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Carlton® Non-Metallic Enclosures

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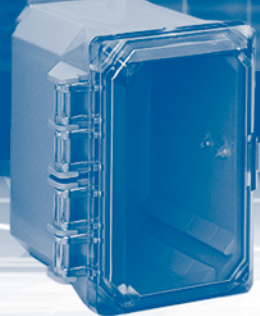
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800.816.7809
Fax: 901.252.1354

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Fax: 800.816.7810

Technical Services
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Circuit Safe® NEMA Enclosures

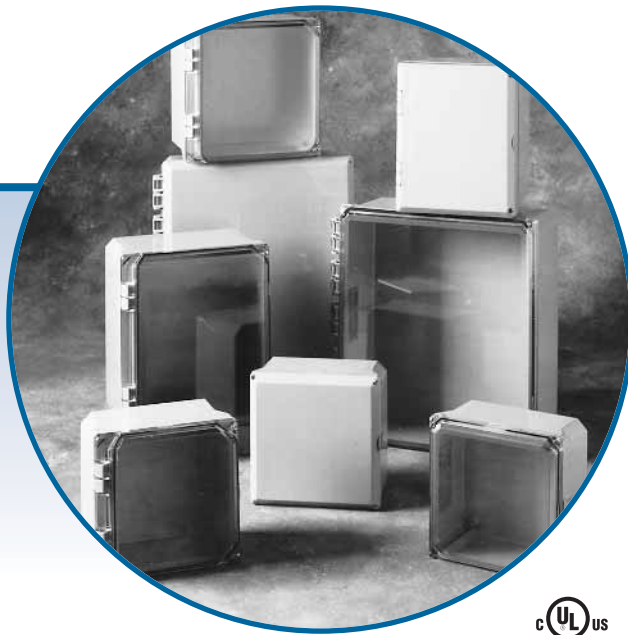
Circuit Safe® NEMA Enclosures

Circuit Safe® NEMA Enclosures are the flagship product of the Carlton® Enclosure offering. Molded in tough, durable polycarbonate resin, these enclosures lead the market in terms of design, durability, aesthetics and economy of use.

Ranging in size from 6" x 4" x 4" to 16" x 14" x 6", all Circuit Safe® NEMA products are UL 50 Listed and meet Types 4X, 12 and 13. These enclosures utilize recognized materials that carry an ultraviolet rating of F1, ensuring a very long, stable service life when installed outdoors. In addition, the use of polycarbonate material means that these enclosures enjoy an extremely high impact-resistance rating...almost three times more impact resistant than traditional fiberglass enclosures.

Installation of components is made easy, too, with the Panel Adjuster Kits and Swing-Out Panel Kits. Subpanels can be stacked or suspended at any depth within the enclosure, maximizing the space available for component mounting. Machining polycarbonate is also safe and easy. There are no splintering problems or airborne fibers as is typical when machining traditional fiberglass products.

Lighter, stronger, easier, safer to use and better looking. Check out Carlton's Circuit Safe® NEMA line today.



Features and Benefits:

- 100% non-metallic construction, including hinges
- Sturdy SS latches install without penetration of the enclosure base
- Clear covers are available, which eliminate the need for window kits
- All cover screws are captive
- Panel suspension system enables the installation of panels at any depth, including stacking of multiple panels
- Swing panels are also available
- Available in junction boxes, external hinge and hidden hinge versions
- Subpanels are available in steel or PVC
- Non-metallic mounting rails for easy installation
- Less than half the weight of metal enclosures, 25% lighter than fiberglass, easier to handle and less expensive to ship
- Full modification services are available

Applications:

- Any outdoor applications, especially where sunlight resistance is an issue

- Applications where water is present
- Applications where damage during shipment, installation or use is an issue
- Any applications where it is necessary to view internal components through a clear cover
- Applications where weight is an issue
- Applications where the ability to pass wireless signals is needed
- Applications where rust and corrosion are an issue

Examples:

- Septic and pump controls
- Wireless system component protection
- Marina and sea-side installations
- Controls that require though-cover viewing of readouts and dials
- Machine controls/process controls
- Food and beverage process controls
- Security system controls

Standards:

- Meets or exceeds NEMA Types 4X, 12 and 13
- Listed per UL 50 as Types 4X, 12 and 13

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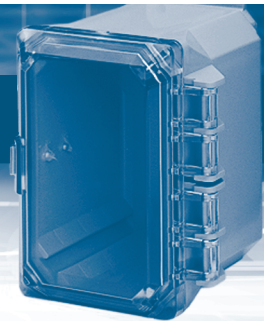
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NEMA Enclosure Styles

Circuit Safe® NEMA Enclosures are available in three different cover options and a wide range of sizes. From our screw-cover style enclosures to our hidden-hinge cover style enclosures to our external-hinge cover style enclosures, Carlton® has a Circuit Safe® NEMA enclosure to meet your application-specific needs.

Styles

- Screw Cover
- External Hinge
- Hidden Hinge

Cover Color Options

- Opaque
- Clear

Material

- Polycarbonate (Bases and Lids)



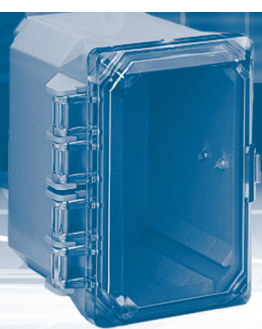
Screw Cover



External-Hinge Cover



Hidden-Hinge Cover



Carlton®

Circuit Safe® NEMA Enclosures

Meets NEMA 1, 2, 3, 3S, 3X, 3SX, 4, 4X, 12.
Screw-On Covers



Assembled Enclosures

OPAQUE COVER* CAT. NO.	CLEAR COVER* CAT. NO.	SIZE (IN.)	BACK PANELS**		STD. CTN.	STD. WT. (LBS.) OPAQUE/CLEAR
			STEEL	PVC		
NS644	NV644	6 x 4 x 4	JP64	JP64P	1	Opa 1.8/Clr 1.9
NS664	NV664	6 x 6 x 4	JP66	JP66P	1	Opa 2.4/Clr 2.4
NS864	NV864	8 x 6 x 4	JP86	JP86P	1	Opa 2.9/Clr 2.8
NS884	NV884	8 x 8 x 4	JP88	JP88P	1	Opa 3.2/Clr 3.3
NS1084	NV1084	10 x 8 x 4	JP108	JP108P	1	Opa 4.0/Clr 3.9
NS1086	NV1086	10 x 8 x 6	JP108	JP108P	1	Opa 4.6/Clr 4.5
NS10106	NV10106	10 x 10 x 6	JP1010	JP1010P	1	Opa 5.3/Clr 4.9
NS12106	NV12106	12 x 10 x 6	JP1210	JP1210P	1	Opa 6.1/Clr 5.2
NS12126	NV12126	12 x 12 x 6	JP1212	JP1212P	1	Opa 6.8/Clr 6.1
NS14126	NV14126	14 x 12 x 6	JP1412	JP1412P	1	Opa 7.4/Clr 7.0
NS16146	NV16146	16 x 14 x 6	JP1614	JP1614P	1	Opa 9.2/Clr 8.1

* Assembled Enclosures include body, lid and mounting rail kit.

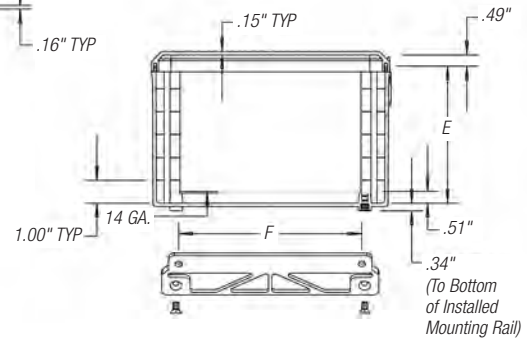
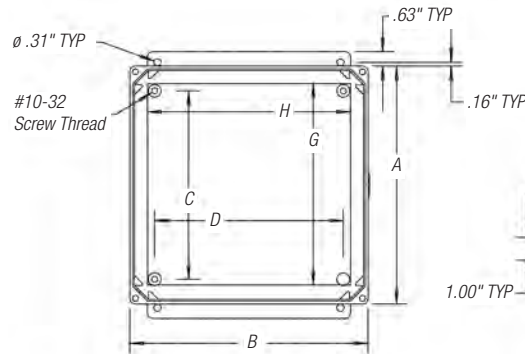
** Order back panels separately.



Opaque Cover



Clear Cover



Individual Components

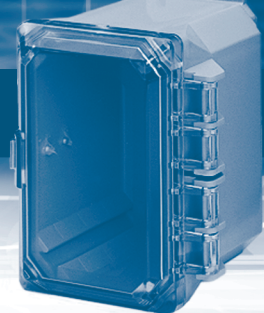
CAT. NO.	ENCLOSURE BASE*			ENCLOSURE LIDS				BACK PANELS**		
	ENCLOSURE SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)	OPAQUE LIDS	CLEAR LIDS	STD. CTN.	STD. WT. (LBS.)	STEEL CAT. NO.	PVC CAT. NO.	STD. CTN.
NP644B	6 x 4 x 4	18	21	NS64L	NV64L	16	Opa 6.4/Clr 5.7	JP64	JP64P	1
NP664B	6 x 6 x 4	12	17	NS66L	NV66L	12	Opa 6.2/Clr 5.7	JP66	JP66P	1
NP864B	8 x 6 x 4	12	18	NS86L	NV86L	9	Opa 6/Clr 4.4	JP86	JP86P	1
NP884B	8 x 8 x 4	14	28	NS88L	NV88L	18	Opa 14/Clr 11.2	JP88	JP88P	1
NP1084B	10 x 8 x 4	12	26	NS108L	NV108L	12	Opa 13/Clr 11	JP108	JP108P	1
NP1086B	10 x 8 x 6	8	23	NS108L	NV108L	12	Opa 13/Clr 11	JP108	JP108P	1
NP1010B	10 x 10 x 6	6	20	NS1010L	NV1010L	11	Opa 14/Clr 12	JP1010	JP1010P	1
NP1210B	12 x 10 x 6	6	23	NS1210L	NV1210L	12	Opa 15/Clr 15	JP1210	JP1210P	1
NP1212B	12 x 12 x 6	5	22	NS1212L	NV1212L	10	Opa 15/Clr 14	JP1212	JP1212P	1
NP1412B	14 x 12 x 6	5	24	NS1412L	NV1412L	5	Opa 9/Clr 9	JP1412	JP1412P	1
NP1614B	16 x 14 x 6	4	31	NS1614L	NV1614L	5	Opa 11/Clr 11	JP1614	JP1614P	1

* Mounting rails are not included. See "Mounting Rails" on page Q-21.

** Order back panels separately.

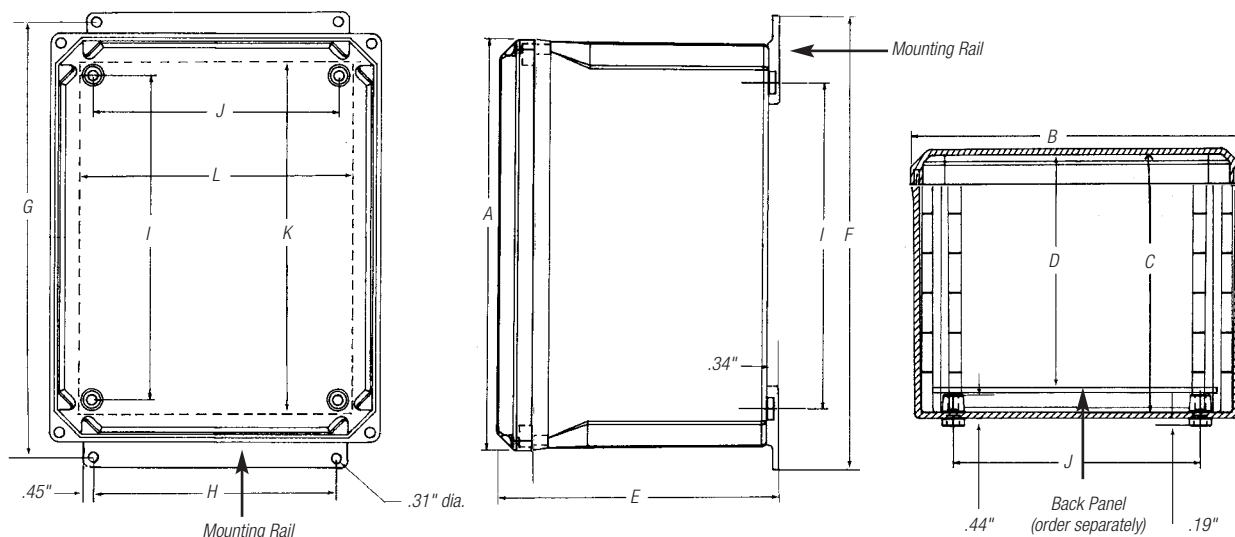
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Circuit Safe® NEMA Enclosures



Carlton® Non-Metallic Enclosures

Screw-On Covers



ENCLOSURE WITH		ENCLOSURE SIZE (IN.)						ENCLOSURE MOUNTING HOLE SPACING		PANEL MOUNTING HOLE SPACING		BACK PANEL SIZE		BACK PANEL** CAT. NO.	
CLEAR LID CAT. NO.*	OPAQUE LID CAT. NO.*	A	B	C	D	E	F	G	H	I	J	K	L	STEEL	PVC
NV644	NS644	6.40	4.40	4.49	3.98	5.13	7.69	6.75	2.00	4.29	2.28	4.88	2.88	JP64	JP64P
NV664	NS664	6.40	6.40	4.49	3.98	5.13	7.69	6.75	4.00	4.28	4.28	4.88	4.88	JP66	JP66P
NV864	NS864	8.40	6.40	4.49	3.98	5.13	9.69	8.75	4.00	6.27	4.26	6.75	4.88	JP86	JP86P
NV884	NS884	8.40	8.40	4.49	3.98	5.13	9.69	8.75	6.00	6.30	6.30	6.75	6.88	JP88	JP88P
NV1084	NS1084	10.40	8.40	4.49	3.98	5.13	11.69	10.75	6.00	8.34	6.30	8.75	6.88	JP108	JP108P
NV1086	NS1086	10.40	8.40	6.49	5.98	7.13	11.69	10.75	6.00	8.34	6.30	8.75	6.88	JP108	JP108P
NV10106	NS10106	10.40	10.40	6.49	5.98	7.13	11.69	10.75	8.00	8.29	8.29	8.75	8.88	JP1010	JP1010P
NV12106	NS12106	12.40	10.40	6.49	5.98	7.13	13.69	12.75	8.00	10.30	8.28	10.75	8.88	JP1210	JP1210P
NV12126	NS12126	12.40	12.40	6.49	5.98	7.13	13.69	12.75	10.00	10.24	10.24	10.75	10.88	JP1212	JP1212P
NV14126	NS14126	14.40	12.40	6.49	5.98	7.13	15.69	14.75	10.00	12.26	10.24	12.75	10.88	JP1412	JP1412P
NV16146	NS16146	16.40	14.40	6.49	5.98	7.13	17.69	16.75	12.00	14.26	12.26	14.75	12.88	JP1614	JP1612P

* Assembled Enclosures include body, lid and mounting rail kit.

** Order back panels separately (10/32 - 1/8 Back Panel screws not supplied).

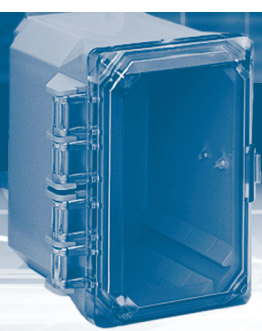
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Meets NEMA 1, 2, 3, 3S, 3X, 3SX, 4, 4X, 12.

Hidden-Hinge Covers



Opaque Cover



Clear Cover

Assembled Enclosures

OPAQUE COVER* CAT. NO.	CLEAR COVER* CAT. NO.	SIZE (IN.)	BACK PANELS**		STD. CTN.	STD. WT. (LBS.) OPAQUE/CLEAR
			STEEL	PVC		
NH644	NI644	6 x 4 x 5 †	JP64	JP64P	1	Opa 2.2/Clr 2.8
NH664	NI664	6 x 6 x 5	JP66	JP66P	1	Opa 2.7/Clr 3.2
NH864	NI864	8 x 6 x 5	JP86	JP86P	1	Opa 3.3/Clr 3.8
NH884	NI884	8 x 8 x 5	JP88	JP88P	1	Opa 3.8/Clr 3.8
NH1084	NI1084	10 x 8 x 5	JP108	JP108P	1	Opa 4.0/Clr 4.5
NH1086	NI1086	10 x 8 x 7	JP108	JP108P	1	Opa 5.2/Clr 5.1
NH10106	NI10106	10 x 10 x 7	JP1010	JP1010P	1	Opa 5.7/Clr 5.8
NH12106	NI12106	12 x 10 x 7	JP1210	JP1210P	1	Opa 6.9/Clr 6.1
NH12126	NI12126	12 x 12 x 7	JP1212	JP1212P	1	Opa 7.7/Clr 7.2
NH14126	NI14126	14 x 12 x 7	JP1412	JP1412P	1	Opa 8.3/Clr 7.9
NH16146	NI16146	16 x 14 x 7	JP1614	JP1614P	1	Opa 10.1/Clr 9.6

* Assembled Enclosures include body, cover assembly and mounting rail kit.

** Order back panels separately.

† 6 x 4 x 5 size not available with quick-release latches.

Individual Components

ENCLOSURE BASE*				ENCLOSURE LIDS				COLLARS			BACK PANELS**			LATCHES		
CAT. NO.	ENCLOSURE SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)	OPAQUE LIDS CAT. NO.	CLEAR LIDS CAT. NO.	STD. CTN.	STD. WT. (LBS.)	CAT. NO.	STD. CTN.	STD. WT. (LBS.)	STEEL CAT. NO.	PVC CAT. NO.	STD. CTN.	STEEL LATCH CAT. NO.	NON-METALLIC LATCH CAT. NO.	STD. CTN.
NP644B	6 x 4 x 5 †	18	21	NH64L	NI64L	16	Opa 6.8/Clr 6.3	NH64C	16	6	JP64	JP64P	1	SSLS	NPLIS	25
NP664B	6 x 4 x 5	12	17	NH66L	NI66L	12	Opa 6.8/Clr 6.3	NH66C	12	5	JP66	JP66P	1	SSLS	NPLIS	25
NP864B	8 x 6 x 5	12	18	NH86L	NI86L	9	Opa 6.3/Clr 5.7	NH86C	9	4	JP86	JP86P	1	SSLS	NPLIS	25
NP884B	8 x 8 x 5	14	28	NH88L	NI88L	18	Opa 16/Clr 15	NH88C	9	3.6	JP88	JP88P	1	SSLS	NPLIS	25
NP1084B	10 x 8 x 5	12	26	NH108L	NI108L	12	Opa 13/Clr 12	NH108C	12	7.8	JP108	JP108P	1	SSLS	NPLIS	25
NP1086B	10 x 8 x 7	8	23	NH108L	NI108L	12	Opa 13/Clr 12	NH108C	12	7.8	JP108	JP108P	1	SSLS	NPLIS	25
NP1010B	10 x 10 x 7	6	20	NH1010L	NI1010L	11	Opa 14/Clr 13	NH1010C	11	7.5	JP1010	JP1010P	1	SSLS	NPLIS	25
NP1210B	12 x 10 x 7 ‡	6	23	NH1210L	NI1210L	12	Opa 17/Clr 6	NH1210C	12	8	JP1210	JP1210P	1	SSLS	NPLIS	25
NP1212B	12 x 12 x 7 ‡	5	22	NH1212L	NI1212L	10	Opa 17/Clr 16	NH1212C	12	7.7	JP1212	JP1212P	1	SSLS	NPLIS	25
NP1412B	14 x 12 x 7 ‡	5	24	NH1412L	NI1412L	5	Opa 10/Clr 10	NH1412C	5	4.7	JP1412	JP1412P	1	SSLS	NPLIS	25
NP1614B	16 x 14 x 7 ‡	4	31	NH1614L	NI1614L	5	Opa 13/Clr 12	NH1614C	5	5.6	JP1614	JP1614P	1	SSLS	NPLIS	25

* Mounting rails are not included. See "Mounting Rails" listed on page Q-21.

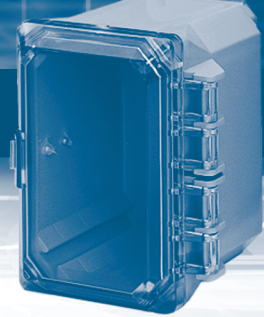
** Order back panels separately.

† 6 x 4 x 5 enclosures are not available with quick-release latches.

‡ Sizes 12 x 10 and larger require two (2) latches per enclosure.

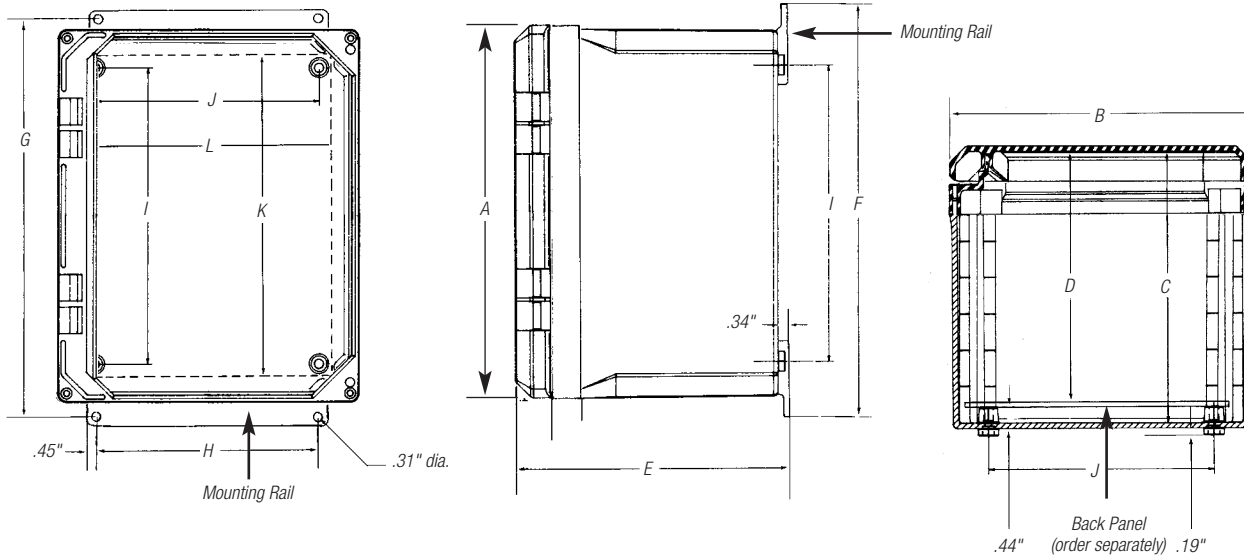
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Circuit Safe® NEMA Enclosures



Hidden-Hinge Covers

Carlton® Non-Metallic Enclosures



ENCLOSURE WITH OPAQUE LID CAT. NO.*	CLEAR LID CAT. NO.*	ENCLOSURE SIZE (IN.)						ENCLOSURE MOUNTING HOLE SPACING		PANEL MOUNTING HOLE SPACING		BACK PANEL SIZE		BACK PANEL** CAT. NO.	
		A	B	C	D	E	F	G	H	I	J	K	L	STEEL	PVC
NH644	NI644	6.40	4.40	5.30	4.79	5.94	7.69	6.75	2.00	4.29	2.28	4.88	2.88	JP64	JP64P
NH664	NI664	6.40	6.40	5.30	4.79	5.94	7.69	6.75	4.00	4.28	4.28	4.88	4.88	JP66	JP66P
NH864	NI864	8.40	6.40	5.30	4.79	5.94	9.69	8.75	4.00	6.27	4.26	6.75	4.88	JP86	JP86P
NH884	NI884	8.40	8.40	5.30	4.79	5.94	9.69	8.75	6.00	6.30	6.30	6.75	6.88	JP88	JP88P
NH1084	NI1084	10.40	8.40	5.30	4.79	5.94	11.69	10.75	6.00	8.34	6.30	8.75	6.88	JP108	JP108P
NH1086	NI1086	10.40	8.40	7.30	6.79	7.94	11.69	10.75	6.00	8.34	6.30	8.75	6.88	JP108	JP108P
NH10106	NI10106	10.40	10.40	7.30	6.79	7.94	11.59	10.75	8.00	8.29	8.29	8.75	8.88	JP1010	JP1010P
NH12106	NI12106	12.40	10.40	7.30	6.79	7.94	13.69	12.75	8.00	10.30	8.28	10.75	8.88	JP1210	JP1210P
NH12126	NI12126	12.40	12.40	7.30	6.79	7.94	13.69	12.75	10.00	10.24	10.24	10.75	10.88	JP1212	JP1212P
NH14126	NI14126	14.40	12.40	7.30	6.79	7.94	15.69	14.75	10.00	12.26	10.24	12.75	10.88	JP1412	JP1412P
NH16146	NI16146	16.40	14.40	7.30	6.79	7.94	17.69	16.75	12.00	14.26	12.26	14.75	12.88	JP1614	JP1612P

* Assembled Enclosures (except NI1084) include body, lid and mounting rail kit.

** Order back panels separately (10/32 - % Back Panel screws not supplied).

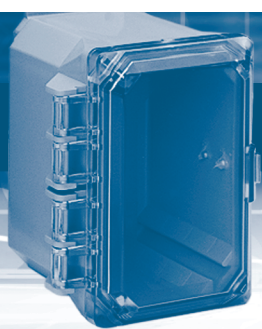
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External-Hinge Covers



Opaque Cover



Clear Cover

Assembled Enclosures

OPAQUE COVER* CAT. NO.	CLEAR COVER* CAT. NO.	BACK PANELS** STEEL	BACK PANELS** PVC	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.) OPAQUE/CLEAR
NJ664	NC664	JP66	JP66P	6 x 6 x 4	1	Opa 2.4/Clr 2.4
NJ864	NC864	JP86	JP86P	8 x 6 x 4	1	Opa 2.9/Clr 2.9
NJ884	NC884	JP88	JP88P	8 x 8 x 4	1	Opa 3.3/Clr 3.3
NJ1084	NC1084	JP108	JP108P	10 x 8 x 4	1	Opa 4/Clr 4
NJ1086	NC1086	JP108	JP108P	10 x 8 x 6	1	Opa 4.6/Clr 4.7
NJ10106	NC10106	JP1010	JP1010P	10 x 10 x 6	1	Opa 5.6/Clr 5.3
NJ12106	NC12106	JP1210	JP1210P	12 x 10 x 6	1	Opa 6.3/Clr 5.8
NJ12126	NC12126	JP1212	JP1212P	12 x 12 x 6	1	Opa 6.9/Clr 6.6
NJ14126	NC14126	JP1412	JP1412P	14 x 12 x 6	1	Opa 7.7/Clr 7
NJ16146	NC16146	JP1614	JP1614P	16 x 14 x 6	1	Opa 8.2/Clr 8

* Assembled Enclosures include body, lid and mounting rail kit.

** Order back panels separately.

Individual Components

ENCLOSURE BASE*				ENCLOSURE LIDS				BACK PANELS**			LATCHES		
CAT. NO.	ENCLOSURE SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)	OPAQUE LIDS CAT. NO.	CLEAR LIDS CAT. NO.	STD. CTN.	STD. WT. (LBS.)	STEEL CAT. NO.	PVC CAT. NO.	STD. CTN.	STEEL LATCH CAT. NO.	NON-METALLIC LATCH CAT. NO.	STD. CTN.
NL664B	6 x 6 x 4	12	18	NJ66L	NC66L	12	Opa 5.0/Clr 5.9	JP66	JP66P	1	SSLS	NPLIS	25
NL864B	8 x 6 x 4	8	14	NJ86L	NC86L	9	Opa 6/Clr 5.3	JP86	JP86P	1	SSLS	NPLIS	25
NL884B	8 x 8 x 4	14	28	NJ88L	NC88L	18	Opa 15/Clr 13.5	JP88	JP88P	1	SSLS	NPLIS	25
NL1084B	10 x 8 x 4	12	32	NJ108L	NC108L	12	Opa 13/Clr 11.7	JP108	JP108P	1	SSLS	NPLIS	25
NL1086B	10 x 8 x 6	8	15	NJ108L	NC108L	12	Opa 13/Clr 11.7	JP108	JP108P	1	SSLS	NPLIS	25
NL1010B	10 x 10 x 6	6	20	NJ1010L	NC1010L	11	Opa 14/Clr 13	JP1010	JP1010P	1	SSLS	NPLIS	25
NL1210B	12 x 10 x 6 ‡	6	24	NJ1210L	NC1210L	12	Opa 14/Clr 15	JP1210	JP1210P	1	SSLS	NPLIS	25
NL1212B	12 x 12 x 6 ‡	5	21.8	NJ1212L	NC1212L	10	Opa 16/Clr 14	JP1212	JP1212P	1	SSLS	NPLIS	25
NL1412B	14 x 12 x 6 ‡	4	19	NJ1412L	NC1412L	5	Opa 10/Clr 9	JP1412	JP1412P	1	SSLS	NPLIS	25
NL1614B	16 x 14 x 6 ‡	4	31	NJ1614L	NC1614L	5	Opa 13.5/Clr 12	JP1614	JP1614P	1	SSLS	NPLIS	25

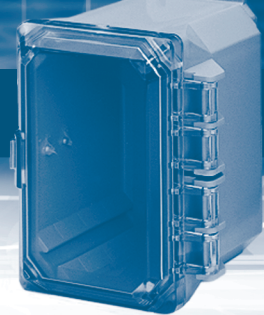
* Mounting rails are not included. See "Mounting Rails" on page Q-21.

** Order back panels separately.

‡ Sizes 12 x 10 and larger require two (2) latches per enclosure.

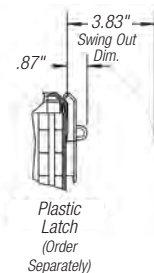
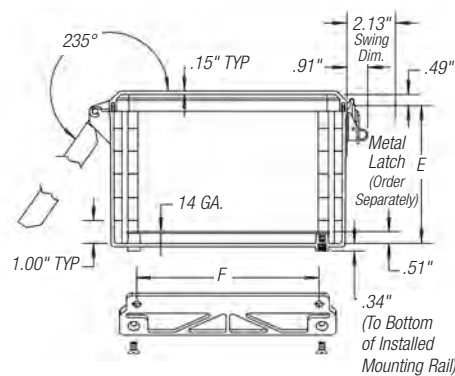
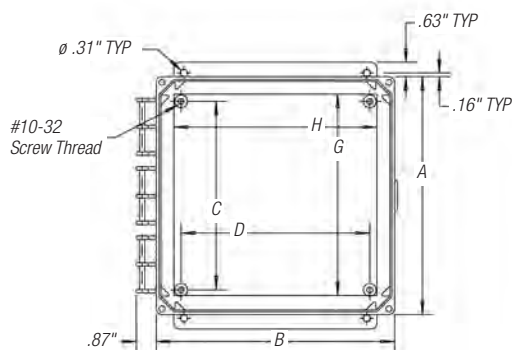
Carlton®

Circuit Safe® NEMA Enclosures



External-Hinge Covers

Carlton® Non-Metallic Enclosures



ENCLOSURE WITH		ENCLOSURE SIZE (IN.)						ENCLOSURE MOUNTING HOLE SPACING		PANEL MOUNTING HOLE SPACING		BACK PANEL SIZE		BACK PANEL** CAT. NO.	
CLEAR LID CAT. NO.*	OPAQUE LID CAT. NO.*	A	B	C	D	E	F	G	H	I	J	K	L	STEEL	PVC
NC644	NJ644	6.40	4.40	4.49	3.98	5.13	7.69	6.75	2.00	4.29	2.28	4.88	2.88	JP64	JP64P
NC664	NJ664	6.40	6.40	4.49	3.98	5.13	7.69	6.75	4.00	4.28	4.28	4.88	4.88	JP66	JP66P
NC864	NJ864	8.40	6.40	4.49	3.98	5.13	9.69	8.75	4.00	6.27	4.26	6.75	4.88	JP86	JP86P
NC884	NJ884	8.40	8.40	4.49	3.98	5.13	9.69	8.75	6.00	6.30	6.30	6.75	6.88	JP88	JP88P
NC1084	NJ1084	10.40	8.40	4.49	3.98	5.13	11.69	10.75	6.00	8.34	6.30	8.75	6.88	JP108	JP108P
NC1086	NJ1086	10.40	8.40	6.49	5.98	7.13	11.69	10.75	6.00	8.34	6.30	8.75	6.88	JP108	JP108P
NC10106	NJ10106	10.40	10.40	6.49	5.98	7.13	11.69	10.75	8.00	8.29	8.29	8.75	8.88	JP1010	JP1010P
NC12106	NJ12106	12.40	10.40	6.49	5.98	7.13	13.69	12.75	8.00	10.30	8.28	10.75	8.88	JP1210	JP1210P
NC12126	NJ12126	12.40	12.40	6.49	5.98	7.13	13.69	12.75	10.00	10.24	10.24	10.75	10.88	JP1212	JP1212P
NC14126	NJ14126	14.40	12.40	6.49	5.98	7.13	15.69	14.75	10.00	12.26	10.24	12.75	10.88	JP1412	JP1412P
NC16146	NJ16146	16.40	14.40	6.49	5.98	7.13	17.69	16.75	12.00	14.26	12.26	14.75	12.88	JP1614	JP1614P

* Assembled Enclosures; include body, lid and mounting rail kit.

** Order back panels separately (10/32 - 1/4 Back Panel screws not supplied).

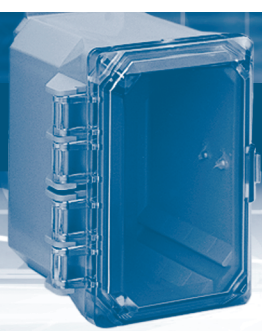
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800.816.7809
Fax: 901.252.1354

Customer Service
Tel: 800.816.7809
Fax: 800.816.7810

Technical Services
Tel: 888.862.3289
Fax: 901.252.1321

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Tel: 800.284.8665

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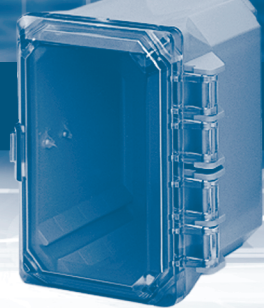
Circuit Safe® NEMA Enclosures

Quick Reference Screw-On Cover Styles

ASSEMBLED ENCLOSURES (NO PANEL OR LATCHES)		INDIVIDUAL COMPONENTS					
OPAQUE LID	CLEAR LID	BODY	LID	COLLAR	MTG. RAILS	BACK PANELS	
						STEEL	PVC
NS644		NP644B	NS64L	N/A	NMK4V	JP64	JP64P
	NV644	NP644B	NV64L	N/A	NMK4V	JP64	JP64P
NS664		NP664B	NS66L	N/A	NMK6V	JP66	JP66P
	NV664	NP664B	NV66L	N/A	NMK6V	JP66	JP66P
NS864		NP864B	NS86L	N/A	NMK6V	JP86	JP86P
	NV864	NP864B	NV86L	N/A	NMK6V	JP86	JP86P
NS884		NP884B	NS88L	N/A	NMK8V	JP88	JP88P
	NV884	NP884B	NV88L	N/A	NMK8V	JP88	JP88P
NS1084		NP1084B	NS108L	N/A	NMK8V	JP108	JP108P
	NV1084	NP1084B	NV108L	N/A	NMK8V	JP108	JP108P
NS1086		NP1086B	NS108L	N/A	NMK8V	JP108	JP108P
	NV1086	NP1086B	NV108L	N/A	NMK8V	JP108	JP108P
NS10106		NP1010B	NS1010L	N/A	NMK10V	JP1010	JP1010P
	NV10106	NP1010B	NV1010L	N/A	NMK10V	JP1010	JP1010P
NS12106		NP1210B	NS1210L	N/A	NMK10V	JP1210	JP1210P
	NV12106	NP1210B	NV1210L	N/A	NMK10V	JP1210	JP1210P
NS12126		NP1212B	NS1212L	N/A	NMK12V	JP1212	JP1212P
	NV12126	NP1212B	NV1212L	N/A	NMK12V	JP1212	JP1212P
NS14126		NP1412B	NS1412L	N/A	NMK12V	JP1412	JP1412P
	NV14126	NP1412B	NV1412L	N/A	NMK12V	JP1412	JP1412P
NS16146		NP1614B	NS1614L	N/A	NMK14V	JP1614	JP1614P
	NV16146	NP1614B	NV1614L	N/A	NMK14V	JP1614	JP1614P

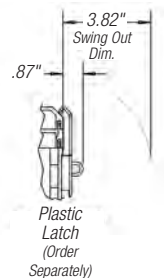
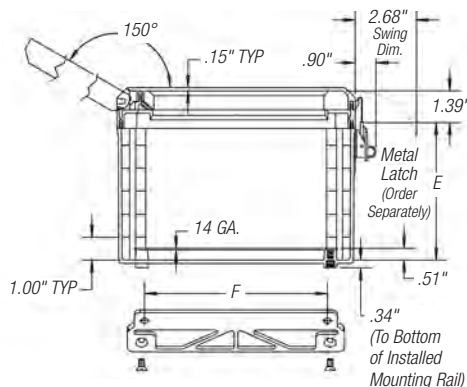
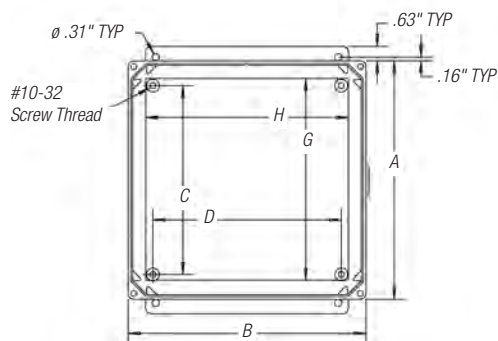
External-Hinge Cover Styles

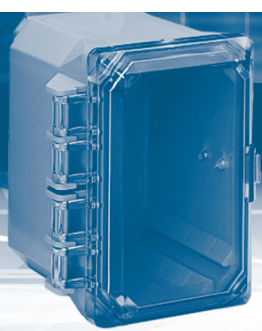
ASSEMBLED ENCLOSURES (NO PANEL OR LATCHES)		INDIVIDUAL COMPONENTS						LATCHES (QTY. NEEDED)	
OPAQUE LID	CLEAR LID	BODY	LID	COLLAR	MTG. RAILS	BACK PANELS		STEEL	NON-METALLIC
						STEEL	PVC		
NJ644		NL644B	NJ64L	N/A	NMK4V	JP64	JP64P	SSLS (1)	NPL1S (1)
	NC644	NL644B	NC64L	N/A	NMK4V	JP64	JP64P	SSLS (1)	NPL1S (1)
NJ664		NL664B	NJ66L	N/A	NMK6V	JP66	JP66P	SSLS (1)	NPL1S (1)
	NC664	NL664B	NC66L	N/A	NMK6V	JP66	JP66P	SSLS (1)	NPL1S (1)
NJ864		NL864B	NJ86L	N/A	NMK6V	JP86	JP86P	SSLS (1)	NPL1S (1)
	NC864	NL864B	NC86L	N/A	NMK6V	JP86	JP86P	SSLS (1)	NPL1S (1)
NJ884		NL884B	NJ88L	N/A	NMK8V	JP88	JP88P	SSLS (1)	NPL1S (1)
	NC884	NL884B	NC88L	N/A	NMK8V	JP88	JP88P	SSLS (1)	NPL1S (1)
NJ1084		NL1084B	NJ108L	N/A	NMK8V	JP108	JP108P	SSLS (1)	NPL1S (1)
	NC1084	NL1084B	NC108L	N/A	NMK8V	JP108	JP108P	SSLS (1)	NPL1S (1)
NJ1086		NL1086B	NJ108L	N/A	NMK8V	JP108	JP108P	SSLS (1)	NPL1S (1)
	NC1086	NL1086B	NC108L	N/A	NMK8V	JP108	JP108P	SSLS (1)	NPL1S (1)
NJ10106		NL1010B	NJ1010L	N/A	NMK10V	JP1010	JP1010P	SSLS (1)	NPL1S (1)
	NC10106	NL1010B	NC1010L	N/A	NMK10V	JP1010	JP1010P	SSLS (1)	NPL1S (1)
NJ12106		NL1210B	NJ1210L	N/A	NMK10V	JP1210	JP1210P	SSLS (2)	NPL1S (2)
	NC12106	NL1210B	NC1210L	N/A	NMK10V	JP1210	JP1210P	SSLS (2)	NPL1S (2)
NJ12126		NL1212B	NJ1212L	N/A	NMK12V	JP1212	JP1212P	SSLS (2)	NPL1S (2)
	NC12126	NL1212B	NC1212L	N/A	NMK12V	JP1212	JP1212P	SSLS (2)	NPL1S (2)
NJ14126		NL1412B	NJ1412L	N/A	NMK12V	JP1412	JP1412P	SSLS (2)	NPL1S (2)
	NC14126	NL1412B	NC1412L	N/A	NMK12V	JP1412	JP1412P	SSLS (2)	NPL1S (2)
NJ16146		NL1614B	NJ1614L	N/A	NMK14V	JP1614	JP1614P	SSLS (2)	NPL1S (2)
	NC16146	NL1614B	NC1614L	N/A	NMK14V	JP1614	JP1614P	SSLS (2)	NPL1S (2)



Quick Reference Hidden-Hinge Cover Styles

ASSEMBLED ENCLOSURES (NO PANEL OR LATCHES)		INDIVIDUAL COMPONENTS							
OPAQUE LID	CLEAR LID	BODY	LID	COLLAR	MTG. RAILS	BACK PANELS		LATCHES (QTY. NEEDED)	
						STEEL	PVC	STEEL	NON-METALLIC
NH644		NP644B	NH64L	NH64C	NMK4V	JP64	JP64P	SSL (1)	NPL1L (1)
	NI644	NP644B	NI64L	NH64C	NMK4V	JP64	JP64P	SSL (1)	NPL1L (1)
NH664		NP664B	NH66L	NH66C	NMK6V	JP66	JP66P	SSL (1)	NPL1L (1)
	NI664	NP664B	NI66L	NH66C	NMK6V	JP66	JP66P	SSL (1)	NPL1L (1)
NH864		NP864B	NH86L	NH86C	NMK6V	JP86	JP86P	SSL (1)	NPL1L (1)
	NI864	NP864B	NI86L	NH86C	NMK6V	JP86	JP86P	SSL (1)	NPL1L (1)
NH884		NP884B	NH88L	NH88C	NMK8V	JP88	JP88P	SSL (1)	NPL1L (1)
	NI884	NP884B	NI88L	NH88C	NMK8V	JP88	JP88P	SSL (1)	NPL1L (1)
NH1084		NP1084B	NH108L	NH108C	NMK8V	JP108	JP108P	SSL (1)	NPL1L (1)
	NI1084	NP1084B	NI108L	NH108C	NMK8V	JP108	JP108P	SSL (1)	NPL1L (1)
NH1086		NP1086B	NH108L	NH108C	NMK8V	JP108	JP108P	SSL (1)	NPL1L (1)
	NI1086	NP1086B	NI108L	NH108C	NMK8V	JP108	JP108P	SSL (1)	NPL1L (1)
NH10106		NP1010B	NH1010L	NH1010C	NMK10V	JP1010	JP1010P	SSL (1)	NPL1L (1)
	NI10106	NP1010B	NI1010L	NH1010C	NMK10V	JP1010	JP1010P	SSL (1)	NPL1L (1)
NH12106		NP1210B	NH1210L	NH1210C	NMK10V	JP1210	JP1210P	SSL (2)	NPL1L (2)
	NI12106	NP1210B	NI1210L	NH1210C	NMK10V	JP1210	JP1210P	SSL (2)	NPL1L (2)
NH12126		NP1212B	NH1212L	NH1212C	NMK12V	JP1212	JP1212P	SSL (2)	NPL1L (2)
	NI12126	NP1212B	NI1212L	NH1212C	NMK12V	JP1212	JP1212P	SSL (2)	NPL1L (2)
NH14126		NP1412B	NH1412L	NH1412C	NMK12V	JP1412	JP1412P	SSL (2)	NPL1L (2)
	NI14126	NP1412B	NI1412L	NH1412C	NMK12V	JP1412	JP1412P	SSL (2)	NPL1L (2)
NH16146		NP1614B	NH1614L	NH1614C	NMK14V	JP1614	JP1614P	SSL (2)	NPL1L (2)
	NI16146	NP1614B	NI1614L	NH1614C	NMK14V	JP1614	JP1614P	SSL (2)	NPL1L (2)



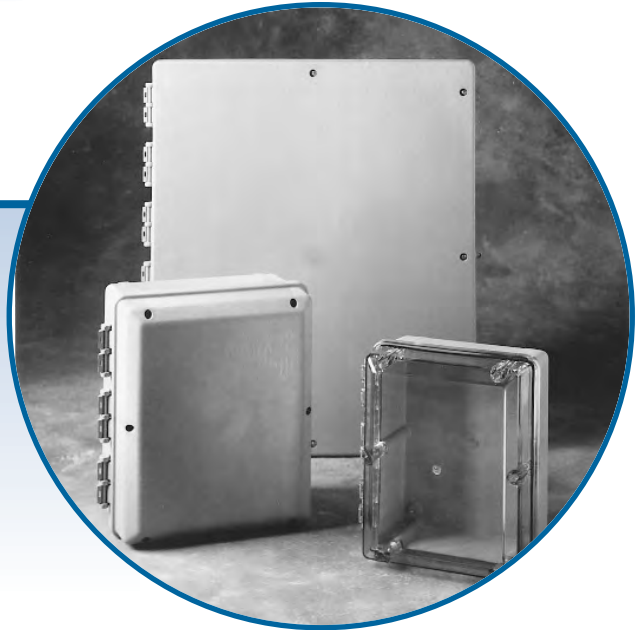


Carlton®

Circuit Safe® JIC Enclosures

Circuit Safe® JIC Enclosures

Manufactured from structural foam thermoplastic, Carlton® Circuit Safe® JIC enclosures provide high-impact strength to eliminate dents and deformations along with high dielectric strength, excellent weathering capabilities and excellent resistance to a wide range of corrosive agents, acids, alkalines and salts. These UL Approved and CSA Recognized enclosures also withstand wet and dirty environments, while their thick-wall construction make them a particularly good choice wherever condensation is a concern. Rated for use in Type 1, 3, 3S, 3X, 3SX, 4, 4X, 12 and 13 environments, Carlton® Circuit Safe® JIC enclosures are suited for virtually all indoor/outdoor industrial, MRO and OEM applications. They are available in 10 sizes from 6 x 6 x 5 through 30 x 24 x 12 with a choice of screw or hinged design, opaque covers or clear polycarbonate covers that protect devices from hostile environments while enabling monitoring of instrumentation and/or electrical functions.



Features:

- Hinge caps make covers captive
- Non-metallic molded-in hinges on hinged models
- No rough corners, sharp edges or burrs
- Non-conductive — eliminates danger of electrical shock
- Lid design provides greater usable internal volume
- Ample interior space for ease of wiring
- Fully gasketed
- Ultraviolet stabilized for outdoor use

Applications:

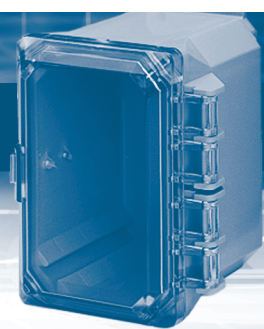
- Instrument case
- Junction and terminal boxes
- Control and switching enclosures
- Splice and pull boxes
- Starter, pushbutton and transformer housings
- Meter and transformer cabinets

Standards:

- Meets NEMA Types 1, 3, 3S, 3X, 3SX, 4, 4X, 12, 13 as indicated
- UL Listed per UL 50, enclosures for electrical equipment
- CSA Certified
- JIC compliance

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Circuit Safe® JIC Enclosures



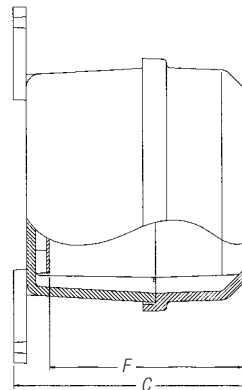
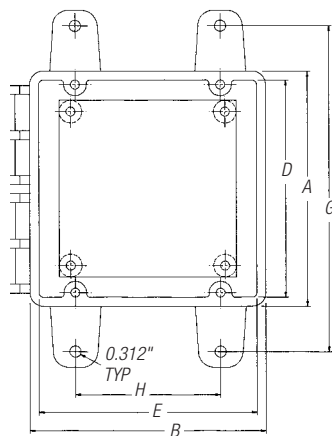
Carlton® Non-Metallic Enclosures

Meets NEMA 1, 3, 3S, 3X, 3SX, 4, 4X, 12, 13.

Hinged Covers

Features:

- Non-metallic mounting feet and all mounting hardware included
- White-painted 14-gauge steel or 1/4" PVC back panel (order separately)
- 304 (18-8) stainless steel screws (10-32/16")
- Lid design provides greater usable internal volume
- Completely non-metallic hinges
- Brass screw inserts
- Temperature range: -30° to 230°F
- Material: polycarbonate molded base and cover



Factory Assembled



OPAQUE COVER CAT. NO.	CLEAR COVER CAT. NO.	DIMENSIONS (IN.)								STD. WT. (LBS.) OPAQUE/CLEAR	BACK PANEL* CAT. NO.		PANEL SIZE (IN.)	STD. WT. (LBS.) STEEL/PVC
		EXTERNAL			INTERNAL			MOUNTING			STEEL	PVC		
		A	B	C	D	E	F	G	H					
CJ665	CC665	6.50	6.50	6.69	6.00	6.00	5.45	9.00	4.00	1 (Opa 3.5)/1 (Clr 3.1)	JP66	JP66P	4.88 x 4.88	1 (1.0)/1 (0.3)
CJ863	CC863	8.50	6.50	4.49	8.00	6.00	3.25	11.00	4.00	1 (Opa 2.8)/1 (Clr 3.1)	JP86	JP86P	6.75 x 4.88	1 (1.0)/1 (0.78)
CJ1085	CC1085	10.50	8.50	6.69	10.00	8.00	5.45	13.00	6.00	1 (Opa 5.2)/1 (Clr 5.2)	JP108	JP108P	8.75 x 6.88	1 (1.5)/1 (0.7)
CJ12106	CC12106	12.50	10.50	7.69	12.00	10.00	6.45	15.00	8.00	1 (Opa 7.1)/1 (Clr 8.4)	JP1210	JP1210P	10.75 x 8.88	1 (2.0)/1 (1.2)
CJ14126	CC14126	14.50	12.50	7.72	14.00	12.00	6.48	17.00	10.00	1 (Opa 9.0)/1 (Clr 8.6)	JP1412	JP1412P	12.75 x 10.88	1 (3.2)/1 (1.7)
CJ16147	CC16147	16.50	14.50	8.46	16.00	14.00	7.22	19.00	12.00	1 (Opa 10.6)/1 (Clr 11.9)	JP1614	JP1614P	14.75 x 12.88	1 (4.7)/1 (2.3)

*Order back panels separately.

Enclosures shipped with mounting feet, hinge caps and screws.

For factory-installed pad-lockable latch (part no. CJTL), consult Customer Service for price and delivery.

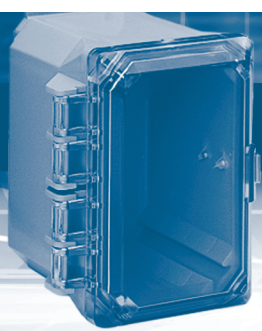
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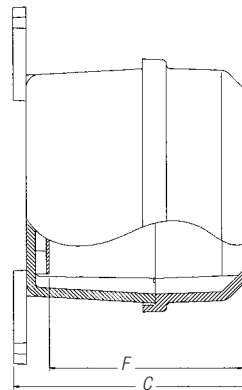
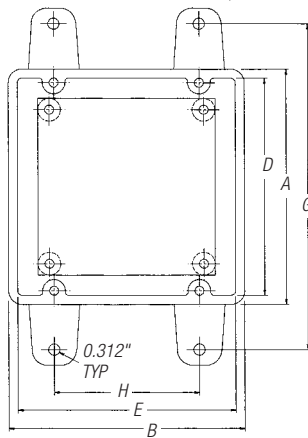
Meets NEMA 1, 3, 3S, 3X, 3SX, 4, 4X, 12, 13.



Screw-On Covers

Features:

- Non-metallic mounting feet and all mounting hardware included
- 304 (18-8) stainless steel screws (10-32/1½")
- Brass screw inserts
- Clear polycarbonate cover available
- White-painted 14-gauge steel or ½" PVC back panel (order separately)
- Lid design provides greater usable internal volume
- Temperature range: -30° to 230°F
- Material: polycarbonate molded base and cover



Factory Assembled

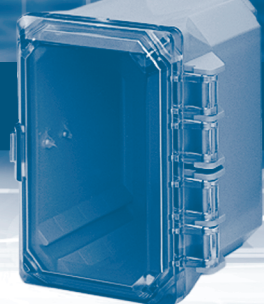
OPAQUE COVER CAT. NO.	CLEAR COVER CAT. NO.	DIMENSIONS (IN.)								STD. WT. (LBS.) OPAQUE/CLEAR	BACK PANEL*		PANEL SIZE (IN.)	STD. WT. (LBS.) STEEL/PVC
		EXTERNAL			INTERNAL			MOUNTING	CAT. NO.					
		A	B	C	D	E	F	G	H		STEEL	PVC		
CS665	CV665	6.50	6.50	6.69	6.00	6.00	5.45	9.00	4.00	1 (Opa 2.7)/1 (Clr 2.9)	JP66	JP66P	4.88 x 4.88	1 (1.0)/1 (0.3)
CS863	CV863	8.50	6.50	4.49	8.00	6.00	3.25	11.00	4.00	1 (Opa 2.9)/1 (Clr 2.9)	JP86	JP86P	6.75 x 4.88	1 (1.0)/1 (0.4)
CS1085	CV1085	10.50	8.50	6.69	10.00	8.00	5.45	13.00	6.00	1 (Opa 5.0)/1 (Clr 5.0)	JP108	JP108P	8.75 x 6.88	1 (1.5)/1 (0.7)
CS12106	CV12106	12.50	10.50	7.69	12.00	10.00	6.45	15.00	8.00	1 (Opa 6.5)/1 (Clr 7.2)	JP1210	JP1210P	10.75 x 8.88	1 (2.0)/1 (1.2)
CS14126	CV14126	14.50	12.50	7.72	14.00	12.00	6.48	17.00	10.00	1 (Opa 8.0)/1 (Clr 8.8)	JP1412	JP1412P	12.75 x 10.88	1 (3.2)/1 (1.7)
CS16147	CV16147	16.50	14.50	8.46	16.00	14.00	7.22	19.00	12.00	1 (Opa 11.5)/1 (Clr 10.8)	JP1614	JP1614P	14.75 x 12.88	1 (4.7)/1 (2.3)

*Order back panels separately.

Enclosures shipped with mounting feet and panel mounting hardware.

Carlton®

Circuit Safe® JIC Enclosures



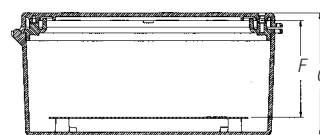
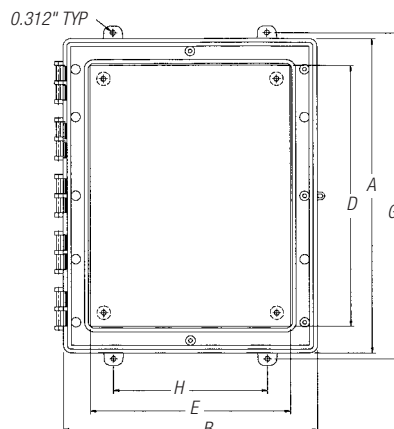
Meets NEMA 1, 3, 3S, 3X, 3SX, 4, 4X, 12, 13.



Medium Hinged Covers

Features:

- Non-metallic mounting feet and all mounting hardware included
- White-painted 14-gauge steel or 1/4" PVC back panel (order separately)
- 304 (18-8) stainless steel screws (10-32/1 1/2")
- Completely non-metallic hinges
- Brass screw inserts
- Temperature range: -40° to 185°F
- Material: NORYL base and cover



Carlton® Non-Metallic Enclosures

Factory Assembled

CAT. NO.	EXTERNAL			INTERNAL			MOUNTING		STD. WT. (LBS.)	BACK PANEL* CAT. NO.		PANEL SIZE (IN.)	STD. WT. (LBS.) STEEL/PVC
	A	B	C	D	E	F	G	H		STEEL	PVC		
C2016A4	20.50	16.50	8.36	17.25	13.25	6.28	21.26	10.00	1 (15.1)	NP2016	NP2016P	17 x 13.25	1 (7.0)/1 (6.1)
C2016B4	20.50	16.50	10.36	17.25	13.25	8.28	21.26	10.00	1 (17.2)	NP2016	NP2016P	17 x 13.25	1 (7.0)/1 (6.1)
C2016C4	20.50	16.50	12.36	17.25	13.25	10.28	21.26	10.00	1 (19.7)	NP2016	NP2016P	17 x 13.25	1 (7.0)/1 (6.1)
C2420A4	24.50	20.50	8.36	21.25	17.25	6.28	25.26	14.00	1 (21.5)	NP2420	NP2420P	21 x 17	1 (10.4)/1 (4.7)
C2420B4	24.50	20.50	10.36	21.25	17.25	8.28	25.26	14.00	1 (24)	NP2420	NP2420P	21 x 17	1 (10.4)/1 (4.7)
C2420C4	24.50	20.50	12.36	21.25	17.25	10.28	25.26	14.00	1 (24.9)	NP2420	NP2420P	21 x 17	1 (10.4)/1 (4.7)
C3024A4	30.50	24.50	8.36	27.25	21.25	6.28	31.26	18.00	1 (28.4)	NP3024	NP3024P	27 x 21	1 (18.0)/1 (9.8)
C3024B4	30.50	24.50	10.36	27.25	21.25	8.28	31.26	18.00	1 (31.4)	NP3024	NP3024P	27 x 21	1 (18.0)/1 (9.8)
C3024C4	30.50	24.50	12.36	27.25	21.25	10.28	31.26	18.00	1 (33.8)	NP3024	NP3024P	27 x 21	1 (18.0)/1 (9.8)

*Order back panels separately.

*Enclosure only available with opaque hinged cover.

Enclosures shipped with mounting feet, hinge caps and screws.

For factory-installed pad-lockable latch (part no. CJTL), consult Customer Service for price and delivery.

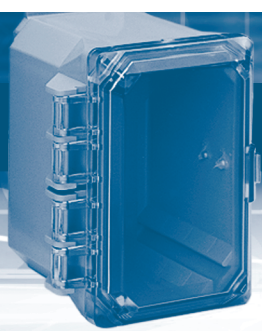
Corporate Office
Tel: 901.252.8000
800.816.7809
Fax: 901.252.1354

Customer Service
Tel: 800.816.7809
Fax: 800.816.7810

Technical Services
Tel: 888.862.3289
Fax: 901.252.1321

Tool Services
Tel: 800.284.8665

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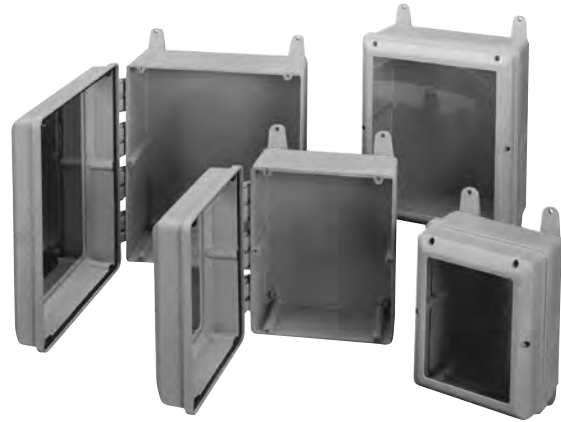
Meets NEMA 1, 3, 3S, 3X, 3SX, 4, 4X, 12, 13.



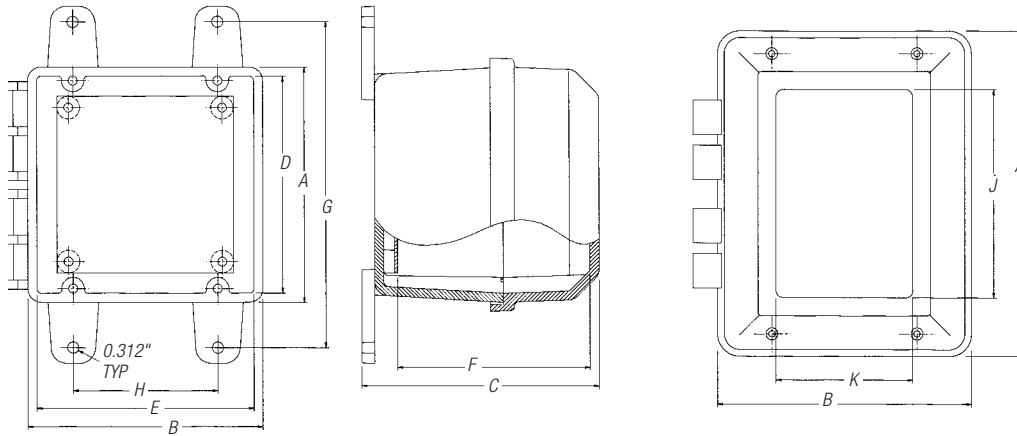
Hinged Window Cover

Features:

- Non-metallic mounting feet and all mounting hardware included
- 304 (18-8) stainless steel screws (10-32/1½")
- White-painted 14-gauge steel or ¼" PVC back panel (order separately)
- Completely non-metallic hinges
- Lid design provides greater usable internal volume
- Brass screw inserts
- Material: polycarbonate molded base and cover



NOTE: Window material ⅛" thick, clear polycarbonate is permanently bonded to the cover.



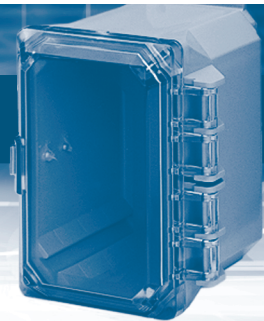
Factory Assembled

CAT. NO.	DIMENSIONS (IN.)										STD. WT. (LBS.)	BACK PANEL*		PANEL SIZE (IN.)	STD. WT. (LBS.) STEEL/PVC
	EXTERNAL				INTERNAL			MOUNTING				CAT. NO.			
	A	B	C	D	E	F	G	H	J	K		STEEL	PVC		
J665W	6.50	6.50	6.69	6.00	6.00	5.45	9.00	4.00	3.75	3.75	1 (3.1)	JP66	JP66P	4.88 x 4.88	1 (1.0)/1 (0.3)
J863W	8.50	6.50	4.49	8.00	6.00	3.25	11.00	4.00	3.75	3.75	1 (3.2)	JP86	JP86P	6.75 x 4.88	1 (1.0)/1 (0.78)
J1085W	10.50	8.50	6.69	10.00	8.00	5.45	13.00	6.00	7.75	5.75	1 (5.6)	JP108	JP108P	8.75 x 6.88	1 (1.5)/1 (0.7)
J12106W	12.50	10.50	7.69	12.00	10.00	6.45	15.00	8.00	9.75	7.75	1 (7.4)	JP1210	JP1210P	10.75 x 8.88	1 (2.0)/1 (1.2)

Enclosures shipped with mounting feet, hinge caps and screws.

*Order back panels separately.

For factory-installed pad-lockable quick-release latch (part no. CJTL), consult Customer Service for price and delivery.



Circuit Safe® Pushbutton Enclosures

Circuit Safe® Non-Metallic Pushbutton Enclosures are molded from engineered thermoplastic material that is resistant to most corrosive agents. Whether predrilled 1-2-3 hole enclosures, blank cover enclosures or enclosures with multiple hole openings, Carlton's pushbutton enclosure series offers high-impact strength, chemical resistance, high dielectric strength and excellent durability for the correct application.

Features:

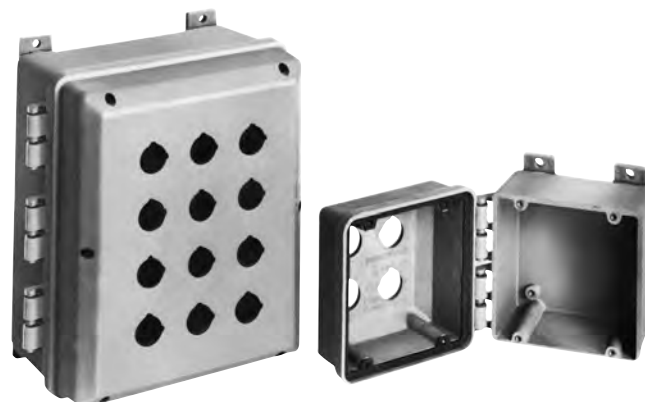
- Engineered thermoplastic base and cover
- 304 stainless steel screws
- Brass screw inserts
- High-impact strength
- Temperature range: -40° to 185°F

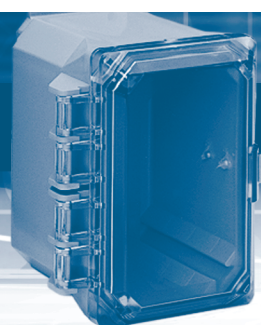
Applications:

- Standard oil-tight pushbuttons, switches and pilot lights
- Conduit entries
- Junction boxes
- MRO and OEM applications

Standards:

- Standards vary by product
- Screw cover pushbutton enclosures with 1-2-3 hole openings are listed per UL 50 for industrial controls
- Narrow-profile blank-screw cover enclosures are listed per UL 50 for industrial controls and meets NEMA Type 1, 3, 3S, 3X, 3SX, 4, 4X, 12 and 13
- Non-metallic hinged cover enclosures with multiple hole openings are UL Listed





Carlton®

Circuit Safe® Pushbutton Enclosures

UL Listed per UL 50 for Industrial Controls.

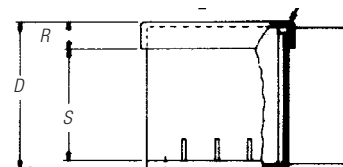
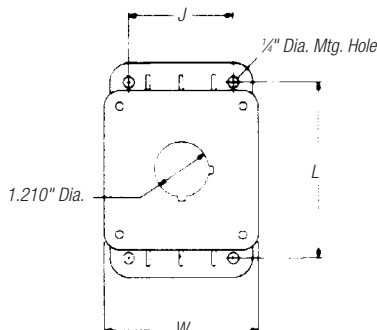
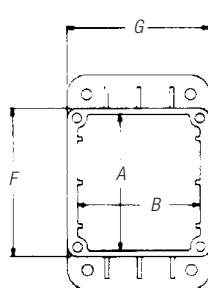


Screw Cover Enclosures with 1-2-3 Hole Openings

Wallmount pushbutton enclosures are molded from gray, engineered thermoplastic material that is resistant to most corrosive agents. Universal pushbutton holes are designed to accommodate all standard oil-tight pushbuttons, switches and pilot lights. A grounding plate is included on the cover. Auxiliary devices must be rated for appropriate NEMA applications.

Features:

- 30.5mm keyed pushbutton holes*
- Material: nylon base and cover
- Integrally molded mounting flange
- Brass screw inserts
- 304 (18-8) stainless screws (8-32 $\frac{3}{8}$ ")
- Temperature range: -40° to 185°F



30.5mm Pushbutton Enclosures †

CAT. NO.	STYLE	INSIDE BOX SIZE A X B X C	MOUNTING L X J	OVERALL OUTSIDE INCLUDING MOUNTING BRACKET H X W X D	F	G	R	S	STD. CTN.	STD. WT. (LBS.)
CP100N	One Opening	3.13 x 2.81 x 3	4 x 2.38	4.88 x 3.50 x 3.38	3.38	3.25	.63	2.5	12	9
CP200N	Two Openings	5.38 x 2.81 x 3	6.25 x 2.38	7.13 x 3.50 x 3.38	5.63	3.25	.63	2.5	8	8
CP300N	Three Openings	7.38 x 2.81 x 3	8.50 x 2.38	9.38 x 3.50 x 3.38	7.88	3.25	.63	2.5	6	7.60

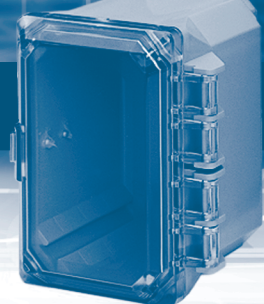
22mm Pushbutton Enclosures *†

CAT. NO.	STYLE	INSIDE BOX SIZE A X B X C	MOUNTING L X J	OVERALL OUTSIDE INCLUDING MOUNTING BRACKET H X W X D	F	G	R	S	STD. CTN.	STD. WT. (LBS.)
PX0010	One Opening	3.13 x 2.81 x 3	4 x 2.38	4.88 x 3.50 x 3.38	3.38	3.25	.63	2.5	10	8.26
PX0007	Two Openings	5.38 x 2.81 x 3	6.25 x 2.38	7.13 x 3.50 x 3.38	5.63	3.25	.63	2.5	1	1.31
PX0011	Three Openings	7.38 x 2.81 x 3	8.50 x 2.38	9.38 x 3.50 x 3.38	7.88	3.25	.63	2.5	6	9.43
PX0008	Four Openings	7.38 x 2.81 x 3	8.50 x 2.38	9.38 x 3.50 x 3.38	7.88	3.25	.63	2.5	1	1.60

* All Circuit Safe pushbutton enclosures are furnished with standard hole dimensions: 1 $\frac{1}{16}$ " diameter with keyways at 12 o'clock and 3 o'clock
† Dimensions are in inches unless marked otherwise. Operators not included.

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Circuit Safe® Pushbutton Enclosures





 LISTED E108856 LR31146

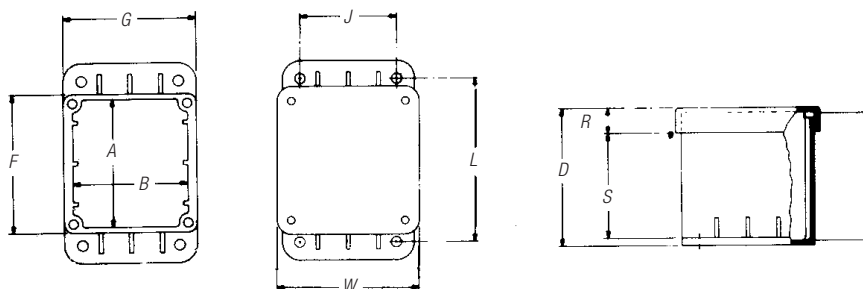
UL Listed per UL 50 for Industrial Controls.
Meets NEMA 1, 3, 3S, 3X, 3SX, 4, 4X, 12, 13.

Narrow-Profile Blank Screw Cover Enclosures for Small Instrumentation and Control Applications

Blank cover enclosures can be easily drilled with a standard hole saw for conduit entries and pushbuttons. Wallmount enclosures are molded from gray, engineered thermoplastic material and are resistant to most corrosive agents.

Features:

- Brass screw inserts
- Material: nylon base and cover
- Integrally molded mounting flange
- 304 (18-8) stainless screws (10-32/8")
- Temperature range: -40° to 185°F



Blank Screw Cover Enclosures *†

CAT. NO.	STYLE	INSIDE BOX SIZE A X B X C	MOUNTING L X J	OVERALL OUTSIDE INCLUDING MOUNTING BRACKET H X W X D	F	G	R	S	STD. CTN.	STD. WT. (LBS.)
CP100NB	Blank Cover	3.13 x 2.81 x 3	4 x 2.38	4.88 x 3.50 x 3.38	3.38	3.25	.63	2.5	12	9.60
CP200NB	Blank Cover	5.38 x 2.81 x 3	6.25 x 2.38	7.13 x 3.50 x 3.38	5.63	3.25	.63	2.5	8	8.8
CP300NB	Blank Cover	7.38 x 2.81 x 3	8.50 x 2.38	9.38 x 3.50 x 3.38	7.88	3.25	.63	2.5	6	8.20

* All Circuit Safe pushbutton enclosures are furnished with standard hole dimensions: 1 1/8" diameter with keyways at 12 o'clock and 3 o'clock
† Dimensions are in inches unless marked otherwise.

Carlton® Non-Metallic Enclosures

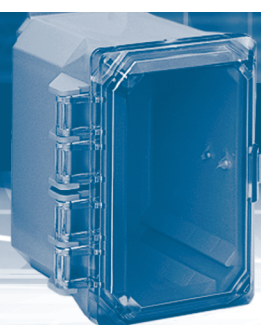
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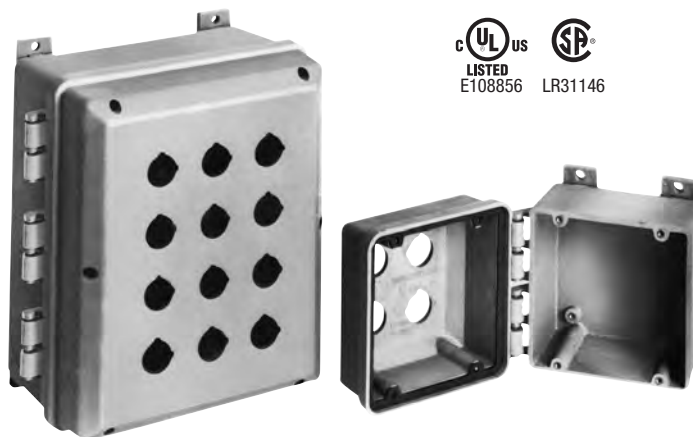
Circuit Safe® Pushbutton Enclosures

Hinged Cover Enclosures with Multiple Hole Openings

Made from engineered thermoplastic material, these enclosures are ideal for applications that require high-impact strength, chemical resistance, high dielectric strength and excellent weathering capabilities, including indoor/outdoor industrial, MRO and OEM applications. Non-metallic hinges are an integral part of the mold. Removable cover enables easy field adjustment. Auxiliary devices must be rated for appropriate NEMA applications.

Features:

- Non-metallic mounting feet and all mounting hardware included
- White-painted 14-gauge steel or 1½" PVC back panel (order separately)
- Material: engineered thermoplastic base and cover
- 304 stainless steel screws
- Brass screw inserts
- Lid design provides greater usable volume
- Completely non-metallic hinges
- Temperature range: -40° to 185°F



Screw Cover Pushbutton Enclosures with Multiple 30.5mm Openings*

CAT. NO.	OPENINGS	INSIDE BOX SIZE (IN.)	WEIGHT (LBS.)	STD. CTN.	PANEL CAT. NO.	SIZE (IN.) STEEL/PVC
J665P	4	6 x 6 x 5.88	2.42	1	JP66 / JP66P	4.88 x 4.88
J863P	6	8 x 6 x 3.63	1.86	1	JP86 / JP86P	6.75 x 4.88
J1085P	9	10 x 8 x 5.88	3.59	1	JP108 / JP108P	8.75 x 6.88
J12106P	12	12 x 10 x 6.88	4.29	1	JP1210 / JP1210P	10.75 x 8.88
J14126P	20	14 x 12 x 6.88	7.19	1	JP1412 / JP1412P	12.75 x 10.88
J16147P	25	16 x 14 x 7.63	11.20	1	JP1614 / JP1614P	14.75 x 12.88

For enclosures larger than 25 position, please call Customer Service.

* All Circuit Safe pushbutton enclosures are furnished with standard hole dimensions:

1½" diameter with keyways at 12 o'clock and 3 o'clock.

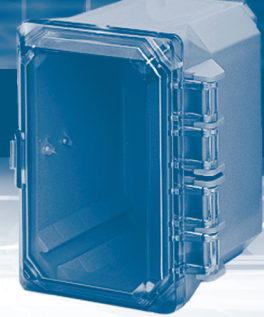
Special openings or positionings available on request.

Accessories

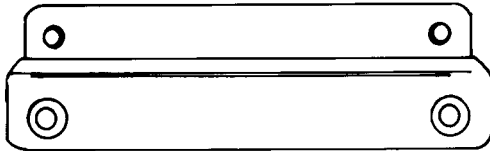
Gasketed Pushbutton Hole Plug

CAT. NO.	SIZE	STD. CTN.	STD. WT. (LBS.)
CP900	Standard PB Hole	100	2.0





Circuit Safe® NEMA Accessories



Mounting Rails*

MOUNTING RAIL KITS CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
NMK4V	4	25	5
NMK6V	6	24	7.7
NMK8V	8	24	10.25
NMK10V	10	20	13.26
NMK12V	12	20	11.4
NMK14V	14	25	17.76

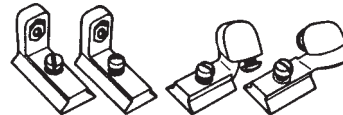
*Mounting Rails include 2 rails and 4 stainless steel screws.
Mounting Rails can be mounted on long or short side of enclosure.
Does not apply to 16" enclosure.



Panel Adjuster Kit (NBPADJ2)



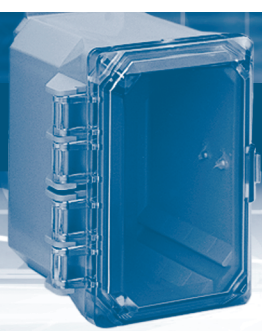
180° Swing-Out Panel Kit (NBPSWG)



Swing-Out Panel Adjuster Kit (NBPSWG2)

Panel Adjuster Kits

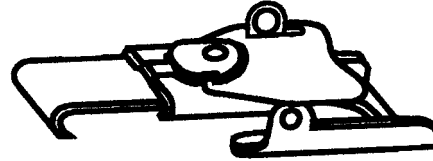
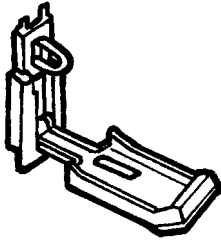
CAT. NO.	PRODUCT	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
NBPADJ2	Panel Adjuster Kit	4 Panel Adjusters (4) #10-32 Screws to Mount Panel	10 kits	2.07
NBPSWG	180° Swing-Out Panel Kit	4 Panel Adjusters 2 Hinges (2) #10-32 Screws to Mount Panel	10 kits	2.68
NBPSWG2	Swing-Out Panel Adjuster Kit	2 Hinged Adjusters 2 Panel Adjusters (4) #10-32 Screws	10 kits	1.80



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Circuit Safe® Enclosure Accessories

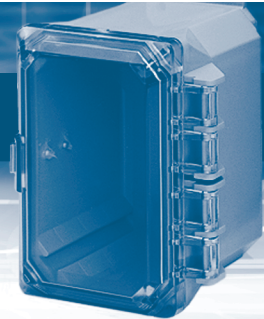
Circuit Safe® NEMA Accessories



For NEMA hinged enclosures.

Latch Kits

CAT. NO.	PRODUCT	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
NPL1L	Non-Metallic Quick-Release Latch Kit	Quick-Release Latch Kit for Use with Hidden Hinge Enclosure for NH & NI Series	25	2.00
NPL1S	Non-Metallic Quick-Release Latch Kit	Quick-Release Latch Kit for Use with External Hinge Enclosure for NJ & NC Series	25	2.00
SSLL	304 Stainless Steel Quick-Release Latch Kit	Quick-Release Latch Kit for Use with Hidden Hinge Enclosure for NH & NI Series	25	4.27
SSLS	304 Stainless Steel Quick-Release Latch Kit	Quick-Release Latch Kit for Use with External Hinge Enclosure for NJ & NC Series	25	3.41



Circuit Safe® JIC Accessories



For Circuit Safe® Enclosures —
Type CC, CJ, CS, CV, J.

Mounting Feet

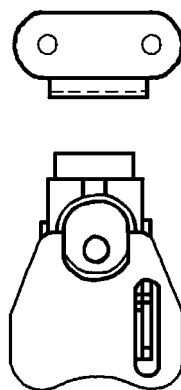
CAT. NO.	STD. CTN.	STD. WT. (LBS.)
CJB159*	As required	0.04

*CJB159 non-metallic mounting feet provide 1/4" standoff and may be used to mount enclosures in horizontal or vertical mode. They are shipped with all Circuit Safe® JIC enclosures. No screws are provided when mounting feet are ordered separately.

JIC Installation Kits*

CAT. NO.	STD. CTN.	STD. WT. (LBS.)
CH208	1 Kit	0.25

*Installation kit is included as standard equipment with all JIC enclosures. Information listed here for purposes of additional purchase only. Kit includes 4 mounting feet, 8 hinge caps and 8 screws.

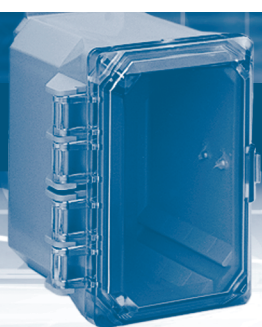


JIC Latch Kits*

CAT. NO.	STD. CTN.	STD. WT. (LBS.)
CJB159*	As required	0.04

Stainless steel. Kit includes latch and keeper.

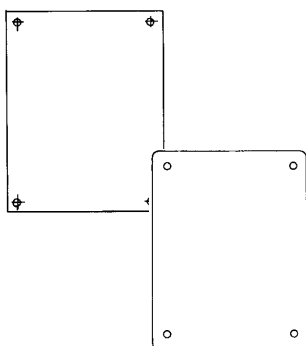
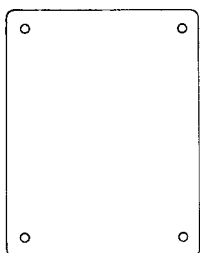
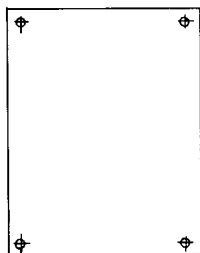
* Factory installed. Consult Customer Service for price and delivery. Not UL Listed.



Carlton®

Circuit Safe® Enclosure Accessories

Circuit Safe® JIC Accessories



Steel back panels are white-painted 14-gauge steel.

Steel Back Panels*

CAT. NO.	THICKNESS	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
JP64	14 gauge	4.88 x 2.88	1	0.6
JP66	14 gauge	4.88 x 4.88	1	1.0
JP86	14 gauge	6.75 x 4.88	1	1.0
JP88	14 gauge	6.75 x 6.88	1	1.2
JP108	14 gauge	8.75 x 6.88	1	1.5
JP1010	14 gauge	8.75 x 8.88	1	2.3
JP1210	14 gauge	10.75 x 8.88	1	2.7
JP1212	14 gauge	10.75 x 10.88	1	3.5
JP1412	14 gauge	12.75 x 10.88	1	3.8
JP1614	14 gauge	14.75 x 12.88	1	4.7

PVC back panels are made from ¼" PVC and meet UL94 V-0.

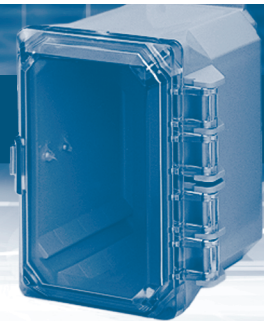
PVC Back Panels*

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
JP64P	4 ¾ x 2 ¾	1	0.3
JP66P	4 ¾ x 4 ¾	1	0.3
JP86P	6 ¾ x 4 ¾	1	0.4
JP88P	6 ¾ x 6 ¾	1	0.5
JP108P	8 ¾ x 6 ¾	1	0.7
JP1010P	8 ¾ x 8 ¾	1	0.9
JP1210P	10 ¾ x 8 ¾	1	1.2
JP1212P	10 ¾ x 10 ¾	1	1.5
JP1412P	12 ¾ x 10 ¾	1	1.7
JP1614P	14 ¾ x 12 ¾	1	2.3

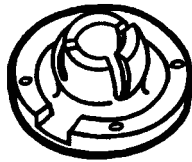
Medium NEMA Back Panels*

CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
NP2016 / NP2016P	17 x 13	1	7.0/6.125
NP2420 / NP2420P	21 x 17	1	10.4/4.71
NP3024 / NP3024P	27 x 21	1	18.0/9.781

*Circuit Safe NEMA enclosures are not shipped with back panels, which must be ordered separately.
All accessories can be factory installed. Consult Customer Service for price and delivery.



Circuit Safe® NEMA and JIC Accessories



For 3R Rating and condensation buildup.

Draining Device*

CAT. NO.	STD. CTN.
HPVEA9	30

*Factory installation available.

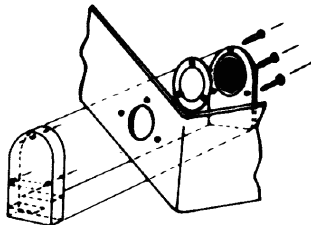


NEMA 1 Rated only.

Air Vents*

CAT. NO.	STYLE	STD. CTN.
HPVM25	For Fitting Outside of All Enclosures	30
HPVM35	For Fitting Inside of All Enclosures	30

*Factory installation available.

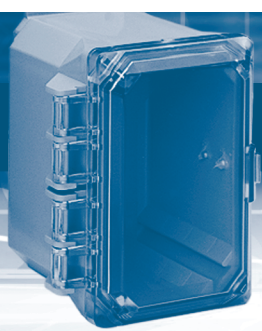


Enables any size enclosure to breathe, yet remain watertight.

Enclosure Ventilator*

CAT. NO.	STD. CTN.
HVM27	15

*Factory installation available.



Carlton®

Circuit Safe® Enclosure Accessories

Window Kits



Carlton® hinged window kits are used to create a NEMA 4X environment on electronic control panels. Polycarbonate construction and double gaskets ensure environmental integrity.

Features:

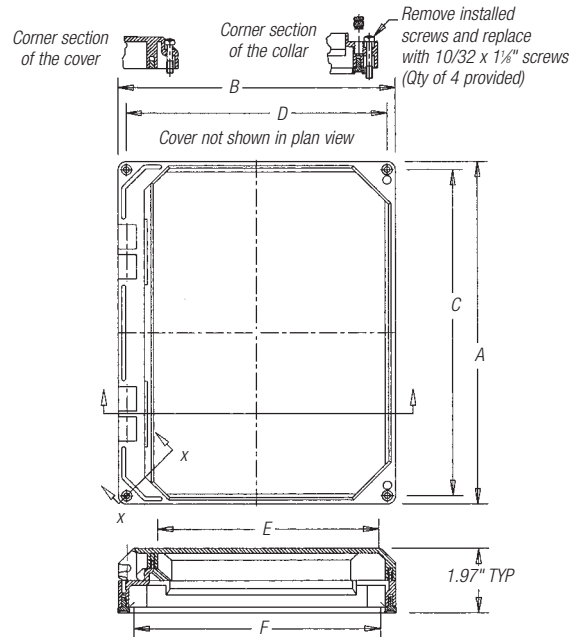
- High-impact strength
- High dielectric strength
- Suitable for indoor and outdoor use
- Fully gasketed

Standards:

- UL Listed and meets NEMA Type 4X with the exception of NI1614W; all sizes are NEMA Type 1 and 12 rated

Applications:

- Instrument case
- Junction and terminal boxes
- Control and switching enclosures
- Meter and transformer cabinets
- Small device enclosures
- Surface-mounted instruments



CAT. NO.*	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
NI64W	6 x 4	1	.8
NI66W	6 x 6	1	.9
NI86W	8 x 6	1	1.17
NI88W	8 x 8	1	1.4
NI108W	10 x 8	1	1.5
NI1010W	10 x 10	1	1.82
NI1210W	12 x 10	1	2.12
NI1212W	12 x 12	1	2.65
NI1412W	14 x 12	1	2.67
NI1614W ¹	16 x 14	1	3.10

All window kits can be factory installed to Carlton® enclosures. Consult factory for price and delivery.

* Non-stock factory order only — consult Customer Service.

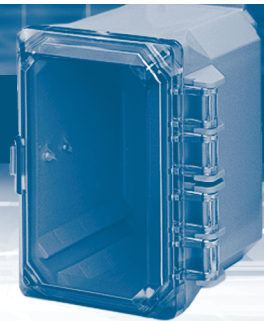
¹ NI1614W NEMA Type 12 Rated

SIZE	DIMENSIONS					
	A	B	C	D	E	F
NI64W	6.42 (163.1)	4.41 (112.0)	5.92 (150.4)	3.94 (100.0)	2.72 (69.1)	3.80 (96.5)
NI66W	6.42 (163.1)	6.42 (163.1)	5.94 (150.9)	5.94 (150.9)	4.72 (119.9)	5.80 (147.3)
NI86W	8.44 (214.4)	6.42 (163.1)	7.92 (201.2)	5.94 (150.9)	4.72 (119.9)	5.80 (147.3)
NI88W	8.44 (214.4)	8.43 (214.1)	7.95 (201.9)	7.95 (201.9)	6.72 (170.7)	7.80 (198.1)
NI108W	10.46 (265.7)	8.45 (214.6)	9.95 (253.5)	7.96 (202.2)	6.72 (170.7)	7.80 (198.1)
NI1010W	10.45 (265.4)	10.45 (265.4)	9.97 (253.2)	9.97 (253.2)	8.72 (221.5)	9.80 (248.9)
NI1210W	12.46 (316.5)	10.45 (265.4)	11.99 (304.5)	9.97 (253.2)	8.72 (221.5)	9.80 (248.9)
NI1212W	12.50 (317.5)	12.50 (317.5)	12.00 (304.8)	12.00 (304.8)	10.72 (272.3)	11.80 (299.7)
NI1412W	14.50 (368.3)	12.50 (317.5)	14.01 (355.9)	12.00 (304.8)	10.72 (272.3)	11.80 (299.7)
NI1614W	16.52 (419.6)	14.48 (367.8)	16.03 (407.2)	14.02 (356.1)	12.72 (323.1)	13.80 (350.5)

NOTE: Chart dimensions read in (mm)

Carlton®

Himeline® Enclosures



Himeline® Enclosures HS, HP, HLA/HLS Series

Carlton® Himeline® enclosures are the ideal alternative to expensive stainless steel enclosures. They have excellent corrosion-resistant properties and are impervious to sunlight, dirt and moisture. Available in four series (HS, HP and HLA/HLS), with sizes ranging from 11 x 7 x 7 through 50 x 40 x 17, these enclosures offer choices that include double doors, clear or opaque covers, hinged and screw versions, single- or three-point closure mechanisms, 4X windows, DIN rail mounting and an adjustable depth door-in-door option that enables you to customize your enclosures by separating power from communications.



Features:

- High-impact strength
- High dielectric strength
- Suitable for indoor and outdoor use
- Fully gasketed
- Lightweight

Applications:

- Instrument case
- Junction and terminal boxes
- Control and switching enclosures
- Meter and transformer cabinets
- Small device enclosures

Standards:

- Meets NEMA and IP standards as indicated in appropriate section
- UL Listed as indicated

Carlton® Non-Metallic Enclosures

Corporate Office
Tel: 901.252.8000
800.816.7809
Fax: 901.252.1354

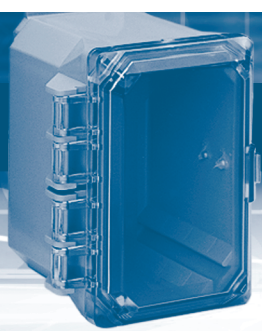
Customer Service
Tel: 800.816.7809
Fax: 800.816.7810

Technical Services
Tel: 888.862.3289
Fax: 901.252.1321

Tool Services
Tel: 800.284.8665

Thomas&Betts
www.tnb.com

Q-27



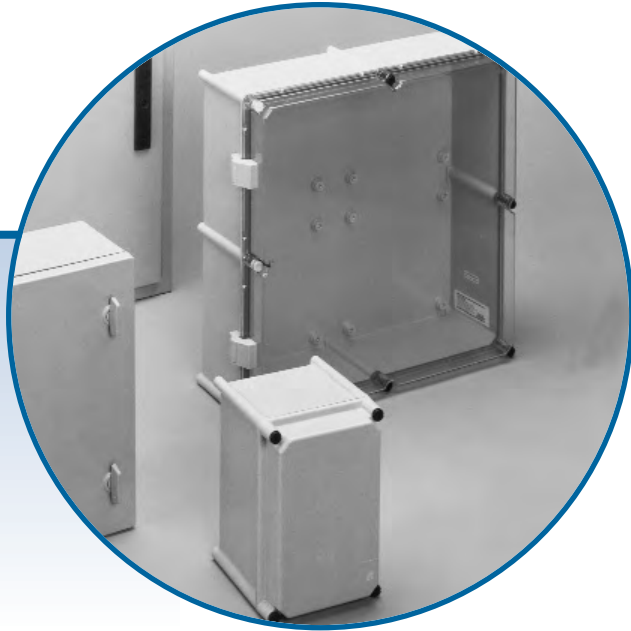
Carlton®

Himeline® Enclosures — HS Series

HS Series Screw-On Fastened and Hinged Cover Enclosures

- Meets NEMA 1, 3, 3S, 4, 4X, 12, 13
- Meets IP 65

Himeline® HS Series enclosures are designed for use as junction boxes, terminal wiring boxes, instrument and control housings and small device enclosure applications. Molded under high pressure, Himeline® HS Series enclosures provide high-impact strength, chemical resistance, high dielectric strength and excellent weathering capabilities.



Features:

- Standard slotted locking screw
- High-impact strength
- Chemical resistance
- High dielectric strength
- Excellent weathering capabilities
- Sealing gasket on all models
- Sunlight resistant

Applications:

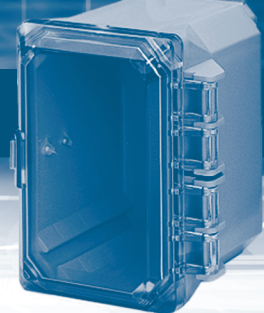
- Junction boxes
- Terminal wiring boxes
- Instrument and control housings
- Small device enclosure applications
- Indoor or outdoor use

Material:

- Opaque/Clear Lid — Polycarbonate
- Base — Fiberglass Reinforced Polyester

Standards:

- Meets NEMA 1, 3, 3S, 4, 4X, 12, 13 standards as indicated
- UL Listed per UL 50, enclosures for electrical equipment
- Meets IP 65
- UL Listed (E108856)



HS Series Screw-On Fastened and Hinged Cover Enclosures

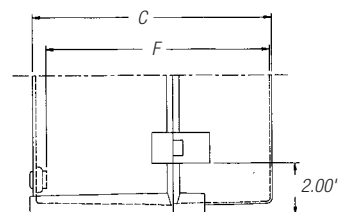
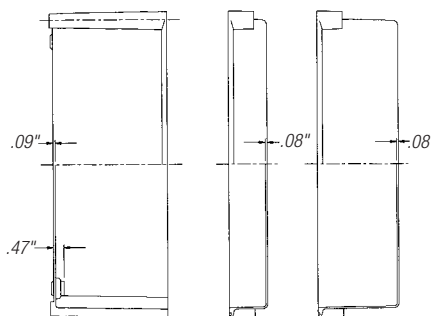
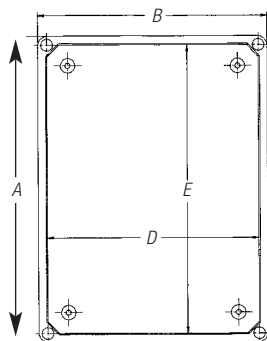


Features:

- Molded under high pressure
- High-impact strength
- Chemical resistance
- High dielectric strength
- Excellent weathering capabilities
- Clear cover available

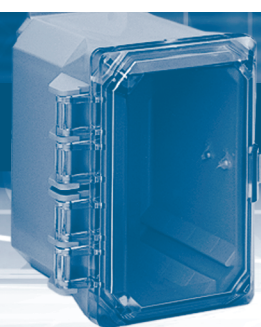


Carlton® Non-Metallic Enclosures



OPAQUE SCREW-ON COVER CAT. NO.	CLEAR SCREW-ON COVER CAT. NO.	OPAQUE HINGED COVER CAT. NO.	CLEAR HINGED COVER CAT. NO.	DIMENSIONS (IN.)						OPAQUE WT. (LBS.) EACH SCREW/ HINGED	CLEAR WT. (LBS.) EACH SCREW/ HINGED	STD. CTN.	BACK PANEL CAT. NO.	DIMENSIONS (IN.) H X W	THICK- NESS (IN.)	STD. WT. (LBS.)	STD. CTN.
				EXTERNAL			INTERNAL										
				A	B	C	D	E	F								
HS7A7	HS7A7C	HH7A7	HH7A7C	10.63	7.09	7.09	6.26	9.80	6.54	10.7/7	10.9/6.2	4	HS7ABP	5.51 x 9.05	.08	1.1	1
HS11A7	HS11A7C	HH11A7	HH11A7C	10.63	10.63	7.09	9.80	9.80	6.54	15.2/8.5	14/8	4	HS11ABP	9.05 x 9.05	.08	1.7	1
HS11B7	HS11B7C	HH11B7	HH11B7C	14.17	10.63	7.09	9.80	13.35	6.54	17/4	18/4	4	HS11BBP	9.05 x 12.60	.08	2.4	1
HS11C7	HS11C7C	HH11C7	HH11C7C	21.26	10.63	7.09	9.80	20.43	6.54	13/13	12.5/13	2	HS11CBP	9.05 x 19.68	.08	3.9	1
HS15C7	HS15C7C	HH15C7	HH15C7C	21.26	14.17	7.09	13.35	20.43	6.54	17.7/11	18/11	2	HS15CBP	12.60 x 19.68	.08	6.6	1
HS21C7	HS21C7C	HH21C7	HH21C7C	21.26	21.26	7.09	20.43	20.43	6.54	12.5/13	12/13	1	HS21CBP	19.68 x 19.68	.08	8.8	1
HS11A9	HS11A9C	HH11A9	HH11A9C	10.63	10.63	9.06	9.80	9.80	8.47	15/4	16.6/5	4	HS11ABP	9.05 x 9.05	.08	1.7	1
HS11B9	HS11B9C	HH11B9	HH11B9C	14.17	10.63	9.06	9.80	13.35	8.47	20/6	19/6	4	HS11BBP	9.05 x 12.60	.08	2.5	1
HS11C9	HS11C9C	HH11C9	HH11C9C	21.26	10.63	9.06	9.80	20.43	8.47	14/9	14/9	2	HS11CBP	9.05 x 19.68	.08	3.9	1
HS15C9	HS15C9C	HH15C9	HH15C9C	21.26	14.17	9.06	13.35	20.43	8.47	18.5/11	19/11	2	HS15CBP	12.60 x 19.68	.08	6.6	1
HS21C9	HS21C9C	HH21C9	HH21C9C	21.26	21.26	9.06	20.43	20.43	8.47	13/14	14/14	1	HS21CBP	19.68 x 19.68	.08	8.8	1
HS15D9	HS15D9C	HH15D9	HH15D9C	28.35	14.17	9.06	13.35	27.52	8.47	13/13	13/13	1	HS15DBP	12.60 x 26.77	.10	9.5	1
HS21D9	HS21D9C	HH21D9	HH21D9C	28.35	21.26	9.06	20.43	27.52	8.47	18/18	17/18	1	HS21DBP	19.68 x 26.77	.10	15.5	1

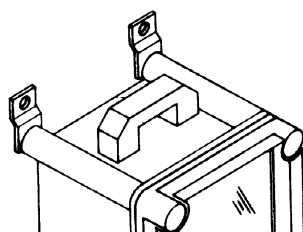
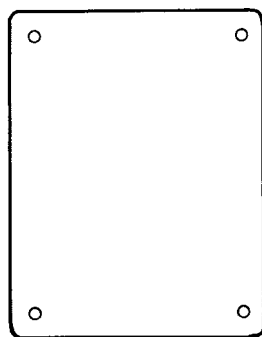
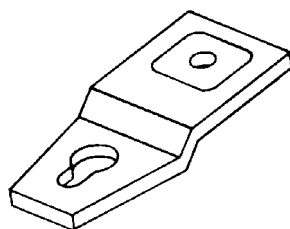
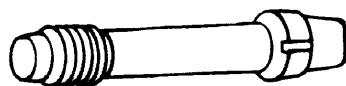
Back panels and mounting feet must be ordered separately.
Consult Customer Service for availability and delivery.



Carlton®

Himeline® Enclosures — HS Series

Accessories



For Himeline HS Enclosures.

Thumb Screws

CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HSTS4	25	0.1
HSTS6	25	0.15

For Himeline HS Enclosures.

Mounting Feet

CAT. NO.	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
HSMFZ	Zinc Dichromated Steel	25	0.2
HSMFSS	304 Stainless Steel	25	0.2

For Himeline HS Enclosures*, metal back panels are white-painted 14-gauge steel.

Back Panels

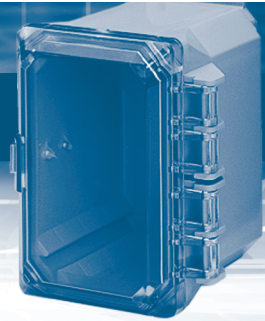
CAT. NO.	SIZE (IN.)	STD. CTN.	STD. WT. (LBS.)
HS7ABP	5.51 x 9.05	1	1.2
HS11ABP	9.05 x 9.05	1	2.0
HS11BBP	9.05 x 12.06	1	2.7
HS11CBP	9.05 x 19.68	1	4.3
HS15CBP	12.60 x 19.68	1	7.1
HS21CBP	19.68 x 19.68	1	9.6
HS15DBP	12.60 x 26.77	1	10.2
HS21DBP	19.68 x 26.77	1	16.6

*Himeline HS enclosures are not shipped with back panels. Order separately.
PVC back panels available upon request. Consult Customer Service.

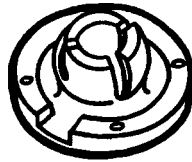
Converts enclosures to portable units for meters and portable power.

Non-Metallic Carrying Handle

CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HSCH	10	0.2



Accessories



For 3R Rating and condensation buildup.

Draining Device*

CAT. NO.	STD. CTN.
HPVEA9	30

*Factory installation available.

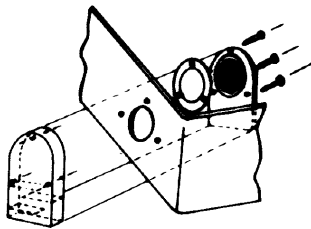


NEMA 1 Rated only.

Air Vents*

CAT. NO.	STYLE	STD. CTN.
HPVM25	For Fitting Outside of All Enclosures	25
HPVM35	For Fitting Inside of All Enclosures	30

*Factory installation available.

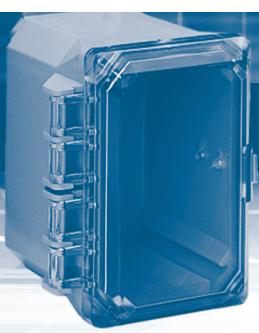


Enables any size enclosure to breathe, yet remain watertight.

Enclosure Ventilator*

CAT. NO.	STD. CTN.
HVM27	15

*Factory installation available.



Carlton®

Himeline® Enclosures — HP Series (Fiber-Reinforced Polyester)

HP Series Enclosures with Hinged Quick-Release Cover

- Meets NEMA 1, 3, 3S, 4, 4X, 12, 13
- Meets IP 66

Himeline® HP Series enclosures for medium-sized devices and equipment provide superior performance as junction and terminal wiring boxes and instrument and control housing applications.

For indoor/outdoor industrial, MRO and OEM applications. HP Series enclosures are resistant to corrosion, sunlight, chemicals, dirt and moisture. Temperature range from -58° F to 320° F.



Features:

- Projections for affixing cover mounted panel
- Door-locking mechanism convertible to key lock
- M8x18 studs for back panel mounting (included)
- Hidden hinges open 185° for easy access
- Multi-positional DIN rail fixing components
- Removable stainless steel hinge pins
- Single-piece construction
- Opaque or tempered glass window option
- Steel, non-metallic and slotted back panels available
- External and internal venting available
- Hinged, variable-height inner panel option
- Quick-locking ¼-turn entry
- Underside grid pattern on inner door panel
- Self-positioning panel depth adjusters
- Pole mounting kit
- Pedestal mounting capability
- Sunlight resistant

Applications:

- Junction boxes
- Terminal wiring boxes
- Instrument and control housing
- Indoor or outdoor use

Standards:

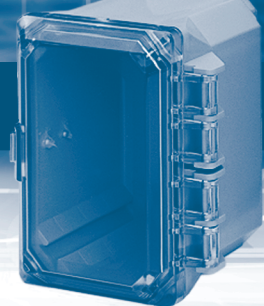
- NEMA Type 1, 3, 3S, 4, 4X, 12, 13
- UL Listed per UL 50, enclosures for electrical equipment
- Meets IP 66

Material:

- Lids/Bases — Fiberglass-reinforced polyester

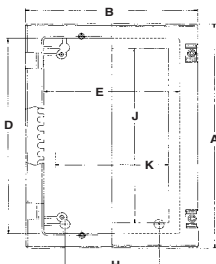
Carlton®

Himeline® Enclosures — HP Series (Fiber-Reinforced Polyester)



Carlton® Non-Metallic Enclosures

HP Series Enclosures with Hinged Quick-Release Cover



Depth with back panel installed

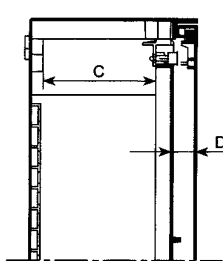
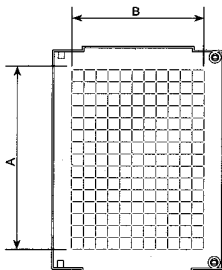
ENCLOSURE WITH OPAQUE COVER CAT. NO.	STD. WT. (LBS.)	ENCLOSURE WITH CLEAR WINDOW*	STD. WT. (LBS.)	WINDOW DIMENSIONS (H X W) (IN.)	DIMENSIONS (IN.)										STD. CTN.
					EXTERNAL			INTERNAL			MOUNTING		WINDOW		
					A	B	C	D	E	F	G	H	J	K	
HP1612B	11.04	HC1612B	12.5	11 x 7.87	16.93	12.99	7.87	14.96	10.24	6.61	14.76	5.91	11.02	7.87	1
HP2016B	16.80	HC2016B	17.2	14.96 x 11.81	20.87	16.93	7.87	18.90	14.17	6.61	18.70	9.84	14.96	11.81	1
HP2416C	21.13	HC2416C	24.12	18.89 x 11.81	25.47	17.17	9.84	22.83	14.17	8.35	22.64	9.84	18.90	11.81	1
HP3020D	32.28	HC3020**	36.02	22.83 x 15.74	29.41	21.10	11.81	26.77	18.11	10.28	26.57	13.78	22.83	15.75	1
HP3325D	39.00	HC3325D**	43.12	26.77 x 19.68	33.35	25.04	11.81	30.71	22.05	10.28	30.51	17.72	26.77	19.69	1

* HC Enclosures are IP 65 Rated. Clear window is glass.

** This series of enclosures comes standard with body, lid and mounting rail kit.
Consult Customer Service for availability and delivery.

Hinged Internal Door

- Internal fiberglass-reinforced polyester door assembly
- Grid pattern on the inside for quicker positioning of equipment
- Quick-locking ¼-turn entry



CAT. NO.	A		B		C		D		STD. CTN.	STD. WT. (LBS.)
	IN.	(MM)	IN.	(MM)	IN.	(MM)	IN.	(MM)		
PID1612	12.40	(315)	18.07	(205)	5.98	(152)	1.02	(26)	1	2.05
HP2016B	16.34	(415)	12.00	(305)	5.98	(152)	1.02	(26)	1	3.15
HP2416C	20.28	(515)	12.00	(305)	7.64	(194)	1.26	(32)	1	4.50
HP3020D	24.21	(615)	15.94	(405)	9.61	(244)	1.26	(32)	1	6.50
HP3325D	28.15	(715)	19.88	(505)	9.61	(244)	1.26	(32)	1	8.45

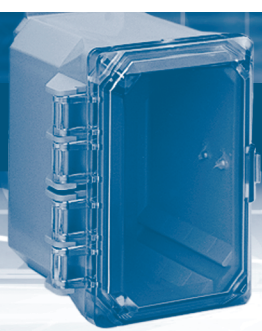
Corporate Office
Tel: 901.252.8000
800.816.7809
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Tel: 800.284.8665

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Carlton®

Himeline® Enclosures — HP Series

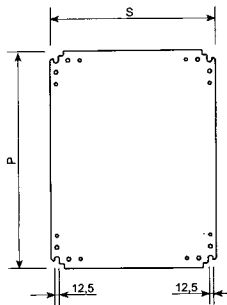
A complete range of plates — directly fix to the enclosure supports or to the adjustable depth supports.

Back Panels Dimensions

Refer to the Enclosure Accessories section for back panel accessories.

Steel back panels are white-painted 14-gauge steel.

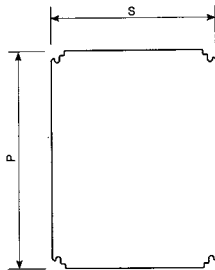
Steel Back Panels



CAT. NO.	TO FIT ENCLOSURES	THICKNESS		WEIGHT		P (IN.)	S (IN.)
		IN.	(MM)	LBS.	(KG)		
PMM1612	HP1612B	.079	(2)	3.10	(1.6)	14.37	9.84
PMM2016	HP2016B	.079	(2)	6.15	(2.5)	18.30	13.78
PMM2416	HP2416C	.079	(2)	8.0	(3.1)	22.24	13.78
PMM3020	HP3020D	.079	(2)	12.04	(4.6)	26.18	17.72
PMM3325	HP3325D	.118	(3)	20.0	(9.9)	30.11	21.65

PVC back panels are made from 1/4" PVC and meet UL94 V-0.

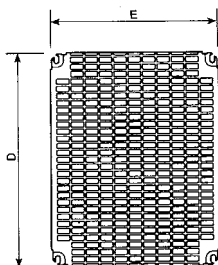
PVC Insulating Back Panels



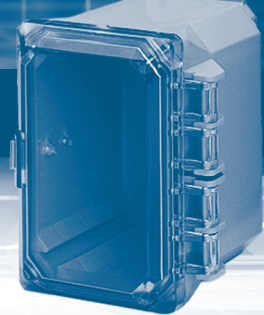
CAT. NO.	TO FIT ENCLOSURES	WEIGHT		P		S	
		LBS.	(KG)	IN.	(MM)	IN.	(MM)
PMB1612	HP1612B	1.10	(0.5)	14.37	(365)	9.84	(250)
PMB2016	HP2016B	2.65	(1.2)	18.30	(465)	13.78	(350)
PMB2416	HP2416C	3.09	(1.4)	22.24	(565)	13.78	(350)
PMB3020	HP3020D	4.63	(2.1)	26.18	(665)	17.72	(450)
PMB3325	HP3325D	6.62	(3.0)	30.11	(765)	21.65	(550)

Zinc, dichromated, coated-steel plates perforated for addition of electrical circuitry.

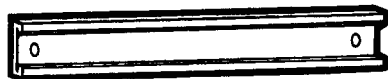
PVC Insulating Back Panels



CAT. NO.	TO FIT ENCLOSURES	WEIGHT		D		E	
		LBS.	(KG)	IN.	(MM)	IN.	(MM)
PMR1612	HP1612B	1.54	(0.7)	13.74	(349)	9.8	(251)
PMR2016	HP2016B	2.87	(1.3)	17.72	(450)	13.82	(351)
PMR2416	HP2416C	3.53	(1.6)	21.85	(555)	13.82	(351)
PMR3020	HP3020D	5.07	(2.3)	25.39	(645)	17.76	(451)
PMR3325	HP3325D	7.06	(3.2)	29.53	(750)	21.69	(551)



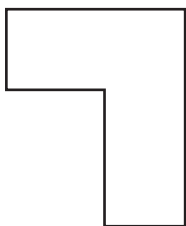
35mm Symmetrical DIN Rail



CAT. NO.	TO FIT ENCLOSURES	WIDTH (IN.)	STD. CTN.
HPC0300	HP1612B	11.02	25
HPC0400	HP2016B, HP2416C	14.96	2
HPC0500	HP3020D	18.90	50

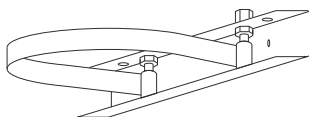
To close off openings on enclosure backs.

Blanking Grommet



CAT. NO.	FITS ENCLOSURE SIZES	DESCRIPTION	STD. CTN.	STD. WT. (LBS.)
HPBNGB	16 x 12 and 20 x 16	Blanking Grommet	10	1.00
HPBNGC	24 x 16, 30 x 20 and 33 x 25	Blanking Grommet	20	1.00

Pole Mounting Set



CAT. NO.	TO FIT ENCLOSURES	STD. CTN.
HPPF300	HP1612B	1
HPPF400	HP2016B, HP2416C	1
HPPF500	HP3020D	1
HPPF600	HP3325D	1

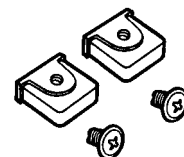
Wall Mounting Set



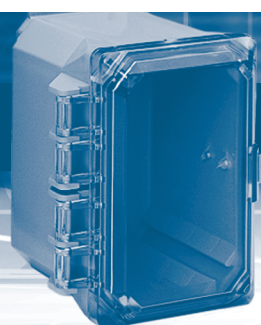
CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HPWMF	10	0.1

Includes brass inserts and installation tools.

Rail Mounting Insert



CAT. NO.	FEATURES	STD. CTN.
HPRFK	Fits All Enclosures	10



Carlton®

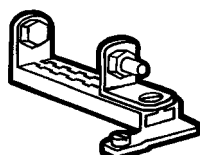
Himeline® Enclosures — HP Series

Fixing Accessories for Slotted Plates



CAT. NO.	FIXING NUT		CAT. NO.	FIXING BOLT WITH WASHER	
	TYPE OF THREAD	STD. CTN.		LENGTH (IN.)	STD. CTN.
HPFA4	M4	8	HPFB104	.39	1000
HPFA4	M4	8	HPFB164	.63	1000
HPFA5	M5	8	HPFB125	.47	1000
HPFA5	M5	8	HPFB185	.71	1000
HPFA6	M6	8	HPFB126	.47	1000
HPFA6	M6	8	HPFB186	.71	1000

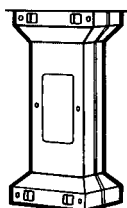
Back Panel Depth Adjustable Supports



Supports designed to fit 7.87" (200mm), 9.84" (250mm), 11.81" (300mm) and 13.78" (350mm) deep enclosures. Self-positioning slots enable adjustment every .49" (12.5mm). Made of zinc dichromated coated steel.

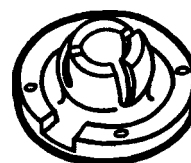
CAT. NO.	TO FIT ENCLOSURES	A IN./MM	B IN./MM	STD. CTN.
HPLM200	HP1612B & HP2016B	5.98/152	3.90/99	8
HPLM250	HP2416C	8.07/205	4.13/105	15
HPLM300	HP3020D & HP3325D	10.04/255	8.07/205	10

Pedestal Mount



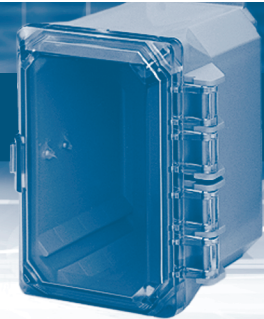
CAT. NO.	TO FIT ENCLOSURES	STD. CTN.
HPSFS1	HP2016B HP2416C	1

For 3R Rating and condensation buildup. Draining Device*



CAT. NO.	STD. CTN.
HPVEA9	30

*Factory installation available.



NEMA 1 Rated only.

Air Vents*

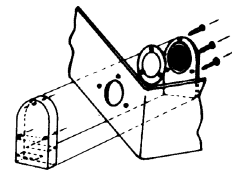


CAT. NO.	STYLE	STD. CTN.
HPVM25	For Fitting Outside of All Enclosures	30
HPVM35	For Fitting Inside of All Enclosures	30

*Factory installation available.

Enables any size enclosure to breathe, yet remain watertight.

Enclosure Ventilator*



CAT. NO.	STD. CTN.
HVM27	15

*Factory installation available.

Replacement Standard Handle



CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HPRSH	1	0.05

For Himeline HP Enclosures HP3020D and HP3325D.

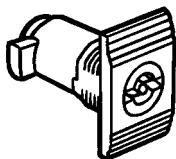
Coupling Frame



CAT. NO.	STD. CTN.
HPBU	1

For Himeline HP Enclosures.

Locks



Replacement Door Lock

CAT. NO.	STD. CTN.
HPRLA	15

For replacement handle, order HPRSH.



Cylinder Key Lock (Keyed Alike)

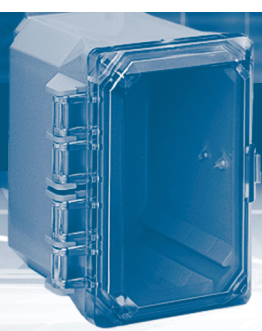
CAT. NO.	STD. CTN.
HPTPLM	15

For replacement key, order HPRKO.



Padlocking Service

CAT. NO.	STD. CTN.
HPPLH	20



Carlton®

Himeline® Enclosures — HLA/HLS Series (Fiber-Reinforced Polyester)

HLA/HLS Series Enclosures

Carlton® Himeline® HLA/HLS Series Enclosures are large fiber-reinforced polyester cabinets ranging in sizes 20 x 20 x 17 to 50 x 40 x 17 and 20 x 20 x 12 to 50 x 40 x 12, respectively. They have operating temperatures of -50° to 150° C and can accommodate large devices and equipment for a wide range of applications, including junction and terminal wiring boxes, instruments and control housings. They are ideal for indoor/outdoor industrial, MRO and OEM applications, and offer superior strength and high resistance to corrosion, moisture, dust, oil and UV light, enabling them to withstand the harshest of environments.

The HLA/HLS Series Enclosures are fitted with a watertight gasket and are available in one- and two-door configurations. These cabinets have a closed top and bottom and the two-door version includes a central upright to maintain rigidity.

To maintain the watertight seal, the locking mechanism is positioned outside the gasketed area. A wide variety of accessories are available such as steel and non-metallic back panels, self-positioning panel depth adjusters and ventilator kits.

Carlton® Enclosures... the ideal alternative to expensive stainless steel enclosures.

Features:

- Fiber-reinforced polyester
- Temperature range of -58° to 302° F (-50° to 150° C)
- Indoor/outdoor applications
- Superior strength
- High resistance to harsh environments
- Watertight gasket seal
- One- and two-door configurations
- Locking mechanism and hinge are outside gasketed area
- Floor or wall mounted

Applications:

- Contain large devices and equipment
- Junction and terminal wiring boxes
- Instrument and control housings

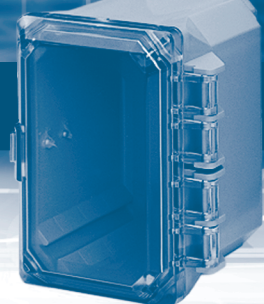
Standards:

- IP 65 Rating (single-door versions only)
- 4/4X Rated (single-door versions only)
- UL Listed



Carlton®

Himeline® Enclosures — HLA/HLS Series (Fiber-Reinforced Polyester)



HLA/HLS Series Single- and Double-Hinged Cover Enclosures with Latches*



One-Door NEMA Types 1, 2, 3, 3R, 4, 4X, 5, 12, 13



HLA One Door (17" Deep)

CAT. NO.	DIMENSIONS (IN.)			STD. CTN.	STD. WT. (LBS.)
	H	W	D		
HLA2020	20	20	17	1	38.3
HLA2030	20	30	17	1	53.9
HLA3020	30	20	17	1	53.9
HLA3030	30	30	17	1	60.7
HLA4020	40	20	17	1	63.1
HLA4030	40	30	17	1	81.0
HLA5020	50	20	17	1	78.7
HLA5030	50	03	17	1.	96.7

* Consult Customer Service for availability and delivery.

HLS One Door (12" Deep)

CAT. NO.	DIMENSIONS (IN.)			STD. CTN.	STD. WT. (LBS.)
	H	W	D		
HLS2020	20	20	12	1	29.8
HLS2030	20	30	12	1	40.59
HLS3020	30	20	12	1	49.5
HLS3030	30	30	12	1	55.1
HLS4020	40	20	12	1	56.81
HLS4030	40	30	12	1	61.7
HLS5020	50	20	12	1	67.56
HLS5030	50	03	12	1	76.83

* Consult Customer Service for availability and delivery.

Two-Door NEMA Types 1, 2, 12, 13



HLA Two Door (17" Deep)

CAT. NO.	DIMENSIONS (IN.)			STD. CTN.	STD. WT. (LBS.)
	H	W	D		
HLA30402	30	40	17	1	81.0
HLA40402	40	40	17	1	114.7
HLA40502	40	40	17	1	135.0
HLA50402	50	40	17	1	135.0

HLS Two Door (12" Deep)

CAT. NO.	DIMENSIONS (IN.)			STD. CTN.	STD. WT. (LBS.)
	H	W	D		
HLS30402	30	40	12	1	62.57
HLS40402	40	40	12	1	87.59
HLS40502	40	40	12	1	104.28
HLS50402	50	40	12	1	104.28

Carlton® Non-Metallic Enclosures

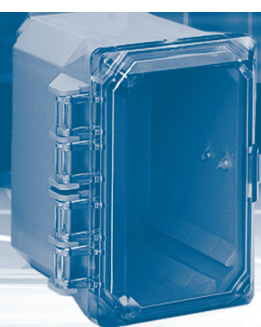
Corporate Office
Tel: 901.252.8000
800.816.7809
Fax: 901.252.1354

Customer Service
Tel: 800.816.7809
Fax: 800.816.7810

Technical Services
Tel: 888.862.3289
Fax: 901.252.1321

Tool Services
Tel: 800.284.8665

Thomas & Betts
www.tnb.com

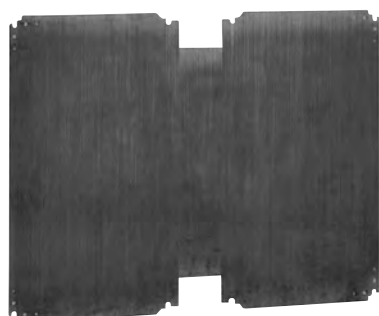


Carlton®

Himeline® Enclosures — HLA/HLS Series (Fiber-Reinforced Polyester)

Accessories

Non-Metallic Thermosetting Plastic (Bakelite)



One Door

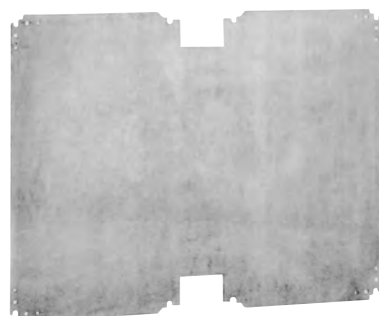
CAT. NO.	DIMENSIONS (IN.)		STD. CTN.	STD. WT. (LBS.)
	H	W		
LP2020BP	15.4	14.8	1	2.1
LP3020BP*	25.2	14.8	1	3.0
LP3030BP	25.2	24.6	1	6.3
LP4020BP	35.0	14.8	1	5.2
LP4030BP	35.0	24.6	1	8.8
LP5020BP	44.3	14.8	1	6.7
LP5030BP	44.3	24.6	1	11.2

* Use Back Panel LP3020BP for Enclosures HLA2030, HLA3020, HLS2030 and HLS3020

Two Door

CAT. NO.	DIMENSIONS (IN.)		STD. CTN.	STD. WT. (LBS.)
	H	W		
LP30402BP	25.2	34.4	1	8.8
LP40402BP	35.0	34.4	1	12.3
LP40502BP	35.0	44.3	1	16.1
LP50402BP	44.3	34.4	1	16.1

Metal — Galvanized Steel



One Door

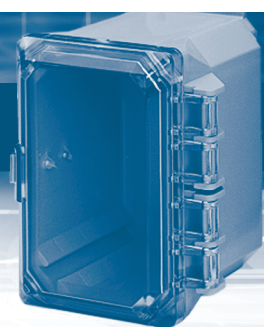
CAT. NO.	DIMENSIONS (IN.)		STD. CTN.	STD. WT. (LBS.)
	H	W		
LA2020BP	15.4	14.8	1	5.6
LA3020BP*	25.2	14.8	1	8.6
LA3030BP	25.2	24.6	1	17.6
LA4020BP	35.0	14.8	1	14.6
LA4030BP	35.0	24.6	1	24.3
LA5020BP	44.3	14.8	1	19.4
LA5030BP	44.3	24.6	1	31.9

* Use Back Panel LA3020BP for Enclosures HLA2030, HLA3020, HLS2030 and HLS3020

Two Door

CAT. NO.	DIMENSIONS (IN.)		STD. CTN.	STD. WT. (LBS.)
	H	W		
LA30402BP	25.2	34.4	1	24.1
LA40402BP	35.0	34.4	1	33.8
LA40502BP	35.0	44.3	1	43.4
LA50402BP	44.3	34.4	1	43.7

Himeline® Enclosures — HLA/HLS Series (Fiber-Reinforced Polyester)



Accessories

Mounting Feet



CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HLAMFSS	1 each (set of 4)	.6

Panel Adjuster Kit



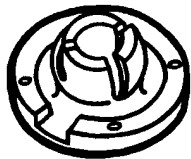
CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HLABPA4	1 each (set of 4)	.31

Padlock Device



CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HLAPAD	8	.61

Draining Device*

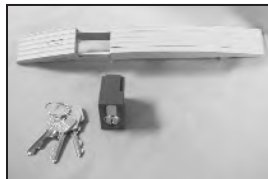


CAT. NO.	STD. CTN.
HPVEA9	30

For 3R Rating and condensation buildup.

*Factory installation available.

Replacement Handle with Cylinder Key Lock



CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HLATEL	8	.41

Standard Replacement Bar Lock with Key



CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HLATD	30	.21

Replacement Handle with Pushbutton

CAT. NO.	STD. CTN.	STD. WT. (LBS.)
HLAHAN	8	.40

Air Vents*

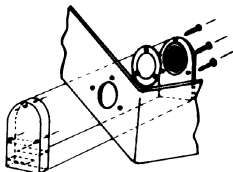


CAT. NO.	STYLE	STD. WT. (LBS.)
HPVM25	For Fitting Outside of All Enclosures	1
HPVM35	For Fitting Inside of All Enclosures	1

NEMA 1 Rated only.

*Factory installation available.

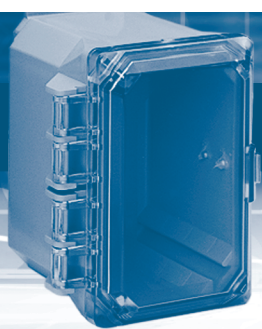
Enclosure Ventilator*



CAT. NO.	STD. CTN.
HVM27	15

Enables any size enclosure to breathe, yet remains watertight.

*Factory installation available.



Carlton®

Himeline® Enclosures — HLP Series

HLP Series Enclosure and Pedestal



Enclosure



Pedestal

Himeline® HLP Enclosures and Pedestals are designed to accommodate all types of electrical equipment for electrical distribution applications. The enclosure may be directly installed on the ground or on top of a pedestal, and the pedestal is approved for direct-bury applications. Both are manufactured using fiber-reinforced polyester to provide high-impact resistance and enable effortless modifications. And, each have an IP-43 Self-Ventilated and IP-54 Watertight rating and a temperature range of -58°F to 302°F.

Enclosure Features:

- High-impact resistance
- Non-conductive and non-corrosive
- Fits all type of electrical equipment
- IP-43 self-ventilated
- IP-54 watertight
- One- and two-door configurations
- Install directly on the ground or on a pedestal
- Removable inner hinges for great access
- Doors open 180°

Pedestal Features:

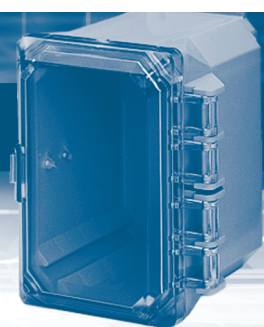
- Can be direct buried
- Non-conductive and non-corrosive
- Detachable upper front for easy access
- High-impact resistance
- Auxiliary outlet on the side
- IP-43 self-ventilated
- IP-54 watertight
- Floor- or wall-mountable

Material:

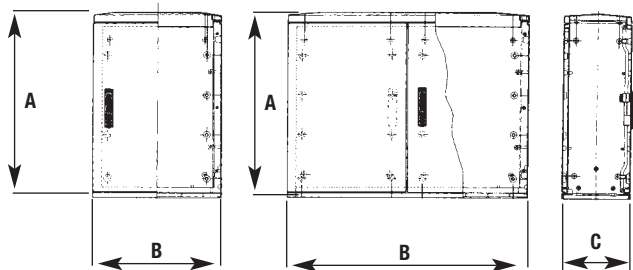
- Fiberglass-reinforced polyester

Applications:





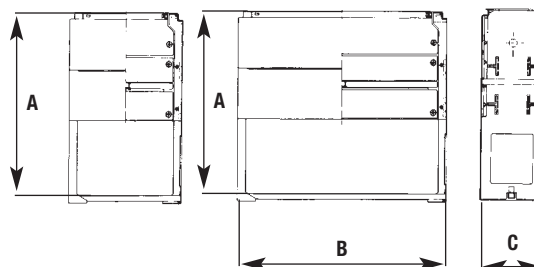
HLP Enclosure and Pedestal



Enclosures

CAT. NO.	NO. OF DOORS	NO. OF LOCKS	DIMENSIONS (IN.)			STD. CTN.	STD. WT. (LBS.)
			A HEIGHT	B WIDTH	C DEPTH		
HLP3318	1	1	33.46	18.31	12.60	1	40.79
HLP3323	1	1	33.46	23.23	12.60	1	48.50
HLP3331	1	1	33.46	30.91	12.60	1	55.12
HLP33442	2	1	33.46	43.90	12.60	1	77.16
HLP33442L	2	2	33.46	43.90	12.60	1	77.16

* Consult Customer Service for availability and delivery.



Pedestals

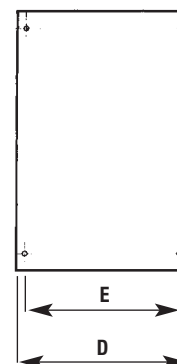
CAT. NO.	DIMENSIONS (IN.)			STD. CTN.	STD. WT. (LBS.)
	A HEIGHT	B WIDTH	C DEPTH		
HLPED3318	35.43	18.31	12.20	1	33.10
HLPED3323	35.43	23.23	12.20	1	37.48
HLPED3331	35.43	30.91	12.20	1	44.10
HLPED33442	35.43	43.90	12.20	1	55.12
HLPED33442L	35.43	43.90	12.20	1	55.12

* Consult Customer Service for availability and delivery.

Mounting Plates

CAT. NO.	ENCLOSURE CAT. NO.	PEDESTAL CAT. NO.	# OF PLATES PER ENCL.	DIMENSIONS (IN.)		THICKNESS (IN.)	STD. CTN.	STD. WT. (LBS.)
				D	E			
LA1412BP	HLP3318	HLPED3318	1	14.02	11.97	.20	1	4.41
LA1816BP	HLP33442L	HLPED33442L	2	17.64	15.59	.20	1	11.02
LA1916BP	HLP3323	HLPED3323	1	18.94	16.89	.20	1	6.00
LA2725BP	HLP3331	HLPED3331	1	26.61	24.57	.20	1	8.38

* Consult Customer Service for availability and delivery.

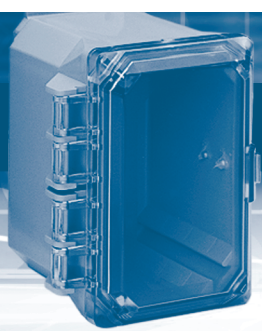


Accessories

Gasket

CAT. NO.	SIZE (IN.) H X W X D	STD. CTN.	STD. WT. (LBS.)
HLP3318G	33 x 18 x 12	1	2.2
HLP3323G	33 x 23 x 12	1	2.2
HLP3331G	33 x 31 x 12	1	2.2
HLP3344G	33 x 44 x 12	1	2.2

* Consult Customer Service for availability and delivery.



Carlton®

Carlton® Slack and Splice Enclosures

Slack and Splice Enclosures

Carlton's® state-of-the-art modification capabilities enable design of Slack and Splice Enclosures to meet specific application requirements.

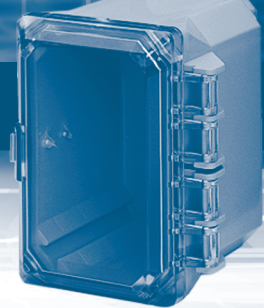
Features:

- Slack and Splice Enclosures provide maximum protection of slack fiber and splice unit assemblies
- Eliminates need for difficult aerial and vault splicing
- Stores adequate slack fiber to facilitate splicing at ground level work station
- Enclosure sized to maintain minimum required radius of fiber optic cable
- Splice tube to accommodate industry standard splice and tray assemblies (splice enclosure only)



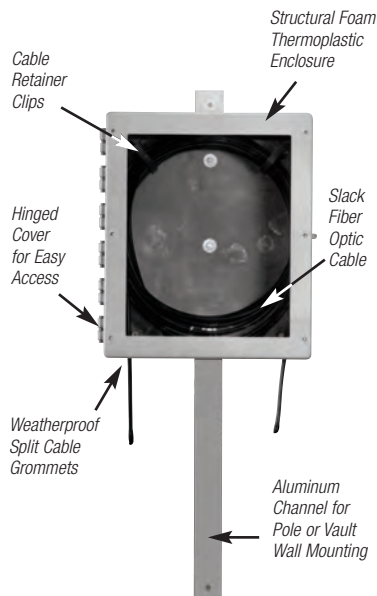
Carlton®

Carlton® Slack and Splice Enclosures

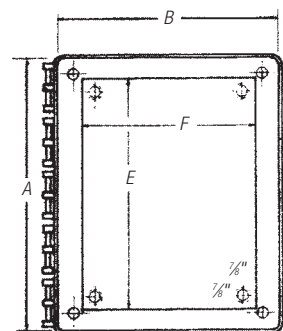
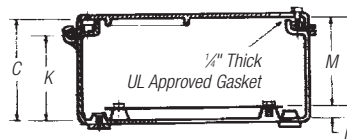


Slack Enclosures

UL US
LISTED
E108856 LR31146

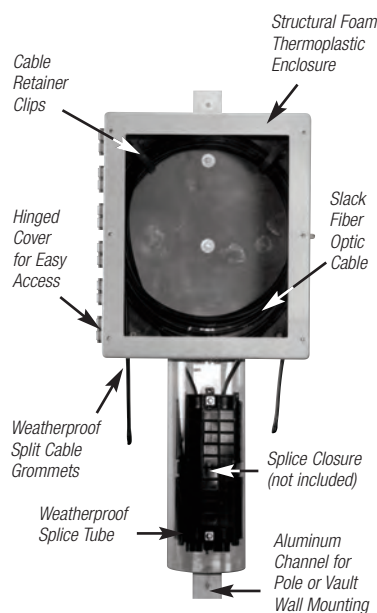


CAT. NO.	INSIDE BOX SIZE (IN.) A X B X C	BOX OPENING (IN.) E X F	DIMENSIONS (IN.)		
			K	M	N
SLK11	30 x 24 x 11½	27¼ x 21¼	10¼	10½	1
SLK12	30 x 24 x 9½	27¼ x 21¼	8¼	8½	1
SLK21	24 x 20 x 11½	21¼ x 17¼	10¼	10½	1
SLK22	24 x 20 x 9½	21¼ x 17¼	8¼	8½	1
SLK31	20 x 16 x 11½	17¼ x 13¼	10¼	10½	1
SLK32	20 x 16 x 9½	17¼ x 13¼	10¼	10½	1

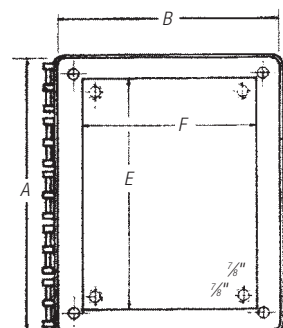
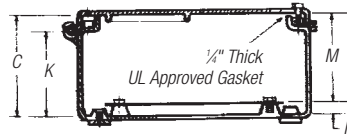


Carlton® Non-Metallic Enclosures

Splice Enclosures



CAT. NO.	INSIDE BOX SIZE (IN.) A X B X C	TUBE SIZE	BOX OPENING (IN.) E X F	DIMENSIONS (IN.)		
				K	M	N
SPL111	30 x 24 x 11½	10	27¼ x 21¼	10¼	10½	1
SPL122	30 x 24 x 9½	8	27¼ x 21¼	8¼	8½	1
SPL211	24 x 20 x 11½	10	21¼ x 17¼	10¼	10½	1
SPL222	24 x 20 x 9½	8	21¼ x 17¼	8¼	8½	1



Corporate Office
Tel: 901.252.8000
800.816.7809
Fax: 901.252.1354

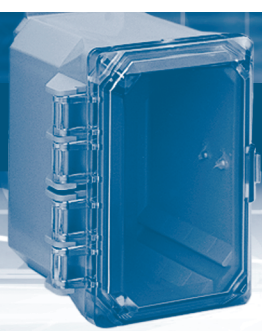
Customer Service
Tel: 800.816.7809
Fax: 800.816.7810

Technical Services
Tel: 888.862.3289
Fax: 901.252.1321

Tool Services
Tel: 800.284.8665

Thomas & Betts
www.tnb.com

Q-45



Carlton®

Factory Modifications

For All Enclosures.



*Painted JIC enclosure with painted back panel.
Installed clear cover with handle and quick-release latch.*



*Color-molded JIC unit with addition
of window and pushbuttons.*



*Molded junction box painted with
addition of mounted weatherproof cover.*



*Painted JIC enclosure with pocket
installed in cover for control pad.*

Color-Molded Enclosures

All Circuit Safe® enclosures can be molded in a variety of colors. Minimum quantities for single shipment or releases against blanket orders are required.

Painted/Silkscreened Enclosures

All enclosures can be painted, interior and exterior, or by special request. Enclosure covers can also be silkscreened on request.

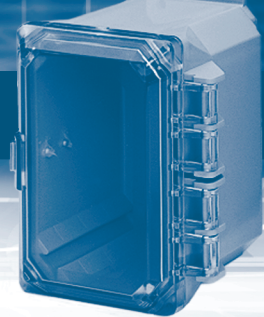
EMI/RFI Protection

For applications where Radio Frequency Interference is a factor, the interior can be coated with an acrylic base paint with a nickel filler. Windows can be covered with fine copper mesh.

Other Modifications Available

Our factory is capable of modifying any of our enclosures to a customer's specifications. Factory's capabilities include:

- Precision milling of button holes, windows and pockets for keypad installations
- Hole tapping
- Ventilators
- Mounting bosses
- Access windows
- Hinged windows
- Mounted in-use weatherproof covers
- Handles for portable units
- Latches
- Enclosure coolers
- Cylinder locking systems
- And more...



NEMA Types — Definitions Pertaining to Non-Hazardous Locations. Enclosures for Electrical Equipment

An enclosure is a surrounding case constructed to provide protection from accidental contact with the enclosed equipment and to provide protection to the enclosed equipment from specified environmental conditions. A brief description of the more common types of enclosures used by the electrical industry follows.

Type 1 Enclosure:

Intended for indoor use, primarily to provide protection against contact with enclosed equipment and a degree of protection against falling dirt.

Type 2 Enclosure:

Intended for indoor use, primarily to provide a degree of protection against limited amounts of falling water and dirt.

Type 3 Enclosure:

Intended for outdoor use, primarily to provide a degree of protection against wind-blown dust, rain, sleet and external ice formation.

Type 3R Enclosure:

Intended for outdoor use, primarily to provide a degree of protection against falling rain, sleet and external ice formation.

Type 3S Enclosure:

Intended for outdoor use, primarily to provide a degree of protection against wind-blown dust, rain and sleet, and to provide for operation of external mechanism when ice laden.

Type 3X Enclosure:

Intended for outdoor use, primarily to provide a degree of protection against wind-blown dust, rain, sleet, external ice formation and corrosion.

Type 3SX Enclosure:

Intended for outdoor use, primarily to provide a degree of protection against wind-blown dust, rain, sleet and corrosion, and to provide for operation of external mechanism when ice laden.

Type 4 Enclosure:

Intended for indoor or outdoor use, primarily to provide a degree of protection against wind-blown dust and rain, splashing water and hose-directed water.

Type 4X Enclosure:

Intended for indoor or outdoor use, primarily to provide a degree of protection against corrosion, wind-blown dust and rain, splashing water and hose-directed water.

Type 6 Enclosure:

Intended for indoor or outdoor use, primarily to avoid a degree of protection against contact with enclosed equipment, falling dirt, hose-directed water, entry of water during occasional temporary submersion at a limited depth and external ice formation.

Type 6P Enclosure:

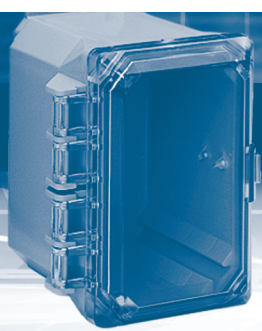
Intended for indoor or outdoor use, primarily to provide a degree of protection against contact with enclosed equipment, falling dirt, hose-directed water, entry of water during prolonged submersion at a limited depth and external ice formation.

Type 12 Enclosure:

Intended for indoor use, primarily to provide a degree of protection against dust, falling dirt and dripping non-corrosive liquids.

Type 13 Enclosure:

Intended for indoor use, primarily to provide a degree of protection against dust, spraying of water, oil and non-corrosive coolant.



Carlton®

General Information

International Standards IP Protection Classification Data.

The letters IP, followed by three characteristic numbers, symbolize the degree of protection.

First Digit

Protection Against Solid Bodies

IP

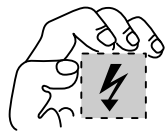
Test

0



No protection

1



Protection against solid bodies larger than 50mm (for example, accidentally touching with the hand)

2



Protection against solid bodies larger than 12mm (for example, a finger)

3



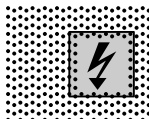
Protection against solid bodies larger than 2.5mm (tools, wires)

4



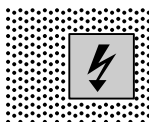
Protection against solid bodies larger than 1mm (tools, small wires)

5



Protection against dust (no harmful deposits)

6



Complete protection against dust

Second Digit

Protection Against Liquids

IP

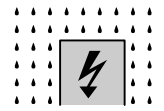
Test

0



No protection

1



Protection against vertical water drops condensation

2



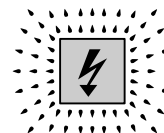
Protection against water drops at up to 15° from the vertical

3



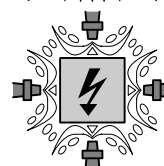
Protection against rain at up to 60° from the vertical

4



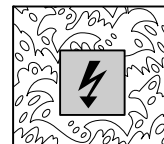
Protection against water splashing from all directions

5



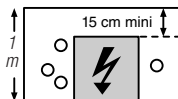
Protection against water sprayed from a hose from all directions

6



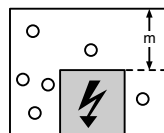
Protection against water projections similar to sea wave splashes

7

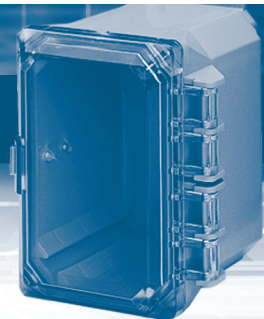


Protection against the effector immersion

8



Protection against effects of prolonged immersion under pressure

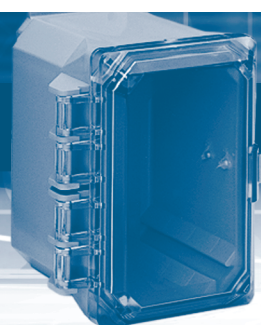


Clearance Holes for Carflex® Fittings or PVC Male Terminal Adapters

CARFLEX FITTINGS & PVC MALE TERMINAL ADAPTERS TRADE SIZES	NOMINAL SIZE (IN.)	ACTUAL SIZE (IN.)	ACTUAL SIZE (MM)
1/2	.875	.879	22.4
3/4	1.093	1.107	28.2
1	1.344	1.357	34.6
1 1/4	1.813	1.699	43.2
1 1/2	1.938	1.949	49.6
2	2.375	2.413	61.5
2 1/2	2.875	2.914	74.0
3	3.5	3.539	89.8
3 1/2	4	4.044	102.7
4	4.5	4.544	115.4
5	5.625	5.675	143.7

Engineering Properties of Enclosures

PROPERTY	TEST METHOD	OPAQUE POLYCARBONATE COVERS & BOXES	CLEAR POLYCARBONATE COVER	FRP	NORYL
Thermal And Mechanical					
Temperature Range (°F)	—	-30° to 230°	-30° to 230°	-58° to 320°	-40° to 185°
Specific Gravity (oz./in³)	ASTM D792	1.20	1.20	1.79	0.85
Thermal Conductivity (BTU•in/hr•ft²•°F)	ASTM D177	1.35	1.35	1.68	0.86
Heat Deflection Temperature @ 264 PSI (°F)	ASTM D648	265	260	392	180
Tensile Strength (PSI)	ASTM D638	8,800	9,000	13,000	3,400
Flexural Strength (PSI)	ASTM D790	13,500	14,000	19,000	6,800
Compressive Strength @ 10% Deformation (PSI)	ASTM D695	12,500	12,500	24,000	5,200
Impact Strength IZOD Notched (ft.lbs./in.)	ASTM D256	12	12	12	—
Water Absorption – 24 hrs. @ 73°F (%)	ASTM D570	0.15	0.15	0.17	0.06
UV Rating	UL 746C	F1	F1	F2	—
Electrical					
Dielectric Strength (VOLTS/MIL.)	ASTM D149	380	380	467	192
Dielectric Constant	ASTM D150				
60 Hz		3.0	3.0	—	—
100 Hz		—	—	—	2.27
106		2.96	2.96	—	2.18
Volume Resistivity @ 73°F (OHM-CM)	ASTM D257	>10 ¹⁶	>10 ¹⁶	2.0 x 10 ¹⁵	1.0 x 10 ¹⁶
Arc Resistance (SEC)	ASTM D495	120	120	200+	67



Carlton®

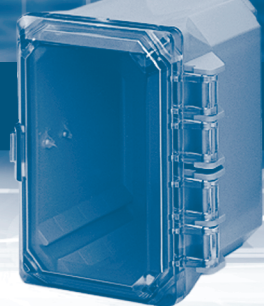
General Information

Environmental Resistance Table: E—Excellent, G—Good, L—Limited, U—Unsatisfactory

IMPORTANT: These environmental resistance ratings are based upon tests where the specimens were placed in complete submergence in the reagent listed. Ratings listed in this chart apply to a 48-hour exposure period. (The information in this chart is to be used ONLY as a guide in selecting equipment for appropriate chemical compatibility. Before permanent installation, test the equipment with the chemicals and under the specific conditions of your application.)

CHEMICAL	PVC Himeline HE Opaque Cover w/Base	POLYCARBONATE Circuit Safe NEMA Circuit Safe JIC Himeline HE Clear Cover w/Base Himeline HS Opaque w/Clear Lids	FRP (Fiberglass Reinforced Polyester) Himeline HS — Bases Himeline HP Himeline HLA/HLS Himeline HLP	NORYL Circuit Safe Medium JIC
Acetaldehyde	U	L	—	—
Acetamide	U	U	—	—
Acetate Solvent	U	—	—	U
Acetic Acid	U	G	E	E
Acetic Acid 20%	U	E	E	E
Acetic Acid 80%	L	G	E	E
Acetic Acid, Glacial	U	G	E	E
Acetic Anhydride	U	U	E	U
Acetone	U	U	U	U
Acetyl Bromide	U	—	—	—
Acetyl Chloride (dry)	L	U	—	U
Acetylene	E	U	—	—
Acrylonitrile	G	U	—	—
Adipic Acid	E	—	—	—
Alcohols:Amyl	E	G	—	L
Alcohols:Butyl	U	—	—	U
Alcohols:Diacetone	E	E	—	E
Alcohols:Diacetone	G	—	—	E
Alcohols:Ethyl	L	G	—	E
Alcohols:Hexyl	E	—	—	E
Alcohols:Isobutyl	E	—	—	E
Alcohols:Isopropyl	E	E	—	E
Alcohols:Methyl	E	G	—	E
Alcohols:Octyl	—	—	—	E
Alcohols:Propyl	E	—	—	E
Aluminum Chloride	E	E	E	E
Aluminum Chloride 20%	E	E	—	E
Aluminum Fluoride	E	—	—	E
Aluminum Hydroxide	E	G	—	E
Aluminum Nitrate	G	E	—	—
Aluminum Potassium Sulfate 10%	E	E	—	E
Aluminum Potassium Sulfate 100%	E	E	—	E
Aluminum Sulfate	E	E	E	E
Amines	U	U	—	U
Ammonia 10%	G	U	—	E
Ammonia Nitrate	G	—	—	E
Ammonia, anhydrous	E	U	—	G
Ammonia, liquid	E	U	L	—
Ammonium Acetate	E	—	—	—
Ammonium Bifluoride	E	—	—	E
Ammonium Carbonate	E	—	L	E
Ammonium Caseinate	—	—	—	E
Ammonium Chloride	E	E	E	E
Ammonium Hydroxide	E	U	L	E
Ammonium Nitrate	E	—	L	E
Ammonium Oxalate	E	E	—	—
Ammonium Persulfate	E	—	—	E
Ammonium Phosphate, Dibasic	E	E	—	E

CHEMICAL	PVC Himeline HE Opaque Cover w/Base	POLYCARBONATE Circuit Safe NEMA Circuit Safe JIC Himeline HE Clear Cover w/Base Himeline HS Opaque w/Clear Lids	FRP (Fiberglass Reinforced Polyester) Himeline HS — Bases Himeline HP Himeline HLA/HLS Himeline HLP	NORYL Circuit Safe Medium JIC
Ammonium Phosphate, Monobasic	E	—	—	E
Ammonium Phosphate, Tribasic	E	—	—	E
Ammonium Sulfate	E	E	E	E
Ammonium Sulfite	E	—	E	E
Amyl Acetate	U	U	L	U
Amyl Alcohol	E	G	L	L
Amyl Chloride	U	—	U	U
Aniline	L	U	U	U
Aniline Hydrochloride	G	U	—	—
Antifreeze	E	—	—	E
Antimony Trichloride	E	E	E	E
Aqua Regia (80% HCl, 20% HNO3)	L	U	—	U
Aromatic Hydrocarbons	U	—	—	U
Arsenic Acid	E	E	—	E
Arsenic Salts	E	—	—	—
Asphalt	E	U	—	—
Barium Carbonate	E	E	E	E
Barium Chloride	E	E	E	E
Barium Cyanide	U	—	—	—
Barium Hydroxide	E	U	U	E
Barium Nitrate	E	U	—	E
Barium Sulfate	G	U	E	E
Barium Sulfide	E	—	E	E
Beer	E	E	—	E
Beet Sugar Liquids	E	—	—	E
Benzaldehyde	U	U	U	G
Benzene	L	U	L	U
Benzene Sulfonic Acid	E	U	E	E
Benzoic Acid	E	G	—	G
Benzol	—	U	—	G
Benzonitrile	—	E	—	—
Benzyl Chloride	—	—	—	U
Bleaching Liquors	E	—	—	—
Borax (Sodium Borate)	E	—	—	E
Boric Acid	E	—	E	E
Bromine	L	L	—	E
Butadiene	L	U	—	U
Butane	L	U	—	U
Butanol (Butyl Alcohol)	L	G	—	E
Butyl Amine	U	U	—	U
Butyl Ether	E	—	—	U
Butyl Phthalate	—	U	—	E
Butylacetate	U	U	U	G
Butylene	E	U	—	—
Butyric Acid	G	U	—	U
Calcium Bisulfate	—	U	—	—
Calcium Bisulfide	E	—	—	E
Calcium Bisulfite	G	U	—	E

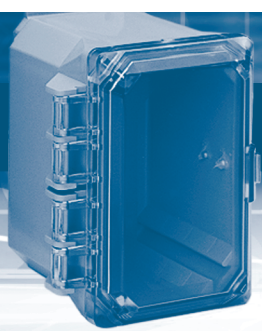


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IMPORTANT: These environmental resistance ratings are based upon tests where the specimens were placed in complete submergence in the reagent listed. Ratings listed in this chart apply to a 48-hour exposure period. (The information in this chart is to be used ONLY as a guide in selecting equipment for appropriate chemical compatibility. Before permanent installation, test the equipment with the chemicals and under the specific conditions of your application.)

CHEMICAL	PVC Himelne HE Opaque Cover w/Base	POLYCARBONATE Circuit Safe NEMA Circuit Safe JIC Himelne HE Clear Cover w/Base Himelne HS Opaque w/Clear Lids	FRP (Fiberglass Reinforced Polyester) Himelne HS — Bases Himelne HP Himelne HLA/HLS Himelne HLP	NORYL Circuit Safe Medium JIC
Calcium Carbonate	E	L	E	E
Calcium Chlorate	G	—	E	—
Calcium Chloride	L	—	E	E
Calcium Hydroxide	G	U	U	E
Calcium Hypochlorite	G	U	L	E
Calcium Nitrate	E	E	E	E
Calcium Oxide	G	—	—	E
Calcium Sulfate	G	E	E	E
Calgon	—	—	—	E
Cane Juice	E	—	—	—
Carbolic Acid (Phenol)	U	U	—	U
Carbon Bisulfide	U	—	L	—
Carbon Dioxide (dry)	E	—	—	E
Carbon Dioxide (wet)	E	—	—	E
Carbon Disulfide	U	U	—	U
Carbon Monoxide	E	—	—	E
Carbon Tetrachloride	U	U	E	U
Carbon Tetrachloride (dry)	—	—	—	U
Carbon Tetrachloride (wet)	—	—	—	U
Carbon Disulfide	U	U	—	U
Carbon Monoxide	E	—	—	E
Carbon Tetrachloride	U	U	E	U
Carbon Tetrachloride (dry)	—	—	—	U
Carbon Tetrachloride (wet)	—	—	—	U
Carbonated Water	E	—	—	E
Carbonic Acid	E	E	—	E
Catsup	E	—	—	E
Chloric Acid	E	—	—	U
Chlorine (dry)	U	—	—	G
Chlorine Water	E	—	E	L
Chlorine, Anhydrous Liquid	U	L	—	G
Chloroacetic Acid	G	U	—	—
Chlorobenzene (Mono)	U	U	U	U
Chlorobromomethane	U	—	—	—
Chloroform	U	U	—	U
Chlorosulfonic Acid	U	L	—	U
Chocolate Syrup	—	E	—	E
Chromic Acid 10%	E	G	E	E
Chromic Acid 30%	E	L	—	U
Chromic Acid 5%	E	G	—	E
Chromic Acid 50%	U	U	—	U
Chromium Salts	E	—	—	—
Citric Acid	G	E	E	E
Citric Oils	—	—	—	E
Clorox® (Bleach)	E	—	—	E
Copper Chloride	E	—	—	E
Copper Cyanide	E	U	—	E
Copper Fluoborate	E	—	—	—

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Copper Nitrate	E	U	—	E
Copper Sulfate >5%	E	E	—	E
Copper Sulfate 5%	E	E	—	E
Cresols	U	U	U	U
Cresylic Acid	U	U	—	—
Cupric Acid	E	E	—	E
Cyclohexane	U	G	—	U
Cyclohexanone	U	U	—	U
Detergents	E	E	—	E
Diacetone Alcohol	U	U	—	—
Dichlorobenzene	U	U	—	—
Dichloroethane	U	U	—	E
Diesel Fuel	E	E	—	U
Diethyl Ether	U	U	—	—
Diethylamine	U	U	—	—
Diethylene Glycol	L	G	—	E
Dimethyl Aniline	U	U	U	U
Dimethyl Formamide	U	U	—	U
Diphenyl Oxide	U	—	—	—
Dyes	G	—	—	E
Epsom Salts (Magnesium Sulfate)	E	E	—	E
Ethane	E	—	—	—
Ethanol	L	G	—	E
Ethanolamine	U	—	—	E
Ether	U	—	L	U
Ethyl Acetate	U	U	L	E
Ethyl Benzoate	U	U	—	E
Ethyl Chloride	U	U	L	U
Ethyl Ether	U	—	U	U
Ethylene Bromide	U	U	—	—
Ethylene Chloride	U	U	—	U
Ethylene Chlorohydrin	U	U	E	—
Ethylene Diamine	U	E	—	U
Ethylene Dichloride	U	U	U	U
Ethylene Glycol	E	G	E	E
Ethylene Oxide	U	L	—	E
Fatty Acids	E	G	—	E
Ferric Chloride	E	E	E	E
Ferric Nitrate	E	E	E	E
Ferric Sulfate	E	E	E	E
Ferrous Chloride	E	U	E	E
Ferrous Sulfate	E	E	E	E
Fluoboric Acid	E	—	—	E
Fluorine	U	L	—	—
Fluosilicic Acid	U	E	—	E
Formaldehyde 100%	E	E	—	E
Formaldehyde 40%	E	E	E	E
Formic Acid	E	E	L	E



Carlton®

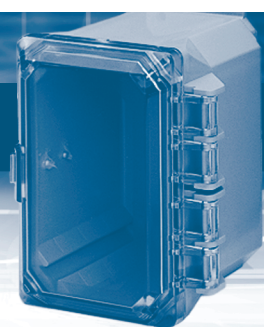
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Freon 113	G	G	—	U
Freon 12	E	—	—	U
Freon 22	E	—	—	G
Freon TF	G	—	—	—
Freon® 11	E	—	—	G
Fuel Oils	E	G	—	G
Furan Resin	E	—	—	—
Furfural	U	U	L	U
Gallic Acid	G	—	—	E
Gasoline (high-aromatic)	E	E	—	G
Gasoline, leaded, ref.	G	E	E	G
Gasoline, unleaded	L	E	—	U
Gelatin	G	—	—	E
Glucose	E	E	E	E
Glue, P.V.A.	L	—	—	—
Glycerin	E	E	E	E
Glycolic Acid	G	—	—	—
Grease	E	—	—	—
Heptane	L	G	E	G
Hexane	G	U	U	G
Hydraulic Oil (Petro)	E	—	—	—
Hydraulic Oil (Synthetic)	E	—	—	—
Hydrazine	—	U	—	—
Hydrobromic Acid 100%	E	—	—	G
Hydrobromic Acid 20%	G	—	—	G
Hydrochloric Acid 100%	U	U	—	E
Hydrochloric Acid 20%	E	G	E	E
Hydrochloric Acid 37%	G	U	L	E
Hydrochloric Acid, Dry Gas	E	—	—	E
Hydrocyanic Acid	G	—	—	E
Hydrocyanic Acid (Gas 10%)	E	G	—	L
Hydrofluoric Acid 100%	L	U	—	U
Hydrofluoric Acid 20%	G	U	—	L
Hydrofluoric Acid 50%	G	U	—	U
Hydrofluoric Acid 75%	L	U	—	U
Hydrofluosilicic Acid 100%	G	—	—	G
Hydrofluosilicic Acid 20%	E	—	—	G
Hydrogen Gas	E	E	—	E
Hydrogen Peroxide 10%	E	E	—	E
Hydrogen Peroxide 100%	E	E	—	E
Hydrogen Peroxide 30%	E	E	E	E
Hydrogen Peroxide 50%	E	E	E	—
Hydrogen Sulfide (aqua)	G	E	—	E
Hydrogen Sulfide (dry)	E	—	—	—
Hydroquinone	G	—	—	—
Hydroxyacetic Acid 70%	U	—	—	—
Ink	L	—	—	—
Iodine	E	—	—	L

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Iodine (in alcohol)	E	—	—	—
Iodoform	E	—	—	—
Isooctane	E	G	—	U
Isopropyl Acetate	U	U	—	—
Isopropyl Ether	G	U	—	—
Isotane	E	—	—	—
Jet Fuel (JP3, JP4, JP5)	L	E	—	U
Kerosene	E	U	—	U
Ketones	U	U	—	U
Lacquer Thinners	U	G	—	U
Lacquers	U	U	—	U
Lactic Acid	G	G	E	E
Lard	E	E	—	E
Lead Acetate	G	—	—	E
Lead Nitrate	E	—	—	E
Lead Sulfamate	G	E	—	—
Lime	G	—	—	—
Linoleic Acid	E	—	—	—
Lithium Chloride	U	G	—	—
Lithium Hydroxide	—	U	—	—
Lubricants	G	E	—	L
Lye: Ca(OH)2 Calcium Hydroxide	G	U	—	E
Lye: KOH Potassium Hydroxide	G	U	—	E
Lye: NaOH Sodium Hydroxide	E	U	—	E
Epsom Salts (Magnesium Sulfate)	E	E	—	E
Magnesium Bisulfate	E	E	—	—
Magnesium Carbonate	G	E	E	E
Magnesium Chloride	G	E	E	E
Magnesium Hydroxide	E	E	G	E
Magnesium Nitrate	E	E	—	E
Magnesium Oxide	—	—	—	—
Magnesium Sulfate (Epsom Salts)	E	E	E	E
Maleic Acid	E	—	—	E
Malic Acid	E	—	—	—
Manganese Sulfate	L	E	—	E
Mayonnaise	U	—	—	—
Melamine	U	—	—	—
Mercuric Chloride (dilute)	E	E	—	E
Mercuric Cyanide	E	—	—	—
Mercurous Nitrate	E	E	—	E
Mercury	E	U	—	E
Methane	G	—	—	—
Methanol (Methyl Alcohol)	E	G	L	E
Methyl Acetate	U	U	—	—
Methyl Acetone	U	—	—	—
Methyl Alcohol 10%	E	G	—	E
Methyl Bromide	U	—	—	—
Methyl Butyl Ketone	E	U	—	—

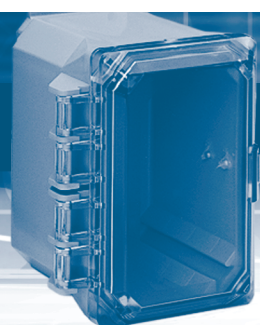


Environmental Resistance Table: E—Excellent, G—Good, L—Limited, U—Unsatisfactory

IMPORTANT: These environmental resistance ratings are based upon tests where the specimens were placed in complete submergence in the reagent listed. Ratings listed in this chart apply to a 48-hour exposure period. (The information in this chart is to be used ONLY as a guide in selecting equipment for appropriate chemical compatibility. Before permanent installation, test the equipment with the chemicals and under the specific conditions of your application.)

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Methyl Cellosolve	U	U	—	—
Methyl Chloride	U	U	—	U
Methyl Dichloride	E	—	—	—
Methyl Ethyl Ketone	U	U	E	U
Methyl Isobutyl Ketone	U	U	—	U
Methyl Isopropyl Ketone	U	U	—	U
Methyl Methacrylate	E	—	—	—
Methylamine	U	—	—	—
Methylene Chloride	U	U	U	U
Mineral Spirits	E	L	—	E
Monochloroacetic acid	—	U	—	—
Monoethanolamine	U	—	—	E
Morpholine	—	U	—	U
Motor oil	G	E	—	E
Naphtha	E	G	E	U
Naphthalene	U	—	—	U
Natural Gas	E	—	—	—
Nickel Chloride	E	E	—	E
Nickel Nitrate	E	U	—	E
Nickel Sulfate	E	E	—	E
Nitrating Acid (<15% HNO ₃)	U	—	—	—
Nitrating Acid (>15% H ₂ SO ₄)	U	—	—	—
Nitrating Acid (1% Acid)	U	—	—	—
Nitrating Acid (15% H ₂ SO ₄)	U	—	—	—
Nitric Acid (20%)	E	G	G	G
Nitric Acid (50%)	G	G	—	G
Nitric Acid (50%)	G	G	—	G
Nitric Acid (5–10%)	E	E	—	E
Nitric Acid (Concentrated)	G	L	—	G
Nitrobenzene	U	U	L	U
Nitromethane	G	U	—	U
Nitrous Acid	E	—	—	—
Nitrous Oxide	E	—	—	—
Oils:Aniline	U	—	—	U
Oils:Citric	G	E	—	E
Oils:Creosote	L	—	—	U
Oils:Diesel Fuel (20, 30, 40, 50)	G	—	—	U
Oils:Diesel Fuel (20, 30, 40, 50)	G	—	—	U
Oils:Hydraulic Oil (Petro)	E	—	—	—
Oils:Hydraulic Oil (Synthetic)	E	—	—	—
Oils:Mineral	G	G	—	E
Oils:Olive	L	E	—	E
Oils:Orange	L	L	—	—
Oils:Pine	U	E	—	—
Oils:Rosin	L	—	—	—
Oils:Silicone	E	—	—	E
Oils:Transformer	G	—	—	—
Oils:Turbine	E	—	—	—

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Oleic Acid	L	—	E	E
Oleum 100%	U	—	—	E
Oleum 25%	U	—	—	—
Oxalic Acid (cold)	G	—	E	E
Ozone	G	E	—	—
Palmitic Acid	G	—	—	—
Paraffin	G	E	—	E
Pentane	E	E	—	—
Perchloric Acid	L	—	—	—
Perchloroethylene	L	U	—	U
Petrolatum	G	—	—	—
Petroleum	—	—	—	U
Phenol (10%)	L	G	L	U
Phenol (Carbolic Acid)	U	U	—	U
Phosphoric Acid (>40%)	G	E	—	E
Phosphoric Acid (crude)	G	E	—	E
Phosphoric Acid (molten)	U	—	—	—
Phosphoric Acid (<40%)	G	E	—	E
Phosphoric Acid Anhydride	—	U	—	—
Phosphorus	E	—	—	—
Phosphorus Trichloride	U	L	—	—
Photographic Developer	E	E	—	E
Photographic Solutions	E	E	—	E
Phthalic Anhydride	U	E	—	—
Picric Acid	U	U	—	—
Potash (Potassium Carbonate)	E	—	L	E
Potassium Bicarbonate	E	—	—	E
Potassium Bromide	E	E	—	E
Potassium Chlorate	E	E	—	E
Potassium Chloride	E	E	E	E
Potassium Chromate	E	—	E	E
Potassium Cyanide Solutions	E	—	—	E
Potassium Dichromate	E	E	—	E
Potassium Ferricyanide	E	—	E	E
Potassium Ferrocyanide	E	—	E	E
Potassium Hydroxide (Caustic Potash)	E	U	L	E
Potassium Hypochlorite	G	—	—	—
Potassium Iodide	E	—	—	—
Potassium Nitrate	E	E	E	E
Potassium Oxalate	—	—	—	—
Potassium Permanganate	E	E	E	E
Potassium Sulfate	E	E	E	E
Potassium Sulfide	E	—	—	E
Propane (liquefied)	E	L	—	E
Propylene	G	—	—	—
Propylene Glycol	L	G	—	—
Pyridine	U	U	—	G
Pyrogalllic Acid	E	—	—	—



Carlton®

General Information

Environmental Resistance Table: E—Excellent, G—Good, L—Limited, U—Unsatisfactory

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Resorcinol	L	G	—	—
Rosins	L	—	—	—
Salicylic Acid	G	E	—	—
Salt Brine (NaCl saturated)	E	E	—	E
Sea Water	E	E	—	E
Silicone	E	E	—	E
Silver Bromide	—	—	—	E
Silver Nitrate	E	E	—	E
Soap Solutions	E	E	—	E
Soda Ash (see Sodium Carbonate)	E	E	—	E
Sodium Acetate	G	E	E	E
Sodium Aluminate	—	—	—	E
Sodium Benzoate	G	E	—	—
Sodium Bicarbonate	E	E	E	E
Sodium Bisulfate	E	E	—	E
Sodium Bisulfite	E	E	—	E
Sodium Borate (Borax)	E	E	—	E
Sodium Bromide	G	—	E	E
Sodium Carbonate	E	E	—	E
Sodium Chlorate	E	E	E	E
Sodium Chloride	E	E	E	E
Sodium Chromate	—	E	—	E
Sodium Cyanide	E	—	—	E
Sodium Ferrocyanide	E	—	E	E
Sodium Fluoride	E	—	—	E
Sodium Hydrosulfite	L	—	—	—
Sodium Hydroxide (20%)	E	E	U	E
Sodium Hydroxide (50%)	E	U	U	E
Sodium Hydroxide (80%)	E	U	U	E
Sodium Hypochlorite (<20%)	E	L	L	E
Sodium Hypochlorite (100%)	G	—	—	E
Sodium Metaphosphate	E	—	—	—
Sodium Metasilicate	E	—	—	—
Sodium Nitrate	E	—	U	E
Sodium Perborate	E	—	—	E
Sodium Peroxide	G	E	—	—
Sodium Polyphosphate	E	—	—	E
Sodium Silicate	E	—	—	E
Sodium Sulfate	E	E	E	E
Sodium Sulfide	E	U	U	E
Sodium Sulfite	E	—	E	E
Sodium Tetraborate	E	—	—	E
Sodium Thiosulfate (hypo)	E	U	—	E
Stannic Chloride	E	E	—	E
Stannic Fluoborate	—	—	—	E
Stannous Chloride	E	—	—	E
Stearic Acid	G	E	—	E
Stoddard Solvent	L	E	—	U
Styrene	U	U	—	E

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Sulfate (Liquors)	G	—	—	—
Sulfur Chloride	L	—	—	E
Sulfur Dioxide	E	—	—	E
Sulfur Dioxide (dry)	E	E	—	E
Sulfur Hexafluoride	G	—	—	—
Sulfur Trioxide	E	—	—	U
Sulfur Trioxide (dry)	E	—	—	U
Sulfuric Acid (<10%)	E	E	E	E
Sulfuric Acid (10–75%)	E	G	U	E
Sulfuric Acid (75–100%)	U	U	—	E
Sulfuric Acid (cold concentrated)	U	—	—	E
Sulfuric Acid (hot concentrated)	U	U	—	U
Sulfurous Acid	E	—	—	E
Tallow	—	—	—	E
Tannic Acid	E	L	—	E
Tanning Liquors	E	—	—	E
Tartaric Acid	E	—	E	E
Tetrachloroethane	L	—	—	U
Tetrachloroethylene	U	U	—	U
Tetrahydrofuran	U	U	L	U
Tin Salts	E	—	—	—
Toluene (Toluol)	U	U	—	U
Trichloroacetic Acid	G	U	—	—
Trichloroethane	L	U	—	U
Trichloroethylene	U	—	U	U
Trichloropropane	—	—	—	U
Tricresylphosphate	U	—	—	E
Triethylamine	G	—	—	G
Trisodium Phosphate	E	—	—	E
Turpentine	U	U	E	U
Urea	U	U	L	E
Uric Acid	E	—	—	—
Varnish	U	—	—	U
Vinegar	G	E	E	E
Vinyl Acetate	U	—	—	—
Vinyl Chloride	U	—	—	—
Water, Acid, Mine	G	G	—	—
Water, Deionized	E	—	—	E
Water, Distilled	E	E	—	E
Beet Sugar Liquids	E	—	—	E
Water, Fresh	G	E	—	E
Water, Salt	G	E	—	E
Whiskey & Wines	E	E	—	E
White Liquor (Pulp Mill)	E	—	—	E
White Water (Paper Mill)	E	—	—	U
Xylene	U	U	E	G
Zinc Chloride	G	E	E	E
Zinc Hydrosulfite	—	—	—	E
Zinc Sulfate	E	E	E	E