

Miniature Golf Park Facility Renovation
Gaithersburg, MD

Product Information Sheets

PERMIT / BID Submission
07.19.16



Gaithersburg
A CHARACTER COUNTS! CITY

Prepared by
NIKA Architects + Engineers
For
City of Gaithersburg

Architectural Cutsheets

WP-1, WP-2, WP-3
Sherwin Williams
Exterior Acrylic Paint Flat
See A601 for color scheme options



**SHERWIN
WILLIAMS.**

102.26 FL

EMERALD™
Exterior Acrylic
Flat
K47 Series

As of 12/01/2012, Complies with:			
OTC	Yes	LEED® 09CI	N/A
SCAQMD	Yes	LEED® 09NC	N/A
CARB	Yes	LEED® 09CS	N/A
CARB SCM 2007	Yes	LEED® H	N/A
MPI #	-	NGBS	N/A

CHARACTERISTICS

Emerald Exterior Acrylic Latex is the "Best-in-Class" exterior architectural house paint.

- Excellent durability, resistant to blistering, peeling and dirt pick-up
- Excellent application, flow and leveling
- Self-priming (2 coats new construction, 1 coat repaint)
- Low temp application – down to 35°F
- Uses a patented cross-linking 100% acrylic technology
- APEO Free
- GreenSeal GS-11 Compliant
- Can only be tinted with CCE Colorants

VinylSafe™ Color Technology allows the use of many darker colors on vinyl siding that cannot be made in most other coatings.

Color: Most colors

Coverage: 250 - 300 sq ft/gal @ 5.3-6.4 mils wet; 2.4-2.9 mils dry

Drying Time @ 50% RH: temperature and humidity dependent @ 35-45°F @ 45°F+

Touch: 2 hour 1 hour

Recoat: 24-48 hours 4 hours

Flash Point: N/A

Finish: 0-5 units @ 85°

Tinting with CCE only:

Base	oz/gal	Strength
Hi Refl White	0-4	100%
Extra White	0-6	125%
Deep Base	5-14	125%
Ultradeep Base	5-14	125%
Light Yellow	5-14	125%
Vivid Yellow	5-14	125%
Primary Red	5-14	125%

Vehicle Type: 100% Acrylic

K47W00051

VOC (less exempt solvents): <50 g/L; <0.42 lb/gal
As per 40 CFR 59.406 and SOR/2009-264, s.12

Volume Solids: 42 ± 2%

Weight Solids: 59 ± 2%

Weight per Gallon: 11.7 lb

WVP Perms (US) 25.6
grains/(hr ft² in Hg)

SPECIFICATIONS

Emerald Exterior Acrylic Latex is self-priming on most surfaces.

Apply 2 coats on new, bare substrates or 1 coat for repaint.

Use on these properly prepared surfaces:

- Aluminum & Aluminum Siding¹
- Galvanized Steel¹
- Concrete Block
- Split face Block
- Brick
- Cement Composition Siding/Panels
- Stucco
- Concrete
- Plywood
- Wood
- Vinyl Siding

Surfaces with a pH greater than 9 must be primed with a high pH-resistant coating such as Loxon Concrete & Masonry Primer/Sealer.

The appearance of textured surfaces such a block, will be improved with the use of Loxon Block Surfacer.

Standard latex primers cannot be used below 50°F. See specific primer label for that product's application limitations.

Knots and some woods, such as redwood and cedar, contain a high amount of tannin, a colored wood extract. If applied to these bare woods, the first coat of Emerald Coating may show some staining, but it will be trapped in the first coat. A second coat will uniform the appearance. If staining persists, spot prime severe areas with 1 coat of Exterior Oil-Based Wood Primer then topcoat with Emerald Coating.

¹ On large expanses of metal siding, the air, surface, and material temperatures must be 50°F or higher.

SURFACE PREPARATION

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Scrape and sand peeled or checked paint to a sound surface. Sand glossy surfaces dull. Sand hard surfaces, such as metal, to provide better adhesion. Seal stains from water, smoke, ink, pencil, grease, etc. with the appropriate primer/sealer.

Aluminum and Galvanized Steel
Wash to remove any oil, grease, or other surface contamination. All corrosion must be removed with sandpaper, steel wool, or other abrading method.

Cement Composition Siding/Panels
Remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. If the surface is new, test it for pH, if the pH is higher than 9, prime with Loxon Concrete & Masonry Primer/Sealer.



102.26 FL

EMERALD™

Exterior Acrylic Flat K47 Series

<u>SURFACE PREPARATION</u>	<u>SURFACE PREPARATION</u>	<u>CAUTIONS</u>
<p>Masonry, Concrete, Cement, Block All new surfaces must be cured according to the supplier's recommendations—usually about 30 days. Remove all form release and curing agents. Rough surfaces can be filled to provide a smooth surface. If painting cannot wait 30 days, allow the surface to cure 7 days and prime the surface with Loxon Concrete & Masonry Primer/Sealer. Cracks, voids, and other holes should be repaired with an elastomeric patch or sealant.</p> <p>Steel Rust and mill scale must be removed using sandpaper, steel wool, or other abrading method. Bare steel must be primed the same day as cleaned. Pro Industrial Pro-Cryl will provide excellent corrosion resistance; other primers may be appropriate.</p> <p>Stucco Remove any loose stucco, efflorescence, or laitance. Allow new stucco to cure at least 30 days before painting. If painting cannot wait 30 days, allow the surface to dry 5-7 days and prime with Loxon Concrete & Masonry Primer/Sealer. Repair cracks, voids, and other holes with an elastomeric patch or sealant.</p> <p>Vinyl Clean the surface thoroughly by scrubbing with warm, soapy water. Rinse thoroughly.</p> <p>Wood, Plywood, Composition Board Sand any exposed wood to a fresh surface. Patch all holes and imperfections with a wood filler or putty and sand smooth. All patched areas must be primed.</p> <p>Caulking Gaps between windows, doors, trim, and other through-wall openings can be filled with the appropriate caulk after priming the surface.</p>	<p>Mildew Remove before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.</p> <p style="text-align: center;"><u>APPLICATION</u></p> <p>When the air temperature is at 35°F, substrates may be colder; prior to painting, check to be sure the air, surface, and material temperature are above 35°F and at least 5°F above the dew point. Avoid using if rain or snow is expected within 2-3 hours. Do not apply at air or surface temperatures below 35°F or when air or surface temperatures may drop below 35°F within 48 hours. No reduction necessary.</p> <p>Brush Use a nylon/polyester brush.</p> <p>Roller Use a high quality polyester roller cover.</p> <p>Spray—Airless Pressure..... 2000 psi Tip015"-.019"</p> <p style="text-align: center;"><u>CLEANUP INFORMATION</u></p> <p>Clean spills, spatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with mineral spirits to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using mineral spirits.</p>	<p style="text-align: center;"><u>CAUTIONS</u></p> <p>Mildew Resistant This coating contains agents which inhibit the growth of mildew on the surface of this coating film.</p> <p>For exterior use only. Protect from freezing. Non-photochemically reactive.</p> <p style="text-align: center;">LABEL CAUTIONS</p> <p>CAUTION contains ZINC. Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved) or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN. HOTW 10/25/2011 K47W00051 06 00</p> <p>The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Sheet.</p>

WP-4
Sherwin Williams
Promar 200 Eggshell
See A601 for color scheme options



101.83a

PROMAR[®] 200

Zero VOC Interior Latex Eg-Shel B20-2600 Series

As of 02/25/2015, Complies with:			
OTC	Yes	LEED® 09 CI	Yes
SCAQMD	Yes	LEED® 09 NC	Yes
CARB	Yes	LEED® 09 CS	Yes
CARB SCM 2007	Yes	LEED® 09 H & S	Yes
MPI		NGBS	Yes

<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>	<u>SURFACE PREPARATION</u>																								
<p>ProMar 200 Zero VOC Interior Latex Eg-Shel is a durable, professional quality, interior vinyl acrylic finish for use on walls, ceilings, and trim of primed plaster, wallboard, wood, masonry, and primed metal.</p> <p>Color: Most colors To optimize hide and color development, always use the recommended P-Shade primer</p> <p>Coverage: 350 - 400 sq ft/gal @ 4 mils wet; 1.7 mils dry</p> <p>Drying Time, @ 77°F, 50% RH: Touch: 1 hour Recoat: 4 hours Drying and recoat times are temperature, humidity, and film thickness dependent</p> <p>Finish: 15-20 units @ 85° 5+ units @ 60°</p> <p>Flash Point: N/A</p> <p>Tinting with CCE only:</p> <table border="1"> <thead> <tr> <th>Base</th> <th>oz/gal</th> <th>Strength</th> </tr> </thead> <tbody> <tr> <td>High Ref White</td> <td>0-6</td> <td>100%</td> </tr> <tr> <td>Extra White</td> <td>0-7</td> <td>125%</td> </tr> <tr> <td>Deep Base</td> <td>4-12</td> <td>100%</td> </tr> <tr> <td>Ultradeep</td> <td>10-12</td> <td>100%</td> </tr> <tr> <td>Real Red</td> <td>4-12</td> <td>100%</td> </tr> <tr> <td>Bright Yellow</td> <td>4-12</td> <td>100%</td> </tr> <tr> <td>Dover White</td> <td></td> <td>do not tint</td> </tr> </tbody> </table> <p>Vehicle Type: Vinyl Acrylic Extra White B20W12651</p> <p>VOC (less exempt solvents): <50 g/L; 0.42 lb/gal As per 40 CFR 59.406 and SOR/2009-264, s.12</p> <p>Volume Solids: 42 ± 2% Weight Solids: 54 ± 2% Weight per Gallon: 10.82 lb</p> <p>Anti-microbial This product contains agents which inhibit the growth of microbes on the surface of this paint film.</p>	Base	oz/gal	Strength	High Ref White	0-6	100%	Extra White	0-7	125%	Deep Base	4-12	100%	Ultradeep	10-12	100%	Real Red	4-12	100%	Bright Yellow	4-12	100%	Dover White		do not tint	<p>Block 1 ct. PrepRite Block Filler* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Drywall 1 ct. ProMar 200 Zero VOC Interior Latex Primer 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Masonry 1 ct. Loxon Concrete & Masonry Primer* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Plaster 1 ct. Premium Wall & Wood Primer* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Wood 1 ct. Premium Wall & Wood Primer* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>* These primers contain relatively low amounts of VOCs, but could result in minor, noticeable odors.</p> <p>Other primers may be appropriate.</p> <p>When repainting involves a drastic color change, a coat of primer will improve the hiding performance of the topcoat color.</p>	<p>WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.</p> <p>Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Glossy surfaces should be sanded dull. Stains from water, smoke, ink, pencil, grease, etc. should be sealed with the appropriate primer/sealer.</p> <p>Drywall Fill cracks and holes with patching paste or spackle and sand smooth. Joint compounds must be cured and sanded smooth. Remove all sanding dust.</p> <p>Masonry, Concrete, Cement, Block All new surfaces must be cured according to the supplier's recommendations—usually about 30 days. Remove all form release and curing agents. Rough surfaces can be filled to provide a smooth surface. If painting cannot wait 30 days, allow the surface to cure 7 days and prime the surface with Loxon Concrete & Masonry Primer.</p>
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Dover White		do not tint																								



**SHERWIN
WILLIAMS.**

101.83a

PROMAR[®] 200
Zero VOC
Interior Latex
Eg-Shel
B20-2600 Series

<u>SURFACE PREPARATION</u>	<u>APPLICATION</u>	<u>CAUTIONS</u>
<p>Plaster Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1 pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.</p> <p>Wood Sand any exposed wood to a fresh surface. Patch all holes and imperfections with a wood filler or putty and sand smooth.</p> <p>Mildew Remove before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.</p> <p>Caulking Gaps between walls, ceilings, crown moldings, and other interior trim can be filled with the appropriate caulk after priming the surface.</p>	<p>Apply at temperatures above 50°F. No reduction needed.</p> <p>Brush Use a nylon/polyester brush.</p> <p>Roller Use a 3/8" - 3/4" nap synthetic cover.</p> <p>Spray—Airless Pressure..... 2000 psi Tip..... .017"-.021"</p> <p><u>CLEANUP INFORMATION</u> Clean spills, spatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with compliant cleanup solvent to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using solvents.</p>	<p>For interior use only Protect from freezing. Non-photochemically reactive.</p> <p>LABEL CAUTIONS Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved) or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.</p> <p>HOTW 02/25/2015 B20W12651 03 00</p> <p>The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Sheet.</p>

MP-1
Sherwin Williams
Promar 200 Semi-Gloss
See A601 for color scheme options



PROMAR[®] 200

Zero VOC Interior Latex Semi-Gloss B31-2600 Series

As of 08/01/2013, Complies with:			
OTC	Yes	LEED [®] 09 CI	Yes
SCAQMD	Yes	LEED [®] 09 NC	Yes
CARB	Yes	LEED [®] 09 CS	Yes
CARB SCM 2007	Yes	LEED [®] 09 H & S	Yes
MPI #	43	NGBS	Yes

CHARACTERISTICS

ProMar 200 Zero VOC Interior Latex Semi-Gloss is a durable, professional quality, interior vinyl acrylic finish for use on walls, ceilings, and trim of primed plaster, wallboard, wood, masonry, and primed metal.

Color: Most colors
To optimize hide and color development, always use the recommended P-Shadow primer

Coverage: 350 - 400 sq ft/gal
@ 4 mils wet; 1.6 mils dry

Drying Time, @ 77°F, 50% RH:

Touch: 1 hour
Recoat: 4 hours

Drying and recoat times are temperature, humidity, and film thickness dependent

Finish: 25-35 units @ 60°

Flash Point: N/A

Tinting with CCE only:

Base	oz/gal	Strength
High Ref White	0-5	100%
Extra White	0-6	125%
Deep Base	4-12	100%
Ultradeep	4-12	100%
Real Red	4-12	100%
Bright Yellow	4-12	100%
Dover White		do not tint

Vehicle Type: Vinyl Acrylic

B31W02651

VOC (less exempt solvents):

<50 g/L; 0.42 lb/gal

As per 40 CFR 59.406 and SOR/2009-264, s.12

Volume Solids: 39 ± 2%

Weight Solids: 50 ± 2%

Weight per Gallon: 10.3 lb

WVP Perms (US) 11.9

grains/(hr ft² in Hg)

Anti-microbial

This product contains agents which inhibit the growth of microbes on the surface of this paint film.

SPECIFICATIONS

Block

- 1 ct. PrepRite Block Filler*
- 2 cts. ProMar 200 Zero VOC Interior Latex

Drywall

- 1 ct. ProMar 200 Zero VOC Interior Latex Primer
- 2 cts. ProMar 200 Zero VOC Interior Latex

Masonry

- 1 ct. Loxon Concrete & Masonry Primer*
- 2 cts. ProMar 200 Zero VOC Interior Latex

Plaster

- 1 ct. Premium Wall & Wood Primer*
- 2 cts. ProMar 200 Zero VOC Interior Latex

Wood

- 1 ct. Premium Wall & Wood Primer*
- 2 cts. ProMar 200 Zero VOC Interior Latex

* These primers contain relatively low amounts of VOCs, but could result in minor, noticeable odors.

Other primers may be appropriate.

When repainting involves a drastic color change, a coat of primer will improve the hiding performance of the topcoat color.

SURFACE PREPARATION

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Glossy surfaces should be sanded dull. Stains from water, smoke, ink, pencil, grease, etc. should be sealed with the appropriate primer/sealer.

Drywall

Fill cracks and holes with patching paste/spackle and sand smooth. Joint compounds must be cured and sanded smooth. Remove all sanding dust.

Masonry, Concrete, Cement, Block

All new surfaces must be cured according to the supplier's recommendations—usually about 30 days. Remove all form release and curing agents. Rough surfaces can be filled to provide a smooth surface. If painting cannot wait 30 days, allow the surface to cure 7 days and prime the surface with Loxon Concrete & Masonry Primer.



PROMAR[®] 200
 Zero VOC
 Interior Latex
 Semi-Gloss
 B31-2600 Series

<u>SURFACE PREPARATION</u>	<u>APPLICATION</u>	<u>CAUTIONS</u>
<p>Plaster Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1 pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.</p> <p>Wood Sand any exposed wood to a fresh surface. Patch all holes and imperfections with a wood filler or putty and sand smooth.</p> <p>Mildew Remove before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.</p> <p>Caulking Gaps between walls, ceilings, crown moldings, and other interior trim can be filled with the appropriate caulk after priming the surface.</p>	<p>Apply at temperatures above 50°F. No reduction needed.</p> <p>Brush Use a nylon/polyester brush.</p> <p>Roller Use a 3/8" - 3/4" nap synthetic cover.</p> <p>Spray—Airless Pressure..... 2000 psi Tip..... .017"-.021"</p> <p><u>CLEANUP INFORMATION</u> Clean spills, spatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with mineral spirits to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using mineral spirits.</p>	<p>For interior use only Protect from freezing. Non-photochemically reactive.</p> <p>LABEL CAUTIONS Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved) or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.</p> <p>HOTW 03/25/2013 B31W02651 17 00</p> <p>The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Sheet.</p>

CP-1
Sherwin Williams
Promar 200 Flat
See A601 for color scheme options

101.81



PROMAR[®] 200

Zero VOC Interior Latex Flat B30-2600 Series

As of 03/24/2014, Complies with:			
OTC	Yes	LEED [®] 09 CI	Yes
SCAQMD	Yes	LEED [®] 09 NC	Yes
CARB	Yes	LEED [®] 09 CS	Yes
CARB SCM 2007	Yes	LEED [®] 09 H & S	Yes
MPI	-	NGBS	Yes

<u>CHARACTERISTICS</u>	<u>SPECIFICATIONS</u>	<u>SURFACE PREPARATION</u>																								
<p>ProMar 200 Zero VOC Interior Latex Flat is a durable, professional quality, washable, interior vinyl acrylic finish for use on walls and ceilings of primed plaster, wallboard, wood, masonry, and primed metal.</p> <p>Color: Most colors To optimize hide and color development, always use the recommended P-Shadow primer</p> <p>Coverage: 350 - 400 sq ft/gal @ 4 mils wet; 1.6 mils dry</p> <p>Drying Time, @ 77°F, 50% RH: Touch: 1 hour Recoat: 4 hours Drying and recoat times are temperature, humidity, and film thickness dependent</p> <p>Finish: 1-3 units @ 85°</p> <p>Flash Point: N/A</p> <p>Tinting with CCE only:</p> <table border="1"> <thead> <tr> <th>Base</th> <th>oz/gal</th> <th>Strength</th> </tr> </thead> <tbody> <tr> <td>High Ref White</td> <td>0-5</td> <td>100%</td> </tr> <tr> <td>Extra White</td> <td>0-6</td> <td>125%</td> </tr> <tr> <td>Deep Base</td> <td>4-12</td> <td>100%</td> </tr> <tr> <td>Ultra Deep</td> <td>4-12</td> <td>100%</td> </tr> <tr> <td>Real Red</td> <td>4-12</td> <td>100%</td> </tr> <tr> <td>Bright Yellow</td> <td>4-12</td> <td>100%</td> </tr> <tr> <td>Dover White</td> <td></td> <td>do not tint</td> </tr> </tbody> </table> <p>Vehicle Type: Vinyl Acrylic Extra White B30W02651</p> <p>VOC (less exempt solvents): <50 g/L; 0.42 lb/gal As per 40 CFR 59.406 and SOR/2009-264, s.12</p> <p>Volume Solids: 41 ± 2%</p> <p>Weight Solids: 57 ± 2%</p> <p>Weight per Gallon: 11.7 lb</p> <p>WVP Perms (US) 10.1 grains/(hr ft² in Hg)</p> <p>Anti-microbial This product contains agents which inhibit the growth of microbes on the surface of this paint film.</p>	Base	oz/gal	Strength	High Ref White	0-5	100%	Extra White	0-6	125%	Deep Base	4-12	100%	Ultra Deep	4-12	100%	Real Red	4-12	100%	Bright Yellow	4-12	100%	Dover White		do not tint	<p>Block 1 ct. PrepRite Block Filler* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Drywall 1 ct. ProMar 200 Zero VOC Interior Latex Primer 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Masonry 1 ct. Loxon Concrete & Masonry Primer* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Plaster 1 ct. Premium Wall & Wood Primer* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>Wood 1 ct. Premium Wall & Wood Primer* 2 cts. ProMar 200 Zero VOC Interior Latex</p> <p>* These primers contain relatively low amounts of VOCs, but could result in minor, noticeable odors.</p> <p>Other primers may be appropriate.</p> <p>When repainting involves a drastic color change, a coat of primer will improve the hiding performance of the topcoat color.</p>	<p>WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.</p> <p>Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Glossy surfaces should be sanded dull. Stains from water, smoke, ink, pencil, grease, etc. should be sealed with the appropriate primer/sealer.</p> <p>Drywall Fill cracks and holes with patching paste/spackle and sand smooth. Joint compounds must be cured and sanded smooth. Remove all sanding dust.</p> <p>Masonry, Concrete, Cement, Block All new surfaces must be cured according to the supplier's recommendations—usually about 30 days. Remove all form release and curing agents. Rough surfaces can be filled to provide a smooth surface. If painting cannot wait 30 days, allow the surface to cure 7 days and prime the surface with Loxon Concrete & Masonry Primer.</p>
Base	oz/gal	Strength																								
High Ref White	0-5	100%																								
Extra White	0-6	125%																								
Deep Base	4-12	100%																								
Ultra Deep	4-12	100%																								
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Bright Yellow	4-12	100%																								
Dover White		do not tint																								



101.81

PROMAR[®] 200
 Zero VOC
 Interior Latex
 Flat
 B30-2600 Series

<u>SURFACE PREPARATION</u>	<u>APPLICATION</u>	<u>CAUTIONS</u>
<p>Plaster Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1 pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.</p> <p>Wood Sand any exposed wood to a fresh surface. Patch all holes and imperfections with a wood filler or putty and sand smooth.</p> <p>Mildew Remove before painting by washing with a solution of 1 part liquid bleach and 3 parts water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. Rinse thoroughly with water and allow the surface to dry before painting. Wear protective eyewear, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.</p> <p>Caulking Gaps between walls, ceilings, crown moldings, and other interior trim can be filled with the appropriate caulk after priming the surface.</p>	<p>Apply at temperatures above 50°F. No reduction needed.</p> <p>Brush Use a nylon/polyester brush.</p> <p>Roller Use a 3/8" - 3/4" nap synthetic cover.</p> <p>Spray—Airless Pressure..... 2000 psi Tip..... .017"-.021"</p> <p><u>CLEANUP INFORMATION</u> Clean spills, spatters, hands and tools immediately after use with soap and warm water. After cleaning, flush spray equipment with mineral spirits to prevent rusting of the equipment. Follow manufacturer's safety recommendations when using mineral spirits.</p>	<p>For interior use only Protect from freezing. Non-photochemically reactive.</p> <p>LABEL CAUTIONS Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved) or leave the area. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.</p> <p>HOTW 03/25/2014 B30W02651 23 00</p> <p>The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Sheet.</p>

RB-1
Johnsonite 1/8" Rubber
Wall Base
461 Wicker WB

Traditional & Perceptions™ Wall Base

1. PROPRIETARY PRODUCT/MANUFACTURER

1.1. Proprietary Product: Thermoplastic Wall Base

1.2. Manufacturer:

Johnsonite, Inc.	Phone	(800) 899-8916
16910 Munn Road		(440) 543-8916
Chagrin Falls, Ohio 44023	Tech:	Ext 9297
Web: www.johnsonite.com	Samples:	Ext 9299
Email: info@johnsonite.com	Fax:	(440) 543-8920

1.3. Proprietary Product Description:

1.3.1. Construction: Johnsonite Traditional Wall Base is manufactured from a proprietary rubber formulation designed specifically to meet the performance and dimensional requirements of ASTM F-1861, Type TV and TP, Group 1 (solid), Style A and B, Standard Specification for Resilient Wall Base.

1.3.2. Physical Characteristics:

Rubber Wall Base

- **Traditional:** DC-XX with toe (coved) or DCT-XX for toeless (straight), 0.125" (3.17 mm) thickness, 2-1/2" (6.35 cm), 4" (10.16 cm), 4 1/2" (11.4 cm) or 6" (15.24 cm) height

Available in 4' (1.22 m) straight lengths and 120' (36.58 m) coiled lengths. The 6" (15.24 cm) high profile available in 4' (1.22 m) straight lengths and 100' (30.48 m) coiled lengths

- **Wall Art:** WA-XX w/toe (coved), 0.125" (3.17 mm) thickness, 4" (10.16 cm) height

Available in 4' (1.22 m) straight lengths only

- **Inside and Outside Corners** available with 4" (10.16 cm) returns packaged 25 per carton, add LIC (Inside corners) or LOC (Outside corners)

Vinyl Wall Base

- **Traditional:** CB-XX with toe (coved) or CBT-XX toeless (straight), 0.125" (3.17 mm) or 0.080" thickness, 2-1/2" (6.35 cm), 4" (10.16 cm), or 6" (15.24 cm) height

Cartons size: Available in 4' (1.22 m) straight lengths and 120' (36.58 m) coiled lengths. The 6" (15.24 cm) high profile available in 4' (1.22 m) straight lengths and 100' (30.48 m) coiled lengths

- **Inside and Outside Corners** available with 4" (10.16 cm) returns packaged 25 per carton, add LIC (Inside corners) or LOC (Outside corners)

Perceptions™ Rubber Wall Base

- **Recess (RWDC with angled toe or RWDCT for straight):** 0.125" (3.17 mm) thickness, 4-1/4" (10.8 cm) height, available in 120' (36.58 m) coiled lengths (or special order 4' straight lengths)
- **Royale (RWDC-XX-E):** 0.125" (3.17 mm) thickness, 4-1/4" (10.8 cm) height, 120' (36.58 m) coiled lengths (or special order 4' straight lengths).
- **Flex (RWDC-XX-F):** 0.125" (3.17 mm) thickness, 4-1/4" (10.8 cm) height, 120' (36.58 m) coiled lengths (or special order 4' straight lengths)
- **Contour (RWDC-XX-G):** 0.125" (3.17 mm) thickness, 4-1/4" (10.8 cm) height, 120' (36.58 m) coiled lengths (or special order 4' straight lengths)
- **Inside and Outside Corners** available with 4" (10.16 cm) returns packaged 25 per carton, add LIC (Inside corners) or LOC (Outside corners)

2. PRODUCT PERFORMANCE AND TECHNICAL DATA

- Meets or exceeds the performance requirements for resistance to heat/light aging, chemicals, and dimensional stability when tested to the methods, as described, in ASTM F-1861.
- **Flexibility:** Will not crack, break, or show any signs of fatigue when bent around a 1/4" (6.4 mm) diameter cylinder.
- **Chemical resistance (ASTM F 925):** Passes – 5% acetic acid, 70% isopropyl alcohol, mineral oil, 5% sodium hydroxide solution, 5% hydrochloric acid solution, 5% sulfuric acid solution, 5% household ammonia solution, and 5.25% household bleach solution
- **Resistance to light (ASTM F 1515):** ΔE < 8
- **Fire Resistance:**

Vinyl Wall Base

ASTM E 84/NFPA 255 (Flame/Smoke) – Class B, < 450
ASTM E 648 (NFPA 253): Critical Radiant Flux – Class I

Rubber Wall Base

ASTM E 84/NFPA 255 (Flame/Smoke) – Class A, < 450
ASTM E 648 (NFPA 253): Critical Radiant Flux – Class I

3. INSTALLATION

Johnsonite Wall Base and adhesives must be site conditioned at room temperature for a minimum of 48 hours prior to, during, and after installation. Room temperature must be maintained between 65° and 85°F (18° and 30°C) with HVAC system operating. A minimum temperature of 55°F (13°C) must be maintained afterwards. The ambient relative humidity should be between 40% and 60%.

Traditional & Perceptions™ Wall Base

All walls must be clean, smooth, flat and dry. The surface must be free of all dust, loose particles, solvents, paint, grease, oil, wax, alkali, sealing/curing compounds, old adhesive, and any other foreign material, which could affect installation. Remove existing adhesive mechanically – do not use chemical adhesive removers or solvents. Fill all depressions, cracks, and other surface irregularities with a good quality patching compound.

Caution: Do not use liquid solvents or adhesive removers.

Do not install Johnsonite BaseWorks Wall Base over vinyl wall coverings.

Do not install Johnsonite Wall Base over non-porous surfaces with Johnsonite 960 Wall Base Adhesive. For non-porous surfaces apply Johnsonite 946 Premium Contact Adhesive.

For current Installation and Maintenance Instructions, Product Specifications, and other technical data, visit us on the web at www.johnsonite.com or contact Johnsonite at 800-899-8916.

3.1. Adhesives:

960 Cove Base Adhesive (porous surfaces)

Approximate coverage:

- 2 ½" high – 300 to 350 linear feet/gallon
- 4" high – 200 to 250 linear feet/gallon
- 6" high – 100 to 150 linear feet/gallon

946 Premium Contact Adhesive (non-porous surfaces)

Application: Brush or roller

Approximate coverage:

- 1 kg Unit (0.95 Qt) – 24 to 36 sq. ft. per unit
- 6 kg Unit (1.44 Gal.) – 144 to 215 sq. ft. per unit

3.2. Installation Manual: Refer to Johnsonite Wall Base Installation Instructions for complete installation details.

4. AVAILABILITY AND COST

Available through authorized Johnsonite distributors nationwide.

5. WARRANTY

Limited 2 year warranty. For complete details, contact Johnsonite or an authorized Johnsonite distributor.

6. MAINTENANCE

Refer to Johnsonite Wall Base Installation Instructions for complete maintenance details.

7. TECHNICAL SERVICES

Samples: Submittal samples for verification and approval available upon request from Johnsonite. Samples shall be submitted in compliance with the requirements of the Contract Documents. Accepted and approved samples shall constitute the standard materials which represent materials installed on the project.

color palette C wall base

color palette D metallics



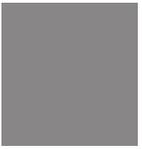
50 White W



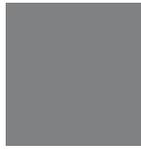
195 Ash WG



36 Manatee



186 Mousi WG



199 Dockside WG



197 Shaded WG



TB3 Dover



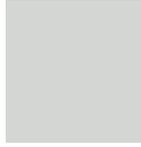
TA5 Colonial Grey CG



262 Drizzle CG



TA6 Bedrock CG



23 Vapor Grey CG



TA4 Gateway WG



08 Icicle W



194 Antique White W



79 Bone White W



461 Wicker WB



TA1 Tannery WB



107 Neutrality



460 Cotton W



TA3 Castaway CB



276 Mystical



TA8 Welsh Castle CB



264 Grounded



TB1 Peppercorn



274 Gold Digger



273 Copper Penny



261 Autumn



259 Terra Firma



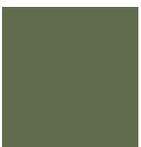
TA7 Rusty Nail



TA2 Saddlebrook



271 Seedling



467 Arugula



665 Sawgrass



TB2 Boxwood



123 Mineral Springs



292 Evening Shower



465 Seafarer



191 Lazuli



14 Tropical Storm



83 Midnight



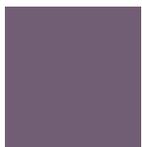
TA9 Indigo



147 South Seas



TB4 Grapest



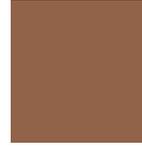
07 Wood Violet



77 White Pearl W



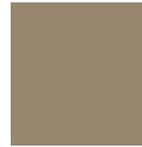
67 Old Gold



177 Copper



65 Coronado



176 Brass WB



66 Either Ore



69 Sterling Silver CG



178 Ironstone CG



179 Steel WG

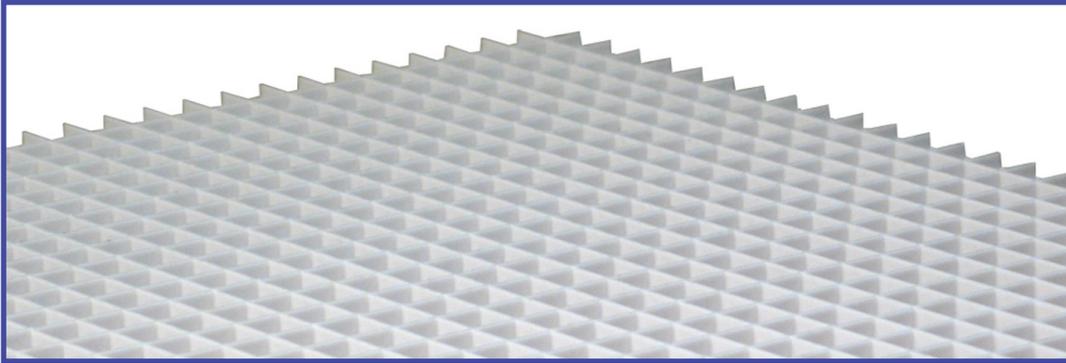
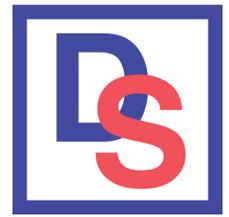


82 Black Pearl B

ACT-1
Diffuser Specialist
Plastic Louvers 45
White

Diffuser Specialist

Plastic Louvers 45: 1/2" x 1/2" x 1/2"



General Description

Straight-blade, or non-parabolic plastic lighting louvers are an efficient, economical solution for a variety of lighting and luminous ceiling applications. A longtime industry standard, the open cell design provides a well ordered, architectural appearance, while at the same time permitting free circulation of air for lower operating temperatures, longer ballast life, and improved lamp performance.

Applications

Conference rooms, commercial and municipal buildings, entries and corridors, perimeter areas and computer rooms.

Ordering Information

Please call 1.800.880.5483 for price and delivery. Specify dimensions when placing an order.

Notice

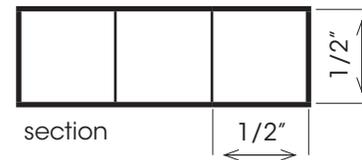
Diffuser Specialist assumes no responsibility for suitability of luminaires and applications.

Plastic Louvers

Straight-blade 1/2" x 1/2" x 1/2" louvers for use in Office, Retail, Commercial and Medical environments.

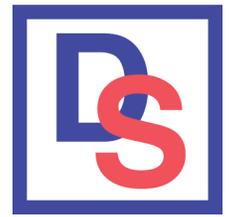
Material: Polystyrene

1/2" x 1/2" x 1/2"



Diffuser Specialist

Plastic Louvers 45: 1/2" x 1/2" x 1/2"



Catalog Number	Color	Dimensions
Polystyrene 1/2" x 1/2" x 1/2"		
ALP45 14	White	11-3/4" x 47-3/4"
ALP45 22	White	23-3/4" x 23-3/4"
ALP45 24	White	23-3/4" x 47-3/4"

All Plastic Louvers are destaticized before and after fabrication to ensure a high quality product. Special sizes and shapes are available, contact Diffuser Specialist to specify Avoida-Notch™, add appropriate suffix to Catalog number AN50-W (white). All 1' x 4' and 2' x 2' louvers MUST be purchased in even multiples. Shipments of oversize louvers are subject to a special packaging charge.

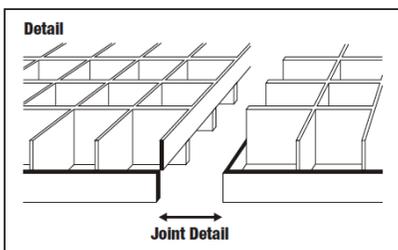
Specifications

Polystyrene louvers shall be injection molded in one-piece 100% white translucent plastic as manufactured by Diffuser Specialist inside dimensions of the cells shall be 1/2" x 1/2" x 1/2" with a uniform wall thickness. Longitudinal and lateral cell walls are in the same plane and are to form continuous straight-line shielding surfaces in each direction. Plastic louvers incorporate a unique edge interlock trim to facilitate the continuous butting of panels without reversing each louver panel.

Styrene louvers are molded in an ultraviolet stabilized material to resist ultraviolet exposure. These styrene louvers meet all industry standards.

Features

- Economical
- Reduces Glare
- Increases Ballast Life
- Improves Lamp Performance



Interlocking step trim design permits panels to be butted together without a noticeable joint - providing an uninterrupted louver pattern. This jointing method is accomplished without having to reverse louver panels.

This drawing is for reference only. Actual part dimensions will vary. Customer is urged to review actual samples to confirm fit and function. All specifications and dimensions are subject to change without notice.

CF-1 Concrete Sealer
111.08 Solid Color
Water Based



111.08

H&C®

CONCRETE STAIN

SOLID COLOR WATER BASED

FORMERLY SHIELD PLUS ULTRA CONCRETE STAIN

<u>PRODUCT DESCRIPTION</u>	<u>CHARACTERISTICS</u>	<u>SURFACE PREPARATION</u>														
<p>H&C® Concrete Stain Water Based provides superior protection and beauty for both exterior and interior concrete. Fortified with silicone it is ideal for pool decks, patios, walkways, block and stucco walls, basements and laundry rooms. It may be applied to bare concrete or previously painted surfaces. H&C® Concrete Stain Water Based is highly resistant to pool chemicals. For best results on garage floors use H&C® Shield-Crete Garage Floor Epoxy.</p>	<p>Color: 8 ready mixed colors, 3 tintable bases for a variety of custom colors and clear for added durability.</p> <p>Coverage sq ft/gal</p> <table border="0"> <tr><td>Concrete floors</td><td style="text-align:right">200-300</td></tr> <tr><td>Porous concrete</td><td style="text-align:right">150-250</td></tr> <tr><td>Asphalt</td><td style="text-align:right">200-250</td></tr> <tr><td>Concrete block</td><td style="text-align:right">100-150</td></tr> <tr><td>Split faced block</td><td style="text-align:right">75-125</td></tr> <tr><td>Fluted block</td><td style="text-align:right">50-100</td></tr> <tr><td>Brick (clay)</td><td style="text-align:right">100-150</td></tr> </table> <p>Drying Time, @ 77°F, 50%RH: temperature and humidity dependent To touch: 30 minutes Light traffic and recoat: 2 hours Heavy traffic: 72-96 hours Full Cure should be reached in 7-14 days <small>*NOTE: High humidity and /or low temperatures will affect drying time.</small></p> <p>Flash Point: N/A</p> <p>Vehicle Type: 100% Acrylic White 20.00121- VOC (less exempt solvents): 224 g/L; 1.87 lb/gal*</p> <p>Pigmented Sheen: Low Luster < 35 Volume Solids: 30 ± 2%* Weight Solids: 43 ± 2%* Weight per Gallon: 10.0 lb* <small>*May vary by color</small></p> <p>Clear 20.00120- VOC (less exempt solvents): 246g/l; 2.05lb/gal</p> <p>Clear Sheen: Low Luster < 35 Volume Solids 19% Weight Solids 22%</p> <p>Static Coefficient of Friction: .9</p> <p>Water Vapor Transmition ASTM D1653 5.21 ± 0.12 grains/(hr ft²) Perm Rating ASTMD1653 11.2 ± 3 grains/(hr ft² in Hg)</p>	Concrete floors	200-300	Porous concrete	150-250	Asphalt	200-250	Concrete block	100-150	Split faced block	75-125	Fluted block	50-100	Brick (clay)	100-150	<p>WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.</p> <p>Bare Concrete: Newly poured concrete must be at least 28 days old. All concrete must be porous, clean, dry and free of grease, oil & any other contaminates. To spot clean, use H&C® Cleaner Degreaser following label directions. If mold, mildew or fungus is present, kill and remove with a solution of one-cup household bleach to one gallon of water. All horizontal concrete surfaces MUST be etched with H&C® Etching Solution or muriatic acid, following label directions. After proper etching the surface should have the feel of 120-grit sandpaper, if not then a second etching is required. Vertical concrete surfaces should absorb water. Test various sections by spraying water directly onto the surface to be stained. If the water does not absorb rapidly, then the surface should be acid etched using the H&C® Etching Solution following label instructions or mechanically abraded. Do not apply the stain until all surfaces are porous. Allow all surfaces to dry 24 hours before staining. Prepared concrete must have a pH level between 6 and 10.</p>
Concrete floors	200-300															
Porous concrete	150-250															
Asphalt	200-250															
Concrete block	100-150															
Split faced block	75-125															
Fluted block	50-100															
Brick (clay)	100-150															
<p>Features:</p> <ul style="list-style-type: none"> • Protects and beautifies interior and exterior surfaces • Use on concrete, masonry, and asphalt • Will not peel, flake, or fade • Resists oil, gasoline, water, and UV rays • Makes the surface easier to clean • Soap & water clean up • Ideal for high pH surfaces 																
<p>Recommended Uses:</p> <ul style="list-style-type: none"> • Pool Decks • Stadium Supports • Bridges and Bridge Structures • Parking Garages • Athletic Courts • Asphalt Driveways • Block & Stucco Walls • Patios and Walkways • Basement Floors • CMU, Split Face, and Fluted Block • Precast, Poured-in-place, and Tilt-up Concrete. 																
<p>For a complete color/seal system on porous substrates, apply 2 coats of H&C® Concrete Stain Water Based and a flood coat of H&C Super V™ Water Repellant.</p>																



H&C®

CONCRETE STAIN SOLID COLOR WATER BASED

FORMERLY SHIELD PLUS ULTRA CONCRETE STAIN

<u>SURFACE PREPARATION</u>	<u>APPLICATION</u>	<u>APPLICATION</u>
<p>Garage Floors: For best results use H&C® Shield-Crete Garage Floor Epoxy</p> <p>Driveways: Proper surface preparation is crucial when using this product on garage floors and driveways. For best results us H&C® Concrete Sealer Solvent Based.</p> <p>Asphalt: Asphalt surfaces must be free of grease, oil, dirt, wax, etc. Scrub with a solvent free cleaner following label directions. DO NOT ETCH ASPHALT. Not recommended if asphalt has been freshly sealed.</p> <p>Previously Painted: All old, peeling, flaking paint must be removed. Areas with firm adhesion must be clean and free of dirt, oil, grease, etc. Clean with H&C® Cleaner Degreaser, following label directions. Rinse thoroughly and allow to dry. Remaining paint should be rough sanded in a circular motion to ensure adhesion of H&C® Concrete Stain. Rinse away sanding dust. DO NOT ETCH PREVIOUSLY PAINTED SURFACES.</p> <p>Repair: For the best waterproofing protection on vertical and horizontal concrete and masonry surfaces, patch and repair cracks with H&C® Quick Patch and Repair. Patching compounds will generally be visible through clear coatings.</p>	<p>When to Apply: H&C® Concrete Stain Water Based should be applied on to a dry surface where moisture content should not exceed 3lbs/1000 sq. ft. of surface (ASTM F710). Air, surface and material temperature must be between 50° and 90°F and at least 5°F above the dew point during and for 24 hours after application. Do not apply H&C® Concrete Stain Water Based if rain is expected in 12 hours following the application. Stir stain thoroughly before and during application. A minimum two coats is required. Apply with brush, roller or spray. When using more than one container, intermix all containers together to ensure color uniformity. Prior to applying your first coat, dry-sweep the concrete with a stiff broom or shop vacuum to remove all surface latent.</p> <p>First Coat: Apply first coat evenly, working in one direction. Allow to dry at least 2 hours before applying second coat.</p> <p>Second Coat: Apply second coat cross-wise to the first coat. Two coats of H&C® Concrete Stain Water Based are usually sufficient. However, extremely porous surfaces may require a third coat for a uniform appearance. If more than two coats are applied on a horizontal surface, consider using H&C® SharkGrip Slip-Resistant Additive. Allow 2 hours dry time between coats. Allow 72 to 96 hours drying conditions before using the surface for heavy traffic.</p>	<p>Brush—Use a nylon/polyester brush Roller—Use a 3/8" woven nap cover Spray—Airless Pressure 1500 psi Tip013" - .017" Spray—Conventional Air Pressure 30 - 50 psi Fluid pressure 15 - 20 psi Cap/Tip 704/FX or equivalent HVLP Cap/Needle Titan #3 or equivalent Backrolling recommended after spraying</p> <p>Slip Resistance: Some surfaces may require a slip-resistant additive for safety. Add H&C® SharkGrip Slip Resistant Additive to the final coat, following label directions. H&C® SharkGrip Slip Resistant Additive should not be used in place of a non-skid finish.</p> <p><u>CLEANUP INFORMATION</u></p> <p>Clean spills and spatters immediately with soap and warm water.</p> <p><u>TECHNICAL SERVICES</u></p> <p>The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of H&C concrete coatings and The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your H&C or Sherwin-Williams representative to obtain the most recent Product Data sheet.</p>



H&C®

CONCRETE STAIN

SOLID COLOR WATER BASED

FORMERLY SHIELD PLUS ULTRA CONCRETE STAIN

<u>ORDERING INFORMATION</u>	<u>PERFORMANCE DATA</u>	<u>PERFORMANCE DATA</u>
<p>Clear Part Number/SMIS Gallon 20.001204/163-2702 Five 20.001205/163-2710</p>	<p>Accelerated Weathering ASTM G154 3000 hrs, no effect Color Change: Delta E = 0.35</p>	<p>Scrub Resistance Testing 1200 cycles, no failure</p>
<p>Extra White Part Number/SMIS Gallon 20.001214/163-1753 Five 20.001215/163-1746</p>	<p>Color & Gloss Retention ASTM G90 Color: Less than .30 Change Sheen: .5 difference @ 60°</p>	<p>Adhesion Testing ASTM 3359 Method A X-Cut Tape Test Results: No film loss Classification 5A</p>
<p>Deep Base Part Number/SMIS Gallon 20.002214/163-1738 Five 20.002215/163-1720</p>	<p>Chloride Ion Penetration AASHTO T 259/T 260 Reduction of 54 % @ 0.0625"-0.5" penetra- tion, 83 % @ 0.5"-1.0"penetration, and 36 % @ 1.0"-1.5"penetration</p>	<p>Method B Cross-Cut Tape Test Results: Less than 5% removed Classification: 4B</p>
<p>Ultra Deep Part Number/SMIS Gallon 20.003214/163-1712 Five 20.003215/163-1704</p>	<p>Resistance to Wind Driven Rain Rilem Tube Method #11.4 Zero water Penetration over 60 minutes expo- sure</p>	<p>Abrasion Resistance ASTM D968 Results: >2000 Liters of Sand</p>
<p>Bombay Part Number/SMIS Gallon 20.001254/163-1787 Five 20.001255/163-1795</p>	<p>Resistance to Salt Spray ASTM B117 No film defect after 500hrs exposure</p>	<p style="text-align: center;">CAUTIONS</p> <p>Do not use on wood surfaces. Non-photochemically reactive.</p>
<p>Sandstone Part Number/SMIS Gallon 20.001324/163-1852 Five 20.001325/163-1845</p>	<p>Resistant to Sulfide Staining ASTM D1712 No change after 15mins</p>	<p style="text-align: center;">Label Caution</p> <p>CAUTION contains CRYSTALLINE SILICA. Use only with adequate ventilation. To avoid overexposure, open windows and doors or use other means to ensure fresh air entry during application and drying. If you experience eye watering, headaches, or dizziness, increase fresh air, or wear respiratory protection (NIOSH approved) or leave the area. Adequate ventilation required when sanding or abrading the dried film. If adequate ventilation cannot be provided wear an approved particulate respirator (NIOSH approved). Follow respirator manufacturer's directions for respirator use. Avoid contact with eyes and skin. Wash hands after using. Keep container closed when not in use. Do not transfer contents to other containers for storage. FIRST AID: In case of eye contact, flush thoroughly with large amounts of water. Get medical attention if irritation persists. If swallowed, call Poison Control Center, hospital emergency room, or physician immediately. DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Abrading or sanding of the dry film may release crystalline silica which has been shown to cause lung damage and cancer under long term exposure. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. DO NOT TAKE INTERNALLY. KEEP OUT OF THE REACH OF CHILDREN.</p>
<p>Tile Red Part Number/SMIS Gallon 20.001364/163-1902 Five 20.001365/163-1910</p>	<p>Chemical Resistance 10% Sodium Hydroxide No softening or color change</p>	<p>LCE 12/02/2002 20.001214 01 00</p>
<p>Terra Cotta Part Number/SMIS Gallon 20.001354/163-1886 Five 20.001255/163-1894</p>	<p>10% Ammonium Hydroxide No softening or color change</p>	
<p>Pearl Gray Part Number/SMIS Gallon 20.001314/163-1837 Five 20.001314/163-1829</p>	<p>Mineral Spirits KB value 38 No softening or color change</p>	
<p>Gull Gray Part Number/SMIS Gallon 20.001284/163-1803 Five 20.001285/163-1811</p>	<p>Reflectance of White (20.00121-) 86% +/-3%</p>	
<p>Silver Gray Part Number/SMIS Gallon 20.001344/163-1878 Five 20.001345/163-1860</p>	<p>Impact Resistance Fed Std 141A Method 2051 ASTM D 2794 6 inch-pounds direct impact Results: No film chipping</p>	
	<p>Flexibility ASTM D522 Method B 1-inch diameter mandrel Results: No cracking, breaking, etc</p>	

**ARCHITECTURAL
SHINGLES
(MATCH EXISTING
WATERPARK ADMIN.
BUILDING)**

Timberline® Cool Series® Brochure

(RESTL127)

Updated: 6/15



*Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™*

gaf.com



Quality You Can Trust... From North America's Largest Roofing Manufacturer!™

TIMBERLINE® COOLSERIES®

ENERGY-SAVING SHINGLES

North America's #1-Selling Architectural Shingles Are Cool!

gaf.com



"Timberline® Cool Series® Shingles. They Not Only Look Cool. They'll Make You Feel Cool."



Timberline® Cool Series® Shingles Will Make You Feel COOL



Timberline® Cool Series® Shingles can help reduce cooling energy costs.*

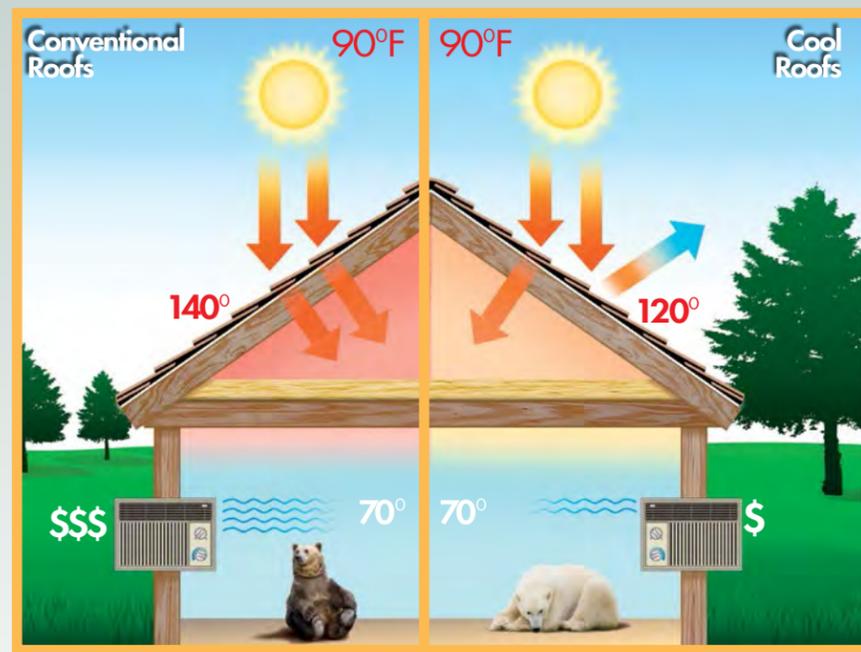
Thanks to modern reflective technology, you can join the green revolution with Timberline® Cool Series® Roofing Shingles. Our highly reflective shingles can help to reduce temperatures in your attic, so your home will stay cooler in the summer—to help save on air-conditioning costs.*

Simply put, our Timberline® Cool Series® Shingles use specially designed roofing granules that have greater reflectance than traditional shingles. This helps reduce the transfer of heat to the space below—to keep you cooler in the summer.

Not only that, Timberline® Cool Series® Shingles are made with the patented StainGuard® protection to ensure the beauty of your roof against unsightly blue-green algae!***



How Cool?¹



Thanks to the reflective nature of Timberline® Cool Series® Shingles, part of the heat radiating from the sun gets reflected, helping to reduce the heat in the attic and heat going into the house. It may translate into savings in air-conditioning bills.

According to the Cool Roof Rating Council, cool roofs may save homeowners an average of 7–15% of their total cooling costs.*

A cool roof minimizes the solar heat gain of a building by first reflecting incoming sun rays and then by quickly re-emitting the absorbed energy. As a result, the cool roof stays cooler than a traditional roof of similar construction.

* Savings depend on various factors including, but not limited to, climate zone, utility rates, location, and HVAC equipment efficiency.
** See GAF Shingle & Accessory Ltd. Warranty for complete coverage and restrictions. The word "Lifetime" means as long as the original individual owner(s) of a single-family detached residence (or the second owner(s) in certain circumstances) owns the property where the shingles are installed. For owners/structures not meeting the above criteria, Lifetime coverage is not applicable.

TIMBERLINE® COOL SERIES® REFLECTANCE & EMITTANCE DATA

Color	Initial Solar Reflectance	Thermal Emittance	Solar Reflectance Index (SRI)	LEED® Credits
Cool Antique Slate	0.27	0.92	29	YES
Cool Barkwood	0.27	0.92	29	YES
Cool Weathered Wood	0.26	0.92	29	YES

A Cool Secret.

Roofing granules give a shingle its unique look and tone. But traditionally, only shingles with white granules were considered "cool" by energy-saving standards.

Thanks to our cool shingle process, using special proprietary cool granules with unique formulas, our shingles are highly reflective. These special granules reflect light to lower the roof temperature to help you feel cool.



Proprietary Outer Coating

- Provides color pigments for the roof color you choose
- Reflects infrared (invisible)

Trust The Star...

Timberline® Cool Series® is an ENERGY STAR®-qualified roof product.¹ Here's what it means to you according to ENERGY STAR®:



U.S. only

- **Saves Money and Energy.** According to the EPA, about \$40 billion is spent annually in the U.S. to air condition buildings—one-sixth of all electricity generated in a year! ENERGY STAR®-qualified roof products may reduce the amount of air conditioning needed in buildings, and may reduce energy bills.

- **Downsizes Cooling Equipment.** A reflective roof can reduce peak cooling demand. As a result, the home or building owner may be able to purchase a smaller, more efficient, and less expensive cooling system.

- **Decreases Pollution in Urban Areas.** Reduced energy demand means less burning of fossil fuels, which results in less pollution from power plants. Also, ENERGY STAR®-qualified roof products help to reduce the "heat island effect," in which dark, heat-absorbing buildings and paved areas make the air in urban areas hotter, and more smoggy.

- **May Increase Roof Product Life.** ENERGY STAR®-qualified roof products maintain a more constant temperature, reduce thermal shock, and may help to extend the life of the roof.

¹When installed properly, this product will help reduce energy costs. Actual savings will vary based on geographic location and individual building characteristics. For more information, contact GAF Technical Services at 1-800-ROOF-411, visit gaf.com, or call 1-888-STAR-YES.

To learn about other Green Roofing products, including ventilation, visit gaf.com/green

Timberline® Cool Series® Shingles Come In Three VERY COOL Colors

FOR HOMEOWNERS

- **Helps Save Money On Cooling Costs...** According to the Cool Roof Rating Council, cool roofs may save you an average of 7-15% on your total cooling costs, depending on geography, season, and property¹
- **Rebates...** Some utility companies may provide incentives for using cool shingles
- **Pioneer in Cool Shingles...** First manufacturer to launch highly reflective shingles.
- **Highest Fire Rating...** Class A fire rating from Underwriters Laboratories
- **High Performance...** Designed with Advanced Protection® Shingle Technology, which reduces the use of natural resources while providing excellent protection for your home (visit gaf.com/aps to learn more)



- **Stays in Place...** Dura Grip™ Adhesive seals each shingle tightly and reduces the risk of shingle blow-off. Shingles warranted to withstand winds up to 130 mph (with special installation; see *GAF Shingle & Accessory Ltd. Warranty* for details)
- **Peace of Mind...** Lifetime Ltd. transferable warranty with Smart Choice® Protection (non-prorated material and installation labor coverage) for the first ten years²
- **Perfect Finishing Touch...** Use Ridglass® Premium or Seal-A-Ridge® Ridge Cap Shingles³

¹Savings depend on various factors including, but not limited to, climate zone, utility rates, location, and HVAC equipment efficiency.

²See *GAF Shingle & Accessory Ltd. Warranty* for complete coverage and restrictions. The word "Lifetime" means as long as the original individual owner(s) of a single-family detached residence (or the second owner(s) in certain circumstances) owns the property where the shingles are installed. For owners/structures not meeting the above criteria, Lifetime coverage is not applicable.

³Ridglass® Premium Ridge Cap Shingles are available only in the Western Area of the U.S. Seal-A-Ridge® Ridge Cap Shingles are available across the U.S. (except the Western Area).

FOR PROFESSIONALS

- **A Familiar Shingle...** The shingle you have come to know and love, Timberline®, now comes in "green" for your customers who want to help save both money and the environment
- **Strong Consumer Interest...** Driven by cooling cost savings¹ and rebates
- **Broaden Your Portfolio...** Offer your customers a potential energy- and cost-saving solution
- **Excellent Value...** This unique product is offered at a competitive price



TIMBERLINE® COOL SERIES® SPECIFICATIONS

- Fiberglass asphalt construction
- Lifetime Ltd. transferable warranty¹
- Smart Choice® Protection for the first 10 years²
- 130 mph Ltd. wind coverage²
- StainGuard® Protection³
- ENERGY STAR® qualified (U.S. only)
- Meets the prescriptive requirements of California TITLE 24, Part 6 for Cool Steep-Slope Roofing
- Rated by Cool Roof Rating Council (CRRCC)
- ASTM D3161 Type 1, Class F
- ASTM D3018 Type 1, Class F
- ASTM D3462⁴
- ASTM D7158, Class H
- Class A fire rated—UL 790
- Texas Department of Insurance
- ICC Approved
- Classified in accordance with ICC-ES AC438
- Miami-Dade County approved
- Florida Building Code approved
- Approx. 64 Pieces/Sq.
- Approx. 3 Bundles/Sq.
- Approx. 256 Nails/Sq.
- 5 5/8" Exposure

¹See *GAF Shingle & Accessory Ltd. Warranty* for complete coverage and restrictions. The word "Lifetime" means as long as the original individual owner(s) of a single-family detached residence (or the second owner(s) in certain circumstances) owns the property where the shingles are installed. For owners/structures not meeting the above criteria, Lifetime coverage is not applicable.

²This wind speed coverage requires special installation; see *GAF Shingle & Accessory Ltd. Warranty* for details.

³Periodically tested by independent and internal labs to ensure compliance with ASTM D3462 at time of manufacture.

⁴Ridglass® Premium Ridge Cap Shingles are available only in the Western Area of the U.S. Seal-A-Ridge® Premium Ridge Cap Shingles are available in the U.S. (except the Western Area).



Color Shown: Cool Barkwood



Color Shown: Cool Antique Slate



Color Shown: Cool Weathered Wood

Note: It is difficult to reproduce the color clarity and actual color blends of these products. Before selecting your color, please ask to see several full-size shingles.



Cool Barkwood



Cool Antique Slate



Cool Weathered Wood



Quality You Can Trust... From North America's Largest Roofing Manufacturer!

gaf.com

More Than Just Coverage On Your Shingles!

Get Automatic Lifetime Protection On Your Entire GAF Roofing System!*

When you install any GAF Lifetime Shingle and at least 3 qualifying GAF accessories, you'll automatically get:

- A Lifetime Ltd. warranty on your shingles and all qualifying GAF accessories!*
- Non-prorated coverage for the first 10 years!*



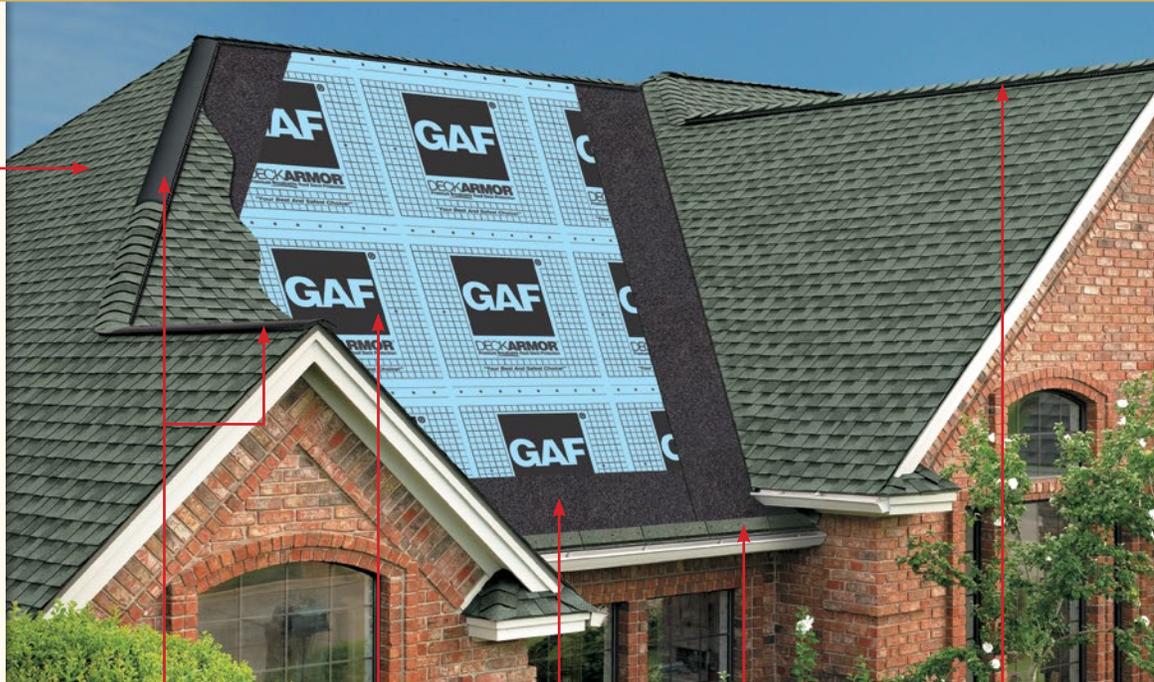
LIFETIME

SHINGLES

GAF offers you many great Lifetime Shingle choices, including **Timberline®** Shingles with Advanced Protection® Shingle Technology. They're the #1-selling shingles in North America!

Advanced Protection® Shingle Technology provides excellent protection for your home while reducing the use of precious natural resources. That's better for your home—and better for the environment!

To learn more about why Advanced Protection® Shingles are your best choice, visit gaf.com/aps.



Cobra® Attic Ventilation

Helps remove excess heat and moisture from your attic to promote energy efficiency in your home and help extend the life of your roof.



Roof Deck Protection

Provides an exceptionally strong layer of protection against wind-driven rain; some even allow moisture to escape from your attic. Also, lies flatter for a better-looking roof.



Leak Barrier

Provides exceptional protection against leaks caused by roof settling and extreme weather. Ideal upgrade at all vulnerable areas (including at the eaves in the North!).



Starter Strip Shingles

Saves time, eliminates waste, and reduces the risk of blow-off...and may even help qualify for upgraded wind warranty coverage (see *GAF Shingle & Accessory Ltd. Warranty** for details).



Ridge Cap Shingles

Enhances the beauty of your home while guarding against leaks at the hips and ridges.



†In the North, building codes require the use of Leak Barrier at the eaves.



*See *GAF Shingle & Accessory Ltd. Warranty* for complete coverage and restrictions. The word "Lifetime" means as long as the original individual owner(s) of a single-family detached residence (or the second owner(s) in certain circumstances) owns the property where the shingles and accessories are installed. For owners/structures not meeting the above criteria, Lifetime coverage is not applicable. Lifetime Ltd. warranty on accessories requires the use of at least three qualifying GAF accessories and the use of Lifetime Shingles.



WOMEN'S CHOICE AWARD
ROOFING PRODUCTS



The GAF Lifetime Roofing System has earned the prestigious Good Housekeeping Seal, which means that Good Housekeeping stands behind the products in this system. (Refer to Good Housekeeping Magazine for its consumer protection policy. Applicable in U.S. only.)

SALES OFFICES:

NORTHEAST
717-866-8392

CENTRAL
630-296-1980

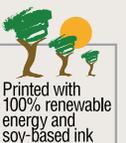
SOUTHEAST
813-829-8880

SOUTHWEST
972-851-0500

WEST
800-445-9330

CANADA
855-492-8085

WORLD HQ
973-628-3000



Deck-Armor Brochure™

(RESUL164)

Updated: 5/16



*Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™*

DECKARMOR™

Premium **Breathable** Roof Deck Protection

Learn about
**Roof Deck
Protection**

*Protect Your Home With
Premium, Breathable*

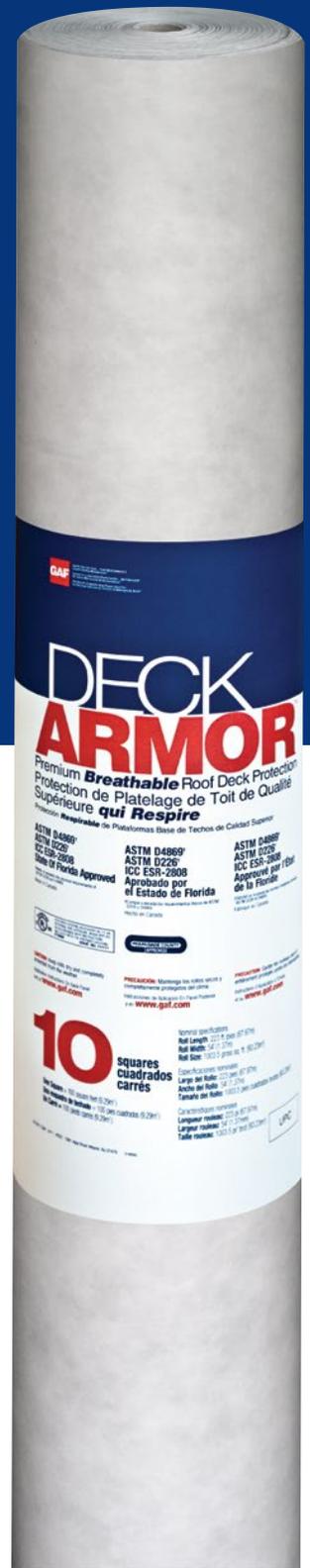
Roof Deck Protection

Roof Deck Protection should help protect your home and reduce trapped moisture at the same time (amazingly, most synthetic underlayments do NOT!).

It provides a critical extra layer of protection between your shingles and your roof deck — to help prevent wind-driven rain (or water from other sources) from infiltrating under your shingles and causing damage to your roof structure or to the inside of your home. In addition, premium-quality roof deck protection will:

- Help reduce trapped moisture from inside your attic, allowing it to escape (to help prevent structural decay, mold, and mildew)
- Provide longer-lasting leak protection than conventional “felts” (which can rot or become brittle before your shingles reach the end of their useful life)
- Lie flatter, so your shingles will lie flat and uniform

Deck-Armor™ Premium Breathable Roof Deck Protection is a key part of the GAF Lifetime Roofing System and has even earned the prestigious Good Housekeeping Seal (applicable in U.S. only; see back page).



gaf.com

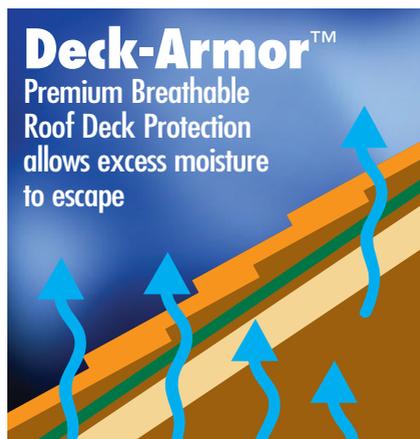
WARNING:

Moisture trapped on the roof deck can result in decay, mold, mildew, and costly structural damage!



Today's modern homes are built weathertight — so common moisture (from cooking, bathing, cleaning, etc.) has less chance to escape. Over time, that can cause roof rot, mold, mildew, and costly structural decay.

That's why GAF recommends the use of roof deck protection that helps reduce moisture that can be trapped under the roof's shingles!



DECK-ARMOR™ ROOF DECK PROTECTION
"Out-breathes" the competition...

16 Perms	Deck-Armor™
6 Perms	#15 felt
5 Perms	#30 felt

← Typical competitive non-asphaltic products: .05 Perms (virtually non-breathable)

As measured on Mocon unit @ 74°F (23°C) and 50% R.H.

The very **best** roofing systems require Premium, Breathable Roof Deck Protection



Conventional organic felts can absorb moisture, causing severe buckling and wrinkling—and a terrible-looking roof



Deck-Armor™ Premium Breathable Roof Deck Protection resists moisture, so it lies flatter for a better-looking roof!

Deck-Armor™ Premium Breathable Roof Deck Protection combines exceptional **strength** and excellent **breathability** to help protect your home against roof rot and other costly damage!

- **Exceptionally Strong...** At least 600% greater tear strength than standard #30 felt!†
- **Revolutionary Breathable Technology...** Helps prevent inside moisture from becoming trapped within your roofing system—and possibly causing mold, mildew, and expensive structural damage.
- **Premium Construction...** Exceptionally durable, non-asphaltic construction will not rot or become brittle (unlike conventional asphalt felts, which can disintegrate over time).
- **Long-Lasting Protection...** Up to a Lifetime ltd. warranty when installed on Lifetime Shingle roofs.* (see back page)
- **Looks Better...** Unlike conventional asphalt felts, Deck-Armor™ Premium Breathable Roof Deck Protection resists wrinkling or buckling, so it lets your shingles lie flatter for a better-looking roof.

SHINGLE & ACCESSORY LTD. WARRANTY
Lifetime
LTD. WARRANTY TERM

† GAF trapezoidal tear strength testing per ASTM D4533.



DECKARMOR™
Premium **Breathable** Roof Deck Protection

Professional Installers Love Deck-Armor™ Roof Deck Protection

The exceptional walkability of Deck-Armor™ Premium Breathable Roof Deck Protection helps keep installers safer on the job!

Deck-Armor™ Premium Roof Deck Protection combines high tear resistance and nail pull-through with a special slip-resistant surface for exceptional walkability — even on steeper pitches!

Tear Resistant...

At least 600% stronger than standard #30 felt—less chance of tearing during installation

Less Chance Of Blow-Off...

214% higher nail pull-through strength than #30 felt keeps product in place



GAF trapezoidal tear strength (lbs) testing per ASTM D4533



GAF nail pull-through (lbs) testing per ASTM D3462

Installers' Best Choice

- **Safer...** Special slip-resistant surface provides enhanced walkability, even on steeper-pitched roofs.
- **Resists Wrinkling...** Unlike conventional asphaltic felts, Deck-Armor™ Roof Deck Protection resists wrinkling and buckling—and it will still remain flat.
- **Lightweight...** At 37 lb. (17 kg) per roll, it's nearly 1/3 the weight of a roll of #30 felt.
- **Faster Installation...** Extra-wide 54" (1.4 m) roll provides 50% more coverage per course than traditional 36" (914 mm) wide felts.
- **Cooler To Work With...** Light-blue surface is cooler in hot weather than conventional black felts.
- **Easier To Cut...** Spun-bound design is easier to cut than some other synthetic underlayments.
- **Avoids Downtime...** Will not become rigid in extreme cold weather or sticky in hot weather.

- **Versatile...** Recommended for use with asphaltic shingle roofing systems. May also be used with certain non-asphaltic roofing systems, such as metal, tile, wood, and slate.¹

¹ Install following the Deck-Armor™ Roof Deck Protection published application instructions. Contact GAF Technical Services at 1-800-ROOF-411 or visit gaf.com for acceptable non-asphaltic roofing systems and limited warranty coverage.

Note: Deck-Armor™ must be installed using plastic cap nails or staples with plastic caps; do NOT use staples or nails without caps.

Specifications (Nominal)

- UV-stabilized polypropylene construction resists UV degradation for up to 180 days²
- Approx. 10 squares/roll (excludes laps)
- Approx. 37 lb. (17 kg)/roll
- 54" (137 cm) wide, 223' (68 m) long
- Miami-Dade County Product Control approved
- Florida Building Code approved
- ICC-ES ESR-2808
- Meets or exceeds the physical requirements of ASTM D226 and D4869
- Meets UL Class A fire rating when used with UL Class A rated roof coverings

²Note: 180-day UV resistance refers to standardized testing conducted to ensure the product will not physically degrade when exposed to UV. It is NOT related to withstanding water, snow, or wind. While Deck-Armor™ Roof Deck Protection is water resistant, it is NOT waterproof. DO NOT USE Deck-Armor™ Roof Deck Protection as a temporary roof to protect property or possessions.

More Than Just Coverage
On Your Shingles!

Get Automatic
Lifetime Protection
On Your Entire GAF
Roofing System!*

When you install any GAF
Lifetime Shingle and at least
3 qualifying GAF accessories,
you'll automatically get:

- A Lifetime Ltd. warranty on your shingles and all qualifying GAF accessories!*
- Non-prorated coverage for the first 10 years*



GAF LIFETIME SHINGLES GAF COBRA ATTIC VENTILATION GAF ROOF DECK PROTECTION GAF LEAK BARRIER GAF STARTER STRIP SHINGLES GAF RIDGE CAP SHINGLES

SHINGLE & ACCESSORY LTD. WARRANTY
Lifetime
LTD. WARRANTY TERM

*See GAF Shingle & Accessory Ltd. Warranty for complete coverage and restrictions. The word "Lifetime" refers to the length of coverage provided by the GAF Shingle & Accessory Ltd. Warranty and means as long as the original individual owner(s) of a single-family detached residence (or the second owner(s) in certain circumstances) owns the property where the shingles and accessories are installed. For owners/structures not meeting the above criteria, Lifetime coverage is not applicable. Lifetime Ltd. warranty on accessories requires the use of at least three qualifying GAF accessories and the use of Lifetime Shingles.



The GAF Lifetime Roofing System has earned the prestigious Good Housekeeping Seal, which means that Good Housekeeping stands behind the products in this system. (Refer to Good Housekeeping Magazine for its consumer protection policy. Applicable in U.S. only.)

GAF
Quality You Can Trust...
From North America's
Largest Roofing Manufacturer!™

**Weather Watch[®]
Mineral-Surfaced Leak Barrier
Sell Sheet
RESUL103**

Updated: 5/15



*Quality You Can Trust... From
North America's Largest Roofing Manufacturer!™*

www.gaf.com

WEATHERWATCH®

Mineral-Surfaced **Leak Barrier**

Learn about
**Leak
Barriers**

*Help Protect Your Home
From Wind-Driven
Rain And Damaging
Ice Dams With A*

Leak Barrier

A Quality Leak Barrier Will:

Help prevent water penetration at the most vulnerable areas of your roof (at the eaves and rakes, in valleys, around chimneys, etc.).

WeatherWatch®, a quality Leak Barrier, will:

- Help protect your home from costly repairs due to wall and ceiling staining from leaks
- Help prevent leaks due to water damming in your gutters, wind-driven rain, and, in the North, damaging ice dams



Help Protect Your Home

- **The Codes Are Clear...** Protection against ice dams is *required* by most building codes* at eaves wherever the January average temperature is 25°F (3.8°C) or lower or where there is a possibility of ice forming in the eaves—i.e., the area labeled “North”

†In the “North,” building codes *require* the use of leak barrier at the eaves.



gaf.com

*Check local building codes for specifications in your area.

†Source: International Building Code (IBC) and International Residential Code (IRC).

WEATHERWATCH®

Mineral-Surfaced Leak Barrier

Homeowner's Best Choice

- **Better...** Fiberglass reinforcement helps resist wrinkling and buckling.
- **Meets Most Building Codes...** In the North, where leak barriers are required[†].
- **Peace Of Mind...** Up to a Lifetime Ltd. warranty when used on Lifetime Shingle roofs¹, up to a 25-year ltd. warranty when used on non-Lifetime Shingle roofs.¹



GAF WeatherWatch® EXCEEDS the following requirements of ASTM D1970

Property	Method	Requirement
Thickness (mils)	D5147	Min. 40
Tensile strength MD (lbf/in)	D2523	Min. 25
Tensile strength CMD (lbf/in)	D2523	Min. 25
Elongation at break, modified bitumen Portion – MD and CMD (%)	D2523	Min. 10
Adhesion to plywood at 75°F (23.9°C) (lbf/ft-width)	D903	Min. 12
Adhesion to plywood at 40°F (4.4°C) (lbf/ft-width)	D903	Min. 2
Thermal stability (mm)	D1204	Max. 3
Low temperature flexibility (-20°F) (-28.8°C)	D1970	Pass
Tear resistance MD (lbf)	D4073	Min. 20
Tear resistance CMD (lbf)	D4073	Min. 20
Moisture vapor permeance (U.S. perms)	E96 A	Max 0.1
Sealability around nail	D1970	Pass
Waterproof integrity after low temperature flexibility	D1970	Pass
Waterproof integrity of lap seam	D1970	Pass

Professional's Best Choice

- **Helps Eliminate Waste...** Special adhesive allows for one-time repositioning, but aggressively adheres over time.
- **Dependable...** Self-seals around nails or metal roofing fasteners.
- **Saves Labor...** Dual-side selvedge and split-back release film helps to speed installation.

[†] See WeatherWatch® and StormGuard® Limited Warranty for this product for complete coverage and restrictions.

Applicable Standards

- ICC-ES Evaluation Report (ESR 1322)
- Meets the performance criteria of ASTM D1970
- Miami-Dade County Approved
- State of Florida Approved
- UL Classified. See complete marking on product.

Nom. Product Specifications

1.5 Square Roll	
Roll length	50 ft (15.2 m)
Roll width	36 in (0.9 m)
Sq. feet per roll	150 sq ft (13.9 sq m)
2.0 Square Roll	
Roll length	66.8 ft (20.3 m)
Roll width	36 in (0.9 m)
Sq. feet per roll	200 sq ft (18.6 sq m)

More Than Just Coverage On Your Shingles!

Get Automatic Lifetime Protection On Your Entire GAF Roofing System!*

When you install any GAF Lifetime Shingle and at least 3 qualifying GAF accessories, you'll automatically get:

- A Lifetime Ltd. warranty on your shingles and all qualifying GAF accessories!*
- Non-prorated coverage for the first 10 years*



LIFETIME SHINGLES COBRA ATTIC VENTILATION ROOF DECK PROTECTION LEAK BARRIER STARTER STRIP SHINGLES RIDGE CAP SHINGLES



*See GAF Shingle & Accessory Ltd. Warranty for complete coverage and restrictions. The word "Lifetime" means as long as the original individual owner(s) of a single-family detached residence (or the second owner(s) in certain circumstances) owns the property where the shingles and accessories are installed. For owners/structures not meeting the above criteria, Lifetime coverage is not applicable. Lifetime Ltd. warranty on accessories requires the use of at least three qualifying GAF accessories and the use of Lifetime Shingles.

The GAF Lifetime Roofing System has earned the prestigious Good Housekeeping Seal, which means that Good Housekeeping stands behind the products in this system. (Refer to Good Housekeeping Magazine for its consumer protection policy. Applicable in U.S. only.)



Timbertex®

Sell Sheet

(RESHR102)

Updated: 2/16



*Quality You Can Trust...From
North America's Largest Roofing Manufacturer!™*

gaf.com

TIMBERTEX[®]

Premium Ridge Cap Shingles

Learn about
Ridge Cap
Shingles

*The Perfect Finishing Touch
For Your New Roof Should Be
A Protective And Distinctive*

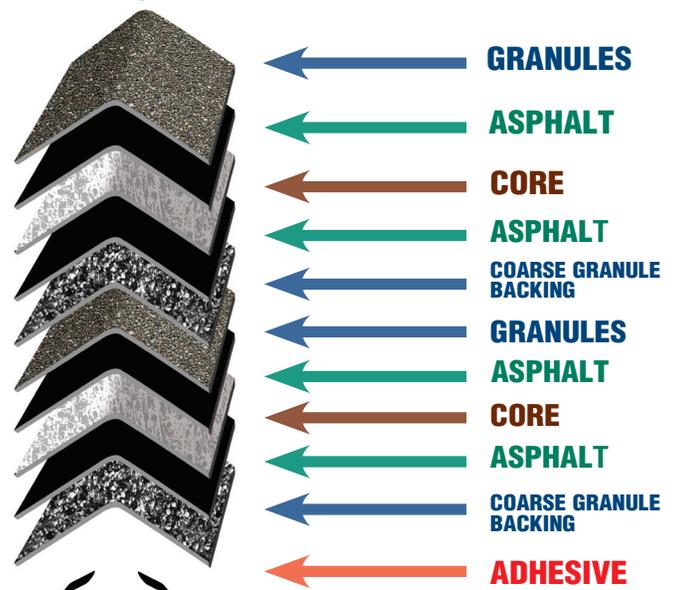
Ridge Cap Shingle

A Distinctive And Protective Premium Ridge Cap Shingle Will:

- Match the performance of your new roof (unlike using typical 20- or 25-year cut-up strip shingles as your ridge cap)
- Accentuate the natural beauty of your newly installed architectural shingle roof (or even add dimension and depth to a strip shingle roof)
- Offer multi-layer protection at the highest-stress areas of your roof (the hips and ridges)
- Provide a striking and higher-quality alternative to using cut-up strip shingles as your ridge cap

Timbertex[®] Premium Ridge Cap Shingles are a key part of the GAF Lifetime Roofing System and have even earned the prestigious Good Housekeeping Seal (applicable in U.S. only; see reverse).

Multi-Layer Protection For Your Home



gaf.com

TIMBERTEX®

Premium Ridge Cap Shingles

Your Best Choice:

- ✓ Up to a Lifetime Ltd. warranty on Lifetime Shingle roofs!*
- ✓ The perfect finishing touch for your GAF roof

Homeowner's Best Choice

- **Dramatic Look...** Extra-thick, double-layer design with massive 8" (20 cm) exposure is up to 195% thicker than strip shingles for a distinctive, upscale look
- **The Right Colors...** Unlike cut-up strip shingles, Timbertex® Premium Ridge Cap Shingles are factory designed to complement the color of GAF laminated shingles
- **Stays In Place...** Dura Grip™ Self-seal Adhesive seals each piece tightly and helps reduce the risk of shingle blow-off
- **StainGuard® Protection...** Helps ensure the beauty of your ridge cap shingles against unsightly blue-green algae*
- **Peace of Mind...** Up to a Lifetime Ltd. warranty when installed on Lifetime Shingle roofs*



Note: See www.gaf.com/ridgecapavailability for regional availability.

See What Timbertex® Can Do For Your Roof!



Professional's Best Choice

- **Easier to Install...** Improved pre-scored design makes hand-tearing pieces easier than ever—no cutting on the roof!
- **Saves Time...** Timbertex's 8" (20 cm) exposure means fewer pieces to install (vs. typical cut-up strip shingles)
- **Versatile...** 12" (30 cm) wide design fits easily over the most common-size ridge vents

Fast & Easy Installation!



Nominal Product Specifications

- 8" (20 cm) exposure
- Approx. 12" (30 cm) wide
- Each bundle covers approximately 20 lineal feet (6 lm)
- 5 bundles cover approximately 100 lineal feet (30 lm)
- 150 pieces per 100 lineal feet (30 lm) of coverage
- Approx. 2 nails per piece
- UL 790 Class A fire rated
- Meets ASTM D3161 Class F; ASTM D3018 Type 1; and ASTM D3462†
- CSA A123.5
- Miami-Dade County Product Control approved
- Florida Building Code approved
- ICC-ES ESR-1475



†Periodically tested by independent and internal labs to ensure compliance with ASTM D3462 at time of manufacture.

More Than Just Coverage On Your Shingles!

Get Automatic Lifetime Protection On Your Entire GAF Roofing System!*

When you install any GAF Lifetime Shingle and at least 3 qualifying GAF accessories, you'll automatically get:

- A Lifetime Ltd. warranty on your shingles and all qualifying GAF accessories!*
- Non-prorated coverage for the first 10 years*



LIFETIME SHINGLES COBRA ATTIC VENTILATION ROOF DECK PROTECTION LEAK BARRIER STARTER STRIP SHINGLES RIDGE CAP SHINGLES



*See GAF Shingle & Accessory Ltd. Warranty for complete coverage and restrictions. The word "Lifetime" refers to the length of coverage provided by the GAF Shingle & Accessory Ltd. Warranty and means as long as the original individual owner(s) of a single-family detached residence (or the second owner(s) in certain circumstances) owns the property where the shingles and accessories are installed. For owners/structures not meeting the above criteria, Lifetime coverage is not applicable. Lifetime Ltd. Warranty on accessories requires the use of at least three qualifying GAF accessories and the use of Lifetime Shingles.



The GAF Lifetime Roofing System has earned the prestigious Good Housekeeping Seal, which means that Good Housekeeping stands behind the products in this system. (Refer to Good Housekeeping Magazine for its consumer protection policy. Applicable in U.S. only.)

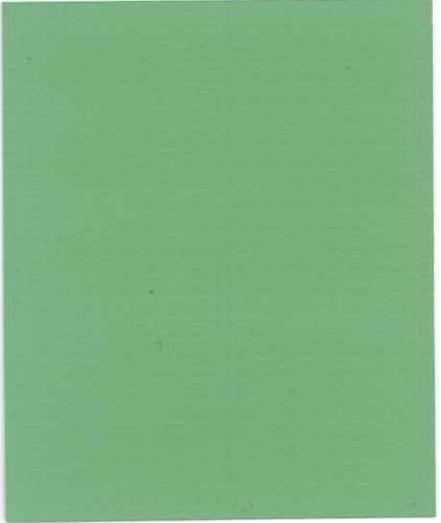
GAF Quality You Can Trust... From North America's Largest Roofing Manufacturer!™

gaf.com

**AWNING FABRIC
PATIO 500
539 BAY BLUE**

Patio500™ Awning Fabric

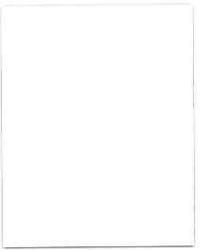
- 61 inches wide, 17.5 oz. per sq. yd.
- Vinyl laminated 100% Polyester
- Made with wick and craze resistant polyester weft-inserted warp knit scrim
- Exceptional resistance to UV, water and mildew
- Superior dimensional stability, tensile and tear strength
- Heat sealable and accepts many types of graphics: heat transfer films, heat-sealed inset fabric sewn-in inset fabric, silk screenings, hand painting and applique
- Pressure sensitive adhesive vinyl graphics not recommended.
- Flame resistant to standards of: California State Fire Marshal, F-121-02; UL-214.
- Classified: NPPA-701; ASTM-E-84, Class A; CPAI-84; MVSS-302
- 5-Year Limited Warranty (except #513 Clear)
- Patio500 is not recommended for backlit applications.



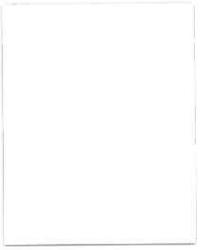
570 Summer Ivy
#858570



513 Clear
#858513



523 White
#858523



541 Designer White
#858541



524 Eggshell
#858524



522 Beige
#858522



538 Parchment
#858538



537 Champagne
#858537



540 Timber
#858540



528 Pewter
#858528



506 Slate Grey
#858506



515 Buff
#858515



566 Sunflower
#858566



504 Lemon
#858504



564 Teal
#858564



567 Jade
#858567



543 Spruce
#858543



514 Lime Green
#858514



510 Dark Green
#858510



562 Emerald
#858562



531 Prussian Teal
#858531



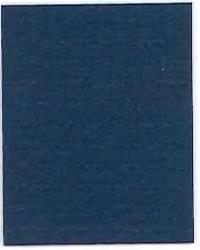
539 Bay Blue
#858539



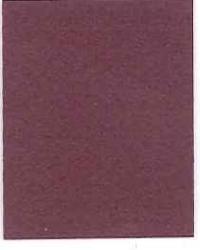
503 Royal Blue
#858503



518 Dusky Blue
#858518



536 Cobalt Blue
#858536



527 Burgundy
#858527



563 Plum
#858563



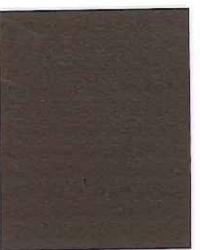
529 Bright Red
#858529



526 Terra Cotta
#858526



516 Brown
#858516



525 English Brown
#858525



508 Black
#858508

Patio500 Duplex Patterns

Solid topside with complementing solid color underside.



521 English Brown
#858521

Beige

DOOR HARDWARE

Door Hinge
Doors: D1, D2, D3, D4, D5
H1

Five Knuckle Heavy Weight Full Mortise Series

Recommended for use on high frequency and/or heavy wood or metal doors in schools, hospitals or other public buildings where heavy traffic is experienced.

- Heavy weight hinges should be used on all extra heavy doors or those exposed to high frequency use
- T4A3386- Stainless steel base or available in brass base material polished
- T4A3786- Steel base material
- For Beveled Edge, where doors are beveled on hinge side, specify T4A4386 or T4A4786
- For available finishes see page 29

Note: 8" x 6" and 8" x 8" have six bearings. Specify T6B3386 or T6B3786.

No.	ANSI Cross Reference	Base Material	Weight
T4A3386	A5111	Stainless	HVY
T4A3386	A2111	Brass	HVY
T4A3786	A8111	Steel	HVY

Specifications

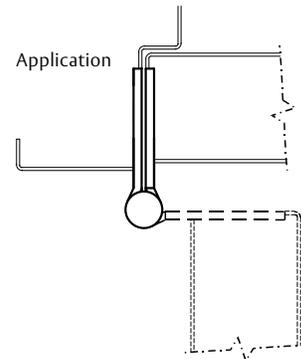
Inches	mm	Gauge	No. of Holes	Fasteners	
				Machine	Wood
4½" x 4"	114.3 x 101.6	.180	8	½ x 12-24	1¼ x 12
4½" x 4½"	114.3 x 114.3	.180	8	½ x 12-24	1¼ x 12
5" x 4½"	127 x 114.3	.190	8	½ x 12-24	1¼ x 12
5" x 5"	127 x 127	.190	8	½ x 12-24	1¼ x 12
6" x 5"	152.4 x 127	.203	8	½ x ¼-24	1¼ x 14
6" x 6"	152.4 x 152.4	.203	10	½ x ¼-20	1½ x 14
8" x 6"	203.2 x 125.4	.203	16	½ x ¼-20	1½ x 14
8" x 8"	203.2 x 203.2	.203	16	½ x ¼-20	1½ x 14

* Not available in brass base material.

** Available in steel only.

***Available in stainless steel only.

T4A3386
T4A3786



Options:

Code	Description
NRP	Non-Removable Pin
T4B	Ball Bearing
TCA	Concealed Bearing
RC	Round Corner – ¼" radius furnished unless specified otherwise
HT	Hospital Tip
BT	Ball Tip
ST	Steeple Tip
SSF	Safety Stud Feature
RB	Raised Barrel*
QC	ElectroLynx® Hinge – 2, 4, 6, 8, 10 or 12 wire available
CC	Concealed Circuit – 2, 4, 6, 8, 10 or 12 wire available
CC-18	Concealed Circuit – 2, 4, 6, 8 or 10 wire available (2-18AWG wires and the remainder 28AWG wires)
MM	Magnetic Monitoring

* Refer to page SP-3 for Raised Barrel.

ASSA ABLOY

The global leader in
door opening solutions

FM-13

**SDC UniFLEX 45 Universal
Electric Strike
Doors: D1, D5**



UniFLEX[®] 45 Universal Electric Strike/Door Release

UniFLEX[™] Series Multi-Frame-Application Electric Strike

- **Centerline Electric Strike**
- **4 Interchangeable Application Faceplates**
- **Full Monitoring is Standard, Including:**
Latched and Unlatched Status
Keeper Closed and Deadlocked or Unlocked
- **Keeper Open Status Optional**
- **Reversible Failsafe/Failsecure, no disassembly**
- **1/4" Horizontal Alignment Adjustment**
- **Plated Architectural Finishes Available**

The SDC UniFLEX Electric Strike is Centerline Latch Entry* strike designed for use with Cylindrical and Mortise locksets with up to 3/4" (19mm) throw latchbolts.. The quality construction makes the 45 series ideal for high traffic applications. The compact low profile design enables quick and easy installation where jamb space is limited.

***Centerline Latch Entry:** The latch must enter at the strike "Centerline" located exactly between the top and bottom of the strike faceplate. Refer to strike installation instructions and template to determine strike location prior to frame preparation for New and Retrofit installations. See SDC strike template and installation instructions for both retrofit and new installation details.

Features

- For 5/8" latch or 3/4" latch with 1/8" door gap
- Latch position status standard
- Keeper closed & deadlocked/unlocked status standard
- Field selectable failsecure - failsafe
- Field selectable voltage, 12/24V AC/DC
- 1/4" Horizontal alignment adjustment
- Low profile, 1-3/16" deep
- Plug-in wire connectors
- Mounting tabs
- Non-handed
- All stainless steel parts with durable die cast body for corrosion resistance
- Fewer moving parts for maximum life
- Stainless steel standard with square corner faceplate
- Aluminum standard with radius corner faceplate
- ANSI/ BHMA A156.31, Grade 2



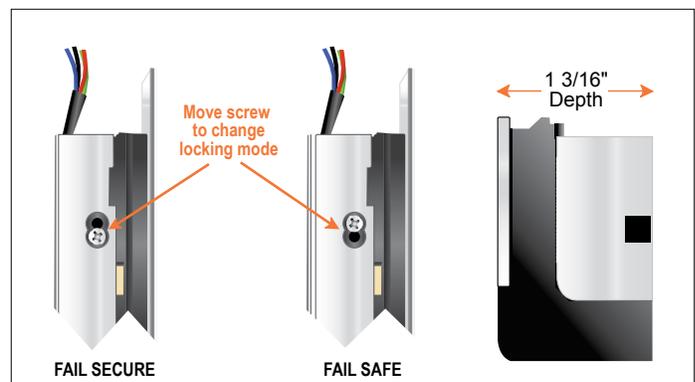
SDC Patented

US Patent: 7,540,542



UniFLEX[™] 45-A

Multi-Application strike with three faceplates for wood, aluminum and hollow metal frames



5 YEAR LIMITED WARRANTY

SECURITY DOOR CONTROLS

sdsecurity.com
service@sdsecurity.com



Price & Installation

Uni-Flex 45 Series Electric Strike

How to Order

Model



- 45-4S** 4-7/8" x 1-1/4" square corner faceplate
- 45-4R** 4-7/8" x 1-1/4" radius corner faceplate
- 45-6R** 6-7/8" x 1-1/4" radius corner faceplate
- 45-7R** 7-15/16" x 1-7/16" radius corner faceplate
- 45-A** Included: One 4-7/8" square corner faceplate
One 4-7/8" radius corner faceplate
One 7-15/16" radius corner faceplate

Latch Position Status Standard
Keeper Closed and Deadlocked/Unlocked Status Standard

Finish



- U** 630 Dull Stainless Steel (standard with 45-4S)
- V** 628 Dull Aluminum (standard with 45-4R, 45-6R and 45-7R)
- Y** 335 Black Anodized
- D** 606 Dull Brass
- H** 613 Oil Rubbed Bronze

Options



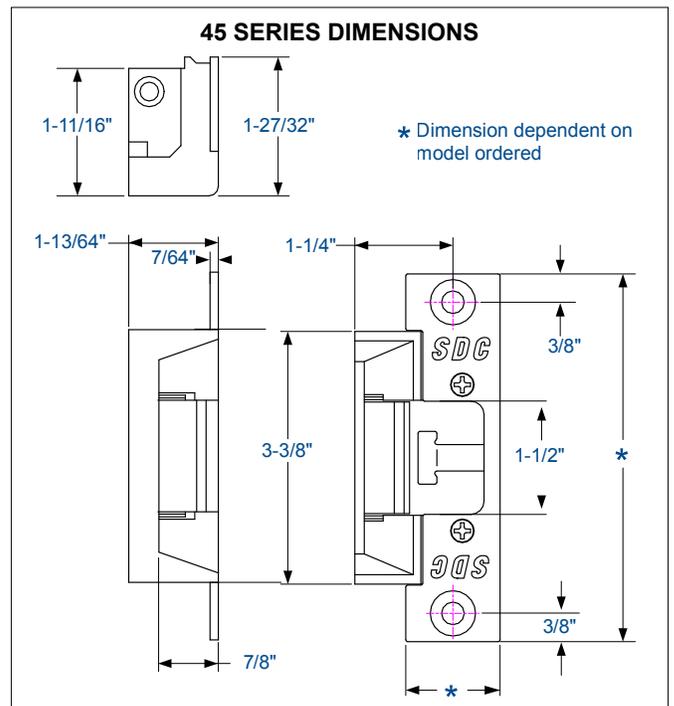
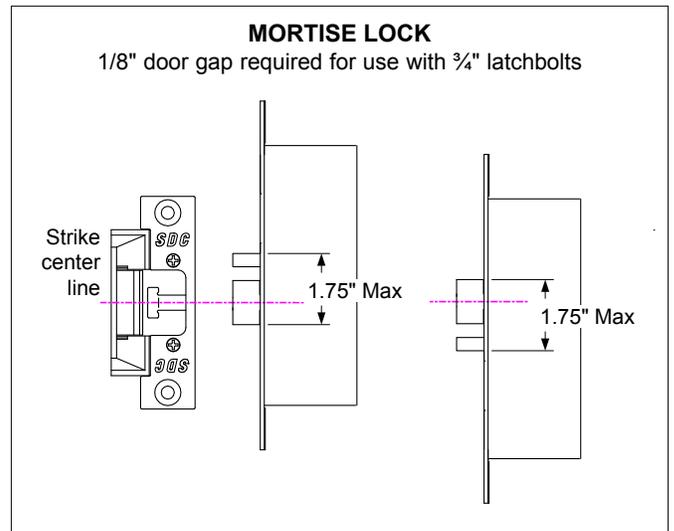
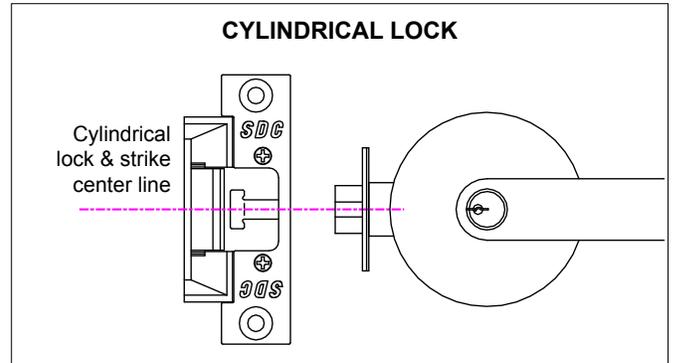
- K** Keeper open/closed status
- RMB** Buzzer 12/24V AC/DC operation

Electrical Specifications

Dual Voltage Coil: 200/100mA @ 12/24V DC
140/70mA @ 12/24V AC
Latch Position Status (std): SPDT, Dry 3Amp @ 30V
Keeper Closed & Locked Status (std): SPDT, Dry 3Amp @ 30V
Keeper Open/Closed Status (optional): SPDT, Dry 3Amp @ 30V

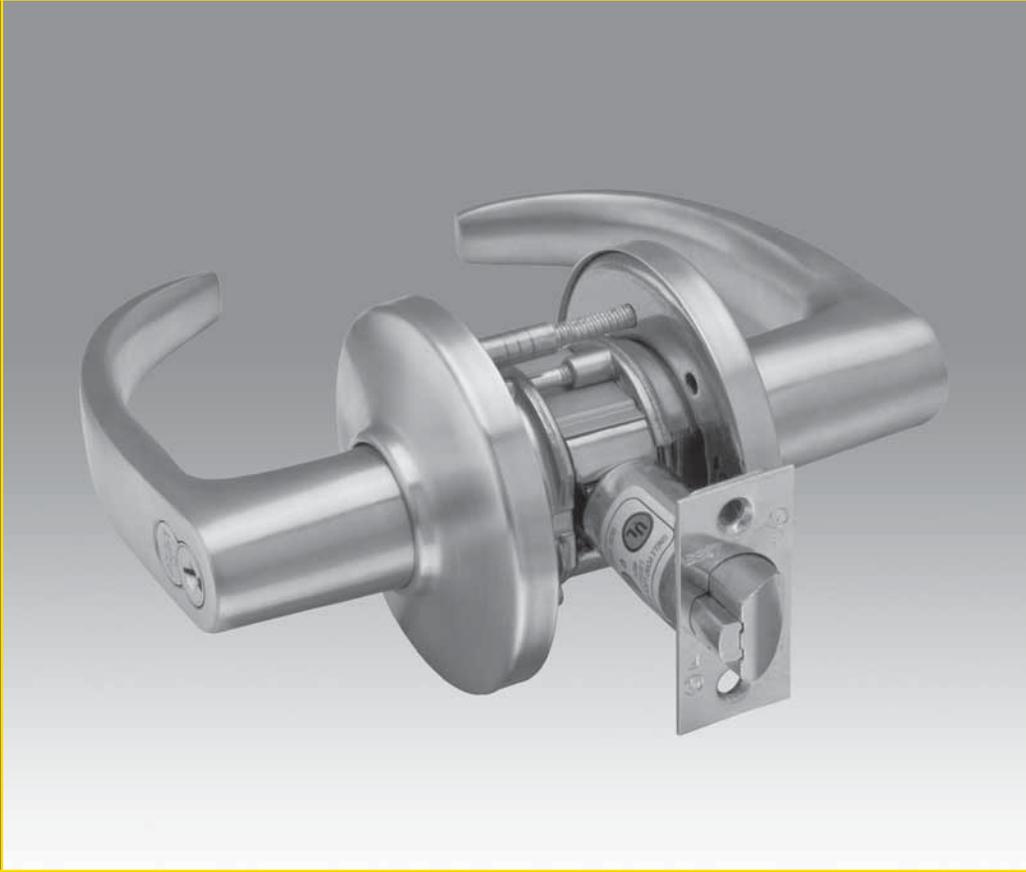
Dimensions

- 45-4S / 45-4R:** 1-1/4" W x 4-7/8" H x 1-3/16" D
(31.8 W x 124 H x 30.1 D mm)
- 45-6R:** 1-1/4" W x 6-7/8" H x 1-3/16" D
(31.8 W x 175 H x 30.1 D mm)
- 45-7R:** 1-7/16" W x 7-15/16" H x 1-3/16" D
(36.5 W x 201.6 H x 30.1 D mm)



Door Handle
Doors: D1, D2, D3, D4, D5
see drawing A602 for
types
HA1

STANLEY[®]
Security Solutions



9K SERIES

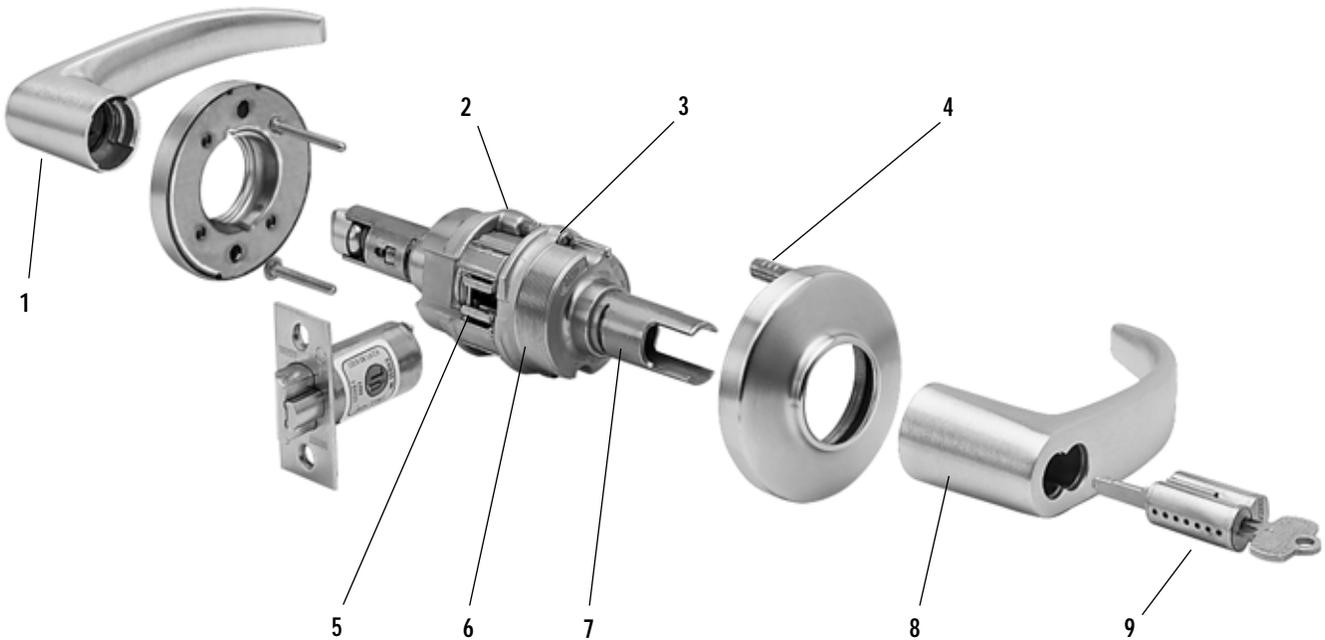
HEAVY DUTY LOCKS - LEVERS



TABLE OF CONTENTS		Page	Page
Features	2	Deadlocking Latches & Strikes	10
Specifications	3	Lever Features & Dimensions.....	5
How to Order.....	3	Function	6-9
Shipping Weights.....	4	Strike & Door Preparation	11
Lever Styles & Trim	4	9K Sample Specifications.....	11
CORMAX™ Patented Keying System.....	10	Service Equipment.....	12

FEATURES

1. For versatile applications, lever by knob trim variations are available.
2. Rose locking pin and rose assembly design offers great torque resistance. It prevents the locking pin from twisting, bending, or breaking under attack.
3. The innovative design of the slotted key release cam and locking lug assembly create maximum attack resistance. Even though damaged, the lock still allows key access. In addition, the lever is fully functional from the inside. The hub-mounted torsion spring and strong retractor springs help prevent lever sag and offer a smooth and snappy operation.
4. Strong through-bolt mounting studs increase torque resistance. Heavy rose liner material is highly attack resistant.
5. Strong retractor springs provide resistance to lever sag.
6. Zinc hubs with a shrouded locking lug, guaranteeing higher quality and increased torque resistance.
7. The outside lever sleeve is a seamless one piece construction made of a hardened steel alloy that provides additional reinforcement in the locking lug slot.
8. Lost Motion feature available allowing 45° lever rotation in either direction without engaging retractor assembly.
9. Interchangeable core allows for quick re-keying and customized masterkeying.



9K – EXPLODED



SPECIFICATIONS

ADA—Americans With Disabilities Act:

9K series – The design and operation of the BEST® cylindrical lock meets the intent of the standard for ANSI A117.1 section 404.2.6

Builders Hardware Manufacturers Association:

9K series – Listed by BHMA for A156.2, Series 4000, Grade 1.

Underwriters Laboratories®:

9K series – Listed by Underwriters Laboratories for use on 3 Hr, A label for single or double swinging doors.

Florida Building Code and Miami-Dade County Code:

9K series – 9/16" latch throw – Listed by Florida Building Code and Miami-Dade County at ± 75 PSF for single doors.

9K series – 3/4" latch throw – Listed by Florida Building Code and Miami Dade County at ± 80 PSF for single doors and ± 50 PSF for double doors.

California State Fire Marshal:

9K series – Listed with California State Fire Marshal.
9K series 14 & 15 lever conforms with California Title 24.

Backset – 2 3/4" standard, 3 3/4" and 5" available.

Chassis – Critical latch and chassis components are brass or corrosion-treated steel. 2 1/16" diameter to fit 2 1/8" hole in door. (Conforms to ANSI A115.2). Lost Motion feature available as an option. (see page 5 for options/features).

Door thickness – Available for 1 3/4" to 2 1/4" doors only.
Spacers available for 1 3/8" doors.

Roses – C – 3" Convex D – 3 1/2" Convex
 K – 3" Convex-no ring L – 3 1/2" Convex-no ring

Products protected by one or more of the following patents:
5,590,555 5,794,472 Other products patent pending.

Finish – (BHMA)	US	DESCRIPTION
605	3	bright brass
606	4	satin brass
611	9	bright bronze
612	10	satin bronze
613	10B	oxidized satin bronze, oil rubbed
618	14	bright nickel plated
619	15	satin nickel plated
622	19	flablack
625	26	bright chromium plated
626	26D	satin chromium plated
690	20	dark bronze

Antimicrobial Finish

626AM satin chrome plated with UltraShield™ antimicrobial protected coating



The Stanley Security Solutions UltraShield™ finish inhibits the growth of bacteria and other microbes on the surface of the hardware.

NOTE: Stanley's UltraShield™ option is recommended for use on any hardware application where product cleanliness is a high priority, i.e.: Hospital/Healthcare, Elderly Care, Education, Transportation, Food-Service, Hospitality.

Latch – Solid brass 9/16" throw. Front 2 1/4" x 1 1/8" beveled.

Lever handles – Lever handles are a high-quality zinc alloy. Trim components are brass or bronze. Body is approximately 5/8" in diameter; Handle is approximately 4 3/4" long (from center-line of chassis). #14 and #15 levers conform to California Administrative Code Title 19 and Title 24. All three styles of levers conform to the Illinois Accessibility Standard.

Mounting – In addition to standard door preparation (ANSI A115.2 for 1 3/4" doors), two additional holes are needed for through-bolts. Through-bolts require two 5/16" diameter holes located at 12 o'clock and 6 o'clock positions. A drill jig can be ordered to insure accuracy of the holes. (see KD303 page 5).

Projection on door – Approx. 2 3/4" when mounted on 1 3/4" door.

Strike – **STK:** Conforms to ANSI A115.2 (2 3/4" x 1 1/8" with curved lip & box). **S3:** Conforms to ANSI A115.2 for 1 3/4" doors (4 7/8" x 1 1/4" with curved lip). **S3-7/8:** Conforms to ANSI A115.2 for 1 1/4" doors (4 7/8" x 1 7/8" flat)

HOW TO ORDER

9K	3	7	AB	15	A	STK	626	
Series	Backset	Core Housing	Function Code	Lever Style	Rose Style	Strike Package	Finishes	Options
9K	3 – 2 3/4" 4 – 3 3/4" 5 – 5"	0– keyless 7– 7-pin housing accepts all BEST® cores	AB– entrance D– storeroom L– privacy N– passage R– classroom etc.	♿ 14– curved return ♿ 15– contour angle return ♿ 16– curved no return	C– 3" convex D– 3 1/2" convex K– 3" convex - no ring L– 3 1/2" convex - no ring	STK– 2 3/4" ANSI S3– 4 7/8" ANSI S3– 7/8- 7/8" flat strike	605 606 611 612 613 618 619 622 625 626 690	AL– abrasive lever LL– lead lined LM– lost motion RQE– request to exit** SH– security head screws TL– tactile lever 3/4– 3/4" throw latch 7/8" LTC– flat lip strike NOTE: specify inside (I), outside (O), or both (B) for AL,TL options
			pages 6-9	pages 4-5	pages 4-5	page11		page 5

*Handles are made from a zinc alloy, and have been plated to be equivalent in appearance to the finishes listed.

For information on 9K non-IC products please refer to BEST's non-IC keying products brochure.

**RQE option requires modification to chassis and is sold with assembly unit only.

SHIPPING WEIGHTS

The chart is the approximate shipping weight for the standard 9K functions locksets. This weight includes the weight of the lockset with the "#15" style lever, "K" style rose, latch, strike package, and box. Listed separately are the approximate weights for "with core" and "less core" shipments.

Lock Function Nomenclature	Case Quantity	Shipping Weight With core	Shipping Weight Less Core
Y	9		31 lbs.
N	9		40 lbs.
L,NX,P	9		40 lbs.
AB,D,E,H,HJ,R,T	9	42 lbs.	40 lbs.
C,G,IN,S,W	9	44 lbs.	40 lbs.

LEVER STYLES AND TRIM



14C



15C



16C



14D



15D



16D



14K



15K



16K



14L



15L



16L

Abrasive Lever Option

Besides complying with a wide variety of accessibility codes and ordinances, Best Access Systems lever handles are available with a special abrasive feature. Abrasive strip on the lever immediately identifies warnings on doors to hazardous areas for the blind.
To order: Designate "AL" on How to Order (page 3). Note: abrasive strip is available on all levers, except #14, #15, #16 levers in 613 finish.

Lost Motion Feature

The Lost Motion feature allows the lever handle to move 45 degrees from parallel to the horizontal plane without engaging the latchbolt assembly. When the lockset is in the locked mode, this feature makes over-torque or over-lever-age abuse more difficult to achieve.
To order: designate "LM" on How to Order (page 3).

Non IC Lever Option

The 9K heavy duty cylindrical lock may be adapted to existing keying systems by using a special retrofit lever and throw member that will accept 6 pin single shear-line cylinders from non BEST manufacturers. No internal modifications are required to adapt the 9K to cylinders from the following manufacturers: Corbin-Russwin, Medeco, Sargent, Schlage, Yale. Refer to BEST® non-IC keying products brochure for more details.

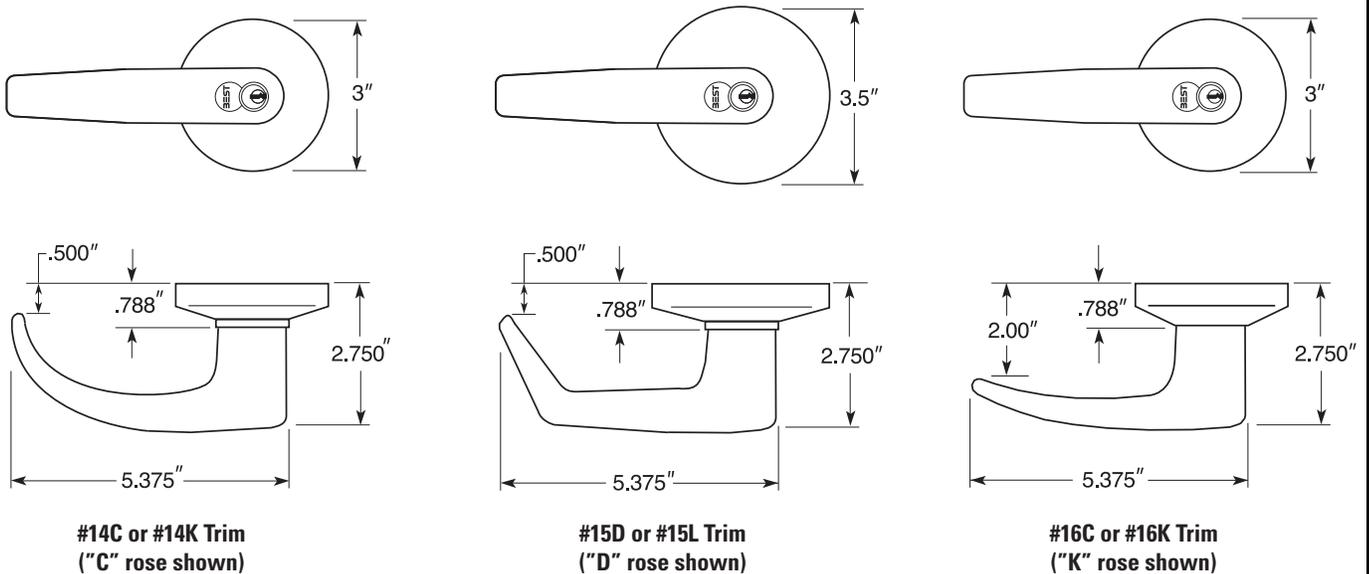
RQE Feature

The 9K lever handle cylindrical can be built to incorporate a request-to-exit (RQE) switch. A normally open switch provides momentary switch closure when the inside lever is rotated. RQE option requires modification to chassis and is sold with assembly unit only.
To order: designate "RQE" on How to Order (page 3).

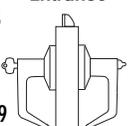
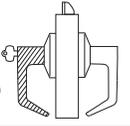
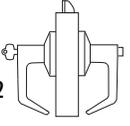
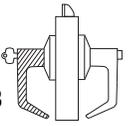
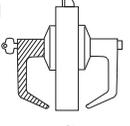
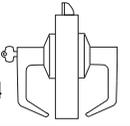
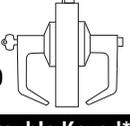
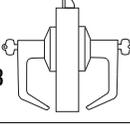
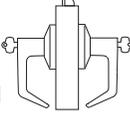
Tactile Lever Option

Tactile levers may be used in areas where improved grip is required or as a warning in hazardous areas. Grooves are machined into the back of the hand grasp portion of the lever to improve grip and/or to provide a sensory warning in hazardous areas. This option can be used for Blind, Safety or Accessibility applications. **To order:** Designate "TL" on How to Order (page 3).

LEVER & TRIM DIMENSIONS



FUNCTIONS

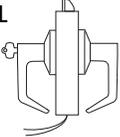
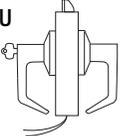
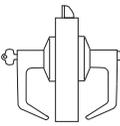
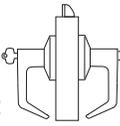
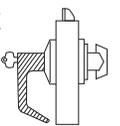
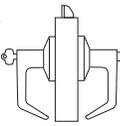
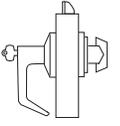
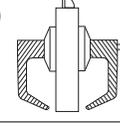
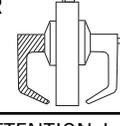
Function & Diag. (ANSI No.)	Description	Outside Lever		Inside Lever	
		Latch operated by	Locked by	Unlocked by	Locked by
Single Keyed					
Entrance AB F109 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever—only when the inside push button is out, Turning the key in the outside lever 	<ul style="list-style-type: none"> Pushing the inside button, Pushing and turning the inside button. Turning the button keeps the outside lever locked until the button is turned back 	<ul style="list-style-type: none"> Turning the key in the outside lever, (only when the button is not turned) Rotating the inside lever, (only when the button is not turned). Closing the door (only when the button is not turned) 	Cannot be locked	Always unlocked
Storeroom D F86 	<ul style="list-style-type: none"> Turning the key in the outside lever, Rotating the inside lever 	Always fixed	Cannot be unlocked	Cannot be locked	Always unlocked
Service Station E F92 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever—only when the inside push button is out. Turning the key in the outside lever 	<ul style="list-style-type: none"> Pushing the inside button, Pushing and turning the inside button. Turning the button keeps the outside lever locked until the button is turned back 	<ul style="list-style-type: none"> Turning the key in the outside lever, Rotating the inside lever, Closing the door—only when the button is not turned, Turning back the slotted button 	Cannot be locked	Always unlocked
Hotel Guest Room H F93  Indicator Included	<ul style="list-style-type: none"> Rotating the inside lever, Turning the key in the outside lever—only when the inside push button is out, Removing the core with a control key and using a special emergency key 	Always fixed	Key block feature is released by: <ul style="list-style-type: none"> Rotating the inside lever, Closing the door 	Cannot be locked	Always unlocked
Pushing the inside button projects an “occupied” indicator in the outside lever and blocks all operating keys.					
Hotel Guest Room HJ  No Indicator	<ul style="list-style-type: none"> Rotating the inside lever, Turning the key in the outside lever—only when the inside push button is out, Removing the core with a control key and using a special emergency key 	Always fixed	Key block feature is released by: <ul style="list-style-type: none"> Rotating the inside lever, Closing the door 	Cannot be locked	Always unlocked
Pushing the inside button blocks all operating keys, but no “occupied” indicator is projected.					
Classroom R F84 	<ul style="list-style-type: none"> Rotating the inside lever, Turning the key in the outside lever, Rotating the outside lever when not locked by key 	Turning the key in the outside lever	Turning the key in the outside lever	Cannot be locked	Always unlocked
Dormitory T F90 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever when not locked by key or push button 	<ul style="list-style-type: none"> Turning the key in the outside lever, Pushing the button on the inside lever 	<ul style="list-style-type: none"> Turning the key in the outside lever, Rotating the inside lever (only when locked by push button), Closing the door (only when locked by push button) 	Cannot be locked	Always unlocked
Double Keyed*					
Corridor C F88 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever when not locked by key, Turning the key in the outside lever 	Turning the key in the inside lever	Turning the key in the inside lever	Cannot be locked	Always unlocked
Storeroom * G F91 	<ul style="list-style-type: none"> Rotating the outside lever when not locked by key, Rotating the inside lever when not locked by key 	<ul style="list-style-type: none"> Turning the key in the inside lever, Turning the key in the outside lever 	<ul style="list-style-type: none"> Turning the key in the inside lever, Turning the key in the outside lever 	<ul style="list-style-type: none"> Turning the key in the inside lever, Turning the key in the outside lever 	<ul style="list-style-type: none"> Turning the key in the inside lever, Turning the key in the outside lever
Turning the key in either the inside or the outside, locks or unlocks both sides.					

*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code. In an emergency exit situation, failure to quickly unlock the inside lever could be hazardous or even fatal.

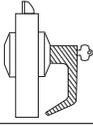
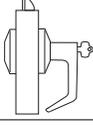
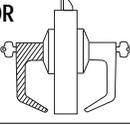
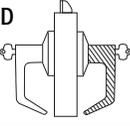
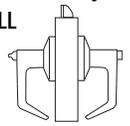
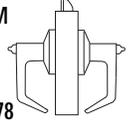
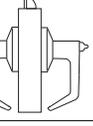
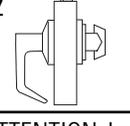
Function & Diag. (ANSI No.)	Description	Outside Lever		Inside Lever	
		Latch operated by	Locked by	Unlocked by	Locked by
Double Keyed (Continued)					
Intruder IN	<ul style="list-style-type: none"> Rotating inside lever, Rotating outside lever only when not locked by inside or outside key 	<ul style="list-style-type: none"> Turning key in the inside lever, Turning the key in the outside lever 	<ul style="list-style-type: none"> Turning key in the inside lever, Turning the key in the outside lever 	Cannot be locked	Always unlocked
Communicating* S F80	<ul style="list-style-type: none"> Turning the key in the inside lever, Turning the key in the outside lever, Rotating the inside or outside lever (if unlocked) 	Turning the key in the outside lever	Turning the key in the outside lever	Turning the key in the inside lever	Turning the key in the inside lever
Turning the key in either lever, locks or unlocks its own lever independently.					
Institutional* W F87	<ul style="list-style-type: none"> Turning the key in the inside lever, Turning the key in the outside lever 	Always fixed	Cannot be unlocked	Always fixed	Cannot be unlocked
Keyless					
Privacy L F76	<ul style="list-style-type: none"> Rotating the inside lever Rotating the outside lever only when the inside push button is out 	Pushing the inside button	<ul style="list-style-type: none"> Rotating the outside slotted button, Rotating the inside lever, Closing the door. 	Cannot be locked	Always unlocked
Passage N F75	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever 	Cannot be locked	Always unlocked	Cannot be locked	Always unlocked
Exit NX F89	Rotating the inside lever	Always fixed	Always fixed	Cannot be locked	Always unlocked
Patio P F77	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever only when the inside push button is out 	Pushing the inside button	<ul style="list-style-type: none"> Rotating the inside lever, Closing the door 	Cannot be locked	Always unlocked
Exit Y	Rotating the inside lever			Cannot be locked	Always unlocked
Single Dummy Trim 1DT	This is a single, surface-mounted lever for an inactive door or a non-latching door				
Double Dummy Trim 2DT	This is a through bolt mounted pair of matching levers for an inactive door or a non-latching door				

*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code. In an emergency exit situation, failure to quickly unlock the inside lever could be hazardous or even fatal.

FUNCTIONS

Function & Diag. (ANSI No.)	Description	Inside Lever			
		Latched by	Locked by	Unlocked by	Locked by
Electromechanical					
Electrically Locked DEL 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever only when power is off, Turning the key in the outside lever 	<ul style="list-style-type: none"> Applying 24 Volts DC. Outside lever remains locked only while power is on 	Switching off 24 Volts DC	Cannot be locked	Always unlocked
Electrically Unlocked DEU 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever only when power is on, Turning the key in the outside lever 	Switching off 24 Volts DC	<ul style="list-style-type: none"> Applying 24 Volts DC Outside lever remains unlocked only while power is on 	Cannot be locked	Always unlocked
Special					
Dormitory or Storeroom A  F81	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever only when inside turn button is in unlocked position, Turning the key in the outside lever 	Turning the inside button	Turning the inside button	Cannot be locked	Always unlocked
NOTE: Turn button must be manually rotated to unlock the outside lever.					
Office B  F82	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever only when inside push button is out, Turning the key in the outside lever 	Pushing the inside button		Cannot be locked	Always unlocked
NOTE: Push button is released by turning the key in the outside lever, OR rotating the inside lever. Closing the door does not release the push button.					
Closet or Storeroom DZ 	<ul style="list-style-type: none"> Turning the key in the outside lever, Turning the inside closet turn knob 	Always fixed	Cannot be unlocked	Closet turn knob cannot be locked	Closet turn knob always free
Entrance or Office EA 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever only when inside push button is out, Turning the key in the outside lever 	<ul style="list-style-type: none"> Pushing the inside button, Pushing and turning the inside button. Turning the slotted button keeps the outside lever locked until the button is turned back 	<ul style="list-style-type: none"> Turning the key in the outside lever, Rotating the inside lever, Turning the slotted button back 	Cannot be locked	Always unlocked
Closet or Storeroom RZ 	<ul style="list-style-type: none"> Turning the key in the outside lever, Turning the inside closet turn knob, Rotating the outside lever when not locked by key 	Turning the key in the outside lever	Turning the key in the outside lever	Closet turn knob cannot be locked	Closet turn knob always free
Special* XD 	Turning the key in the inside lever	Always fixed	Cannot be unlocked	Always fixed	Cannot be unlocked
Special* XR 	<ul style="list-style-type: none"> Turning the key in the inside lever, Rotating the inside lever when not locked by key 	Always fixed	Cannot be unlocked	Turning the key in the inside lever	Turning the key in the inside lever

*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code. In an emergency exit situation, failure quickly unlock the inside lever could be hazardous or even fatal.

Function & Diag. (ANSI No.)	Description Latch operated by	Outside Lever		Inside Lever	
		Locked by	Unlocked by	Locked by	Unlocked by
Special (Continued)					
Exit * YD 	Turning the key in the inside lever			Always fixed	Cannot be unlocked
Special * YR 	<ul style="list-style-type: none"> Turning the key in the inside lever, Rotating the inside lever when not locked by key 			Turning the key in the inside lever	Turning the key in the inside lever
Special * DR 	<ul style="list-style-type: none"> Rotating the inside lever only when not locked by key, Turning the key in the outside lever, Turning the key in the inside lever 	Always fixed	Cannot be unlocked	Turning the key in the inside lever	Turning the key in the inside lever
Special * RD 	<ul style="list-style-type: none"> Rotating the outside lever only when not locked by key, Turning the key in the outside lever, Turning the key in the inside lever 	Turning the key in the outside lever	Turning the key in the outside lever	Always fixed	Cannot be unlocked
Hospital Privacy LL 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever only when the inside push button is out 	Pushing the inside push button	<ul style="list-style-type: none"> Turning the turn button in the outside lever, Rotating the inside lever, Closing the door 	Cannot be locked	Always unlocked
Communicating* M F78 	<ul style="list-style-type: none"> Rotating the inside lever-only when the outside turn button is in the unlocked position, Rotating the outside lever-only when the inside turn button is in the unlocked position 	Turning the inside turn button	Turning the inside turn button	Turning the outside turn button	Turning the outside turn button
NOTE: Do not use this function for rooms that have no other entrance.					
Exit Q F83 	<ul style="list-style-type: none"> Rotating the inside lever, Rotating the outside lever-only when the inside turn button is in the unlocked position 	Turning the inside turn button	Turning the inside turn button	Cannot be locked	Always unlocked
Closet Z 	<ul style="list-style-type: none"> Rotating the outside lever, Turning the inside closet turn knob 	Cannot be locked	Always unlocked	Closet turn knob cannot be locked	Closet turn knob is always free

*ATTENTION: Locksets that secure both sides of the door are controlled by building codes and the Life Safety Code. In an emergency exit situation, failure to quickly unlock the inside lever could be hazardous or even fatal.

CORMAX™ PATENTED KEYING SYSTEM

BEST® CORMAX™ is the premier patented keying system offered by Stanley Security Solutions. CORMAX will meet your needs for security, key control, and convenience. A simple solution with no compromising allowed.

CORMAX is the upgrade path for existing BEST Standard, Premium, and MX8 customers; and it is an essential element of non-residential access control as security administrators strive to eliminate the unauthorized duplication of keys.

CORMAX offers the following features and benefits:

- A long-term US utility patent that guarantees the extended useful life of the system through 2027.
- A second, independent locking mechanism that utilizes a patented set of built-in side pins to provide higher security.
- Several levels of geographical exclusivity, including national exclusivity, are available via the patented side pin feature.
- CORMAX cores and keys are available exclusively through Stanley sales offices. Key blanks are only sold to individuals authorized by the customer to ensure key blanks do not end up in the possession of unauthorized personnel either inside or outside the customer's facility.
- CORMAX cores are certified to meet the security, safety, and reliability requirements of BHMA A156.5 Grade 1.
- Picking and drilling resistance options are available if higher levels of security are desired.
- Complete factory masterkeying service offered, and at no charge with purchase of BEST locksets and PHI exit devices.
- Keyways are organized in families of four keyways each, with double-milled and quad-milled key levels to facilitate the design of masterkey systems in multi-building campuses.
- BEST CORMAX cores are compatible with all existing BEST interchangeable core housings, eliminating the need for new or modified locksets.



CORMAX™
Patented Keying System

DEADLOCKING LATCHES & STRIKES



8KL3 Deadlocking Latch

Bolt throw – $\frac{9}{16}$ "
Backset – $2\frac{3}{4}$ "
Front – $2\frac{1}{4}$ " x $1\frac{1}{8}$ " beveled.
Tube – To fit 1" diameter hole in door edge.
To order: (with unit) designate "9K3" on How to Order (page 3).
To order: (without unit) designate "8KL3-SL" (Spring Latch) or DL (Deadlocking Latch) and finish.



8KL4 Deadlocking Latch

Bolt throw – $\frac{9}{16}$ "
Backset – $3\frac{3}{4}$ "
Front – $2\frac{1}{4}$ " x $1\frac{1}{8}$ " beveled.
Tube – To fit 1" diameter hole in door edge.
To order: (with unit) designate "9K4" on How to Order (page 3).
To order: (without unit) designate "8KL4-SL" (Spring Latch) or DL (Deadlocking Latch) and finish.



8KL5 Deadlocking Latch

Bolt throw – $\frac{9}{16}$ "
Backset – 5"
Front – $2\frac{1}{4}$ " x $1\frac{1}{8}$ " beveled.
Tube – To fit 1" diameter hole in door edge.
To order: (with unit) designate "9K5" on How to Order (page 3).
To order: (without unit) designate "8KL5-SL" (Spring Latch) or DL (Deadlocking Latch) and finish.



8KS3-7/8 Flat Strike

Dimension: Conforms to ANSI A115.2 for $1\frac{3}{4}$ " doors ($4\frac{7}{8}$ " x $1\frac{1}{8}$ " flat)
To order: (with unit) designate "S3-7/8" on How to Order (page 3).
To order: (without unit) designate 8KS3-7/8 and finish.



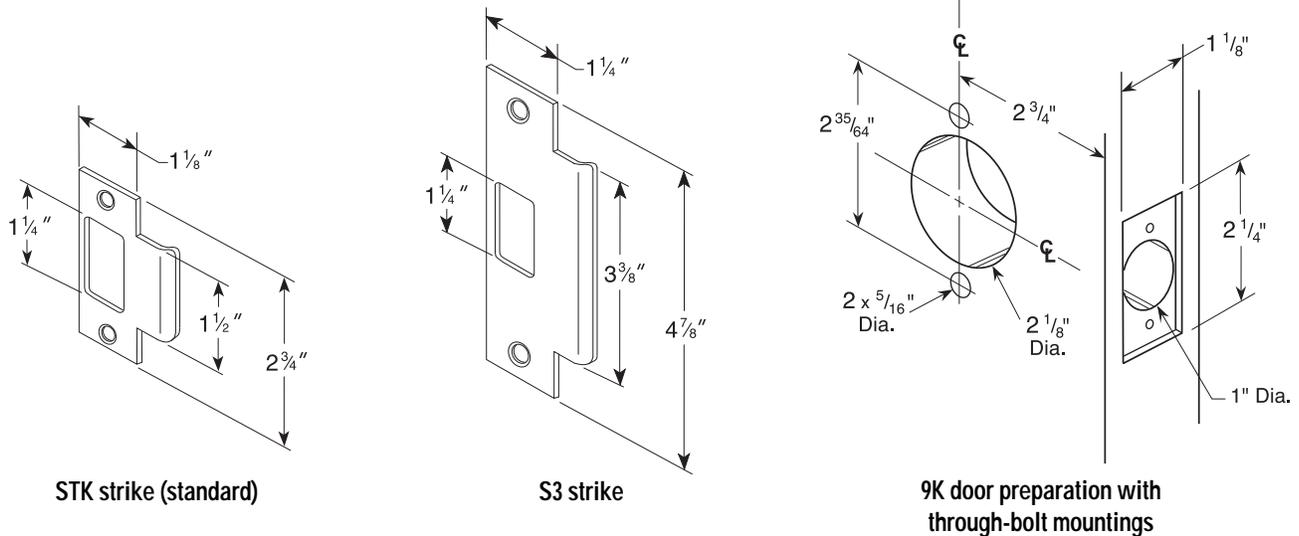
8KS3 Strike

Dimension: Conforms to ANSI A115.2 for $1\frac{3}{4}$ " doors ($4\frac{7}{8}$ " x $1\frac{1}{4}$ " with curved lip).
To order: (with unit) designate "S3" on How to Order (page 3).
To order: (without unit) designate 8KS3 and finish.



8KS2 Strike (Supplied Standard)

Dimension: Conforms to ANSI A115.2 for $1\frac{3}{8}$ " doors ($2\frac{3}{4}$ " x $1\frac{1}{8}$ " with curved lip and box).
To order: (with unit) designate "STK" on How to Order (page 3).
To order: (without unit) designate 8KS2 and finish.



SAMPLE SPECIFICATION ACCEPTABLE MANUFACTURERS

A. Locksets and Latchsets

Stanley/BEST - No Substitution.

- 1.Locksets and latchsets: ANSI A156.2, Series 4000, Grade 1 UL listed, extra heavy-duty cylindrical type.
- 2.Backset 2 3/4 inches (70mm)
- 3.Interchangeable core 7-pin: [Restricted keyway] [Patented] [Standard] [_____].
- 4.Locksets to have anti-rotational studs that are through-bolted.
- 5.Keyed lever with no exposed keeper hole.
- 6.Each lever to have independent spring mechanism designed to control lever only.
- 7.Outside lever sleeve seamless, 1-piece construction, hardened steel alloy.
8. Keyed Lever: Removable only after core is removed, by authorized control key, to allow access to knob keeper
- 9.Hub, side plate, anti-rotational studs 1-piece casting with shrouded locking lug.

B. Keys and Keying

A.Cylinders: 7-pin, interchangeable core and keyed into a [New] [Existing] factory registered Grand Masterkey System with a [Standard] [Restricted] [Patented] keyway.

1. Acceptable Material: Cylinders as manufactured by Stanley/BEST.

B.Provide construction cores and keys during construction period. Construction control and operating keys and cores are not part of permanent keying system or furnished on same keyway (or key section) as permanent keying system.

C.Permanent Keys and Cores: Prepare permanent cores and keys in accordance with keying schedule. [Stamp with applicable key mark for identification.] [Do not stamp.] [_____].

D.Provide Grand Masterkeys, Masterkeys and other Security Keys.

E. Furnish keys in the following quantities:

1. [4] [_____] each Grand Masterkeys.
2. [4] [_____] each Masterkeys per set.
3. [2] [_____] each Change keys each keyed core.
4. [6] [_____] each Construction masterkeys.
5. [2] [_____] each Control keys.
6. Install permanent cores in locksets.

F. Return construction cores to [(Stanley/BEST) factory representative] [Hardware manufacturer's representative].

SERVICE EQUIPMENT

KD304A Boring Jig Kit

The KD304A jig kit is made for boring cut-outs in wooden doors for Fed. Spec. 160 and 161 series cylindrical/tubular locksets, doors 1 3/8" to 2 1/4" thick. The KD304A kit includes the boring jig (to drill wood doors for 2 3/8", 2 3/4", 3 3/4", and 5" backsets), a quick-release adaptor for 3/8" drill chuck, a 2 1/8" bit, and a 1" diameter x 9" bit.



KD304A parts



KD304A with case

The following kit items can also be purchased separately.

KD309 – 2 1/8" bit

KD318 – 1" dia. x 9" bit

KD319 – 3/8", quick release adaptor

To order complete kits specify: KD304A Kit

KD312 and KD315 Face Plate Marking Chisel and KD325 Strike Plate Location Pin

The KD315 face plate marking chisel (which locates the mortising for the faceplate) and the KD325 strike locating pin (which centers the strike for proper installation) and is used for Fed. Spec. 161 cylindrical lockset, (1 1/8" x 2 1/4"), and BEST® series 82T & 83T tubular locks. The KD312 face plate marking chisel is available for Fed. Spec. 160 (1" x 2 1/4") preparation.

To order specify:

KD312– face plate marking chisel 1" (160)

KD315– face plate marking chisel 1 1/8" (161)

KD325– strike plate locating pin



KD315
(Fed. Spec. 161)



KD325

KD303 Through-Bolt Drill Jig

Special accessory jig aids in aligning 5/16" holes for through-bolt mounting. Install the latch first, then insert jig in 2 1/8" bored hole, align with door edge and drill with 5/16" drill bit.

To order specify: KD303.



KD303-9K

KD317 Spanner Wrench and KD340 Spring Tool

All 9K locksets require the use of KD317 spanner wrench for door removal. This tool is included 1 per every 9 locksets with your order. If more are needed, desnate KD317 on your order. The KD340 lever return spring tool with its unique design feature is used when replacing the 9K lever return spring.

To order specify: KD340.



KD317
Spanner Wrench



KD340
Spring Tool

For more information on Stanley Security Solutions' products, services, and office locations visit our web site at www.stanleysecuritysolutions.com

Product information contained in this catalog has been compiled and presented with as much care and completeness as is reasonably possible. Errors or mistakes may be present, and in many cases, reliance has been placed on information supplied by other manufacturers which may be in error or which may be subject to changes or modifications by the manufacturer without notice and without obligation. Therefore, no guarantee can be made or should be assumed or implied with regards to product information contained in this catalog.



Stanley Security Solutions, Inc.

6161 E. 75th Street Indianapolis, Indiana 46250

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10M 113
BAS008

Card Reader
Doors: D1, D5

ProxPoint® Plus Reader

125 kHz Proximity

Value Priced Proximity Card Reader • 6005



ACCESS reliability.

Application

HID's ProxPoint® Plus reader combines multiple configuration options with an attractive, inconspicuous design and economical price. Its secure potted electronics are ideal for both indoor and outdoor applications.

Features

- ▶ Features a beeper and multicolor LED which can be host-and/or locally controlled.
- ▶ Enables various beeper and LED configurations, depending on individual site requirements.
- ▶ Can read HID cards with formats up to 85 bits.
- ▶ Designed for mounting directly onto metal with no change in read range performance.
- ▶ Available with either Wiegand or Clock-and-Data (magnetic stripe data) output.
- ▶ Compatible with all standard access control systems.
- ▶ Aesthetic design available in two cover designs and in four colors to match any decor.
- ▶ Includes multilingual installation manual.

Mounting	Unobtrusive design can be mounted directly onto metal such as door mullions.
Audiovisual Indication	Audiovisual indication: when a proximity card is presented to the reader, the red LED flashes green and the beeper sounds. The multicolor LED and beeper can also be controlled individually by the host system.
Diagnostics	On reader power-up, an internal self-test routine checks and verifies the setup configuration, determines the internal or external control of the LED and beeper, and initializes reader operation. An additional external loop-back test allows for the reader outputs and inputs to be verified without the use of additional test equipment.
Indoor/outdoor Design	Sealed in a rugged, weatherized polycarbonate enclosure designed to withstand harsh environments, providing reliable performance and a high degree of vandal resistance.
Easily Interfaced	Wiegand output model interfaces with all existing Wiegand protocol access control systems. Clock-and-Data (magnetic stripe) model interfaces with most systems that accept magnetic stripe readers.
Security	Recognizes card formats up to 85 bits, with over 137 billion unique codes.
Warranty	Lifetime warranty against defects in materials and workmanship (see complete sales policy for details).
Part Numbers	Base Part No.: 6005B Wiegand Interface Base Part No.: 6008B Clock-and-Data Interface
Description	Tri-State LED, Pigtail Connection
Options	<ul style="list-style-type: none"> • CLASSIC series cover in gray, beige, black or white (or) • Designer series cover in grey, wave blue, black or white • custom label • custom embossing in housing <p>(Please see "How to Order Guide" for a description of options and associated part numbers).</p>

Typical Maximum* Read Range

ProxCard® II card - up to 3" (7.6 cm)
 ISOProx® II card - up to 2.5" (6.35 cm)
 DuoProx® II card - up to 2.5" (6.35 cm)
 Smart ISOProx®/DuoProx® II cards - up to 2.5" (6.35 cm)
 Proximity & MIFARE® card - up to 2.5" (6.35 cm)
 ProxCard® Plus card - up to 1.0" (2.5 cm)
 ProxKey® II keyfob - up to 1.5" (3.8 cm)
 MicroProx® Tag - up to 2" (5.1 cm)
 *Depending on local installation conditions.

Dimensions

3.135" x 1.720" x 0.660" (7.96 x 4.37 x 1.68 cm)

Material: Polycarbonate UL 94

Power Supply

5-16 VDC
 Linear power supplies are recommended.

Maximum Current Requirements

Current (DC)
 Average 30 mA, Peak 75 mA

Operating Temperature

-22° to 150° F (-30° to 65° C)

Operating Humidity

0-95% relative humidity noncondensing

Transmit Frequency: 125 kHz

Weight: 2.7 oz. (75 gm)

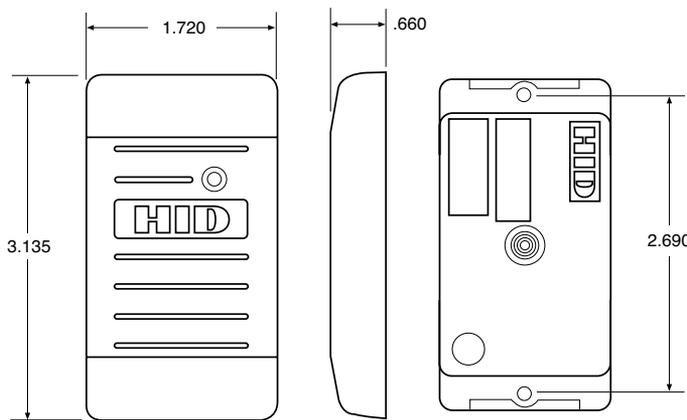
Environmental: IP55

Certifications

UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), C-tick (Australia, New Zealand), SRRC (China), MIC (Korea), NCC (Taiwan), MIC (Japan), iDA (Singapore), RoHS

Cable Distance

Wiegand or Clock-and-Data interface:
 500 feet (150 m)
 Recommended cable is ALPHA 1295 (22 AWG) 5 conductor stranded with overall shield or equivalent.



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About BarcodesInc

Who We Are

BarcodesInc is North America's leading provider of barcode and mobile computing solutions. We are a leading provider of barcode and mobile computing solutions. We are a leading provider of barcode and mobile computing solutions.

We Owe Our Success To You

Our success is due to the support and trust of our customers. We are committed to providing the highest quality products and services to our customers.

Why Choose BarcodesInc?

Dedicated Account A UbU Yf

Our Account Managers will not compromise when it comes to providing you top-notch service. Your Account Manager is the primary point of contact for your business and makes it a priority to get to know you, your company and all your needs.

Highly-Trained Technical Support

Our technical staff has the broadest knowledge and every significant certification in the industry. One of our friendly experts is always available to suggest products and solutions for any situation.

Incredible Value

Our purchasing power means big savings for you. Whatever your project, our team will work hard to deliver a solution that fits your budget.

Largest Inventory in the Industry and Same-Day Shipping

Whatever your barcoding, mobile computing, or printing needs, we will fill your order and ship it the same day.

Premier Access to Top Manufacturers

BarcodesInc maintains strong strategic partnerships with the leading manufacturers in barcoding, mobile computing, printing and RFID.

Responsive Customer Service

Every phone call and email is responded to promptly, completely and accurately by our customer service team.

Easy Returns

Damaged, defective or incorrectly ordered goods may be returned without hassle.

BRANDS



AND MORE

Mechanical Closer (door)
Doors: D1, D4, D5
MC1

8000 SERIES

Architectural Door Closer



Norton[®]
ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions

OVERVIEW

The 8000 Series Door Closers offer the ideal combination of appearance, reliability and durability in today's market. With features such as staked valves, precise valve adjustment and a complete range of arm and cover options, this closer can meet virtually any application challenge.

Features

- Exceeds 15 million cycles (witnessed and verified by UL)
- Adjustable spring sizes 1 through 6
- Tri-Style® packaging standard (regular arm, top jamb and parallel arm mounting)
- Non-handed
- Staked valves
- Cast aluminum body
- Rack and pinion design
- 1-1/4" (32mm) diameter piston
- 5/8" (16mm) diameter pinion journals
- 2-1/8" (54mm) projection (standard covers)
- All standard arm applications (with slim, full or metal covers) allow doors to swing 180 degrees, conditions permitting
- Full size template
- Metal, architectural plastic or architectural metal covers (8501 only)
- Lead lined metal cover - suffix MLL
- Application specific arms: Regular (S), Top Jamb (J) and Parallel (P)
- Heavy-duty arms; Regular Rigid, Parallel Rigid, CloserPlus®, CloserPlus Spring™, Unitrol®
- Slide Tracks: push or pull side mounting
- 25-year limited warranty

Functions

- Standard, separate and independent, latch, sweep and backcheck intensity valves
- Delayed action

Features	8301	8501
Adjustable spring sizes 1 through 6	X	X
Tri-Style® packaging standard (regular arm, top jamb and parallel arm mounting)	X	X
Slim Line Cover	X	
Full cover		X

TABLE OF CONTENTS

Overview 2-3

How to Order 4

Fasteners/Finishes 5

Features 6

Optional Features 6-7

Suggested Specifications 8

Applications 9-12

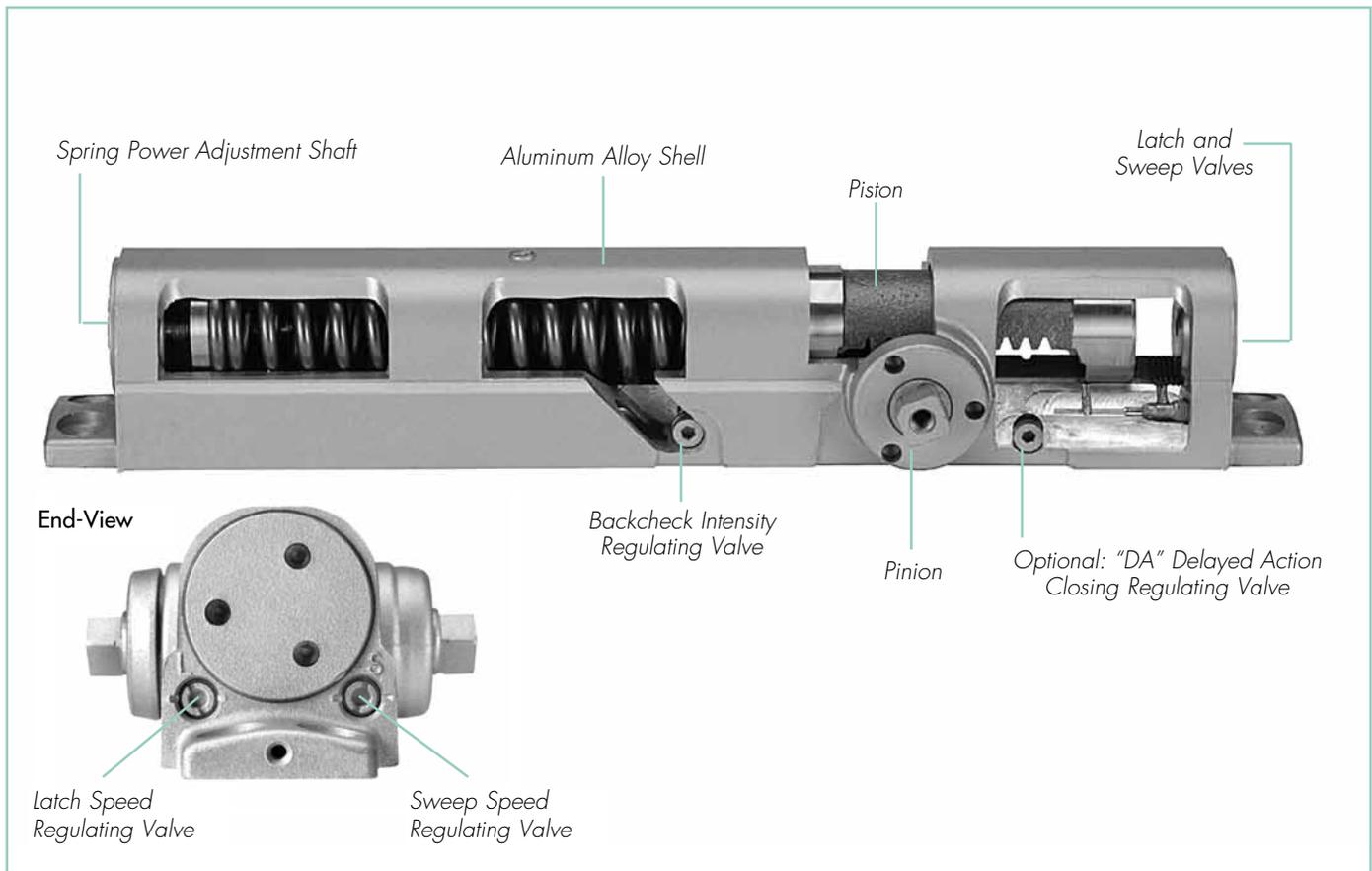
Technical Details 13-25

Accessories 26-38

Parts List 38-50

OVERVIEW

Cutaway View



COMPLIANCE STANDARDS

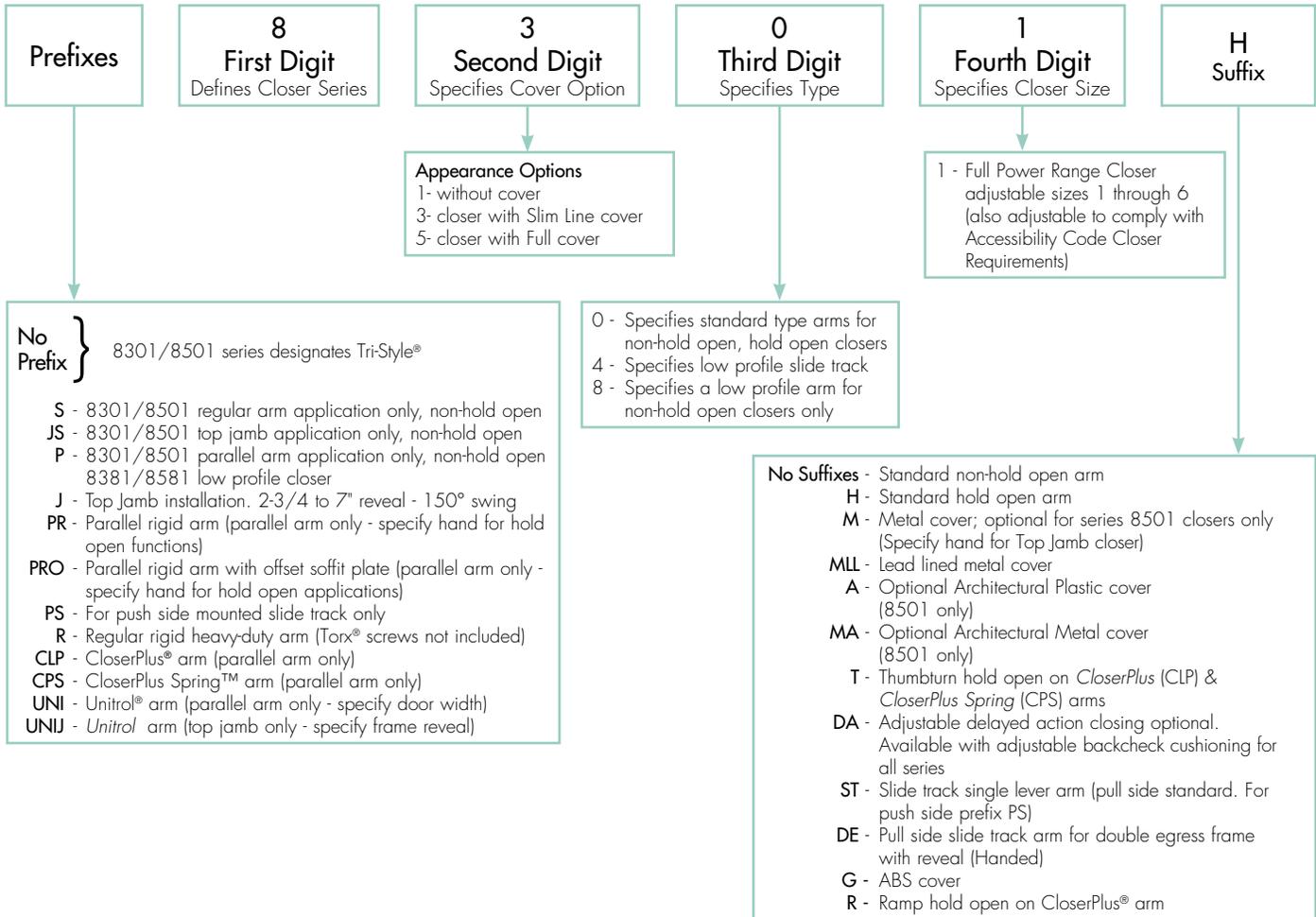
- ANSI/BHMA A156.4, Grade 1 certified 
- UL / cUL listed for use on fire rated doors 
- UL10C listed for positive pressure fire test
- 8301 and 8501 door closers are designed to comply with requirements for the Americans with Disabilities Act (A.D.A) and ANSI standard A117.1 
- This product is manufactured in an ISO 9001 facility

CAUTION: Door Closers for Low Opening Force Applications:

Door closers installed in openings required to meet the requirements of The Americans with Disabilities Act or ANSI/BHMA Standard A117.1, when adjusted to meet those requirements, may not provide adequate closing power to dependably close and latch the door.

HOW TO ORDER

For optimum protection of door and frame assemblies, always use auxiliary wall, floor, or overhead door stop.



Notes:

- Warranty becomes void if door closer is installed on the exterior side of a door in the exterior wall of a building.
- It is strongly recommended, and required on fire door assemblies, that doors having a door closer be hung on ball bearing or anti-friction hinges or pivots; unless an alternate method is identified in the door manufacturer's listing.
- Failure to use the correct type and size fasteners may void factory warranty.
- Fasteners for fire/smoke door assemblies must conform to NFPA 80. In some applications additional fasteners may be mandated by NFPA 80 that are not shipped with standard Norton product, such as sleeve-nuts/sex nuts or through-bolts and grommet nuts.
- Sizing charts provided on pages 13-25 are based on 1-3/4" (44mm) x 7" (2.13m) standard weight doors swinging to 110°. Other conditions (such as door height or weight; or wind/draft conditions) may require a larger size closer.

FASTENERS

Type	Description	Arm								
		RA	PA	TJ	Low Profile	PR	CLP / CPS	UNI	UNI-J	Slide Track
DOOR										
SDST	Self Drilling Self Tapping	S	S	S	S	S	S	S	O	O
MS	Machine Screw	S	S	S	S	S	S	S	S	S
SN	Sleeve Nut/Sex Nut	O	O	O	O	S	S	S	S	S
TBGN	Through-Bolts & Grommet Nuts	O	O	O	O	O	O	O	O	O
SMS	Sheet Metal Screws	O	O	O	O	O	O	O	O	O
Torx®	Torx Drive Security Screw	O	O	O	O	O	O	O	O	O
FRAME										
SDST	Self Drilling Self Tapping	S	S	S	S	S	S	S	S	S
MS	Machine Screw	S	S	S	S	S	S	S	S	S
SMS	Sheet Metal Screws	O	O	O	O	O	O	O	O	O
Torx	Torx Drive Security Screw	O	O	O	O	O	O	O	O	O

S = standard; O = optional

SN are for use on unreinforced hollow metal doors or to prevent any hollow metal door from collapse/dimpling. They can also be used for thru bolting on wood doors. SN are supplied for 1-3/4" (44mm) thick doors unless specified for 2-1/4" (57mm) thick doors.

TBGN are an alternative to SN for wood doors. TBGN are supplied standard for 1-3/4" (44mm) thick doors. They can be specified for 1-3/8" (35mm) thick doors.

SMS - when specified, closer will be packed with sheet metal screws for the door AND sheet metal screws plus machine screws for the frame.

TORX screws with security pin are standard with Security Door Closers. Torx may be specified for all other series applications. Torx are only available with machine screw threads. Sheet metal screw threads or wood screw threads are not available.

Note: To order special fasteners with closers, specify model number x fastener (Ex: 8501 x 689 x TBGN)

FINISHES

Norton offers waterborne acrylic, polyester powder coat and plated finishes. Custom finishes are available on special order. A sample and approval is required.

Waterborne acrylic and polyester powder coat will withstand 100 hours of salt spray (ANSI requires 25 hours).

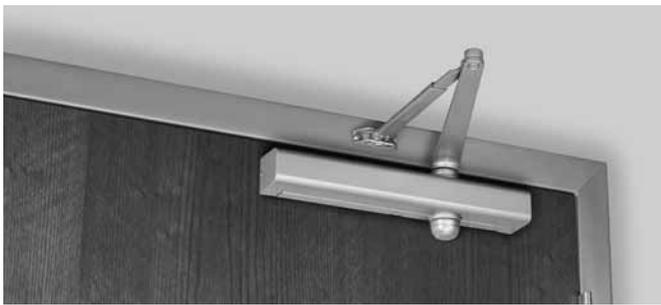
ANSI/BHMA	Description
600*	Prime Coat
605	Bright Brass
606	Satin Brass
611	Bright Bronze
612	Satin Bronze
613E	Dark Oxidized Satin Bronze - Equivalent
619	Satin Nickel
625	Bright Chrome
626	Satin Chrome

ANSI/BHMA	Description
689	Aluminum
690	Statuary Bronze
691	Dull Bronze
693	Black
694	Medium Amber
696	Gold
N/A	556 White

* 600 is a special rust-inhibiting prime coat. Closers can be ordered prime coat only (specify closer x 600). An additional charge applies if finish coat is required over prime coat.

- Norton closer bodies and plastic covers are available in waterborne acrylic finishes. Arms and metal covers are available in powder coat or plated finishes.
- When a plated finish is ordered, arm and cover will be plated unless "cover only" is specified.

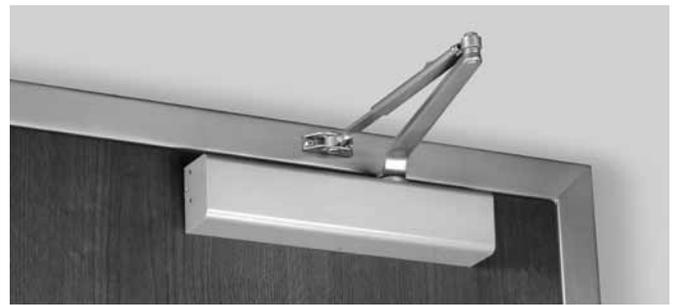
APPLICATIONS



Regular Arm

8301 - slim cover

This is the only pull-side application where a double lever arm is used. It is the most power-efficient application for a door closer. Sufficient frame, door and/or ceiling clearance must be considered.



8501 - full cover

Since the arm assembly projects directly out from the frame, this application may present an aesthetics issue or be prone to vandalism.



Top Jamb

For efficiency reasons this application provides the best alternative to the regular arm application. There must be sufficient frame face and/or ceiling clearance for this application. It requires a top rail on the door of just 2-1/4" (57mm). This application provides the best door control for doors in exterior walls that swing out of a building.



The entire door closer and arm assembly project from the frame, similar to the regular arm application, where matters of appearance and malicious abuse can be of concern. Consideration must be given to depth of frame reveal.



Parallel Arm

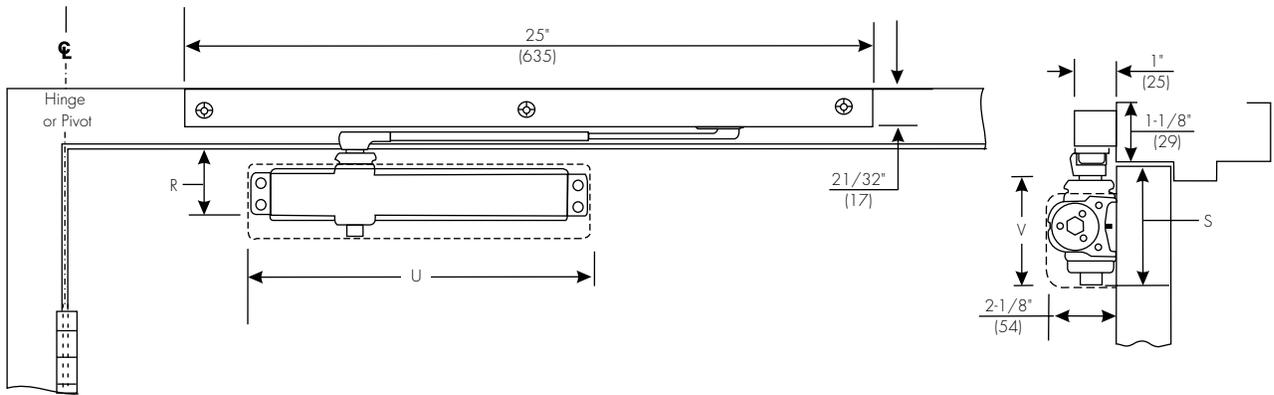
This application provides the most appealing design appearance for a surface-mounted door closer having a double lever arm. This also makes it beneficial in vandalism-prone areas. It is on the push side of the door and the arm assembly extends almost parallel to the door. In the closed position, there is very little or no hardware projecting beyond the frame face in most situations.



Due to the geometry of the arm it is approximately 25% less power efficient than a regular arm application. The entire closer and arm assembly are mounted below the frame stop. Top rail clearance dimensions will vary based on the type of cover used. (See pg. 15)

8000 SERIES ARCHITECTURAL DOOR CLOSER

LOW PROFILE PULL SIDE SLIDE TRACK



Mounting holes for closer body are spaced 3/4" (19mm) vertically x 12" (305mm) horizontally.

Closer Series	R Minimum Top Rail		S Minimum Top Rail Clearance				U Closer Length				V Closer Height			
	W/O Drop Plate	With 8146 Drop Plate	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal	Slim or Full Cover	Metal Cover	Arch Plastic	Arch Metal
8301ST	2-1/2" (64)	5/8" (16)	3" (76)	4-5/8" (117)	3-1/8" (79)	3" (76)	13" (330)	13-5/8" (346)	14" (356)		3" (76)	3-7/8" (98)	3-1/4" (83)	3-1/8" (79)
8501ST														

Door Width Inches (cm)	Model Number	
	Non-Hold Open	Hold Open
32" (81)	8341ST 8541ST	8341STH 8541STH
38" (97)		
48" (122)		

Note: 8301/8501 door closers can be adjusted for door sizes noted. Multi-size closers are set at mid power range from the factory.
*Projection is for Slim Line or Full Covers. Projection for Metal Covers = 2-3/16" (56mm). Projection for Architectural Plastic & Architectural Metal Covers = 2-1/4" (57mm).
Note: Please contact factory if door weight exceeds 250 lbs.

Mechanical Closer (gate)

Door: D6

MC2



SUREClose®

Hydraulic Gate Closers & Hinges



NEW External mount

Internal mount



**Internal or External mount...
the choice is yours.**



D&D Technologies

World's most trusted gate hardware

www.ddtechglobal.com



SUREClose® READYFit

Externally Mounted

SureClose® is a hinge & closer, in one small, powerful package!

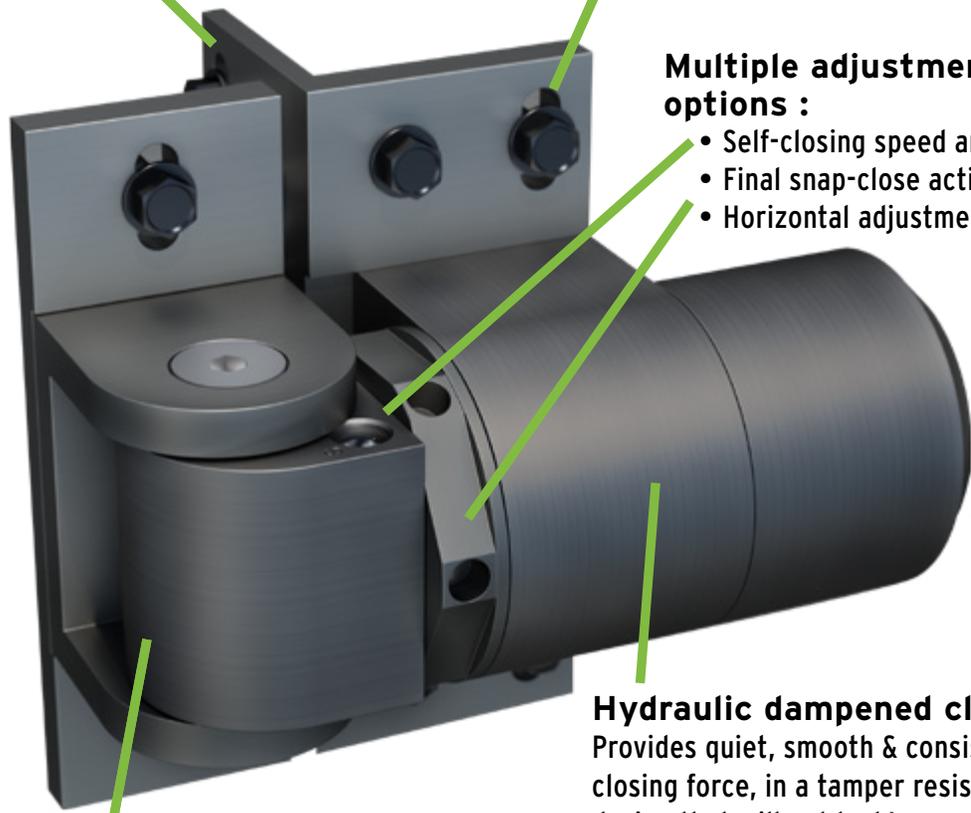


Quick-fit alignment legs:
For ease of installation, alignment and two face fixing strength.

Vertical alignment slots
Fasteners included

Multiple adjustment options :

- Self-closing speed and force
- Final snap-close action
- Horizontal adjustment



Hydraulic dampened closing
Provides quiet, smooth & consistent closing force, in a tamper resistant design that will not leak!

Dual bearing glide system™
Two rows of bearings for consistently superior performance.



SureClose ReadyFit Hinge/Closer



ADJUSTABLE SELF-CLOSING SPEED AND FINAL SNAP-CLOSE ACTION

SureClose ReadyFit Hinge



NON SELF-CLOSING LOAD BEARING

- Easy install - No special tools or holes in post
- Gap variance of 1/2" to 1 3/8" (12-35mm)
- All mounting brackets and fasteners included
- Quick alignment legs
- Safety gate models available
- Improved snap action (all 108 models)
- New non-removable adjustment nozzles
- Designed for new and existing gates

Hinge Combinations	Self-Closing Gate Weight Max*
108 + SM	180 lbs (80 kgs)
108 + 108	260 lbs (120 kgs)

Access Control	Weight Capacity
SM + SM	1,500 lbs (680 kgs)

*CAUTION: Based on max gate size 72"H x 40"W (1800x1000mm). For gates with greater HxW, or if conditions such as wind play a role, use hinge combinations with higher self-closing weight ratings.

GATE FUNCTION

- Hold-open
Not for safety gates
- Self-closing
Speed adjustable
- Final snap-close action
For electric/coded locks
- Free-swinging

ReadyFit Brackets

Models	Bracket Material
74108315	Steel
74108313	Aluminum

SELF-CLOSING - NON SAFETY
Not suitable for child/pool safety

ReadyFit Brackets

Models	Bracket Material
74108325	Steel
74108323	Aluminum

SELF-CLOSING - SAFETY (SF Model)
Suitable for child/pool safety*
DO NOT PROP GATE OPEN

⚠️ CAUTION: When used on swimming pool gates, always consult local authorities for swimming pool Codes.

⚠️ CAUTION: A gate stop must be installed when using SF models. Gate must not be allowed to open past 90°. Doing so voids warranty.

ReadyFit Brackets

Models	Bracket Material
74001315	Steel
74001313	Aluminum

NON SELF-CLOSING
Not suitable for child/pool safety

Item*	Type	Description	Self-Closing From	Max Gate Swing	Final Snap Action	Pool/Child Safety**	Hinge Gap	Fence Post Size Min.	Weight (Lbs)
74001313	RF SM S	ReadyFit Heavy Duty Hinge - Aluminum Brackets	-	180°	-	-	1/2" - 1-3/8"	2"+	2.10
74001315	RF SM W	ReadyFit Heavy Duty Hinge - Steel Brackets	-	180°	-	-	1/2" - 1-3/8"	2"+	2.93
74108313	RF 108 S	ReadyFit Heavy Duty Hinge/Closer - Aluminum Brackets	85°	180°	Yes	-	1/2" - 1-3/8"	2"+	2.91
74108315	RF 108 W	ReadyFit Heavy Duty Hinge/Closer - Steel Brackets	85°	180°	Yes	-	1/2" - 1-3/8"	2"+	3.74
74108323	RF 108SF S	ReadyFit Heavy Duty Hinge/Closer - SF - Aluminum Brackets	90°	90°	Yes	Yes	1/2" - 1-3/8"	2"+	2.91
74108325	RF 108SF W	ReadyFit Heavy Duty Hinge/Closer - SF - Steel Brackets	90°	90°	Yes	Yes	1/2" - 1-3/8"	2"+	3.74

*All ReadyFit hinges include fasteners, gate and post mounting brackets.

**Yes (SF) = Gate will not hold open at 90° (OK for safety gates). Do NOT use a hinge with a 90° hold open feature (-) for pool / child safety gates.

IMPORTANT: For maximum gate weights, see weight chart above.

CAUTION: A gate stop must be installed when using SF models. Gate must not be allowed to open past 90°. Doing so voids warranty.



SUREClose®

Internal Post Mounting

SureClose® is a hinge & closer, in one small, powerful package!

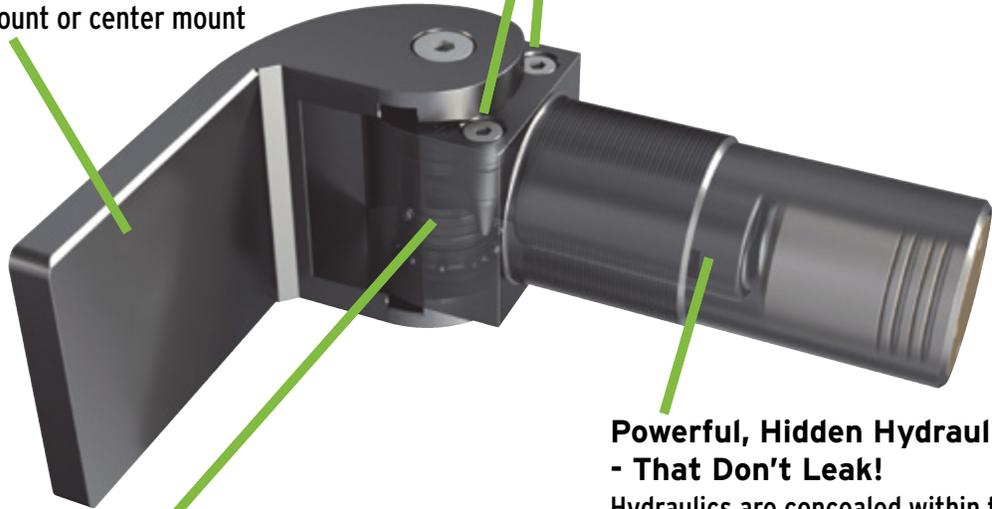
Mounting Brackets :

A variety of gate brackets allow for virtually any square-post application:

- Steel or Aluminum
- Fastened or Welded
- Flush mount or center mount

Multiple Adjustment Options :

- Self-closing speed and force
- Final snap-close action - Now 30% Stronger
- Horizontal adjustment with Center Mount Bracket



Dual Bearing Glide System™:
Two rows of bearings for consistently superior performance.

Powerful, Hidden Hydraulics - That Don't Leak!

Hydraulics are concealed within the post, providing a controlled, quiet close, in a tamper-resistant, compact design.

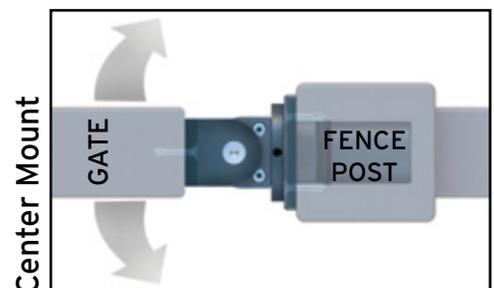
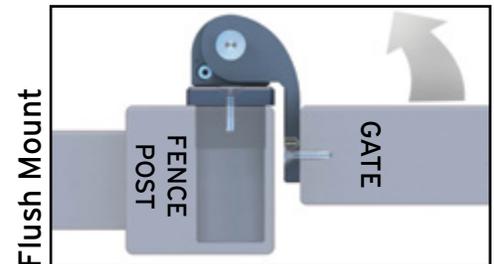
- Maintenance free
- Flush mount & center mount options
- Non self-closing models available
- Visibly small footprint
- Multiple adjustment options
- Prevents gate slam noise & gate damage
- Self-closes gates up to 260 lbs.
- High corrosion resistance
-50 Micron anodizing (Aluminum Components)



Hinge Combinations	Self-Closing Gate Weight Max*
57 + SM	90 lbs (40 kgs)
57 + 57	180 lbs (80 kgs)
108 + SM	180 lbs (80 kgs)
108 + 108	260 lbs (120 kgs)

Access Control	Weight Capacity
SM + SM	1,500 lbs (680 kgs)

*CAUTION: Based on max gate size 72"H x 40"W (1800x1000mm). For gates with greater HxW, or if conditions such as wind play a role, use hinge combinations with higher self-closing weight ratings.



GATE FUNCTION

- Hold-open
Not for safety gates
- Final snap-close action
For electric/coded locks
- Self-closing
Speed adjustable
- Free-swinging

<p>Flush Mount Brackets</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Models</th> <th>Bracket Material</th> </tr> </thead> <tbody> <tr> <td>75108214</td> <td>Steel</td> </tr> <tr> <td>75108213</td> <td>Aluminum</td> </tr> </tbody> </table> <p>SELF-CLOSING - NON SAFETY Not suitable for child/pool safety</p> <p>Use post bracket: 7525 Steel 7515 Aluminum</p> <p>Flush Mount: Face of gate and post are aligned.</p>	Models	Bracket Material	75108214	Steel	75108213	Aluminum	<p>Flush Mount Brackets</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Models</th> <th>Bracket Material</th> </tr> </thead> <tbody> <tr> <td>75108224</td> <td>Steel</td> </tr> <tr> <td>75108223</td> <td>Aluminum</td> </tr> </tbody> </table> <p>SELF-CLOSING - SAFETY (SF Model) Suitable for child/pool safety* DO NOT PROP GATE OPEN</p> <p>Use post bracket: 7525 (W) 7515 Aluminum</p> <p>Flush Mount: Face of gate and post are aligned.</p> <p><small>* CAUTION: When used on swimming pool gates, always consult local authorities for swimming pool Codes.</small></p>	Models	Bracket Material	75108224	Steel	75108223	Aluminum
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75001113	Aluminum												

SureClose for Aluminum Gates (Screw-on)

Center Mount



SM S
Item#: 75001113
NON-SELF-CLOSING



57 S
Item#: 75057113
SELF-CLOSING FROM 85°
• Holds gate open at 90°



57SF S
Item#: 75057123
SELF-CLOSING FROM 90°

108 S
Item#: 75108113
SELF-CLOSING FROM 85°
• Holds gate open at 90°
• With Final Snap Action

Item#*	Type	Description	Self-Closing From	Max Gate Swing	Final Snap Action	Pool/Child Safety**	Horiz Adjust.	Hinge Gap	Fence Post Size Min.	Mount Type	Weight (Lbs)
75001113	SM S	Heavy-Duty Hinge	-	90°	-	-	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	1.08
75057113	57 S	Heavy-Duty Hydraulic Closer & Hinge	85°	90°	-	-	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	1.30
75057123	57SF S	Heavy-Duty Hydraulic Closer & Hinge	90°	90°	-	Yes	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	1.30
75108113	108 S	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	85°	90°	Yes	-	Yes	2 1/2"-3" (64-76mm)	3" (76mm)	Center	1.80
75108123	108SF S	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	90°	90°	Yes	Yes	Yes	2 1/2"-3" (64-76mm)	3" (76mm)	Center	1.80

*Gate mounting brackets included with hinge. Post mounting brackets sold separately. Fasteners not included.
**Use only SF type closers on pool/safety gates.

Flush Mount



SM AT90 S
Item#: 75001213
NON-SELF-CLOSING



57 AT90 S
Item#: 75057213
SELF-CLOSING FROM 85°
• Holds gate open at 90°



57SF AT90 S
Item#: 75057223
SELF-CLOSING FROM 90°

108 AT90 S
Item#: 75108213
SELF-CLOSING FROM 85°
• Holds gate open at 90°
• With Final Snap Action

108SF AT90 S
Item#: 75108223
SELF-CLOSING FROM 90°
• With Final Snap Action

Item#*	Type	Description	Self-Closing From	Max Gate Swing	Final Snap Action	Pool/Child Safety**	Horiz Adjust.	Hinge Gap	Fence Post Size Min.	Mount Type	Weight (Lbs)
75001213	SM AT90 S	Heavy-Duty Hinge	-	180°	-	-	-	1/2" (13mm)	2" (50mm)	Flush	1.17
75057213	57 AT90 S	Heavy-Duty Hydraulic Closer & Hinge	85°	180°	-	-	-	1/2" (13mm)	2" (50mm)	Flush	1.38
75057223	57SF AT90S	Heavy-Duty Hydraulic Closer & Hinge	90°	90°	-	Yes	-	1/2" (13mm)	2" (50mm)	Flush	1.38
75108213	108 AT90 S	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	85°	180°	Yes	-	-	1/2" (13mm)	3" (76mm)	Flush	1.90
75108223	108SF AT90 S	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	90°	90°	Yes	Yes	-	1/2" (13mm)	3" (76mm)	Flush	1.90

*Gate mounting brackets included with hinge. Post mounting brackets sold separately. Fasteners not included.
**Use only SF type closers on pool/safety gates.

Post Mounting Brackets

Aluminum Screw-On Options (Sold Separately)



Item#: 7511
Center Mount



Item#: 7512
Center Mount



Item#: 7513
Center Mount



Item#: 7514
Center Mount



Item#: 7515
Flush Mount

Item#	Type	Description	Max Gate Swing	Horiz. Adjust.	Hinge Gap	Fence Post Size Min.	Mount Type	Weight (Lbs)
7511	6026-01	Aluminum	90°	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	0.56
7512	6026-02	Aluminum	90°	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	0.49
7513	6026-03	Aluminum	90°	Yes	2 1/2"-3" (64-76mm)	4" (102mm)	Center	0.64
7514	6026-04	Aluminum with Side Fixing Clamp	90°	-	2 1/2" (64mm)	2 1/2" (64mm)	Center	0.52
7515	6026-05	Aluminum	180°	-	1/2" (13mm)	2" (50mm)	Flush	0.35

SureClose for Steel Gates (Weld-on)

Center Mount



SM W
Item#: 75001114
NON-SELF-CLOSING



57 W
Item#: 75057114
SELF-CLOSING FROM 85°
• Holds gate open at 90°



57SF W
Item#: 75057124
SELF-CLOSING FROM 90°

108SF W
Item#: 75108124
SELF-CLOSING FROM 90°
• With Final Snap Action

Item#*	Type	Description	Self-Closing From	Max Gate Swing	Final Snap Action	Pool/Child Safety**	Horiz Adjust.	Hinge Gap	Fence Post Size Min.	Mount Type	Weight (Lbs)
75001114	SM W	Heavy-Duty Hinge	-	90°	-	-	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	1.41
75057114	57 W	Heavy-Duty Hydraulic Closer & Hinge	85°	90°	-	-	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	1.63
75057124	57SF W	Heavy-Duty Hydraulic Closer & Hinge	90°	90°	-	Yes	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	1.63
75108114	108 W	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	85°	90°	Yes	-	Yes	2 1/2"-3" (64-76mm)	3" (76mm)	Center	2.14
75108124	108SF W	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	90°	90°	Yes	Yes	Yes	2 1/2"-3" (64-76mm)	3" (76mm)	Center	2.14

*Gate mounting brackets included with hinge. Post mounting brackets sold separately. Fasteners not included.
**Use only SF type closers on pool/safety gates.

Flush Mount



SM AT90 W
Item#: 75001214
NON-SELF-CLOSING



57 AT90 W
Item#: 75057214
SELF-CLOSING FROM 85°
• Holds gate open at 90°



57SF AT90 W
Item#: 75057224
SELF-CLOSING FROM 90°

108 AT90 W
Item#: 75108214
SELF-CLOSING FROM 85°
• Holds gate open at 90°
• With Final Snap Action

108SF AT90 W
Item#: 75108224
SELF-CLOSING FROM 90°
• With Final Snap Action

Item#*	Type	Description	Self-Closing From	Max Gate Swing	Final Snap Action	Pool/Child Safety**	Horiz Adjust.	Hinge Gap	Fence Post Size Min.	Mount Type	Weight (Lbs)
75001214	SM AT90 W	Heavy-Duty Hinge	-	180°	-	-	-	1/2" (13mm)	2" (50mm)	Flush	1.86
75057214	57 AT90 W	Heavy-Duty Hydraulic Closer & Hinge	85°	180°	-	-	-	1/2" (13mm)	2" (50mm)	Flush	2.09
75057224	57SF AT90W	Heavy-Duty Hydraulic Closer & Hinge	90°	90°	-	Yes	-	1/2" (13mm)	2" (50mm)	Flush	2.09
75108214	108 AT90 W	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	85°	180°	Yes	-	-	1/2" (13mm)	3" (76mm)	Flush	2.60
75108224	108SF AT90 W	Heavy-Duty Hydraulic Closer & Hinge w/ Final Snap Action	90°	90°	Yes	Yes	-	1/2" (13mm)	3" (76mm)	Flush	2.60

*Gate mounting brackets included with hinge. Post mounting brackets sold separately. Fasteners not included.
**Use only SF type closers on pool/safety gates.

Post Mounting Brackets

Steel Weld-on Options (Sold Separately)



Item#: 7525
Flush Mount



Item#: 7526
Center Mount

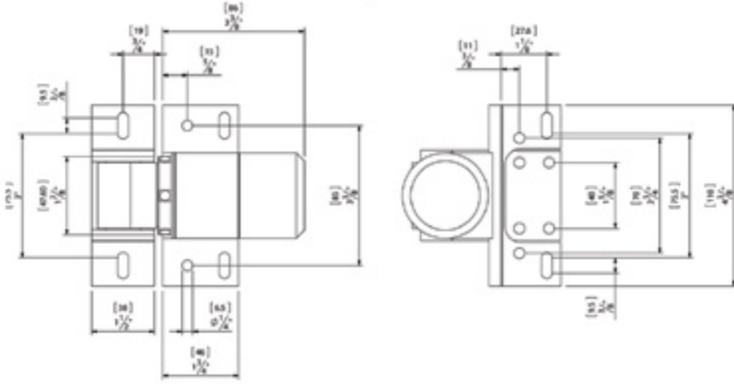
Pool and child safety gate models (SF type) can be identified by the fifth dimple on the end cap.

DO NOT use any non-SF models (4-dimples only) on gates where human safety is critical.

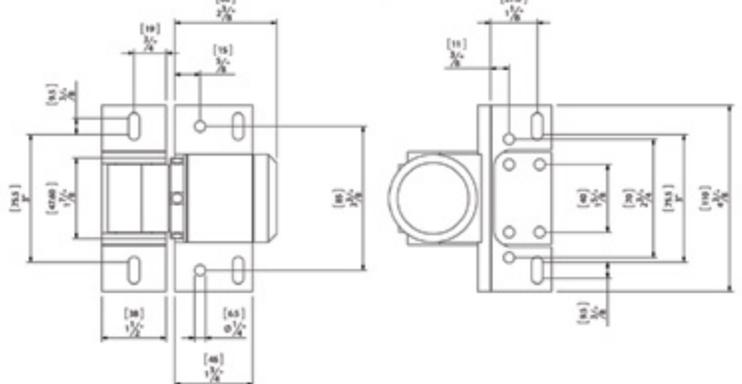


Item#	Type	Description	Max Gate Swing	Horiz. Adjust.	Hinge Gap	Fence Post Size Min.	Mount Type	Weight (Lbs)
7525	0510-04	Steel	180°	-	1/2" (13mm)	2 1/2" (64mm)	Flush	0.35
7526	0510-05	Steel	90°	Yes	2 1/2"-3" (64-76mm)	2 1/2" (64mm)	Center	1.08

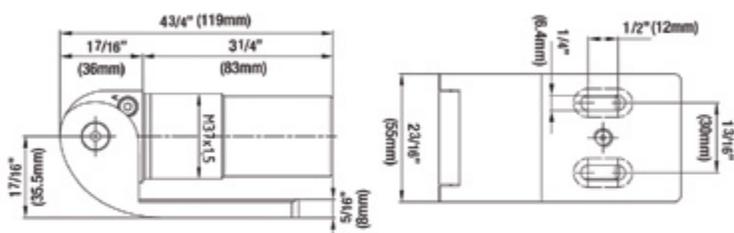
ReadyFit 108



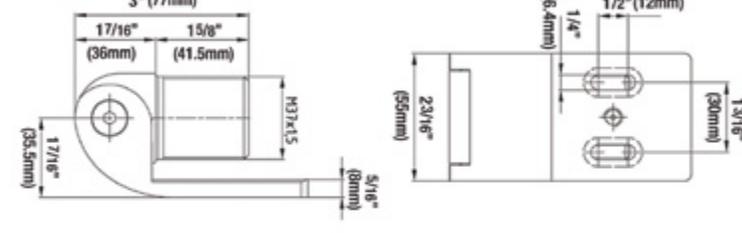
ReadyFit SM



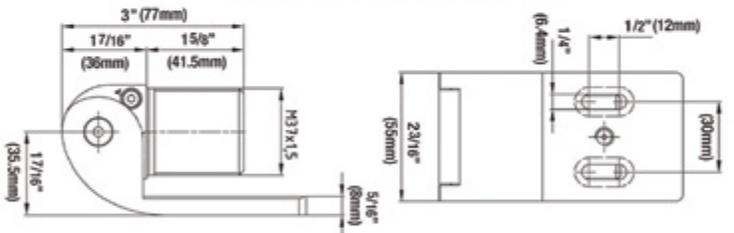
108 AT90 S & 108SF AT90 S



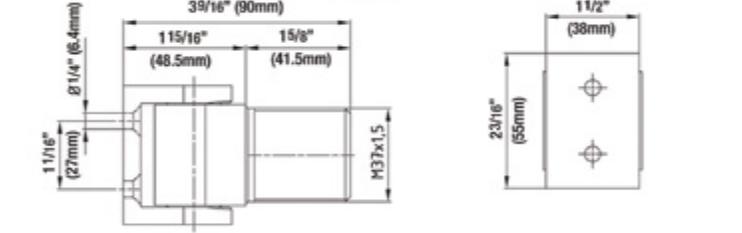
SM AT90 S



57 AT90 S & 57SF AT90 S

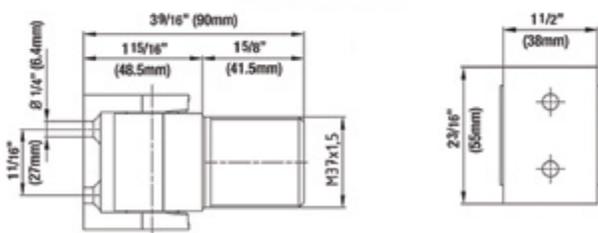


SM S



Flush Mount models require 1 9/16" (40mm) hole in fence post.

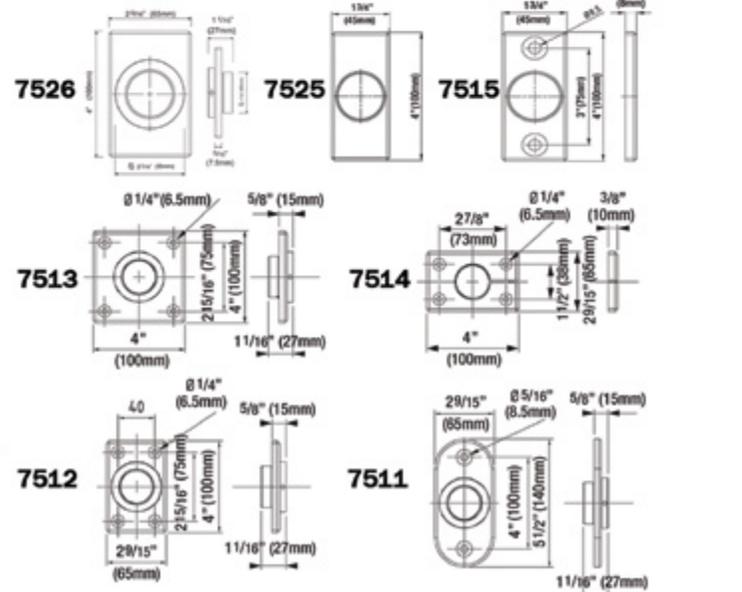
57S & 57SF S



108S & 108SF S



Center Mount models require 1 7/8" (48mm) hole in fence post.



Please visit our website for a complete product overview, including video animations, installation instructions, CAD & Spec.



World's most trusted gate hardware

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**SECURITRON GATE
ELECTRIC STRIKE
DOOR: D-6
GL1
(PAIRED WITH PB1)
SEE ELECTRICAL SECTION
FOR MORE INFORMATION**



2,000 lbs holding force



GL1 Gate Lock

SECURITRON GL1

Electromechanical Gate Solution Offers One Ton of Holding Power

The heavy duty GL1 Electromechanical Gate Lock provides weather-resistant access control for a wide range of gate applications. The GL1 provides 2,000 lbs of holding force for electrical and manually operated indoor or outdoor gates where preload is a concern.

Ideal Applications

Swinging Gates



Sliding Vehicle Gates



Pedestrian Gates



Stock Gates



Interior Cribs



Remote Field Gates



» MODELS	PART # Description
GL1-FL	Gate Lock, 12/24VDC, Standard Fail Locked
GL1-FS	Gate Lock, 12/24VDC, Standard Fail Safe
GL1-FLM	Gate Lock, 12/24VDC, Monitored Fail Locked
GL1-FSM	Gate Lock, 12/24VDC, Monitored Fail Safe
GMC	Gate Lock Mortise Cylinder (FL Models Only)

SECURITRON
ASSA ABLOY



GL1 Electromechanical Gate Lock

GL1

Electromechanical Gate Lock

Specifications

Patent: 8,047,582

Holding Force

- 2,000 lbs [907kg]

Dimensions

2-3/4" L x 7-1/4" W x 3-1/4" D

Electrical

- 12 Volts Initial (Peak): (~1.0 sec.) @ 870mA - Reduced: 290mA Power
- Consumption: 3.5 Watts
- 24 Volts Initial (Peak): (~1.0 sec.) @ 720mA - Reduced: 170mA Power
- Consumption: 4.1 Watts

Operating temperature

- -58 to +167F [-50 to +75C] Indoor or outdoor use

Shipping Weight

- 6 lbs [2.72kg]



- » 2,000 lbs Holding Force
- » 100 lbs of Preload
- » Key Override Ready
- » Automatic Dual Voltage

PRODUCT FEATURES

- 2,000 lbs holding force
- Operates under preload up to 100 lbs
- Automatic dual voltage - no field adjustment required
- Accepts a standard mortise cylinder with Adams Rite MS cam for manual key override (*not included, see spacer guide below*)
- Self-aligning receiver (+/- 1/2" horizontally) helps compensate for gate misalignment and sag
- Tamper resistant cast housing
- Optional latch status monitor
- Surface mount
- MagnaCare® Lifetime Replacement No Fault Warranty

Flex-Mount Gate Lock Bracket Kits (FMK)

Bracket Kits Extend Access Control to Gates and Fences.

The FMK Flex-Mount Bracket System is an intuitive set of mounting brackets designed exclusively for use with the the M62FG Magnalock® and GL1 Gate Lock. Pre-formed post channels and plates of varying lengths make it easy for you to assemble a professional looking, high-security gate lock mounting platform in minutes, without special tools.



Cylinder Length	Spacer Required
1"	1/4"
1-1/8"	3/8"
1-1/4"	1/2"

SMC-0564-0215



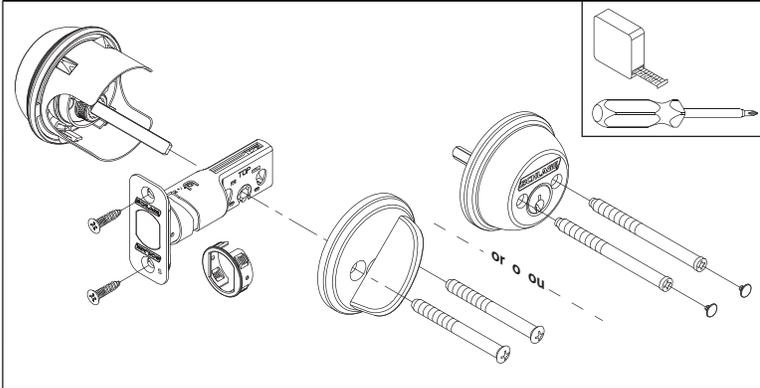
**Gate Deadbolt (4" thick
door application)**

Door: D7

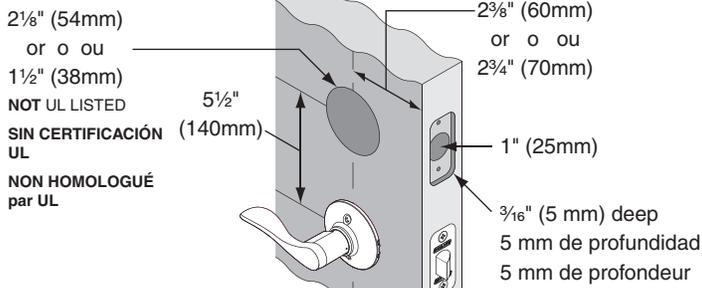
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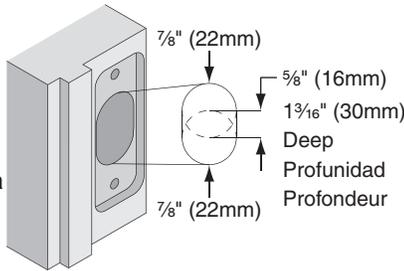
P515-788
B60, B60F, B62



1



**For Strike
Para Placa
Hembra
Pour Gâche**



See <http://consumer.schlage.com/customerservice> if dimensions are different.
Consulte a <http://consumer.schlage.com/customerservice> si las dimensiones son diferentes.
Voir <http://consumer.schlage.com/customerservice> si les dimensions sont différentes.

2

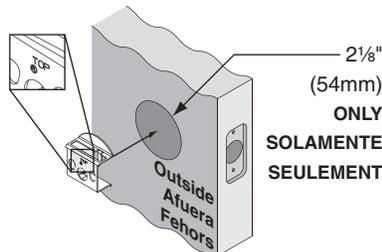
Non-UL Functions (Typical)
Funciones Sin UL (Típica)
Fonctions Non-UL (Typique)

OR
O
OU

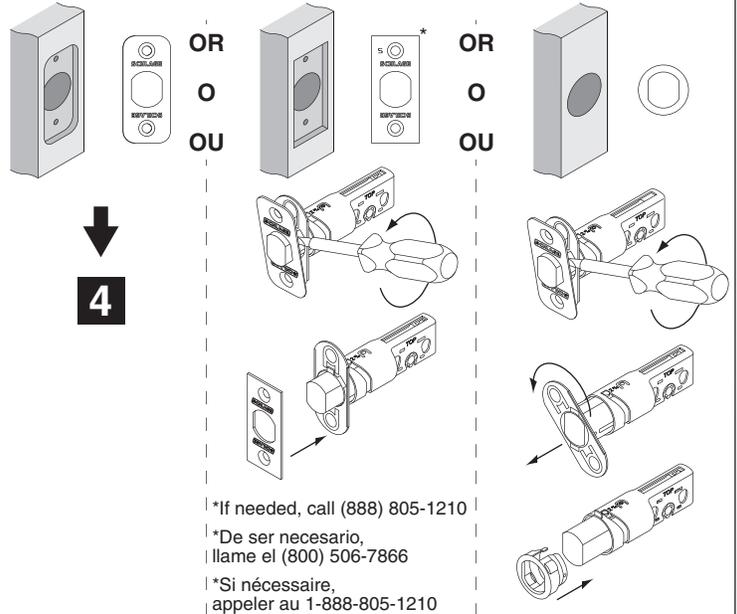
UL Functions (Not Typical)
UL Funciones (No Típica)
UL Fonctions (Pas Typique)

1 1/2" (38mm) NOT UL Listed
38mm SIN certificación UL
38mm non homologué par UL

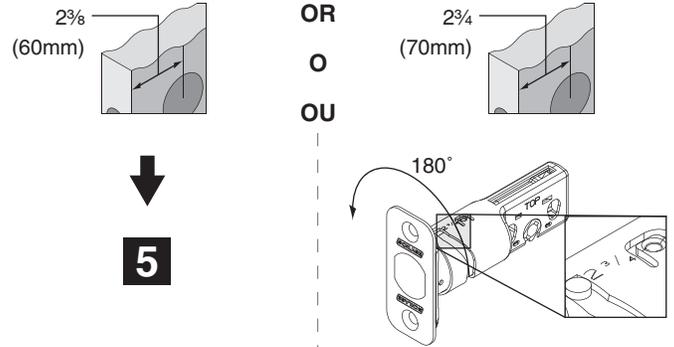
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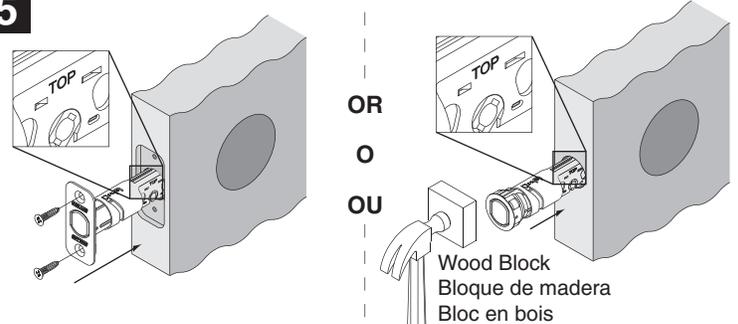
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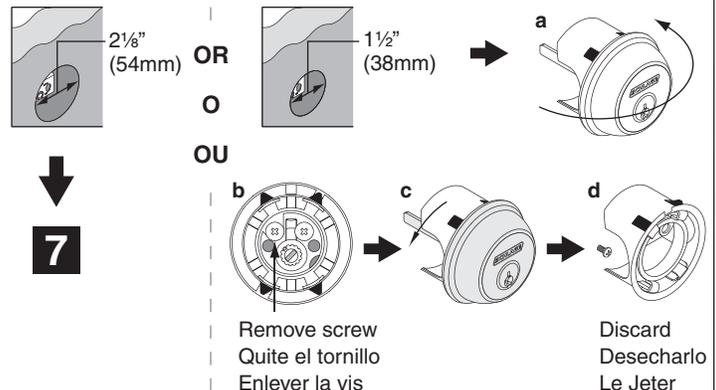
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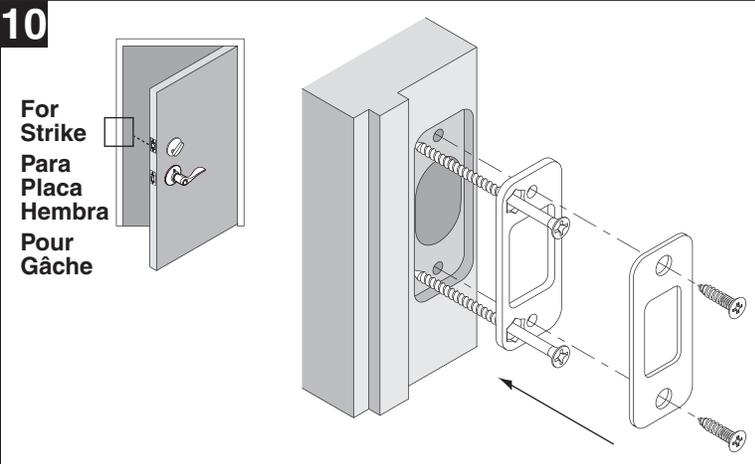
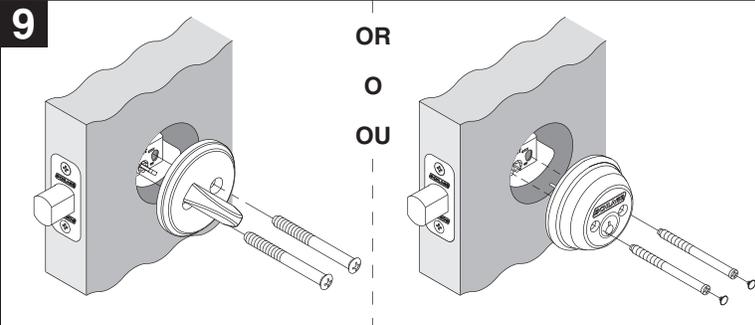
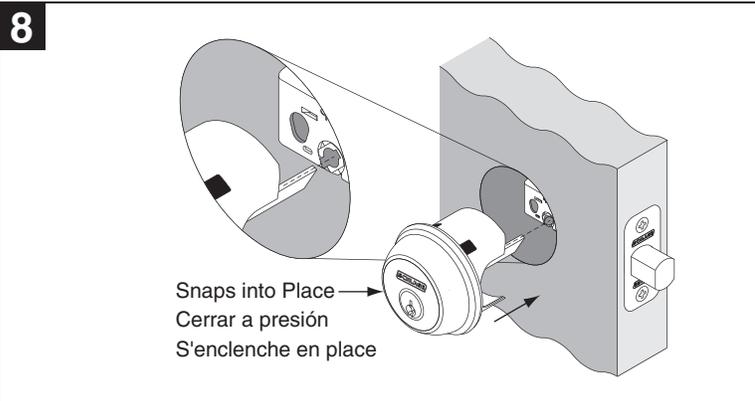
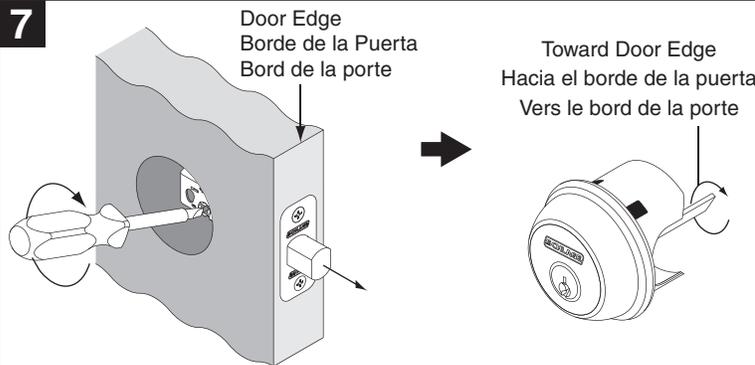


5



6





PATENT NOTICE
Schlage® products and those of its subsidiary companies and licensees may be covered by both issued and pending U.S. and foreign patents, copyrights and trademarks. Manufactured items are covered by one or more of the following patents:

NOTIFICACIÓN SOBRE PATENTES
Los productos Schlage® y los de sus compañías afiliadas y licenciatarias pueden estar cubiertos por patentes, derechos de copyright y marcas comerciales, emitidos y pendientes, tanto en Estados Unidos como en otros países. Los productos manufacturados están cubiertos por una o más de las siguientes patentes:

L'AVIS DE BREVET
Les produits Schlage® et ceux de ses filiales et de ses fabricants sous licence peuvent être couverts par des marques de commerce, des copyrights et des brevets américains et étrangers émis ou en instance. Les produits fabriqués sont couverts par un ou plusieurs des brevets suivants:

5070715	5765412	6523375	D372417	D458829
5152558	5769472	6533336	D372854	D467155
5308131	5809816	6540274	D406056	D472788
5395144	5816086	6581426	D406528	D487388
5593193	5820290	6802546	D426452	D520331
5598726	5881590	6905773	D428324	D520332
5640863	5918916	6926319	D450558	D537702
5683127	6286347	7143477	D457048	D541620
5715717	6297725	7159424	D457049	D543435

Lifetime Limited Mechanical and Finish Warranty and 1-Year Limited Electronics Warranty
Subject to the terms and conditions of this warranty, Schlage extends a lifetime limited mechanical and finish warranty and a one-year limited electronics warranty to the original consumer user ("Original User") of our Schlage brand product ("Product") against defects in material and workmanship, as long as the Original User occupies the residential premises upon which the Product was originally installed.

What Schlage will do: Upon return of the defective Product to Schlage, Schlage's sole obligation, at its option, is to either repair or replace the Product, or refund the original purchase price in exchange for the Product.

Original User: This warranty only applies to the Original User of Products. This warranty is not transferable.

What is not covered: The following costs, expenses and damages are not covered by the provisions of this limited warranty: (i) labor costs including, but not limited to, such costs as the removal and reinstallation of Product; (ii) shipping and freight expenses required to return Product to Schlage; and (iii) any other incidental, consequential, indirect, special and/or punitive damages, whether based on contract, warranty, tort (including, but not limited to, strict liability or negligence), patent infringement, or otherwise, even if advised of the possibility of such damages. Some local laws do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.

The provisions of this warranty do not apply to Products: (i) used in commercial applications; (ii) used in common area applications; (iii) used for purposes for which they are not designed or intended; (iv) which have been subjected to alteration, abuse, misuse, negligence or accident; (v) which have been improperly stored, installed, maintained or operated; (vi) which have been used in violation of written instructions provided by Schlage; (vii) which have been subjected to improper temperature, humidity or other environmental conditions; or (viii) which, based on Schlage's examination, do not disclose Schlage's satisfaction non-conformance to the warranty. Additionally, this warranty DOES NOT COVER scratches, abrasions, or deterioration due to the use of paints, solvents or other chemicals.

Exclusions: Oil Rubbed Bronze finish (613) is designed to improve over time and change in appearance, creating a living finish through daily use and thus, finish discoloration is not applicable to the above warranty.

Additional terms: Schlage does not authorize any person to create for it any obligation or liability in connection with the Product. Schlage's maximum liability hereunder is limited to the original purchase price of the Product. No action arising out of any claimed breach of this warranty by Schlage may be brought by the Original User more than one (1) year after the cause of action has arisen.

How local law applies: This warranty gives you specific legal rights, and you may also have other rights as otherwise permitted by law. If this Product is considered a consumer product, please be advised that some local laws do not allow limitations on incidental or consequential damages or how long an implied warranty lasts, so that the above limitations may not fully apply. Refer to your local laws for your specific rights under this warranty.

Guaranteed Fit Program: Schlage products are designed to fit standard residential door preparations and retrofit existing tubular locks. Note: Mortise locks and preparations are not considered standard and are not guaranteed under this program. During the initial installation, if there is a problem with the Product's performance, the Original User may simply contact Schlage Customer Service at 888-805-9837 in the U.S. and Canada or 800-506-7866 in Mexico for assistance.

Program and warranty claims: If you encounter a residential door preparation or fit issue under the Guaranteed Fit Program or have a claim under this warranty, please contact Schlage Customer Service for repair, replacement or refund of the original purchase price in exchange for the return of the Product to Schlage.

Garantía limitada de 100 años para Mecánica y Terminados y garantía limitada de un año para electrónicos

Sujeto a los términos y condiciones de la presente garantía, Schlage concede al usuario consumidor original ("Usuario Original") de este producto de marca Schlage ("Producto") una garantía limitada de 100 años, para mecánica y terminados y garantía limitada de un año para electrónicos, contra defectos del material y la fabricación, mientras el Usuario Original ocupe la residencia en la que el Producto fue instalado originalmente.

Obligaciones de Schlage: Cuando se le devuelva el Producto defectuoso, la única obligación de Schlage, a su opción, es reparar o reemplazar el Producto, o rembolsar su precio de compra original a cambio del mismo.

Usuario Original: La garantía sólo se extiende al Usuario Original del Producto. Esta garantía es intransferible.

Exclusiones de la cobertura: Las disposiciones de la presente garantía limitada excluyen los siguientes costos, gastos y daños y perjuicios: (i) costos de mano de obra que incluyen, pero no limitan, los ocasionados por la extracción y reinstalación del Producto; (ii) gastos de envío y franquía necesarios para devolver el Producto a Schlage; y (iii) otras indemnizaciones por daños y perjuicios incidentales, consecuentes, indirectos, especiales y/o punitivos, tanto si se basan en un contrato, en una garantía, un agravio (incluyendo pero no limitando, negligencia o responsabilidad estricta), violación de patente u otro, aunque se le hubiera advertido sobre la posibilidad de dichos daños. Es posible que la limitación o exclusión antedicha no sea aplicable en este caso, porque algunos leyes locales prohíben la exclusión o limitación de las indemnizaciones por daños y perjuicios incidentales o consecuentes.

Las disposiciones de esta garantía no abarcan los Productos: (i) utilizados en aplicaciones comerciales; (ii) utilizado en usos comunes del área; (iii) utilizados para fines ajenos a lo diseñado o previsto; (iv) sometidos a alteración, maltrato, uso incorrecto, negligencia o accidente; (v)

almacenados, instalados, mantenidos o utilizados inadecuadamente; (vi) utilizados en contravención de las instrucciones escritas por Schlage; (vii) sometidos a temperaturas, humedades u otras condiciones ambientales inadecuadas; (viii) que, a juicio de Schlage, no hayan incumplido los compromisos de la garantía. Esta garantía limitada de 100 años TAMPOCO ABARCA arañazos, roces o deterioros atribuibles al uso de pinturas, disolventes u otras sustancias químicas.

Exclusiones: El terminado de bronce lustroso (613) está diseñado para mejorar con el tiempo y cambia de aspecto, adquiriendo vivacidad con el uso diario, por lo cual su decoloración queda excluida de esta garantía.

Otras estipulaciones: Schlage no autoriza a ninguna persona a crear en su nombre ninguna obligación o responsabilidad en relación con el Producto. La máxima responsabilidad de Schlage, al amparo de esta garantía, se limita al precio original de compra del Producto. El Usuario Original no podrá interponer demanda alguna contra Schlage por supuesta infracción de esta garantía más de un (1) año después de producirse la causa de la demanda.

Cómo aplica la ley local: Esta garantía reconoce derechos legales específicos y el usuario puede tener otros según lo permitido por la ley. En caso de que este Producto sea considerado un producto de consumidor, tenga en cuenta que algunas leyes locales prohíben la limitación de las indemnizaciones por daños incidentales o consecuentes, o en la duración de una garantía implícita, de tal manera que es posible que las limitaciones antedichas no apliquen por completo. Consulte las leyes locales para los derechos específicos de esta garantía.

Programa de adaptación garantizada: Los productos Schlage están diseñados para que se adapten a las preparaciones de puertas residenciales de dimensiones estándar y colocar cerraduras tubulares con seguro ya instaladas. Nota: Las cerraduras embutidas y sus preparaciones se excluyen de la garantía de este programa, por no ser de dimensiones estándar. Si tiene cualquier dificultad con el Producto durante su instalación inicial, el Usuario Original puede solicitar ayuda del Schlage servicio de cliente, llamando por teléfono 888-805-9837 (E.E.U.U. y Canadá) o 800-506-7866 (México).

Reclamaciones del programa y la garantía: Si encuentra una problema con la preparación o el ajuste de una puerta residencial amparada por el programa de adaptación garantizada, por favor solicite a nuestro servicio de cliente para la reparación, el reemplazo o el reembolso del precio de compra original a cambio de la vuelta del producto a Schlage.

Garantía a vie limitada cubriendo los organes mecánicas et du fini et garantie limitée d'un an couvrant l'électronique

Sous réserve des conditions générales de cette garantie, Schlage offre une garantie à vie limitée couvrant les organes mécaniques et fini et garantie limitée d'un an couvrant l'électronique au utilisateur original (Utilisateur) de son produit de marque Schlage (Produit) contre les vices de fabrication et de matériau tant que l'Utilisateur occupe la résidence sur laquelle le produit a été à l'origine installé.

Ce à quoi Schlage s'engage: Au renvoi du Produit défectueux à Schlage, la seule obligation de Schlage consiste, à sa discrétion, soit à réparer, soit à remplacer le Produit, soit à rembourser le prix d'achat original en échange du Produit.

Utilisateur Original: Cette garantie ne s'applique qu'à l'Utilisateur Original des Produits. Cette garantie n'est pas transférable.

Ce qui n'est pas couvert: Les coûts, dépenses et dommages suivants ne sont pas couverts par la garantie: (i) main-d'œuvre y compris mais sans s'y limiter, les coûts de dépôt et de réinstallation des produits; (ii) frais d'expédition et de fret requis

pour renvoyer les Produits à Schlage; et (iii) tout autre dommage accessoire, consécutif, indirect, spécial et/ou punitif, que la réclamation soit de nature délictuelle ou contractuelle (y compris, mais sans s'y limiter, la négligence ou la responsabilité stricte); violations de brevets, même si l'Utilisateur avait été avisé de l'éventualité de tels dommages. Certains lois locales ne permettent pas l'exclusion ou la limitation des dommages accessoires ou indirects; l'exclusion ou la limitation susmentionnée peut donc ne pas s'appliquer à vous.

Les conditions de cette garantie ne s'appliquent pas aux Produits: (i) utilisés dans des applications commerciales (ii) utilisé dans des applications de secteurs communs (iii) utilisés à des fins pour lesquelles ils n'ont été ni conçus ni prévus; (iv) soumis à modification, abus, message ou accident; (v) entreposés, installés, entretenus ou utilisés de manière incorrecte; (vi) utilisés en violation des instructions écrites de Schlage; (vii) soumis à des températures, degrés d'humidité et autres conditions d'environnement inappropriées; (viii) ou qui, sur la base d'un examen par Schlage, ne satisfont pas aux conditions de non-conformité de cette garantie. En outre, cette garantie NE COUVRE PAS les rayures, abrasions ou détériorations dues à l'utilisation de peintures, solvants ou autres substances chimiques.

Exclusions: Le bronze luilé (613) est conçu pour évoluer en apparence au fil du temps, en acquérant une patine vivante par usage quotidien; en conséquence, la garantie susmentionnée ne s'applique pas à la décoloration.

Conditions supplémentaires: Schlage n'autorise personne à créer en son nom une obligation ou une responsabilité en rapport avec le Produit. La responsabilité maximale de Schlage aux termes des présentes est limitée au prix d'achat original du Produit. Aucune demande au titre d'une violation alléguée de cette garantie par Schlage ne peut être effectuée par l'Utilisateur d'origine plus d'un (1) an après l'occurrence alléguée.

Comment la loi locale s'applique: Cette garantie vous confère des droits légaux spécifiques, auxquels d'autres peuvent venir s'ajouter, selon ce que la loi permet par ailleurs. Si ce Produit est considéré comme un bien de consommation, veuillez noter que certaines lois locales ne permettent pas de limitations sur les dommages fortuits ou indirects ou des durées de garantie, de sorte que certaines des limitations susmentionnées peuvent ne pas s'appliquer entièrement. Reportez-vous à votre législation locale pour vos droits spécifiques sous cette garantie.

Programme d'ajustement garanti: Les produits Schlage sont conçus pour s'adapter aux portes résidentielles standard neuves et aux serrures tubulaires existantes. Remarque: Les serrures et dispositifs à mortaiser ne sont pas considérés comme standard et ne sont pas couverts par ce programme. Si au cours de l'installation un problème survient quant aux performances du Produit, l'Utilisateur Original peut simplement contacter un responsable du service clientèle de Schlage en appelant le numéro 888-805-9837 aux États-Unis et au Canada, ou le 800-506-7866 au Mexique pour assistance.

Programme et demande au titre de la garantie: En cas de configuration d'emplacement de serrure non standard ou de problème d'ajustement au titre du Programme d'ajustement garanti, veuillez contacter le service à la clientèle Schlage pour la réparation, le remplacement ou le remboursement du prix d'achat original en échange du retour du produit à Schlage.

U.S. & Canada
Schlage Customer Service
P.O. Box 1210
Olathe, KS 66051-1210
Phone 888-805-9837
Fax 800-566-5625

Mexico & Outside of U.S.
Ingersoll Rand
SA de CV Blvd; Centro Industrial No 11
Col. Industrial Puente de Vigas
Tlalpan Edo. de Mexico C.P.
54070. Telefono: 018005067866

Progress is greener with Ingersoll Rand

All materials used in this product are recyclable.
Todos los materiales utilizados en este producto son reciclables.
Tous les matériaux de fabrication de ce produit sont recyclables.

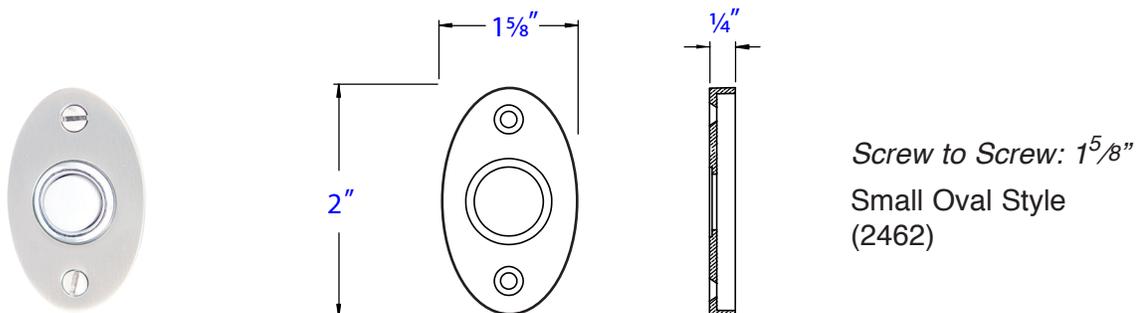
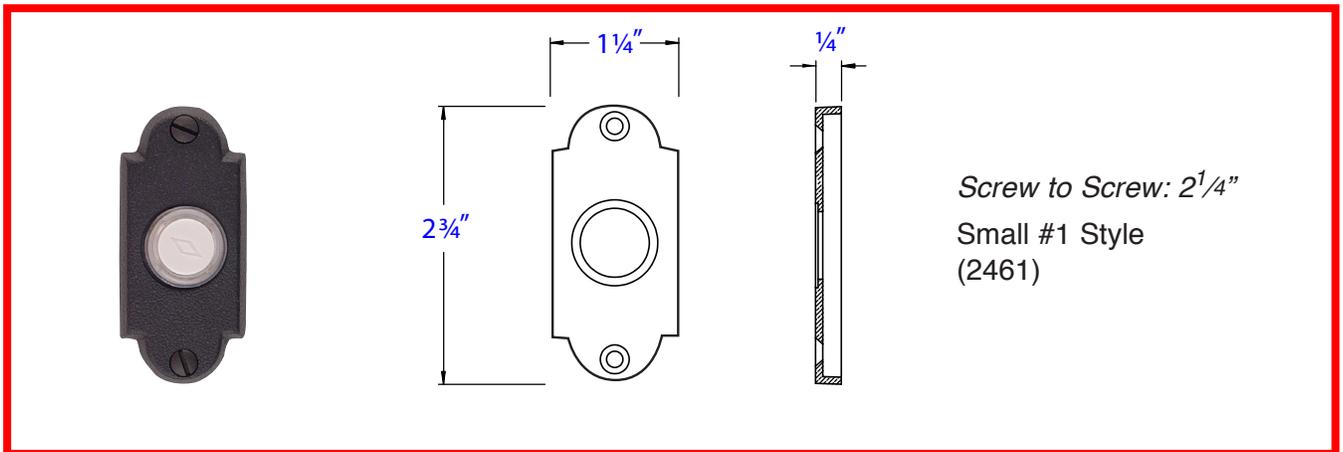
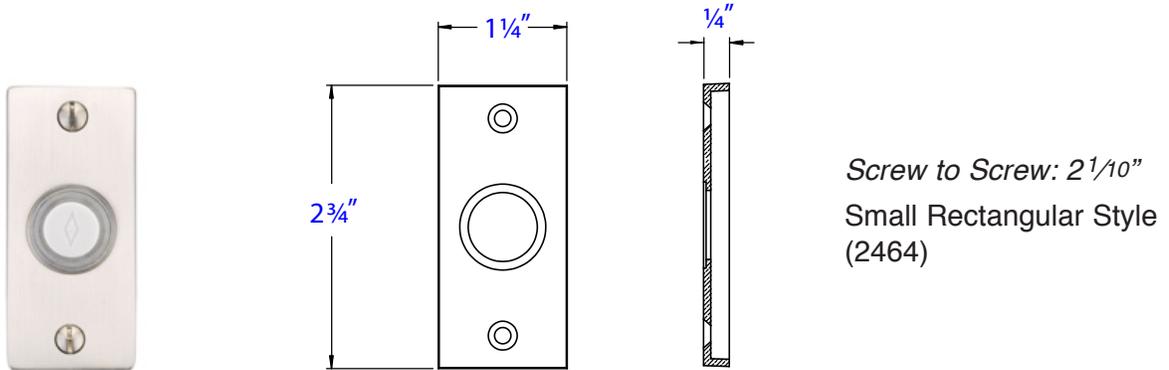


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(800) 847-1864
Printed in Country
P515-788 Rev. 07/08-a

**Gate Doorbell
Doors: D6
DB1
(PAIRED WITH PZ1)**

Door Bell - Small Rosette Style

Supplied With Matching Screws & Lighted Button

***Note:**

These are the dimensions for these three styles only. All other doorbell button rosettes are the same dimensions as the passage/privacy rosettes.

**Gate Doorbell Buzzer
Doors: D6 (In office)
PZ1
(Paired with DB1)**

PZ1

Piezo Sounder

The PZ-1 can be used as a local or remote alarm sounder for exit delay or door prop alarm.



PRODUCT FEATURES

- Remote annunciator
- Powerful Piezo sounder - 86 db
- Includes anti-tamper screws
- Stainless steel single gang plate 4-1/2" x 2-3/4" [114mm x 70mm]
- MagnaCare® lifetime replacement, no fault warranty

» MODELS

PART # | Description

PZ1 | Piezo on Keyplate - Single Gang



MAGNACARE WARRANTY

DT-7

Prime Time Digital Timer

Control doors equipped with electrified hardware - with or without access control - with The DT-7 digital timer. The DT-7 can be used as a stand-alone unit, or in conjunction with DK and other products. Versatile programming supports timed unlocked/locked/or access- control-only states to turn electric locks or other security systems on and off at programmed times.



PRODUCT FEATURES

- 7-day digital timer
- 10A DPDT relay can be operated in toggle or pulse mode
- 12 programmed on/off times
- Set daily (6 on, 6 off), on selected days, or on blocks of days
- "First Man In" feature delays preset action until first access
- Supports holiday programming
- 12 or 24 VAC or VDC
- AA battery provides backup to the display module program memory - battery not included
- MagnaCare® lifetime replacement, no fault warranty

SPECIFICATIONS

Electrical:

170 mA at 12V or 24V (VAC or VDC)

Operating Temperature:

+32 to +113F [0 to +45C]

Shipping Weight:

.75 lbs [0.34kg]

» MODELS

PART # | Description

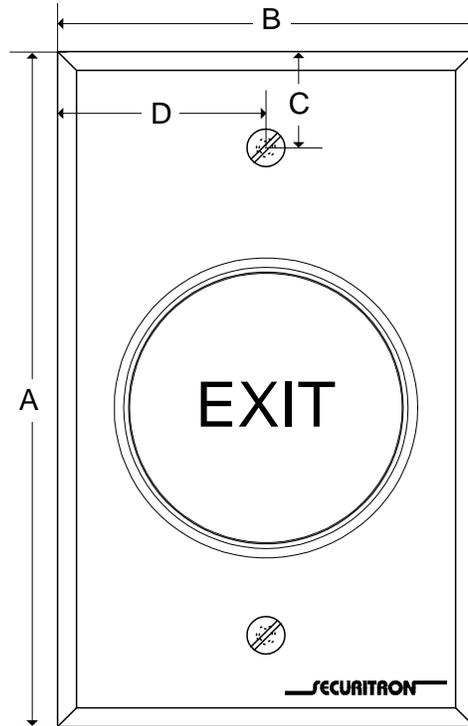
DT-7 | Prime Time Digital Timer



MAGNACARE WARRANTY

SECURITRON
ASSA ABLOY

PUSH BUTTON
Doors: D6 (Located in
office)
PB1
(PAIRED WITH GL1)



MODEL	A	B	C	D	DEPTH
PB5	4.5	2.75	.625	1.375	3
NOTE: FASTENERS NOT SHOWN ALL DIMENSIONS IN INCHES.					

PUSH BUTTON - MODEL PB5

Features

- Stainless steel single gang face plate
- 2" Diameter red button
- 10 amp contacts
- DPST (DPDT by adding wires in the field)
- Illuminated or non-illuminated

Operating Temperature
0 to 43C [32 to 110F]



How to Order

<u>Part #</u>	<u>Description</u>
PB5	Push Button 2" Round Red Momentary Illuminated
PB5E	Push Button 2" Round Red Momentary Non-Illuminated

PUSH BUTTON - MODEL PB5 (cont'd)

Architectural Specifications

- A. The Push Button shall be produced by an ISO 9001 certified manufacturer.
- B. The Push Button shall be a 2" diameter red industrial grade button with protective cowling.
- C. The Button shall be labeled 'EXIT" and shall be red back lit using an incandescent bulb.
- D. The LED shall operate on 12 or 24 VDC (field selectable).
- E. The switch shall be DPST and rated at 10 Amps at 12 or 24 VDC.
- F. The push button shall be mounted on a single gang Stainless Steel - 630/US32D face-plate.
- G. The switch shall be available in momentary action in both illuminated and non-illuminated versions.

Door Silencer
Doors: D1, D2, D3, D4, D5



SR64 Door Silencer

- For use on metal frames featuring pneumatic design that, once installed, forms an air pocket to absorb shock and reduce noise of door closing.
- Tamper-proof once installed on the frame.
- Proper installation also eliminates door rattle and provides constant tension for door latches or locks.

Packed in bags of 100.
 Grey Available in bulk pack of 2500.
 Each bag has an installation tool included.

Dimensions

Diameter: 1/2"
 Thickness: 1/8"

Finishes

GRY **TAN**



Meets ANSI/BHMA 156.16, L03021

SR65 Door Silencer

- For use on wood frames, also feature pneumatic design to cushion shock and absorb noise.
- To prevent removal, a small brad should be driven into stop strip and through stem of silencer, as shown in the detail.

Packed in bags of 100.

Dimensions

Height: 3/4"
 Diameter: 3/8"
 Thickness: 1/8"

Finishes

GRY



SR66 Door Silencer

- Self Adhesive Rubber Silencers.
- Economical installation requires no drilling of frames.

Packed two sheets of 50 (100 minimum).

Dimensions

Diameter: 1/2"
 Thickness: 1/8"

Finishes

BRN, GRY, WHT

A
Hinges & Pivots

B
Pulls & Plates

C
Flush Bolts & Coordinators

D
Latches, Catches & Bolts

E23
Stops

F
Exterior Hardware

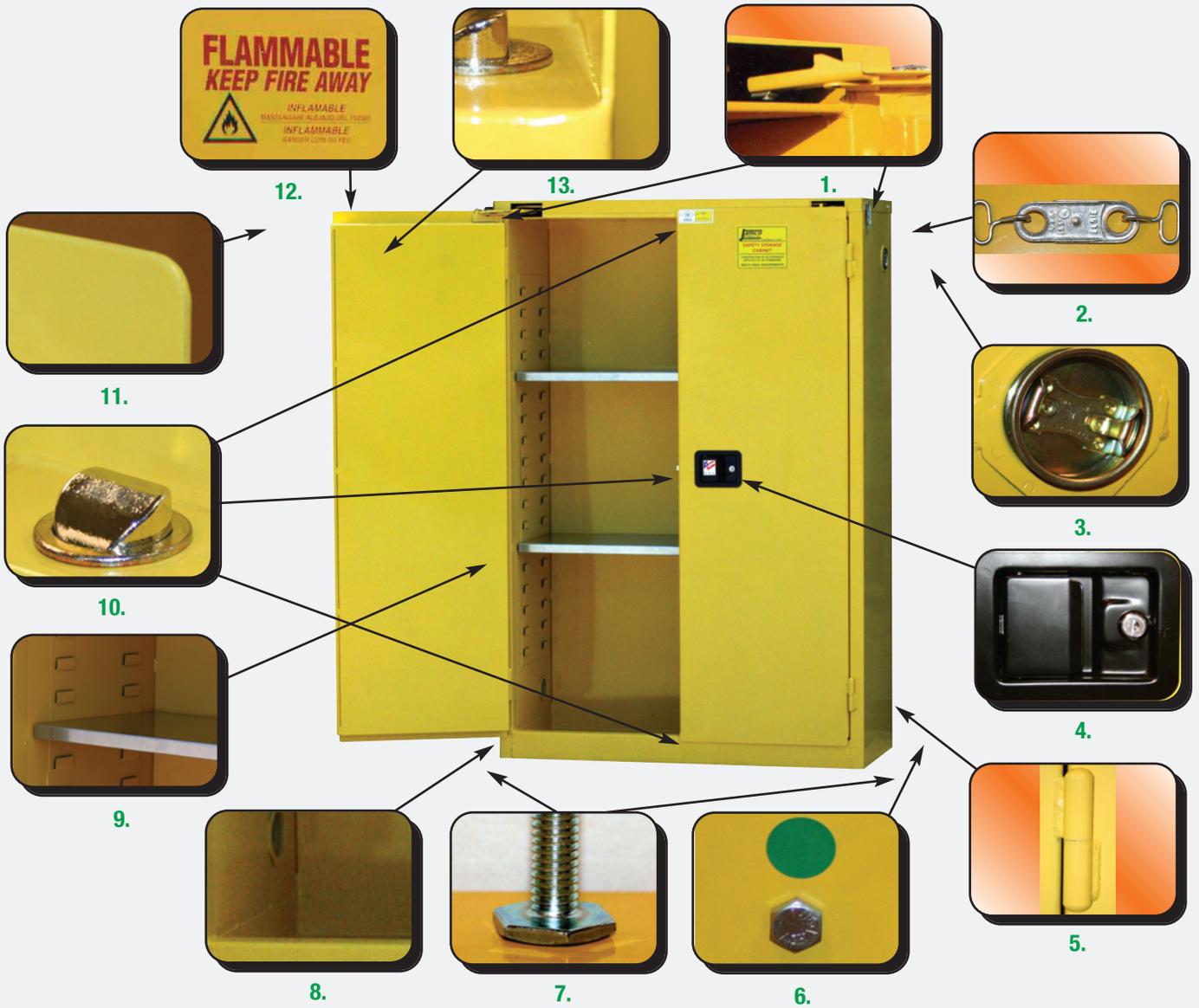
G
Miscellaneous Hardware

EQUIPMENT LIST

**Flammable Cabinet
120 Gal.**

Jamco Heavy Duty Safety Cabinet Features

More steel than other brands...FM Approved...



FEATURES

- 1. Concealed heavy duty self close mechanism
- 2. Lead fusible link
- 3. 2" flame arrester vents
- 4. Flush Mounted paddle handle
- 5. 4" Heavy Duty weld hinge with brass pin
- 6. Grounding connector
- 7. Adjustable leveling feet
- 8. 2" leak proof sump for spill containment
- 9. 16 gauge louvered shelf supports to adjust shelves on 2-1/2" centers
- 10. 3 point locking system
- 11. Rounded safety corners on doors
- 12. Safety signage in large red lettering
- 13. Heavy Duty 14 gauge door



QUICK ALPHABETICAL INDEX - 41 MODELS

BA.....6	BN.....8	BU.....7	CB.....14	CV.....13	FL.....9	KM.....16
BF.....4	BO.....10	BV.....10	CH.....12	CW.....12	FM.....5	KN.....16
BH.....8	BP.....8	BW.....10	CJ.....9	CX.....13	FS.....5	ML.....11
BJ.....6	BR.....14	BX.....14	CK.....9	FF.....5	KJ.....15	MP.....11
BK.....7	BS.....4	BY.....7	CL.....9	FJ.....9	KK.....15	MY.....11
BM.....4	BT.....7	CA.....12	CU.....13	FK.....9	KL.....15	

Forkliftable Safety Flammable Cabinets - 3 Door Types

Models FM, FS & FF - manual, bi fold & self close doors with double wall cabinets to contain flammable liquids in protected storage with floor clearance



Model FM45 Shown



Model FS45 Shown

Concealed Self-Close Mechanism



Model FF45 Shown

Product Features:

- All welded double wall 18 gauge construction with 1-1/2" insulating air space.
- 4" high feet allow for movement with a fork lift truck.
- 2" leakproof sill to contain leaks.
- Lockable flush mounted handle with 2 keys.
- Doors have 3 point locking system and radius edges.
- **Doors are double walled, 14 gauge outside & 18 gauge inside.**
- 4" heavy duty weld hinges with brass pins.
- Twin 2" flame arrester vents.
- **Powder coated yellow finish** (see options).
- Safety signage in large red letters.
- Galvanized steel shelves adjust on 2-1/2" centers.
- Meets OSHA, and NFPA code 30 & UFC 79 standards.



Three Door Types:

Model FM - 2 Doors

- Manual close doors open full 180°.

Model FS - 2 Doors

- Self close doors shut, index, latch automatically as fusible links melt under fire conditions at 165°.
- Concealed self closing mechanism.

Model FF - 1 Bi-Fold Door

- Manual close door opens full 180°.

Options:

- Putty for laboratory setting - **Code PP**
- Gray for hazardous materials - **Code GP**
- Additional galvanized shelves - **see charts**

Model FM - Manual Close

Capacity Gallons	Catalog No.	Size (in) W x D x H	# Shelves	Wgt. (lbs)	Add'l Shelves	
					No.	Wgt.
28	FM28	34 x 18 x 49	2	230	GS134	8
30	FM30	43 x 18 x 49	1	250	GS143	12
44	FM44	34 x 18 x 70	3	340	GS134	8
45	FM45	43 x 18 x 70	2	368	GS143	12
60	FM60	34 x 34 x 70	2	444	GS334	16
90	FM90	43 x 34 x 70	2	508	GS343	22
120	FM120	59 x 34 x 70	2	626	GS359	30

Model FS - Self Close

Capacity Gallons	Catalog No.	Size (in) W x D x H	# Shelves	Wgt. (lbs)	Add'l Shelves	
					No.	Wgt.
28	FS28	34 x 18 x 49	2	250	GS134	8
30	FS30	43 x 18 x 49	1	270	GS143	12
44	FS44	34 x 18 x 70	3	354	GS134	8
45	FS45	43 x 18 x 70	2	388	GS143	12
60	FS60	34 x 34 x 70	2	460	GS334	16
90	FS90	43 x 34 x 70	2	524	GS343	22

Model FF - Bi-Fold

Capacity Gallons	Catalog No.	Size (in) W x D x H	# Shelves	Wgt. (lbs)	Add'l Shelves	
					No.	Wgt.
30	FF30	43 x 18 x 49	1	260	GS143	12
45	FF45	43 x 18 x 70	2	378	GS143	12
60	FF60	34 x 34 x 70	2	450	GS334	16
90	FF90	43 x 34 x 70	2	516	GS343	22

Chemical storage maximum - Class I & II - 60 gallons, Class III - 120 gallons

Made in USA

Custom Equipment Company

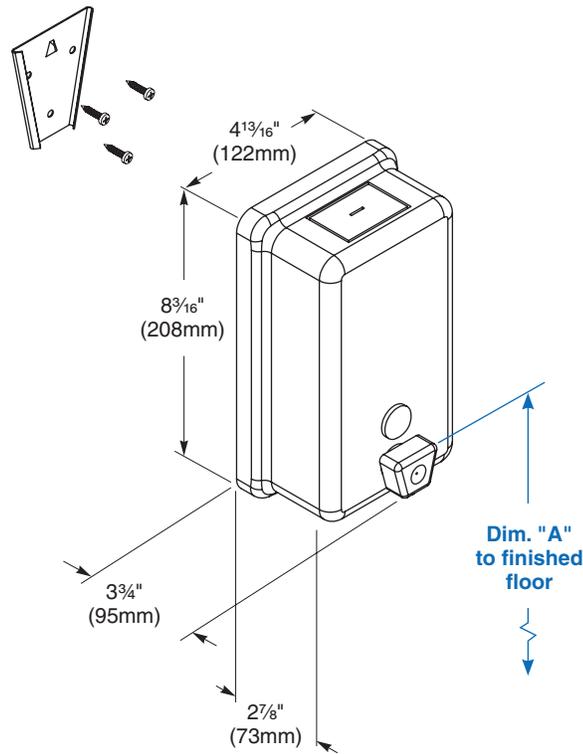
Sales: sales@customMhs.com

www.customMhs.com

**BRADLEY
SOAP DISPENSER
SD-1**



Dimensions



Dim. "A" Key Surface:	For Dim. "A"	Top of Unit	Bottom of Unit
Push button top to finished floor	40" (1016mm)	46 1/4" (1175mm)	38" (965mm)
	38" (965mm)	44 1/4" (1124mm)	36" (914mm)
	36" (914mm)	42 1/4" (1073mm)	34" (864mm)
	34" (864mm)	40 1/4" (1022mm)	32" (813mm)
Rough wall opening:			
Surface Mount:	No rough wall opening, see overall dimensions		

Orders composed of products indicated as **Bradex**® will be available to ship in three days after receipt of order at the factory. There is no pricing penalty for this service from Bradley.

**BRADLEY
SEAT COVER DISPENSER
SCD-1**

Model 583 — Surface-Mounted **Bradex**[®]

500 Capacity

Product Materials

COVER: 22 gauge stainless steel with exposed surfaces in architectural satin finish. Welded construction with burr-free edges, full length piano hinge and tumbler lock keyed like other Bradley units.

BACK: stainless steel.

Capacity

500 standard single-fold or half-fold toilet seat covers.

Operation

Cabinet bottom hinged for easy filling. Unit has spring clip dispensing mechanism.

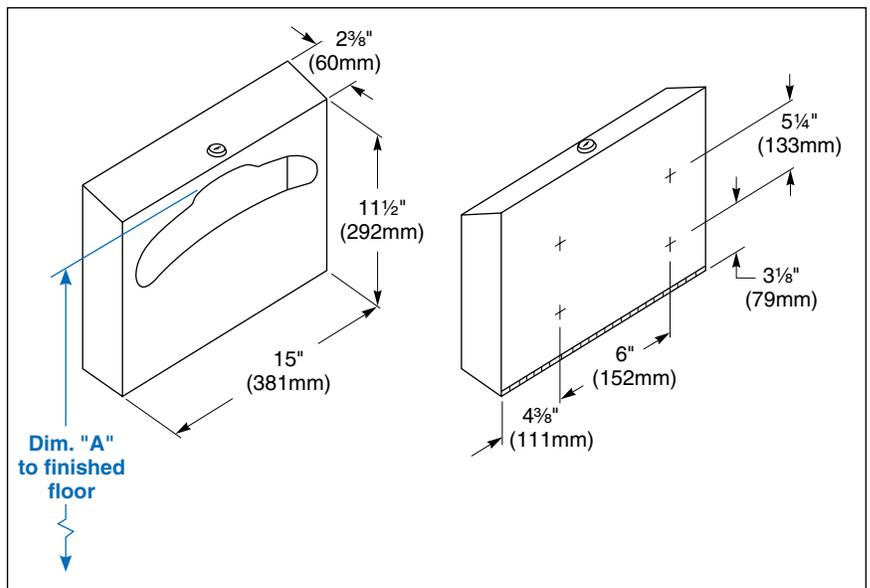
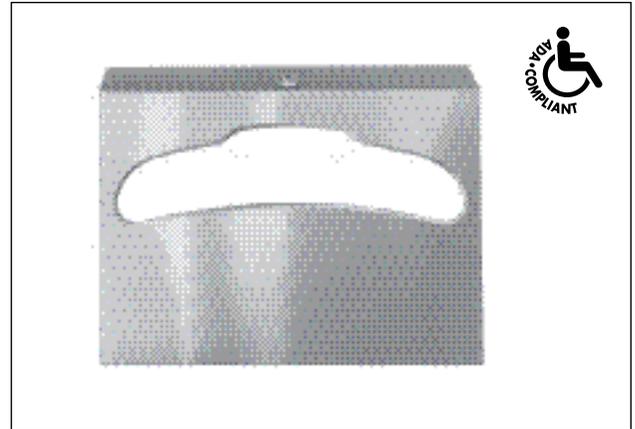
Installation

Verify all rough-in dimensions prior to installation. Secure unit to wall or toilet partition with mounting screws (included) through mounting holes.

Guide Specification

Surface-mounted toilet seat cover dispenser shall be fabricated of 22-gauge stainless steel with exposed surfaces in satin finish with welded construction. Door with piano hinge and tumbler lock. Capacity 500 toilet seat covers.

Overall dimensions: 15"W x 11½"H x 2¾"D.



ADA Compliant

- Consult local and national accessibility codes for proper installation guidelines.
- Conformity and compliance to local and national codes is the responsibility of the installer.

Dim. "A" Key Surface:	For Dim. "A"	Top of Unit	Bottom of Unit
Top of seat cover opening to finished floor	48" (1219mm)	50" (1270mm)	38 ⁵ / ₈ " (981mm)
	45" (1143mm)	47" (1194mm)	35 ⁵ / ₈ " (904mm)
	42" (1067mm)	44" (1118mm)	32 ⁵ / ₈ " (828mm)
	40" (1016mm)	42" (1067mm)	30 ⁵ / ₈ " (777mm)
Rough wall opening:			
Surface Mount:	No rough opening, see overall dimensions		

Orders composed of products indicated as **Bradex**[®] will be available to ship in three days after receipt of order at the factory. There is no pricing penalty for this service from Bradley.

**BRADLEY
WASTE RECEPTACLE
WR-1**



**Model 357 — Surface-Mounted
Bradex®**

6.5-gallon Capacity

Product Materials

RECEPTACLE: 22 gauge stainless steel with exposed surfaces in architectural satin finish. All welded construction with rounded front corners.

LINER: (optional) heavy-duty stitched vinyl-coated nylon.

HINGED COVER: (optional) 22 gauge stainless steel with exposed surfaces in architectural satin finish. Heavy-duty stainless steel piano hinge.

Capacity

6.5 gal. (0.9 cu. ft.)

Operation

Optional vinyl liner is attached to receptacle with hook-and-loop fasteners, easily removed for servicing.

Installation

Verify all rough-in dimensions prior to installation. Secure to wall with mounting screws (not included) at holes provided. Mounting kits available through Bradley (ref. #899-027).

Optional Features

Feature	Suffix
<input type="checkbox"/> Hinged cover	-35
<input type="checkbox"/> Vinyl Liner Part #P11-007	

Guide Specification

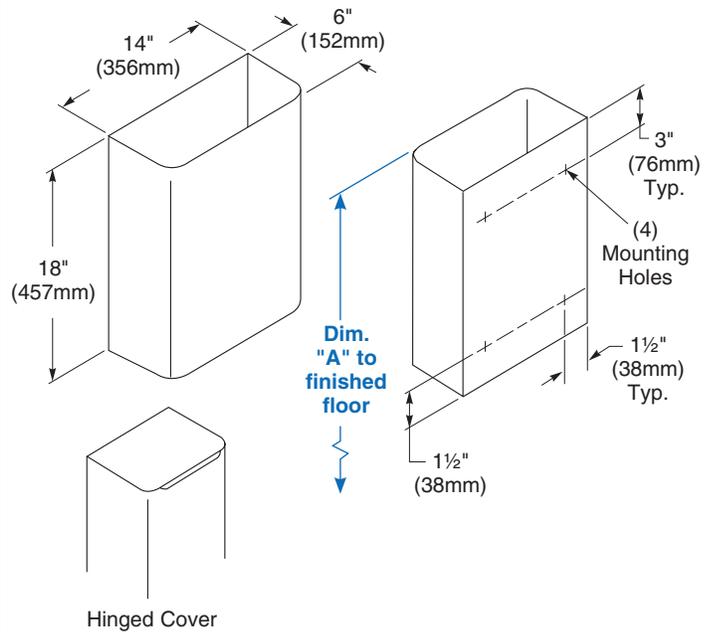
Surface-mounted waste receptacle shall be fabricated of 22 gauge stainless steel with seamless exposed surfaces in satin finish. Reusable heavy-duty vinyl liner (optional). Receptacle holds 6.5 gal.

Overall dimensions: 14"W x 18"H x 6"D.

ADA Compliant

- Consult local and national accessibility codes for proper installation guidelines.
- Conformity and compliance to local and national codes is the responsibility of the installer.

Orders composed of products indicated as **Bradex®** will be available to ship in three days after receipt of order at the factory. There is no pricing penalty for this service from Bradley.



Dim. "A" Key Surface:	For Dim. "A"	Top of Unit	Bottom of Unit
Waste receptacle top lip to finished floor	36" (914mm)	36" (914mm)	18" (457mm)
	32" (813mm)	32" (813mm)	14" (356mm)
	28" (711mm)	28" (711mm)	10" (254mm)
Rough wall opening:			
Surface Mount:	No rough wall opening, see overall dimensions		

**BRADLEY
TOILET TISSUE DISPENSER
TTD-1**

Model 5402 — **Bradex**[®]

Dual Roll

Product Materials

CABINET: 22 gauge stainless steel with exposed surfaces in architectural satin finish. Welded construction with burr-free edges.

SERVICE DOOR: 22 gauge stainless steel with exposed surfaces in architectural satin finish and tumbler lock keyed like other Bradley units. Hinged at bottom.

SPINDLES: molded polyethylene.

Capacity

Two standard core toilet tissue rolls through 5" in diameter.

Operation

Cabinet holds two rolls of 4½" x 5" standard core toilet tissue, one above the other. When first roll is used up, fresh roll automatically drops down for use. Unique retaining mechanism prevents use of spare roll until first roll is completely used. Spindles non-removable by user. Hinged door permits access to storage compartment for servicing of unit.

Installation

Verify all rough-in dimensions prior to installation. Secure to wall with mounting screws (not included) at holes provided. Mounting Kit #899-027 available from Bradley. Visit www.bradleycorp.com for more information. Provide in-wall backing at mounting screw locations.

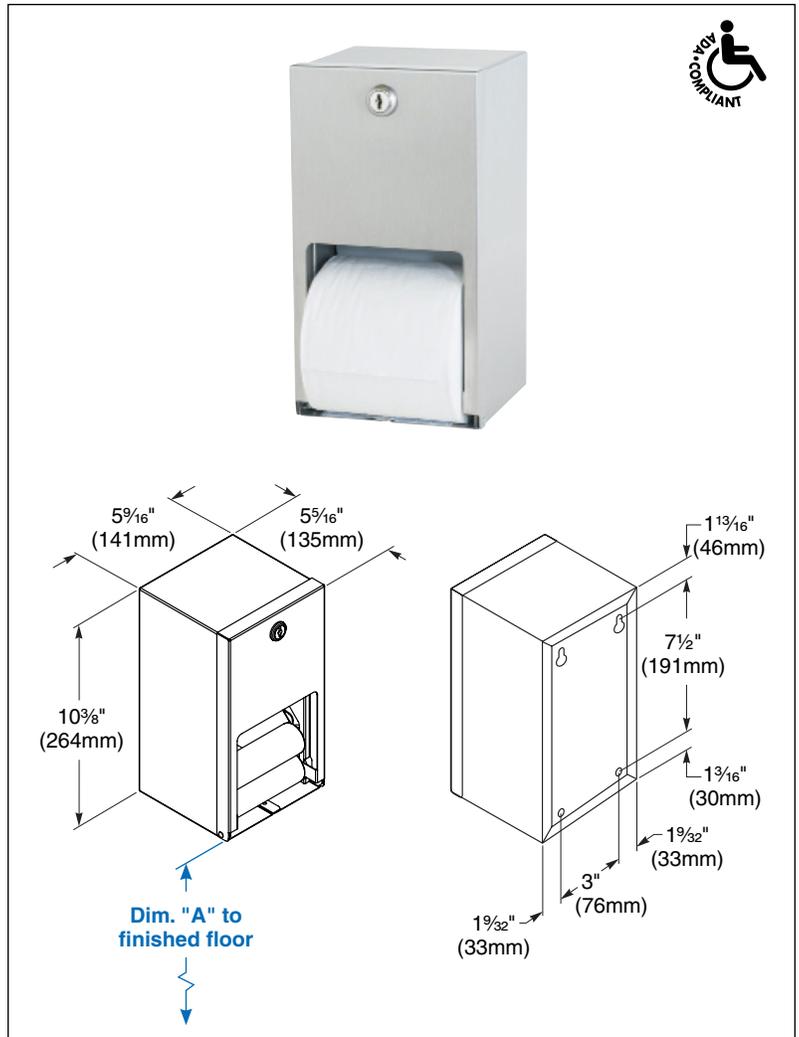
Guide Specification

Surface-mounted dual roll toilet tissue dispenser shall be heavy gauge satin finish stainless steel and hold two standard core toilet tissue rolls.

Overall dimensions: 5½"W x 10⅜"H x 5½"D.

ADA Compliant

- Consult local and national accessibility codes for proper installation guidelines.
- Conformity and compliance to local and national codes is the responsibility of the installer.



Dim. "A" Key Surface:	For Dim. "A"	Top of Unit	Bottom of Unit
Bottom of toilet paper opening to finished floor	20" (508mm)	30¼" (768mm)	19⅞" (505mm)
	19" (483mm)	29¼" (743mm)	18⅞" (479mm)
	18" (457mm)	28¼" (718mm)	17⅞" (454mm)
	17" (432mm)	27¼" (692mm)	16⅞" (429mm)
	16" (406mm)	26¼" (667mm)	15⅞" (403mm)
	15" (381mm)	25¼" (641mm)	14⅞" (378mm)

Rough wall opening:	
Surface Mount:	No rough opening, see overall dimensions

Orders composed of products indicated as **Bradex**[®] will be available to ship in three days after receipt of order at the factory. There is no pricing penalty for this service from Bradley.

**EXCEL
XLERATOR HAND DRYER
HD-1**

XLERATOR® HAND DRYER



MODELS: **XL - BW** **W** **GR** **C** **SB** **SI** **SP** OPTIONS: **-1.1N** (Noise Reduction Nozzle) **-H** (HEPA Filter) **-VOLTAGE** (See Chart)



XL-BW
White Thermoset Resin (BMC)



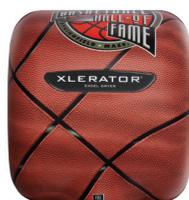
XL-W
White Epoxy Painted



XL-GR
Graphite Textured Painted



XL-SP**
Custom Special Paint



XL-SI***
Custom Special Image



XL-C
Chrome Plated



XL-SB
Brushed Stainless Steel

* Dry time based on third party testing performed by SGS International on standard XLERATOR hand dryer with 0.8 nozzle to 0.2g or less of residual moisture.
** Special Paint powder-coated covers are available in many colors and textures.
*** Exclusive digital image technology allows for the addition of company, school or team logos with any color, design or a 'green message'.

FOR ARCHITECT/ENGINEER APPROVAL

Job Name _____ Date _____

Model Specified _____ Quantity _____

Variations Specified _____

Customer/Wholesaler _____

Contractor _____

Architect _____

PERFORMANCE

- A. Dry Time: 10 Seconds*
- B. Wattage: 1490 Watts (Heat On) - 425 Watts (Heat Off)
- C. Certifications:



CONSTRUCTION

- A. All covers will be fastened to a base plate by two chrome plated tamper-proof bolts. Cover shall be one of the following:
 - Die-cast zinc alloy** - One-piece, heavy-duty, rib-reinforced, lightweight, unbreakable, rustproof and all exposed surfaces shall be bright chrome plated or finished with chip-proof, electrostatically applied epoxy paint.
 - Bulk Molding Compound (BMC)** - White reinforced thermoset resin.
 - Stainless Steel** - with a brushed finish.
 - Special Image** - Digital image applied to die-cast or stainless steel covers using patented Kolorfusion Sublimation Decoration process.
- B. Base plate shall be equipped with (3) 7/8" (22 mm) diameter holes, the bottom one is suitable for use with surface conduit.
- C. All internal parts shall be coated according to Underwriters' Laboratories, Inc. requirements.
- D. Entire mechanism shall be internally grounded.
- E. Options
 - HEPA Filtration System:** Filters 99.97% of bacteria at 0.3 microns from the air stream.
 - 1.1 Noise Reduction Nozzle:** Lowers decibel level 9 dB by reducing air deflection noise but increases dry time by approximately 3 seconds.
- F. Accessories (optional)
 - Microban® Antimicrobial Wall Guards:** 89W (White), 89B (Black), 89S (Stainless)
 - XChanger Paper Towel Retrofit Kit:** 40550, 40551 (ADA Height)
 - ADA Recess Kit:** 40502

MECHANISM

- A. Motor shall be a thermally protected, series commutated, through-flow discharge vacuum motor/blower (5/8 hp / 20,000 rpm) which provides air velocity of up to 19,000 LFM (linear feet per minute) at the air outlet and 16,000 LFM at the hands (4 inches [102 mm] below air outlet).
- B. Heating element (970 w) is constructed of Nichrome wire and mounted inside the blower housing, thereby being vandal resistant. It shall be protected by an automatic resetting thermostat, which shall open whenever air flow is cut off and shall close when flow of air is resumed. It shall produce an air temperature of up to 135°F (57°C) at a 72°F (22°C) ambient room temperature at the hands (4 inches [102 mm] below air outlet).
- C. Control assembly is activated by an infrared optical sensor located next to the air outlet. The dryer shall operate as long as hands are under the air outlet. Control includes a speed and sound control mechanism, variable heat control with High, Medium, Low and Off settings and a filter sensor which is activated should the filter become clogged. There is a 35-second lockout feature if hands are not removed. Sensor equipped with externally visible Red LED light that flashes error codes to assist in troubleshooting.

LIMITED WARRANTY

The dryer shall be guaranteed to be free from defects for a period of five (5) years. Warranty shall include labor performed at factory as well as the repair or exchange of defective parts, at manufacturer's option.

QUANTITY RECOMMENDATIONS

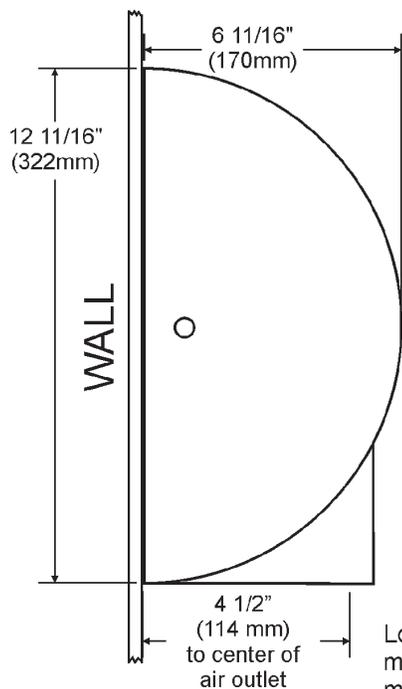
One dryer for every two washbasins is sufficient for most applications. If restroom traffic is unusually heavy, we suggest one dryer per washbasin in small installations and two dryers for every three washbasins in larger installations. When a 54" washfountain is used, we suggest four to five dryers.

XLERATOR® HAND DRYER

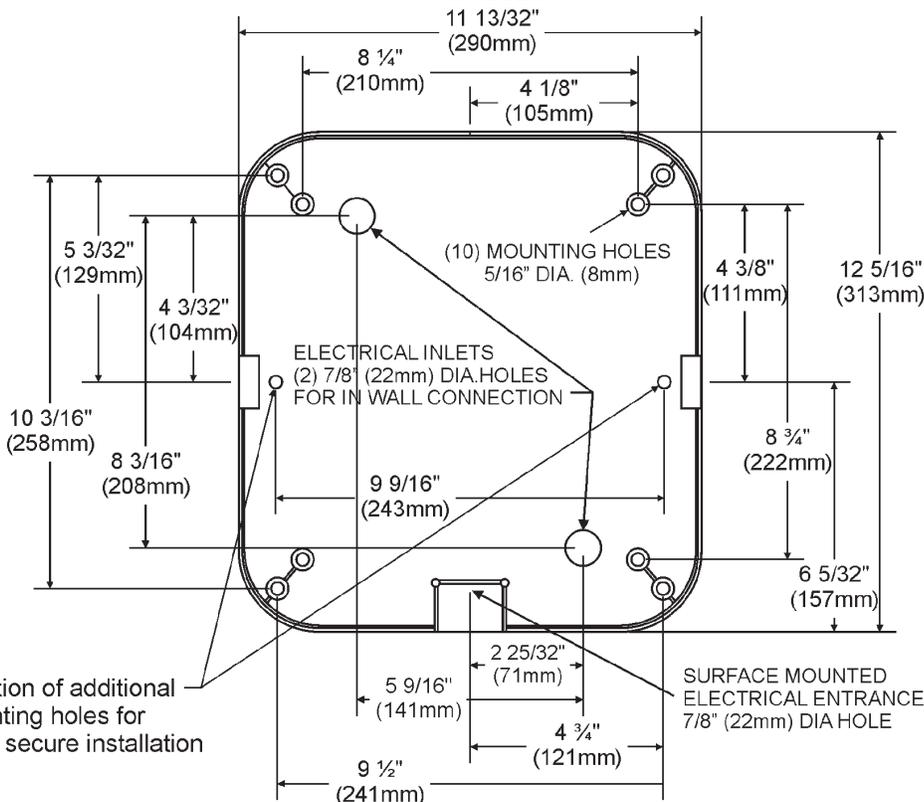


MODELS: **XL - BW** **W** **GR** **C** **SB** **SI** **SP** OPTIONS: **-1.1N** (Noise Reduction Nozzle) **-H** (HEPA Filter) **-VOLTAGE** (See Chart)

SIDE VIEW



FRONT VIEW FACING WALL



Location of additional mounting holes for more secure installation

DIMENSIONS

Width 11 3/4" (298 mm) Height 12 11/16" (322 mm) Depth 6 11/16" (170 mm)

WEIGHT

XL-BW: 15 lbs. (6.8 kgs.) XL-SB: 16 lbs. (7.26 kgs.) XL-W, GR, C, SI, SP: 17 lbs. (7.71 kgs.)

ELECTRICAL

VOLTS	AMPS	WATTS	NO HEAT AMPS	NO HEAT WATTS	HERTZ	
110-120V	11.3-12.2A	1240-1450W	4.3-4.5A	460-530W	50/60 Hz	
208-277V	5.6-6.2A	1160-1490W	2.0-2.2A	425-500W	50/60 Hz	
230V	6.1A	1410W	2.2A	500W	50 Hz	

ACTIVATION

Automatic Sensor Operated

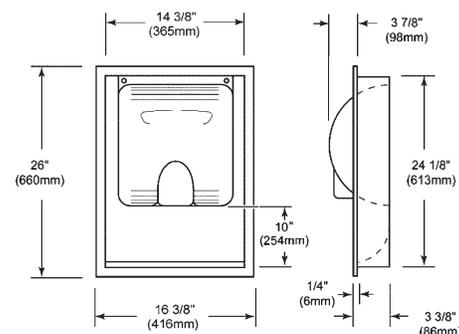
MOUNTING

Surface Mounted

OPTIONAL ADA-COMPLIANT RECESS KIT



Part # 40502



SUGGESTED MOUNTING HEIGHTS from floor to bottom of dryer:

Men	45" (114 cm)
Women	43" (109 cm)
Teenagers	41" (104 cm)
Small Children	35" (89 cm)
Handicapped	37" (94 cm)



DIMENSIONS

Width 16 3/8" (416 mm) Height 26" (660 mm) Depth 3 3/8" (86 mm)

WEIGHT

11 lbs. (4.99 kgs.)

Bottom of recessed wall box should be 10" (254 mm) below suggested mounting height for dryer.

Plumbing Cutsheets

BFP-1, BFP-2
Backflow Preventer

For Health Hazard Applications

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

Series 009

Reduced Pressure Zone Assemblies

Sizes: 1/4" – 2"

Series 009 Reduced Pressure Zone Assemblies are designed to protect potable water supplies in accordance with national plumbing codes and water authority requirements. This series is designed to protect drinking water supplies from dangerous cross-connections in accordance with national plumbing codes and water authority requirements for non-potable service applications such as irrigation, fireline, or industrial processing.

This series features two in-line, independent check valves, captured springs and replaceable check seats with an intermediate relief valve. Its compact modular design facilitates easy maintenance and assembly access. Sizes 1/4" – 1" shutoffs have tee handles.

Features

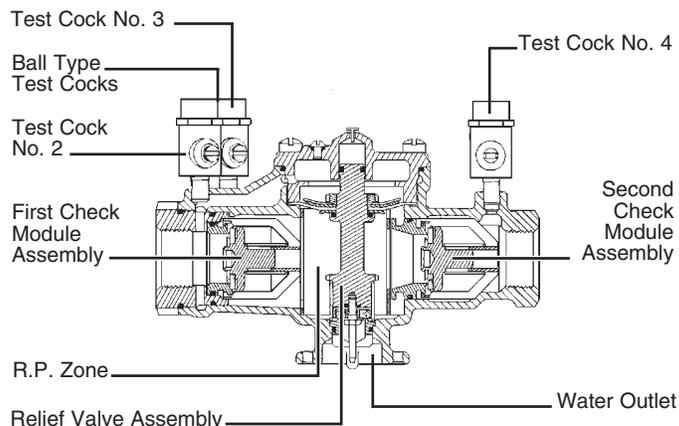
- Single access cover and modular check construction for ease of maintenance
- Top entry - all internals immediately accessible
- Captured springs for safe maintenance
- Internal relief valve for reduced installation clearances
- Replaceable seats for economical repair
- Bronze body construction for durability 1/4" – 2"
- Ball valve test cocks — screwdriver slotted 1/4" – 2"
- Large body passages provides low pressure drop
- Compact, space saving design
- No special tools required for servicing

Specifications

A Reduced Pressure Zone Assembly shall be installed at each potential health hazard location to prevent backflow due to backsiphonage and/or backpressure. The assembly shall consist of an internal pressure differential relief valve located in a zone between two positive seating check modules with captured springs and silicone seat discs. Seats and seat discs shall be replaceable in both check modules and the relief valve. There shall be no threads or screws in the waterway exposed to line fluids. Service of all internal components shall be through a single access bronze cover secured with stainless steel bolts. The assembly shall also include two resilient seated isolation valves, four resilient seated test cocks and an air gap drain fitting. The assembly shall meet the requirements of: USC; ASSE Std. 1013; AWWA Std. C511-92; CSA B64.4. Shall be a Watts Series 009.

†Does not indicate approval status. Refer to Page 2 for approved sizes & models.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.



Now Available
WattsBox Insulated Enclosures.

For more information, send for literature ES-WB.

NOTICE

Inquire with governing authorities for local installation requirements

WATTS®

Available Models: 1/4" – 2"

Suffix:

- QT – quarter-turn ball valves
- S – bronze strainer
- LF – without shutoff valves
- AQT – elbow fittings for 360° rotation
3/4" – 2" only
- PC – internal Polymer Coating
- SH – stainless steel ball valve handles
- HC – 2 1/2" inlet/outlet fire hydrant fitting (2" valve)

Prefix:

- C – clean and check strainer
3/4" – 1" only
- U – union connections (see ES-U009)

Materials: 1/4" – 2"

Bronze body construction, silicone rubber disc material in the first and second check plus the relief valve. Replaceable polymer check seats for first and second checks. Removable stainless steel relief valve seat. Stainless steel cover bolts.

Standardly furnished with NPT body connections. For optional bronze union inlet and outlet connections, specify prefix U (1/2" – 2"). Series 009QT furnished with quarter turn, full port, resilient seated, bronze ball valve shutoffs.

Pressure / Temperature

Series 009 1/4" – 2" Suitable for supply pressure up to 175psi (12.1 bar). Water temperature: 33°F – 180°F (0.5°C – 75°C).

Standards

- USC
- ASSE No. 1013
- AWWA C511-92
- CSA B64.4
- IAPMO File No. 1563.

†Does not indicate approval status. See below for approved models.



Approvals

ASSE, AWWA, CSA, IAPMO

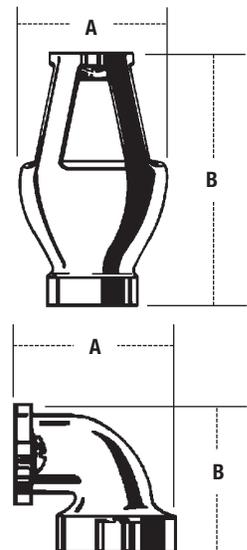
Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

UL Classified 3/4" – 2"
(LF models only except 009M3LF)

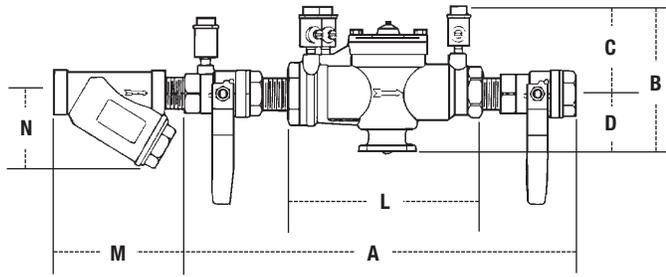
Air Gaps and Elbows

MODEL	for 909, 009 and 993 sizes	DRAIN OUTLET		DIMENSIONS				WEIGHT	
		in.	mm	A		B		lbs.	kgs.
909AGA	1/4"-1/2" 009, 3/4" 009M2/M3	1/2	13	2 3/8	60	3 1/8	79	0.625	0.28
909AGC	3/4"-1" 009/909, 1"-1 1/2" 009M2	1	25	3 1/4	83	4 7/8	124	1.5	0.68
909AGF	1 1/4"-2" 009M1, 1 1/4"-3" 009/909, 2" 009M2, 4"-6" 993	2	51	4 3/8	111	6 3/4	171	3.25	1.47
909AGK	4"-6" 909, 8"-10" 909M1	3	76	6 3/8	162	9 5/8	244	6.25	2.83
909AGM	8"-10" 909	4	102	7 3/8	187	11 1/4	286	15.5	7.03
909ELA	1/4"-1/2" 009, 3/4" 009M2/M3	-	-	-	-	-	-	-	-
909ELC	3/4"-1" 009/909	-	-	2 3/8	60	2 3/8	60	0.38	0.17
* 909ELF	1 1/4"-2" 009M1, 1 1/4"-2" 009/909, 2" 009M2, 4"-6" 993	-	-	3 3/8	92	3 3/8	92	2	0.91
* 909ELH Vertical	2 1/2"-3" 009/909	-	-	-	-	-	-	-	-

* Epoxy coated



Dimensions and Weight: 1/4" – 2" 009



009 1/4" – 2"

SIZE	DIMENSIONS (APPROX.)						STRAINER DIMENSIONS				WEIGHT					
	in.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.			
1/4	10	250	4 5/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/8	60	2 1/2	64	5	2
3/8	10	250	4 5/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/8	60	2 1/2	64	5	2
1/2	10	250	4 5/8	117	3 3/8	86	1 1/4	32	5 1/2	140	2 3/4	70	2 1/4	57	5	2
3/4	10 3/4	273	5	127	3 1/2	89	1 1/2	38	6 3/4	171	3 9/16	81	2 3/4	70	6	3
1	14 1/2	368	5 1/2	140	3	76	2 1/2	64	9 1/2	241	3 3/4	95	3	76	12	5
1 1/4	17 3/8	441	6	150	3 1/2	89	2 1/2	64	11 3/8	289	4 7/16	113	3 1/2	89	15	6
1 1/2	17 7/8	454	6	150	3 1/2	89	2 1/2	64	11 1/8	283	4 7/8	124	4	102	16	7
2	21 3/8	543	7 3/4	197	4 1/2	114	3 1/4	83	13 1/2	343	5 15/16	151	5	127	30	13

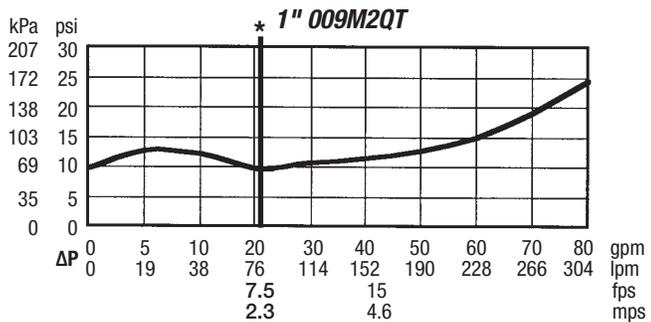
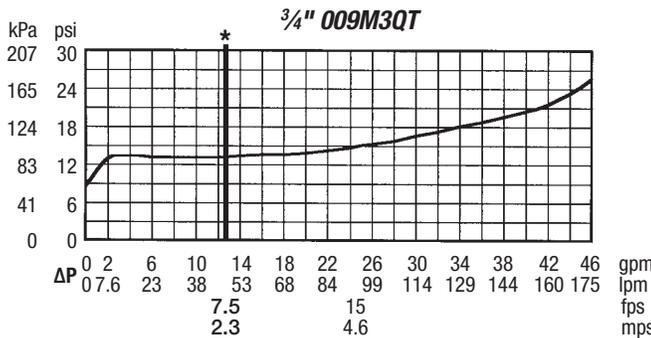
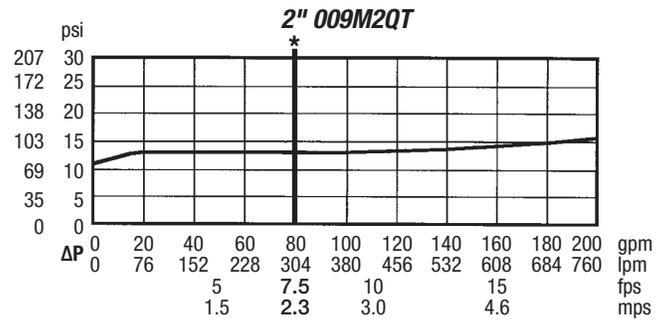
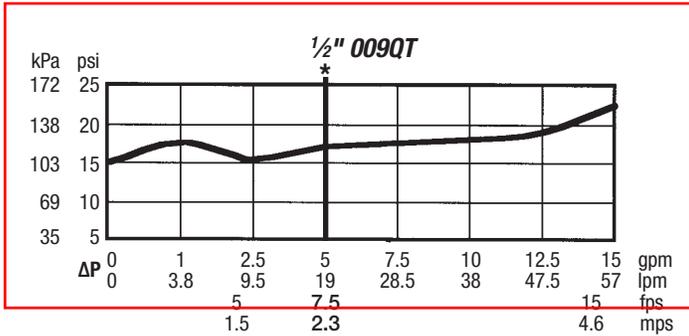
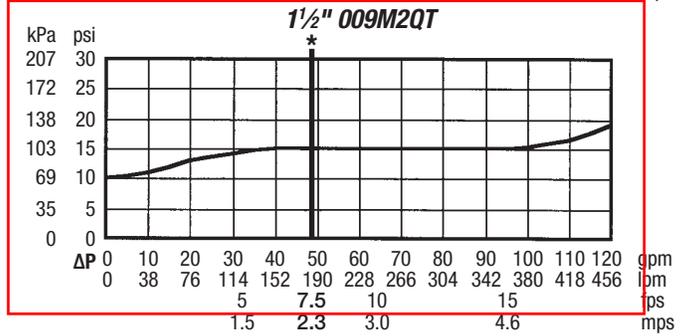
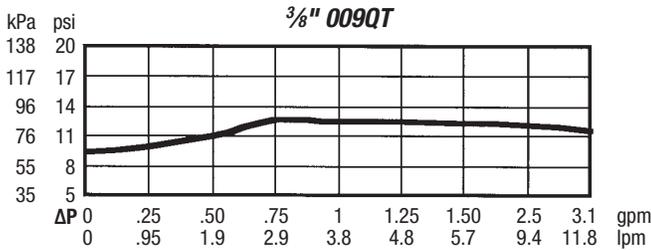
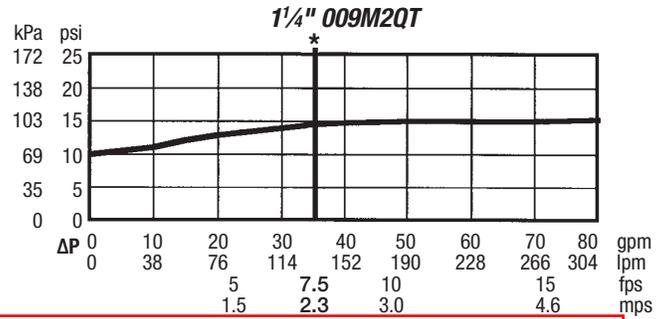
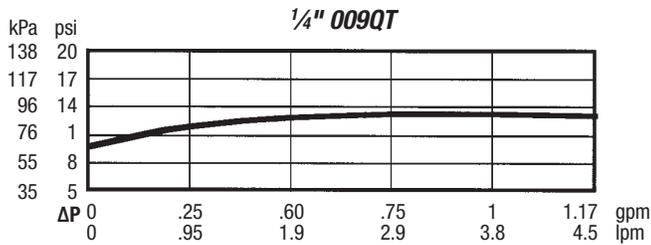
BFP-1

BFP-2

Suffix HC – Fire Hydrant Fittings dimension 'A' = 25"

Capacity

Performance as established by an independent testing laboratory. *Typical maximum system flow rate (7.5 feet/sec., 2.3 meters/sec.)



A Watts Water Technologies Company



ISO 9001-2008 CERTIFIED

USA: Tel: (978) 688-1811 • Fax: (978) 794-1848 • www.watts.com
 Canada: Tel: (905) 332-4090 • Fax: (905) 332-7068 • www.watts.ca

EWC-1
Electric Water Cooler
(ADA)



Water Coolers



M8SBEE shown

BARRIER-FREE MODULAR

M8SBEE, M8SBPM

Models

M8SBEE produces a light beam that is reflected off the user to automatically start water flowing. If user does not move away within 30 seconds, water shuts off automatically.

M8SBPM operates when the mechanical push button is depressed. Water continues to flow as long as the button is depressed.

When these coolers are properly installed, they allow your facility to comply with ADA requirements.

Standard Features

- > Waterways are Lead-Free in Materials & Construction
- > Stainless Steel Surfaces
- > Heavy-gauge galvanized steel wall mounting frame
- > High efficiency cooling tank and coil
- > Refrigerant R-134a
- > Product Certified to NSF/ANSI Standard 61, Annex G (AB1953)
- > Limited 5-Year Warranty

Finishes

- > Standard Finish: Stainless Steel
- > Optional Finish at extra cost: Regency Bronze

Installation

- > Prior to roughing-in, consult local, state and federal codes for proper mounting height.
- > Wall mounting frame is furnished for easy installation



Components in this fountain are lead free as defined by the Safe Drinking Water Act Amendments of 1986, and the Lead Contamination Control Act of 1988.

Limited 5-Year Warranty (Continental limits of the United States and Canada): Five years on the sealed refrigeration system and most component parts. Detailed warranty certificate enclosed with each water cooler; sample available upon request.

Export Warranty: One year on sealed refrigeration system and most components parts. Four-year replacement contract on sealed refrigeration system. Detailed warranty certificate enclosed with each drinking fountain; sample copy available upon request.

Product Certified to NSF/ANSI Standard 61, Annex G (weighted average lead content of $\leq 0.25\%$) and is in compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953).

Drinking water coolers shall comply with ANSI A117.1-1992 and ADA frontal approach requirements. Cooling unit RLF8 for Model M8SBEE and M8SBPM complies with all known Plumbing Codes. Listed by Underwriters' Laboratories to U.S. and Canadian standards.



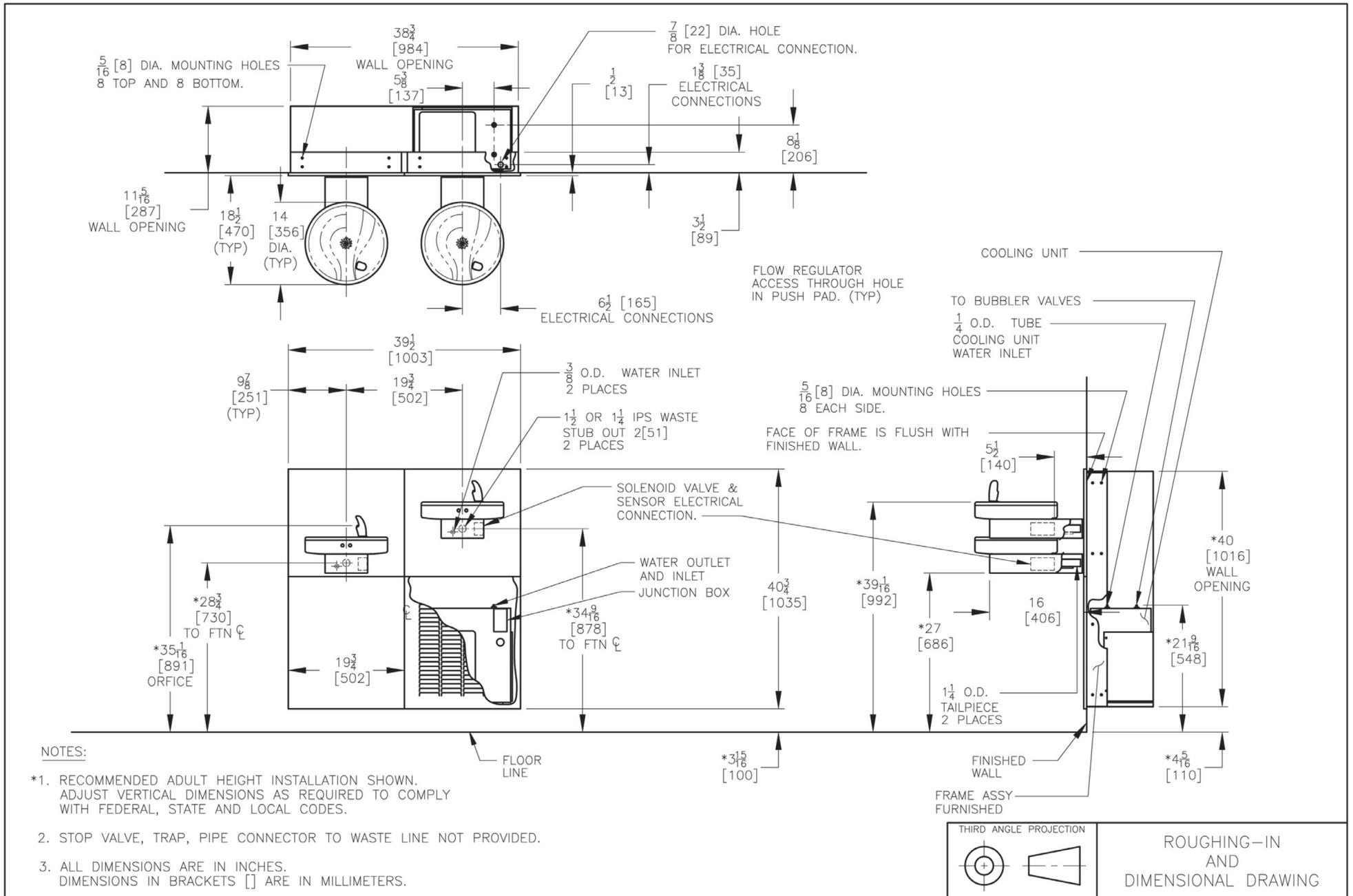
Certified to NSF/ANSI 61-G

Model	50° F Drinking Water 90° F Ambient Air Temp*			Hot 'N Cold™ Model	115 Volts, 60 HZ			Glass Filler Acc. Option	Cabinet Color Finish	Net Wt. Approx.
	Cooling Capacity GPH	Base Rate GPH	Pre-Cooler		Compr. HP	Full Load Amps	Rated Watts			
M8SBEE	8.0	8.0	No	No	1/5	4.8	340	No	Yes	114 Lbs.
M8SBPM	8.0	8.0	No	No	1/5	4.6	340	No	Yes	114 Lbs.

*Industry Standard Rating Condition 80° F inlet water temperature.

Specifications subject to change without notice

OASIS™ BARRIER-FREE MODULAR WATER COOLER MODELS M8SBEE, M8SBPM



EWH-1
Electric Mini Tank Water
Heater

electric mini tank water heater

SPECIFICATIONS

MINITANK
Series

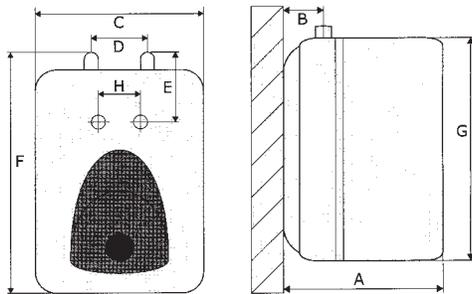
1, 2.5, 4 and 6 Gallon Mini Tanks Deliver Hot Water Efficiently by Heating and Storing at the Point of Use

EEMAX MINI TANK FEATURES

- Point-of-Use Heating Eliminates Long Hot Water Pipe Runs
- Compact Design Fits Virtually Anywhere
- Easy and Ready to Install
- Hot or Cold Water Feed
- Adjustable Temperature Control 50°-140°F
- All units are 110/120 volt plug-in
- Temperature/Pressure Relief Valve Included
- Glass Lined Tank for Extended Life
- Floor and Wall Mountable, Bracket Included
- Power Plug Outlet Capable, No Hardware Needed
- UL Listed
- Voltage: 110/120 volts
- Amperage: 12 amps
- Heating Capacity: 1440 watts
- Phase: single
- Temperatures: 50°-140°F
- Max Operating Pressure: 150 psi

EEMAX MINI TANK INSTALLATION

Save water by eliminating the wait for hot water to reach the faucet. Simply tap into the water line and install the heater directly at the sink. No need for costly recirculating lines and pumps. And when you want to eliminate the wait for hot water but need more volume, install the Eemax heater in-line with a larger hot water source, such as a tankless heater or a storage tank heater. Lightweight and compact, these units plug into a standard 110 volt outlet.



	EMT1	EMT2.5	EMT4	EMT6
A	10.0"	10.375"	10.375"	15.5"
B	2.25"	2.75"	2.75"	4.0"
C	11.0"	11.75"	11.75"	15.75"
D	4.0"	4.0"	4.0"	4.0"
E	6.0"	6.0"	6.0"	6.0"
F	13.5"	15.5"	20.25"	19.0"
G	12.5"	14.5"	19.25"	18.0"
H	2.5"	2.5"	2.5"	2.5"



EMT1 PRODUCT SPECIFICATIONS:

Tank Vol.: 1.3 gallon
 Dimensions: 12.5" H x 11" W x 10" D
 Weight: 12.5 lbs.
 Element: Field replaceable
 Fittings: 1/2" NPT connections at TOP of unit
 Warranty: 5 years limited on leaks, 2 years defects

EMT2.5 PRODUCT SPECIFICATIONS:

Tank Vol.: 2.5 gallons
 Dimensions: 14.5" H x 11.75" W x 10.375" D
 Weight: 20 lbs.
 Element: Field replaceable
 Fittings: 1/2" NPT connections at TOP of unit
 Warranty: 5 years limited on leaks, 2 years defects

EMT4 PRODUCT SPECIFICATIONS:

Tank Vol.: 4 gallons
 Dimensions: 19.25" H x 11.75" W x 10.375" D
 Weight: 24 lbs.
 Element: Field replaceable
 Fittings: 1/2" NPT connections at TOP of unit
 Warranty: 5 years limited on leaks, 2 years defects

EMT6 PRODUCT SPECIFICATIONS:

Tank Vol.: 6 gallons
 Dimensions: 18" H x 15.75" W x 15.5" D
 Weight: 26 lbs.
 Element: Field replaceable
 Fittings: 3/4" NPT connections at TOP of unit
 Warranty: 5 years limited on leaks, 2 years defects



353 Christian Street, Oxford, CT 06478
 (800) 543-6163 info@eemaxinc.com
eemax.com



FD-1
Floor Drain



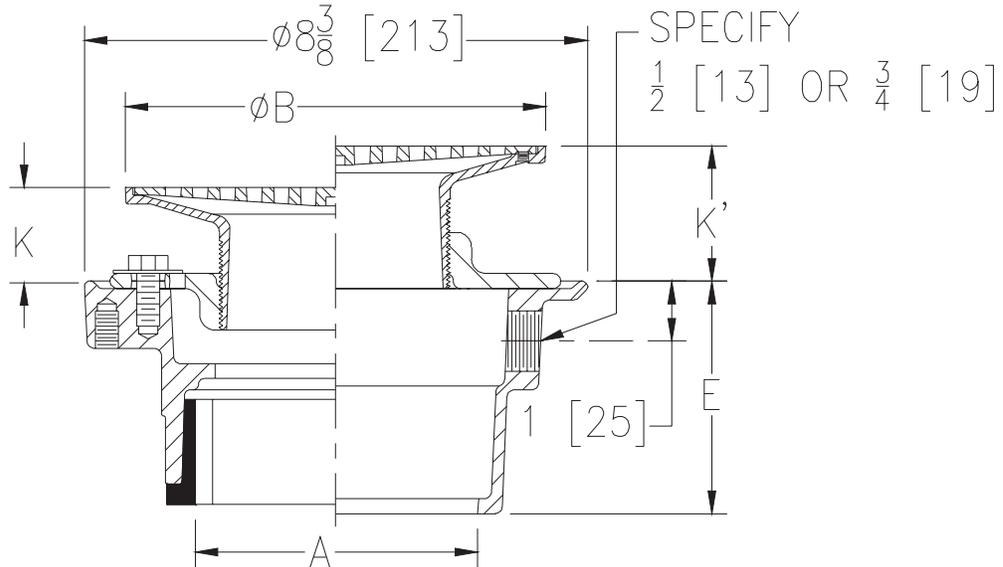
Z415B-P

SPECIFICATION SHEET

BODY ASSEMBLY W/ "TYPE B" STRAINER & TRAP PRIMER CONNECTION

TAG _____

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



Dimensions In Inches						Approx. Wt. Lbs. [kg]	Strainer Open Area Sq. In. [cm ²]
A - Pipe Size	B Strainer Dia.	K		K'			
		Min.	Max.	Min.	Max.		
2-3 [50-75]	5 [127]	1/2 [13]	1 5/8 [41]	1 3/8 [35]	2 3/8 [60]	11 [5]	8 [52]
2-3-4 [50-75-100]	6 [152]	3/4 [19]	1 3/4 [44]	1 5/8 [41]	2 3/4 [70]	13 [6]	9 [58]
2-3-4 [50-75-100]	7 [178]	1 [25]	2 1/4 [57]	2 [51]	3 1/8 [79]	14 [6]	12 [77]
3-4 [75-100]	8 [203]	1 1/8 [29]	2 1/4 [57]	2 [51]	3 1/8 [79]	16 [7]	18 [116]
6 [150]	8 [203]	1 1/8 [29]	2 1/4 [57]	2 [51]	3 1/8 [79]	18 [8]	18 [116]
6 [150]	10 [254]	1 5/8 [41]	2 5/8 [67]	2 5/8 [67]	3 1/2 [89]	22 [10]	26 [168]

ENGINEERING SPECIFICATION: ZURN ZN415B-P Floor and shower drain, Dura-Coated cast iron body with bottom outlet and trap primer connection, combination invertible membrane clamp and adjustable collar with seepage slots and "TYPE B" polished nickel bronze strainer.

OPTIONS (Check/specify appropriate options)

PIPE SIZE

- 2 thru 4 [50 thru 100]
- 2 thru 4 [50 thru 100]
- 2 [50]
- 3 [75]
- 4 [100]
- 6 [150]
- 2 thru 4 [50 thru 100]
- 2 thru 4 [50 thru 100]

(Specify size/type) **OUTLET**

- _____ IC Inside Caulk
- _____ IG Inside Gasket
- _____ IP Threaded
- _____ IP Threaded
- _____ IP Threaded
- _____ IP Threaded
- _____ NH No-Hub
- _____ NL Neo-Loc

'E' BODY HT. DIM.

- 3 7/8 [98]
- 3 7/8 [98]
- 2 3/8 [60]
- 2 5/8 [67]
- 2 7/8 [73]
- 2 3/4 [70]
- 3 7/8 [98]
- 4 5/8 [117]

PREFIXES

- _____ ZB D.C.C.I. Body Assembly w/Polished Bronze Top
- _____ ZN D.C.C.I. Body Assembly w/Polished Nickel Bronze Top*

SUFFIXES

- _____ -AA All Acid Resisting Epoxy
- _____ -AR Acid Resisting Epoxy Coated Cast Iron
- _____ -DP Decorative Polished Top
- _____ -G Galvanized Cast Iron
- _____ -HD Heavy Duty Slotted Grate (ZN 5 [127] and 6 [152] Sizes Only)
- _____ -OF Oval Funnel (Z329) (6 - 10 [152 - 254] Strainers Only)
- _____ -TC Neo-Loc Test Cap Gasket (2 [50] - 4 [100] NL Outlet Only)
- _____ -U 1 - 3 [25 - 76] High Extension Adapter
- _____ -V Backwater Valve
- _____ -VP Vandal-Proof Secured Top
- _____ -Y Sediment Bucket
- _____ -4 4 [100] Diameter Funnel (Z328)

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

REV.	DATE: 1/19/04	C.N. NO. 91865
DWG. NO. 67167	PRODUCT NO. Z415B-P	

HB-1
Hose Bib

387-E27CP

Inside Sill Fitting

PRODUCT TYPE

Inside sill fitting

FEATURES & SPECIFICATIONS

- Polished chrome plated finish
- Solid brass body construction
- 2 1/4" tee handle, catalog #293-6
- Slow compression renewable cartridge that closes with water pressure with tapered square broach to facilitate handle removal, catalog #217-XTLH
- In-line vacuum breaker hose thread outlet, catalog #E27
- 3/4" NPT female inlet
- 3/4" male garden hose thread outlet
- Loose wall flange

PERFORMANCE SPECIFICATION

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140° F

WARRANTY

- Lifetime Limited Faucet Warranty
- 5-Year Limited Cartridge Warranty
- 1-Year Limited Finish Warranty

COMPLIANT TO

- ASME A112.18.1M
- CSA B125

Job Name	_____
Item Number	_____
Section/Tag	_____
Model Specified	_____
Architect	_____
Engineer	_____
Contractor	_____
<input type="checkbox"/> Submitted as Shown	<input type="checkbox"/> Submitted with Variations
Date	_____

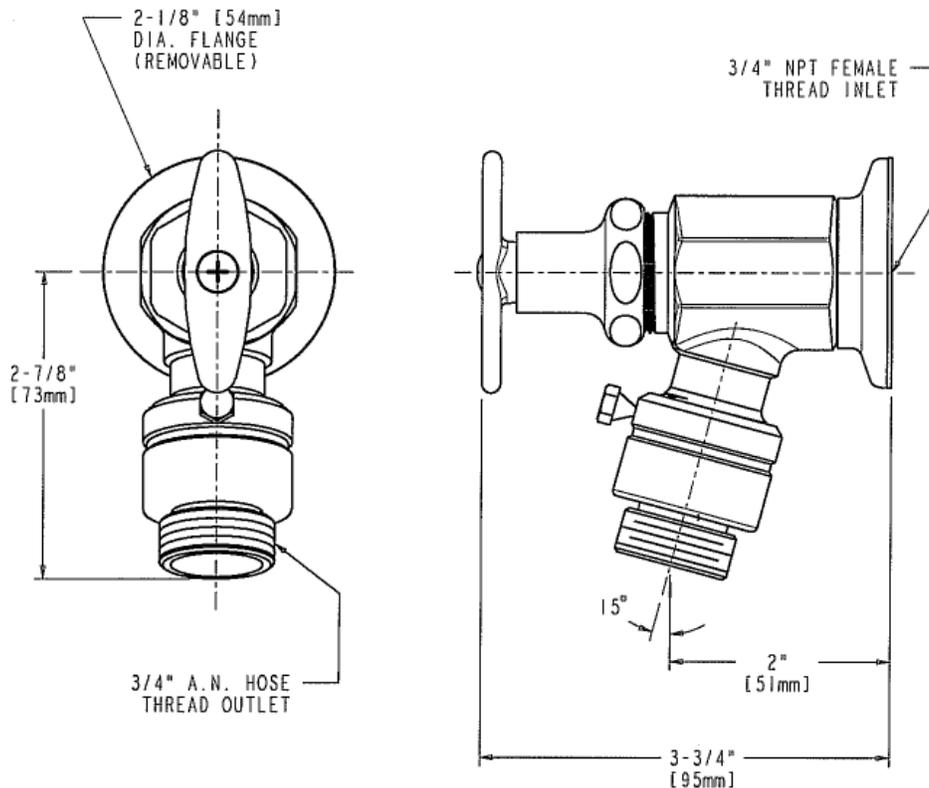


387-E27CP

Inside Sill Fitting

ARCHITECT/ENGINEER SPECIFICATION

Chicago Faucets No. 387-E27CP, Polished chrome plated solid cast brass construction. 2 1/4" tee handle with tapered broach. Slow compression renewable cartridge designed to close with water pressure with square tapered broach feature to help facilitate handle removal. In-line vacuum breaker hose thread outlet. 3/4" NPT female inlet. 3/4" male garden hose outlet. This product is tested to ASME A112.18.1 and CSA B125 industry standards. Optional plug available for loose key tamper resistant applications.



OPERATION AND MAINTENANCE

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning this product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



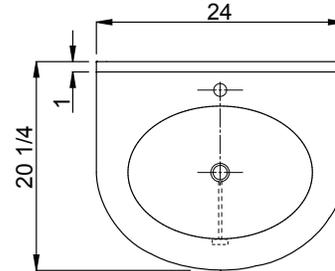
L-1
Lavatory (ADA)



WHLV-175-S

**INSTITUTIONAL GROUP
LAVATORY - OVAL - WALL-HUNG
ADA COMPLIANT**

SUBMITTAL DATA

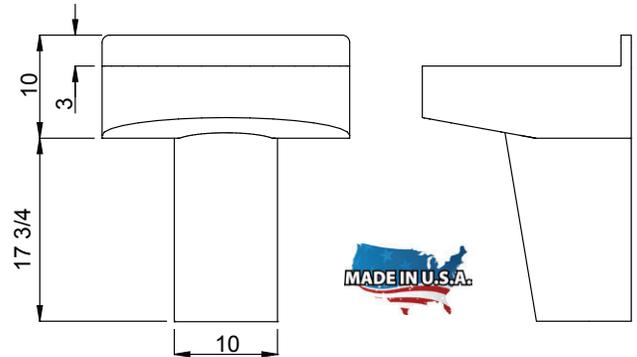


**ADA
COMPLIANT
Vandal Resistant**

SPECIFICATIONS

Top and integral apron constructed of 16 gauge type 304 stainless steel. Bowl of seamless drawn construction of 18 gauge stainless steel. Enclosure of 18 gauge type 304 stainless steel. Integral Flow overflow system. Enclosure shall be secured to apron using vandal resistant screws. Exposed exterior surfaces shall have a Hand-Blended Just Finish. Underside of bowl and shall be sound deadened.

Includes (1) JSGN-6 sensor-operated faucet with goosneck spout; (1) JTM-47 thermostatic mixing valve and (1) J-ADA-115-FS flat grid strainer.



APPROVED FOR MANUFACTURING

MODEL NO.: **WHLV-175-S** QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____



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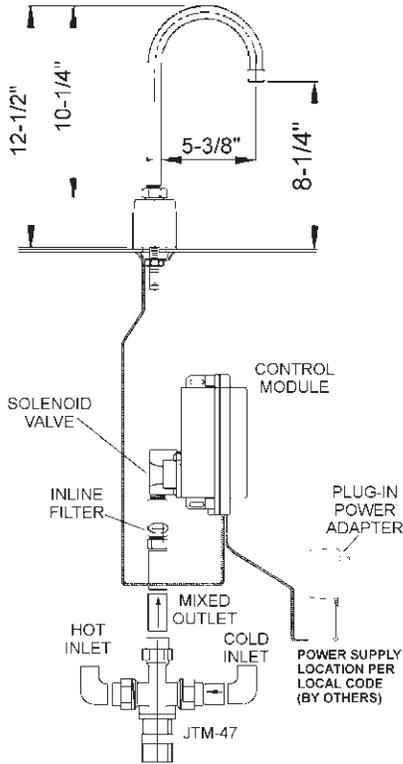
PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com



SUBMITTAL DATA

WHLV-175-S

INSTITUTIONAL GROUP LAVATORY - OVAL - WALL-HUNG ADA COMPLIANT



JSGN-6-AC - Sensor Operated Faucet with Control Module

Sensor-operated deck mounted gooseneck faucet. Chrome plated solid brass construction faucet body. Chrome plated spout 12-1/2" high from bottom of base (8-1/4" from base to aerator) with 5-3/8" reach. 2.0 GPM Laminar flow control.

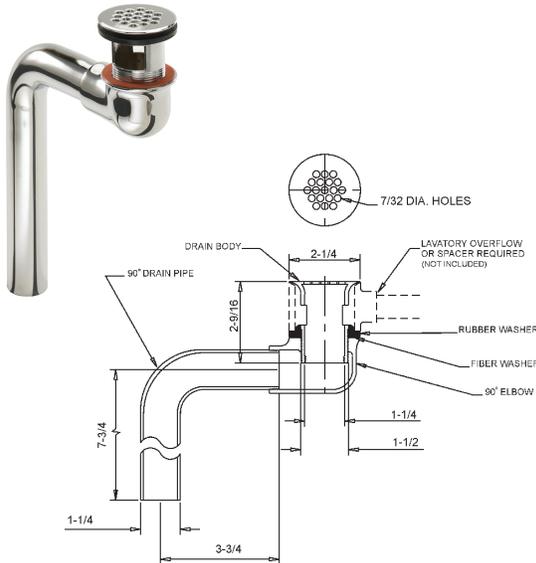


Control module, AC powered vandal resistant with armored control/power cable. Power adapter, standard plug in type, provides 12V DC output. Slow closing solenoid valve, piston-operated, provides reliable smooth operation without water hammer. In-line filter with clean-out trap. Sensor range adjustable from 6" to 30". Automatic time-out feature adjustable from 0 (preset-active until no activity sensed) up to 60 seconds in 15 second intervals. Shut-off delay adjustable to 0, 1 (preset), 2, 4 or 8 seconds.

Battery powered unit available. Specifications same as above, except provides 6V DC and includes battery holder for four AA batteries in lieu of plug-in power adapter.

JTM-47 - Thermostatic Mixing Valve

Anti-Scald mixing valve with bronze body with integral check valves and adjustment cap with locking feature. 1/2" threaded union inlet and outlet connections. Temperature range from 60 to 120 F (16 C to 49 C). ASSE Standard 1016 Listed.



J-ADA-115-FS Drain

Polished chrome plated flat grid lavatory drain with 1-1/4" O.D. offset tailpiece.

J-ADA-115-FS Drain

AC OUTLET MUST BE INSTALLED ACCORDING TO LOCAL CODES. INSTALLATION CONTRACTOR RESPONSIBLE FOR COMPLIANCE WITH THOSE CODES.

JUST MANUFACTURING COMPANY

9233 KING STREET . FRANKLIN PARK . ILLINOIS . 60131-2111

PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com

**WC-1
Carrier**



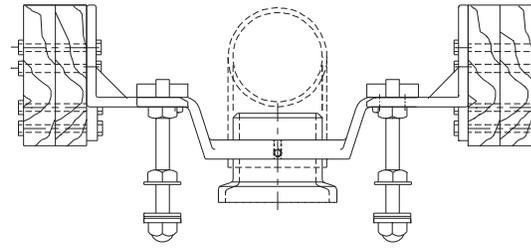
Z1285

WOOD STUD SUPPORTED WATER CLOSET CARRIER

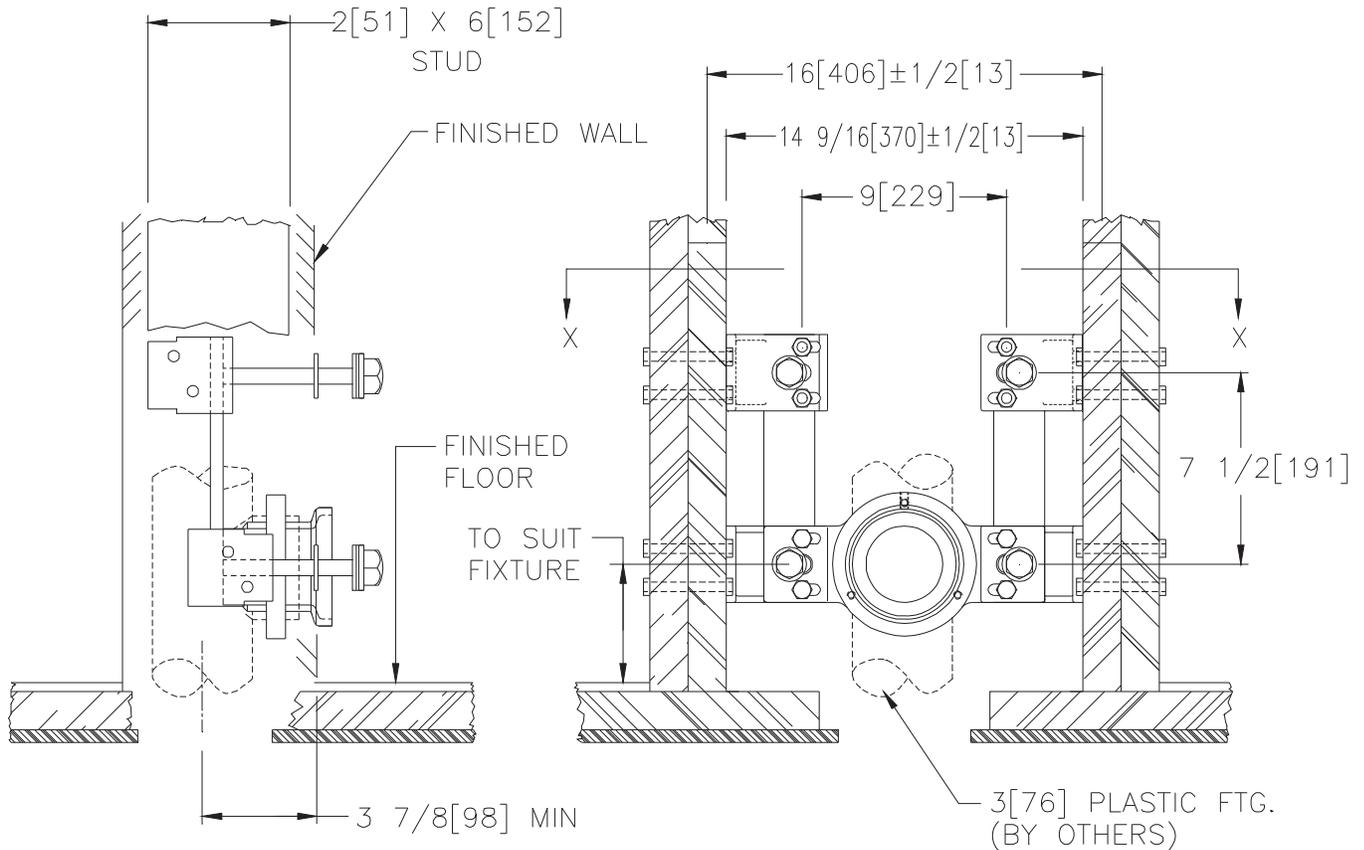
SPECIFICATION SHEET

TAG _____

Dimensional Data (inches and [mm]) are Subject to Manufacturing Tolerances and Change Without Notice



SECTION X-X



Product Number	Approx. Wt. Lbs. [kg]
Z1285	25[12]

ENGINEERING SPECIFICATION: ZURN Z1285 Residential water closet support system. Complete with Dura-Coated support brackets and coupling support, ABS coupling, fixture bolts, trim and bonded "Neo-Seal" gasket.

PREFIXES

___ Z Dura-Coated Bracket System*

SUFFIXES

- ___ -CL Coupling Length Greater Than 3 [76] (Specify Length)
- ___ -HT Hanger Type Closet Adapter
- ___ -PD3 3 [76] Double Plastic Pipe Connection
- ___ -X4 4 [102] Carrier Foot Extension (For-Y Only)
- ___ -Y Foot Support System

*REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

REV. A	DATE: 12/6/10	C.N. NO. 120624
DWG. NO. 63136	PRODUCT NO. Z1285	

WC-1
Flushometer

Non-Hold Open Toilet Flushometer Valve - 1.28 gpf

FEATURES

- Manual operated, non-hold open, toilet flushometer valve complete with 1" angle stop and 1-1/2" vacuum breaker set
- Piston valve action with 1.28 gpf
- Left/right rough-in

MODELS

- TMT1LN#CP
Valve only, Right/Left hand rough
- TMT1LN32#CP (1-1/2" Vacuum breaker)
Complete set, Right/Left hand rough

Complete set supplied with:

Vacuum breaker & angle stop set - VB9CP-32

- 1" Angle stop - 10077t3
 - 1-1/2" Vacuum breaker - 10075t1
 - Spud nut & escutcheon - 71051Nt6
 - Sweat solder kit - TH559EDVSJ3
- Optional Parts:
Z-4000-J - Adapter for ground joint angle stops
10075T1L - 24" Long 1-1/2" vacuum breaker tube



PRODUCT SPECIFICATION

TOTO® Model No. _____

Manual toilet brass flushometer valve, non-hold-open piston type with self-cleaning debris screen and precise flushing capability. Low water consumption of 1.28 gpf / 4.8 lpf Polished Chrome exterior, angle stop with back-check and vacuum breaker included.

COLORS/FINISHES

- #CP Polished Chrome

CODES/STANDARDS

- Meets or exceeds ASSE 1037, CSA B125.3
- Certifications: IAPMO(cUPC), ASSE, State of Massachusetts, and others
- Code Compliance: UPC, IPC, NSPC, NPC Canada, and others
- ADA compliant



TMT1LN

Non-Hold Open Toilet Flushometer Valve - 1.28 gpf

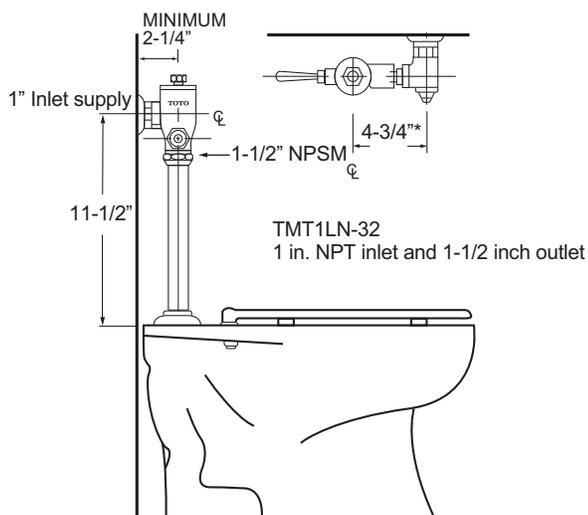
SPECIFICATIONS

- Warranty Three Year Warranty
- Material Bronze casting
- Water Supply 1" NPT
- Fixture type Flushometer valve bowl
1.28 gpf/4.8 lpf
- Supply water pressure 35 psi (flowing) - 100 psi*
(minimum flow rate of 23gpm)

These specifications are subject to change without notice.

*Water pressures over 80 psi are not recommended for most plumbing fixtures.

Check your local plumbing code for details.



*Adjustable to + 1/2" from standard

TOTO

These dimensions and specifications are subject to change without notice

WC-1
Toilet



R2105

Siphon Jet Toilet - Off Floor

Replacement Toilet for Most Vitreous China Closet Fixtures.

The **R2105** is designed to replace a variety of existing front mount wall-hung fixtures with 4-point mounting. Unit includes a contoured integral seat with satin finish in addition to punching for a hinged seat by others. Unit is fabricated from 16 gage, type 304 stainless steel and is seamless welded construction with exposed exterior & interior surfaces having a satin finish.

Toilet is Siphon Jet type with elongated bowl manufactured to ASME A112.19.3-2008 and CSA B45.4-2008 requirements and will flush with a minimum of 25 PSI flow pressure when used in conjunction with an appropriate flush valve. Trap has a minimum 3-1/2" seal, will pass a 2-1/8" ball and is fully enclosed. Wall flange is reinforced for maximum strength and includes 1-1/2" NPT flushing inlet connection and gasket waste outlet.

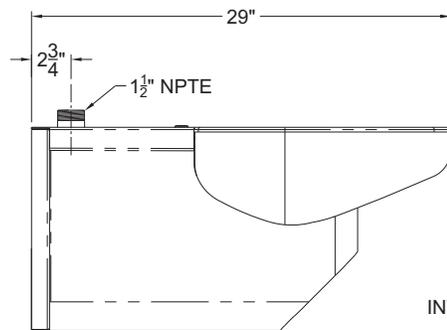
GUIDE SPECIFICATION

Provide and install Acorn Replacement Siphon Jet Toilet (specify model number and options). Fixture shall be fabricated from 16 gage, type 304 stainless steel. Construction shall be seamless welded and exposed surfaces shall have a satin finish with an integral contoured toilet seat. Toilet shall be concealed blowout jet type with an elongated bowl and a self-draining flushing rim. Toilet shall meet ASME A112.19.3-2008 and CSA B45.4-2008 requirements and will flush with a minimum of 25 PSI. Toilet trap shall have a minimum 3-1/2" seal that shall pass a 2-1/8" diameter ball and be fully enclosed. Toilet waste outlet shall be gasket waste.

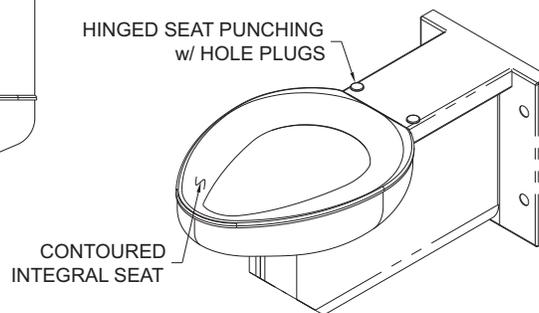


Must specify:

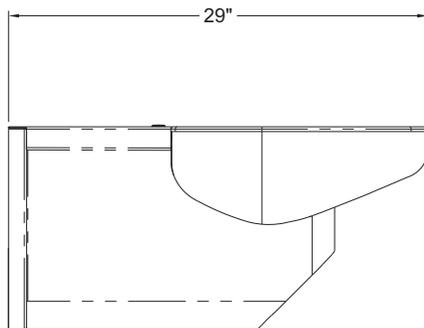
- R2105-T-1
- R2105-W-1



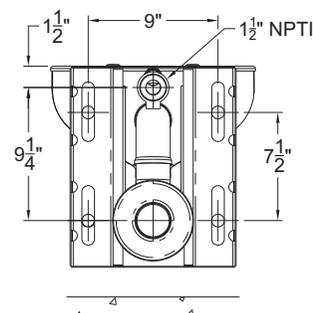
R2105-T-1



R2105-W-1
SHOWN



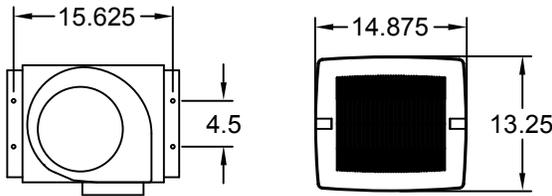
R2105-W-1



Please visit www.acorneng.com for most current specifications.

Mechanical Cutsheets

EF-1
Exhaust Fan



Model: SP-B80

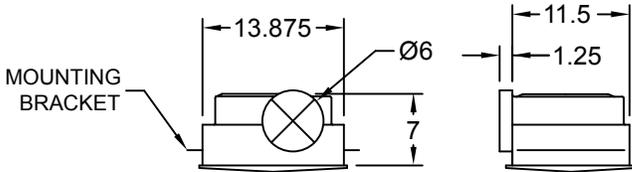
Ceiling Exhaust Fan

Standard Construction Features:

- Corrosion resistant galvanized steel scroll and housing - White designer non-yellowing grille - Round outlet duct collar with integral backdraft damper - Single inlet forward curved wheel - Plug type disconnect - Adjustable mounting brackets

Selected Options & Accessories:

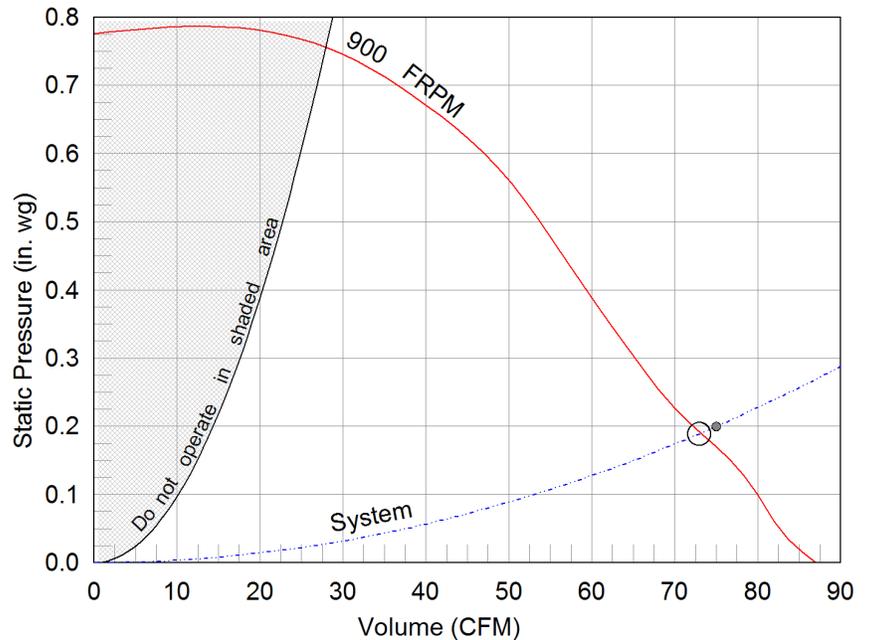
Motor with Thermal Overload
Motor with 40 Degree C Ambient Temperature
UL/cUL 507 Listed - Electric Fan
Designer Grille
Round Duct Connection
Polypropylene Wheel Material
Energy Star Rated



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	9
Weight w/ Acc's (lb)	9

Performance	
Requested Volume (CFM)	75
Actual Volume (CFM)	73
External SP (in. wg)	0.2
Total SP (in. wg)	0.189
Fan RPM	900
Amps (A)	0.6
Elevation (ft)	282
Airstream Temp.(F)	70
Air Density (ft3)	0.074
Sones	2.5

Motor	
Motor Mounted	Yes
Input Watts (W)	54.3
V/C/P	115/60/1
Enclosure	ODP



- △ Operating Bhp point
- Operating point at Total SP
- Operating point at External SP
- Fan curve
- - - System curve
- · · Brake horsepower curve

Notes:

All dimensions shown are in units of in.
*FLA is approximate and will vary slightly with the motor.
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB
attenuation per Octave band at 5 ft
Sones - calculated using AMCA 301 at 5 ft
AMCA certified ratings seal applies to some ratings only.
Wattage is shown at free air.
Wattage is approximate and may vary between motors.



AMCA



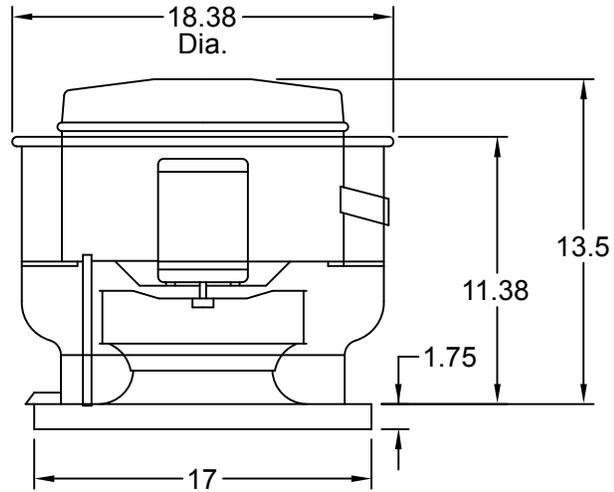
AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The watt ratings shown are at free air. The sound ratings shown are for loudness values in spherical sones at 5 ft. (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical sone levels. The AMCA Certified Ratings Seal applies to sone ratings only.

EF-2
Exhaust Fan

Model: CUE-060-E

Direct Drive Upblast Centrifugal Roof Exhaust Fan

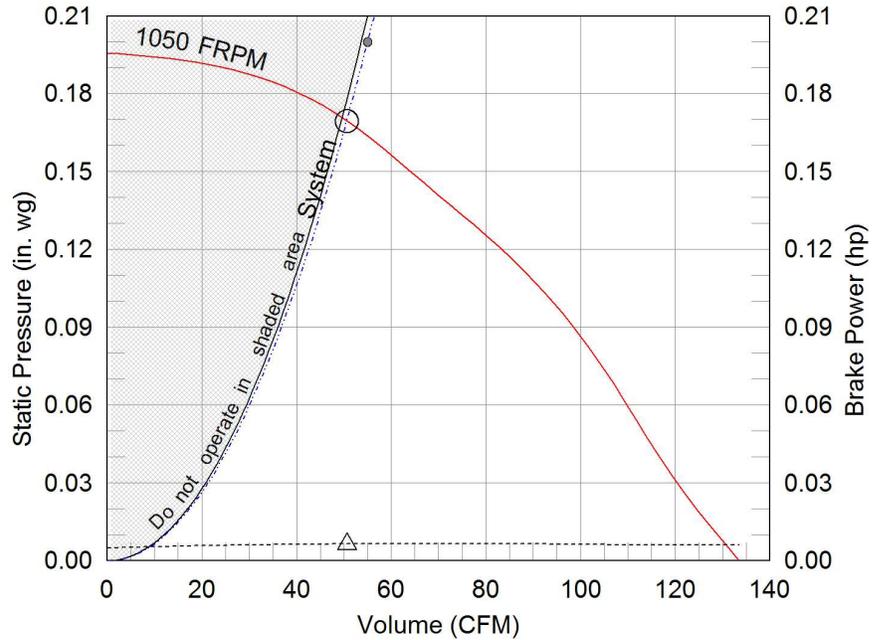


Reference assembly view drawings for actual dimensions with mounted accessories

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	23
Weight w/ Acc's (lb)	25
Roof Opening (in.)	10.5 x 10.5

Performance	
Requested Volume (CFM)	55
Actual Volume (CFM)	51
External SP (in. wg)	0.2
Total SP (in. wg)	0.169
Fan RPM	1050
Operating Power (hp)	0.01
Elevation (ft)	282
Airstream Temp.(F)	70
Air Density (ft3)	0.074
Tip Speed (ft/min)	2,233
Static Eff. (%)	21

Motor	
Motor Mounted	Yes
Size (hp)	1/200
V/C/P	115/60/1
Enclosure	ODP
Motor RPM	1050
Windings	1



- △ Operating Bhp point
 - Operating point at Total SP
 - Operating point at External SP
 - Fan curve
 - - - System curve
 - Brake horsepower curve
- | | |
|-----------------------------|---------------------|
| External SP | 0.2 in. wg |
| Direct Drive RPM Adjustment | -0.031 in. wg |
| Total SP | 0.169 in. wg |

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	60	60	52	40	36	34	23	23	48	37	1.8

Notes:

All dimensions shown are in units of in.
*FLA - based on tables 150 or 148 of National Electrical Code 2002. Actual motor FLA may vary, for sizing thermal overload, consult factory.
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft



Model: CUE-060-E

Direct Drive Upblast Centrifugal Roof Exhaust Fan

Standard Construction Features:

- Aluminum housing - Backward inclined aluminum wheel - Aluminum curb cap with prepunched mounting holes - Drain trough - Ball bearing motors (sizes 98-160), sleeve bearing motors (sizes 60-95) - Motor isolated on shock mounts - Corrosion resistant fasteners

Selected Options & Accessories:

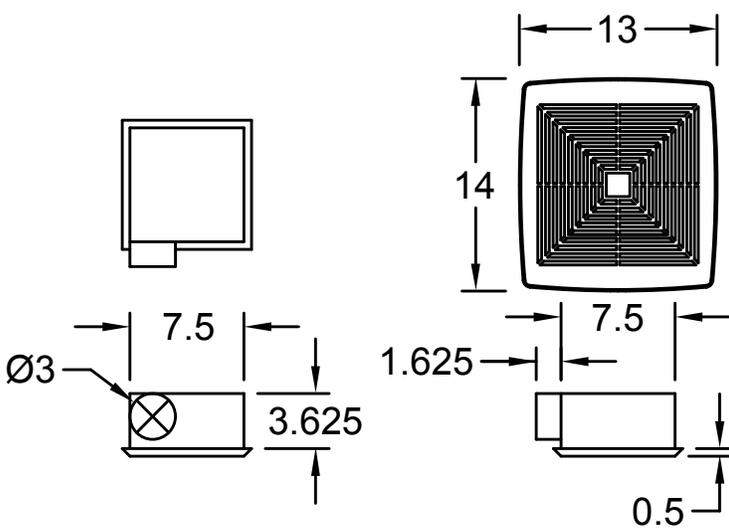
Switch, NEMA-1, Toggle, Junction Box Mounted & Wired
Unit Warranty: 1 Yr (Standard)

AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to sone ratings only.



Model: SP-C50

Ceiling Exhaust Fan

Standard Construction Features:

- Galvanized steel housing - Outlet duct collar with integral backdraft damper - Forward curved wheel - Plug type disconnect - Adjustable mounting brackets

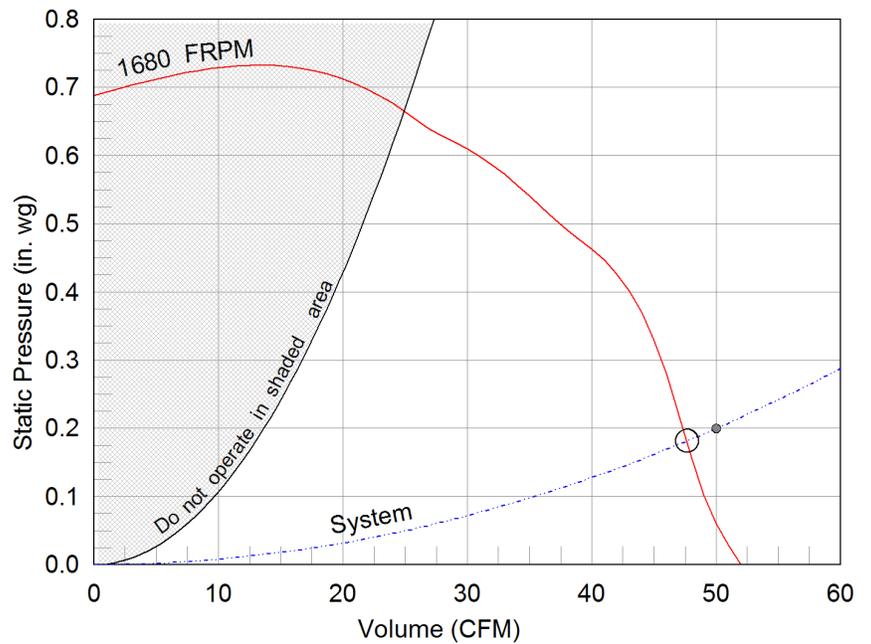
Selected Options & Accessories:

Motor with Thermal Overload
Motor with 40 Degree C Ambient Temperature
UL/cUL 507 Listed - Electric Fan
Standard Grille
Polypropylene Wheel Material

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	5
Weight w/ Acc's (lb)	5

Performance	
Requested Volume (CFM)	50
Actual Volume (CFM)	48
External SP (in. wg)	0.2
Total SP (in. wg)	0.182
Fan RPM	1680
Amps (A)	0.8
Elevation (ft)	282
Airstream Temp.(F)	70
Air Density (ft3)	0.074
Sones	3.0

Motor	
Motor Mounted	Yes
Input Watts (W)	0
V/C/P	115/60/1
Enclosure	ODP



- △ Operating Bhp point
- Operating point at Total SP
- Operating point at External SP
- Fan curve
- - - System curve
- Brake horsepower curve

Notes:

All dimensions shown are in units of in.
*FLA is approximate and will vary slightly with the motor.
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB
attenuation per Octave band at 5 ft
Sones - calculated using AMCA 301 at 5 ft
AMCA certified ratings seal applies to some ratings only.
Wattage is shown at free air.
Wattage is approximate and may vary between motors.



AMCA

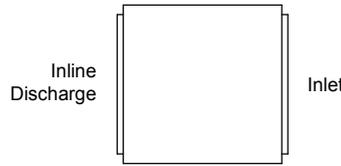


AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

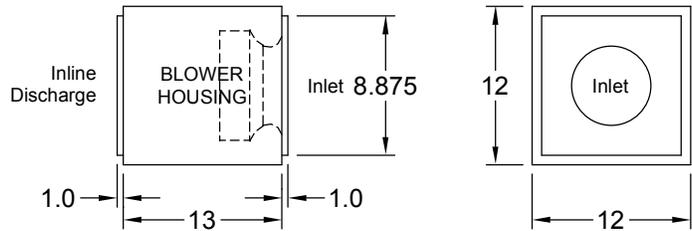
Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft damper. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The watt ratings shown are at free air. The sound ratings shown are for loudness values in spherical sones at 5 ft. (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation type B: free inlet spherical sone levels. The AMCA Certified Ratings Seal applies to sone ratings only.

EF-3
Exhaust Fan

Model: SQ-75-VG
Direct Drive Centrifugal Inline Fan



PLAN VIEW

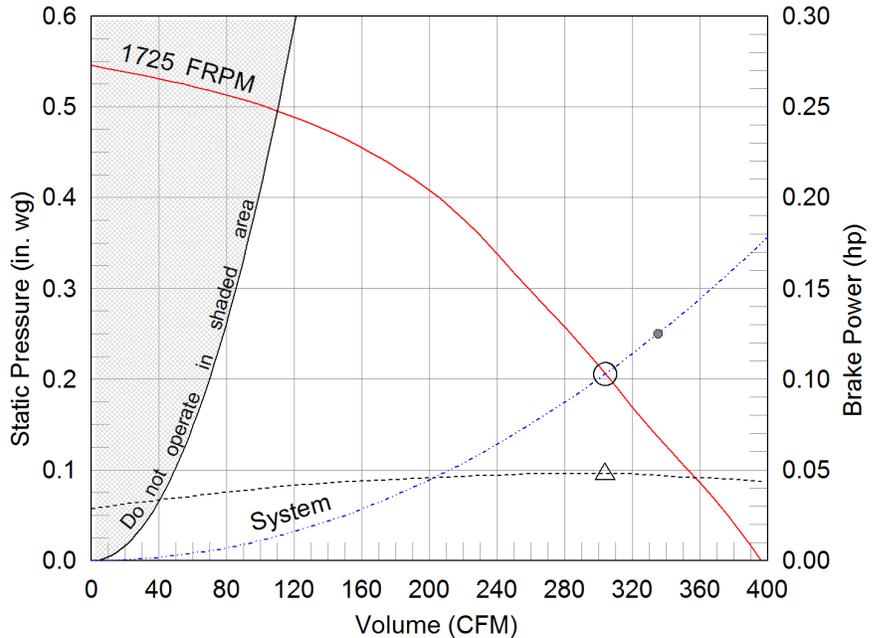


ELEVATION VIEW

END VIEW

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	32
Weight w/ Acc's (lb)	34

Performance	
Requested Volume (CFM)	335
Actual Volume (CFM)	304
External SP (in. wg)	0.25
Total SP (in. wg)	0.206
Fan RPM	1725
Operating Power (hp)	0.05
Elevation (ft)	282
Airstream Temp.(F)	70
Air Density (ft3)	0.074
Tip Speed (ft/min)	3,669
Static Eff. (%)	21



Motor	
Motor Mounted	Yes
Size (hp)	1/6
V/C/P	115/60/1
Enclosure	TENV
Motor RPM	1725
Windings	1
NEC FLA* (Amps)	4.4
FLA (Amps)	3.4

- △ Operating Bhp point
 - Operating point at Total SP
 - Operating point at External SP
 - Fan curve
 - - - System curve
 - - - Brake horsepower curve
- | | |
|-----------------------------|---------------|
| External SP | 0.25 in. wg |
| Direct Drive RPM Adjustment | -0.044 in. wg |
| Total SP | 0.206 in. wg |

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	Lwa	dBA	Sones
Inlet	71	72	69	57	54	51	46	39	64	52	6.5
Radiated	72	74	63	51	49	46	40	35	61	50	5.7

Notes:

All dimensions shown are in units of in.
*FLA - based on tables 150 or 148 of National Electrical Code 2002. Actual motor FLA may vary, for sizing thermal overload, consult factory.
LWA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft



Model: SQ-75-VG

Direct Drive Centrifugal Inline Fan

Standard Construction Features:

- Galvanized steel housing - Backward inclined aluminum wheel - Two bolted access panels - Integral duct connection flanges - Ball bearing motors (sizes 100-160 and all vari-green motors), sleeve bearing motors (sizes 60-95) - Corrosion resistant fasteners

Selected Options & Accessories:

Motor - Vari-Green EC motor 0-10 VDC Input Signal
Control - Vari-Green Dial on Exterior of Fan Housing, Mounted and Wired
Switch, NEMA-1, Toggle, Junction Box Mounted & Wired
Unit Warranty: 1 Yr (Standard)

AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type B: Free inlet, Ducted outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The inlet sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type B: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to inlet sone ratings only. Radiated (casing) sound data is the sound generated through the fan housing when the fan is ducted on both the inlet and outlet.

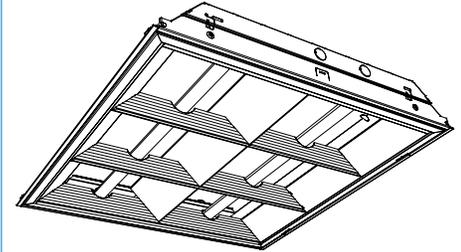
Electrical Cutsheets

Philips Day-Brite Paralouver Recessed
2ESG214-23FMW-UNIV1/2

Paralouver Recessed

2X2 Energy Select
2 Lamp T5, T5HO or T8 6 Cell

2 lamp energy saving replacement
for standard parabolics



Specifier's Reference

Project
Type
Model No.
Comments

application

- Designed for modern lamp/ballast systems. High lumen lamps and high efficiency ballasts are recommended to minimize energy consumption without sacrificing light levels.
- Energy savings approaching 1/3 are possible compared to conventional T8 parabolic luminaires, while maintaining IES recommended light levels.
- Lighting power densities as low as 0.6 Watts/square foot are possible while maintaining recommended light levels.
- 3" nominal housing depth requires less plenum space than traditional parabolics.

construction

- Housing is multi-stage phosphate treated for maximum corrosion resistance and finish coat is high reflectance baked white enamel.
- Smooth rolled edges on all four sides for easy handling.
- Integral baffling system to prevent light leaks.
- Die-formed one piece housing including end plates has stiffening embosses and provides increased rigidity.
- T-bar grid clips are integral to luminaire, no extra parts required. Designed for use with standard grid ceiling members, 1-1/2" maximum height.
- Embosses with holes provided in housing for screwing to T-bar if desired.

electrical

- Lamp/ballast systems are available offering electrical system efficacy ratings up to 90 Lumens/Watt.
- Total luminaire efficacy as high as 77 LPW.
- Step dimming ballasts can be switched to 50% (or less) input power for energy savings to meet most energy codes while maintaining symmetrical illumination.
- UL listed for damp locations. Canadian certified optional.
- Self-contained fluorescent emergency power packs can be incorporated, UL listed for dry locations.
- Some models with multiple ballasts or emergency ballasts will be supplied with a top mounted ballast box which will increase the height of the luminaire.

enclosure

- 6 cell louver is available with ribbed or flat cross baffles and creates a controlled amount of light in the upper spaces of the room to eliminate "cave effect" and create uniform illumination.
- Louver features a high reflectance diffuse white powder-coat finish.
- Opposable spring loaded latches are standard for easy operation and consistent retention.
- Can be hinged and latched from either side.

Green Choice: 2ESG217-23RMW-UNV-1/2EBHE-LPT835HL

2	ES	2	-	-	-	-
Width	Ceiling Type	Lamp Type/Wattage	Louver Finish	Ballast Configuration	Ballast Type	Options
2 - 2'	G - Grid F - Flange	14 - 14WT5 (22") 17 - 17WT8 (24") 24HO - 24WT5HO (22")	RMW - Matte white finish with ribbed cross baffles FMW - Matte white finish with flat cross baffles	1/2 - One 2-lamp ballast	EB95 - 28WT5 electronic ballast, .95 ballast factor EB115 - 14WT5/28WT5 electronic ballast, 1.15 ballast factor EBS095 - 14WT5/28WT5 electronic step dimming ballast, .95 ballast factor EBS0115 - 14WT5/28WT5 electronic step dimming ballast, 1.15 ballast factor EBS080 - 54WT5HO electronic step dimming ballast, .80 ballast factor EBD - Electronic dimming ballast EB - Electronic ballast, std. ballast factor EBL - T8 electronic ballast, low ballast factor EBH - T8 electronic ballast, hi ballast factor EB101 - T8 electronic ballast, <10% THD, instant start EB10R - T8 electronic ballast, <10% THD, program rapid start EBS0 - T8 electronic step dimming ballast, .88 ballast factor EBS0104 - T8 electronic step dimming ballast, 1.04 ballast factor EBHE - T8 electronic ballast, high efficiency, std. ballast factor EBLHE - T8 electronic ballast, high efficiency, low ballast factor EBHHE - T8 electronic ballast, high efficiency, high ballast factor	CM - Canadian Market F1 - Installed flex, 3/8" diameter, 18 gauge, 3 wire, 6' F2 - Installed flex, 3/8" diameter, 18 gauge, 4 wire, 6' E1* - DEB-1 emerg. ballast, CF/T8, 350-450 lumens E5* - DEB-5 emerg. ballast, CF/T8, 1100-1400 lumens E7* - DEB-7 emerg. ballast, CF/T8, 430-700 lumens E7LP* - DEB-7LP emerg. ballast T8/T5/T5HO, 430-700 lumens E6LP* - DEB-6LP emerg. ballast, T8/T5/T5HO, 750-1325 lumens GLR# - Fusing, fast blow (# = number of ballasts) LPT730 - Installed T8 lamps, 70+ CRI, 3000K LPT735 - Installed T8 lamps, 70+ CRI, 3500K LPT741 - Installed T8 lamps, 70+ CRI, 4100K LPT830HL - Installed T8/T5 hi lumen lamps, 80+ CRI, 3000K LPT835HL - Installed T8/T5 hi lumen lamps, 80+ CRI, 3500K LPT841HL - Installed T8/T5 hi lumen lamps, 80+ CRI, 4100K LPT830 - Installed CF/T8/T5/T5HO lamps, 80+ CRI, 3000K LPT835 - Installed CF/T8/T5/T5HO lamps, 80+ CRI, 3500K LPT841 - Installed CF/T8/T5/T5HO lamps, 80+ CRI, 4100K PAF - Housing painted after fabrication
Family	No. of Lamps	Louver Configuration	Voltage			
ES - Energy Select	(not included) 2	(Cells Wide x Cells Long) 23 - 2 x 3	120 277 347 UNV - Universal voltage, 120-277 volt			

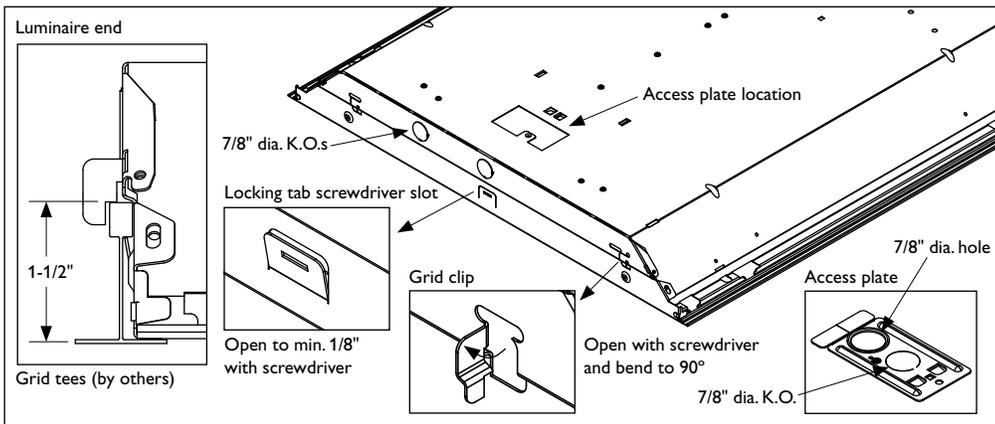
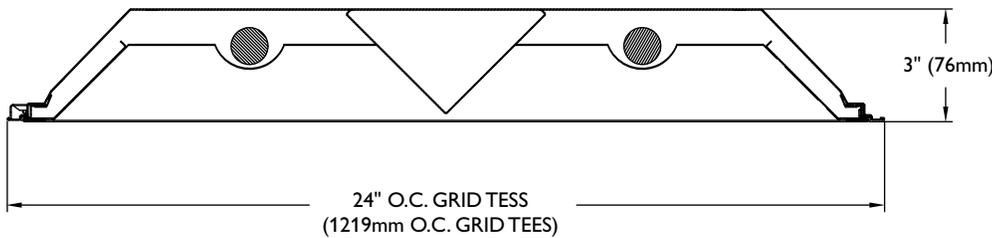
*Factory Installed.

energy data

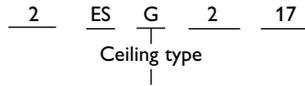
Lamp Type	Ballast Type	Input Power (120/277V)	Electrical System Lumens/Watt	
			Std. Lamps*	Hi-Lumen Lamps
I4	EB	34W / 34W	84	-
	EBS95@hi	35W / 35W	77	-
	EBS95@lo	16W / 16W	62	-
	EBS115@hi	38W / 37W	84	-
	EBS115@lo	18W / 19W	57	-
I7	EB	34W / 34W	76	86
	EBHE	30W / 30W	80	90
	EB10I	33W / 33W	75	85
	EB10R	34W / 34W	74	84
	EBL	30W / 30W	76	86
	EBLHE	27W / 27W	79	89
	EBH	43W / 43W	78	88
	EBHHE	40W / 40W	78	89
	EBS@hi	30W / 30W	77	87
	EBS@lo	16W / 16W	50	57
24HO	EB	53W / 52W	77	-
CF40	EB	76W / 73W	79	-
CF50	EB	106W / 106W	85	-
CF55	EB	112W / 109W	79	-

*T8 values assume 70+CRI lamp. 80+CRI lamps with increased lumen ratings are also available.

dimensions

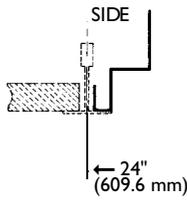


2 Lamp T5, T5H0 or T8 6 Cell ceiling configuration

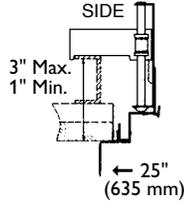


G = Grid (NEMA G)

F = Flange (NEMA F)



(NEMA Type G)
Lay-in acoustical ceilings using exposed grid suspension, with tees for luminaires on 24" x 48" spacing.



(NEMA Type F)
Flange for acoustical ceilings using concealed mechanical suspension. Swing-jack mounting brackets: adjustment 3" max. and 1" min. Refer to sheet 801-CL for cut-out information.

photometry

LP3 2 Lamp T8

Efficiency – 85.6%

LER – 68

TER – 59

Catalog No. 2ESG217-23RMW-1/2-EB Test No. 28076 S/MH 1.4 Lamp Type FF17T8 Lumens/Lamp 1325 Ballast Factor .90 Input Watts 30 Comparative yearly lighting energy cost per 1000 lumens – \$5.53 based on 3000 hrs. and \$.08 pwr KWH. The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.	Candlepower				Light Distribution																																																																																																																																					
	<table border="1"> <thead> <tr> <th>Angle</th> <th>End</th> <th>45</th> <th>Cross</th> </tr> </thead> <tbody> <tr><td>0</td><td>731</td><td>731</td><td>731</td></tr> <tr><td>5</td><td>730</td><td>727</td><td>728</td></tr> <tr><td>10</td><td>717</td><td>721</td><td>728</td></tr> <tr><td>15</td><td>696</td><td>710</td><td>726</td></tr> <tr><td>20</td><td>669</td><td>695</td><td>722</td></tr> <tr><td>25</td><td>636</td><td>674</td><td>714</td></tr> <tr><td>30</td><td>599</td><td>647</td><td>701</td></tr> <tr><td>35</td><td>555</td><td>617</td><td>688</td></tr> <tr><td>40</td><td>506</td><td>580</td><td>668</td></tr> <tr><td>45</td><td>456</td><td>540</td><td>645</td></tr> <tr><td>50</td><td>398</td><td>494</td><td>621</td></tr> <tr><td>55</td><td>341</td><td>447</td><td>579</td></tr> <tr><td>60</td><td>283</td><td>393</td><td>511</td></tr> <tr><td>65</td><td>224</td><td>322</td><td>424</td></tr> <tr><td>70</td><td>167</td><td>235</td><td>278</td></tr> <tr><td>75</td><td>111</td><td>141</td><td>102</td></tr> <tr><td>80</td><td>63</td><td>57</td><td>37</td></tr> <tr><td>85</td><td>27</td><td>24</td><td>13</td></tr> </tbody> </table>	Angle	End	45	Cross	0	731	731	731	5	730	727	728	10	717	721	728	15	696	710	726	20	669	695	722	25	636	674	714	30	599	647	701	35	555	617	688	40	506	580	668	45	456	540	645	50	398	494	621	55	341	447	579	60	283	393	511	65	224	322	424	70	167	235	278	75	111	141	102	80	63	57	37	85	27	24	13	<table border="1"> <thead> <tr> <th>Degrees</th> <th>Lumens</th> <th>% Lamp</th> <th>% Luminaire</th> </tr> </thead> <tbody> <tr><td>0-30</td><td>582</td><td>21.9</td><td>25.6</td></tr> <tr><td>0-40</td><td>969</td><td>36.6</td><td>42.7</td></tr> <tr><td>0-60</td><td>1793</td><td>67.7</td><td>79.1</td></tr> <tr><td>0-90</td><td>2267</td><td>85.6</td><td>100.0</td></tr> </tbody> </table>	Degrees	Lumens	% Lamp	% Luminaire	0-30	582	21.9	25.6	0-40	969	36.6	42.7	0-60	1793	67.7	79.1	0-90	2267	85.6	100.0																																								
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2	84	78	71	81	76	70	72	68																																																																																																																																		
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10	45	33	26	42	33	26	32	26																																																																																																																																		

LP3 2 Lamp T5

Efficiency – 84.1%

LER – 61

TER – 53

Catalog No. 2ESG214-23RMW-1/2-EB Test No. 28858 S/MH 1.4 Lamp Type F14T5 Lumens/Lamp 1200 Ballast Factor 1.00 Input Watts 33 Comparative yearly lighting energy cost per 1000 lumens – \$3.93 based on 3000 hrs. and \$.08 pwr KWH. The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.	Candlepower				Light Distribution																																																																																																																																					
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268-PLV photometry

2 Lamp T5, T5H0 or T8 6 Cell

LP3 2 Lamp F24T5HO

Efficiency – 80.1%

LER – 55

TER – 48

		Candlepower				Light Distribution									
		Angle	End	45	Cross	Degrees	Lumens	% Lamp	% Luminaire						
Catalog No.	2ESG224HO-23RMV-1/2-EB	0	931	931	931	0-30	735	20.9	26.1						
Test No.	28855	5	920	921	946	0-40	1219	34.6	43.2						
S/MH	1.4	10	902	913	948	0-60	2229	63.3	79.0						
Lamp Type	F24T5HO	15	876	899	945	0-90	2820	80.1	100.0						
Lumens/Lamp	1760	20	840	877	932										
Ballast Factor	1.00	25	797	845	911										
Input Watts	51	30	750	808	891										
		35	695	764	869										
		40	634	716	839										
		45	564	664	804										
		50	492	605	765										
		55	415	542	700										
		60	337	471	629										
		65	263	379	536										
		70	190	286	458										
		75	122	188	146										
		80	65	66	41										
		85	28	26	16										
Comparative yearly lighting energy cost per 1000 lumens – \$4.36 based on 3000 hrs. and \$.08 pwr KWH.															
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.															
						Coefficients of Utilization									
						EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
						pcc	80			70			50		
						pw	70	50	30	70	50	30	50	30	
						RCR									
						0	94	94	94	93	93	93	89	89	
						1	86	83	80	84	81	79	78	76	
						2	79	72	67	77	70	66	68	64	
						3	71	64	56	69	61	56	59	55	
						4	66	56	48	64	55	47	53	46	
						5	59	50	42	58	48	41	46	40	
						6	56	45	38	54	44	36	42	36	
						7	52	40	33	50	40	33	39	33	
						8	47	36	29	46	35	29	34	28	
						9	45	34	27	44	33	27	32	27	
						10	41	30	25	40	30	25	29	23	



Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled, "Contain Mercury" and/or the symbol "HG". Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org



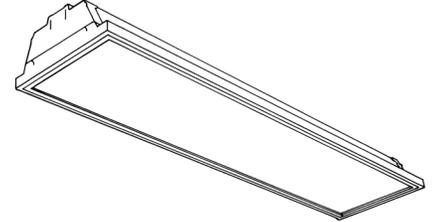
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268-PLV 05/13

Philips Lighting Company
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Philips Lighting Company
281 Hillmount Road
Markham ON, Canada L6C 2S3
Phone: 800-668-9008

Philips Day-Brite Static Recessed SP Troffer
1SPF232-FS01-UNIV



construction/finish

- Specification quality recessed troffer for the following "NEMA" ceiling types: NEMA "G"-Grid, NEMA "NFSG"-Narrow Faced Slot Grid, NEMA "GR"-Grid Regressed, NEMA "NFG"-Narrow Faced Grid, NEMA "F"-Flange.
- Die formed ribbed and embossed steel housing.
- Housing is multi-stage phosphate treated for maximum corrosion resistance and finish coat is high reflectance baked white enamel.
- Access plate (2 K.O.'s) factory installed includes grounding screw.
- T-bar grid clips (UL listed) built into fixture end plates, no extra parts required.

electrical

- Class P, HPF ballasts comply with © Federal Ballast Law (Public Law 100-357, 1988).
- UL listed for damp locations. C.S.A. certified optional.
- Self-contained fluorescent emergency power packs can be incorporated. (1 and 2 lamp models only)

enclosure

- Mitered corner door frames are Flat Steel.
- Door frames standard with guide post spring loaded latches.
- Mechanically designed interlocks block light, no gaskets are needed.
- Prismatic acrylic pattern 12 lens standard (01). Other lenses or louvers optional.

Specifier's Reference

Project
Type
Model No.
Comments

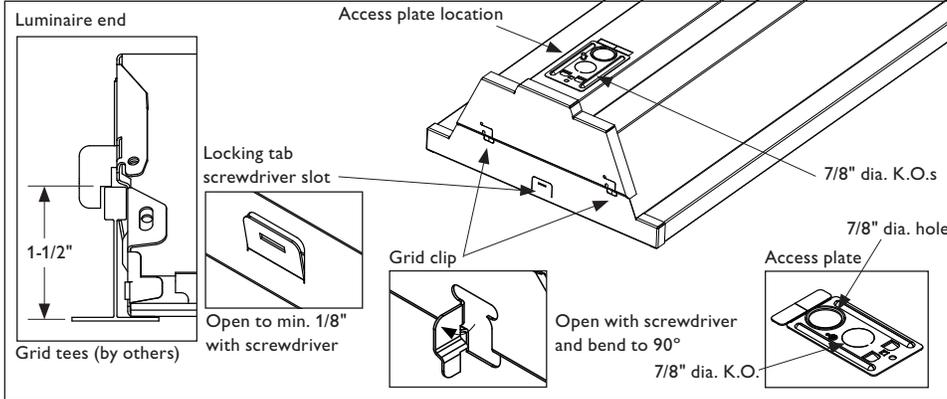
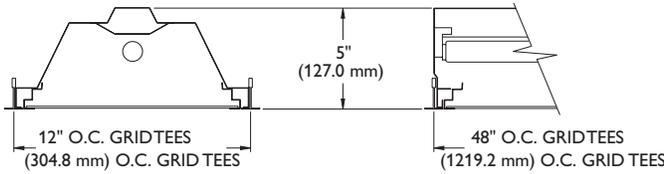
Green Choice: 1SPG132-FS01-UNV-1/1-EBHHE-LPT835HL

1	32 - FS					
Width	Ceiling Type	Lamp Type/ Wattage	Lens	Voltage	Options	
1 - 1'	G - Grid F - Flange	32 - 32WT8 (48")	01 - Prismatic acrylic 12 - DB-12, .125" 19 - DB-19, .156" 21 - Pattern 12, .125" See Sheet 401-SR for other options.	120 277 347 UNV - Universal voltage, 120-277 volt	1/1 - One 1-lamp ballast 1/2 - One 2-lamp ballast 1/3 - One 3-lamp ballast 1/21 - 2-lamp & 1-lamp ballast EB - Electronic ballast, <20% THD EB101 - Electronic ballast, instant start, <10% THD EB10R - Electronic ballast, program rapid start, <10% THD EBHE - T8 Electronic ballast, high efficiency, std. ballast factor EBLHE - T8 Electronic ballast, high efficiency, low ballast factor EBHHE - T8 Electronic ballast, high efficiency, high ballast factor E1 - DEB-1 emerg. ballast, 350-450 lumens, UL dry loc. E7 - DEB-7 emerg. ballast, 600-700 lumens, UL dry loc. E5 - DEB-5 emerg. ballast, 1100-1400 lumens, UL dry loc. E5ST - DEB-5ST emerg. ballast w/self test, 1100-1400 lumens, UL dry loc. F1 - Installed flex, 3/8" diameter, 18 gauge, 3 wire, 6' F2 - Installed flex, 3/8" diameter, 18 gauge, 4 wire, 6' GLR# - Fusing, fast blow (# = number of ballasts) LPT735 - Installed lamps, 70+ CRI, 3500K LPT835HL - Installed T8 hi lumen lamps, 80+ CRI, 3500K 1W - 1-way gasketing, between lens & door frame 2W - 2-way gasketing, 1W + gasketing between door frame & housing 3W - 3-way gasketing, 2W + gasketing for field installation between housing & ceiling.	
Family		No. of Lamps (not included)	Door Frame	Door Finish		
SP - SP Troffer SPC - Canadian Certified Model		1 2 3	FS - Flat Steel	BLANK - White Door B - Black Door		

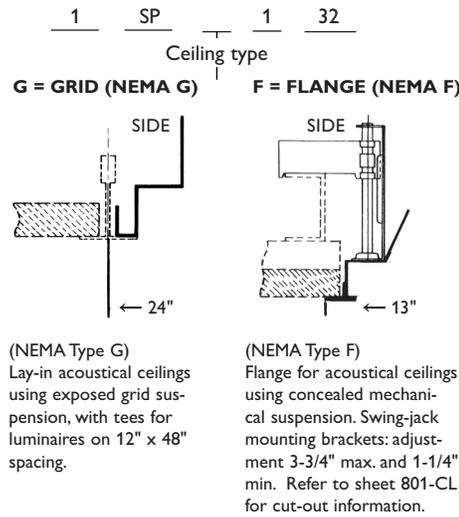


414-SR dimensions

SP Troffer 1X4 1, 2, or 3 Lamp T8



ceiling configuration



photometry

SP TROFFER 1x4 1 Lamp T8

Efficiency – 78.1%

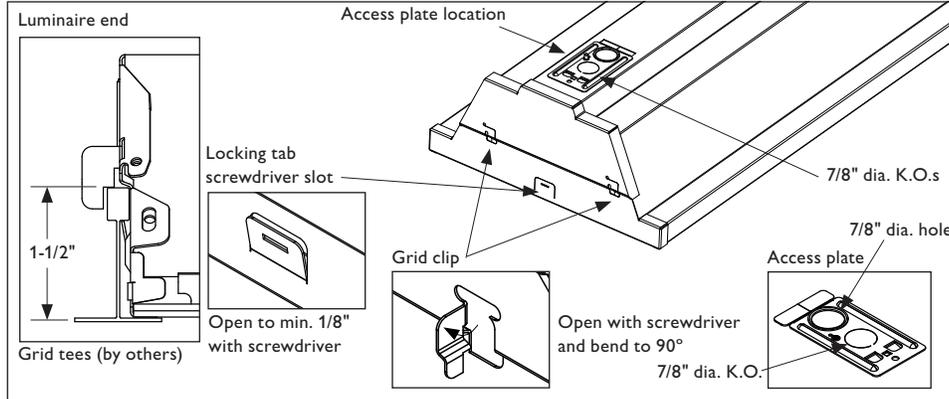
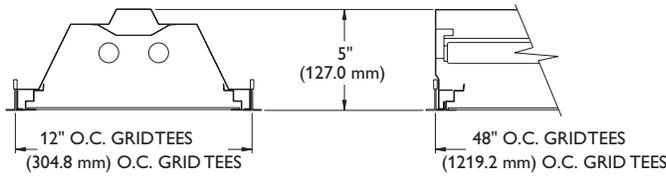
TER – 57

Catalog No.	1SPG132-FS01-1/1-EB	Candlepower				Light Distribution			Average Luminance			
		Angle	End	45	Cross	Degrees	Lumens	% Lamp % Lumi	Angle	End	45°	Cross
Test No.	15549D2	0	846	846	846	0-30	682	23.5 30.1	45	2505	2856	3144
S/MH	1.4	5	843	845	843	0-40	1137	39.2 50.2	55	2013	2403	2277
Lamp Type	F32T8	10	832	840	844	0-60	1922	66.3 84.8	65	1566	1549	1582
Lumens/Lamp	2900	15	814	832	845	0-90	2266	78.1 100.0	75	1411	1079	1465
Ballast Factor	1.00	20	786	819	842				85	1740	1582	1819
Input Watts	35	25	750	799	834							
		30	705	769	828							
		35	655	732	806							
		40	589	666	746							
		45	514	586	645							
		50	423	501	514							
		55	335	400	379							
		60	258	289	272							
		65	192	190	194							
		70	140	117	142							
		75	106	81	110							
		80	81	68	84							
		85	44	40	46							
Comparative yearly lighting energy cost per 1000 lumens – \$3.69 based on 3000 hrs. and \$.08 pwr KWH.												
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.												

EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)												
pcc	80			70			50					
	70	50	30	70	50	30	50	30				
RCR												
0	93	93	93	91	91	91	86	86				
1	85	81	79	82	80	77	77	75				
2	78	71	67	76	70	66	68	64				
3	71	64	57	69	63	56	60	56				
4	66	56	51	64	56	50	54	48				
5	60	51	45	58	50	44	48	42				
6	56	46	40	55	46	39	44	38				
7	52	41	34	51	40	34	40	34				
8	48	38	32	47	38	32	36	30				
9	46	34	28	44	34	28	34	28				
10	42	33	27	41	32	26	30	26				

414-SR dimensions

SP Troffer 1X4 1, 2, or 3 Lamp T8



photometry

SP TROFFER 1x4 2 Lamp T8

Efficiency – 69.8%

LER – 63

TER – 58

Catalog No.	1SPG232-FS01-1/2-EB
Test No.	15184D3
S/MH	1.2
Lamp Type	F32T8
Lumens/Lamp	2900
Ballast Factor	0.92
Input Watts	59
Comparative yearly lighting energy cost per 1000 lumens – \$3.81 based on 3000 hrs. and \$.08 pwr KWH.	
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.	

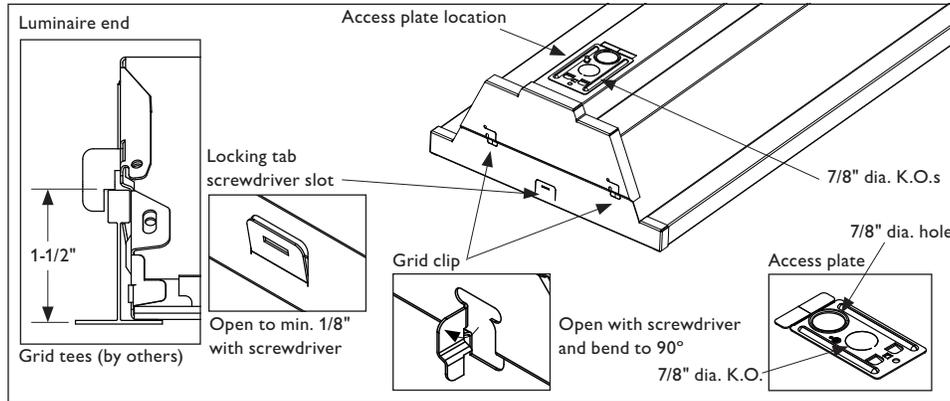
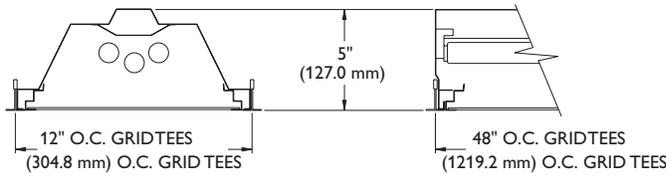
Candlepower			
Angle	End	45	Cross
0	1838	1838	1838
5	1834	1835	1821
10	1811	1811	1796
15	1771	1769	1755
20	1711	1706	1682
25	1635	1616	1569
30	1528	1487	1415
35	1400	1331	1259
40	1243	1149	1109
45	1054	958	935
50	844	764	718
55	638	577	522
60	462	407	378
65	333	277	283
70	241	189	222
75	177	141	180
80	128	110	133
85	67	60	68

Light Distribution				Average Luminance			
Degrees	Lumens	% Lamp	% Lumi	Angle	End	45°	Cross
0-30	1513	26.1	37.4	45	5579	5070	4949
0-40	2342	40.4	57.9	55	4162	3764	3406
0-60	3554	61.3	87.8	65	2948	2452	2505
0-90	4047	69.8	100.0	75	2557	2037	2601
				85	2868	2569	2911

Coefficients of Utilization									
EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pcc	80			70			50		
pw	70	50	30	70	50	30	50	30	
RCR									
0	83	83	83	81	81	81	77	77	
1	77	74	72	75	73	70	70	68	
2	71	66	62	70	65	61	63	60	
3	66	60	55	64	59	54	57	53	
4	61	54	48	60	53	48	51	47	
5	56	48	43	55	48	42	46	41	
6	52	44	38	51	43	38	42	37	
7	48	40	34	47	39	34	38	33	
8	45	36	30	43	35	30	34	29	
9	41	32	27	40	32	26	31	26	
10	38	29	24	37	29	24	28	23	

414-SR dimensions

SP Troffer 1X4 1, 2, or 3 Lamp T8



photometry

SPTROFFER 1x4 3 Lamp T8

Efficiency – 67.7%

LER – 67

TER – 59

Catalog No.	1SPG332-FS01-1/3-EB	Candlepower				Light Distribution				Average Luminance			
		Angle	End	45	Cross	Degrees	Lumens	% Lamp	% Lumi	Angle	End	45°	Cross
Test No.	15554D2	0	2538	2538	2538	0-30	1972	22.7	33.5	45	7267	6886	6799
S/MH	1.2	5	2528	2527	2527	0-40	3170	36.4	53.8	55	5666	5450	4891
Lamp Type	F32T8	10	2495	2501	2504	0-60	5066	58.2	86.0	65	4110	3457	3563
Lumens/Lamp	2900	15	2439	2453	2466	0-90	5888	67.7	100.0	75	3662	2583	3435
Ballast Factor	0.93	20	2351	2378	2387					85	4666	3835	4349
Input Watts	82	25	2240	2266	2266								
		30	2101	2119	2107								
		35	1934	1927	1910								
		40	1729	1683	1671								
		45	1491	1413	1395								
		50	1209	1154	1096								
		55	943	907	814								
		60	709	648	592								
		65	504	424	437								
		70	359	275	326								
		75	275	194	258								
		80	212	165	199								
			118	97	110								
Comparative yearly lighting energy cost per 1000 lumens – \$3.58 based on 3000 hrs. and \$.08 pwr KWH.													
The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.													



Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled, "Contain Mercury" and/or the symbol "HG". Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org



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Philips Lighting Company
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Philips Lighting Company
281 Hillmount Road
Markham ON, Canada L6C 2S3
Phone: 800-668-9008

Philips Day-Brite HDS Heavy Duty Strip
HDS232-UNIV-LT

Strip Luminaire

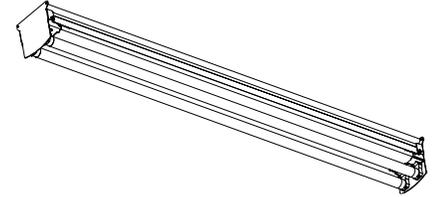
HDS Heavy Duty Strip
1 or 2 Lamp
T5, T5HO, T8 or T12

construction/finish

- Premium heavy duty industrial channel for added rigidity.
- Suitable for unit or row mounting in surface or suspended applications.
- Housing and end caps are multi-stage phosphate treated for maximum corrosion resistance and painted after fabrication with high reflectance white polyester powder coating.
- Thumbscrews secure channel cover for easy wireway access.

electrical

- High output 380mA (44HO, 86HO), high output 800mA (48HO, 96HO) and very high output 1500mA (48VH, 96VH) models come standard with -20°F start ballast where available.
- 32WT8, and Slimline models UL listed for direct mounting on low density ceilings.
- UL listed for damp locations. Units incorporating emergency ballasts UL listed for dry locations.
- Class P, HPF ballasts comply with ⓔ Federal Ballast Law (Public Law 100-357,1988).
- Green grounding screw installed in channel.
- Lampholders may be individually replaced or rewired.



Specifier's Reference

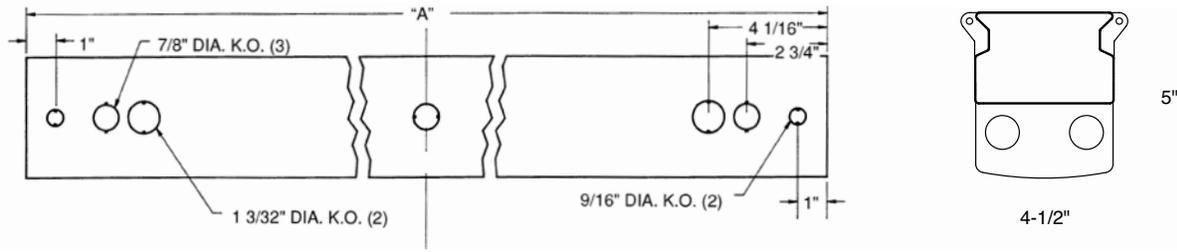
Project
Type
Model No.
Comments

Green Choice: HDS232-UNV-1/2-EBLHE

No. of Lamps/Cross Section (not included)	Voltage	
1	120	
2	277	
	347	
	UNV – Universal voltage, 120-277 volt (with T8 or T5 electronic ballast only)	
Family	Lamp Type/Wattage	Options
HDS – Heavy Duty Strip THDS – Tandem Version	28 – 28WT5 (46") 32 – 32WT8 (48") 48 – 38WT12 Slimline (48") 44HO – 44WT8 380mA (48") 48HO – 60WT12 800mA (48") 48VH – 110WT12 1500mA (48") 54HO – 54WT5HO (46") 59 – 59WT8 (96") 96 – 75WT12 Slimline (96") 86HO – 86WT8 380mA (96") 96HO – 110WT12 800mA (96") 96VH – 215WT12 1500mA (96")	CM – Canadian Market 1/1 – One 1-lamp ballast (electronic or non-standard) 1/2 – One 2-lamp ballast (electronic or non-standard) 1/4 – One 4-lamp ballast (electronic or non-standard) 2/2 – Two 2-lamp ballasts (electronic or non-standard) EB – Electronic ballast, <20% THD EBH – High ballast factor electronic ballast (F32T8 only) EB10I – Electronic ballast, instant start, <10% THD EB10R – Electronic ballast, program rapid start, <10% THD EBHE – F32T8 electronic ballast, high efficiency, std. ballast factor EBLHE – F32T8 electronic ballast, high efficiency, low ballast factor EBHHE – F32T8 electronic ballast, high efficiency, high ballast factor E1 – DEB-1 emerg. ballast, 350-450 lumens, UL dry loc. E7 – DEB-7 emerg. ballast, 600-700 lumens, UL dry loc. E5 – DEB-5 emerg. ballast, 1100-1400 lumens, UL dry loc. ESST – DEB-5ST emerg. ballast w/self test, 1100-1400 lumens, UL dry loc. GLR# – Fusing, fast blow (# = number of ballasts) LT – Low temperature (0°F) start ballast (standard on F32T8, HO,HOV) Power-Connect modular wiring – see sheet 1604-OA
Accessories		
CG-4 – 4' Wire guard 5988W/5977W – Hydee hangers CS-400 – Rigid stem canopy CS-500 – Swivel stem canopy CS series stems FL-111 – Sliding hanger, conduit/stem/screw FL-116 – Sliding hanger, chain suspension FL-117 – Hook, chain FL-118 – Sliding hanger, messenger cable FL-119 – Hook, messenger cable FL-123 – 5' chain (w/S-hooks) set N-3380/3381 – Universal joint aligner, octagonal box, 1/2" / 3/4" I.P.S. N-3385 – Universal joint aligner, square box, 1/2" I.P.S.		See section 1600-OA for option info.

dimensions

DIM "A"		
4' Channel	(1219mm)	48"
8' Channel	(2438mm)	96"



HDS Strip, 4' 2 Lamp 32WT8

Efficiency – 93.3%

LER – 78

TER – 41

Catalog No.	HDS232-1/2-EB	Candlepower				Light Distribution				Average Luminance			
		Angle	End	45	Cross	Degrees	Lumens	% Lamp	% Luminaire	Angle	End	45°	Cross
Test No.	14719	0	1019	1019	1019	0-30	839	14.5	15.5	45	6257	6389	6686
S/MH	1.6	5	1015	1018	1019	0-40	1429	24.6	26.4	55	5693	6243	6738
Lamp Type	F32T8	15	976	1009	1034	0-60	2793	48.1	51.6	65	4843	6152	7171
Lumens/Lamp	2900	25	901	990	1059	0-90	4316	74.4	79.8	75	3551	6404	6627
Ballast Factor	.88	35	793	958	1059	0-180	5410	93.3	100.0	85	1448	4423	5003
Input Watts	61	45	656	898	1019								
		55	494	800	956								
		65	320	688	911								
		75	154	590	718								
		85	28	308	432								
		95	2	325	452								
		105	3	305	512								
		115	2	230	379								
		125	2	160	334								
		135	6	104	236								
		145	6	46	133								
		155	7	5	42								
		165	8	6	6								
		175	9	5	6								

Comparative yearly lighting energy cost per 1000 lumens – \$3.08 based on 3000 hrs. and \$.08 pwr KWH.

The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Coefficients of Utilization									
EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pcc	80			70			50		
pw	70	50	30	70	50	30	50	30	
RCR									
0	107	107	107	102	102	102	93	93	
1	94	89	83	90	84	81	78	73	
2	84	76	68	80	72	66	66	60	
3	77	66	56	71	63	55	56	51	
4	69	56	48	66	55	46	50	42	
5	64	51	41	59	48	40	44	36	
6	57	45	36	55	42	34	40	33	
7	54	40	32	51	39	30	35	28	
8	50	36	28	46	35	28	33	26	
9	46	34	26	44	32	25	29	23	
10	44	30	23	40	29	23	28	20	

HDS Strip, 4' 2 Lamp F96T12HOES

Efficiency – 97.1%

LER – 94

TER – 51

Catalog No.	HDS296HO-1/2-EB	Candlepower				Light Distribution				Average Luminance			
		Angle	End	45	Cross	Degrees	Lumens	% Lamp	% Luminaire	Angle	End	45°	Cross
Test No.	10973	0	3029	3029	3029	0-30	2502	15.6	16.1	45	11569	11885	12633
S/MH	1.6	5	3035	3033	3029	0-40	4264	26.7	27.4	55	10789	11918	12756
Lamp Type	F96T12HOES	15	2932	3014	3091	0-60	8315	52.0	53.5	65	9714	11634	12441
Lumens/Lamp	8000	25	2724	2961	3152	0-90	12735	79.6	82.0	75	8540	10991	12423
Ballast Factor	1.00	35	2423	2850	3148	0-180	15536	97.1	100.0	85	8088	11903	12650
Input Watts	165	45	2039	2659	3054								
		55	1553	2371	2804								
		65	1042	1956	2379								
		75	575	1453	1948								
		85	205	1098	1488								
		95	37	897	1342								
		105	1	734	1186								
		115	1	550	987								
		125	1	414	739								
		135	1	290	531								
		145	1	169	347								
		155	1	79	190								
		165	1	29	52								
		175	1	13	20								

Comparative yearly lighting energy cost per 1000 lumens – \$2.55 based on 3000 hrs. and \$.08 pwr KWH.

The photometric results were obtained in the Philips Day-Brite laboratory which is NVLAP accredited by the National Institute of Standards and Technology.

Coefficients of Utilization									
EFFECTIVE FLOOR CAVITY REFLECTANCE 20 PER (pfc=0.20)									
pcc	80			70			50		
pw	70	50	30	70	50	30	50	30	
RCR									
0	111	111	111	107	107	107	97	97	
1	98	93	88	93	89	83	81	78	
2	89	79	71	83	76	68	69	64	
3	80	68	59	76	66	57	59	54	
4	72	59	51	68	57	48	53	46	
5	67	53	44	63	51	41	46	40	
6	60	47	38	57	46	36	41	34	
7	56	42	34	54	40	33	38	30	
8	52	39	29	50	36	28	34	28	
9	48	34	27	46	34	26	32	25	
10	46	33	25	44	30	23	28	23	

Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled, "Contain Mercury" and/or the symbol "HG". Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org



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Philips Lighting Company
200 Franklin Square Drive
Somerset, NJ 08873
Phone: 855-486-2216

Philips Lighting Company
281 Hillmount Road
Markham ON, Canada L6C 2S3
Phone: 800-668-9008

Philips Gardco ClearScape Floodlight
CSFS32L530NWG1SFSPUNIV



Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Quantity: _____
 Notes: _____

The Philips Gardco ClearScape LED luminaires feature an architecturally stylish design that will complement your application's visual landscape. ClearScape offers unparalleled photometric performance, significant savings over HID, and is available with the latest in energy saving control options.

Ordering guide

Example: CSFS-16L-1A-NW-G1-SF-SP-UNIV-BK

Prefix	# of LEDs	Drive Current	LED Color	Generation	Mounting	Distribution	Voltage	Options		Finish
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	G1	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>
CSFS ClearScape Flood Small	16L 16 LEDs 32L 32 LEDs	350 350 mA 530 530 mA 700 700 mA 1A 1 A 530 530 mA 700 700 mA 1A 1 A	NW Neutral White 4,000K, 70 min. CRI CW Cool White 5,700K, 70 min. CRI WW Warm White 3,000K, 70 min CRI	G1 Gen-1	SF Slip Fitter Mount (fits to 2-3/8" O.D. tenon) YK Yoke Mount	SP Spot RSP Rectangular Spot A33 Asymmetric 33° Flood RN Rectangular Narrow Flood RM Rectangular Medium Flood	120 208 240 277 347 480 ⁶ UNV ⁵ (120-277V) HVU ^{5,6} (347-480V)	DD ¹ 0-10V Dimming Driver DynaDimmer Safety Profile DS25 ² DS50 ² DS75 ² DynaDimmer Median Profile DM25 ² DM50 ² DM75 ² DynaDimmer Economy Profile DE25 ² DE50 ² DE75 ² MRO ^{3,4,13} DynaDimmer and Motion Response Override <i>Pole Mounted sensor</i> MR50 ^{4,13} Motion Response (50% Low) <i>Pole Mounted sensor</i>	PCB ^{5,6} Photocontrol Button TLR ⁹ Twist Lock Receptacle TLRPC ^{5,7,9} Twist Lock Receptacle w/ Photocell F1 ⁵ Single Fusing (120, 277, 347V) F2 ⁵ Double Fusing (208, 240, 480V) F3 ⁵ Double Fusing Canadian Double Pull (208, 240, 480V) ICL ⁸ Internal Concentric Glare Louver	BK Textured Black WH Textured White BZ Textured Dark Bronze DGY Textured Dark Gray MGY Textured Medium Gray OC Optional Color Specify optional color or RAL ex: OC-LGP or OC-RAL7024. SC Special Color Specify. Must supply color chip. Requires factory quote.

1. 0-10V leads exiting the luminaire are supplied for secondary controls (by others).

2. DynaDimmer available with 120 through 277V only.

3. DynaDimmer Profile must be specified with 'MRO' option. Example: DE75-MRO

4. Requires 'MS-A-120' or 'MS-A-277' Accessory (ordered separately). 120 or 277V only.

5. Specify input voltage. Fusing and Photocontrols are not available with 'UNV' or 'HVU' options.

6. 'PCB' option is not available in 480V.

7. Not available with 347 or 480V.

8. Not available with Spot Optics (SP)

9. Not available with Yoke Mount.

CSFS ClearScape LED Floodlight, Small

16 or 32 LED

Accessories - Ordering guide (Must be ordered separately)

Shielding and Lenses	Mounting - Slipfitter Mount	Mounting - Yoke Mount	Motion Response
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
ICL-CSFS(16/32)¹⁰ Internal Concentric Glare Louvers BD-CSFS¹¹ Barn Doors (Black finish standard) WG-CSFS Wire Guard SG-CSFS Stone Guard RDF-CSFS¹¹ Red Color Filter PKF-CSFS¹¹ Pink Color Filter BLF-CSFS¹¹ Blue Color Filter GNF-CSFS¹¹ Green Color Filter	WMB-16.5-(F)¹² Wall Mounting Bracket SMT-2-(F)¹² Surface Mount Tenon JB-VMT-(F)¹² Junction Box w/ SMT-2 SM-18-(F)¹² 18" Stanchion Mount PTA-2180-16.5-(F)¹² Pole Top Adaptor 2@180 PTA-2090-16.5-(F)¹² Pole Top Adaptor 2@90 PTA-3090-16.5-(F)¹² Pole Top Adaptor 3@90 PTA-4090-16.5-(F)¹² Pole Top Adaptor 4@90	MF4-(F)¹² Standalone Slip Fitter BP-(F)¹² Surface Mount Base Plate JB-BP-(F)¹² Junction Box w/ Base Plate	MS-A-120V^{5,13} 120V input - Motion Sensor for MR50 or MRO (pole mounted sensor only) MS-A-277V^{5,13} 277V input - Motion Sensor for MR50 or MRO (pole mounted sensor only)

10. (16/32) = Specify LED count Example: CSFS16.
Not available with Spot Optics (SP).

12. (F) = Specify Finish

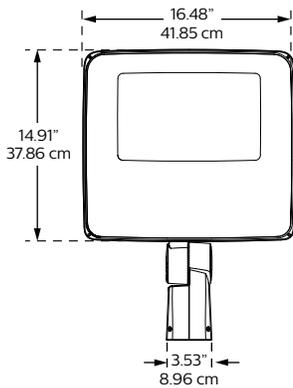
13. Requires 'MR50' option or DynaDimmer 'MRO' option to be specified with the luminaire.

11. Color filters and Barn Doors available Q2, 2015.

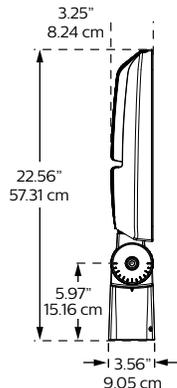
Dimensions - ClearScape Small (CSFS)

Slipfitter Mount

Front view



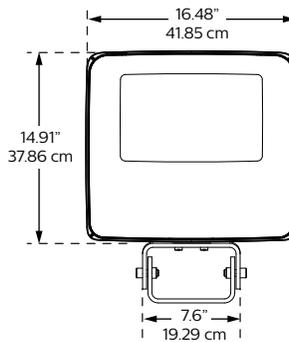
Side view



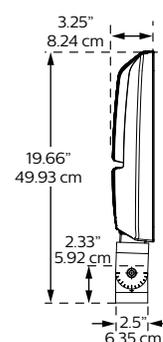
Weight: 31 Lbs
EPA: 2.20 ft²

Yoke Mount

Front view

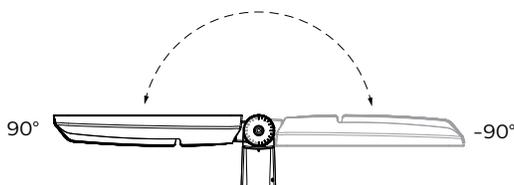


Side view

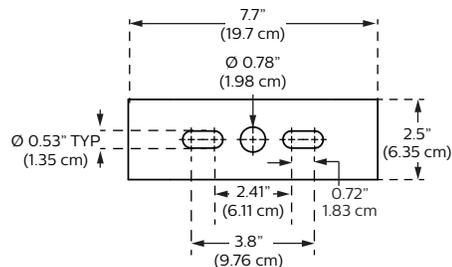


Weight: 29 Lbs
EPA: 2.12 ft²

Slipfitter Aiming Diagram



Drill Template - Yoke Mount



Recommended Bolt Size: 1/2"

CSFS ClearScape LED Floodlight, Small

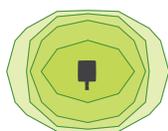
16 or 32 LED

Distribution Patterns



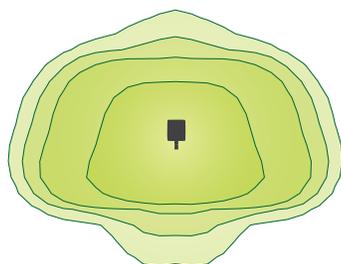
Spot 'SP'

50% Main Beam: 15°H x 15°V
10% Field Beam: 24°H x 24°V
20' Setback, 0° Tilt



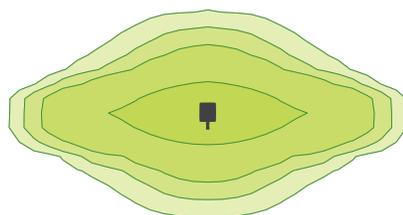
Rectangular Spot 'RSP'

50% Main Beam: 22°H x 13°V
10% Field Beam: 40°H x 30°V
20' Setback, 0° Tilt



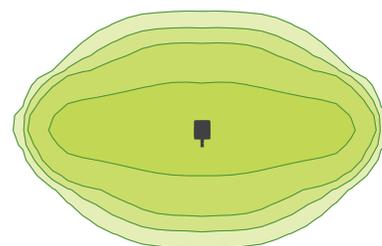
Asymmetric 33° Flood 'A33'

50% Main Beam: 81°H x 38°V
10% Field Beam: 119°H x 77°V
20' Setback, 0° Tilt



Rectangular Narrow 'RN'

50% Main Beam: 138°H x 41°V
10% Field Beam: 148°H x 75°V
20' Setback, 0° Tilt



Rectangular Medium 'RM'

50% Main Beam: 81°H x 39°V
10% Field Beam: 119°H x 77°V
20' Setback, 0° Tilt

Technical Data

Order Code	# of LEDs	LED Current (mA)	Color Temperature (CCT)	Average System Wattage (W)	Initial Nominal Delivered Lumens					Average Efficacy (Lm/W)
					SP	RSP	A33	RN	RM	
CSFS-16L-350-NW	16	350	4000K, NW	20	2,087	2,057	2,174	2,127	2,099	109
CSFS-16L-530-NW	16	530	4000K, NW	29	3,025	2,982	3,135	3,085	3,044	106
CSFS-16L-700-NW	16	700	4000K, NW	38	3,859	3,805	3,984	3,935	3,884	103
CSFS-16L-1A-NW	16	1A	4000K, NW	57	5,424	5,347	5,533	5,531	5,459	95
CSFS-32L-530-NW	32	530	4000K, NW	52	5,737	5,656	5,944	5,850	5,775	111
CSFS-32L-700-NW	32	700	4000K, NW	72	7,510	7,403	7,724	7,658	7,560	106
CSFS-32L-1A-NW	32	1A	4000K, NW	109	10,431	10,283	10,727	10,636	10,499	97

Notes:

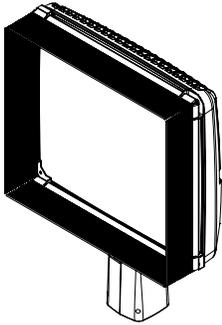
Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of Philips. Lumen output by optic type will vary slightly. See IES files and specification sheets when available. All technical data is subject to change.

CSFS ClearScape LED Floodlight, Small

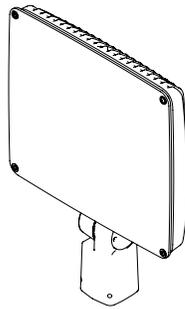
16 or 32 LED

Luminaire Option and Accessory details

Barn Doors (BD)



Stone Guard (SG)



Wire Guard (WG)



Control option details

MR50

Motion Response

Philips Gardco ClearScape LED luminaire with motion response, providing a 50% power reduction on low and a commensurate reduction in light output. The power and light output reduction is accomplished utilizing the Philips DynaDimmer module, programmed for a constant 50% power. Power supplied by the motion sensor connected to the override line on the DynaDimmer takes the luminaire to high setting, 100% power and light output, when motion is detected. The luminaire remains on high until no motion is detected for the motion sensor duration period, after which the luminaire returns to low. Duration period is factory set at 15 minutes, and is field adjustable from 5 minutes up to 15 minutes.

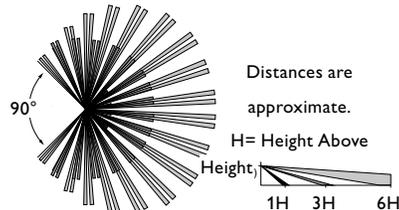
MR50 is available in 120V through 277V input only to the luminaire.

Motion sensors require single voltage 120V or 277V input.

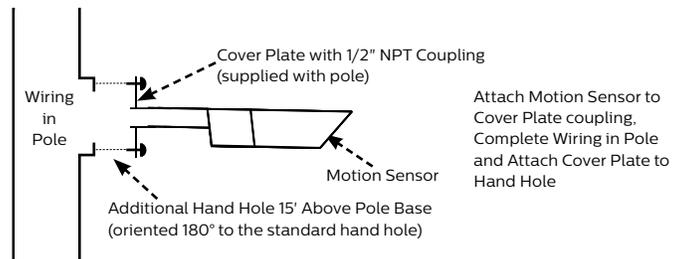
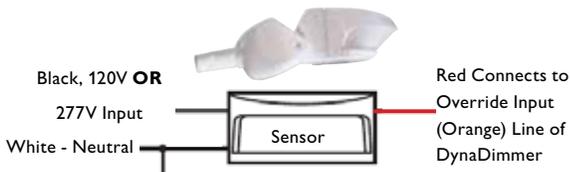
The Area PIR motion sensor is the WattStopper EW-200-120-W (120V Input - MSA-120V) or the WattStopper EW-200-277-W (277V Input - MSA-277V). One motion sensor per pole is required and is ordered separately. Area sensors require single voltage 120V or 277V input.

The area motion detector provides coverage equal to up to 6 times the sensor height above ground, 270° from the front-center of the sensor.

Area PIR Motion Sensor Coverage Pattern:



Motion response requires that the pole include an additional hand hole 15 feet above the pole base, normally oriented 180° to the standard hand hole. For Philips Gardco poles, order the pole with the Motion Sensor Mounting (MSM) option which includes the hand hole and a special hand hole cover plate for the sensor with a 1/2" NPT receptacle centered on the hand hole cover plate into which the motion sensor mounts. Once the motion sensor is connected to the hand hole cover plate, then wiring connections are completed in the pole. The plate (complete with motion sensor attached and wired) is then mounted to the hand hole. If poles are supplied by others, the customer is responsible for providing suitable mounting accommodations for the motion sensor in the pole.



CSFS ClearScape LED Floodlight, Small

16 or 32 LED

Mounting accessory details - Slipfitter

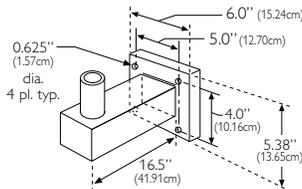
WMB-16.5-(F)

Wall Mounting Bracket

2-3/8" O.D. vertical tenon welded to extruded aluminum arm with removable end cap for wiring. Arm is bolted to a cast aluminum plate that has four 5/8" diameter mounting holes.

Suitable for mounting single luminaire only.

Mounting hardware by others.



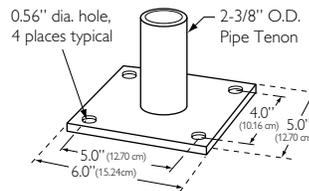
SMT-2-(F)

Surface Mounted Tenon

2-3/8" O.D. aluminum tenon welded to a flat aluminum plate with four 1/2" diameter mounting holes.

Single floodlight may be pad mounted or wall mounted.

Mounting hardware by others.



JB-VMT-(F)

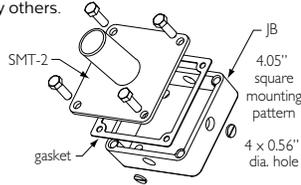
Junction Box with SMT-2

For mounting to flat surfaces when using surface mount conduit.

Box has four 1/2" pipe entrances.

1/2" NPS.

Mounting hardware by others.



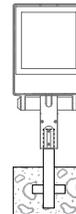
SM-18-(F)

18" Stanchion Mount

Stanchion mounting allows stable positioning of vertical tenon member in aggregate or substrate.

2-3/8" O.D. aluminum tenon welded to a 2-7/8" stanchion.

Standard length: 18"



PTA-2180-16.5-(F)

Pole Top Adapter, 2@180

Vertically mounted 2-3/8" O.D. tenons welded to extruded aluminum arms with removable end cap for wiring. Arms bolted to cast aluminum pole top bracket. Fits poles having a 2-3/8" O.D. x 4" vertical tenon.

PTA-2090-16.5-(F)

Pole Top Adapter, 2@90

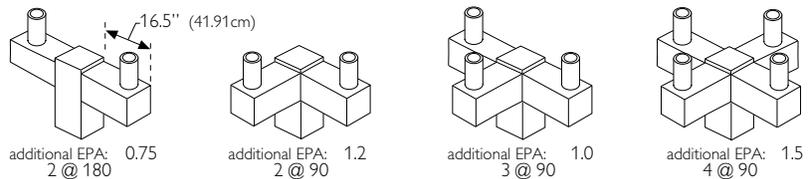
Components shipped separately. Field assembly required.

PTA-3090-16.5-(F)

Pole Top Adapter, 3@90

PTA-4090-16.5-(F)

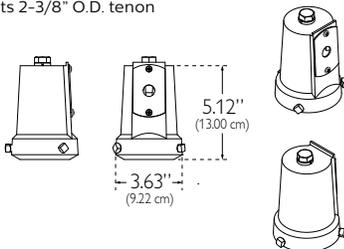
Pole Top Adapter, 4@90



Mounting accessory details - Yoke Mount

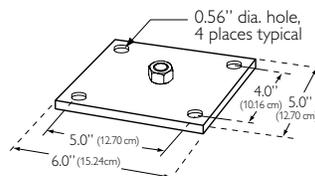
MF4-(F) Slip Fitter

Fits 2-3/8" O.D. tenon



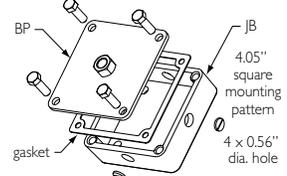
BP-(F) Surface Mount Base Plate

Flat aluminum plate with four 1/2" diameter mounting holes. Single floodlight may be pad mounted or wall mounted. Mounting hardware by others.



JB-BP-(F) Junction Box with BP

For mounting to flat surfaces when using surface mount conduit. Box has four 1/2" pipe entrances. Mounting hardware by others. 1/2" NPS.



CSFS ClearScape LED Floodlight, Small

16 or 32 LED

Specifications

Construction

Die-cast aluminum housing with corrosion resistant hardware. ClearScape housing constructed to IP66. Die-cast aluminum heatsink allows for long life of LEDs up to 40°C ambient.

Thermal Management

The luminaire design incorporates vertical fins that allow the housing to provide excellent thermal management critical to long LED system life.

LED Board and Array

16 or 32 high power LEDs. Warm, Neutral, and Cool Color temperatures available. Metal core printed circuit board. RoHS compliant.

IP Rating

Luminaire optic and electrical housing constructed to IP66.

Driver

High efficiency multi-volt driver (50 or 60 Hz), maintains constant current flow to LEDs to accommodate LED variations. High power factor (0.9 standard). Constant current: 350, 530, 700, or 1000 mA. Voltage: 120-277, 347, 480. Ambient temperature range: -40°C (-40°F) to 40°C (104°F). Open / short circuit protection. RoHS compliant. Surge protector standard. The surge protector is in accordance with IEEE / ANSI C62.41.2 guidelines, with a surge current rating of 10 KV / 5 KA.

LED Optical System

SP - Spot, RSP - Rectangular Spot, A33 - Asymmetric 33° Flood, RN - Rectangular Narrow Flood, RM - Rectangular Medium Flood distributions. See optical data for details. Fully gasketed IP66-rated construction.

Optical Options

Internal Concentric Glare Louver (ICL) options reduce glare and increase visual comfort. Shields are mounted internally, and do not disrupt the overall aesthetic of the luminaire. Shields can be ordered as an option and installed in the factory, or as an accessory for field installation.

Barn doors are also available.

Mounting

Slipfitter (SF) is vertically adjustable, suitable for mounting to a 2-3/8" O.D. tenon. Slipfitter features an integral splice compartment with gasketed access cover to eliminate the need for a secondary junction box.

Yoke mount also available

Vibration Resistance

ClearScape with yoke mount and slipfitter carries a 3G vibration rating that conforms to the standards set forth by ANSI C136.31. Testing includes vibration to 3G acceleration in three axes, all performed on the same luminaire.

Energy saving benefits and controls

The CSFS has a system efficacy of up to 118 LPW at a system wattage of up to 109W. Optional DynaDimmer and motion response controls provide additional energy savings by dimming to 25%.

Finish

Standard textured finishes available. BZ - Textured Dark Bronze, DGY - Textured Dark Gray, MGY - Textured Medium Gray, WH - Textured White, BK - Textured Black.

Accessories

See ordering guide on page 2, 4 and 5 for details.

Listings

All luminaires bear UL or cUL (where applicable) Wet Location labels. Suitable for use in ambients from -40° to 40°C (-40° to 104°F).

Limited Warranty

5 year limited warranty. See philips.com/luminaires for complete details and exclusions.

LED Performance:

PREDICTED LUMEN DEPRECIATION DATA ¹³				
Ambient Temperature °C	Driver mA	Calculated L ₇₀ Hours ^{13,14}	L ₇₀ Per TM-21 ^{14,15}	Lumen Maintenance % @ 60,000 hours
25°C	up to 1050 mA	>100,000	>60,000	96%

13. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.

14. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output.

15. Calculated per IESNA TM21-11. Published L₇₀ hours limited to 6 times actual LED test hours.

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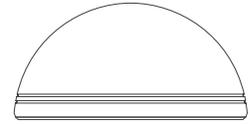
Philips Gardco 100 Line LED
106L-3-35LA-NW-UNIV-NP

Job:
Type:
Notes:

100 Line LED

106 Quarter Sphere Sconce LED

Philips Gardco 106 LED quarter sphere high performance sconce luminaires are designed to integrate naturally to wall surfaces. 106 LED luminaires are available with three (3) different distribution patterns, providing full cutoff performance (in the normal downlight position) and featuring LED arrays. Luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer potential energy savings of 50 % or more compared to HID systems. 106 LED luminaires are also available with Automatic Profile Dimming, increasing savings by an additional 33%.



PREFIX	DISTRIBUTION	LED WATTAGE	LED SELECTION	VOLTAGE	FINISH	OPTIONS
<small>Enter the order code into the appropriate box above. Note: Philips Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.</small>						

PREFIX

- 106L** Quarter Sphere LED - Constant Wattage / Full Light Output
- 106L-DCC** Quarter Sphere LED - Dual Arrays with Dual Circuit Control
- 106L-DIM** Quarter Sphere LED - 0 - 10V Dimming (Control system by others.)
- 106L-APD** Quarter Sphere LED with Automatic Profile Dimming

DISTRIBUTION

- 2** Type II Wide Throw Optic, featuring Maximized Lateral Throw
- 3** Type III Preferred Wide Throw Optic, featuring Improved Forward Throw
- 4** Type IV Maximized Forward Throw Optic

See page 3 for more detailed luminaire configuration information.

LED WATTAGE AND LUMEN VALUES

Ordering Code	Average System Watts ¹	LED Current (mA)	LED Selection	Luminaire Initial Absolute Lumens ^{2,3}			Basis of Lumen Data Photometric tests performed in compliance with IESNA LM-79.
				TYPE 2	TYPE 3	TYPE 4	
35LA	34	350	NW	3,459	3,559	3,385	
55LA	52	530	NW	4,785	5,021	4,709	

1. Wattage may vary by +/- 8% due to LED manufacturer forward volt specification and ambient temperature. Wattage shown is average for 120V through 277V input. Actual wattage may vary by an additional +/- 10% due to actual input voltage.
2. Tests are in process for luminaires with the DL option, CW and WW luminaires. CW values may be approximated by applying a 1.08 multiplier to NW values shown. Contact Gardco.applications@philips.com if any approximate estimates are required for design purposes.
3. LED arrays feature LEDs that provide from 100 to 130 lumens per watt when operated at 350 mA. Lumen values based on tests performed in compliance with IESNA LM-79.

LED SELECTION

- CW** Cool White - 5700°K - 75 CRI
- NW** Neutral White - 4000°K - 70 CRI
- WW** Warm White - 3000°K - 80 CRI

VOLTAGE

- UNIV** 120V through 277V, 50hz or 60hz
- 120**
- 208**
- 240**
- 277**
- 347**



PHILIPS



100 Line LED

106 Quarter Sphere Sconce LED

FINISH

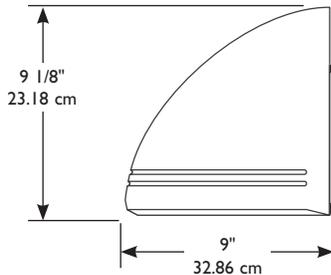
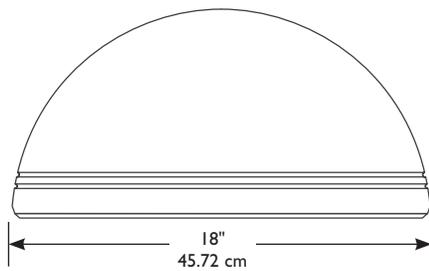
BRP	Bronze Paint
BLP	Black Paint
WP	White Paint
NP	Natural Aluminum Paint
BGP	Beige Paint
OC	Optional Color Paint Specify Optional Color or RAL ex: OC-LGP or OC-RAL7024.
SC	Special Paint Specify. Must supply color chip.

OPTIONS

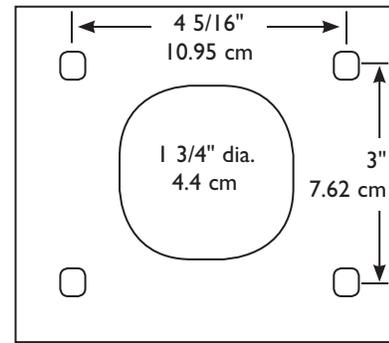
F⁹	Fusing
PCB⁹	Button Type Photocontrol
DL⁶	Diffusing Lens Reduces Performance Significantly
PSO^{4,7}	Offset Polycarbonate Flat Shield
UT	5° Uptilt
WS⁵	Wall Mounted Box for Surface Conduit
WS/UT⁵	WS Option w/5° Uptilt
WG⁸	Wire Guard

- 4. Polycarbonate lenses carry a 1 year warranty only.
- 5. Rear entry permitted.
- 6. Not available with PSO option and not available with the WG option.
- 7. Not available with DL option and not available with the WG option.
- 8. Not available with DL option and not available with the PSO option.
- 9. Specify input voltage.

DIMENSIONS



Mounting Plate



Mounting Bolt Pattern

Note: Mounting plate center is located in the center of the luminaire width and 3.5" (8.89cm) above the luminaire bottom (lens down position). Splices must be made in the J-box (by others). Mounting plate must be secured by max. 5/16" (.79cm) diameter bolts (by others) structurally to the wall.

LUMINAIRE CONFIGURATION INFORMATION

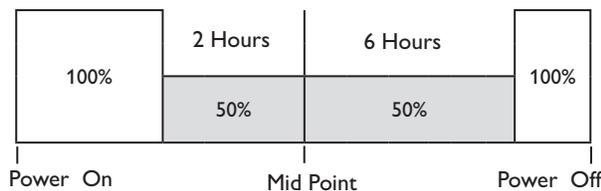
106L: Philips Gardco performance LED sconce providing constant wattage and constant light output when power to the luminaire is energized.

106L-DCC: Philips Gardco performance LED sconce provided with dual circuiting, and dual arrays, permitting separate switching of each led array.

106L-DIM: Philips Gardco performance LED sconce provided with 0 -10V dimming for connection to a control system provided by others.

106L-APD: Philips Gardco performance LED sconces with Automatic Profile Dimming are provided with a programmed LED Driver included. The LED driver is factory programmed to go to 50% power, 50% light output two (2) hours prior to night time mid-point and remain at 50% for six (6) hours after night time mid-point. Mid-point is continuously calculated by the LED driver based on the average mid-point of the last two full night cycles. Short duration cycles, and power interruptions are ignored and do not affect the determination of mid-point.

APD Dimming Profile:



100 Line LED

106 Quarter Sphere Sconce LED

SPECIFICATIONS

GENERAL: Philips Gardco 106 LED quarter sphere high performance sconce luminaires are designed to integrate naturally to wall surfaces. 106 LED luminaires are available with three (3) different distribution patterns, providing full cutoff performance (in the normal downlight position) and featuring LED arrays. Luminaires provide performance excellence and advanced Philips Gardco LED thermal management technology. High performance Class 1 LED systems offer potential energy savings of 50 % or more compared to HID systems.

THERMAL MANAGEMENT: Philips Gardco 106 LED luminaires utilize extruded aluminum integral thermal radiation fins to provide the excellent thermal management so critical to long LED system life.

LED RELIABILITY:

PREDICTED LUMEN DEPRECIATION DATA		
Ambient Temperature °C	LED Wattage / Driver mA	L ₇₀ Hours ¹⁰
25 °C	35LA / 350 mA	150,000
	55LA / 530 mA	100,000
40 °C	35LA / 350 mA	100,000
	55LA / 530 mA	70,000

10. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output.

OPTICAL SYSTEMS: Philips Gardco 106 LED luminaires utilize lensed LED arrays set to achieve IES Type II, Type III, and Type IV distributions. Individual LED arrays are replaceable. Luminaires feature high performance Class 1 LED systems.

FULL CUTOFF PERFORMANCE: Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

CUTOFF PERFORMANCE: Cutoff performance means a luminaire distribution where the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle at or above 90° above nadir, and 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

HOUSING: Housings are die cast aluminum. A memory retentive gasket seals the housing to the door frame to exclude moisture, dust, insects and pollutants from the optical system. A black, die cast ribbed backplate dissipates heat for longer system life.

DOOR FRAME: A single-piece die cast aluminum door frame integrates to the housing form. The door frame is hinged closed and secured to the housing with captive stainless steel fasteners. The heat and impact resistant 1/8" (.32cm) tempered glass lens and one-piece gasket are mechanically secured to the door frame with galvanized steel retainers.

IP RATING: Luminaires are rated IP66.

FINISH: Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. Standard colors are as listed. Consult factory for specs on custom colors.

LABELS: All luminaires bear UL or CUL (where applicable) labels. Lens down application is Wet Location and lens up is Damp Location.

WARRANTY: Philips Gardco LED luminaires feature a 5 year limited warranty, including a 5 year limited warranty covering the LED arrays. See Warranty Information on www.sitelighting.com for complete details and exclusions. Polycarbonate lenses carry a 1 year warranty only.



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Bogen Reentrant Horn Loudspeakers SPT30A

Reentrant Horn Loudspeakers

Models SPT30A and SP308A



Description

The Bogen SPT30A and SP308A are compact, high intelligibility, reentrant type loudspeakers, designed for one-way or two-way sound and communication systems. Their sturdy, weatherproof, all-metal construction is ideal for indoor and outdoor use in industrial plants, warehouses, schools, construction sites, transportation terminals, and recreational areas.

The Model SPT30A has a built-in, variable impedance selector switch for matching the speaker power requirements to a 25V or 70V constant-voltage line. The model SP308A has an 8-ohm impedance only.

Features

- High intelligibility and efficiency; ideal for both one-way and talk back applications
- Weatherproof, all-metal construction
- 30 watts; 25/70 volt or 8-ohm operation
- Tap settings for 70V: 30, 15, 7.5, 3.7, 1.8 watts; for 25V: 15, 7.5, 3.7, 1.8 watts
- Rotary tap impedance selector on SPT30A
- Tilt and swivel base for easy positioning
- Screw terminals make installation fast and easy
- All-purpose mounting bracket
- Self-aligning, field replaceable diaphragm
- Textured mocha enamel finish
- Limited lifetime warranty
- Mountable to I-beam flange using Bogen's BC1 Beam Clamp (sold separately)
- Mountable to electrical box using Bogen's HSES10 mounting strap (sold separately)
- Terminal Cover (TCSPT1) allows connection of conduit fittings to horn speakers (sold separately)

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Technical Specifications

Power Rating (RMS): 30 watts continuous, 40 watts equalized

Frequency Response: 225 Hz to 14 kHz

Impedance:

SPT30A — 25/70 volts

SP308A — 8 ohms

Sound Pressure Level: 125 dB @ four feet on axis with 30-watt input @ 1000 Hz

Dispersion: 100°

Sensitivity as Microphone: -22 dBm [Ref: 10 dynes/cm²]

Dimensions: 11" Diameter x 10-1/2" D

Product Weight:

SPT30A — 6 lb.

SP308A — 5 lb.

Finish: Textured mocha enamel

Impedance Selector Switch Settings (SPT30A only):
25V @ 15, 7.5, 3.7, 1.8 watts
70V @ 30, 15, 7.5, 3.7, 1.8 watts

Sound Pressure Level in dB @ 1000Hz:	Watts					Feet on Axis					
	Input:	4	8	16	32	64	4	8	16	32	64
30		125	119	113	107	101					
15		122	116	110	104	98					
7.5		119	113	107	101	95					
3.7		116	110	104	98	92					
1.8		113	107	101	95	89					

Architect and Engineer Specifications

The loudspeaker shall be a Bogen Model ____ (specify SPT30A or SP308A), or approved equivalent, reentrant type horn loudspeaker. The frequency response shall be 225 Hz to 14 kHz. Rated power output shall be 30 watts, RMS continuous. Dispersion shall be 100°. Sound pressure level, measured four feet on axis with 30 watt input @ 1000 Hz, shall be at least 125 dB.

Use for SPT30A. The unit shall incorporate a seven-position weather-sealed switch, to allow matching the loudspeaker to a 25V or 70V constant-voltage line. Power handling capacity shall be adjustable at 70V to 1.8, 3.7, 7.5, 15, or 30 watts, and at 25V to 1.8, 3.7, 7.5, or 15 watts.

Use for SP308A. The unit shall have an impedance of 8 ohms.

The loudspeaker shall be of weatherproof, all-metal construction, with driver enclosed within a weatherproof housing. The loudspeaker shall include a self-aligning, field-replaceable diaphragm.

Screw terminals shall be provided for connection to the audio line. A plastic cover shall be provided to protect the connectors and impedance selector switch, and provide strain relief for the audio line.

An all-purpose mounting bracket shall provide precise positioning in the vertical and horizontal planes with a single adjustment. The bracket shall include banding slots to permit mounting the loudspeaker on beams or pillars. Bracket and loudspeaker shall be finished in textured mocha enamel. The unit shall measure 11" in diameter by 10-1/2" D. Product weight shall be _____ (insert 6 lb. for the SPT30A, 5 lb. for the SP308A).

BOGEN[®]
COMMUNICATIONS, INC.

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Tel. 201-934-8500; FAX: 201-934-9832; www.bogen.com

Bogen Power Vector Modular Amplifier

Power Vector Modular Amplifiers

Models V35, V60,
V100, V150, and V250



Description Bogen's Power Vector modular amplifiers offer a wide range of power levels from which to choose, with five models from 35W to 250W. The amplifiers are designed to work with both high- (70/25V) and low- (4/8-ohm) impedance speaker systems.

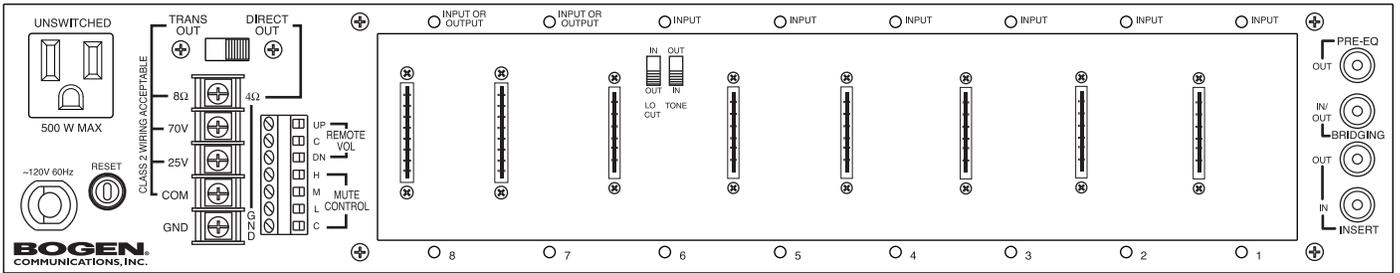
Each model includes eight module bays for plug-in input modules and allows up to four levels of priority between modules. Two module bays are capable of accepting plug-in signal-processing output modules. Each module is controlled by an independent volume control with an associated signal/clip LED for signal status. An 11-segment LED output meter monitors output signal level.

Each model includes a motorized master volume control that can be controlled using a remote volume control panel (RVCP, sold separately).

- Features**
- 5 models ranging from 35W to 250W each; a mixer-only version (VMIX) is also available
 - Capable of handling 70V, 25V, 8-ohm, and 4-ohm speaker loads
 - 8 module bays
 - Wide selection of advanced plug-in modules (modules sold separately)
 - 4 levels of priority between modules
 - 2 module bays capable of handling plug-in signal-processing output modules
 - 11-segment LED output level meter monitors the output level of the power amplifier with Avg./Peak meter switch
 - Motorized master volume control can be remotely operated
 - Lockable switch permits user to select either transformer-coupled outputs or a direct low-impedance output
 - 5-position barrier strip, with clamping washers, provides connections for speaker loads
 - Bridging In/Out connector
 - External access to priority mute buses
 - Bridging jack and Mute terminals join multiple Power Vector amps and mixers together
 - Independent volume control for each of the eight module bays
 - Two-color LED for each channel indicates input signal or clipping
 - Bass and treble control with bypass switch (located in module bay 6)
 - 125 Hz Low Cut switch (located in module bay 6)
 - Signal-processing insert jacks allow external equipment to be inserted between the pre-amp output and the power amp input
 - Pre-EQ, unbalanced, buffered output signal ("post" all unit controls, but "pre" any external "Insert" equipment connected)
 - Grounded, unswitched AC convenience receptacle with a 500W maximum capacity provided for external equipment
 - 8 module security cover/filler plates included with amplifier (PVMC)
 - Push-button remote volume control panel (Model RVCP, sold separately)
 - Security cover to selectively protect volume, bass, and treble controls (Model PVSC, sold separately)
 - Rack mountable (with rack mounting kit RPK87, sold separately)
 - 2 rack spaces high (3-1/2")
 - Listed to UL Standard 60065 for U.S. and Canada

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Technical Specifications

Power Output (RMS):	V35	V60	V100	V150	V250
Rated:	35W	60W	100W	150W	250W
Typical @ 1 kHz:*	45W	85W	140W	200W	340W

Frequency Response

Transformer:	45 Hz to 20 kHz; +0/-2 dB
Direct:	20 Hz to 20 kHz; +0/-1 dB

Distortion

Transformer:	< 0.5%**
Direct:	< 0.1%** (.05 typical @ 1 kHz)

Signal-to-Noise†

Fundamental:	-94 dB
With SAX1R Module:	-70 dB
With MIC1S Module:	-60 dB
With TEL1S Module:	-70 dB

Tone Controls

Bass Frequency:	@100 Hz (+/- 10 dB minimum)
Treble Frequency:	@10 kHz (+/- 10 dB minimum)
Low Cut Frequency:	@125 Hz (-6 dB/octave)

Sensitivity	0.4V (at backplane connector)
Output Regulation:	2 dB or better, no load to full load

Output Impedance

Transformer-Coupled:	70V, 25V, 8 ohms (bal or unbal)
Direct Coupled:	4 ohms (minimum)

Thermal Emissions: (BTU/hr.)	V35	V60	V100	V150	V250
	174.2	204.9	495.2	696.7	911.9

Inserts

Insert "OUT" Level:	1VRMS (@FRP)
Insert "OUT" Impedance:	50 ohms maximum
Insert "IN" Sensitivity:	1VRMS
Insert "IN" Impedance:	10k ohms minimum

Bridging In/Out

Bus Level:	250 mVRMS (@FRP)
Bus Impedance:	10k ohms maximum

Pre-EQ Output

Output Level:	4VRMS (@FRP)
Output Impedance:	50 ohms maximum

AC Power Receptacle: 500 watts maximum power, unswitched

AC Voltage: 120V AC, 60 Hz

AC Current:	V35	V60	V100	V150	V250
	0.6A	1.3A	2.0A	3.5A	5.5A

Product Weight (lb.):	V35	V60	V100	V150	V250
	22	26	28	31	32

Dimensions: 17-1/4" W x 3-7/8" H x 14-3/4" D (all models)

* Typical, @1 kHz/0.1% THD/4-ohm direct ** THD+N, Maximum, Full bandwidth @ FRP † Referenced to FRP output level, 20 Hz to 20 kHz bandwidth limited

Architect and Engineer Specifications

The amplifier shall be a Bogen Power Vector Amplifier, Model V35, V60, V100, V150, or V250. The amplifier shall be compatible with both high- (70/25V) and low- (4/8-ohm) impedance speakers, with the capability of 35, 60, 100, 150, or 250 watts, respectively.

The amplifier shall provide 8 module bays for plug-in input modules with two of the bays also capable of handling plug-in signal-processing output modules. There shall be 4 levels of priority available between all modules.

Each of the 8 module bays shall have an associated independent volume control. Each independent volume control shall have a signal/clip LED to indicate signal condition. Each amplifier shall also include bass and treble controls, as well as a motorized master volume control, which can be remotely operated using the RVCP accessory (sold separately).

For larger applications, the amplifier shall be able to bridge to another Power Vector amplifier or mixer using a built-in bridging jack and mute terminals. This connection shall effectively increase the number of inputs.

An 11-segment LED output level meter will register either the average or peak level of the amplifier's output level, as selected by an Average/Peak switch. Each Power Vector amplifier shall have a Tone Control Bypass switch and a Low-Cut Filter switch, both located on the rear of the amplifier in module bay 6.

A lockable switch will permit the selection of transformer-coupled output or direct output for speaker connections.

Signal-processing Insert jacks (RCA connectors) will allow external equipment to be inserted between the pre-amp output and the power amp input.

Each model will have a Pre-EQ, unbalanced (RCA jack), buffered output whose signal is post all volume controls, tone controls, and output module signal-processing, but before (pre-EQ) any external signal-processing equipment connected to the Insert jacks.

Each amplifier will have bridging in/out capability and individual access to internal module priority buses for easy connection of multiple amplifiers or mixers in a system.

Each amplifier will include a 500W maximum, unswitched AC power receptacle.

The amplifier shall fit into a 19" rack and fit in two rack spaces (2 RU). It shall allow the attachment of feet for tabletop placement. Each model shall measure 17-1/4" W x 3-7/8" H x 14-3/4" D. The V35 shall weigh 22 lb., the V60 - 26 lb., the V100 - 28 lb., the V150 - 31 lb., and the V250 - 32 lb.

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Input Modules

Input Modules

Models BAL2S,
BRG1R, LMM1S,
LMR1S, MAX1R,
MIC1S, MIC2S,
MIC1X, MIC2X,
SAX1R, TBL1S,
TEL1S, TNG1S



DESCRIPTION Bogen's advanced plug-in modules provide a wide range of functions to support a variety of applications. These modules support different signal-source requirements, including the ability to interface to balanced and unbalanced high- and low-level inputs, stereo or mono, telco systems, and microphones.

FEATURES

BALANCED (BAL2S)

Stereo, balanced input module

- Stereo, high-impedance, balanced inputs
- Professional-quality, low noise performance
- Selectable gain of 0 or 18 dB
- Mutable by higher priority modules
- Variable ducking level when muted
- Fade back from mute
- Screw terminal connections

BRIDGING (BRG1R)

Daisy chain multiple amplifiers input module

- Gain/Trim control
- Input signal available at buffered output
- Mute send & receive
- Variable ducking level when muted
- Fade back from mute
- 4 Priority levels
- Buffered output not mutable
- Bus assignable
- RCA input and output connectors

LINE/MIC (LMM1S, LMR1S)

LINE/MIC level input modules

- Gain control
- Bass & Treble controls
- Actively-balanced input
- LINE/MIC Attenuator switch
- Gating w/Threshold & Duration
- 24V Phantom power supply
- 4 Priority levels
- Bus assignable
- Built-in limiter w/ LED (LMR1S)
- Remote control volume option (LMR1S)
- Single-gang remote control panel included (LMR1S)
- Remote distance up to 2,000 Ft. (LMR1S)
- Screw terminal connectors

MICROPHONES (MIC1S, MIC1X)

Transformer-balanced, low-impedance microphone input modules

- Gain/Trim control
- Bass & Treble controls
- Noise gate w/Threshold & Duration
- Limiter w/Threshold control
- Limiter activity LED
- 24V Phantom power
- Mute send & receive
- 4 Priority levels
- Bus assignable
- Balanced, transformer-isolated
- Screw terminal (MIC1S); XLR connector (MIC1X) models

MICROPHONES (MIC2S, MIC2X)

Electronic-balanced, low-impedance microphone input modules

- Gain/Trim control
- High Cut/Low Cut controls
- Voice Enhancement control
- Noise gate w/Threshold control
- Limiter w/Threshold control
- 24V Phantom power
- Mute send & receive
- 4 Priority levels
- Bus assignable
- Electronically balanced
- Screw terminal (MIC2S); XLR connector (MIC2X) models

MONO, STEREO AUX (MAX1R, SAX1R)

Unbalanced input modules

- Gain/Trim control
- Bass & Treble controls
- Gating w/Threshold & Duration
- Mute send & receive
- Variable ducking level when muted/gated
- Fade back from mute/gate
- 4 Priority levels
- Bus assignable
- Stereo to mono summing option (SAX1R)
- RCA connectors

TRANSFORMER-BALANCED (TBL1S)

Transformer-balanced AUX input module

- Transformer-isolated line-level input
- Gain/Trim control
- Bass & Treble controls
- Gating w/Threshold & Duration
- Mute send & receive
- Variable ducking level when muted/gated
- Fade back from mute/gate
- 4 Priority levels
- Bus assignable
- Pluggable screw terminal connections

TELEPHONE (TEL1S)

Telephone interface input module

- Loop start or ground start trunk interfacing (requires external power supply)
- Dry loop interface to paging ports
- Audio-activated paging in dry loop
- Gain/Trim control
- Limiter
- Noise gate w/Threshold & Duration
- Mute send & receive
- 4 Priority levels
- Bus assignable
- Transformer-isolated
- Screw terminal connections

tone GENERATOR (TNG1S)

Multiple tone generator input module

- Select 4 of 8 tones to trigger
- 512 Hz Burst/steady, slow whoop, siren, mechanical bell, Klaxon, night ringer, double chime, & doorbell tones
- Momentary & continuous playback modes
- Screw terminal trigger connections
- Level control
- Microprocessor-controlled operation
- Mute send & receive
- 4 Priority levels

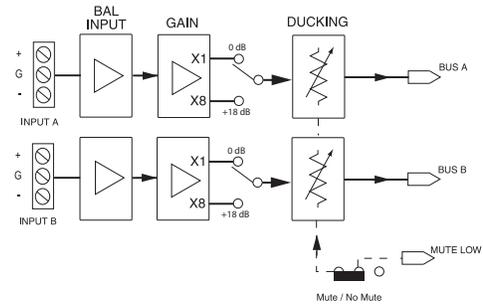
BOGEN®

TECHNICAL SPECIFICATIONS

Balanced Input Module (BAL2S)



Gain	0 dB (or +18 dB; switch selectable per channel)
Frequency Response	+0/-3 dB, 5 Hz-100 kHz
S/N (20 Hz - 20 kHz)	-100 dBV
Distortion	< 0.005%, 20 Hz-20 kHz
Input Impedance	10k ohms (unbalanced) 20k ohms (balanced)
Ducking (level)	-10 dB to -48 dB
CMRR	> 80 dB @ 1 kHz
Controls	Ducking
Priority	Lowest or none
Connector	6-position barrier strip
Dimensions	1-3/8" W x 3-1/8" H x 3-1/2" D
Weight	2.8 oz.

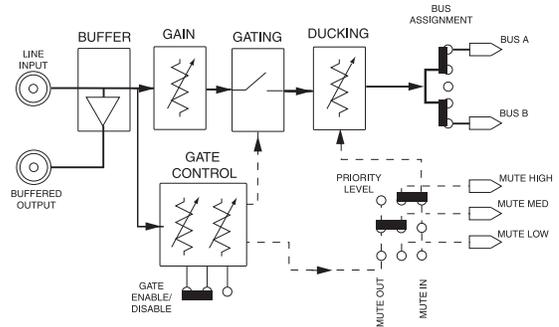


All measurements at 0 dB gain.

Bridging Input Module (BRG1R)



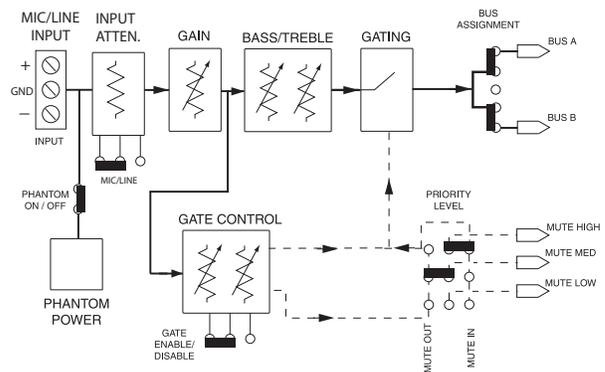
Gain	-5 dB to 5 dB
Frequency Response	+0/-3 dB, 5 Hz-100 kHz
S/N (20 Hz - 20 kHz)	-100 dBV
Distortion	< 0.005%, 20 Hz-20 kHz
Input Impedance	10k ohms (balanced)
Output Impedance	200 ohms (pseudo-balanced)
Ducking (level)	-10 dB to -48 dB
Gate Threshold	3 mV to 30 mV
Gate Duration	0.5s to 5s
CMRR	> 60 dB @ 1 kHz
Priority	Four levels
Controls	Gain, Ducking, Gate Threshold, Gate Duration
Connector	RCA Type
Dimensions	1-3/8" W x 3-1/8" H x 3-1/2" D
Weight	2.3 oz.



LINE/MIC Input Module (LMM1S)



Gain	18 dB to 60 dB (MIC) -2 dB to 40 dB (LINE)
Frequency Response	20 Hz to 50 kHz (+0/-3 dB)
S/N (20 Hz - 20 kHz)	-76 dBV @ 60 dB gain
Distortion	< 0.01%
Input Impedance	15K LINE mode 2K MIC mode
Gate Threshold	2 to 25mV @ min. gain
Gate Duration	0.5s to 5s
Priority	Four levels
Tone	± 10 dB @ 100 Hz & 10 kHz
CMRR	> 80 dB @ 1 kHz
Controls	Gain, Bass, Treble, Threshold, Duration
Connector	Pluggable Euro Screw Type
Dimensions	1-3/8" W x 3-1/8" H x 3-1/2" D
Weight	2.2 oz.



LINE/MIC Input Module (LMR1S)



Gain 18 dB to 60 dB (MIC)
-2 dB to 40 dB (LINE)

Frequency Response 20 Hz to 50 kHz (+0/-3 dB)

S/N (20 Hz - 20 kHz) -74 dBV @ 60 dB gain

Distortion < 0.03%

Input Impedance 15K LINE mode
2K MIC mode

Gate Threshold 2 to 25mV @ min. gain

Gate Duration 0.5s to 5s

Priority Four levels

Tone ± 10 dB @ 100 Hz & 10 kHz

CMRR > 80 dB @ 1 kHz

Controls Gain, Bass, Treble, Limit, Threshold, Duration

Limit (threshold) -16 dBV to off

Remote Voltage 0 to 4.5V DC

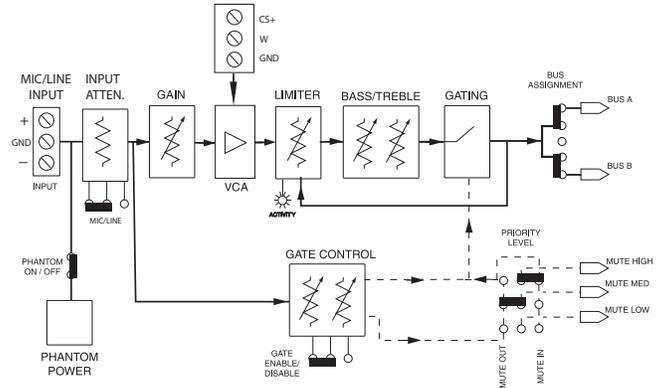
Remote Loop Current 0.5mA

Max. Distance 200 Ft. (2 Conductor), 2,000 Ft. (3 Conductor Shielded)

Connector Fixed Euro Screw Type

Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D

Weight 2.6 oz.



Microphone Input Module (MIC1S)



Gain 28 dB to 62 dB

Frequency Response +0/-3 dB, 10 Hz-20 kHz

S/N (20 Hz - 20 kHz) -71 dBV @ 60 dB gain,
-131 dBV EIN

Distortion < 0.5%, 20 Hz-20 kHz

Input Impedance 500 ohms

Tone ± 10 dB @ 100 Hz & 10 kHz

Limit (threshold) -10 dBV to off

Gate Threshold 3 mV to 30 mV

Gate Duration 0.5s to 5s

CMRR > 80 dB @ 1 kHz

Priority Four levels

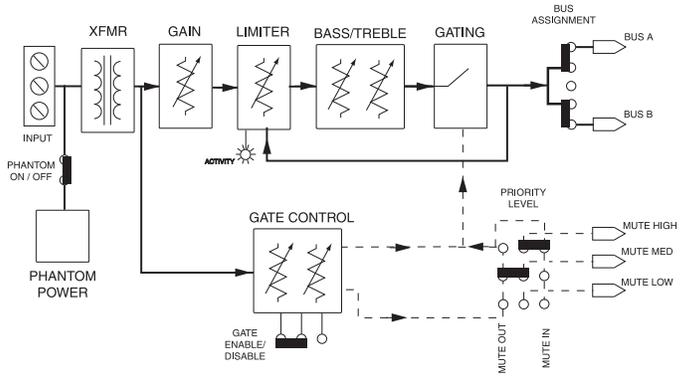
Phantom Power 24V DC (defeatable)

Controls Gain, Bass, Treble, Limit, Gate Threshold, Gate Duration

Connector Screw Terminal

Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D

Weight 3.6 oz.



Microphone Input Module (MIC1X)



Gain 28 dB to 62 dB

Frequency Response +0/-3 dB, 10 Hz-20 kHz

S/N (20 Hz - 20 kHz) -71 dBV @ 60 dB gain,
-131 dBV EIN

Distortion < 0.5%, 20 Hz-20 kHz

Input Impedance 500 ohms

Tone ± 10 dB @ 100 Hz & 10 kHz

Limit (threshold) -10 dBV to off

Gate Threshold 3 mV to 30 mV

Gate Duration 0.5s to 5s

CMRR > 80 dB @ 1 kHz

Priority Four levels

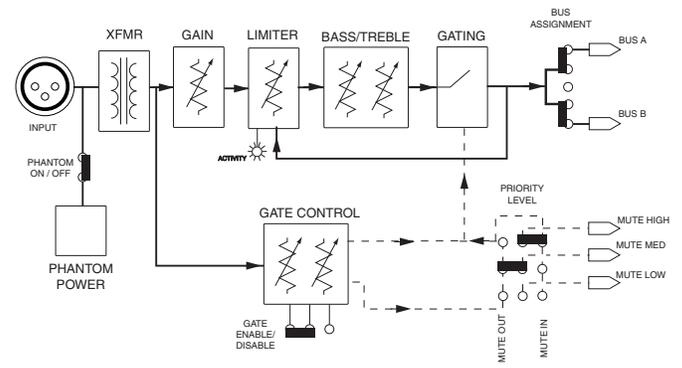
Phantom Power 24V DC (defeatable)

Controls Gain, Bass, Treble, Limit, Gate Threshold, Gate Duration

Connector XLR

Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D

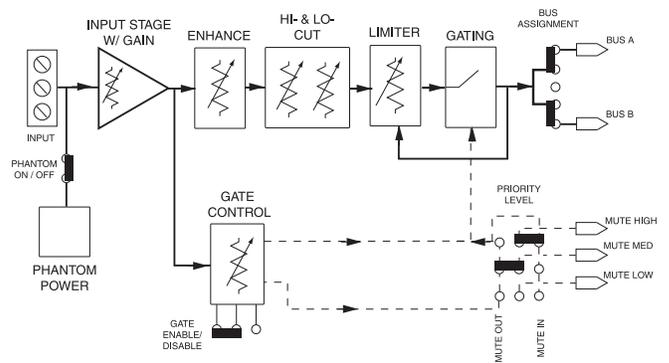
Weight 3.6 oz.





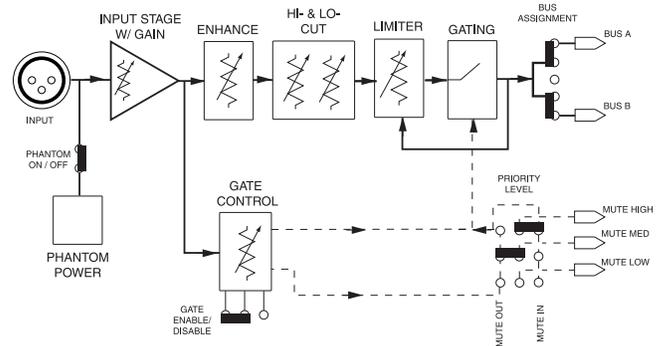
Microphone Input Module (MIC2S)

Gain 18 dB to 62 dB
 Frequency Response +0/-3 dB, 10 Hz-40 kHz
 S/N (20 Hz - 20 kHz) -73 dBV @ 60 dB gain, -133 dBV EIN
 Distortion < 0.02%, 20 Hz-20 kHz
 Input Impedance 2K ohms
 Tone -10 dB @ 100 Hz & 3 kHz (cut only)
 Limit (threshold) -10 dBV to off
 Gate Threshold 3 mV to 30 mV
 CMRR > 80 dB @ 1 kHz
 Priority Four levels
 Phantom Power 24V DC (defeatable)
 Controls Gain, Low Cut, High Cut, Enhance, Limit, Gate Threshold
 Connector Screw Terminal
 Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D
 Weight 2.2 oz.



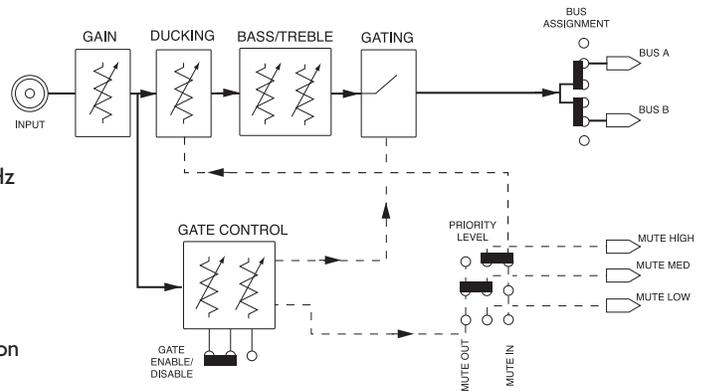
Microphone Input Module (MIC2X)

Gain 18 dB to 62 dB
 Frequency Response +0/-3 dB, 10 Hz - 40 kHz
 S/N (20 Hz - 20 kHz) -73 dBV @ 60 dB gain, -133 dBV EIN
 Distortion < 0.02%, 20 Hz - 20 kHz
 Input Impedance 2K ohms
 Tone -10 dB @ 100 Hz & 3 kHz (cut only)
 Limit (threshold) -10 dBV to off
 Gate Threshold 3 mV to 30 mV
 CMRR > 80 dB @ 1 kHz
 Priority Four levels
 Phantom Power 24V DC (defeatable)
 Controls Gain, Low Cut, High Cut, Enhance, Limit, Gate Threshold
 Connector XLR
 Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D
 Weight 2.2 oz.



Mono Aux Input Module (MAX1R)

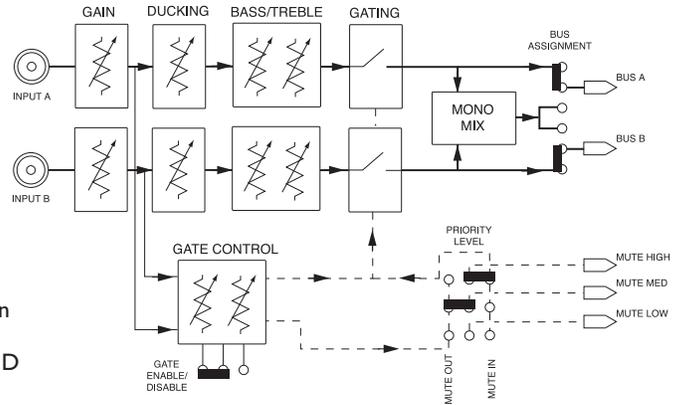
Gain -20 dB to 6 dB
 Frequency Response +0/-3 dB, 5 Hz-100 kHz
 S/N (20 Hz - 20 kHz) -100 dBV
 Distortion < 0.005%, 20 Hz-20 kHz
 Input Impedance 50k ohms
 Tone ±10 dB @ 100 Hz & 10 kHz
 Ducking (level) -10 dB to -48 dB
 Gate Threshold 3 mV to 30 mV
 Gate Duration 0.5s to 5s
 Priority Four levels
 Controls Gain, Bass, Treble, Ducking, Gate Threshold, Gate Duration
 Connector RCA type
 Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D
 Weight 2.6 oz.





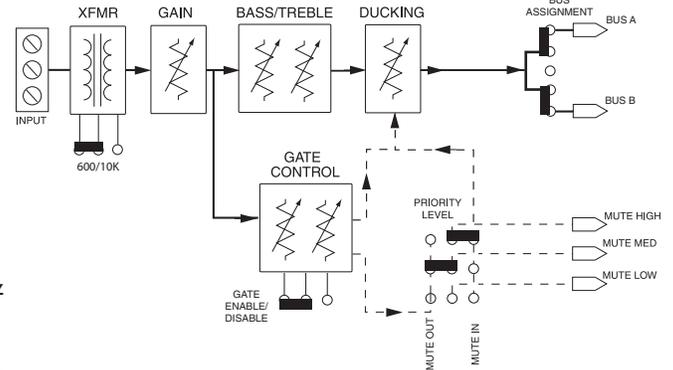
Stereo Aux Input Module (SAX1R)

Gain -20 dB to 6 dB
 Frequency Response +0/-3 dB, 5 Hz - 100 kHz
 S/N (20 Hz - 20 kHz) -100 dBV
 Distortion < 0.005%, 20 Hz - 20 kHz
 Input Impedance 50k ohms
 Tone ± 10 dB @ 100 Hz & 10 kHz
 Ducking (level) -10 dB to -48 dB
 Gate Threshold 3 mV to 30 mV
 Gate Duration 0.5s to 5s
 Priority Four levels
 Controls Gain, Bass, Treble, Ducking, Gate Threshold, Gate Duration
 Connector RCA type
 Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D
 Weight 2.6 oz.



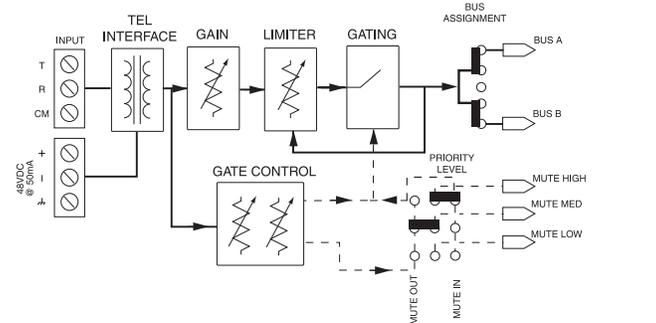
Transformer-Balanced Input Module (TBL1S)

Gain -11 dB to +19 dB
 Frequency Response 10 - 40 kHz (+0/-3 dB)
 S/N (20 Hz - 20 kHz) -75 dBV
 Distortion < 0.3%, 20 Hz - 20 kHz @ 1V
 Input Impedance 10k ohms/600 ohms (jumper selectable)
 Gate Threshold 5 mV to disable
 Gate Duration 0.5s to 5s
 Priority Four levels
 Duck Level -10 dB to -72 dB
 Tone +/- 10 dB @ 100 Hz & 10 kHz
 CMRR > 80 dB @ 1 kHz
 Controls Gain, Bass, Treble, Duck, Gate Threshold, Gate Duration
 Connector Pluggable Euro Screw Type
 Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D
 Weight 3.8 oz.



Telephone Input Module (TEL1S)

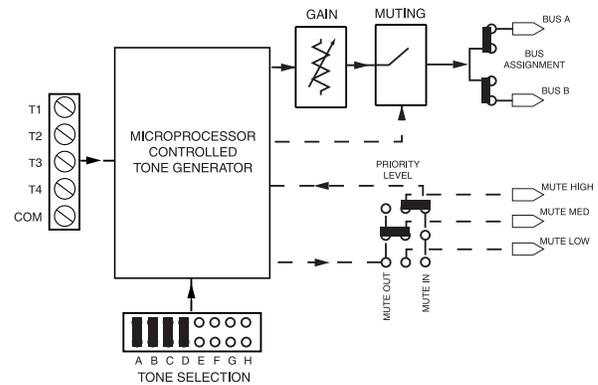
Gain 0 dB to 30 dB
 Frequency Response +0/-3 dB, 20 Hz - 20 kHz
 S/N (20 Hz - 20 kHz) -90 dBV @ 30 dB of gain, -120 dBV EIN
 Distortion < 0.1%, 20 Hz - 20 kHz
 Input Impedance Dry loop 30k ohms, Wet loop 1k ohms
 Limit (threshold) -10 dBV to off
 Gate Threshold 3 mV to 30 mV
 Gate Duration 0.5s to 5s
 Priority Four levels
 External Power 48V DC (for talk battery)
 CMRR > 80 dB @ 1 kHz
 Controls Gain, Limit, Gate Threshold, Gate Duration
 Connector 6-position barrier strip
 Dimensions 1-3/8" W x 3-1/8" H x 3-1/2" D
 Weight 2.8 oz.





Tone Generator Input Module (TNG1S)

Max. Output Level	1.8V
Max. Contact Resist.	100 ohms
Tones	8 total, 4 selectable; 512 Hz Burst/steady, slow whoop, siren, mechanical bell, Klaxon, night ringer, double chime, & doorbell
Priority	Four levels
Controls	Level
Connector	5-position barrier strip
Dimensions	1-3/8" W x 3-1/8" H x 3-1/2" D
Weight	2 oz.



ARCHITECT & ENGINEER SPECIFICATIONS

Balanced Input Module (BAL2S) The BAL2S input module shall be a stereo, high-impedance, electronically-balanced input module. It shall be mutable by higher priority modules and shall feature an internal PCB jumper to enable or disable muting from the priority bus system. It shall have a continuously variable ducking control that will enable attenuation of the input signal from a minimum of 10 dB to a maximum of 48 dB relative to the normal unmuted condition. The module shall have a rapid mute when the mute function is activated and a gradual fade back from mute when the mute control is deactivated. Gain shall be switch selectable per channel and shall be 0 dB or +18 dB.

Bridging Input Module (BRG1R) The BRG1R input module shall have a mono-balanced input and a buffered pseudo-balanced output that will enable the connection of several amplifiers to each other in a daisy chain configuration without creating ground loops between units. It shall have an RCA jack for both the input and the output connections. The module shall have a gain/trim control that will allow the gain to be adjusted plus or minus 5 dB relative to 0 dB nominal gain. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. It shall have a continuously variable ducking control that will enable attenuation of the input signal from a minimum of 10 dB to a maximum of 48 dB relative to the normal unmuted condition and a gradual fade back from mute when the mute control is deactivated. The buffered output shall not be mutable. The module shall have a VOX/gating circuit to control muting of lower priority modules and an internal gating circuit with controls for threshold and duration. The module's output shall be assignable to either or both of two mixing buses.

LINE/MIC Input Module (LMM1S) The LMM1S module shall be a LINE/MIC level input module. Input shall be via front-mounted screw terminals. It shall have an internal, 24V DC phantom power supply that is enabled by a PCB jumper. The module shall have a gain control that will allow gain to be adjusted from 18 dB to 60 dB in MIC position, or from -2 dB to 40 dB in LINE position. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of four priority levels. The module shall have an internal gating circuit with controls for threshold and duration. The module shall have bass and treble controls with cut and boost of 10 dB at 100 Hz and 10 kHz, respectively. The module's output shall be assignable to either or both of two mixing buses.

LINE/MIC Remote Input Module (LMR1S) The LMR1S module shall be a LINE/MIC level input module with remote volume control capability. Input level control shall be by remote potentiometer or by direct voltage input (0 – 4.5V DC). Input shall be via front-mounted screw terminals. The LMR1S shall have an internal, 24V DC phantom power supply that is enabled by a PCB jumper. The module shall have a gain control that will allow gain to be adjusted from 18 dB to 60 dB in MIC position, or from -2 dB to 40 dB in LINE position. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of four priority levels. The module shall have an internal gating circuit with controls for threshold and duration. It shall have a built-in limiter to control the maximum output level of the module. The module shall have an LED to indicate limiter activity. The module shall have bass and treble controls with cut and boost of 10 dB at 100 Hz and 10 kHz, respectively. The module's output shall be assignable to either or both of two mixing buses.

A Remote Volume Control Panel is included with the module. The panel shall be wall mountable and shall be able to control input level from a distance of up to 200 feet using a 2-conductor cable, or up to 2,000 feet using a 3-conductor shielded cable.

ARCHITECT & ENGINEER SPECIFICATIONS (cont.)

Mono Aux Input Module (MAX1R) The MAX1R module shall be a mono, high-impedance, unbalanced input module. The module shall have an RCA jack as its input connector. The module shall have a gain/trim control that will allow the gain to be adjusted from -20 dB to +6 dB relative to 0 dB nominal gain. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. It shall have a continuously variable ducking control that will enable attenuation of the input signal from a minimum of 10 dB to a maximum of 48 dB relative to the normal unmuted condition and a gradual fade back from mute when the mute or gate control is deactivated. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit, with controls for threshold and duration. The module shall have bass and treble controls with cut or boost of 10 dB at 100 Hz and 10 kHz, respectively. The module's output shall be assignable to either or both of two mixing buses.

Microphone Input Module (MIC1S) The MIC1S module shall have a transformer-isolated, balanced input with screw terminal connector. It shall interface with low-impedance dynamic microphones. It shall also interface with electret condenser microphones and shall have an internal 24V DC phantom power supply to provide the bias supply that is enabled by a PCB jumper. The module shall have a gain control that will allow the gain to be adjusted from 28 dB to 62 dB. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit with controls for threshold and duration. It shall have a built-in limiter, with a threshold control, to limit the maximum output level of the module. A front panel LED will indicate limiter activity. The module shall have bass and treble controls with cut or boost of 10 dB at 100 Hz and 10 kHz, respectively. The module's output shall be assignable to either or both of two mixing buses.

Microphone Input Module (MIC1X) The MIC1X module shall have a transformer-isolated, balanced input with XLR connector. It shall interface with low-impedance dynamic microphones. It shall also interface with electret condenser microphones and shall have an internal 24V DC phantom power supply to provide the bias supply that is enabled by a PCB jumper. The module shall have a gain control that will allow the gain to be adjusted from 28 dB to 62 dB. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit with controls for threshold and duration. It shall have a built-in limiter, with a threshold control, to limit the maximum output level of the module. A front panel LED will indicate limiter activity. The module shall have bass and treble controls with cut or boost of 10 dB at 100 Hz and 10 kHz, respectively. The module's output shall be assignable to either or both of two mixing buses.

Microphone Input Module (MIC2S) The MIC2S module shall have an electronically-balanced input with screw terminal connector. It shall interface with low-impedance dynamic microphones. It shall also interface with electret condenser microphones and shall have an internal 24V DC phantom power supply to provide the bias supply that is enabled by a PCB jumper. The module shall have a gain control that will allow the gain to be adjusted from 18 dB to 62 dB. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit with a threshold control. It shall have a built-in limiter, with a threshold control, to limit the maximum output level of the module. The module shall have bass and treble controls with cut only of 10 dB at 100 Hz and 3 kHz, respectively. The module shall have a voice enhancement control for improving voice intelligibility. The module's output shall be assignable to either or both of two mixing buses.

Microphone Input Module (MIC2X) The MIC2X module shall have an electronically-balanced input with XLR connector. It shall interface with low-impedance dynamic microphones. It shall also interface with electret condenser microphones and shall have an internal 24V DC phantom power supply to provide the bias supply that is enabled by a PCB jumper. The module shall have a gain control that will allow the gain to be adjusted from 18 dB to 62 dB. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit with a threshold control. It shall have a built-in limiter, with a threshold control, to limit the maximum output level of the module. The module shall have bass and treble controls with cut only of 10 dB at 100 Hz and 3 kHz, respectively. The module shall have a voice enhancement control for improving voice intelligibility. The module's output shall be assignable to either or both of two mixing buses.

Stereo AUX Input Module (SAX1R) The SAX1R module shall be a stereo, high-impedance, unbalanced input module. The module shall have two RCA jacks for its input connectors. The module shall have a gain/trim control that will allow the gain to be adjusted from -20 dB to +6 dB relative to 0 dB nominal gain. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. It shall have a continuously variable ducking control that will enable attenuation of the input signal from a minimum of 10 dB to a maximum of 48 dB relative to the normal unmuted condition and a gradual fade back from mute when the mute or gate control is deactivated. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit, with controls for threshold and duration. The module shall have bass and treble controls with cut or boost of 10 dB at 100 Hz and 10 kHz, respectively. The module's outputs shall be independently assignable to each of two mixing buses. The module shall allow stereo sources to be summed and sent mono to either or both of two mixing buses.

ARCHITECT & ENGINEER SPECIFICATIONS (cont.)

Transformer-Balanced Input Module (TBL1S) The TBL1S input module shall be a transformer-isolated, line-level, balanced input module. The module shall have a pluggable 3-pin screw terminal input barrier strip connector to make the input connection. The module shall have a jumper selectable input impedance of 600 ohms or 10k ohms. The module shall have a gain/trim control that will allow the gain to be adjusted from -11 dB to +19 dB. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit with controls for threshold and duration. It shall have a continuously variable ducking control that will enable attenuation of the input signal from a minimum of -10 dB to a maximum of -72 dB relative to the normal unmuted condition and a gradual fade back from mute when the mute or gate control is deactivated. The module's output shall be assignable to either or both of two mixing buses.

Telephone Input Module (TEL1S) The TEL1S module shall have a transformer-isolated, balanced input and configuration jumpers that will allow it to interface with both wet and dry loop telephone systems. In the dry loop mode, this module shall allow connections to page port systems. In the wet mode of operation, it shall allow connections to both ground start and loop start telephone systems. The module shall have a 6-pin screw terminal input barrier strip connector to make the input connection. The module shall provide for the connection of an external talk-battery power supply of 48V DC. The module shall have a gain control that will allow the gain to be adjusted from 0 dB to 30 dB. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. The module shall have a VOX/gating circuit to control muting of lower priority modules and its internal gating circuit with controls for threshold and duration. It shall have a built-in limiter, with a threshold control, to limit the maximum output level of the module. The module's output shall be assignable to either or both of two mixing buses.

Tone Generator Input Module (TNG1S) The TNG1S input module shall be a multiple tone generator input module. The module shall have a 5-pin screw terminal input barrier strip connector to make the trigger connections. The module shall include 8 tones: 512 Hz burst/steady, slow whoop, siren, mechanical bell, Klaxon, night ringer, double chime, and doorbell tones. The module shall permit 4 of the 8 tones to be triggered. Momentary and continuous playback modes shall be available. The module shall have a level control. It shall have the ability to mute lower priority modules and be muted by higher priority modules. The module shall be able to assume any of 4 priority levels. The module shall have a gradual fade back from mute when the mute control is deactivated. The module's output shall be assignable to either or both of two mixing buses.

BOGEN[®]
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Microphone

BOGEN MICROPHONES

Models HDU250, HDU150, HDO100, MBS1000A, DDU250, GCU250, GDU150, MGN19, SCU250, WCU250

Introduction

Bogen's line of microphones come in a variety of types and styles (handheld, desktop, gooseneck, boundary, and overhead hanging) to meet any and all application needs ranging from paging systems to instrument and vocal reproduction. Each is ruggedly constructed to withstand the demands of sound installations.

Each microphone provides clear, natural, intelligible sound reproduction with accurate response and dependable performance. Bogen's microphone models are crafted with professional-grade features, including models with rubberized grips; quiet on/off glide switches; dent-proof screens; contemporary designs; and a variety of accessories including stands, mounting clips, windscreens, and cables.

Index

Handhelds (HDU250, HDU150, HDO100).....	1-2
Desktops (MBS1000A, DDU250)	3
Goosenecks (GDU250, GCU150, MGN19)	4-5
Boundary (SCU250)	6
Overhead (WCU250)	6
Accessories	7
Architect and Engineer Specifications	8

HDU250 - Professional Stage

Description

The HDU250 is a dynamic microphone ideal for acoustically-demanding environments. It features a heavy zinc die cast case with a rigid, low noise cable-mount system and a lockable silent reed switch. It has an extra low handling noise, floating, shock-mounted Neodymium capsule.



Features

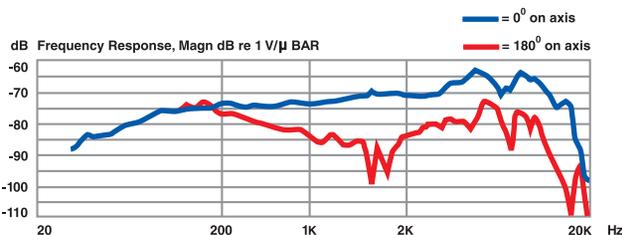
- Cardioid pickup pattern
- High sensitivity Neodymium capsule
- High output design with excellent gain before feedback characteristics
- High sound pressure capability without distortion and low sensitivity to breath/pop noise
- Efficient shock-mount system reduces handling and cable noise
- Rugged, reliable construction
- Integral multi-layer breath/wind filter
- Low-impedance operation
- Lockable, silent on/off reed switch
- Includes mic clip

Specifications

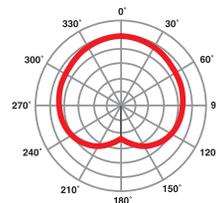
MIC Type:	Handheld
Element:	Moving coil dynamic
Polar Pattern:	Cardioid
Impedance:	250-ohm
Frequency Response:	50 Hz to 18 kHz
Sensitivity*:	-72 dB +/- 3dB
S/N Ratio:	>65 dB
Connector:	XLR Male
Switch:	With sliding-type on/off switch (lockable, silent reed switch)
Dimensions:	7" D x 2" Dia.
Product Weight:	13 oz.
Material:	Zinc die cast
Finish:	Rubberized black finish

* (0dB=1V/μ BAR 1,000 Hz indicated by open circuit)

Frequency Response Graph



Polar Graph



HDU150 - Handheld Stage

Description

The HDU150 is an attractive, dynamic, all-purpose microphone ideally suited for a wide variety of vocal and sound reinforcement applications.



Features

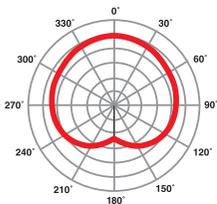
- Cardioid pickup pattern
- Crisp, clear sound
- Wide dynamic range with high-end sparkle and minimum feedback
- Rigid, low noise cable-mount system
- Low sensitivity to breath and popping sounds
- Durable ball-shaped design
- Rubber shock-mount system for attenuation of handling and cable noise
- Lockable, silent on/off reed switch
- Includes mic clip

Specifications

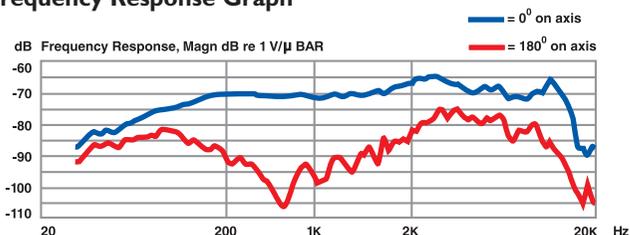
MIC Type:	Handheld
Element:	Moving coil dynamic
Polar Pattern:	Cardioid
Impedance:	500-ohm
Frequency Response:	70 Hz to 15 kHz
Sensitivity*:	-70 dB +/- 3dB
S/N Ratio:	>65 dB
Connector:	XLR Male
Switch:	With sliding-type on/off switch (lockable, silent reed switch)
Dimensions:	6-1/2" D x 1-1/2" Dia.
Product Weight:	13 oz.
Material:	Zinc die cast
Finish:	Rubberized black finish

* (0dB=1V/ μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



HDO100 - Public Address

Description

The HDO100 is an attractive, dynamic microphone perfectly-suited for public address applications and instrument sound reproduction.



Features

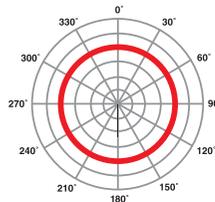
- Omni-directional pickup pattern
- Uniform pickup of sound from all directions with no deterioration in frequency response
- Clean, clear reproduction with minimal ambient sound
- Low sensitivity to handling noise and stage vibrations
- Rugged, reliable construction
- Internal rubber shock isolation system
- Lockable, silent on/off reed switch
- Includes mic clip

Specifications

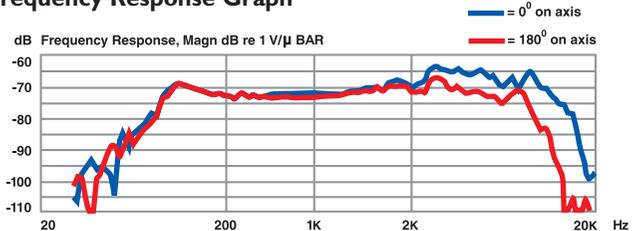
MIC Type:	Handheld
Element:	Moving coil dynamic
Polar Pattern:	Omnidirectional
Impedance:	500-ohm
Frequency Response:	70 Hz to 15 kHz
Sensitivity*:	-72 dB +/- 3dB
S/N Ratio:	>65 dB
Connector:	XLR Male
Switch:	With silent on/off switch (lockable, silent reed switch)
Dimensions:	6-1/2" D x 1-1/2" Dia.
Product Weight:	13 oz.
Material:	Zinc die cast
Finish:	Rubberized black finish

* (0dB=1V/ μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



MBS1000A - Desktop Paging

Description

The MBS1000A is a dynamic, dual-impedance, desktop microphone designed for all industrial and commercial public address and paging applications.

Features

- Uni-directional pickup pattern
- Push-to-talk or lift-to-talk operation
- Locking mechanism with push-to-talk bar for long announcements
- Rubberized black finish with die-cast base
- Contact closure leads

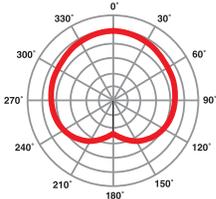


Specifications

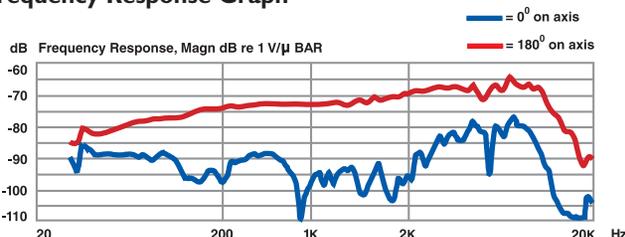
MIC Type:	Desktop
Element:	Dynamic
Polar Pattern:	Cardioid
Impedance:	Lo-Z, 500 ohms; Hi-Z, 50k ohms (switch-selectable)
Frequency Response:	45 Hz to 15 kHz
Sensitivity*:	Hi-Z: -52 dB +/- 3 dB Lo-Z: -72 dB +/- 3 dB
Cable:	7' of 4-conductor, 2-shielded
Switch:	Locking push-to-talk, lift-to-talk, impedance selector
Dimensions:	4-3/8" W x 9-3/8" H x 5-7/8" D
Product Weight:	1-1/4 lb.
Material:	ABS plastic
Finish:	Rubberized black finish

* (0dB=1V/μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



DDU250 - Dynamic Desktop

Description

The DDU250 is a high-quality, dynamic, gooseneck desktop microphone ideal for any podium or PA system. The gooseneck permits the user to adjust the microphone's angle and height to suit the user's needs.

Features

- Cardioid pickup pattern
- 16" long, fully flexible gooseneck stalk that is shock-mounted to a heavy zinc die cast base
- Push-to-lock and push-to-talk switches
- 10-foot cable with external contact closure outputs for the talk switches
- Excellent speech intelligibility with low ambient noise
- Effective feedback control
- Low sensitivity to breath and popping sound
- Slim, compact design to minimize distraction to the user

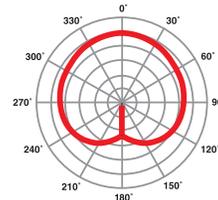


Specifications

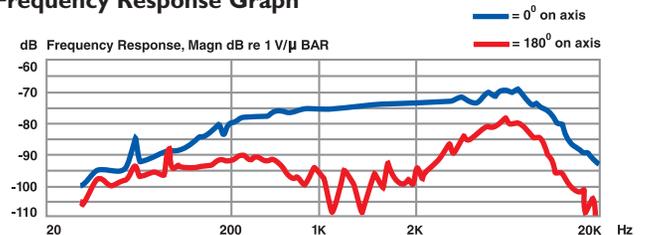
MIC Type:	Desktop
Element:	Moving coil dynamic
Polar Pattern:	Cardioid
Impedance:	500-ohm
Frequency Response:	100 Hz to 12 kHz
Sensitivity*:	-76 dB +/- 3dB
S/N Ratio:	>65 dB
Cable:	10 ft., 4-conductor, 2-shielded
Switches:	Push-to-lock and push-to-talk
Dimensions:	4-1/4" W x 18-1/4" H x 6-1/4" D
Product Weight:	3-1/2 lb.
Material:	Zinc die cast
Finish:	Matte black

* (0dB=1V/μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



GCU250 - Condenser Gooseneck

Description

The GCU250 is a high performance, partially-rigid, adjustable gooseneck condenser microphone capable of meeting the stringent demand of today's conference and PA systems. It is an intelligent choice for sound reinforcement applications. It has an integral XLR male connector mounting base and requires a 9V - 52V DC phantom power source. Slim and compact, the GCU250 is designed to minimize intrusion between the user and the audience.



Features

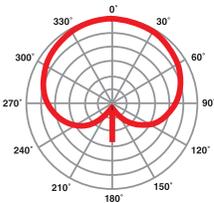
- 15-1/4" Adjustable Neck
- Phantom power-operated
- Cardioid pickup pattern
- Clean, accurate vocal reproduction with low ambient noise
- Snap-on windscreen
- Wide frequency response with rich treble and bass
- Thin, unobtrusive construction for close-up use
- Breath/wind filter included
- Durable all-metal case with non-glare black finish

Specifications

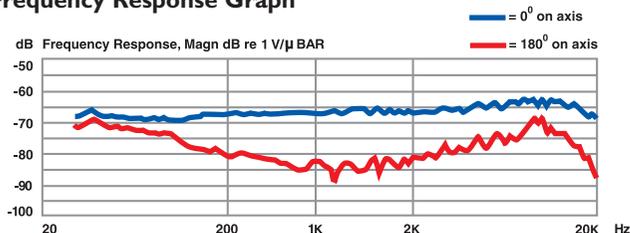
MIC Type:	Gooseneck
Element:	Back electret condenser
Polar Pattern:	Cardioid
Impedance:	250-ohm
Frequency Response:	50 Hz to 18 kHz
Sensitivity*:	-65 dB +/- 3dB
Max SPL @ 1% THD:	>130 dB
S/N Ratio:	>65 dB
Phantom Voltage Req:	9V - 52V DC
Connector:	XLR Male
Dimensions:	18-1/2" L (5-1/2" adjustable lower stalk, with 9-1/2" rigid upper section)
Product Weight:	4 oz.
Material:	Copper
Finish:	Non-glare black finish

* (0dB=1V/μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



GDU150 - Dynamic Gooseneck

Description

The GDU150 is a dynamic, gooseneck microphone that features a durable all-metal case with a non-glare black finish. It has a 10" long, fully flexible neck with an integral XLR mounting base.



Features

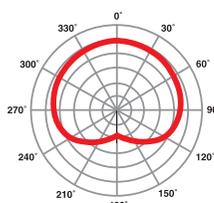
- Cardioid pickup pattern
- Outstanding speech intelligibility, feedback rejection, and user sound isolation
- High sound pressure capability and low sensitivity to breath/pop noise
- Superior shock-mount system to reject handling and cable noise
- Rugged, reliable construction
- Integral multi-layer breath/wind filter
- Durable all-metal case with non-glare black finish
- Silent push-on/push-off talk switch on base

Specifications

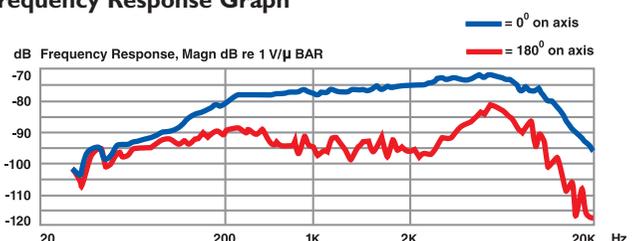
MIC Type:	Gooseneck
Element:	Moving coil dynamic
Polar Pattern:	Cardioid
Impedance:	500-ohm
Frequency:	100 Hz to 12 kHz
Sensitivity*:	-75 dB +/- 3dB
S/N Ratio:	>65 dB
Connector:	XLR Male
Switch:	Push-on/push-off talk switch on base
Dimensions:	16-3/4" L
Product Weight:	11 oz.
Material:	Zinc
Finish:	Non-glare black finish

* (0dB=1V/μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



MGN19 - Dynamic Gooseneck

Description

The MGN19 is a push-button activated, dynamic microphone that is ideal for paging and commercial applications.



Features

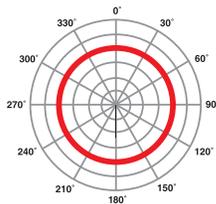
- Omni-directional pickup pattern
- Push-to-talk switch on MIC housing
- Rugged, reliable design for quality, long-term use under the most strenuous handling conditions
- Chrome-plated screen and 19" L gooseneck with black plastic housing
- Contact closure leads

Specifications

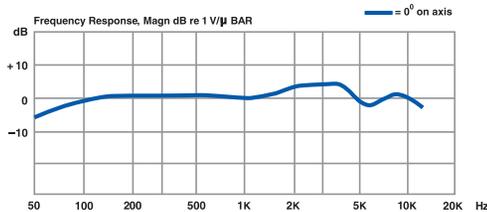
MIC Type:	Gooseneck
Element:	Dynamic
Polar Pattern:	Omni-directional
Impedance:	400-ohm
Frequency Response:	50 Hz to 12 kHz with 2 kHz boost
Sensitivity*:	-76 dB +/- 3dB
Cable:	7' of 4-conductor, 2-shielded
Switch:	Push-to-talk on housing
Dimensions:	23-1/2" L
Product Weight:	1-1/4 lb.
Material:	Plastic (housing)
Finish:	Black plastic cap and housing; chrome gooseneck and mounting flange

* (0dB=1V/μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



SCU250 - Boundary

Description

The SCU250 is an unobtrusive, surface-mount, boundary, condenser microphone ideal for meeting rooms, conferences, and stage productions where minimum visibility is ideal. It requires an external 9V - 52V DC phantom power supply.



Features

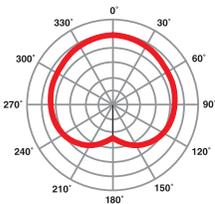
- Cardioid pickup pattern
- Full, rich reproduction of voice and music
- Well-suited in capturing the sound source and immediate surroundings
- Low sensitivity to stage vibration and thumping noise
- Mounting keyways for hanging or for secure attachment to the mounting surface
- Excellent user sound isolation with excellent feedback rejection
- Heavy-duty metal case
- Low-impedance balanced output

Specifications

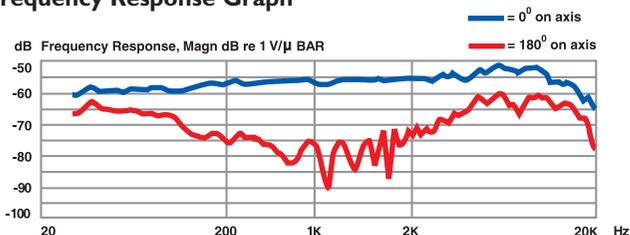
MIC Type:	Surface-mount
Element:	Back electret condenser
Polar Pattern:	Cardioid
Impedance:	250-ohm
Frequency Response:	20 Hz to 18 kHz
Sensitivity*:	-58 dB +/- 3dB
S/N Ratio:	>65 dB
Phantom Voltage Req:	9V - 52V DC
Cable:	26 ft., quad cable
Connector:	XLR Male
Dimensions:	2-3/4" W x 3/4" H x 3-1/4" D
Product Weight:	11 oz.
Material:	Zinc die cast
Finish:	Matte black finish

* (0dB=1V/ μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



WCU250 - Overhead Hanging

Description

The WCU250 is an electret condenser, professional microphone perfectly-suited for picking up audio from large groups. Because it can hang from the ceiling and is compact in size, the WCU250 is very useful in minimizing visual distraction for the performers and the audience alike, and limits intrusion into the working space.



The WCU250 cable is terminated by a mini-XLR (female). A mini-XLR to standard XLR adapter (included) houses the pre-amplifier. It requires an external 9V - 52V DC phantom power supply.

Features

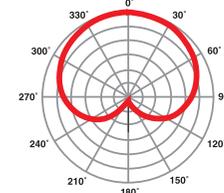
- Cardioid pickup pattern
- Utilizes a superior-quality, state-of-the-art transducer element and circuitry
- Transformerless, direct-coupled design to ensure clear, transparent reproduction of even the most delicate transients at the highest output levels
- Clear, crisp sound with outstanding ambient noise isolation
- Wide frequency response with excellent off-axis rejection
- Low profile, compact, hanging-type design
- Integrated metal hanger

Specifications

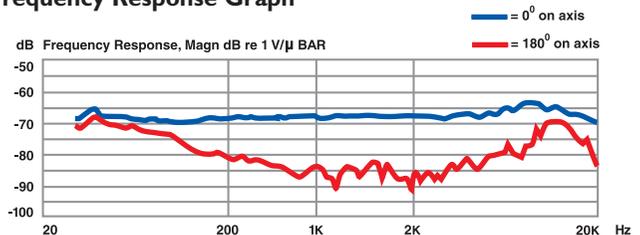
MIC Type:	Overhead hanging
Element:	Back electret condenser
Polar Pattern:	Cardioid
Impedance:	250-ohm
Frequency Response:	50 Hz to 18 kHz
Sensitivity*:	-65 dB +/- 3dB
Max SPL @ 1% THD:	>130 dB
S/N Ratio:	>65 dB
Phantom Voltage Req:	9V - 52V DC
Cable:	20 ft. quad cable
Connector:	Mini-XLR Female with Mini-XLR to standard XLR (Male) adapter
Dimensions:	1-1/4" D x 1/2" Dia.
Product Weight:	5 oz.
Material:	Copper
Finish:	Matte black finish

* (0dB=1V/ μ BAR 1,000 Hz indicated by open circuit)

Polar Graph



Frequency Response Graph



Accessories

CABLES

MAC - Microphone Cable Assembly

- For handheld models
- Female XLR to stripped and tinned wires
- 25' cable
- 2-conductor plus shield
- 1 lb.

XLR25 - Microphone Cable

- For handheld models
- Male XLR to female XLR
- 25' cable
- 2-conductor plus shield
- 12 oz.

CLIPS

MC27 - Handheld Clip

- For handheld models
- Black, flexible, impact-resistant plastic

WINDSCREENS

WSGCU250 - Windscreen for GCU250

- Foam windscreen for use with GCU250 microphone

MOUNTS

MSM - Shock-Isolated Microphone Base

- For GCU250 and GDU150
- Provides superior mechanical noise and vibration isolation
- Lightweight ABS material housing
- XLR (female) connector
- Thick shock-absorbing rubber cushion
- Ideal fixture for boardrooms, conference rooms, pulpits, podiums, and newsrooms
- 4-³/₄" W x 1-³/₄" H x 4" D, 6 ounces

STANDS

DS3 - Desk Stand

- 3" chrome-finish tube, 4" high with base
- 6" diameter cast iron base, 3 lb.

SF4 Floor Stand

- 34" to 62" adjustable height
- Round 10" diameter die cast base, 9 lb.
- Grip-action clutch and chrome-plated tubing

SB6 - Floor Boom Stand

- Telescopic floor stand
- Sliding 30" boom arm
- 34" to 62" adjustable height, 6 lb.
- Chrome-plated tubing
- Tripod base



MC27



WSGCU250



MAC



XLR25



DS3



SB6



MSM



SF4

Architect and Engineer Specifications

HDU250 - The microphone shall be a Bogen Model HDU250. It shall be a cardioid, dynamic handheld microphone with a frequency response of 50 Hz to 18 kHz and a 250-ohm impedance. The sensitivity shall be -72 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. It shall have a sliding-type on/off switch and a rubberized black finish. The HDU250 shall have an XLR Male connector. Dimensions shall be 7" D x 2" Dia. Weight shall be 13 oz.

HDU150 - The microphone shall be a Bogen Model HDU150. It shall be a cardioid, dynamic handheld microphone with a frequency response of 70 Hz to 15 kHz and a 500-ohm impedance. The sensitivity shall be -70 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. It shall have a sliding-type on/off switch and a rubberized black finish. The HDU150 shall have an XLR Male connector. Dimensions shall be 6-1/2" D x 1-1/2" Dia. Weight shall be 13 oz.

HDO100 - The microphone shall be a Bogen Model HDO100. It shall be an omni-directional, dynamic handheld microphone with a frequency response of 70 Hz to 15 kHz and a 500-ohm impedance. The sensitivity shall be -72 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. It shall have a silent on/off lockable reed switch and a rubberized black finish. The HDO100 shall have an XLR Male connector. Dimensions shall be 6-1/2" D x 1-1/2" Dia. Weight shall be 13 oz.

MBS1000A - The microphone shall be a Bogen Model MBS1000A. It shall be a dynamic-type, cardioid, dual-impedance desktop microphone. The frequency response shall be uniform from 45 Hz to 15 kHz. Impedance shall be selected via a switch on the underside of the microphone base. Impedances shall be 500 ohms (matching 125 ohms to 1,000 ohms) or 50,000 ohms (matching 50k ohms or greater). Voltage output shall be -72 dB at Lo-Z, and -52 dB at Hi-Z. The microphone shall provide push-to-talk and lift-to-talk operation. The push-to-talk bar shall include a locking mechanism. Provision shall be included to defeat lift-to-talk operation. The microphone and relay switching shall be accomplished with long life DPDT professional leaf switches. The microphone circuit shall be wired normally open. The microphone shall be in an ABS plastic case with a rubberized black finish and a die-cast base. It shall be supplied with 7 feet of 4-conductor cable, 2 conductors individually shielded, and shall be permanently wired into the microphone. Dimensions shall be 4-3/8" W x 9-3/8" H x 5-7/8" D. Weight shall be 1-1/4 lb.

DDU250 - The microphone shall be a Bogen Model DDU250. It shall be a cardioid, dynamic desktop microphone with a frequency response of 100 Hz to 12 kHz and a 500-ohm impedance. The sensitivity shall be -76 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. It shall have a push-to-lock/push-to-talk switch and a matte black finish. It shall have a 10', 4-conductor, 2-shielded cable. Dimensions shall be 4-1/4" W x 18-1/4" H x 6-1/4" D. Weight shall be 3-1/2 lb.

GCU250 - The microphone shall be a Bogen Model GCU250. It shall be a cardioid, back electret condenser gooseneck microphone with a frequency response of 50 Hz to 18 kHz and a 250-ohm impedance. The sensitivity shall be -65 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. Max SPL @ 1% THD shall be greater than 130 dB. It shall have a non-glare black finish. The GCU250 shall have an XLR male type connector. It requires an external 9V - 52V DC phantom power source. Dimensions shall be 18-1/2" L. Weight shall be 4 ounces.

GDU150 - The microphone shall be a Bogen Model GDU150. It shall be a cardioid, dynamic gooseneck microphone with a frequency response of 100 Hz to 12 kHz and a 500-ohm impedance. The sensitivity shall be -75 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. It shall have a push-on/push-off talk switch mounted on its base and a non-glare black finish. The GDU150 shall have an XLR Male type connector. Dimensions shall be 16-3/4" L. Weight shall be 11 oz.

MGN19 - The microphone shall be a Bogen Model MGN19 dynamic-type, omni-directional microphone. Frequency response shall be uniform from 50 Hz to 12 kHz, with a presence boost at 2 kHz for natural, intelligible sound. Impedance shall be 400 ohms. A sealed push-to-talk microswitch shall be mounted on the microphone housing. The sensitivity shall be -76 dB (+/- 3dB). The microphone shall be furnished with a 19" chrome-plated flexible gooseneck and mounting flange and seven feet of rugged synthetic-jacketed 4-conductor, 2-shielded cable. The microphone shall have a black plastic cap and housing with chrome-plated screen and shall measure 4-5/8" long with a maximum diameter of 1-3/8". Removable set screws shall secure the front cap to the microphone and the microphone to the gooseneck. Dimensions shall be 23-1/2" L. Weight shall be 1-1/4 lb.

SCU250 - The microphone shall be a Bogen Model SCU250. It shall be a cardioid, back electret condenser boundary microphone with a frequency response of 20 Hz to 18 kHz and a 250-ohm impedance. The sensitivity shall be -58 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. It shall have a matte black finish and will require an external 9V - 52V DC phantom power source. It shall have a male XLR connector. Dimensions shall be 2-3/4" W x 3/4" H x 3-1/4" D. Weight shall be 11 oz.

WCU250 - The microphone shall be a Bogen Model WCU250 hanging microphone. It shall be a cardioid, back electret condenser microphone with a frequency response of 50 Hz to 18 kHz and a 250-ohm impedance. The sensitivity shall be -65 dB (+/- 3dB) and the signal-to-noise ratio greater than 65 dB. It shall have a matte black finish and will require an external 9V - 52V DC phantom power source with a connecting cable of 20'. It shall have a female mini-XLR connector with a mini-XLR to standard XLR (male) adapter. Dimensions shall be 1-1/4" D x 1/2" dia. Weight shall be 5 ounces.

BOGEN[®]
COMMUNICATIONS, INC.

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Tel. 201-934-8500 • Fax: 201-934-9832

www.bogen.com

Securitron Gate Electric Strike GL1



2,000 lbs holding force



GL1 Gate Lock

SECURITRON GL1

Electromechanical Gate Solution Offers One Ton of Holding Power

The heavy duty GL1 Electromechanical Gate Lock provides weather-resistant access control for a wide range of gate applications. The GL1 provides 2,000 lbs of holding force for electrical and manually operated indoor or outdoor gates where preload is a concern.

Ideal Applications

Swinging Gates



Sliding Vehicle Gates



Pedestrian Gates



Stock Gates



Interior Cribs



Remote Field Gates



» MODELS	PART # Description
GL1-FL	Gate Lock, 12/24VDC, Standard Fail Locked
GL1-FS	Gate Lock, 12/24VDC, Standard Fail Safe
GL1-FLM	Gate Lock, 12/24VDC, Monitored Fail Locked
GL1-FSM	Gate Lock, 12/24VDC, Monitored Fail Safe
GMC	Gate Lock Mortise Cylinder (FL Models Only)

SECURITRON
ASSA ABLOY



GL1 Electromechanical Gate Lock

GL1

Electromechanical Gate Lock

Specifications

Patent: 8,047,582

Holding Force

- 2,000 lbs [907kg]

Dimensions

2-3/4" L x 7-1/4" W x 3-1/4" D

Electrical

- 12 Volts Initial (Peak): (~1.0 sec.) @ 870mA - Reduced: 290mA Power
- Consumption: 3.5 Watts
- 24 Volts Initial (Peak): (~1.0 sec.) @ 720mA - Reduced: 170mA Power
- Consumption: 4.1 Watts

Operating temperature

- -58 to +167F [-50 to +75C] Indoor or outdoor use

Shipping Weight

- 6 lbs [2.72kg]



- » 2,000 lbs Holding Force
- » 100 lbs of Preload
- » Key Override Ready
- » Automatic Dual Voltage

PRODUCT FEATURES

- 2,000 lbs holding force
- Operates under preload up to 100 lbs
- Automatic dual voltage - no field adjustment required
- Accepts a standard mortise cylinder with Adams Rite MS cam for manual key override (*not included, see spacer guide below*)
- Self-aligning receiver (+/- 1/2" horizontally) helps compensate for gate misalignment and sag
- Tamper resistant cast housing
- Optional latch status monitor
- Surface mount
- MagnaCare® Lifetime Replacement No Fault Warranty

Flex-Mount Gate Lock Bracket Kits (FMK)

Bracket Kits Extend Access Control to Gates and Fences.

The FMK Flex-Mount Bracket System is an intuitive set of mounting brackets designed exclusively for use with the the M62FG Magnalock® and GL1 Gate Lock. Pre-formed post channels and plates of varying lengths make it easy for you to assemble a professional looking, high-security gate lock mounting platform in minutes, without special tools.



Cylinder Length	Spacer Required
1"	1/4"
1-1/8"	3/8"
1-1/4"	1/2"

SMC-0564-0215





FMK-SW (Swing Gate) and FMK-SL (Slide Gate)

Flex Mount Kit

Installation Instructions

Table of Contents

Table of Contents	2
Product Overview	3
Product Components.....	3
Recommended Tools	5
Installing the FMK-SW on a Swinging Gate.....	5
Perform a Pre-Installation Survey	5
Install Strike “U” Bracket #1 to Swinging Gate	5
Install Lock “U” Bracket #2 to Fence Post	6
Install “L” Bracket #6 (Magnalock) or Bracket #7 (GL1)	6
Install “L” Bracket #5	7
Installing Lock on a Swinging Gate	8
Install GL1 Lock on a Swinging Gate	8
Install GL1 Lock on a Swinging Gate (Alternate Method).....	11
Install Magnalock on a Swinging Gate	13
Installing FMK-SL on a Sliding Gate.....	15
Perform a Pre-Installation Survey	15
Install Strike “U” Bracket #2 to Fence Post	16
Install Lock “L” Bracket #3 and GL1 Lock onto Bracket #2	17
Install Lock “L” Bracket #3 and Magnalock onto Bracket #2	18
Install Strike “U” Bracket #1 to Gate Post.....	19
Install Strike “L” Bracket #4 and Strike	20

Product Overview

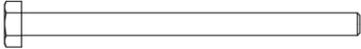
The FMK Flex-Mount Bracket System is a set of mounting brackets designed exclusively for use with the M62FG Magnalock® and the GL1 Gate Lock. Pre-formed post channels and plates of varying lengths make it easy to assemble a high-security gate lock mounting platform.

Product Components

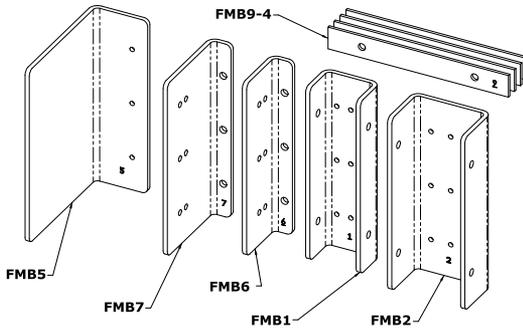
Upon unpacking this product, an inventory should be made to ensure that all the required components and hardware have been included. Along with these instructions, the kit should include the following items:

1.

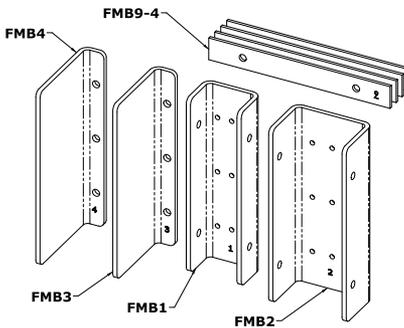
Fastener	Quantity	Description
SA 	1	5/16"-18 x 1-1/4" Flathead Screw
SC 	6	1/4"-20 x 1/2" Hex Bolt
SD 	1	5/16"-18 Lock Nut
SE 	8	1/4"-20 Lock Nut
SF 	4	1/4"-20 x 1-3/4" Cap Screw
SG 	2	1/4"-20 x 2-3/4" Hex Bolt

Fastener	Quantity	Description
SH 	2	1/4"-20 x 4" Hex Bolt
SJ 	6	1/4" Split Washer
SK 	4	1/4"-20 x 3/4" Socket Head Cap Screw

2.



FMK-SW Swing Gate Kit



FMK-SL Slide Gate Kit

Recommended Tools

NOTE: It is recommended that all brackets and hardware be welded after installation to ensure maximum security.

Electric Drill	3/16" Hex Wrench	Adjustable Wrench
5/16", 3/8" and 13/64" Drill Bits	1/4"-20 Tap	7/16" Socket Wrench
Hammer	Center Punch	Welder (Optional)

Installing the FMK-SW on a Swinging Gate

Perform a Pre-Installation Survey

It is recommended that an initial physical survey and assessment be made of the actual area where the FMK-SW be installed to determine the optimal method of mounting prior to installation. The following should be considered:

- Physical strength of mounting areas: It is recommended that the structural integrity of mounting surfaces be strong enough to meet or exceed the holding force of the lock product (Maglock or GL1).
- Protection of the lock from external attack: The lock and the wiring must be protected to a reasonable degree from potential damage due to intruders or vandals.
- Convenience and accessibility of area to be protected: The lock assembly should be installed in a location that will not hinder or create a potential safety hazard to authorized personnel routinely accessing the protected area.

Install Strike "U" Bracket #1 to Swinging Gate

Required Parts: Strike "U" Bracket #1 (Bracket #1)
Shims, as needed
Two (2) 1/4"-20 x 2 3/4" hex bolts (SG)
Two (2) 1/4"-20 lock nuts (SE)

1. PLAN the installation prior to any drilling.
 - a. POSITION Bracket #1 on the swinging gate at a location suitable for lock height.

- b. VERIFY that there are no obstructions on either the fence or gate posts at this height, and RE-POSITION, if required.
2. Using Bracket #1 as a template, MARK the four (4) through-hole locations onto the post.
3. REMOVE Bracket #1, CENTER PUNCH, and DRILL the 4 locations using a 5/16" bit.
4. REINSTALL Bracket #1 with shims (if needed) and hardware.

Install Lock "U" Bracket #2 to Fence Post

Required Parts: Lock "U" Bracket #2 (Bracket #2)
Shims, as needed
Two (2) 1/4"-20 x 4" hex bolts (SH)
Two (2) 1/4"-20 lock nuts (SE)

1. CLOSE the gate.
2. ALIGN Bracket #2 on the fence post to match the height of Bracket #1.
3. Using Bracket #2 as a template, MARK the 4 through-hole locations onto the post.
4. REMOVE Bracket #2, CENTER PUNCH, and DRILL the 4 locations using a 5/16" bit.
5. REINSTALL Bracket #2 with shims (if needed) and hardware.

Install "L" Bracket #6 (Magnalock) or Bracket #7 (GL1)

Required Parts: "L" Bracket #6 or #7
Three (3) 1/4"-20 x 1/2" hex bolts (SC)
Three (3) 1/4" split washers (SJ)

NOTE: The following step allows for the lock and strike to properly align regardless of the fence/gate poles distances.

1. SELECT the proper set of vertical adjustment holes and INSTALL Bracket #6 or #7 onto Bracket #1.

Install “L” Bracket #5

Required Parts: “L” Bracket #5 (Bracket #5)
Three (3) 1/4”-20 x 1/2” hex bolts (SC)
Three (3) 1/4” split washers (SJ)

NOTE 1: Brackets can be adjusted in any manner necessary to ensure proper fit and alignment.

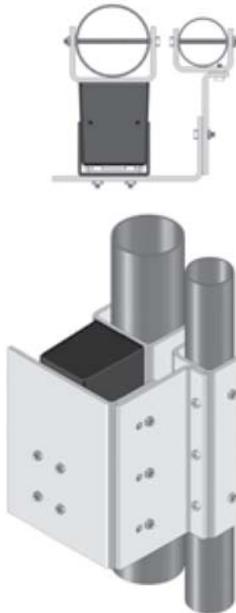
NOTE 2: Installing Bracket #5 onto Bracket #6 or #7 forms the “Z” Bracket.

1. INSTALL Bracket #5 onto Bracket #6 or #7 to complete the “Z” bracket installation.

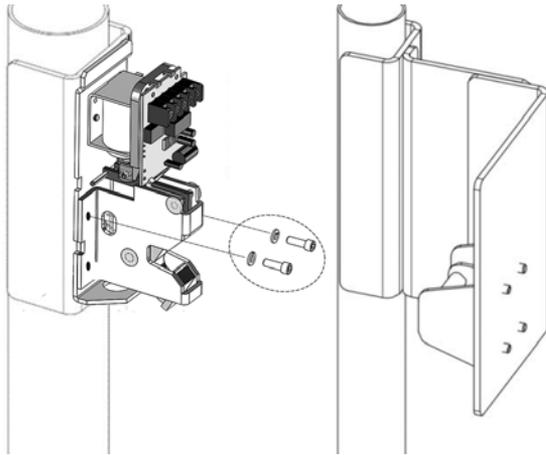
Installing Lock on a Swinging Gate

Install GL1 Lock on a Swinging Gate

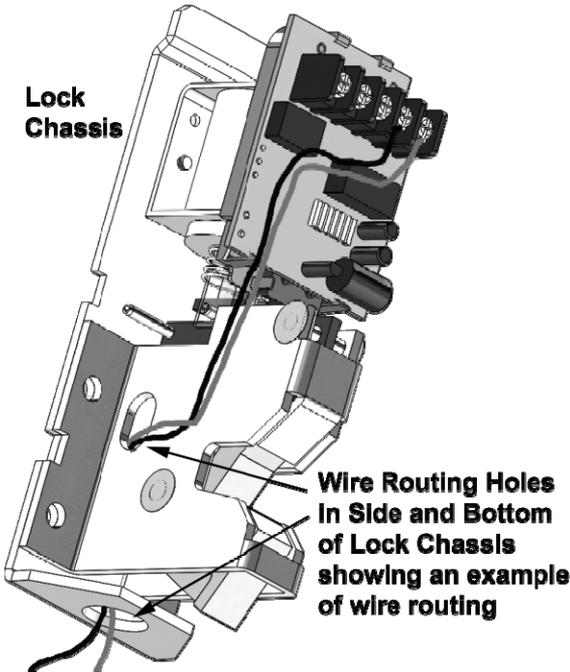
Required Parts: Lock Chassis and strike assembly
Eight (8) 1/4" split washers (SJ) from GL1 hardware kit
Four (4) 1/4"-20 x 3/4" socket head cap screws (SK)
Four (4) 1/4"-20 x 1" socket head cap screws from
GL1 hardware pack



1. For proper gate and fence alignment on GL1 applications, MEASURE and ADJUST (if needed) the "Z" bracket to ensure its face is 4" from the face of Bracket #2 when the gate is closed.
2. ATTACH the GL1 lock chassis to Bracket #2 with the upper two bolts only (1/4"-20 x 3/4" socket head cap screws [SK]).



3. PULL wire as needed to the lock body circuit board, and CONNECT appropriate wiring per the GL1 installation instructions.

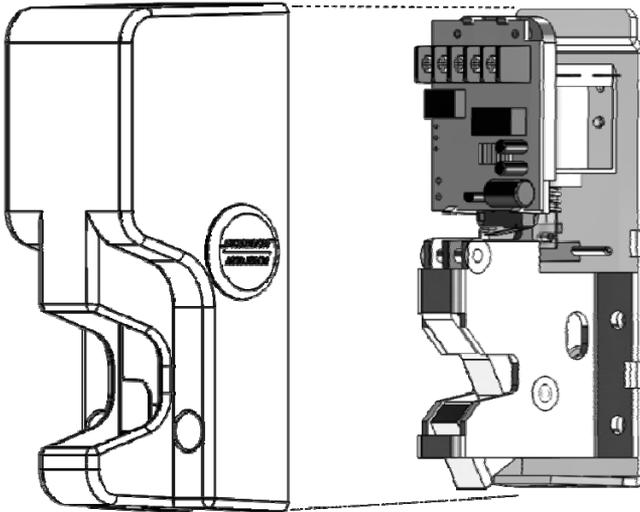


4. PERFORM a functional test of the GL1.

5. CLOSE the gate.
6. ALIGN the GL1 strike assembly onto Bracket #1 to match the position of the lock chassis, or USE the template to properly position the strike assembly.
7. MARK the 4 through-hole locations onto Bracket #1.
8. CENTER PUNCH and DRILL the holes using a 13/64" drill bit and 1/4"-20 tap.
9. MOUNT the strike assembly onto Bracket #1 using the 4 washers and screws from the GL1 hardware pack.
10. PERFORM the cylinder lock/cover hole plug installation, as required, per the GL1 installation instructions.

CAUTION: The lock cover must be installed straight on to avoid possible damage to the PC Board.

11. INSTALL the lock cover over the lock chassis by placing the cover straight on and then sliding down to engage.



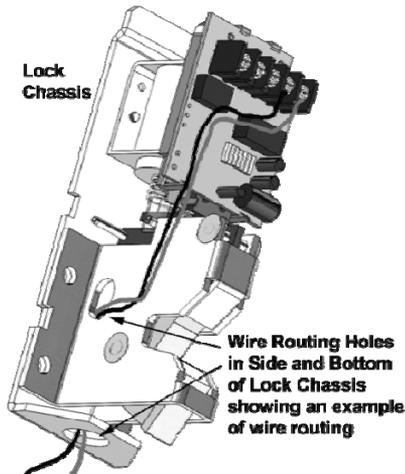
12. SECURE the cover to the mounting surface using two 1/4"-20 x 3/4" socket head cap screws and two split lock washers.
13. PLUG conduit fitting if not used, welding the plug for maximum security.

Install GL1 Lock on a Swinging Gate (Alternate Method)

Required Parts: Lock Chassis and strike assembly
 Eight (8) 1/4" split washers (SJ) from GL1 hardware kit
 Four (4) 1/4"-20 x 3/4" socket head cap screws (SK)
 Four (4) 1/4"-20 x 1" socket head cap screws from GL1 hardware pack

NOTE: The following installation reverses the lock and strike traditional location, allowing for the lock to be mounted to the moving gate for ease of wiring the lock to a gate operator.

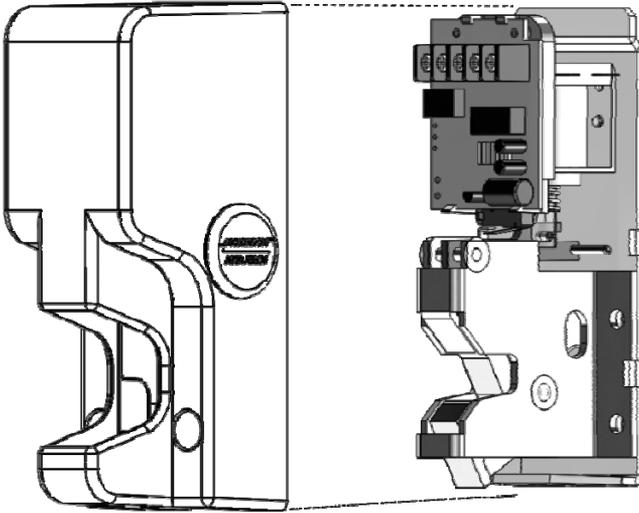
1. Carefully POSITION and MARK the 4 lock mounting holes onto the "Z" bracket using the GL1 template or by using the lock chassis as a template.
2. CENTER PUNCH and DRILL the 4 holes using a 13/64" drill bit and tap for 1/4"-20 machine screws.
3. ATTACH the GL1 lock chassis to Bracket #2 with the upper 2 bolts only.
4. PULL wire as needed to the lock body circuit board and CONNECT appropriate wiring per the GL1 installation instructions.



5. PERFORM a functional test of the GL1.

CAUTION: The lock cover must be installed straight on to avoid possible damage to the PC board.

6. INSTALL the lock cover over the lock chassis by placing the cover straight on and then sliding down to engage.



7. SECURE the cover to the mounting surface using 2 socket head cap screws and 2 split lock washers.
8. ENGAGE strike assembly into lock and CLOSE gate.
9. Carefully CENTER strike with lock and MARK strike assembly location on the fence post bracket.
10. CENTER PUNCH and DRILL the 4 holes with a 13/64" drill bit and TAP for 1/4"-20 machine screws.
11. ATTACH strike assembly to bracket using four 1/4"-20 x 3/4" socket head cap screws and four lock washers.
12. CLOSE the gate and TEST the GL1 for proper mechanical and electrical operations.
13. For high security applications, WELD lock body, strike assembly, and all brackets in place.

Securitron

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Phoenix, AZ 85044

Tel: 1-800-624-5625

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ASSA ABLOY, the global leader
in door opening solutions

500-22190, Rev E

SDC UniFLEX 45 Universal Electric Strike



UniFLEX[®] 45 Universal Electric Strike/Door Release

UniFLEX[™] Series Multi-Frame-Application Electric Strike

- **Centerline Electric Strike**
- **4 Interchangeable Application Faceplates**
- **Full Monitoring is Standard, Including:**
Latched and Unlatched Status
Keeper Closed and Deadlocked or Unlocked
- **Keeper Open Status Optional**
- **Reversible Failsafe/Failsecure, no disassembly**
- **1/4" Horizontal Alignment Adjustment**
- **Plated Architectural Finishes Available**

The SDC UniFLEX Electric Strike is Centerline Latch Entry* strike designed for use with Cylindrical and Mortise locksets with up to 3/4" (19mm) throw latchbolts.. The quality construction makes the 45 series ideal for high traffic applications. The compact low profile design enables quick and easy installation where jamb space is limited.

***Centerline Latch Entry:** The latch must enter at the strike "Centerline" located exactly between the top and bottom of the strike faceplate. Refer to strike installation instructions and template to determine strike location prior to frame preparation for New and Retrofit installations. See SDC strike template and installation instructions for both retrofit and new installation details.

Features

- For 5/8" latch or 3/4" latch with 1/8" door gap
- Latch position status standard
- Keeper closed & deadlocked/unlocked status standard
- Field selectable failsecure - failsafe
- Field selectable voltage, 12/24V AC/DC
- 1/4" Horizontal alignment adjustment
- Low profile, 1-3/16" deep
- Plug-in wire connectors
- Mounting tabs
- Non-handed
- All stainless steel parts with durable die cast body for corrosion resistance
- Fewer moving parts for maximum life
- Stainless steel standard with square corner faceplate
- Aluminum standard with radius corner faceplate
- ANSI/ BHMA A156.31, Grade 2



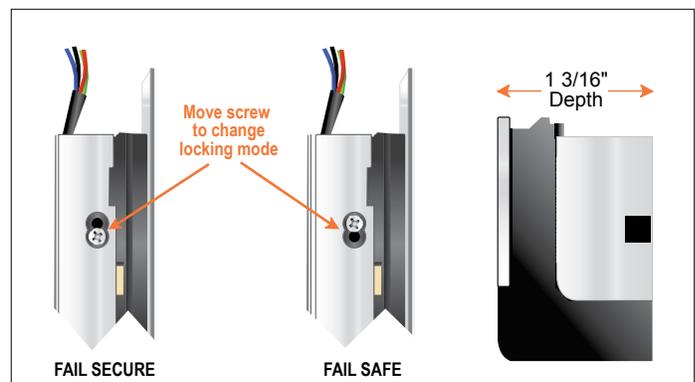
SDC Patented

US Patent: 7,540,542



UniFLEX[™] 45-A

Multi-Application strike with three faceplates for wood, aluminum and hollow metal frames



5 YEAR LIMITED WARRANTY

SECURITY DOOR CONTROLS

sdsecurity.com
service@sdsecurity.com



Price & Installation

Uni-Flex 45 Series Electric Strike

How to Order

Model



- 45-4S** 4-7/8" x 1-1/4" square corner faceplate
- 45-4R** 4-7/8" x 1-1/4" radius corner faceplate
- 45-6R** 6-7/8" x 1-1/4" radius corner faceplate
- 45-7R** 7-15/16" x 1-7/16" radius corner faceplate
- 45-A** Included: One 4-7/8" square corner faceplate
One 4-7/8" radius corner faceplate
One 7-15/16" radius corner faceplate

Latch Position Status Standard
Keeper Closed and Deadlocked/Unlocked Status Standard

Finish



- U** 630 Dull Stainless Steel (standard with 45-4S)
- V** 628 Dull Aluminum (standard with 45-4R, 45-6R and 45-7R)
- Y** 335 Black Anodized
- D** 606 Dull Brass
- H** 613 Oil Rubbed Bronze

Options



- K** Keeper open/closed status
- RMB** Buzzer 12/24V AC/DC operation

Electrical Specifications

Dual Voltage Coil: 200/100mA @ 12/24V DC
140/70mA @ 12/24V AC
Latch Position Status (std): SPDT, Dry 3Amp @ 30V
Keeper Closed & Locked Status (std): SPDT, Dry 3Amp @ 30V
Keeper Open/Closed Status (optional): SPDT, Dry 3Amp @ 30V

Dimensions

- 45-4S / 45-4R:** 1-1/4" W x 4-7/8" H x 1-3/16" D
(31.8 W x 124 H x 30.1 D mm)
- 45-6R:** 1-1/4" W x 6-7/8" H x 1-3/16" D
(31.8 W x 175 H x 30.1 D mm)
- 45-7R:** 1-7/16" W x 7-15/16" H x 1-3/16" D
(36.5 W x 201.6 H x 30.1 D mm)

