

Information provided in this document covers all of our housing components.

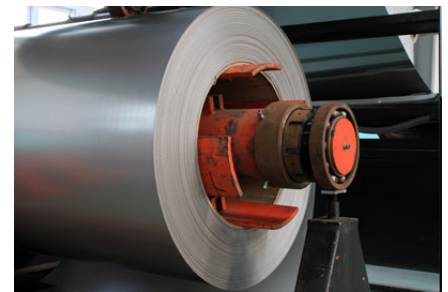
FABRICATION PROCESS

At WINCO, we design, fabricate, assemble, and support our products at our factory in Minnesota. Unlike many generator assemblers that rely on contract manufacturers for the lowest bid of the day, at WINCO we design, fabricate and assemble our own housing components. We have the ability to provide sheet metal housing components for our generators that are decades old.

Each housing starts with the purchase of high quality steels. Most components are constructed from galvanealed steel. In this process the steel is run through a zinc bath and is then heated in an annealing furnace to over 500C causing the iron and zinc to form an alloy on the surface. The galvaneal coating provides a harder, more scratch resistant layer.

Components are then cut from sheet steel on our turret press or fiber laser. When cutting on the laser we generate nitrogen on-site with over 99.9% purity levels. Using nitrogen as our assist gas allows our laser to make the cut without impurities oxidizing on the edge. The clean edges provide a good surface for proper paint adhesion.

After the parts are cut we form them using CNC brake presses. These machines are capable of repeatable ram movements of .0001 inches.



Fiber Laser Cutter



Nitrogen Generator



Cincinnati Brake Press

POWDERCOAT PAINT PROCESS

The most critical part of the paint process is the wash. Winco uses a phosphoric acid to clean and prepare the steel so the paint can properly adhere. The carousel washer has an electronically monitored and controlled system to ensure the wash system constantly has the right pH and concentration of the acid.



Winco has partnered with Axalta (formerly DuPont Performance Coatings) to provide all of our paints. Winco only uses powder paints with a heated curing process.

PAINT INFORMATION

SPECIFICATION	RESULT
ASTM D3451-91,13	Mass loss during curing: < 1%
ASTM D523-89	Gloss at 60°: >70 (excluding textured black)
DPC TM 10.219	PCI powder smoothness: 7 (excluding textured black)
ASTM D2454-95	Overbake resistance time: 100%
ASTM D3363-92a	Pencil hardness: 2H
ASTM D3359-97	Adhesion, cross hatch: 5B pass
ASTM D522-93A	Flexibility, mandrel: 1/8" diameter, no fracture
UL DTOV	Organic coating: recognized
CERTIFICATIONS	ISO 9001:2015 ISO 14001:2015



SOUND ATTENUATING FOAM

1" POLYETHER POLYURETHANE FOAM

MATTE FACING

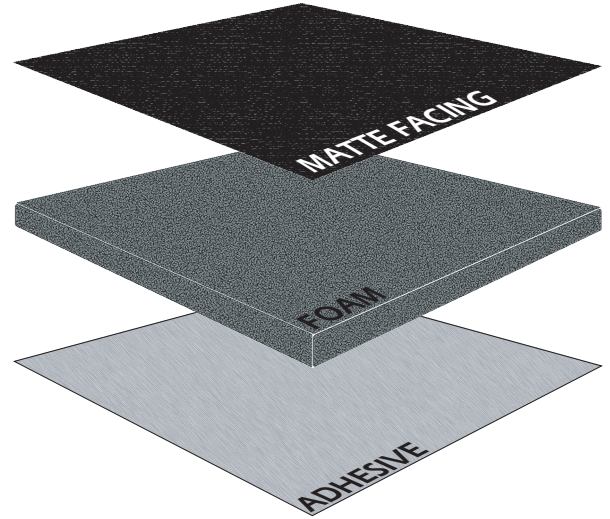
DESCRIPTION	SPECIFICATION
Product	Matte film
Material	Polyurethane
Color	Black
Ultimate Tensile Strength	9,000 psi
Ultimate Elongation	375%
Weight	0.0157 lb/ft ²
Operating Temperature	-45°F to 230°F (-43°C to 110°C)
Flame Resistance	MVSS-302

FOAM

DESCRIPTION	SPECIFICATION
Product	Soundfoam M
Material	Polyether Urathane Foam
Color	Charcoal Gray
Density	1.8 lb/ft ³
Elongation	200%
Tensile Strength	14.5 psi
Compression Set	< 10% @ 50%, 22 Hrs
Flame Resistance	MVSS-302 UL-94 HF-1
Temperature Range	-45°F to 230°F (-43°C to 110°C)

ADHESIVE

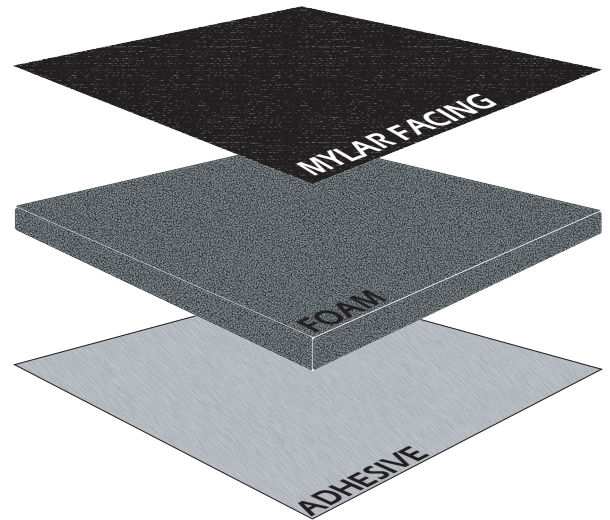
DESCRIPTION	SPECIFICATION
Product	MD-K
Material	Acrylic
Thickness	4 mil
Peal Adhesion	4.5 lbs/inch after 1-hour
Temperature Range	-45°F to 170°F Continuous -45°F to 250°F Intermittent



0.5" HIGH TEMP MELAMINE

MYLAR FACING

DESCRIPTION	SPECIFICATION
Thickness	0.007
Scrim	Reinforced 5/16inch x 5/16inch
Basis Weight	20lbs/MSF +/- 10%
Tensile Strength	ASTM D-828 20 Tensile LB/inch C.D.
Fire Resistance	FMVSS302 This material exhibits no afterglow or alum foil rupture exceeding the area of direct flame contact-Self Extinguishing (SE)
Temp Resistance	Rothel PA Q 1000 Material does not delaminate or fall off aluminum surface after having been heat sealed to it and exposed at 300°F for 96 hours in a vertical position



FOAM

DESCRIPTION	SPECIFICATION
Service Temperature	-150°F up to +356°F
Density ENSO 845	0.56 lb/ft ³
Elongation at Break ISO 1798	Average Value >20%
Compression Strength EN ISO 3386-1	Average Value >1 psi
Tensile Strength ISO 1798	Average Value >17.4 psi
Flame Resistance	MVSS-302 UL-94 HF-1 UL-94 V-O ASTM E662 ASTM E162 ASTM E84 ASTM D2863 (ISO 4589-2)

ADHESIVE

DESCRIPTION	SPECIFICATION
Material	High Strength Acrylic
Thickness	3.0 mil
Peal Adhesion	4.0 lbs/inch after 1-hour
Temperature Range	-30°F to +220°F

SCREWS, WASHERS, NUTS

STAINLESS STEEL HEX CAP SCREWS

Hex cap screws feature a washer face under the head, a chamfered point and conform to ASTM F593.

PART NUMBER	FNL	DIAMETER	THREAD SIZE	THREAD	LENGTH
65000-000	18-8	1/4"	20	Coarse	5/8"
65000-001	18-8	1/4"	20	Coarse	3/4"
65000-002	18-8	1/4"	20	Coarse	1"
65001-001	18-8	5/16"	18	Coarse	3/4"
65001-002	18-8	5/16"	18	Coarse	1"
65002-000	18-8	3/8"	16	Coarse	3/4"
65002-001	18-8	3/8"	16	Coarse	1"

STAINLESS STEEL FLAT WASHERS

Provide a smooth bearing surface and distribute the fastener load over a wider surface area.

PART NUMBER	FNL	NOMINAL SIZE	OUTER DIAMETER	SERIES
65005-001	18-8	5/16"	0.875"	Large OD
65005-000	18-8	1/4"	0.625"	Small OD
65005-002	18-8	3/8"	0.875"	Small OD

LOCK WASHER

Provide a positive locking action.

PART NUMBER	FNL	NOMINAL SIZE	SPLIT
65003-000	18-8	1/4"	Medium
65003-001	18-8	5/16"	Medium

FLANGE NUT

Flange nuts have a washer-like base to distribute pressure over a greater surface area and ensure the fastener stay tight.

PART NUMBER	FNL	DIAMETER	THREAD SIZE	THREAD	WRENCH SIZE
65006-000	18-8	1/4"	20	Coarse	7/16"
65006-001	18-8	5/16"	18	Coarse	1/2"
65006-002	18-8	3/8"	16	Coarse	9/16"

TORX SHEET METAL SCREW

The Delta Seal is an organic microlayer topcoat composed of highly cross-linked binder system and high quality pigments. Once cured, it provides a thin, extremely resistant, adhesive coating.

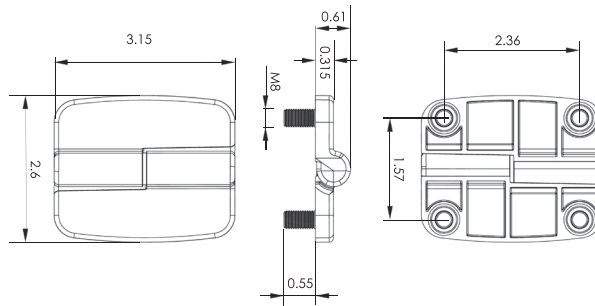
PART NUMBER	FINISH	TORX SIZE	THREAD SIZE	THREAD	WRENCH SIZE
65006-000	Black Delta Seal	#10	16	Coarse	7/16"

HINGES

LIFT-OFF

Allow a door to be removed from its frame without using tools, removing a pin, or unfastening a hinge leaf.

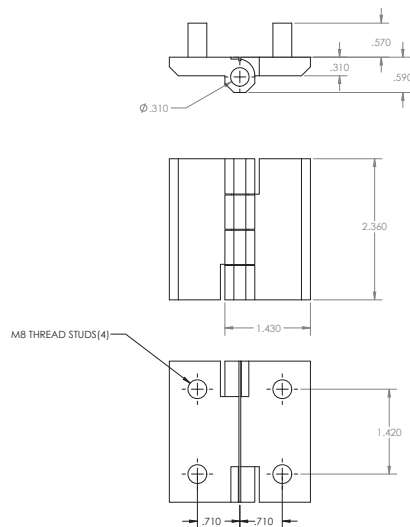
PART NUMBER	OPENING	OPENING ANGLE	FINISH
350054-3	Right Hand	180°	Powder coat, zinc die cast, stainless steel hinge pin and bolt
350054-4	Left Hand	180°	Powder coat, zinc die cast, stainless steel hinge pin and bolt



EXTERNAL MOUNTING

Hinge with cast-in M8 screws and/or countersunk holes

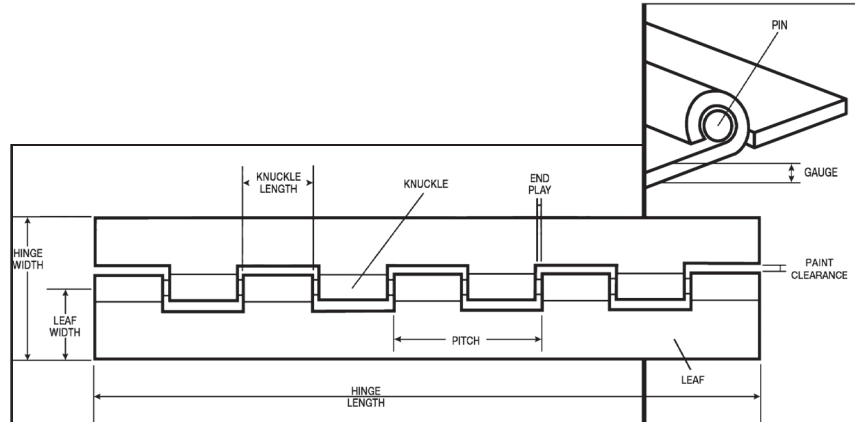
PART NUMBER	OPENING	OPENING ANGLE	FINISH
350054-5	Universal	180°	Powder coat, zinc die cast, stainless steel hinge pin and 304 injection studs



PIANO TYPE HINGE

Supports the full length of door.

PART NUMBER	OPEN WIDTH	THICKNESS	PIN DIAMETER	KNUCKLE LENGTH	OPENING ANGLE	MATERIAL
100061-108	3"	.075"	1/4"	1"	90°	Stainless Steel
100061-110	2"	.060"	1/8"	1/2"	90°	Aluminum
100061-111	3"	.075"	0.187"	1/2"	90°	Aluminum

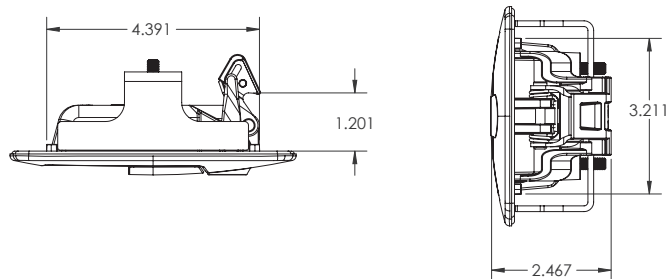


LATCHES

PADDLE LATCHES

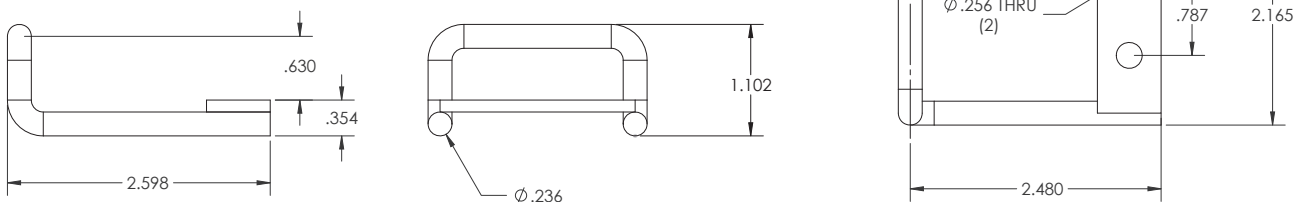
House in recessed cup. Simply lift the paddle to operate.

PART NUMBER	OPENING	CAM	LATCH MATERIAL	MOUNTING BRACKET MATERIAL
99269-002	Universal	Fixed	Black fiber-glass Polyamide	Steel, zinc plated



LOOP STRIKER

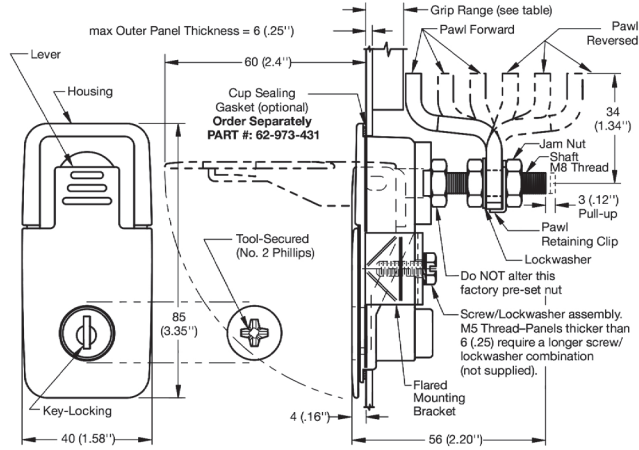
PART NUMBER	MATERIAL	COMPATIBILITY
99269-003	Zinc plated	Paddle latch



SECURED LIFT & TURN

Flush style.

PART NUMBER	MATERIAL	FINISH
95229-004	Zinc die cast	Black powder



RAISED TRIGGER LEVER

Flush style.

PART NUMBER	MATERIAL	FINISH
95229-005	Zinc die cast	Black powder

