



# ZERO KNOWS

R U G G E D I Z E D   E N C L O S U R E S





# ZERO KNOWS... SOLUTIONS!

In practice, ZERO Manufacturing produces metal and plastic cases, containers and enclosures.

But in truth, our products are protection solutions—ensuring the safe transport and viability of valuable equipment and electronics, without compromise.

Whether we meet your needs with one of our nearly 3,000 standard products, or with the infinite possibilities through a specialized custom design, ZERO has the engineering expertise and manufacturing experience to provide the perfect solution for your protection needs.

Please review the Ruggedized Enclosures product data for specifications and information about how ZERO provides protection solutions for your industry.



**ZERO**  
MANUFACTURING  
PROTECTION

## Quality Commitment

ZERO MANUFACTURING is committed to providing products and services that meet and exceed our customers' expectations. To that end, we have been ISO 9001 certified since 1994, are an SPC Certified Supplier and boast nearly a dozen Military Certifications. We have also received numerous awards and certifications from hundreds of customers and industries, both domestically and internationally.

### ZERO MANUFACTURING, INC.

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ISO 9001:2008  
AS9100 Rev. B  
SPC Certified



# TABLE OF CONTENTS

## Centurion MIL-Spec Series



Case Selection Guide .....	2-3
Equipment and Capabilities .....	4-5
Case Description and Finish Options .....	6-7
Options: Closure Panels .....	8
Individual Case Drawings .....	9-13

## VAL-AN SERIES



VAL-AN Series .....	14
Case Description/Specifications/Ordering Information .....	15
Index to Case Sizes/Finish Options/ Determining Case Weights .....	16
Individual Case Drawings .....	17-42
Closure, Panel Flange and Inner Lid Details .....	43-44
Inner Lid Assembly and Typical Beading Patterns.....	45

## VAL-AN 900 SERIES



How To Choose The Correct VAL-AN 900 Case .....	46
Case Description.....	47
Model 900-960 Specifications and Ordering Information .....	48-60

## Pre-Engineered Ruggedized Cases



Case Description.....	61-62
Design Guide for Case Selection (Case Specifications for Military Environment Testing, Vibration and Shock Isolation) .....	63-64
Drawings for Model A, B, C, F, G, H, J, K, and L .....	65-69
Size Listings and Ordering Information .....	70-79
Panel/Flange Hole Patterns and Gaskets .....	80-83
Typical Beading Pattern .....	84
Hardware, Components and Accessories.....	85-90

## Modular Containers



Container Description.....	91
Method of Construction.....	92
Design and Specifications .....	93-94
Shock/Vibration .....	95-96
How to Order .....	97-98



# CASE/CONTAINER SELECTION GUIDE

## OPTIONS AVAILABLE

CENTURION MIL-SPEC CASES	VALAN SERIES	VALAN 900 SERIES	PRE-ENGINEERED RUGGEDIZED CASES	MODULAR CONTAINERS	PLY CONTAINERS	CENTURION ELITE CASES*	CENTURION VALULINE CASES*
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## SPECIFICATIONS:

MIL-C-4150				X	X	X		
MIL-STD-108	X	X	X	X	X	X		
MIL-STD-810**			X	X	X	X		
MIL-T-28800			X	X	X	X		

## CASE TYPE:

Instrument Case	X	X	X	X	X	X	X	X
Transit Case	X	X	X	X	X	X	X	X
Combination Case	X	X	X	X	X	X	X	X
Accepts 19" EIA Panel			X		X			

## PERFORMANCE:

Watertight	X	X	X	X	X	X		
Splash Proof	X	X	X	X	X	X		
Drip Proof	X	X	X	X	X	X		
Salt Exposure	X	X	X	X	X	X		
Dust Proof	X	X	X	X	X	X		
EMI Shielded	X	X	X	X			X	

## EXAMPLE ACCESSORIES:

Fork Lift Guides				X	X		
Hoisting Grapple		X	X	X	X		
Separable Hinges	X	X		X		X	X
Skid Rails			X	X	X		

An "X" indicates option is available, but not necessarily standard. As definitions may vary from customer to customer, consult this catalog or Zero Manufacturing, Inc. for more specific details.

\*Not included in this catalog. See separate catalog (No. CC2005) published by Zero Manufacturing, Inc. for information regarding these cases/containers.

\*\*Tests as applicable to cases/containers.

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## Ruggedized Aluminum Cases & Containers

Zero Manufacturing, Inc. is the number one supplier of high performance, deep drawn aluminum cases. In addition, we produce many other types of aluminum cases using a variety of fabrication methods. Ruggedized cases made from aluminum achieve the demanding standards required of our products.

### – EXCEPTIONAL FEATURES OF ALUMINUM CASES BY ZERO MANUFACTURING, INC. –

- **High Strength-to-Weight Ratio** – Lightweight aluminum alloys used in our cases are known for their excellent strength in protecting equipment from damage.
- **Extraordinary Resistance to Corrosion** – Aluminum is highly resistant to nearly all substances that cause corrosion and weathering.
- **Endurance Against Stress, Tearing and Cracking** – Aluminum offers much better fracture toughness than most other materials used in cases, including resistance to both mechanical breakage and propagation of fractures.
- **Sustaining Cold Temperatures** – Instead of becoming more fragile and brittle in cold weather, the tensile strength of our aluminum cases actually increases with cold, without loss of ductility.
- **RFI/EMI Shielding and ESD/Grounding** – Aluminum has the highest electrical conductivity-to-weight ratio of any metal, making our cases excellent for RFI/EMI shielding and for ESD/grounding systems. Aluminum is also an efficient reflector for externally generated interference, including the electromagnetic wavelengths of radio and radar.
- **Heat Dissipation/Shielding** – Aluminum is widely used in “heat sinks” and heat exchangers because of its high thermal conductivity. In an enclosure it can efficiently transport heat away from electronics and other equipment. It also has high reflectance to encroaching radiated heat, such as sunlight. (Aluminum has a light reflectivity of over 80%.) Further, the low coefficient of thermal expansion of aluminum allows it to sustain higher temperatures without distortion.
- **Special Environments** – Aluminum is non-toxic, odorless, tasteless, non-absorbing, non-sparking, non-magnetic and resistant to fire. Aluminum cases can therefore be used in a wide variety of special environments, including sanitary or clean rooms, food service areas and certain volatile environments, as well as for more traditional environments requiring such provisions as watertight, splash proof, drip proof and salt exposure protection.
- **Customizing Through Secondary Operations** – Our aluminum products can be customized and modified without the cost of special molds, through such secondary operations as drilling, laser cutting, riveting, welding, brazing, soldering, etc., provided at Zero Manufacturing, Inc.. In addition, aluminum products by Zero Manufacturing, Inc. accommodate virtually every kind of finish, whether mechanical (such as brushing or polishing), chemical (such as anodizing) or any of an almost unlimited variety of coatings (such as paint and powder coatings).



# Equipment and Capabilities

ZERO Manufacturing, Inc. is the leader in the manufacture of quality, deep drawn and fabricated cases and enclosures. Offering over 32,000 pre-tooled sizes of deep drawn enclosures, and virtually unlimited sizes and configurations, ZERO Manufacturing, Inc. is the source for secondary operations and customization, whether commercial or military specification.



## Deep Draw

**Presses:**

Thirty presses.

Capacity Range: Up to a 440 ton fully CNC controlled press with quick die change capability.

Maximum Bed Size: 60" x 98"

Maximum Drawn Depth: 18"

**Sizes:**

In addition to 32,000 pre-tooled sizes, ZERO can tool for any size, depth or material.

**Shears:**

Blanks are cut on automatic coil shears or conventional 12 foot shears for sheet stock.

Certified to meet MIL-H-6088 and customer specifications.



## Processes:

**Washer System:**

Automatic titrating conveyor system 6' x 90'.

**Etch:**

For weld preparation and cleaning.

**Chemical Film:**

Certified to meet MIL-C-5541, Classes 1A and 3.

## Aluminum & Metal Laser Cutting:

**Five-Axis Laser:** Computer controlled five-axis laser provides flexibility, speed and efficiency to design and manufacturing capabilities and the ability to custom cut and fabricate aluminum or other metals. Bypassing the entire tooling process eliminates costly setup and tooling fees. It's ideal for creating prototypes and for shorter runs.

**Specifications:**

Working Range (X, Y, Z, C, B):

X = 158, 118, 80, 50"

Y = 60"

C = 360° Endless

B ± 120°

**Speed (X, Y, Z, C, B):** X, Y = 2000 IPM

Z = 1200 IPM

C, B = 360° /sec



**Smallest Programmable Increment:** .000039"

**Position Accuracy:** .0039"

**Repeatability:** Ps .0012"

**Working Height:** 28"



## Sheet Metal Fabrication

**Press Brakes:**

Five press brakes up to 130 tons, equipped with back gauging.

**Metal Fabricator:**

Two turret fabricators with 58 stations.

**Punch Presses:**

Fifty-four mechanical punch presses up to 350 ton capacity, including a CNC metal fabricator.

**Extrusion Forming:**

Three heavy-duty and two light-duty benders for forming extrusions.

**Shears:**

Three shears, 12 feet wide, with 10 gauge capacity and digital back gauging.



## Environmental Testing

Three test tanks to test for watertight integrity per MIL-STD-108.



## Welding

*Welding performed IAW MIL-STD-2219 Class B & C (Class A by contract only) and certified to MIL-STD-1595.*

**Resistance:** *Twelve 3-phase spot welders with Class A solid state controls rated up to 250 KVA. This permits spot welding aluminum up to 5/16" thick. Certified to MIL-W-6858D.*

**Fusion:** *Eight 300 amp GTAW stations, 2 GMA welders, and longitudinal and peripheral seam welders.*



## Assembly

**Equipment:** *A wide range of electrical and pneumatic hopper fed riveters and versatile presses for threaded insert and stud installation. Conventional pedestal and hand held riveters are used as well.*

## Painting

*The ZERO Manufacturing, Inc. paint system was custom designed to accommodate all enclosure products and types of paint. The primary system is completely enclosed and supplied with a 100,000 cfm filtered, climate controlled air make-up system.*



**Layout:** *A 540 foot overhead conveyor runs through five alternatively opposed filter booths and a 60 foot long drying oven. (Oven is also equipped with a six foot wide lower conveyor to handle large and/or heavy objects).*

**Additional:** *Two off-line booths, and a third booth with two batch ovens for short runs.*

**Certification:** *Capable of painting to all specifications meeting safe environmental conditions. Enamel, water-base, and powder paints available and others as specified.*



## Tool Department

*ZERO Manufacturing, Inc. has a 9,600 square foot tool and die, and production machine shop with over 40 pieces of primary equipment. A foundry for casting sleeves for multiple draw jobs is also in-house. Production machining is performed on two CNC milling machines. Quality control is monitored by a coordinate measuring machine and a profile projector.*

## Additional Facts

**Plant Size:** 286,000 square feet  
**Manufacturing:** 250,000 square feet  
**Sample Plan:** Based on MIL-STD-105, Level II

*ZERO is an ISO 9001:2000 certified company.*

*SPC certified supplier to major and key customers.*

**Water Filtration System:** *All process lines are integrated with a reverse osmosis filtrations system. Over 80 percent of the industrial waste stream is recovered for purification and recycling.*

**Engineering Capabilities:** *Thirteen CAD-based design systems. Can custom design to meet all customer and military specifications. Manufacturing engineering is performed on the latest computer network system.*



# CENTURION MIL-SPEC

## Watertight Carrying Cases

The watertight Centurion MIL-Spec Series from ZERO Manufacturing, Inc. features deep-drawn heat-treated aluminum case shells with wrinkle-free surfaces, accented by distinctive styling beads. Sturdy and durable. Centurion MIL-Spec cases are strong enough to stand on, yet are ultra-lightweight. Cases are available in a variety of finishes and with a choice of closures, and three different panel mounting flanges.

Hinged inner lids available as special order item.

### Gasketed Closures

Closure features interlocking tongue and groove extrusion of 6063-T1 aluminum, permitting maximum sealing and alignment of two halves.



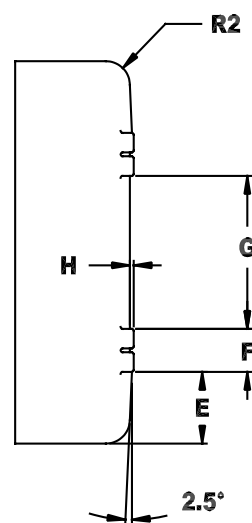
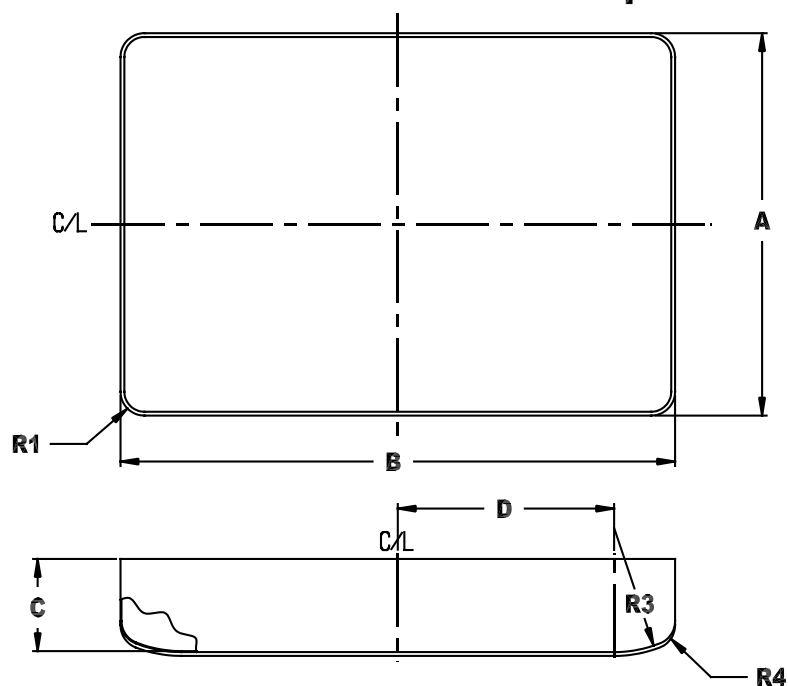
Panel Mounting Flanges



# Case Description and Finish Options

CASE NUMBER	"A" OUTSIDE WIDTH	"B" OUTSIDE LENGTH	"C" INSIDE MIN. MAX.		D	E	F	G	H	R1	R2	R3	R4	MAT'L THICK-NESS
100P	9.00	12.00	2.50	3.36	3.50	1.75	1.34	2.81	.09	1.00	1.00	6.00	1.00	.040
101P	9.00	16.00	2.50	5.56	5.50	1.75	1.34	2.81	.09	1.25	1.00	6.00	1.00	.051
103P	13.00	18.00	2.50	5.91	6.40	2.00	1.75	5.12	.12	1.25	1.00	6.25	1.00	.040
105P	13.00	21.00	2.50	4.06	7.90	2.00	2.00	5.00	.12	1.25	1.00	6.25	1.00	.040
106P	17.00	21.00	2.78	4.81	7.46	2.68	2.25	7.13	.12	1.25	1.25	6.50	1.25	.051
109P	18.00	26.00	2.38	7.31	9.81	3.16	1.63	8.43	.12	1.00	1.00	6.50	1.00	.063
112P	18.00	24.00	2.78	4.81	8.87	2.93	2.25	7.64	.12	1.25	1.25	6.50	1.25	.051
114P	17.00	18.00	2.31	4.36	6.40	2.68	2.25	7.14	.12	1.25	1.00	6.25	1.00	.040
129P	20.00	29.00	2.78	5.02	11.31	2.94	2.25	9.62	.12	1.25	1.25	6.50	1.25	.051
132P	19.75	8.50	2.50	2.91	--	--	--	--	--	1.25	.50	--	.50	.051

## Basic Shell Dimensions and Case Specifications



## Finish Options

(FINISH: EXCEPT LATCHES, HANDLE GRIP, HINGES, AND VALVE)

A = Chemical Film per MIL-C-5541

B = Wash Prime per DOD-P-15328 and Epoxy Primer per MIL-PRF-23377, Type I, Class C.

C = Same as B Plus Light Gray Semi-gloss Baked Enamel per MIL-E-15090, Type I or II, Class 2.

D = Same as B Plus Light Gray Gloss Baked Enamel per MIL-E-15090, Type I or II, Class 1.

E = Same as B Plus Yellow Gloss Baked Enamel, Color No. 13538 of FED-STD-595.

F = Same as B Plus Strata Blue Gloss Baked Enamel, Color No. 15045 of FED-STD-595.

G = Same as B Plus Green Semi-gloss Baked Enamel, Color No. 24300 of FED-STD-595.

H = Same as B Plus Olive Drab Semi-gloss Enamel, Color No. 24084 of FED-STD-595.

J = Same as B Plus Olive Drab Lusterless Baked Enamel, Color No. 34088 of FED-STD-595.

S = Special Order - Please Specify.

W = Chemical Film per MIL-C-5541, Class 1A.

Epoxy Primer per MIL-P-53022, Type II or Waterbase.

Epoxy Primer per MIL-P-53030, Paint with Polyurethane coating per MIL-PRF-85285, Type II,

Color No. 17925 (White) of FED-STD-595 or Epoxy Coating per MIL-C-22750, Type I.

## Other Colors and Finishes Available Upon Request

Commercial or military specifications can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

### Panel Fabrication

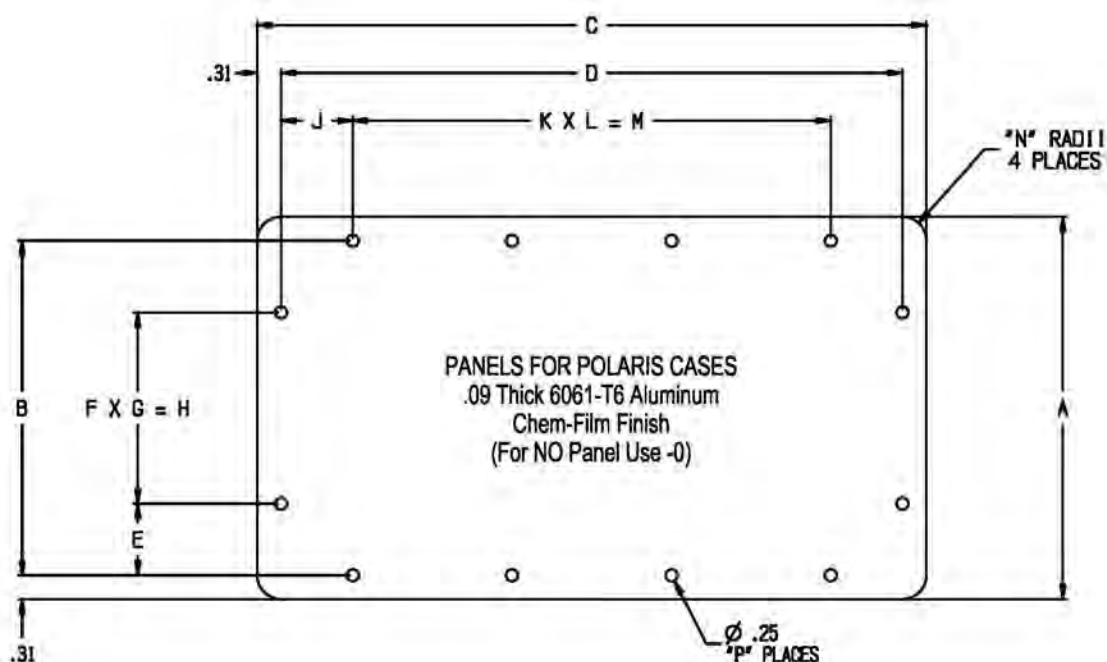
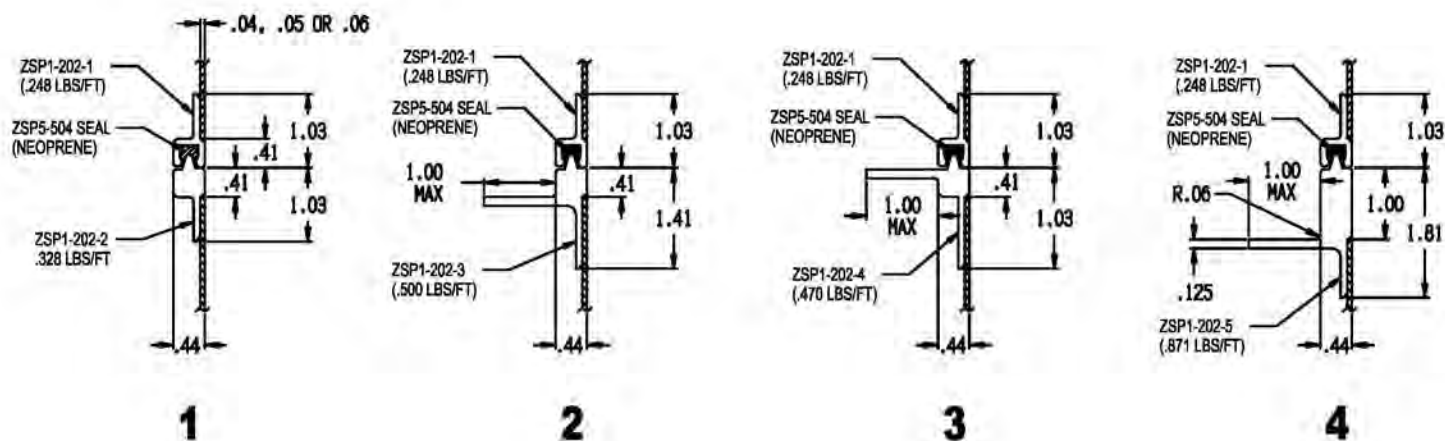
- silk-screening
- engraving
- custom fabrication

### Case Customization

- stenciling
- designation printing
- decals / labels
- silk-screening

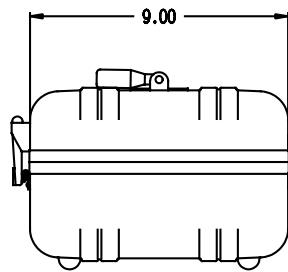
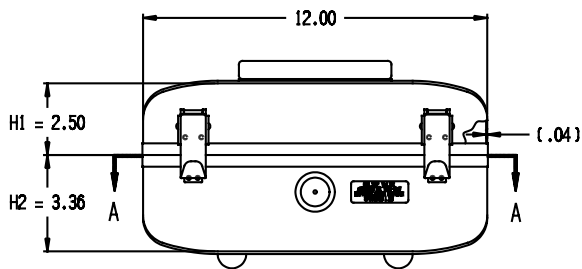
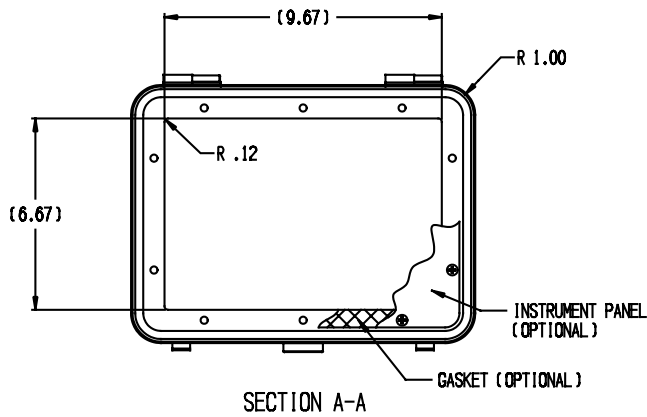


# Closure/Panel Options



ZP21622 (PANEL) TABULATION BLOCK															
DASH NO	CASE REF	A	B	C	D	E	F	G	H	J	K	L	M	N	P
-1	100P	7.92	7.300	10.92	10.300	1.650	1	4.000	4.000	1.650	2	3.500	7.000	.50	10
-3	101P	7.90	7.280	14.90	14.280	1.640	1	4.000	4.000	1.140	3	4.000	12.000	.75	12
-5	103P	11.92	11.300	16.92	16.300	1.650	2	4.000	8.000	1.150	4	3.500	14.000	.75	16
-7	105P	11.92	11.300	19.92	19.300	1.650	2	4.000	8.000	1.650	4	4.000	16.000	.75	16
-9	106P	15.90	15.280	19.90	19.280	1.640	3	4.000	12.000	1.640	4	4.000	16.000	.75	18
-11	109P	16.88	16.250	24.88	24.250	1.125	4	3.500	14.000	1.625	6	3.500	21.000	.44	24
-13	112P	16.90	16.280	22.90	22.280	1.140	4	3.500	14.000	1.140	5	4.000	20.000	.75	22
-15	114P	15.92	15.300	16.92	16.300	1.650	3	4.000	12.000	1.150	4	3.500	14.000	.75	18
-17	129P	18.90	18.280	27.90	27.280	1.140	4	4.000	16.000	1.640	6	4.000	24.000	.75	24
-19	132P	7.40	6.780	18.65	18.030	1.340	1	4.000	4.000	1.015	4	4.000	16.000	.75	14

# 100P



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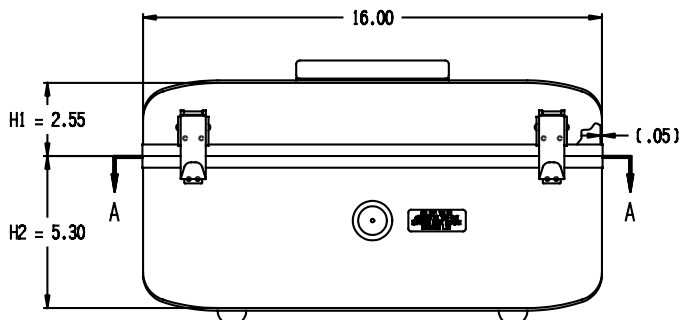
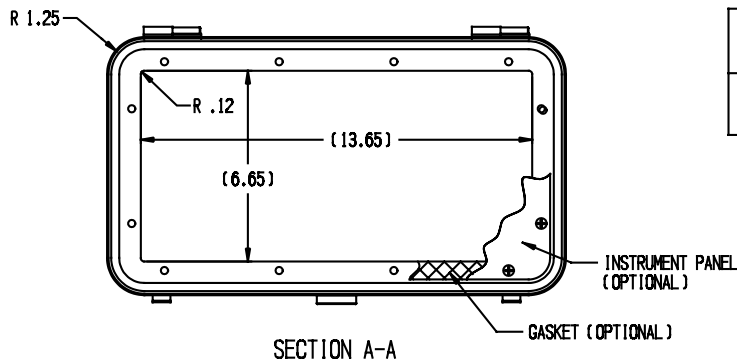
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SEE PAGE 7 FOR OPTIONS

A FOR AUTOMATIC  
M FOR MANUAL

SEE PAGE 8 FOR OPTIONS

# 101P



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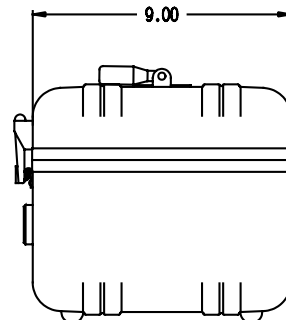
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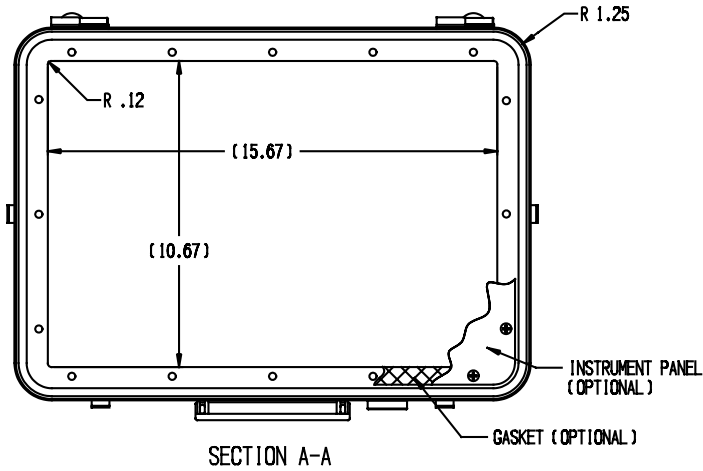
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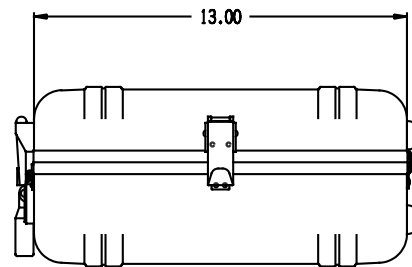
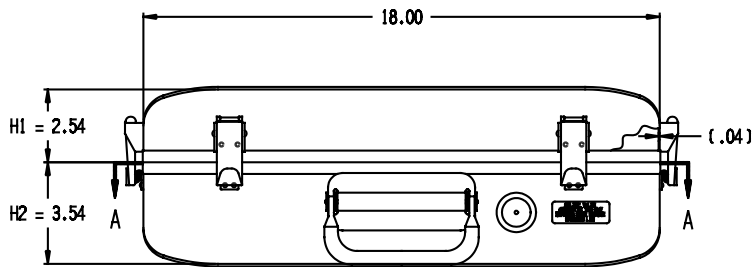
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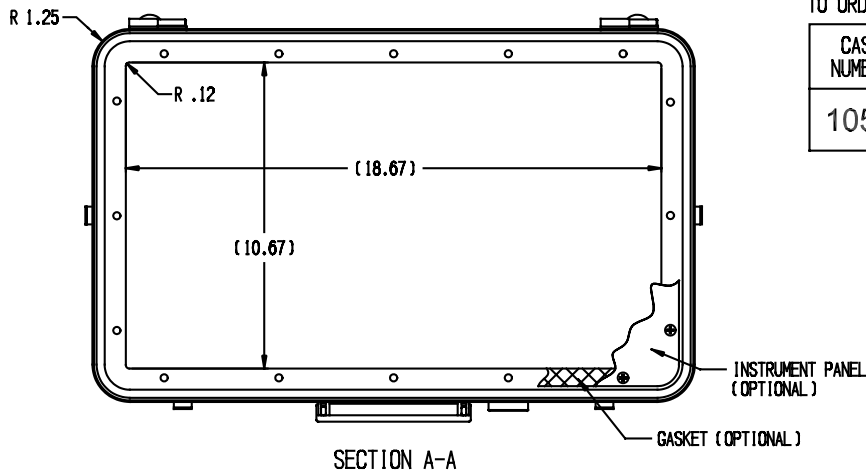
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M FOR MANUAL

SEE PAGE 8 FOR OPTIONS



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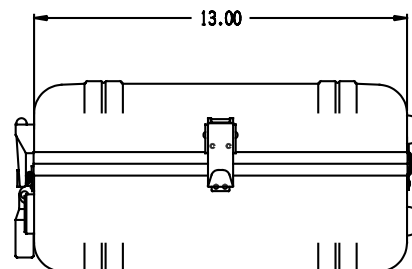
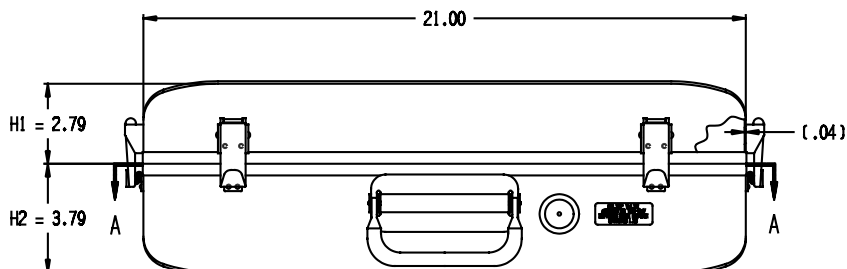
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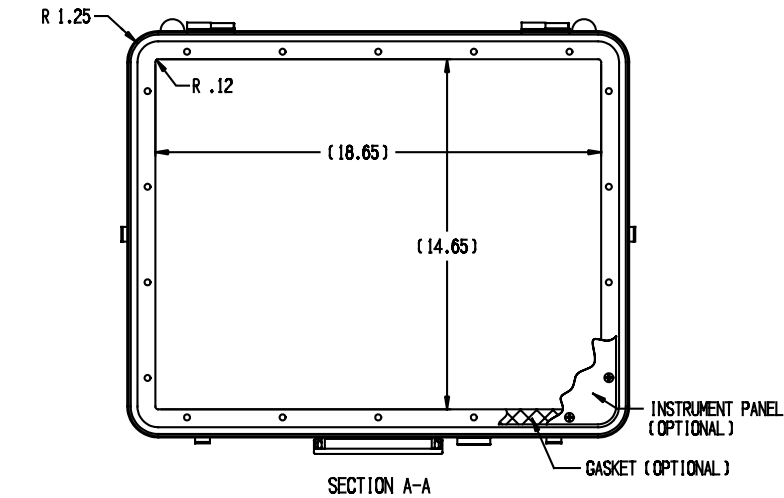
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M FOR MANUAL

SEE PAGE 8 FOR OPTIONS



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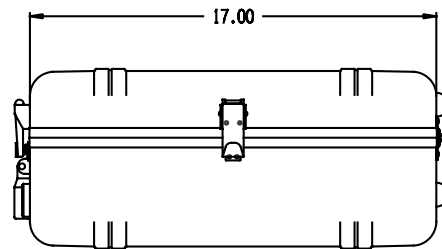
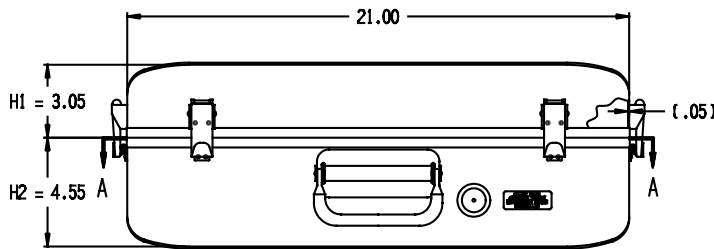
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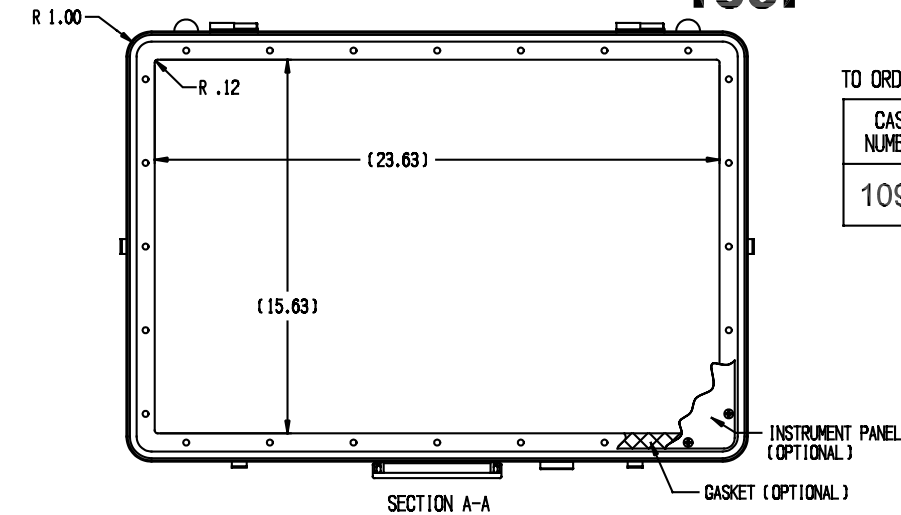
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A FOR AUTOMATIC  
M FOR MANUAL

SEE PAGE 8 FOR OPTIONS



# 109P



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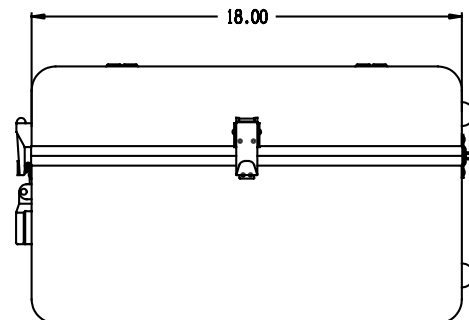
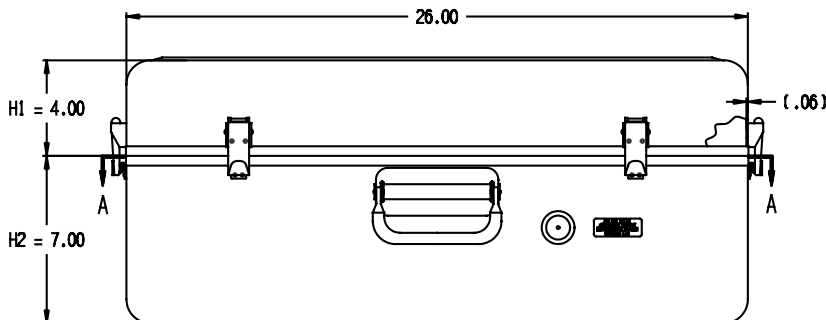
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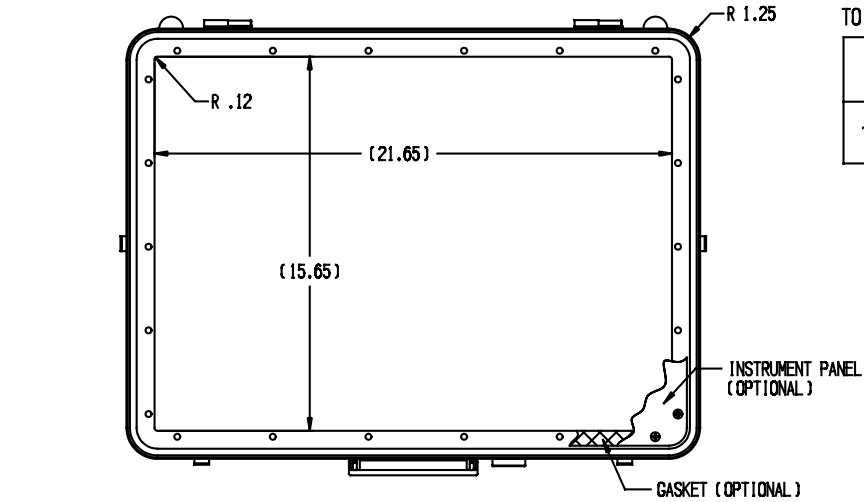
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M FOR MANUAL

SEE PAGE 8 FOR OPTIONS

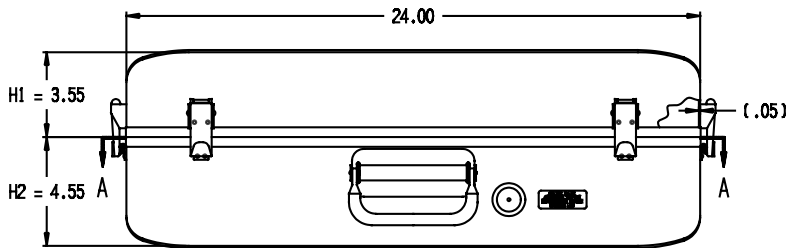




# 112P



SECTION A-A



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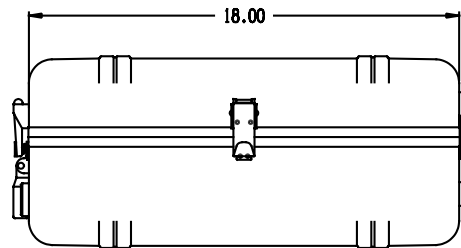
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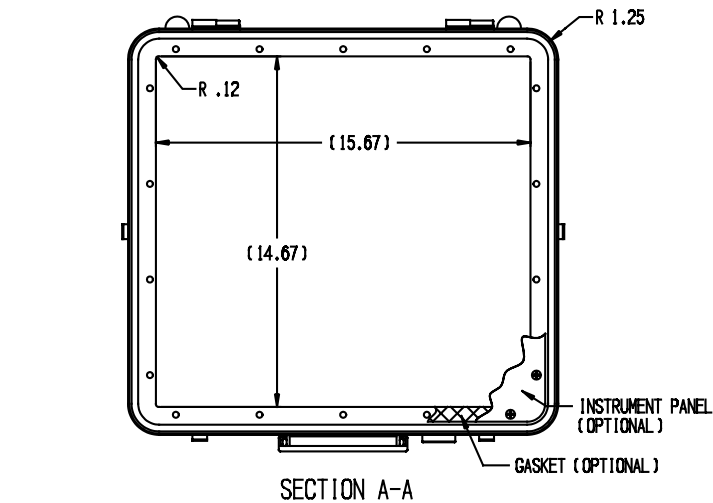
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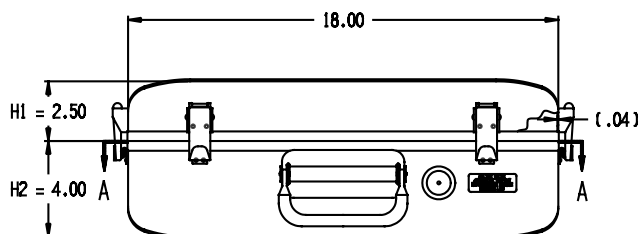
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# 114P



SECTION A-A



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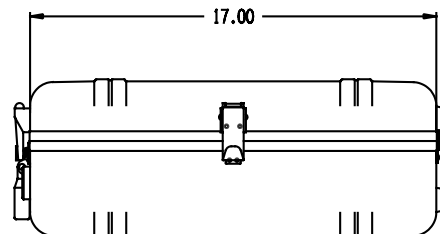
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114P				

USE DASH NUMBER FROM PAGE 8

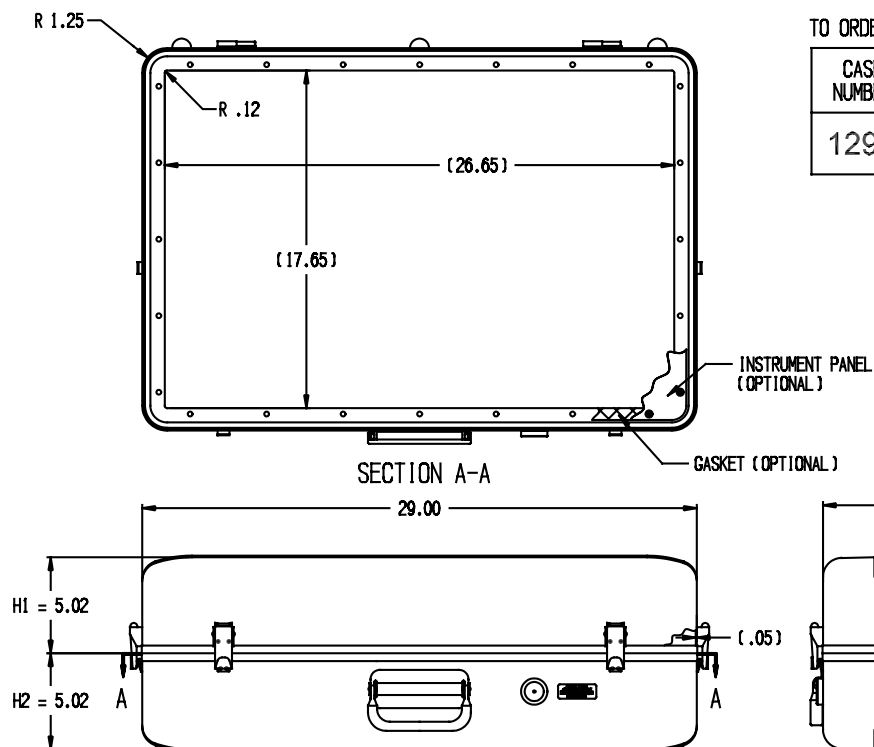
SEE PAGE 7 FOR OPTIONS

A FOR AUTOMATIC  
M FOR MANUAL

SEE PAGE 8 FOR OPTIONS



# 129P



TO ORDER COMPLETE PART NUMBER BELOW:

CASE NUMBER	CLOSURE STYLE	VALVE TYPE	FINISH	OPTIONAL PANEL
129P				

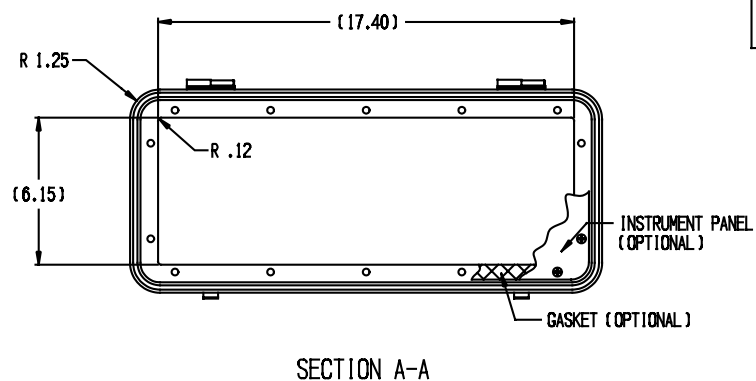
USE DASH NUMBER FROM PAGE 8

SEE PAGE 7 FOR OPTIONS

A FOR AUTOMATIC  
M FOR MANUAL

SEE PAGE 8 FOR OPTIONS

# 132P



TO ORDER COMPLETE PART NUMBER BELOW:

CASE NUMBER	CLOSURE STYLE	VALVE TYPE	FINISH	OPTIONAL PANEL
132P				

USE DASH NUMBER FROM PAGE 8

SEE PAGE 7 FOR OPTIONS

A FOR AUTOMATIC  
M FOR MANUAL

SEE PAGE 8 FOR OPTIONS

NOTE: CASE SHELLS ARE NOT BEADED.



# VAL-AN SERIES

## TRANSIT, INSTRUMENT AND COMBINATION CASES

- 52 width and length combinations, and many depths to choose from.
- Water-tight construction meets MIL-STD-108. Made from seamless, deep drawn aluminum shells.
- Pressure relief valve.
- Choice of closure type, panel flange and/or inner lid.
- Choice of finish.
- With or without inner panel.

VAL-AN means “value analyzed”, implying a commitment from Zero Manufacturing, Inc. to provide the desirable features of the VAL-AN series in efficient, cost-effective cases.

VAL-AN cases come in many standard sizes and configurations. They can also be customized to meet an even greater number of needs.



# INDEX TO CASE SIZE

WIDTH INCHES	LENGTH INCHES	CASE NO.	PAGE NO.
4.00	7.00	AA	17
5.00	6.00	AD	17
5.25	9.75	AG	18
6.00	7.00	AK	18
6.19	16.88	AN	19
7.00	8.00	AS	19
7.00	9.00	AV	20
7.00	11.00	AY	20
7.50	12.00	HA	21
8.00	11.00	BB	21
8.00	14.00	BE	22
8.50	20.50	HD	22
8.75	12.00	BH	23
8.75	17.97	BL	23
9.00	9.00	BP	24
9.00	27.00	HG	24
9.19	13.25	BT	25
9.88	20.50	HK	25
10.00	10.38	BW	26
10.00	12.00	HN	26
10.00	16.00	HS	27
10.00	18.06	HV	27
11.00	11.00	HY	28
11.00	18.00	JB	28
11.44	13.75	JE	29
11.56	15.06	JH	29
11.75	27.25	JL	30
12.00	12.00	JP	30
12.00	18.00	JT	31
12.00	21.50	JW	31
13.00	22.50	JZ	32
13.63	20.63	KC	32
14.50	20.63	KF	33
15.00	15.50	KJ	33
15.50	30.38	BZ	34
15.63	19.13	KM	34
16.13	26.13	KR	35
16.50	20.00	CC	35
16.88	20.13	KU	36
16.94	21.94	KX	36
16.94	32.94	LA	37
17.25	22.88	LD	37
18.00	18.00	LG	38
18.00	27.00	LK	38
18.48	22.13	CF	39
19.56	21.50	CJ	39
20.00	26.00	LN	40
20.13	21.38	LS	40
20.13	32.13	LV	41
24.00	26.00	LY	41
27.25	37.25	MB	42
28.25	28.25	ME	42

## MILITARY SPECIFICATION: MEETS MIL-STD-108.

VAL-AN cases are the result of an intensive design and testing program and will meet or exceed all watertight requirements of MIL-STD-108.

## TOLERANCES:

Fractions  $\pm 1/16$  except as noted.

Decimals  $\pm .02$  except as noted.

## DIMENSIONS:

Width, Length and Height are outside dimensions measured at points of tangency at bottom, top and sides.

## MATERIAL:

6061 deep drawn aluminum alloy, except for AD, AK, and AS case styles which are made of 1100-0 aluminum alloy.

## CASE TYPES:

### CODE

1 = Combination Case (No feet on rear except when handle is on front. Latches on case with strikes on cover. Separable hinges)

2 = Transit Case (No feet on rear except when handle is on front. Latches on cover, strikes on case. Non-separable hinges)

3 = Instrument Case (Feet on rear and bottom in all situations. Separable hinges) Latches on case with strikes on cover.

NOTE: Drawings shown on pages 17-42 are typical subject to the above.

These drawings show feet on the bottom and rear of all cases. This is for reference only. Four (4) metal feet are on the bottom of each case with feet on the rear when specified by case type.

## SPECIFICATIONS:

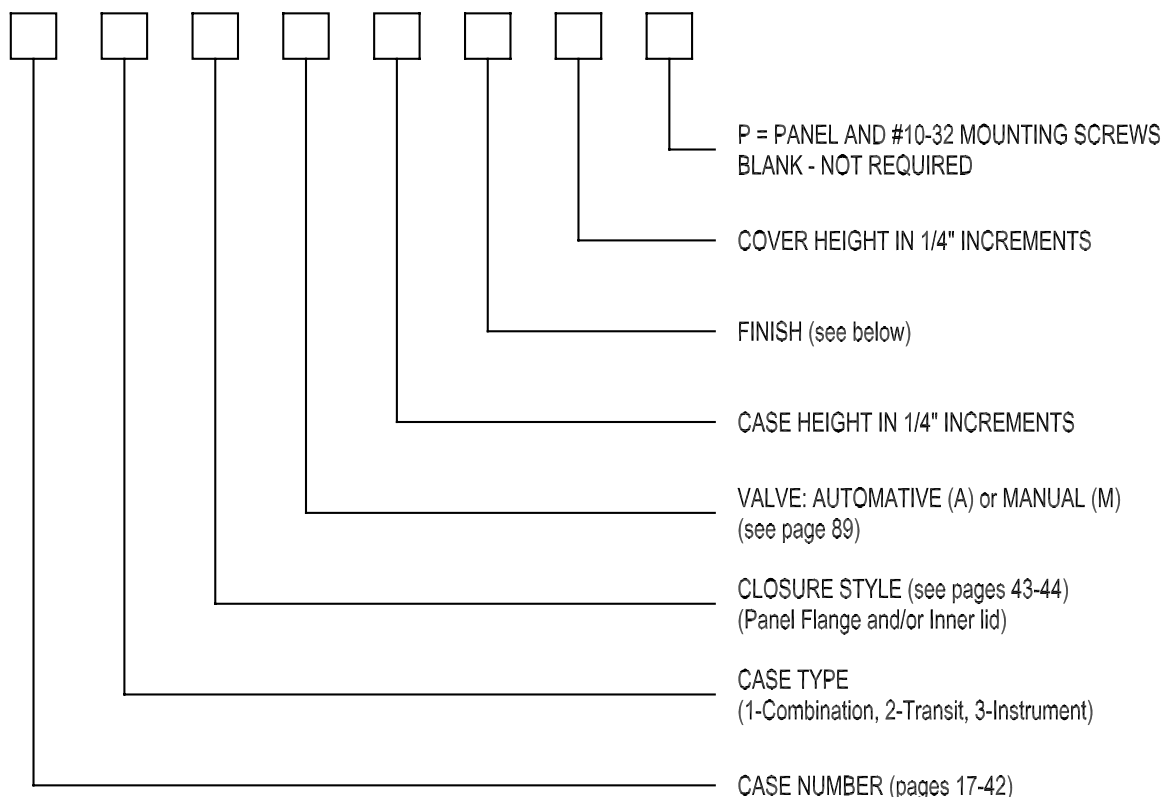
- Continuous mating gasketed extruded closures.
- Handles meet or exceed military specifications and are located for ease of carrying case.
- Hinged inner lid assemblies are available on a case by case situation.
- Optional panel flange with nut plates and neoprene gasket.
- Choice of manual or automatic pressure relief valve.
- Spring loaded latches tested to 400 pounds pull are located to insure watertight integrity.

# ORDERING INFORMATION - VAL-AN CASES

This catalog has been designed to speed and simplify ordering watertight cases to MIL-STD-108. Choose the basic case size, specify combination, transit or instrument case style, indicate manual or automatic pressure relief valve, case and cover height and finish desired by inserting the code for each in the basic part number formula below.

EXAMPLE: HG1DA20C18

Specifies a deep drawn aluminum combination case, 9" X 27", to comply with MIL-STD-108, with one handle, four latches, two hinges, gasketed closure with flush panel flange complete with #10-32 floating nut plates and neoprene gasket, hinged and latched inner lid, automatic two-way pressure relief valve, case 5" high, cover 4.50" high, painted color per MIL-E-15090, light gray semi-gloss enamel.



## Finish Options

- A = No Finish
- B = Chem Film per MIL-C-5541, CL3 All Aluminum Surfaces & Epoxy Prime per MIL-PRF-23377, Type I, Class C (Ext. only).
- C = Same as B Plus Light Gray Semi-gloss Baked Enamel per MIL-E-15090, Type I or II, Class 2.
- D = Same as B Plus Light Gray Gloss Baked Enamel per MIL-E-15090, Type I or II, Class 1.
- E = Same as B Plus Yellow Gloss Baked Enamel, Color No. 13538 of FED-STD-595.
- F = Same as B Plus Strata Blue Gloss Baked Enamel, Color No. 15045 of FED-STD-595.
- G = Same as B Plus Green Semi-gloss Baked Enamel, Color No. 24300 of FED-STD-595.
- H = Same as B Plus Olive Drab Semi-gloss Enamel, Color No. 24084 of FED-STD-595.
- J = Same as B Plus Olive Drab Lusterless Baked Enamel, Color No. 34088 of FED-STD-595.
- K = Same as B Plus Aliphatic Polyurethane Camouflage (CARC) per MIL-C-46168, Color No. 383.
- S = Special Order - Please Specify.
- W = Chemical Film per MIL-C-5541, CL3 All Aluminum Surfaces.  
Epoxy Primer per MIL-P-53022, Type II or Waterbase.  
Epoxy Primer per MIL-P-53030, Paint with Polyurethane coating per MIL-PRF-85285, Type II, Color No. 17925 (White) of FED-STD-595 or Epoxy Coating per MIL-C-22750, Type I.

## Case Weights

To determine approximate weights for any of the cases shown in this catalog, multiply the square foot area of the case, including inner lid if any, by .889 lbs. per square foot for .063 cases and 1.27 lbs. per square foot for .090 cases. Add to this the sum of the weights of the latches, hinges, handles, and feet as given on pages 85-90.

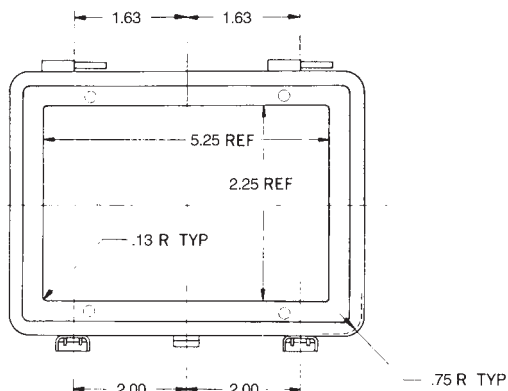
## Other Colors and Finishes Available Upon Request

Commercial or military specifications can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

Panel Fabrication	Case Customization
- silk-screening	- stenciling
- engraving	- designation printing
- custom fabrication	- decals / labels
	- silk-screening

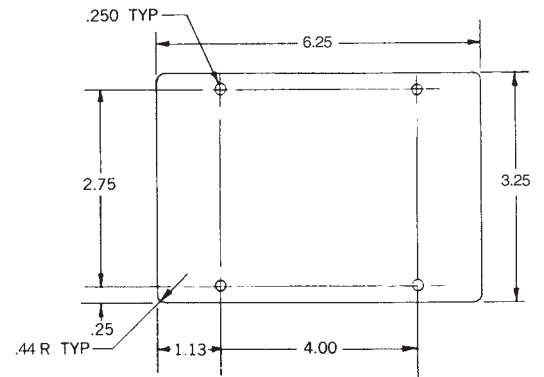


# AA



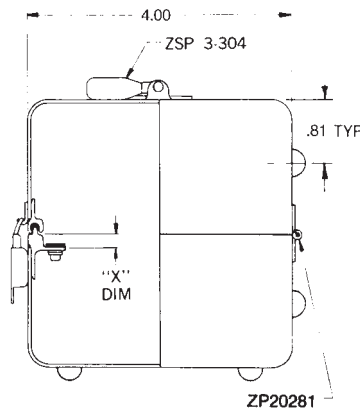
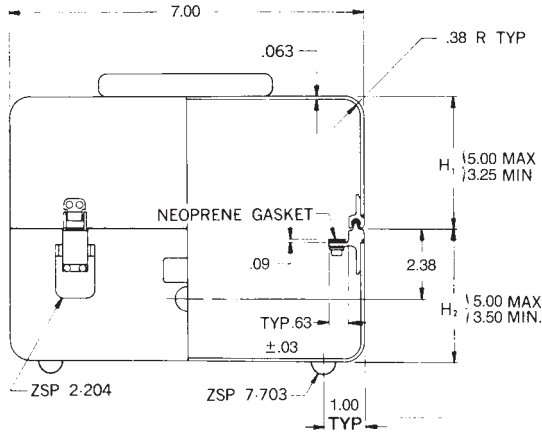
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

**VALVE CODE:**  
A = Automatic  
M = Manual



**PANEL PART NUMBER:**  
ZP21740-1

**NOTE: INNER LID NOT AVAILABLE IN THIS CASE.**



CLOSURE TYPE	"X" DIM
"C"	.020
"E"	.281
"G"	.875

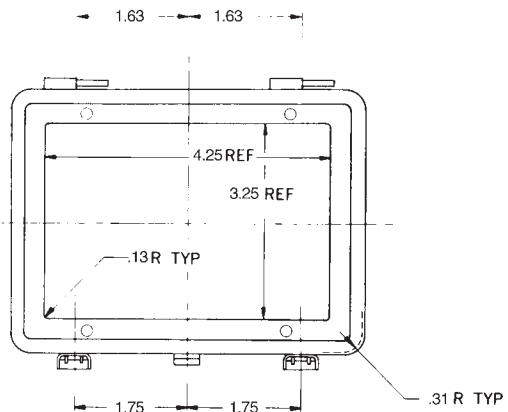
**TO ORDER COMPLETE THE PART NUMBER BELOW:**

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AA						

**EXAMPLE: AA1EA16C14 SPECIFIES:**

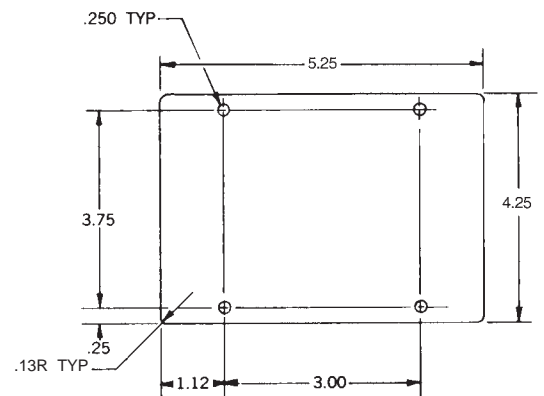
A deep drawn .063 aluminum combination case 4" x 7", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; automatic two-way pressure relief valve, case 4" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# AD

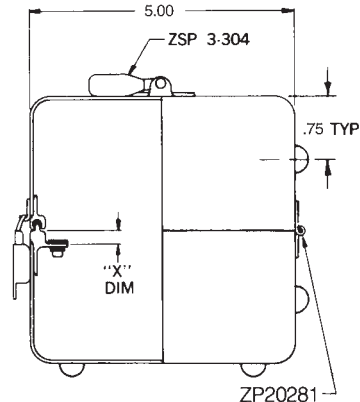
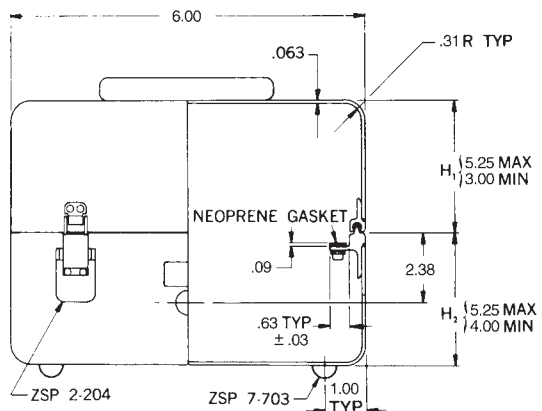


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

**VALVE CODE:**  
A = Automatic  
M = Manual



**PANEL PART NUMBER:**  
ZP21740-3



CLOSURE TYPE	"X" DIM
"C"	.020
"E"	.281
"G"	.875

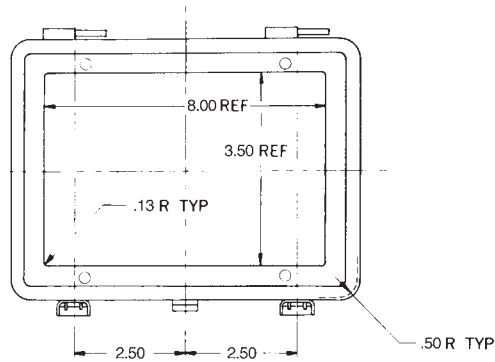
**TO ORDER COMPLETE THE PART NUMBER BELOW:**

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AD						

**EXAMPLE: AD1EA16C14 SPECIFIES:**

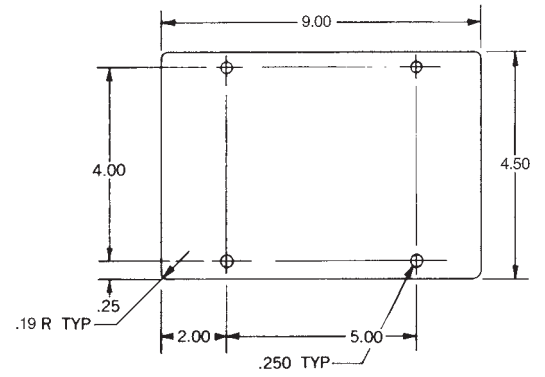
A deep drawn .063 aluminum combination case 5" x 6", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; automatic two-way pressure relief valve, case 4" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# AG

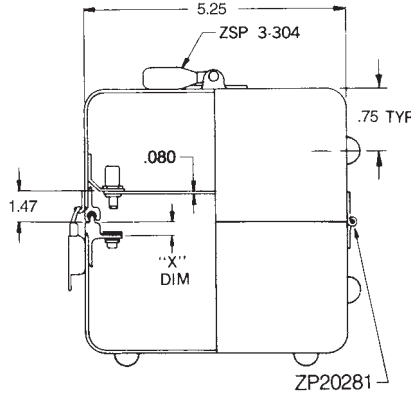
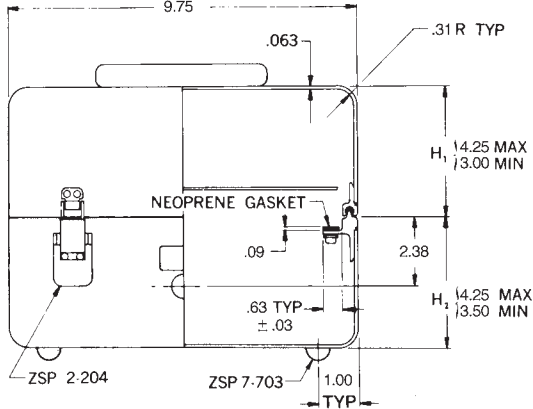


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-5



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

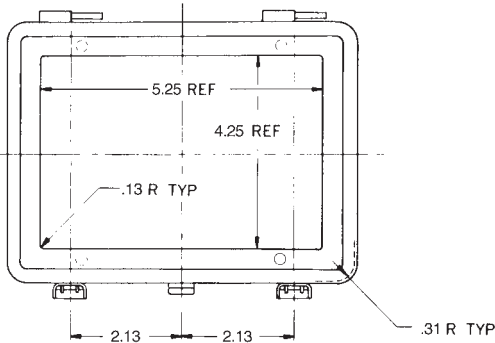
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AG						

EXAMPLE: AG1FA16C14 SPECIFIES:

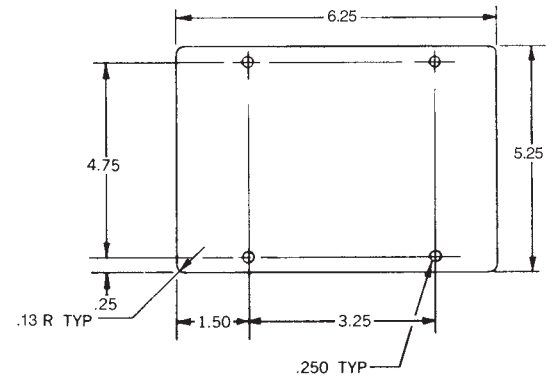
A deep drawn .063 aluminum combination case 5-1/4" x 9-3/4", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 4" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# AK

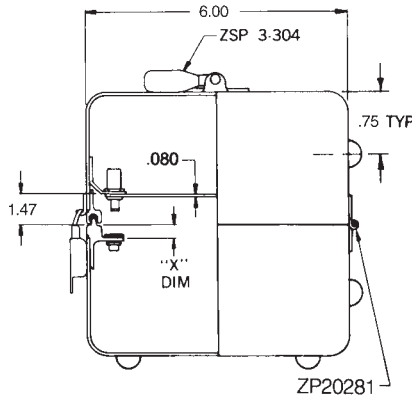
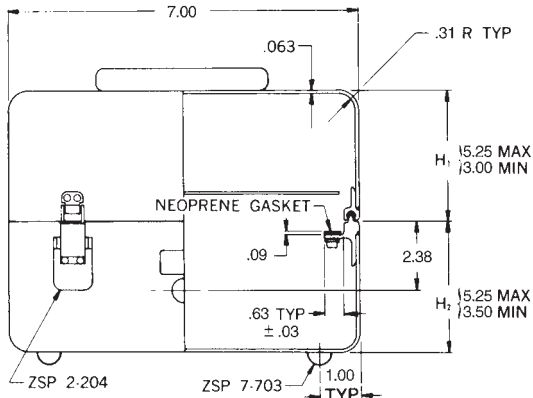


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-7



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

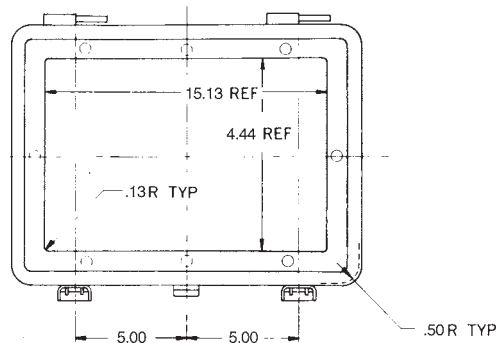
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AK						

EXAMPLE: AK1FA16C14 SPECIFIES:

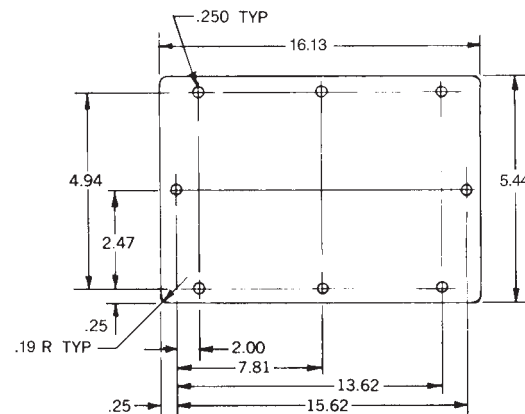
A deep drawn .063 aluminum combination case 6" x 7", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 4" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# AN

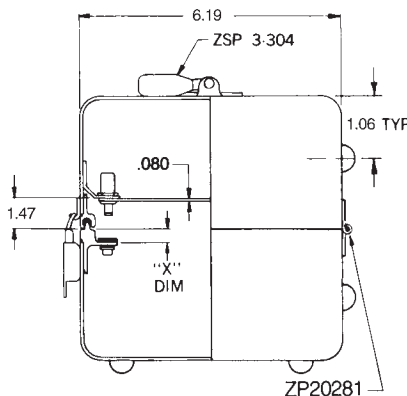
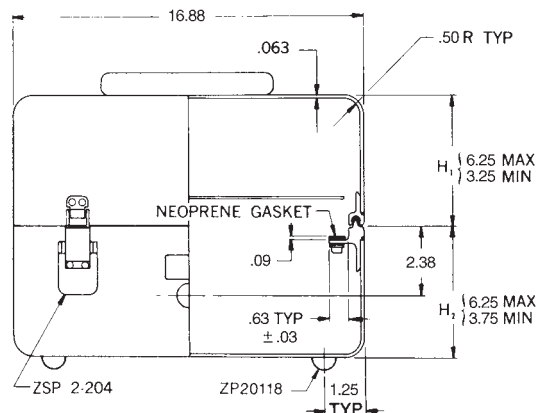


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-9



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

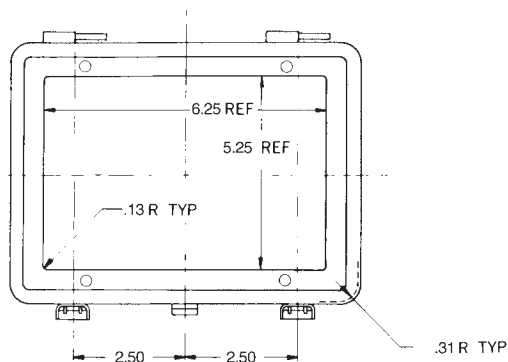
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AN						

EXAMPLE: AN1FA24C14 SPECIFIES:

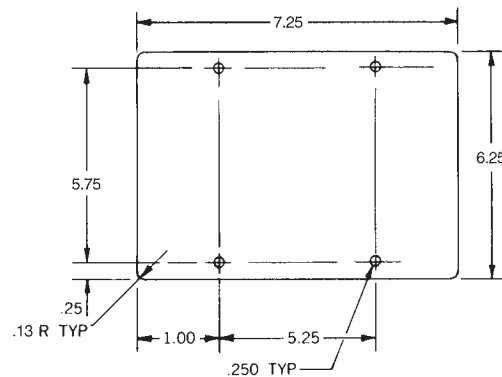
A deep drawn .063 aluminum combination case 6-3/16" x 16-7/8", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# AS

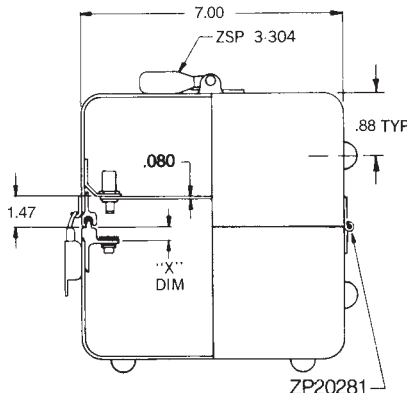
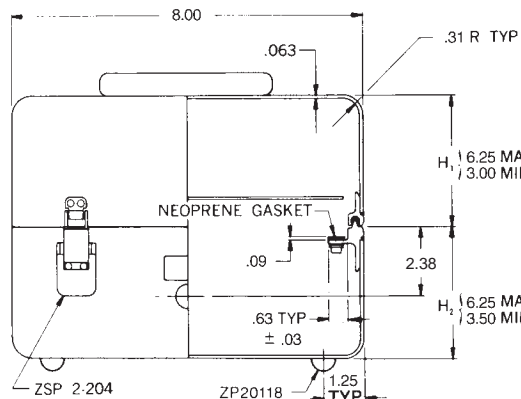


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-11



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

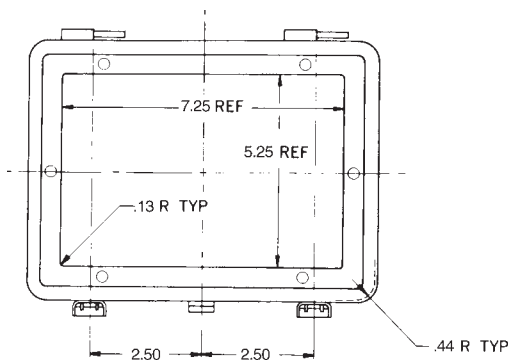
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AS						

EXAMPLE: AS1FA24C14 SPECIFIES:

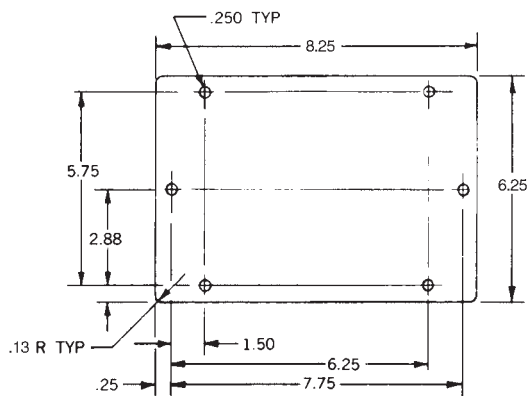
A deep drawn .063 aluminum combination case 7" x 8", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# AV

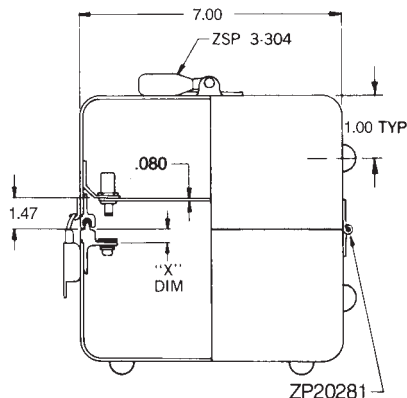
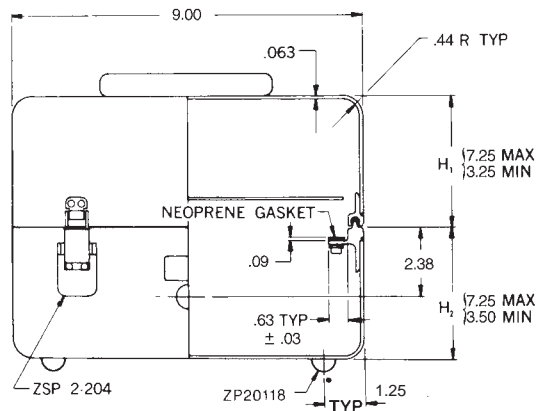


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

**VALVE CODE:**  
A = Automatic  
M = Manual



**PANEL PART NUMBER:**  
ZP21740-13



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

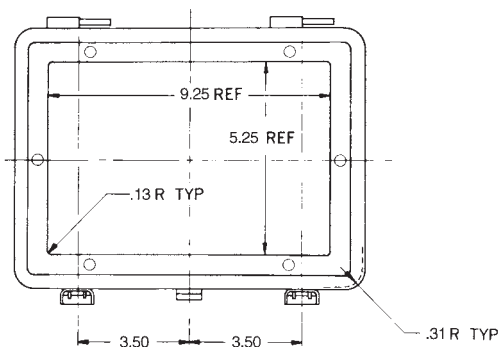
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AV						

**EXAMPLE: AV1FA24C14 SPECIFIES:**

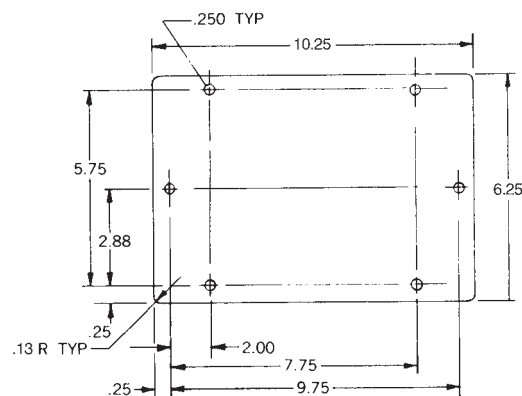
A deep drawn .063 aluminum combination case 7" x 9", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# AY

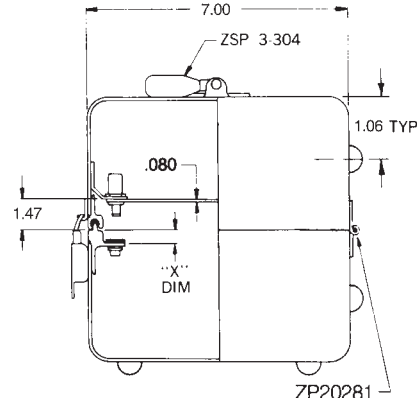
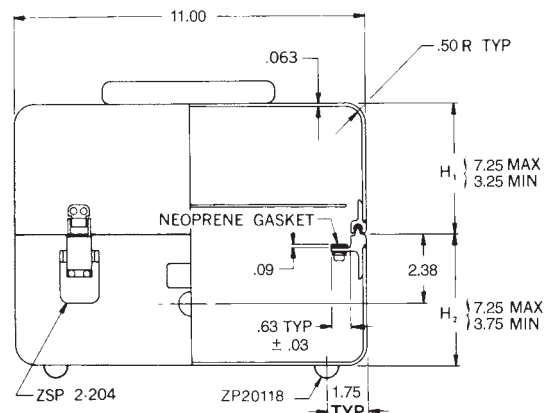


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

**VALVE CODE:**  
A = Automatic  
M = Manual



**PANEL PART NUMBER:**  
ZP21740-15



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

TO ORDER COMPLETE THE PART NUMBER BELOW:

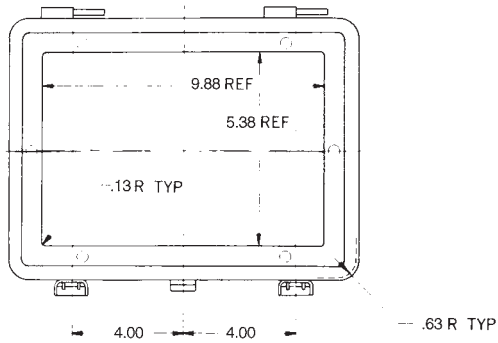
CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
AY						

**EXAMPLE: AY1FA24C14 SPECIFIES:**

A deep drawn .063 aluminum combination case 7" x 11", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

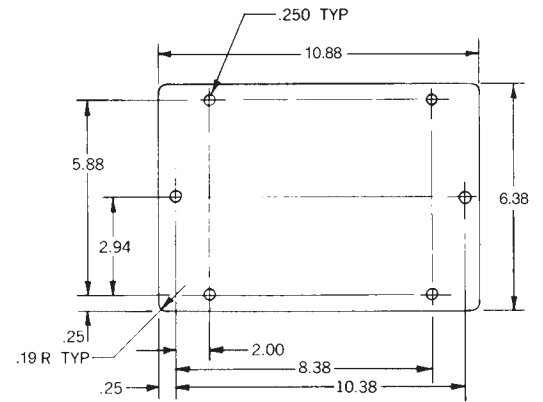


# HA

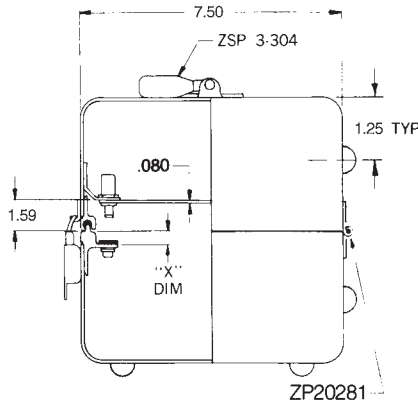
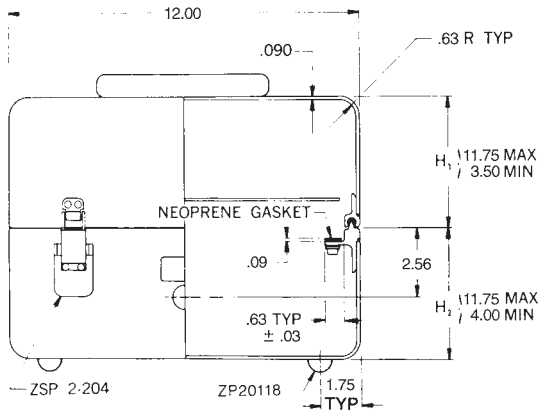


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

**VALVE CODE:**  
A = Automatic  
M = Manual



**PANEL PART NUMBER:**  
ZP21740-17



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

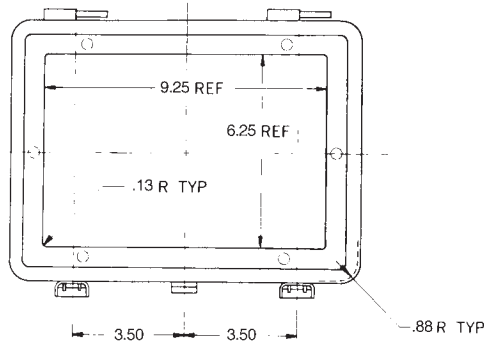
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HA						

**EXAMPLE: HA1FA24C14 SPECIFIES:**

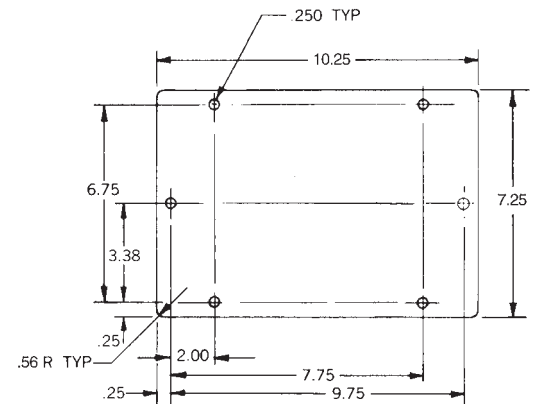
A deep drawn .090 aluminum combination case 7-1/2" x 12", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# BB

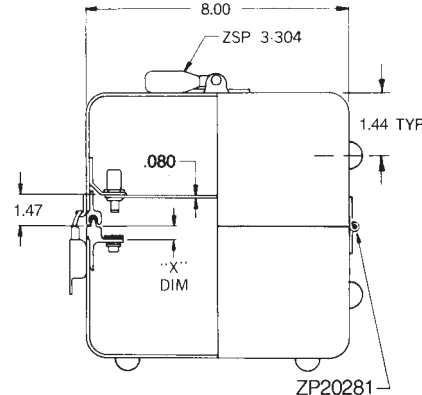
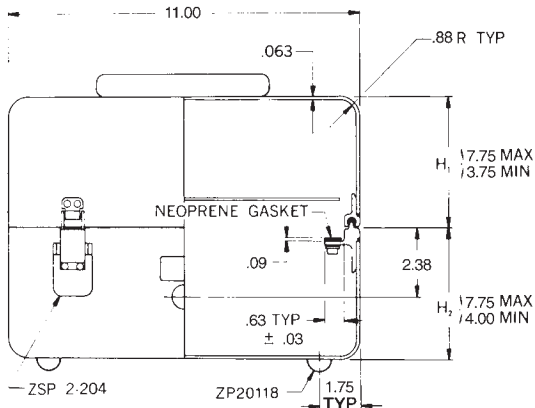


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

**VALVE CODE:**  
A = Automatic  
M = Manual



**PANEL PART NUMBER:**  
ZP21740-19



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

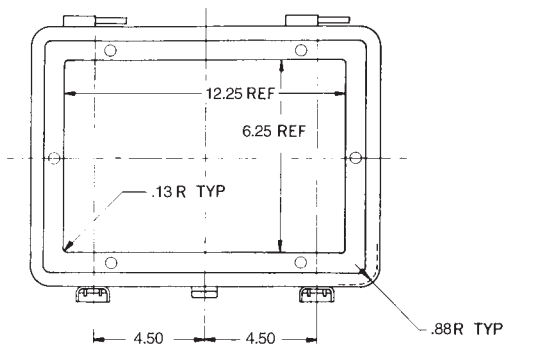
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BB						

**EXAMPLE: BB1FA24C18 SPECIFIES:**

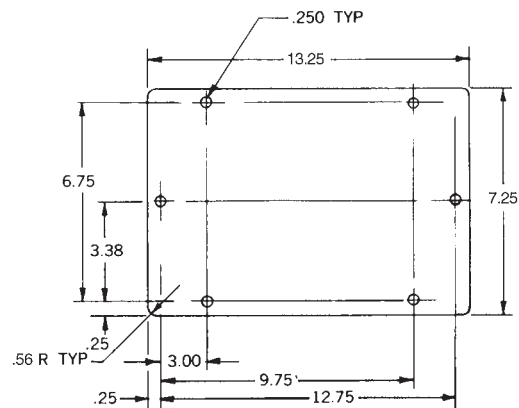
A deep drawn .063 aluminum combination case 8" x 11", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# BE

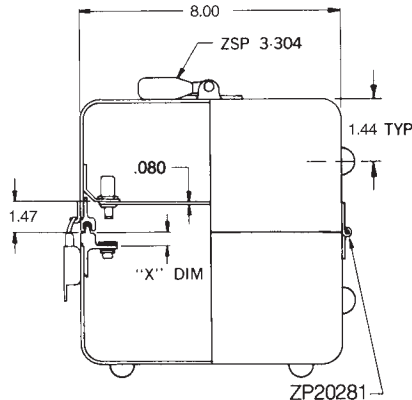
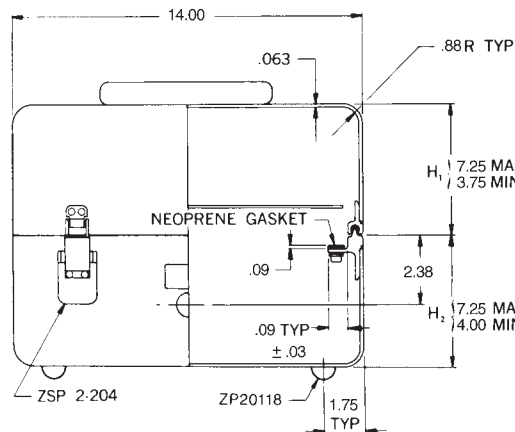


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-21



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

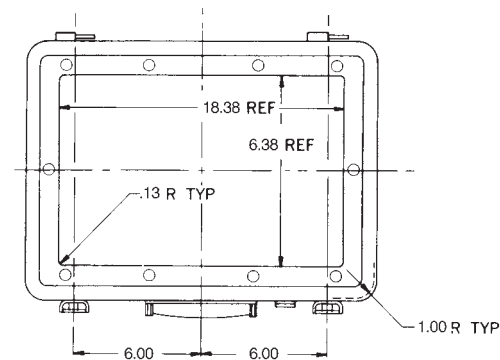
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BE						

EXAMPLE: BE1FA24C18 SPECIFIES:

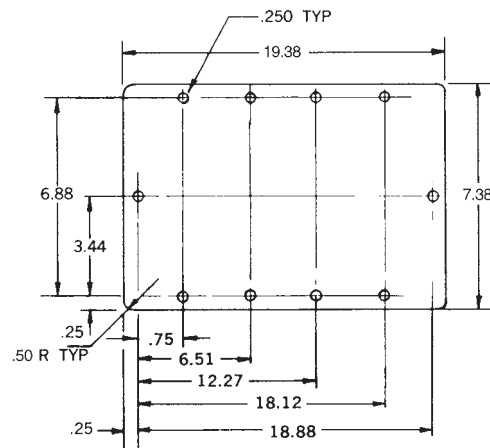
A deep drawn .063 aluminum combination case 8" x 14", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# HD

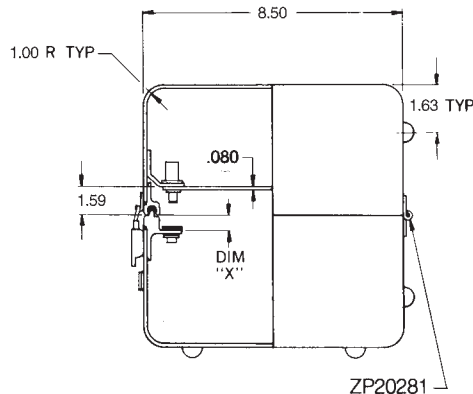
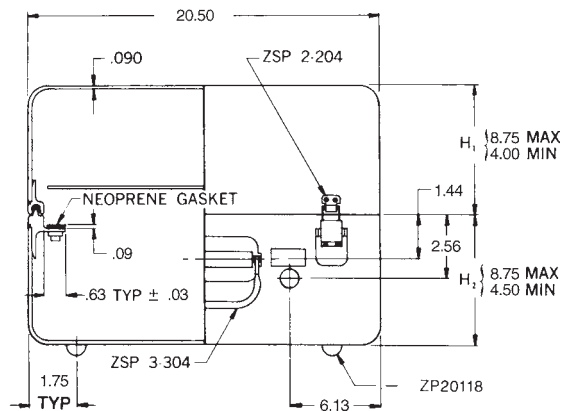


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-23



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

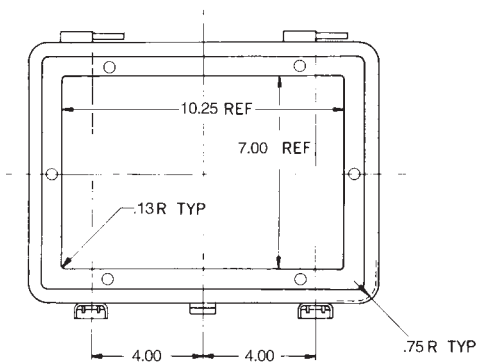
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HD						

EXAMPLE: HD1FA24C18 SPECIFIES:

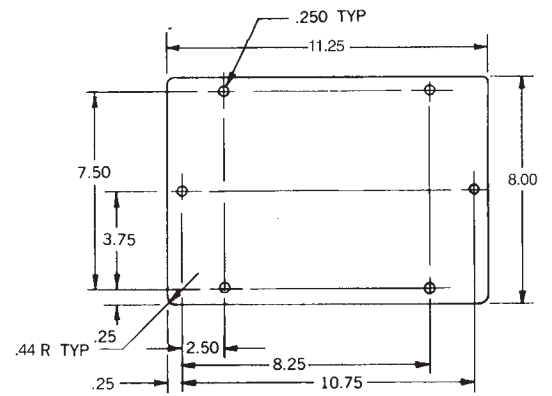
A deep drawn .090 aluminum combination case 8-1/2" x 20-1/2", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# BH

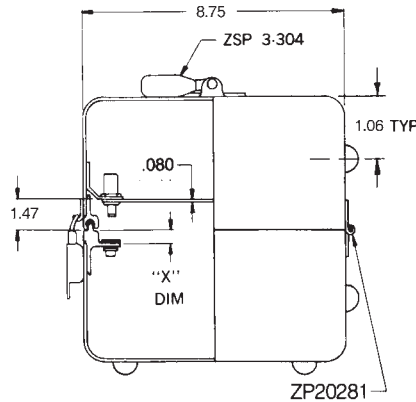
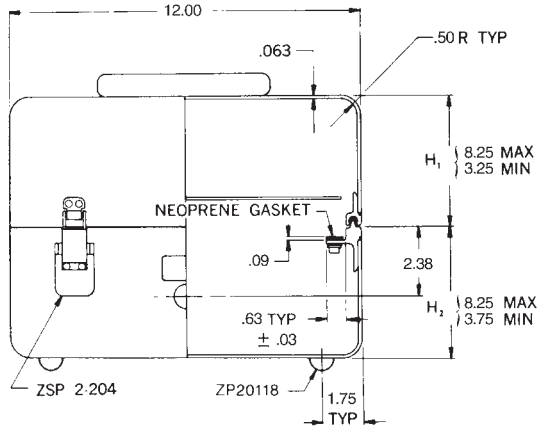


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-25



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

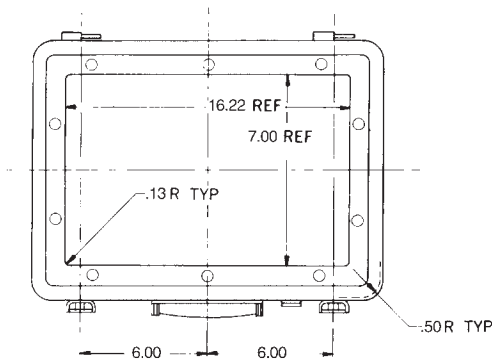
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BH						

EXAMPLE: BH1FA24C14 SPECIFIES:

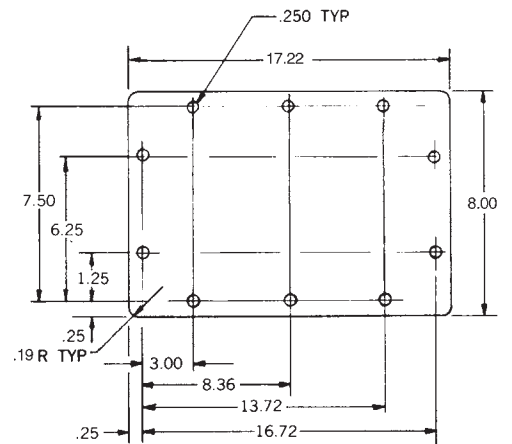
A deep drawn .063 aluminum combination case 8-3/4" x 12", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# BL

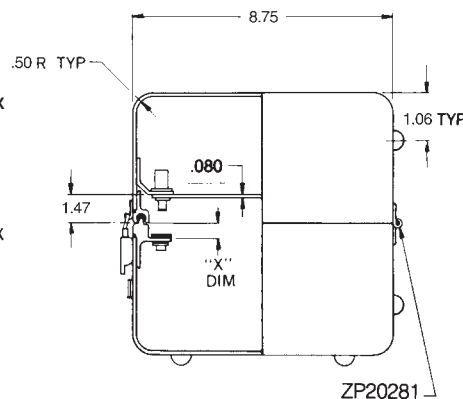
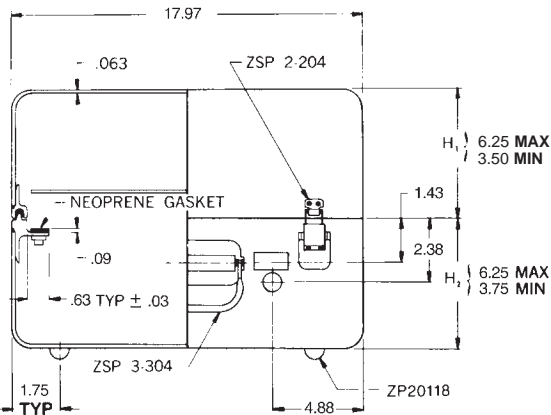


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-27



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

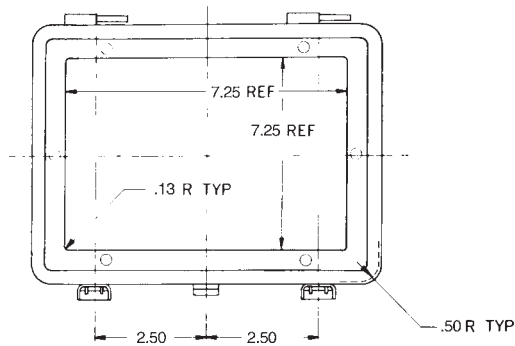
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BL						

EXAMPLE: BL1FA24C14 SPECIFIES:

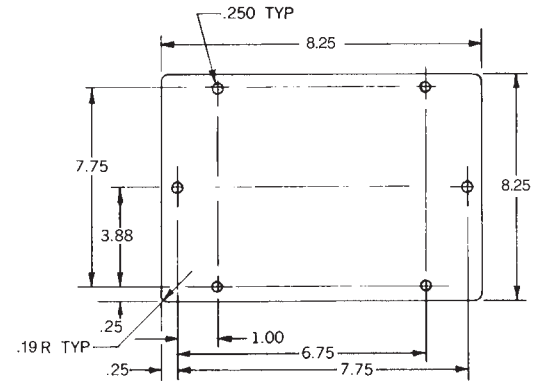
A deep drawn .063 aluminum combination case 8-3/4" x 17-31/32", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# BP

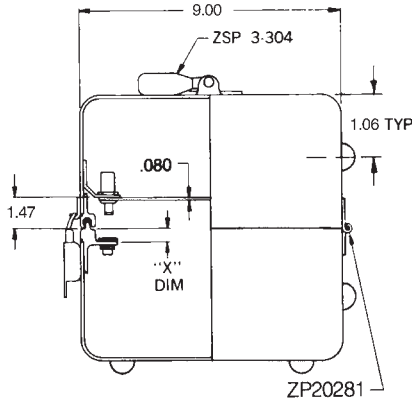
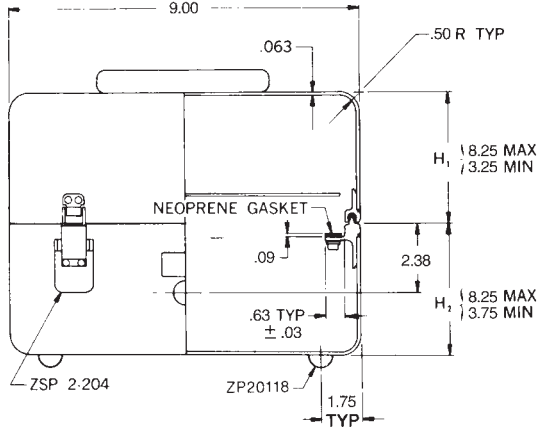


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-29



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

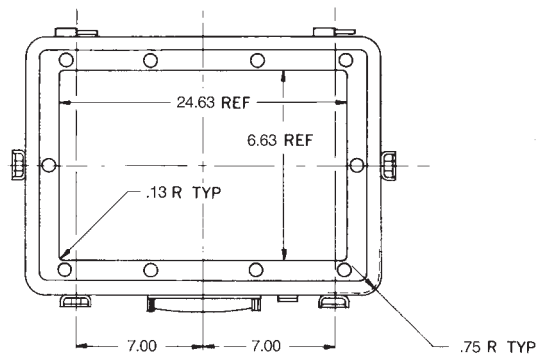
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BP						

EXAMPLE: BP1FA24C14 SPECIFIES:

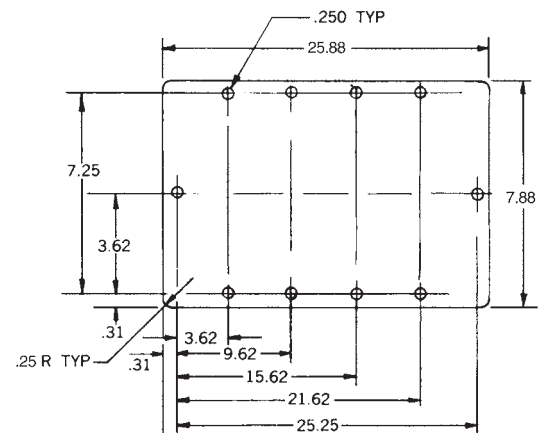
A deep drawn .063 aluminum combination case 9" x 9", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# HG

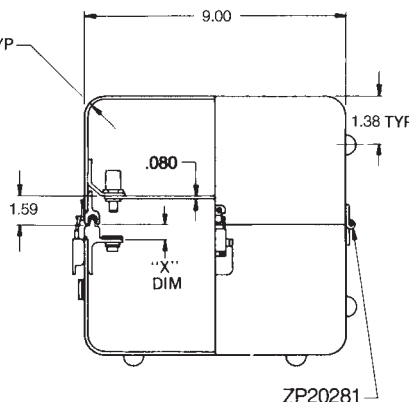
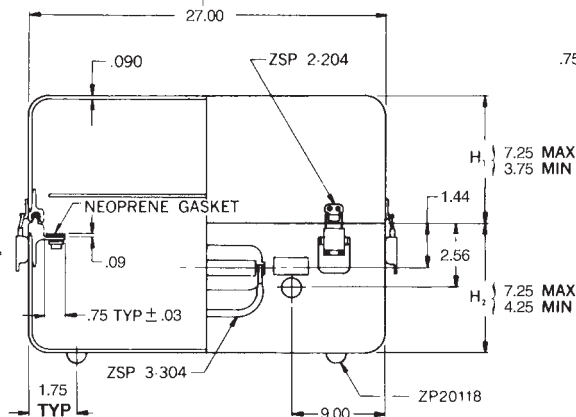


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-31



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

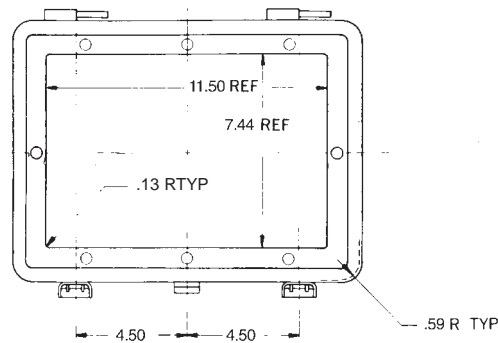
CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HG						

EXAMPLE: HG1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 9" x 27", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

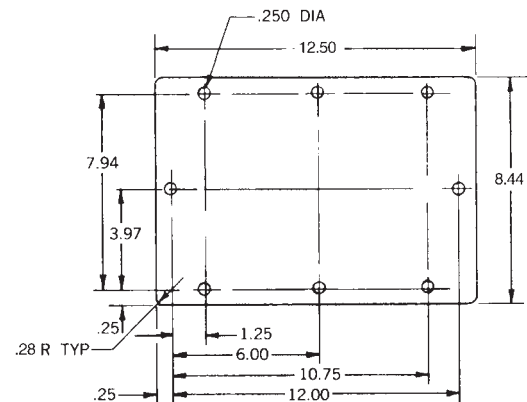


# BT

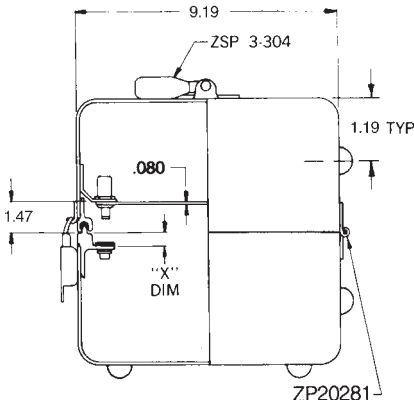
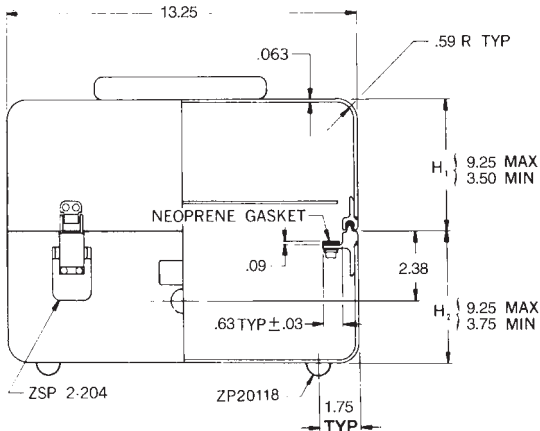


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-33



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

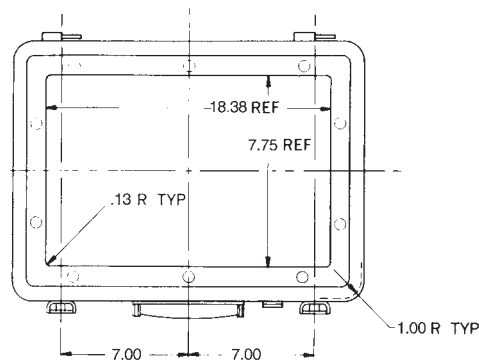
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BT						

EXAMPLE: BT1FA24C14 SPECIFIES:

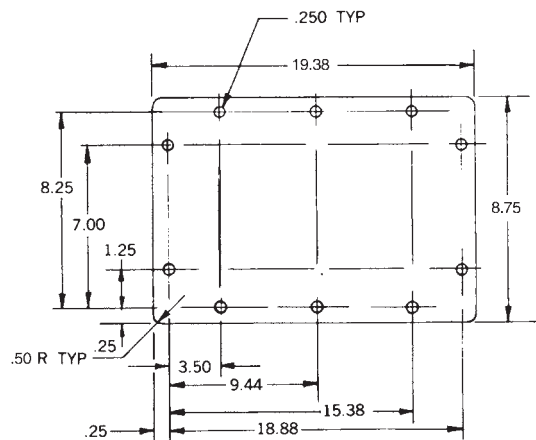
A deep drawn .063 aluminum combination case 9-3/16" x 13-1/4", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# HK

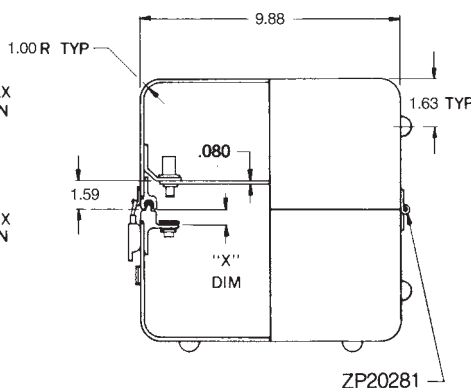
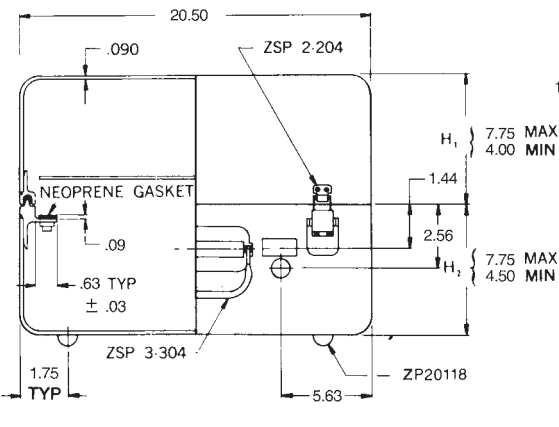


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-35



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

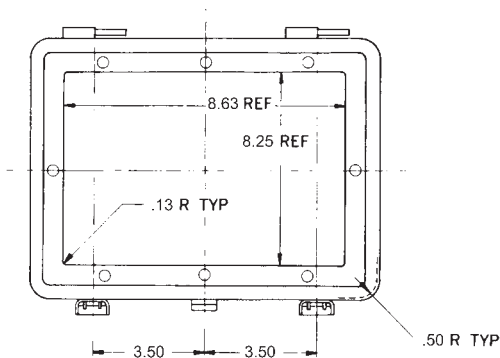
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HK						

EXAMPLE: HK1FA24C18 SPECIFIES:

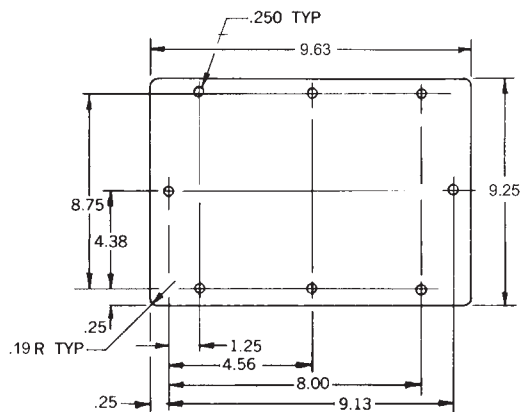
A deep drawn .090 aluminum combination case 9-7/8" x 20-1/2", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# BW

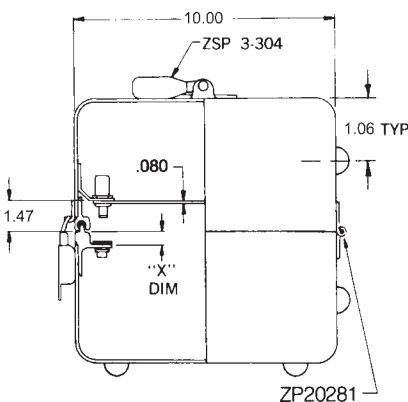
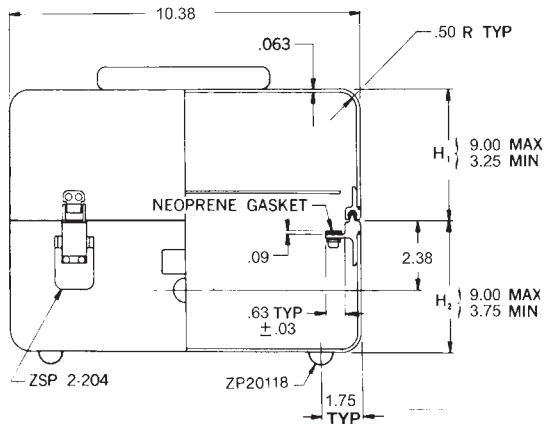


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-37



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

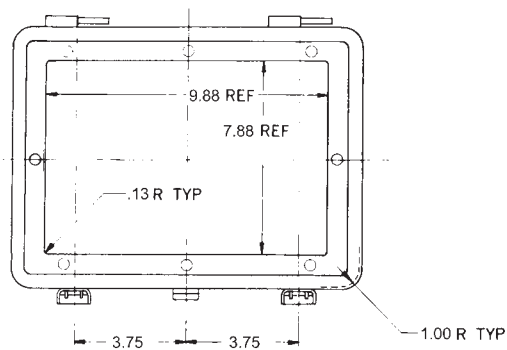
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BW						

EXAMPLE: BW1FA24C14 SPECIFIES:

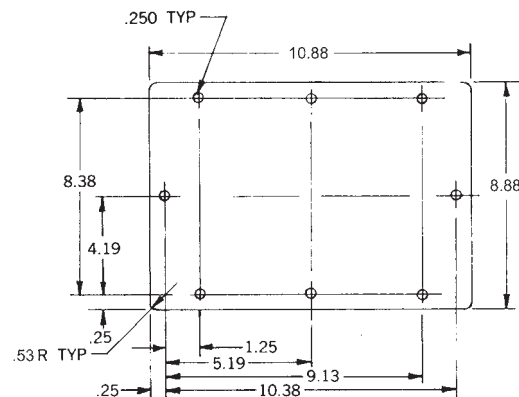
A deep drawn .063 aluminum combination case 10" x 10-3/8", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# HN

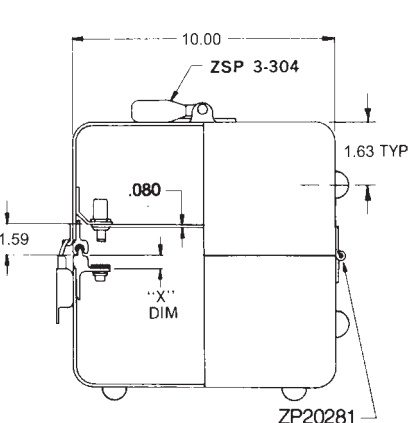
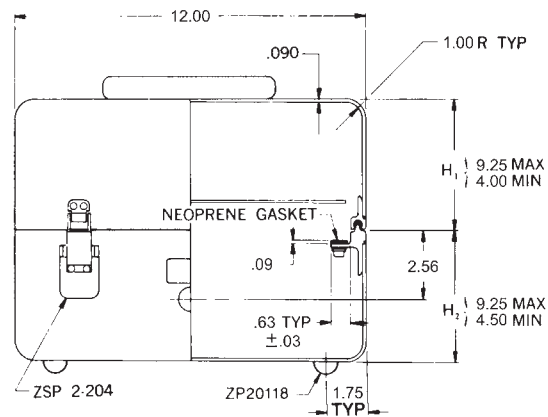


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-39



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

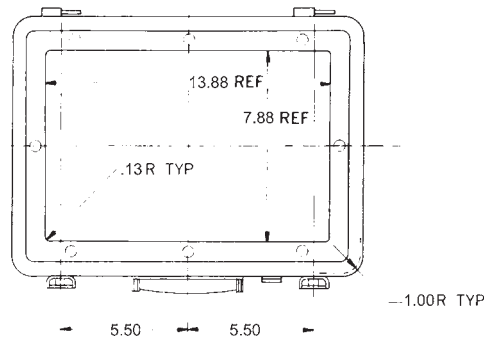
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HN						

EXAMPLE: HN1FA24C18 SPECIFIES:

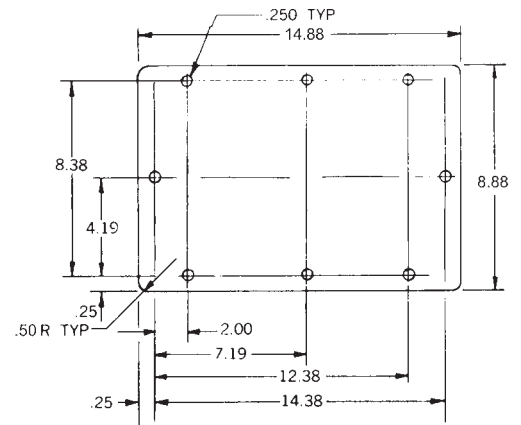
A deep drawn .090 aluminum combination case 10" x 12", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# HS

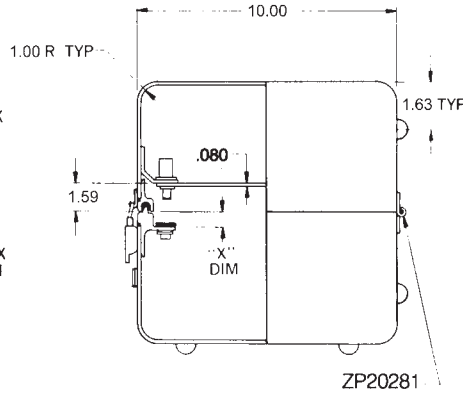
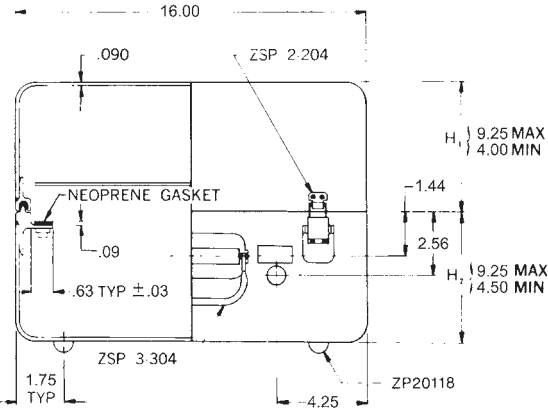


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-41



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

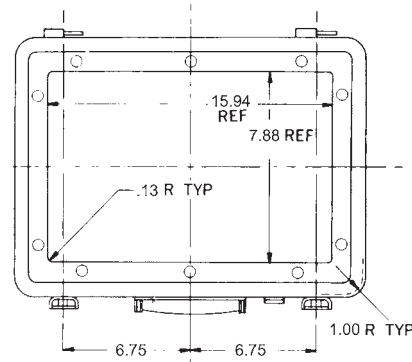
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HS						

EXAMPLE: HS1FA24C18 SPECIFIES:

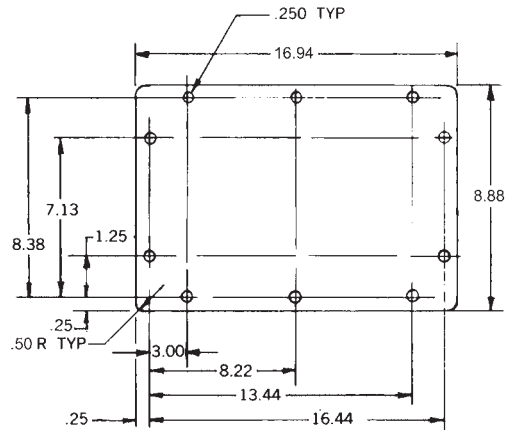
A deep drawn .090 aluminum combination case 10" x 16", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# HV

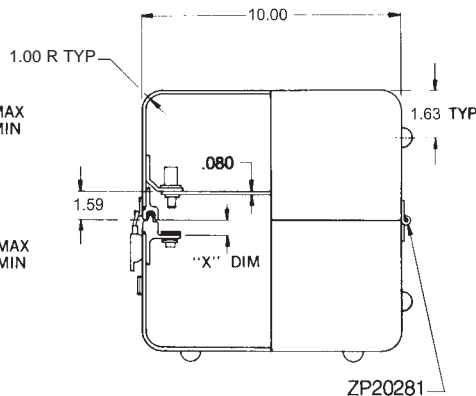
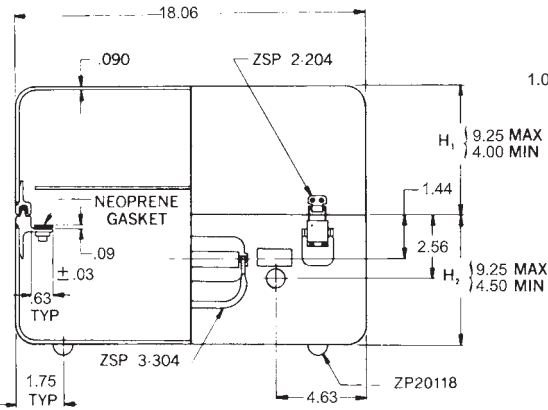


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-43



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HV						

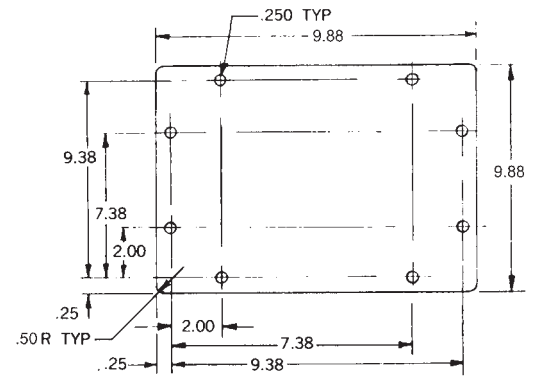
EXAMPLE: HV1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 10" x 18-1/16", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# HY

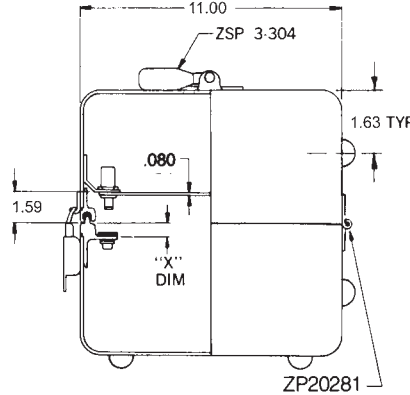
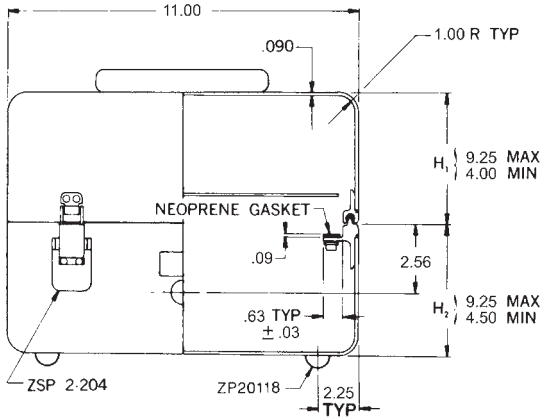
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-45

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
HY						

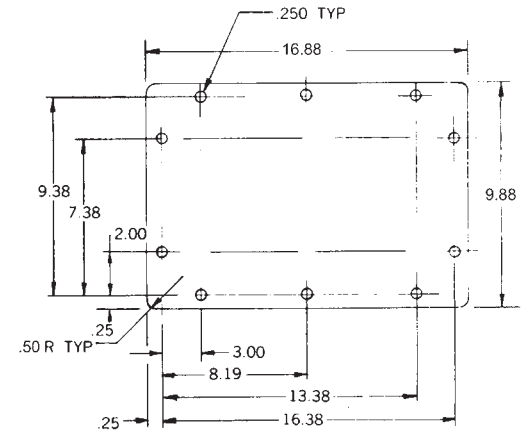
EXAMPLE: HY1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 11" x 11", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# JB

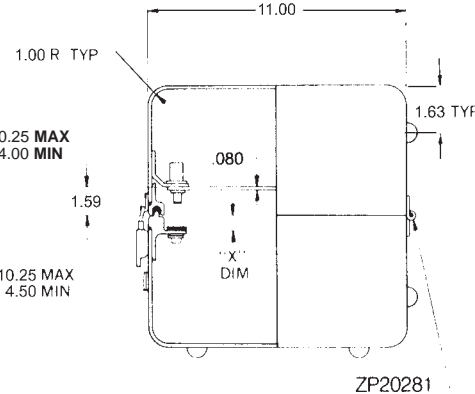
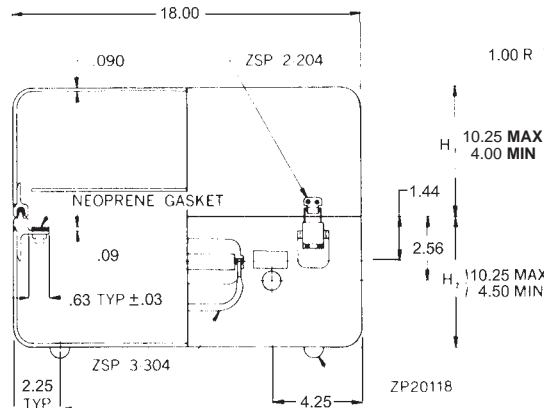
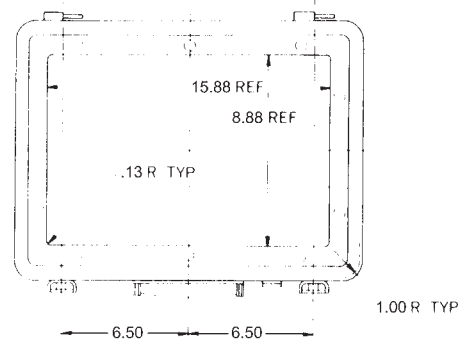
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-47

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JB						

EXAMPLE: JB1FA24C18 SPECIFIES:

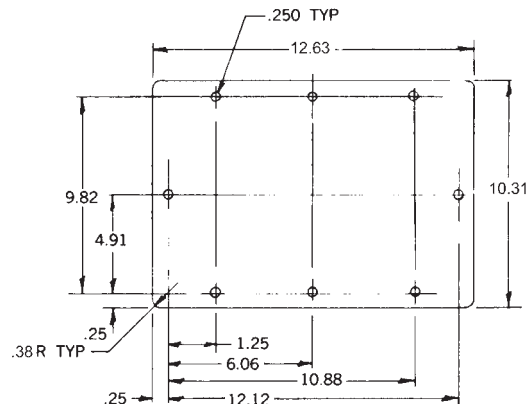
A deep drawn .090 aluminum combination case 11" x 18", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.



# JE

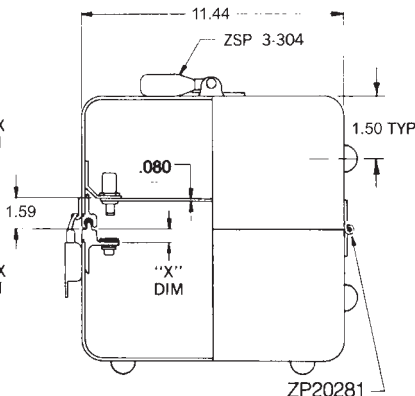
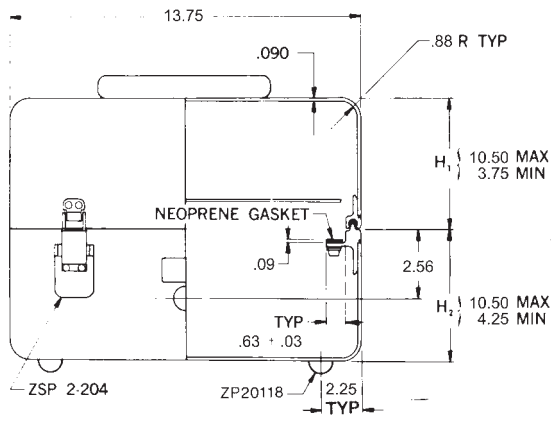
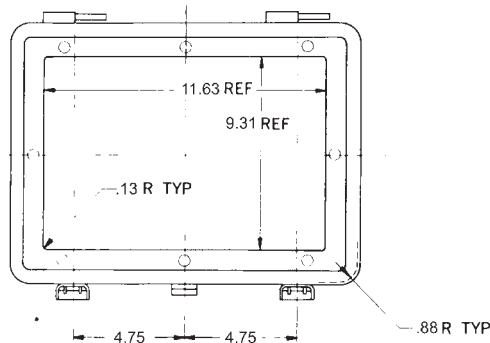
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-49

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JE						

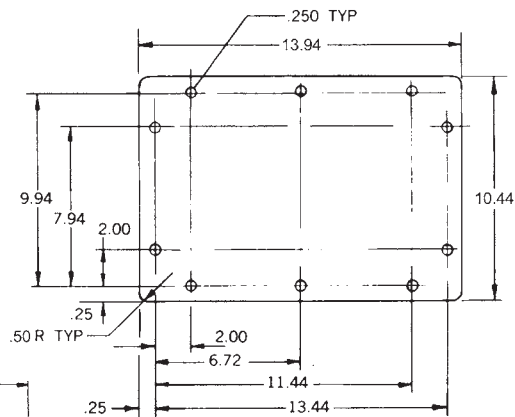
EXAMPLE: JE1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 11-7/16" x 13-3/4", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# JH

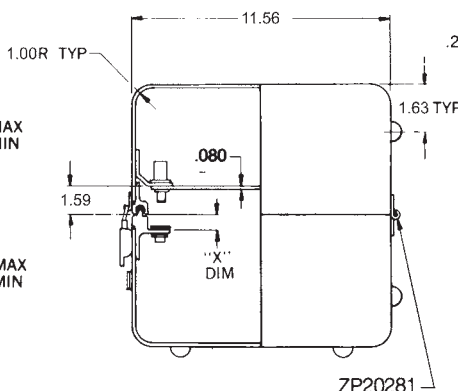
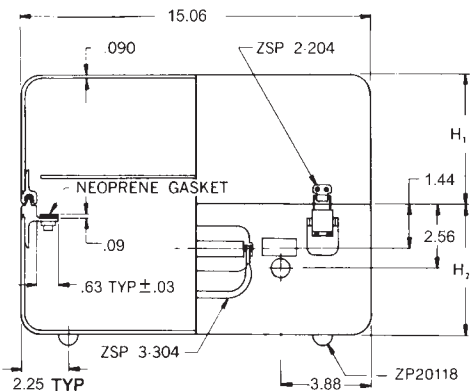
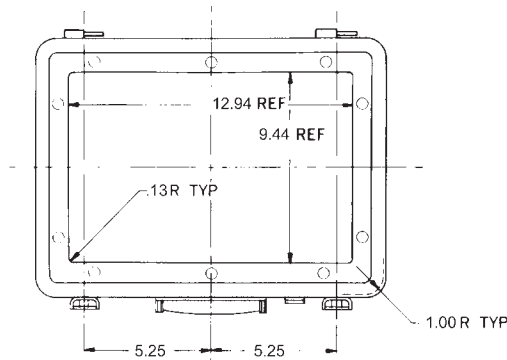
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-51

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JH						

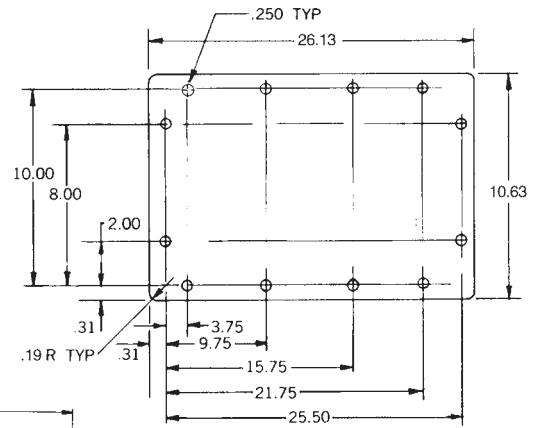
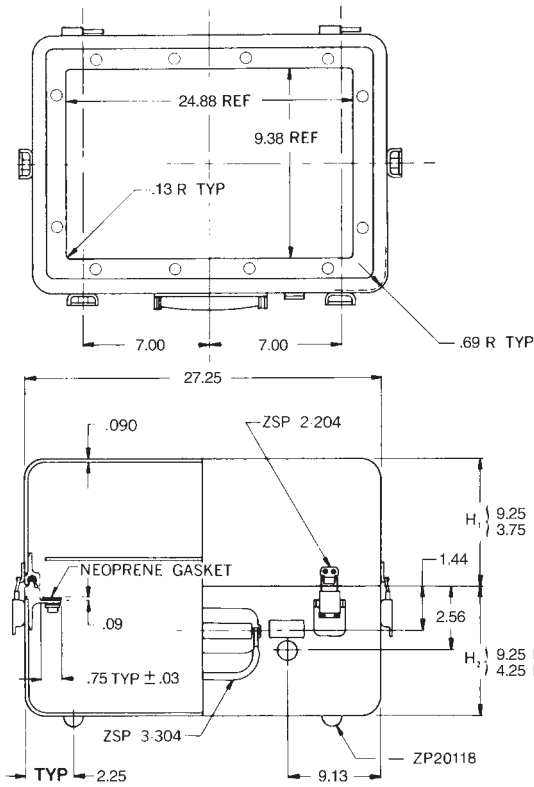
EXAMPLE: JH1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 11-9/16" x 15-1/16", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# JL

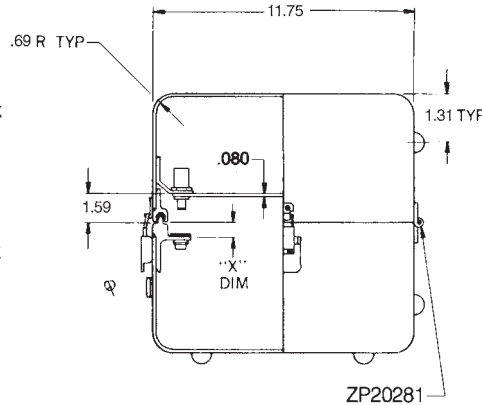
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-53

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JL						

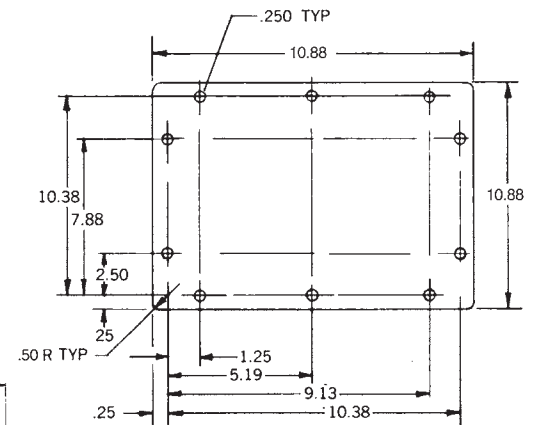
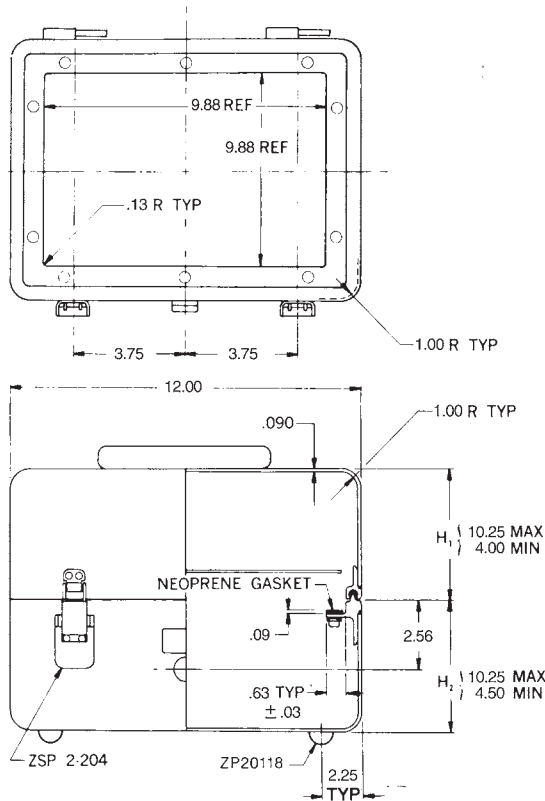
EXAMPLE: JL1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 11-3/4" x 27-1/4", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# JP

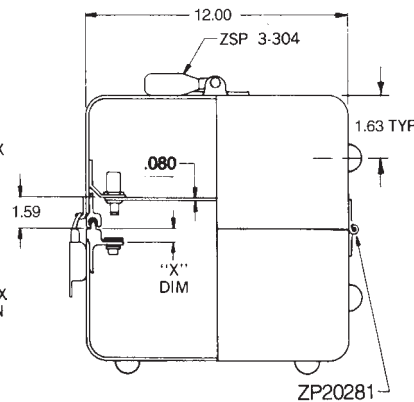
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-55

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JP						

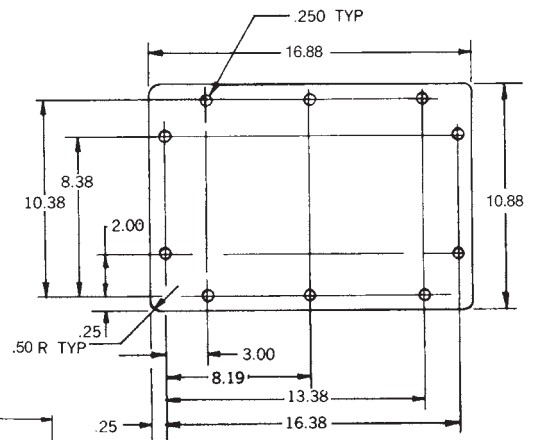
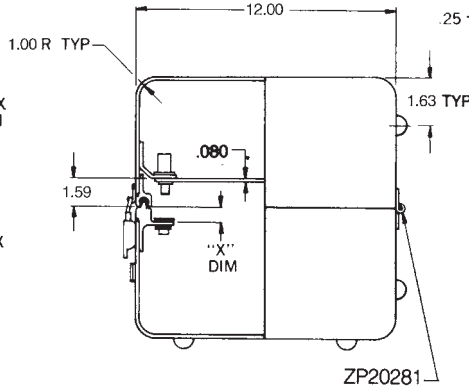
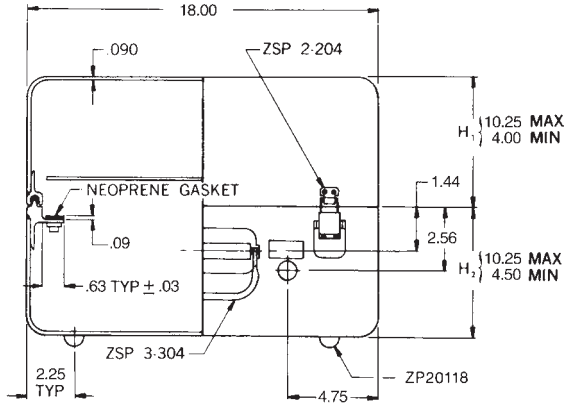
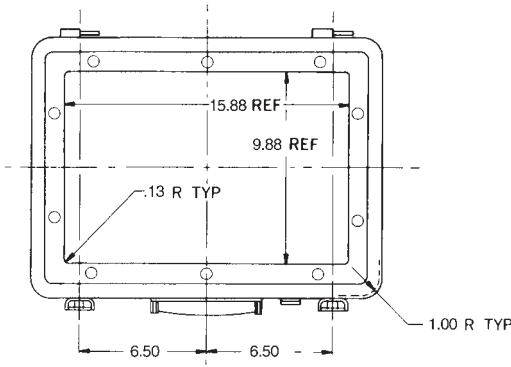
EXAMPLE: JP1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 12" x 12", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# JT

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-57

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JT						

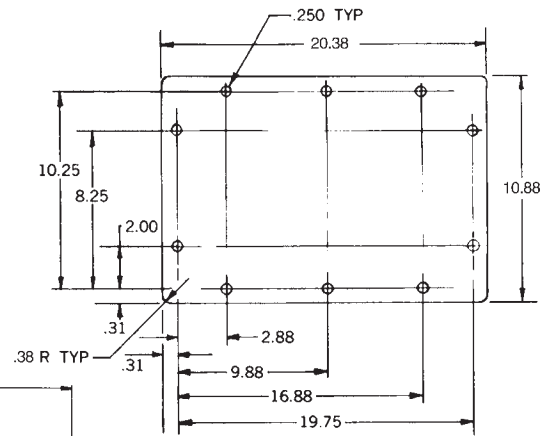
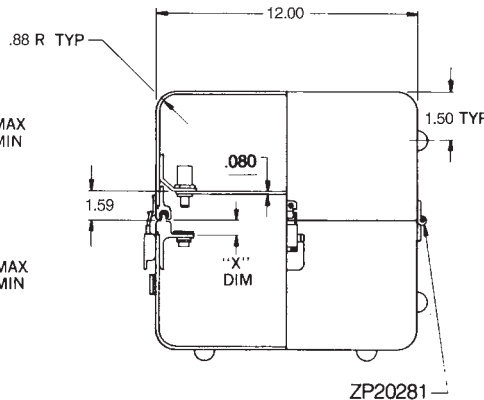
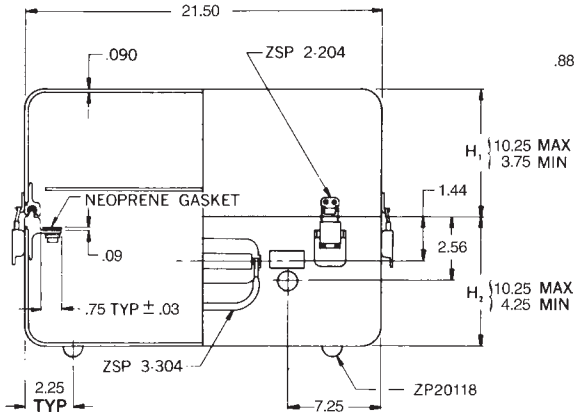
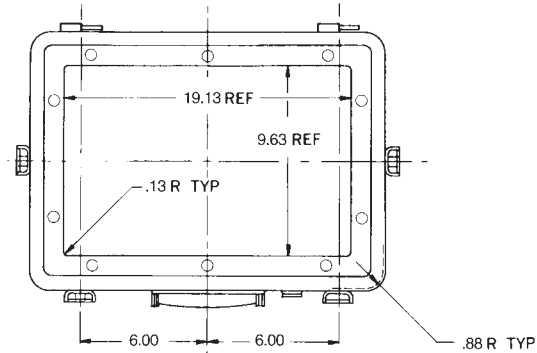
EXAMPLE: JT1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 12" x 18", to comply with MIL-STD-108 with 1 handle; 2 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# JW

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-59

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

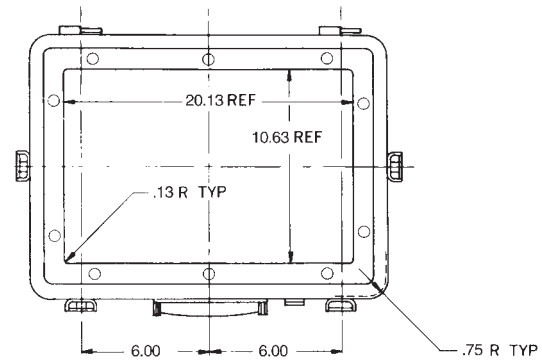
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JW						

EXAMPLE: JW1FA24C18 SPECIFIES:

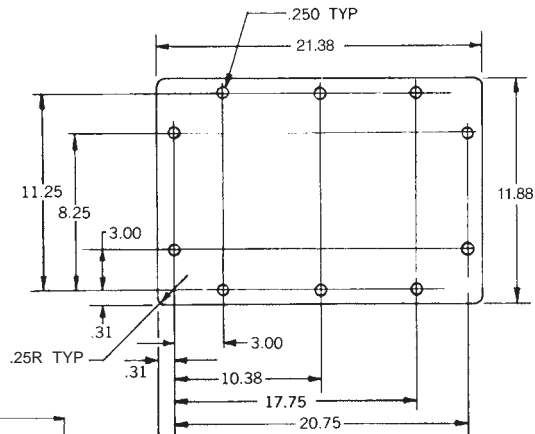
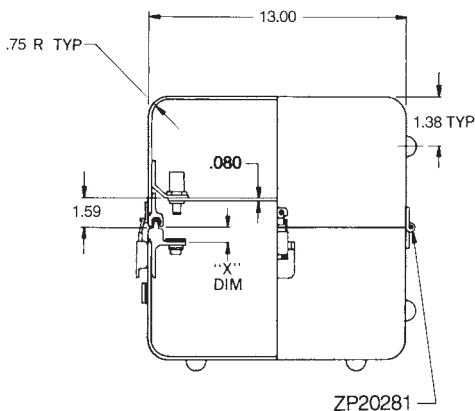
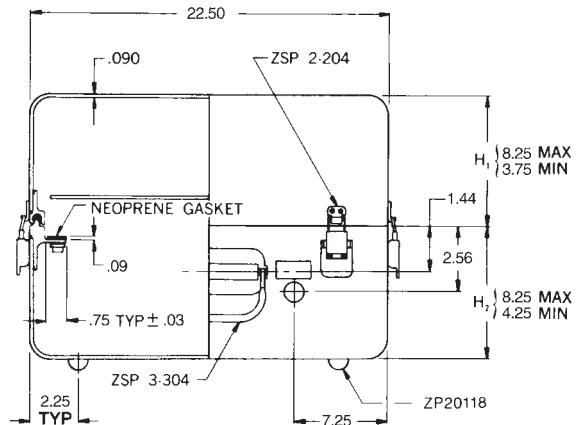
A deep drawn .090 aluminum combination case 12" x 21-1/2", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# JZ



(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-61

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
JZ						

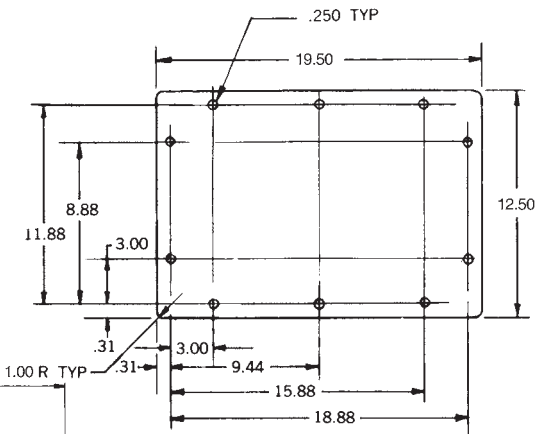
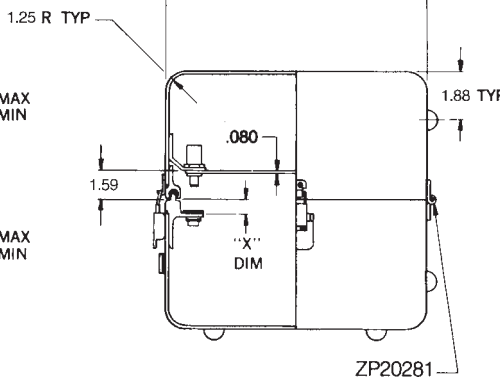
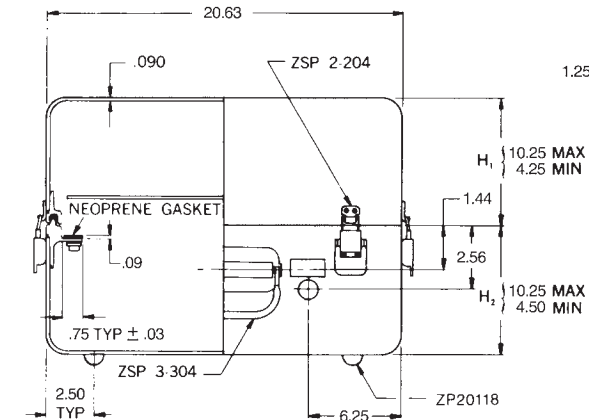
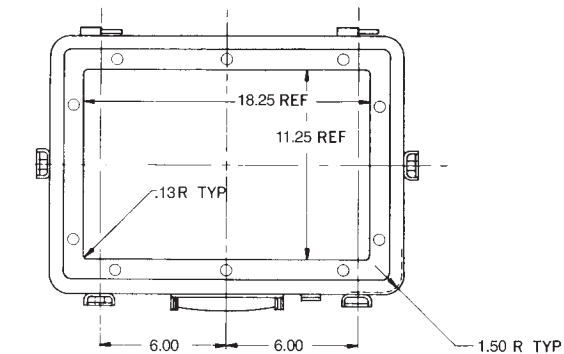
EXAMPLE: JZ1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 13" x 22-1/2", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# KC

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-63

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
KC						

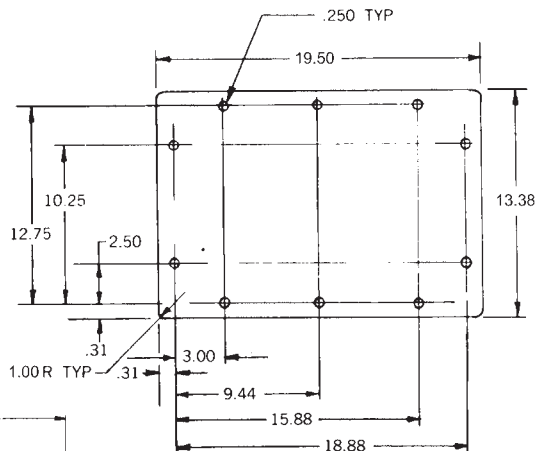
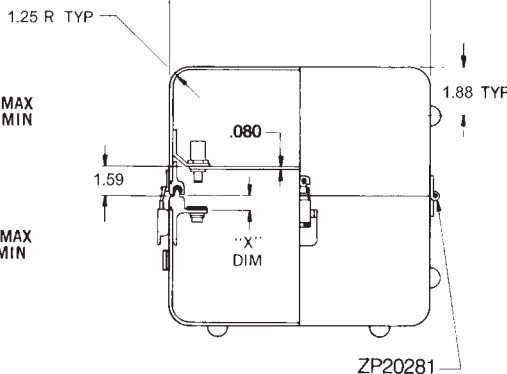
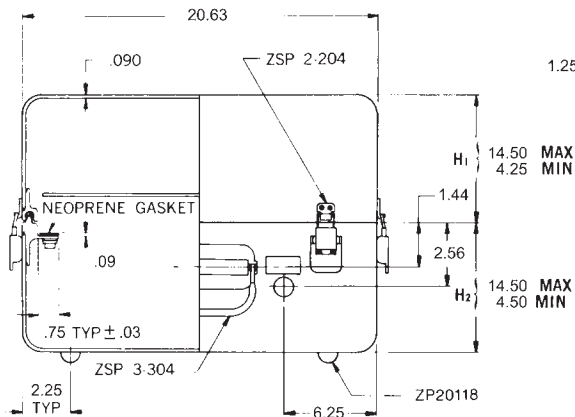
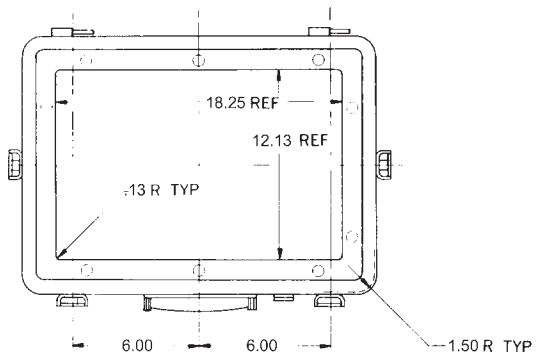
EXAMPLE: KC1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 13-5/8" x 20-5/8", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# KF

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-65

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
KF						

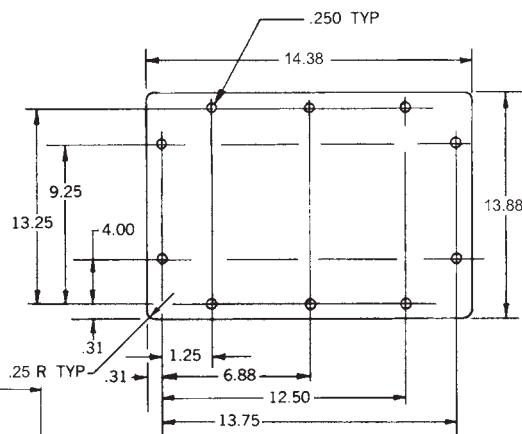
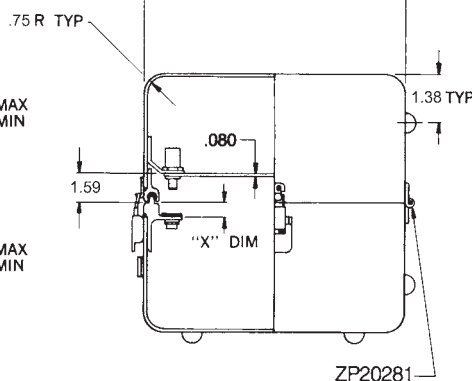
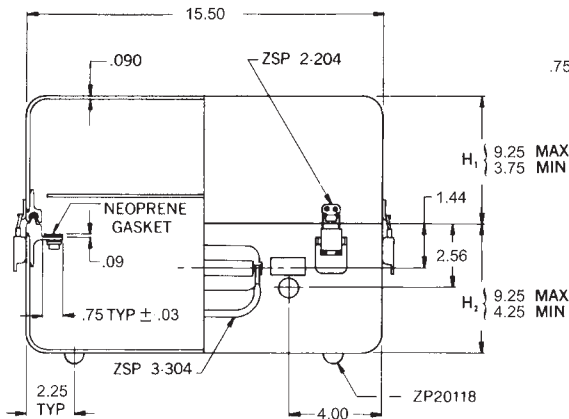
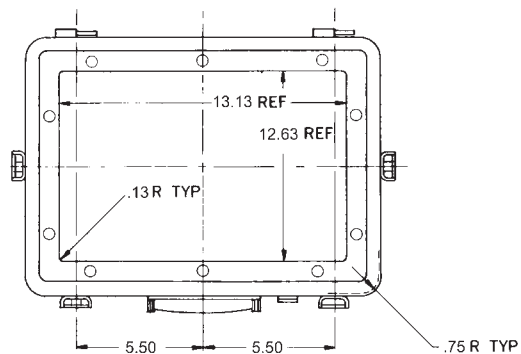
EXAMPLE: KF1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 14-1/2" x 20-5/8", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# KJ

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-67

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

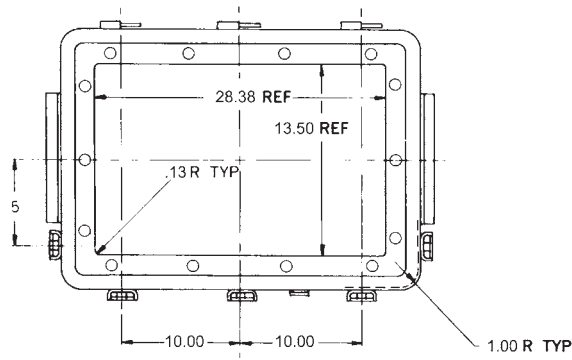
CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
KJ						

EXAMPLE: KJ1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 15" x 15-1/2", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

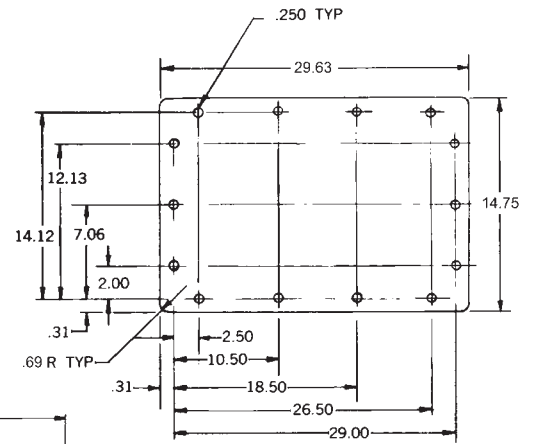


# BZ



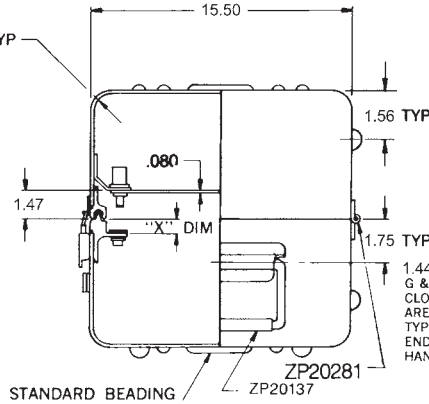
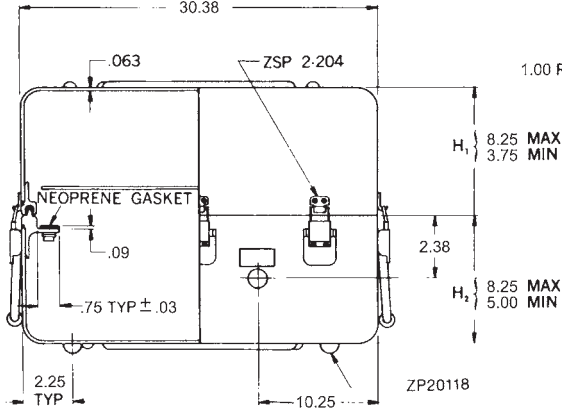
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-69

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
BZ						

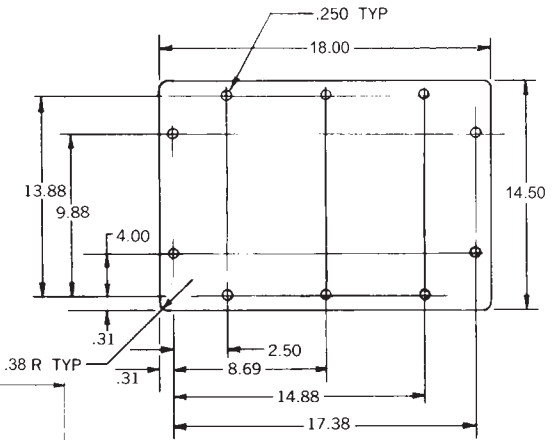
EXAMPLE: BZ1FA24C18 SPECIFIES:

A deep drawn .063 aluminum combination case 15-1/2" x 30-3/8", to comply with MIL-STD-108 with 2 handle; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# KM

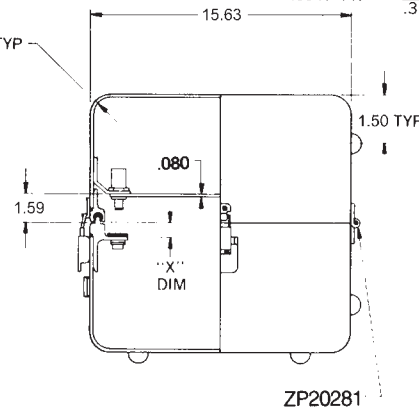
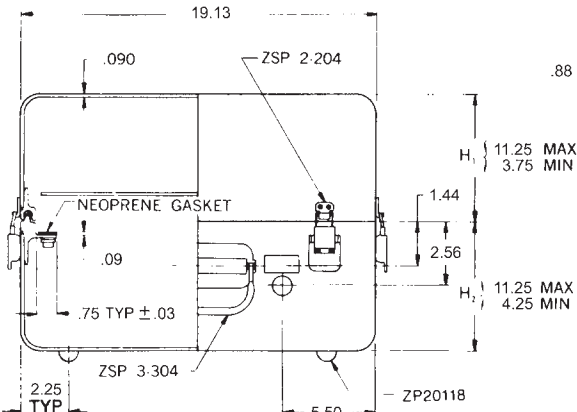
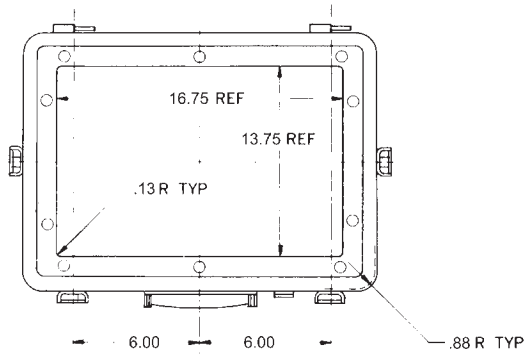
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-71

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
KM						

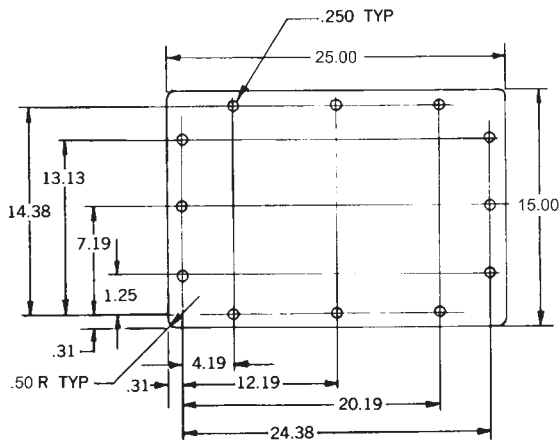
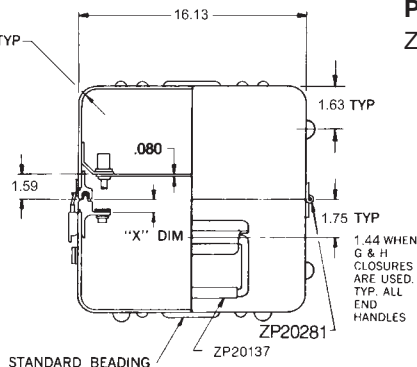
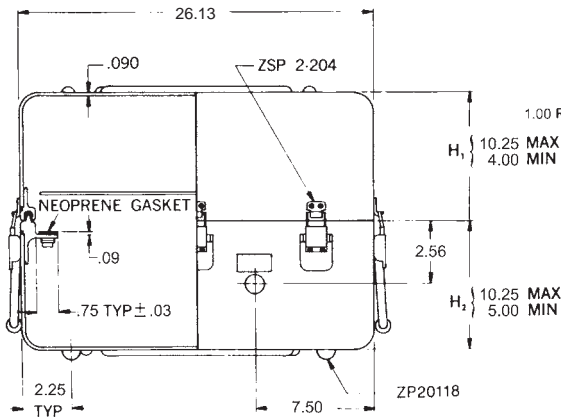
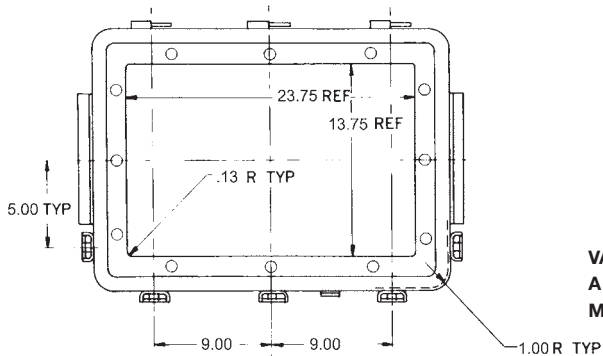
EXAMPLE: KM1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 15-5/8" x 19-1/18", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# KR

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-73

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
KR						

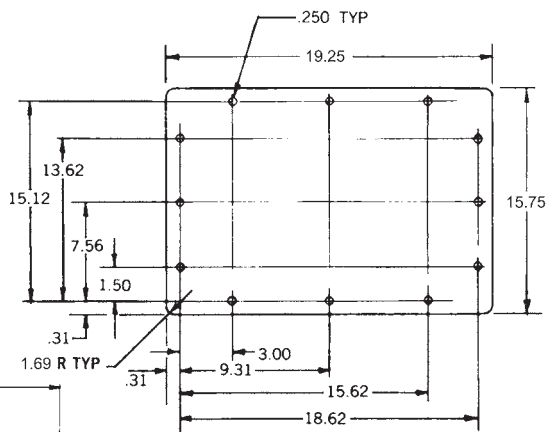
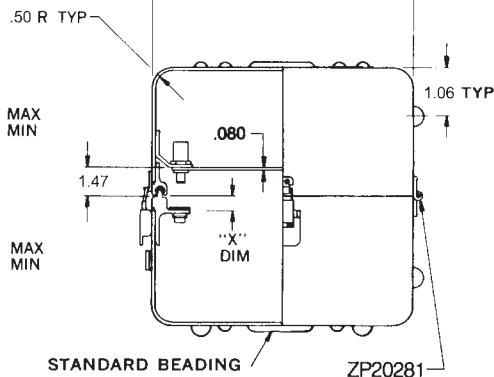
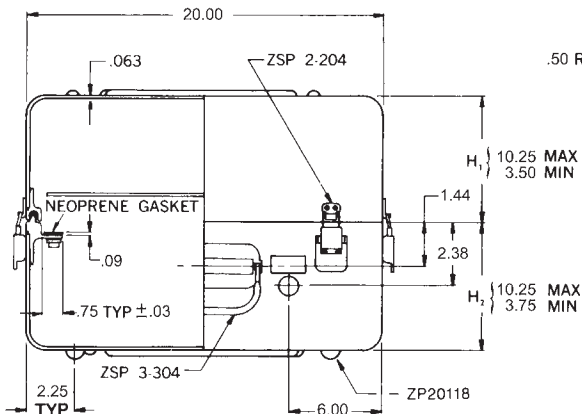
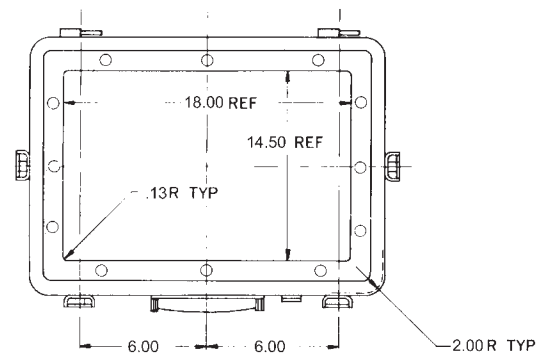
EXAMPLE: KR1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 16-1/8" x 26-1/8", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# CC

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-75

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
CC						

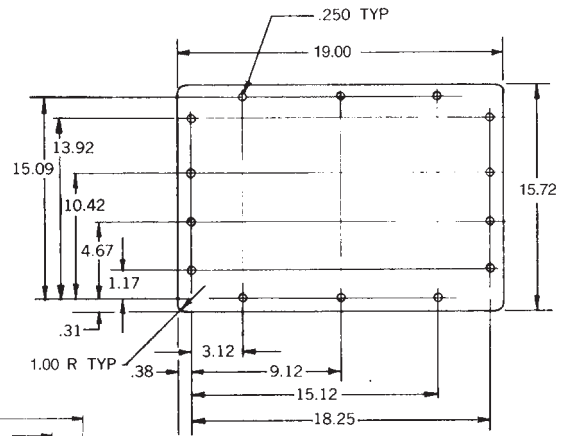
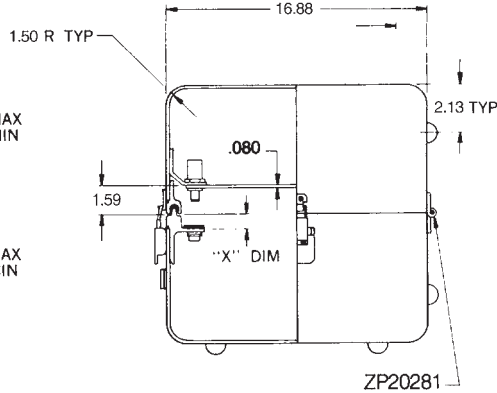
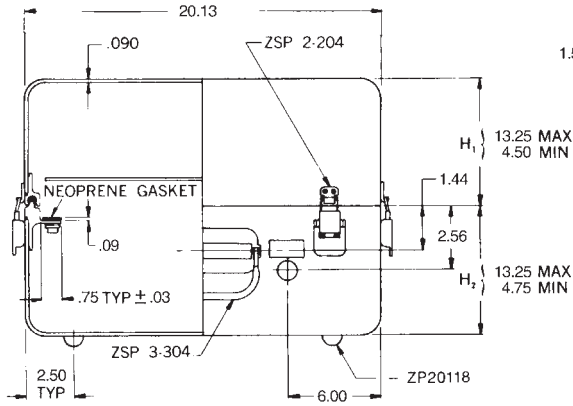
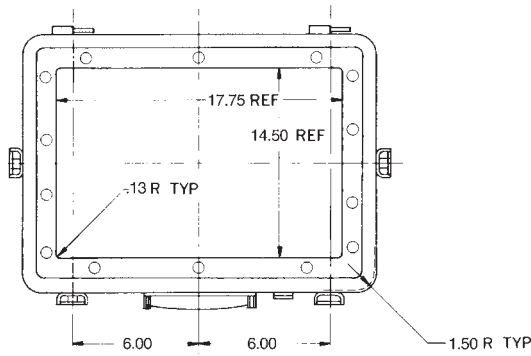
EXAMPLE: CC1FA24C14 SPECIFIES:

A deep drawn .063 aluminum combination case 16-1/2" x 20", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# KU

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-77

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
KU						

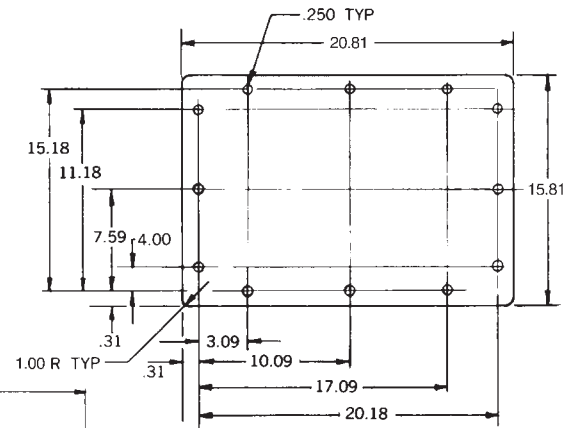
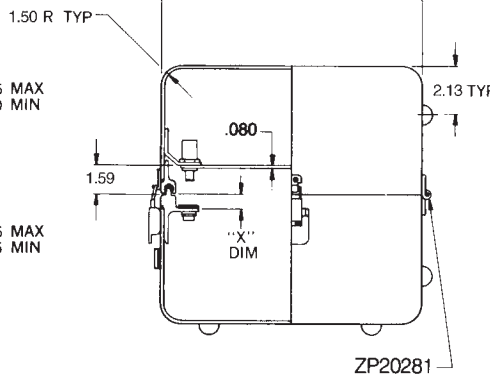
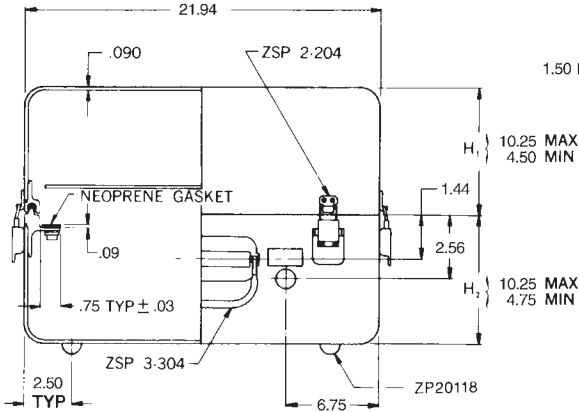
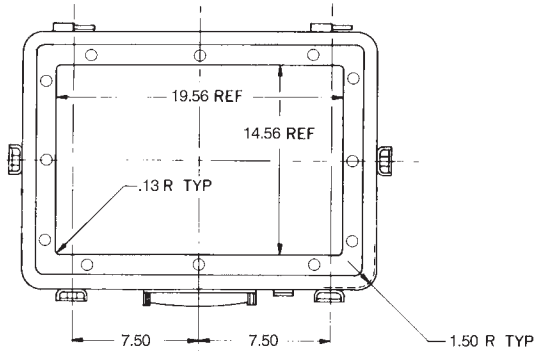
EXAMPLE: KU1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 16-7/8" x 20-1/8", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# KX

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-79

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

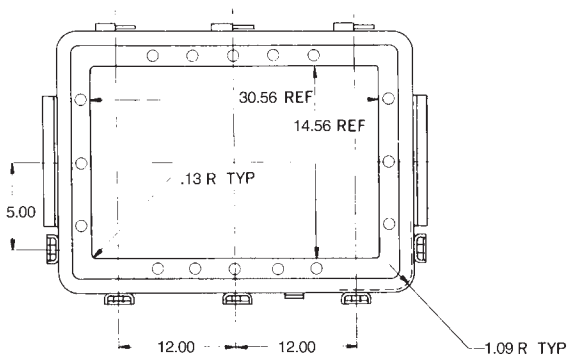
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
KX						

EXAMPLE: KX1FA24C18 SPECIFIES:

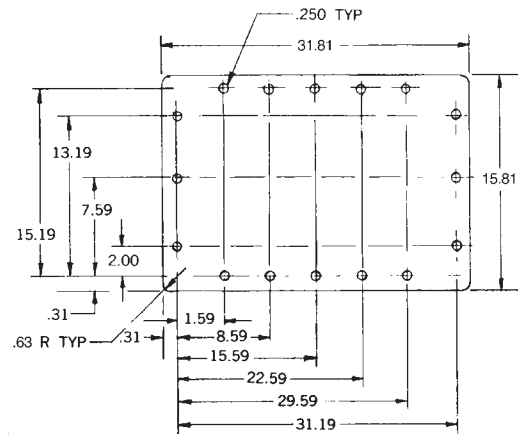
A deep drawn .090 aluminum combination case 16-15/16" x 21-15/16", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LA



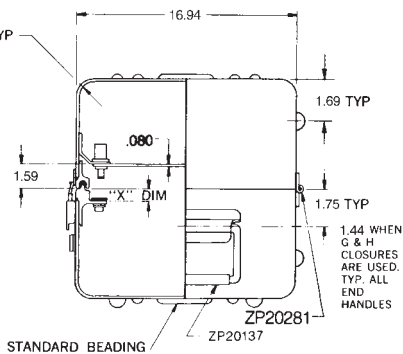
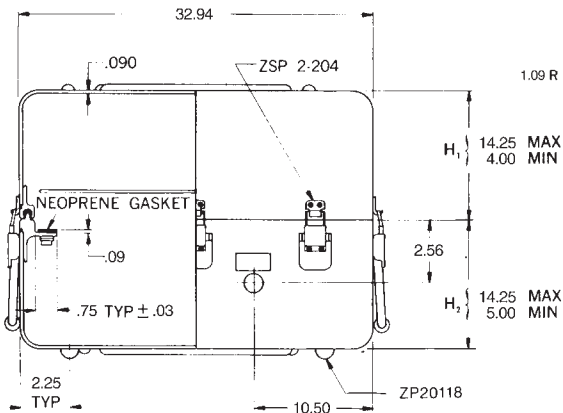
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-81

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



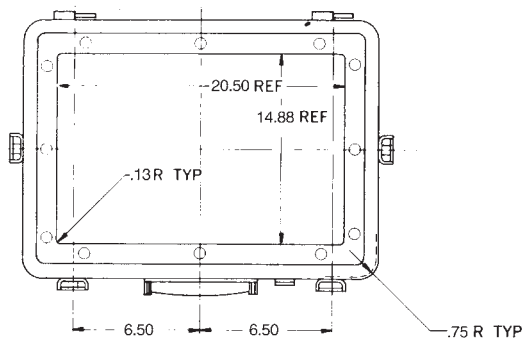
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LA						

EXAMPLE: LA1FA24C18 SPECIFIES:

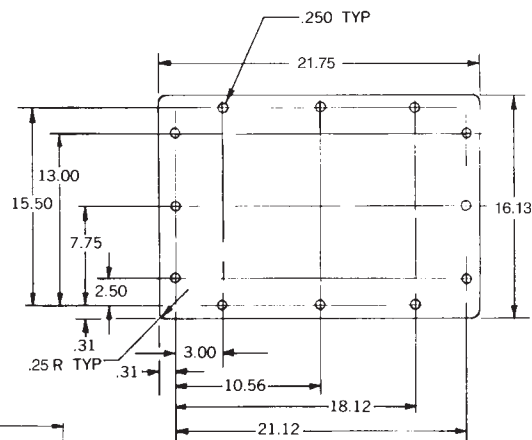
A deep drawn .090 aluminum combination case 16-15/16" x 32-15/16", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LD



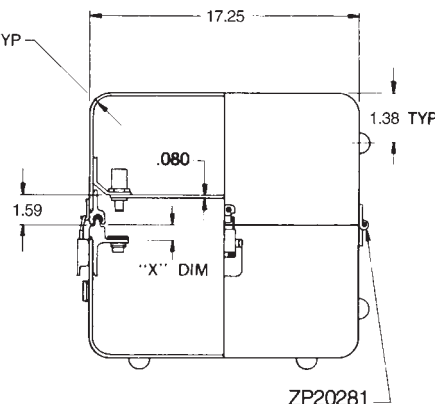
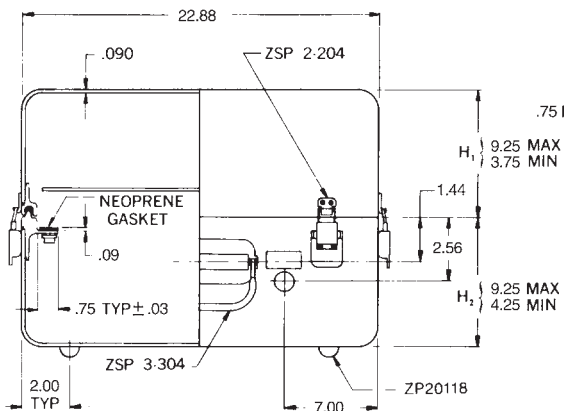
(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-83

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000



TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LD						

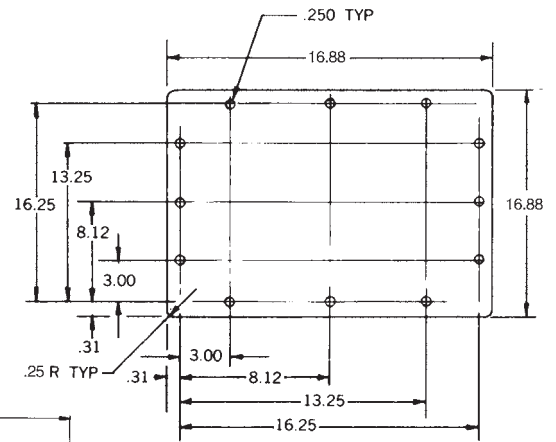
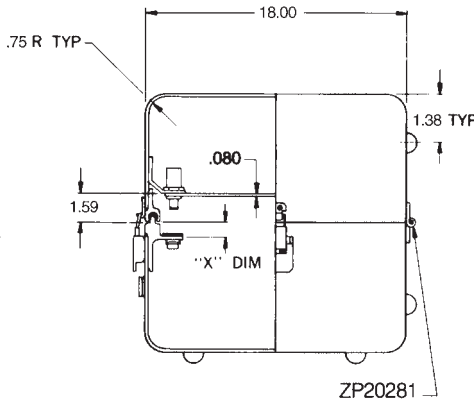
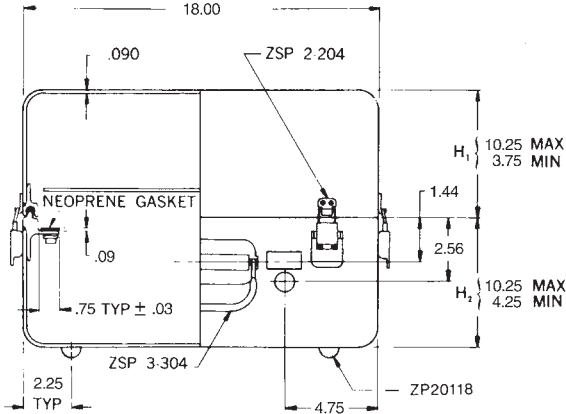
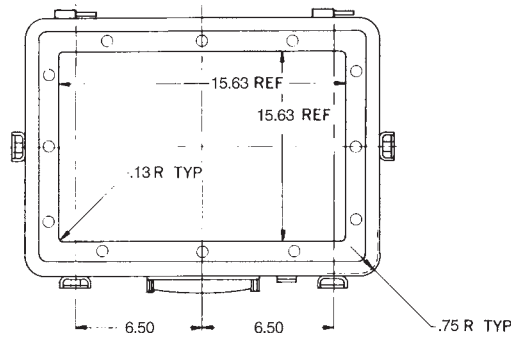
EXAMPLE: LD1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 17-1/4" x 22-7/8", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LG

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-85

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LG						

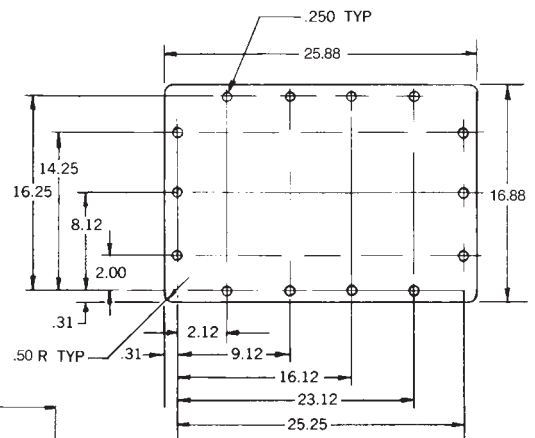
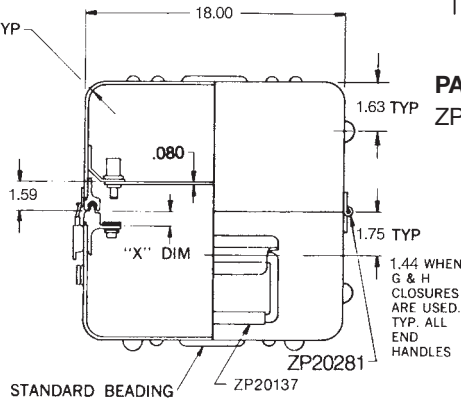
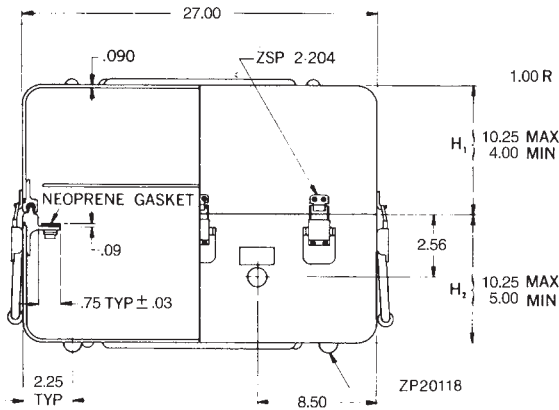
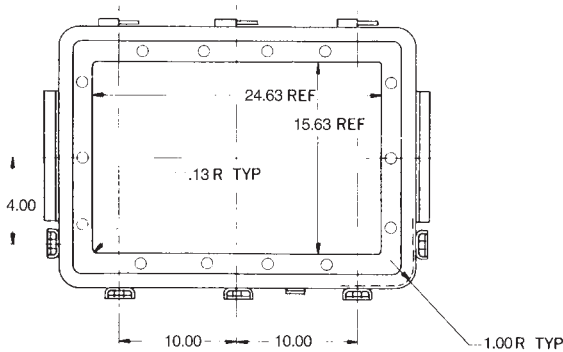
EXAMPLE: LG1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 18" x 18", to comply with MIL-STD-108 with 1 handle; 4 latches; 2 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LK

(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-87

CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

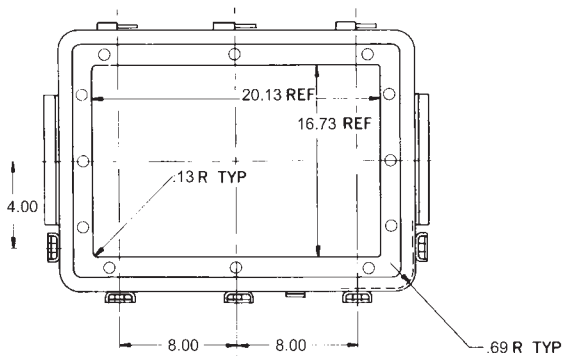
CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LK						

EXAMPLE: LK1FA24C18 SPECIFIES:

A deep drawn .090 aluminum combination case 18" x 27", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

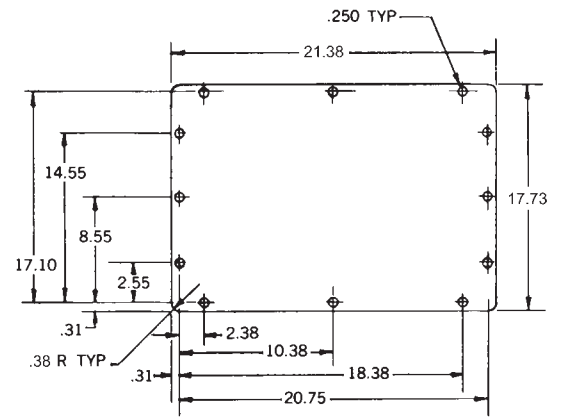


# CF

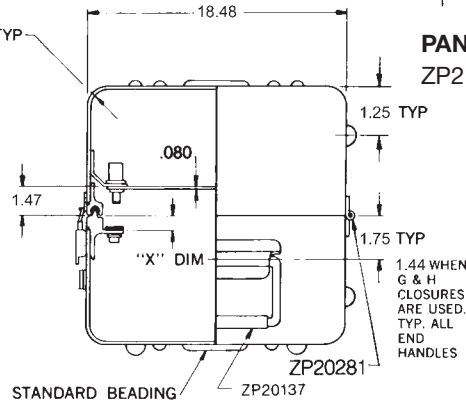
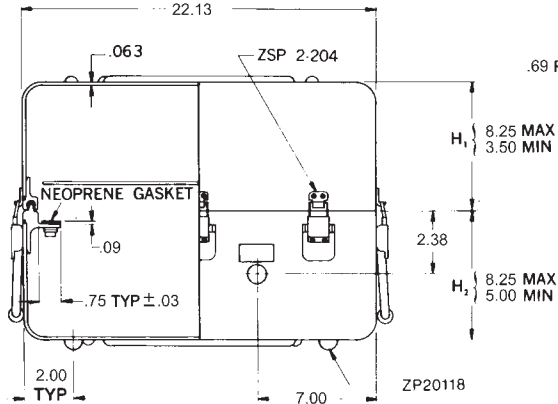


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-89



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

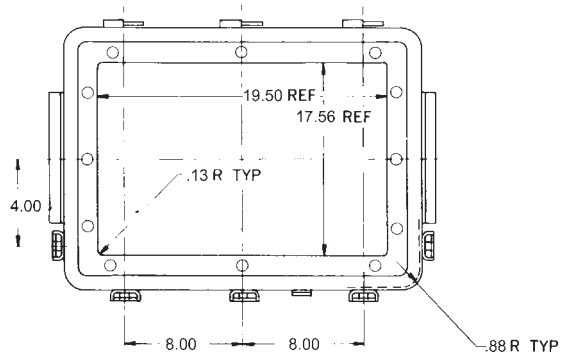
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
CF						

EXAMPLE: CF1FA24C14 SPECIFIES:

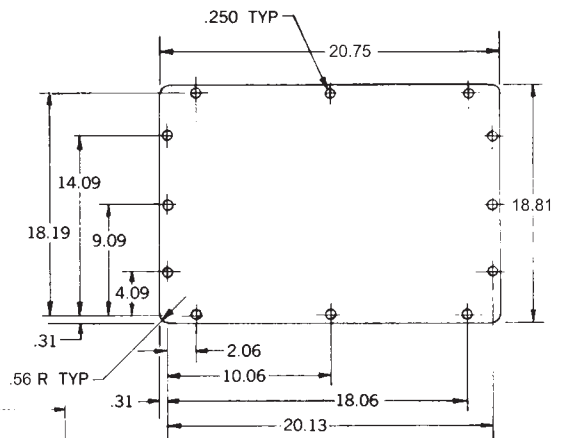
A deep drawn .063 aluminum combination case 18-31/64" x 22-1/8", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 3-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# CJ

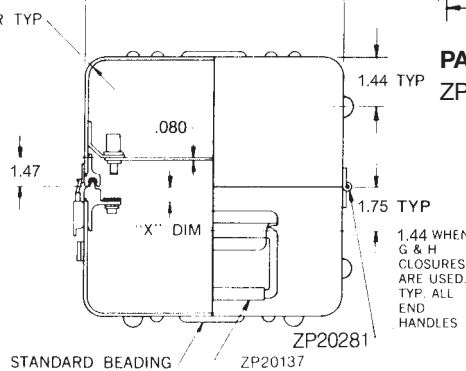
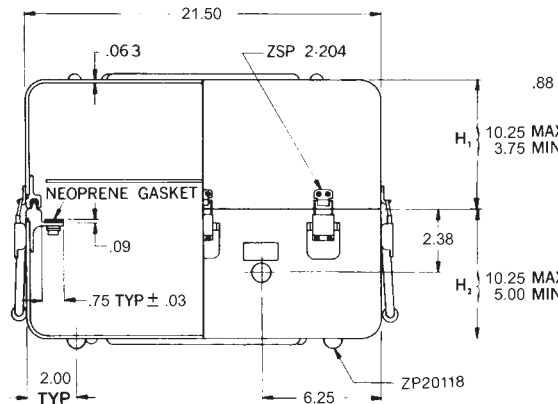


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-91



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.281
"G" & "H"	.875

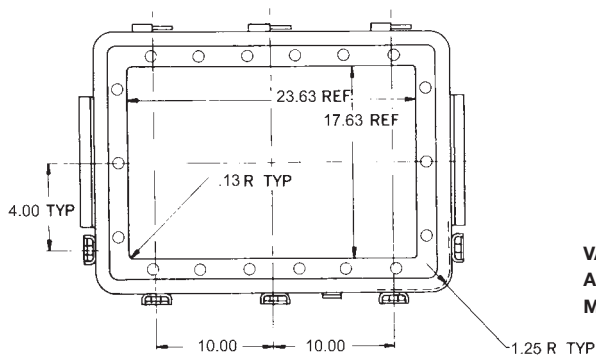
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 43)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
CJ						

EXAMPLE: CJ1FA24C18 SPECIFIES:

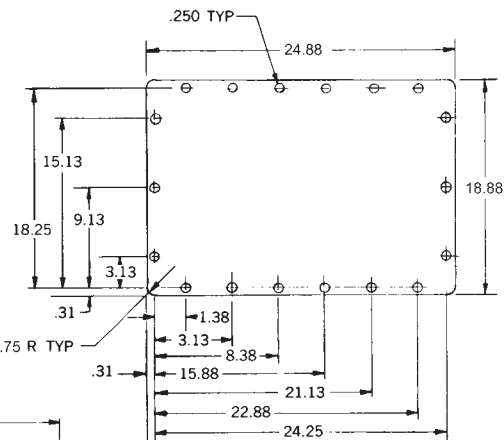
A deep drawn .063 aluminum combination case 19-9/16" x 21-1/2", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LN

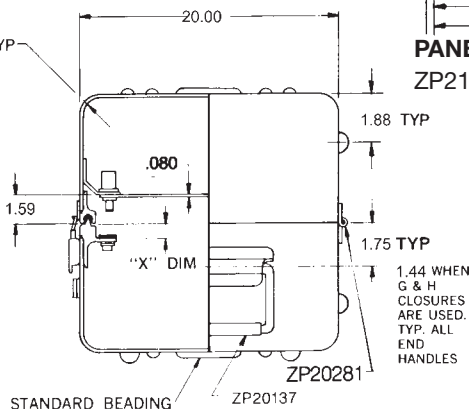
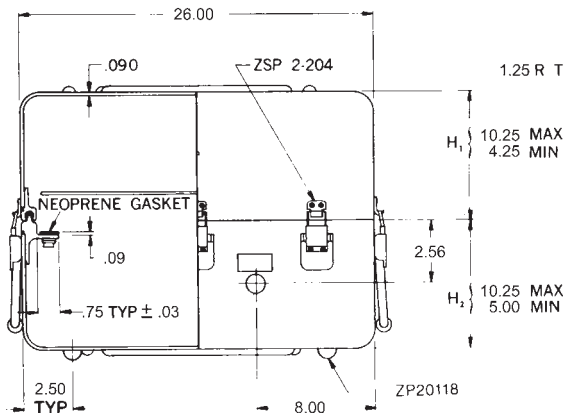


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-93



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

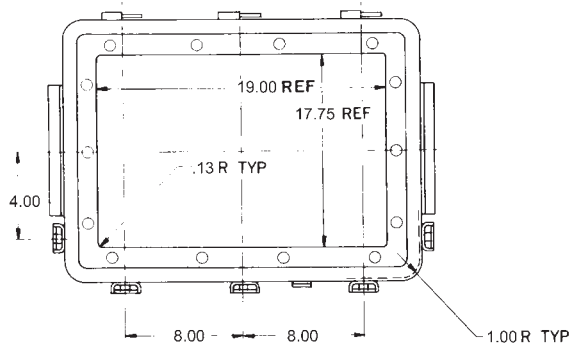
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LN						

EXAMPLE: LN1FA24C18 SPECIFIES:

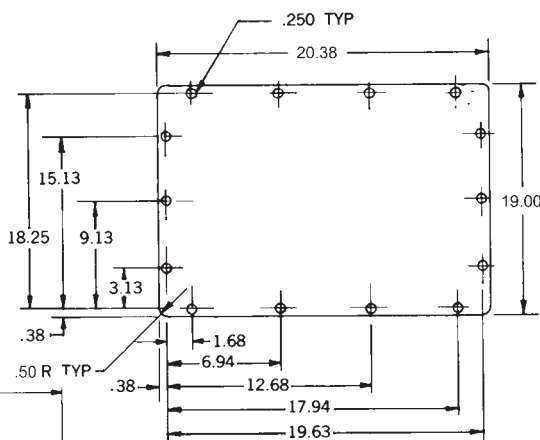
A deep drawn .090 aluminum combination case 20" x 26", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LS

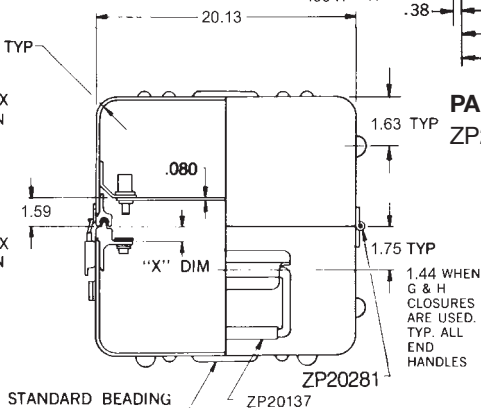
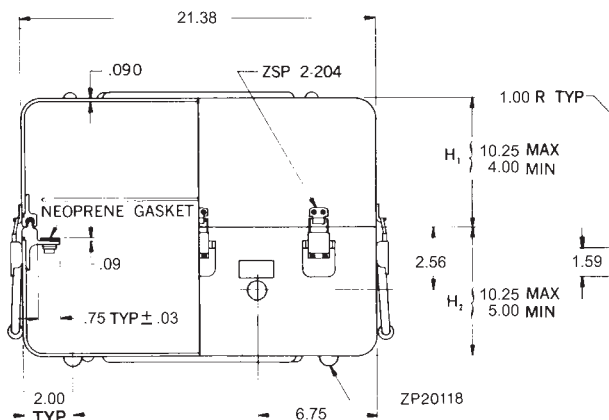


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-95



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

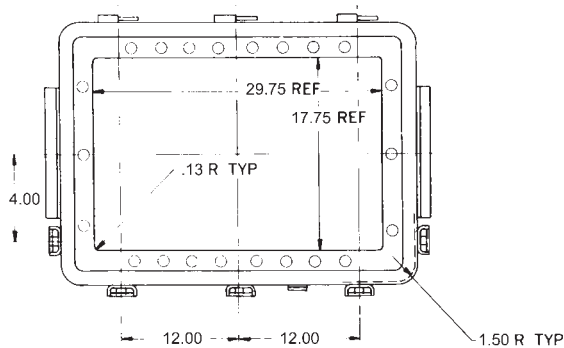
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LS						

EXAMPLE: LS1FA24C18 SPECIFIES:

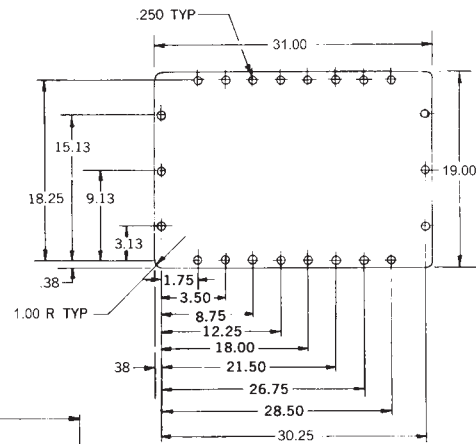
A deep drawn .090 aluminum combination case 20-1/8" x 21-3/8", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LV

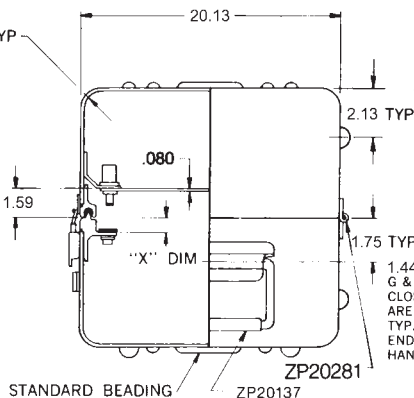
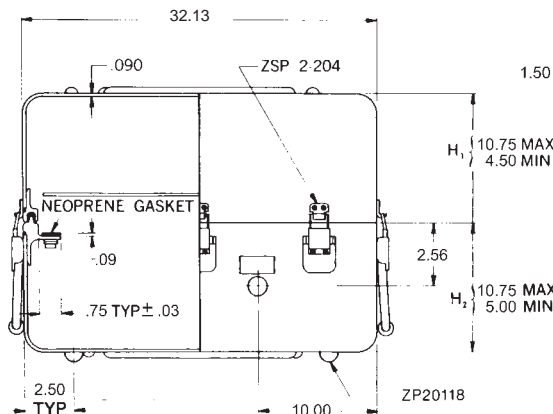


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-97



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

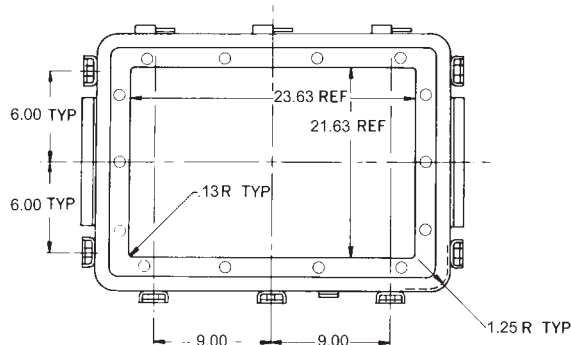
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LV						

EXAMPLE: LV1FA24C18 SPECIFIES:

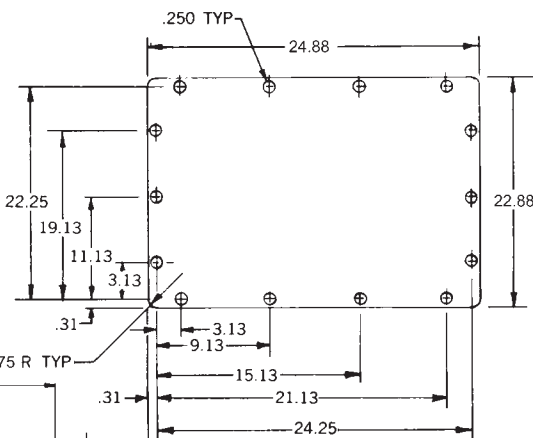
A deep drawn .090 aluminum combination case 20-1/8" x 32-1/8", to comply with MIL-STD-108 with 2 handles; 5 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# LY

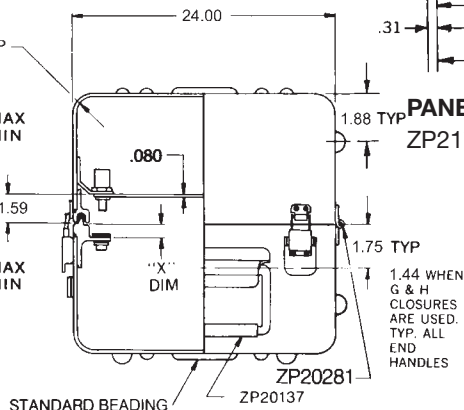
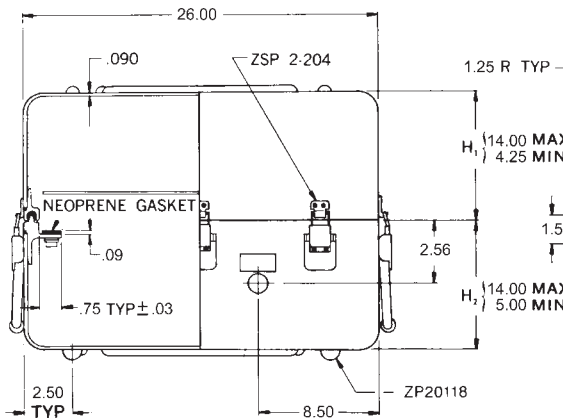


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-99



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

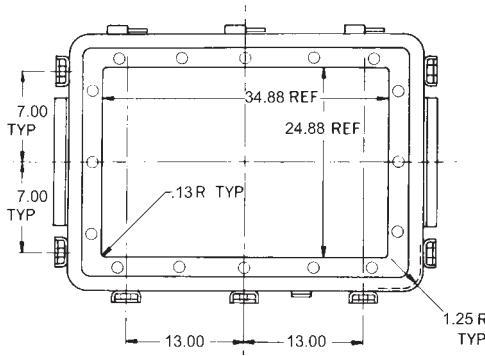
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
LY						

EXAMPLE: LY1FA24C18 SPECIFIES:

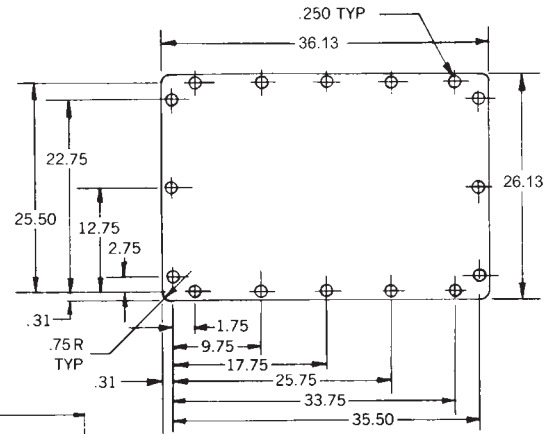
A deep drawn .090 aluminum combination case 24" x 26", to comply with MIL-STD-108 with 2 handles; 7 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# MB

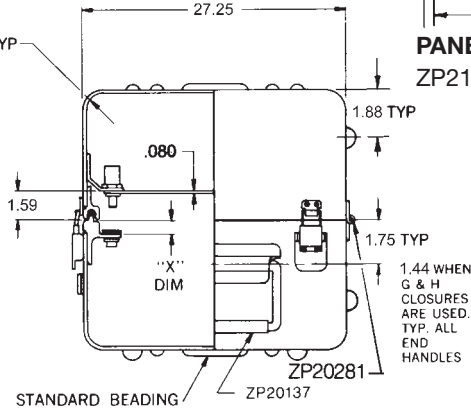
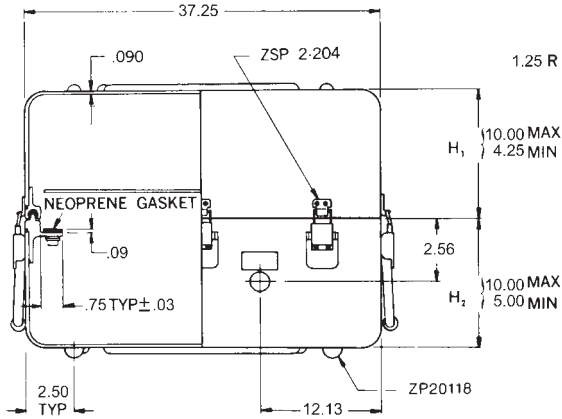


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-101



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

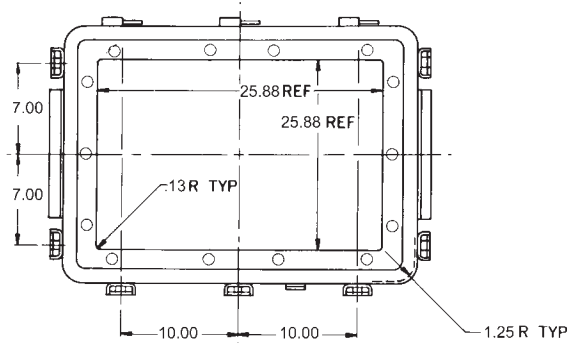
TO ORDER COMPLETE THE PART NUMBER BELOW:

CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
MB						

EXAMPLE: MB1FA24C18 SPECIFICS:

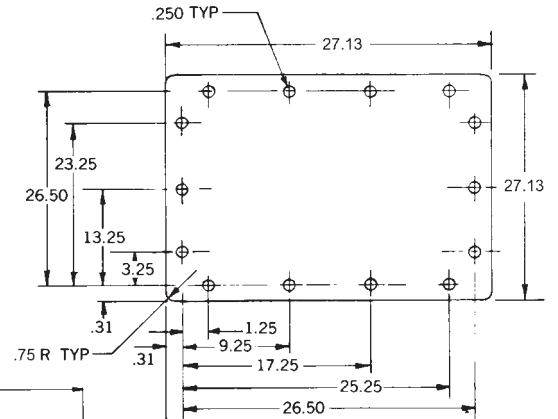
A deep drawn .090 aluminum combination case 27-1/4" x 37-1/4", to comply with MIL-STD-108 with 2 handles; 7 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# ME

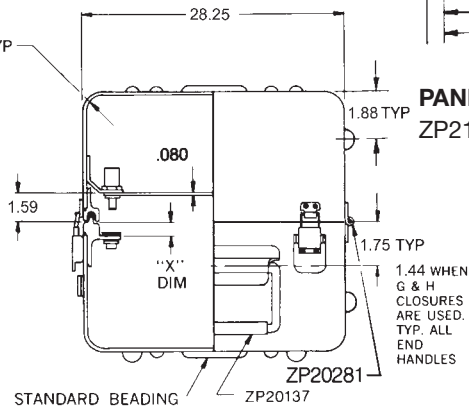
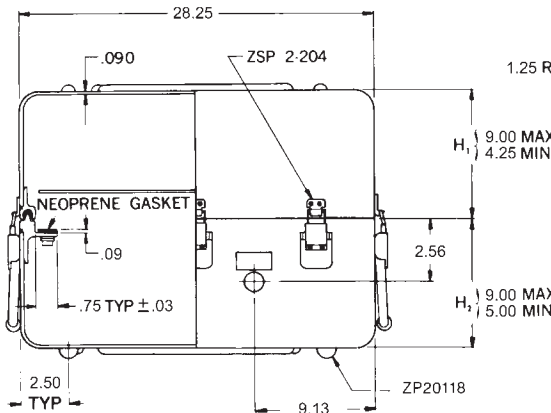


(PANEL OPTIONAL.  
PLEASE ORDER  
SEPARATELY.)

VALVE CODE:  
A = Automatic  
M = Manual



PANEL PART NUMBER:  
ZP21740-103



CLOSURE TYPE	"X" DIM
"C" & "D"	.020
"E" & "F"	.406
"G" & "H"	1.000

TO ORDER COMPLETE THE PART NUMBER BELOW:

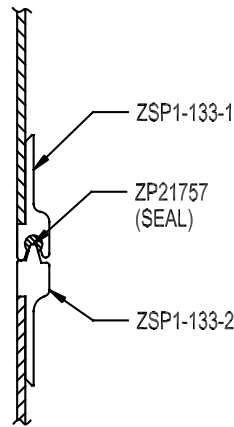
CASE NUMBER	CASE TYPE (see pg. 15)	CLOSURE STYLE (see pg. 44)	VALVE TYPE (see pg. 88)	Case Height in 1/4" Increments	FINISH (see pg. 16)	Cover Height in 1/4" Increments
ME						

EXAMPLE: ME1FA24C18 SPECIFICS:

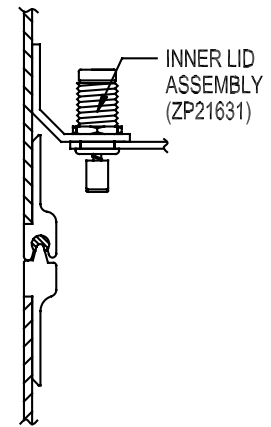
A deep drawn .090 aluminum combination case 28-1/4" x 28-1/4", to comply with MIL-STD-108 with 2 handles; 7 latches; 3 hinges; gasketed closure with medium recessed panel flange complete with 10-32 floating nut plates and neoprene gasket; hinged and latched inner lid; automatic two-way pressure relief valve, case 6" high, cover 4-1/2" high, painted color per MIL-E-15090, light gray semi-gloss enamel.

# Closure, Panel Flange and Inner Lid Details (.063")

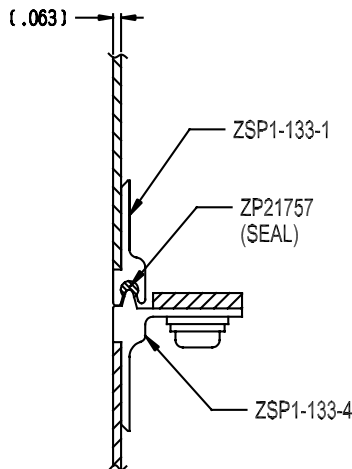
Special mating gasketed extrusions are used to provide effective sealing of VAL-AN cases. In addition to sealing, these exclusive closures provide effective alignment of the two halves of the case and protection of the seal and hinges from shearing forces. Each of the closure, panel flange and inner lid choices listed is available on every VAL-AN case. Specify by inserting the indicated code in the basic part number.



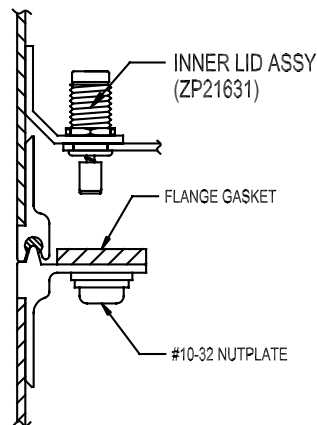
A = Plain Closure set.  
Weight: .260 lbs/ft.



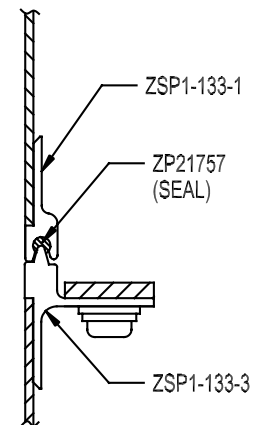
B = Plain with Inner Lid



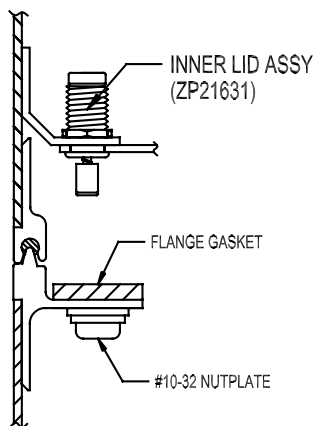
C = Top flanged w/nut plates & flange gasket  
Weight: .388 lbs/ft.



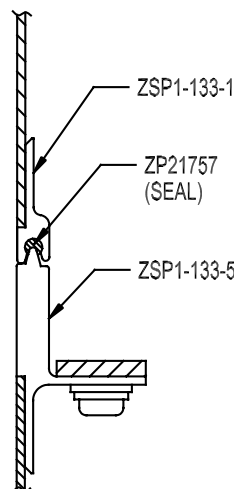
D = Top flanged w/nut plates, flange gasket and Inner lid assembly.



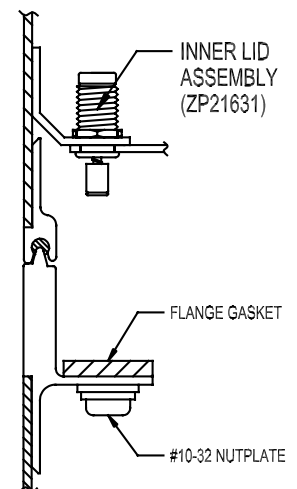
E = Medium recessed w/nut plates and flange gasket  
Weight: .379 lbs/ft.



F = Medium recessed flange w/nut plates, flange gasket and Inner lid assembly.



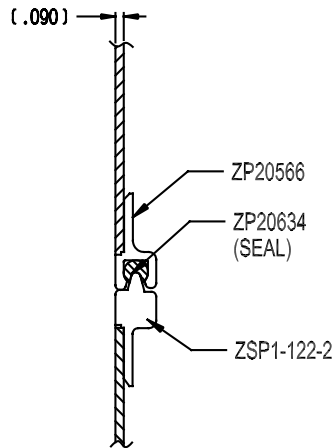
G = Deep recessed flange w/nut plates and flange gasket.  
Weight: .553 lbs/ft.



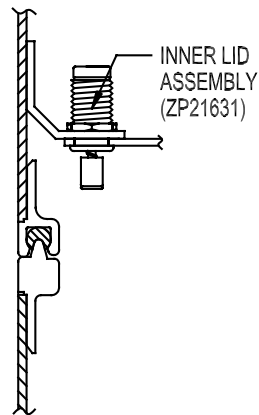
H = Deep recessed flange with nut plates, flange gasket and Inner lid assembly.



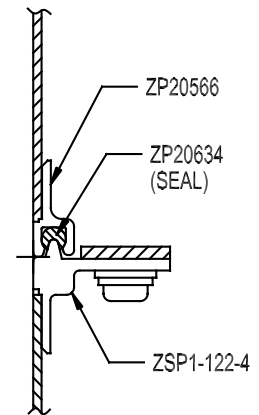
# Closure, Panel Flange and Inner Lid Details (.090")



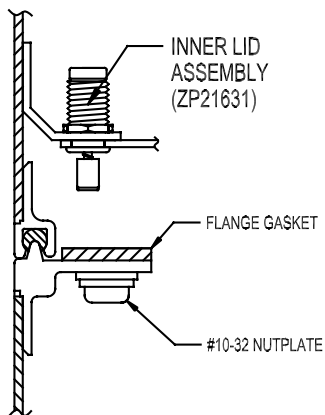
A = Plain Closure set.  
Weight: .458 lbs/ft.



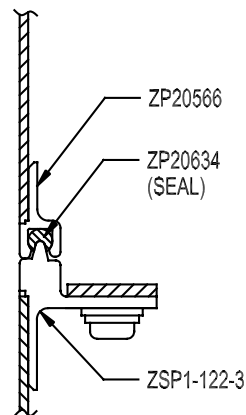
B = Plain with Inner Lid



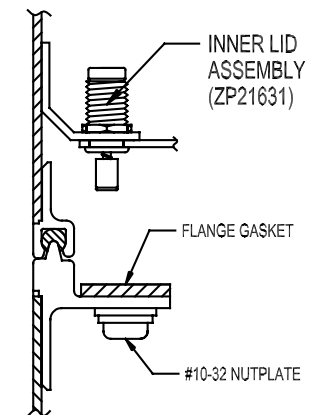
C = Top flanged w/nut plates &  
flange gasket  
Weight: .678 lbs/ft.



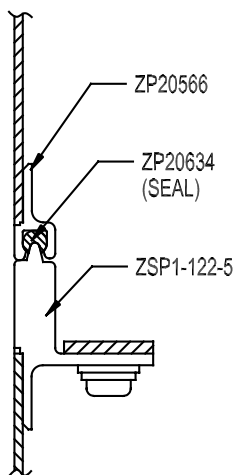
D = Top flanged w/nut plates, flange gasket  
and Inner lid assembly.



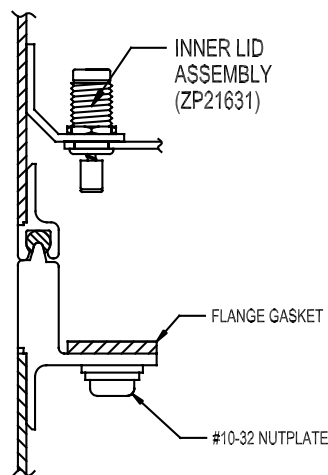
E = Medium recessed flange with  
nut plates and flange gasket.  
Weight: .761 lbs/ft.



F = Medium recessed flange with  
nut plates, flange gasket and  
Inner lid assembly.



G = Deep recessed flange w/nut plates  
and flange gasket.  
Weight: 1.031 lbs/ft.

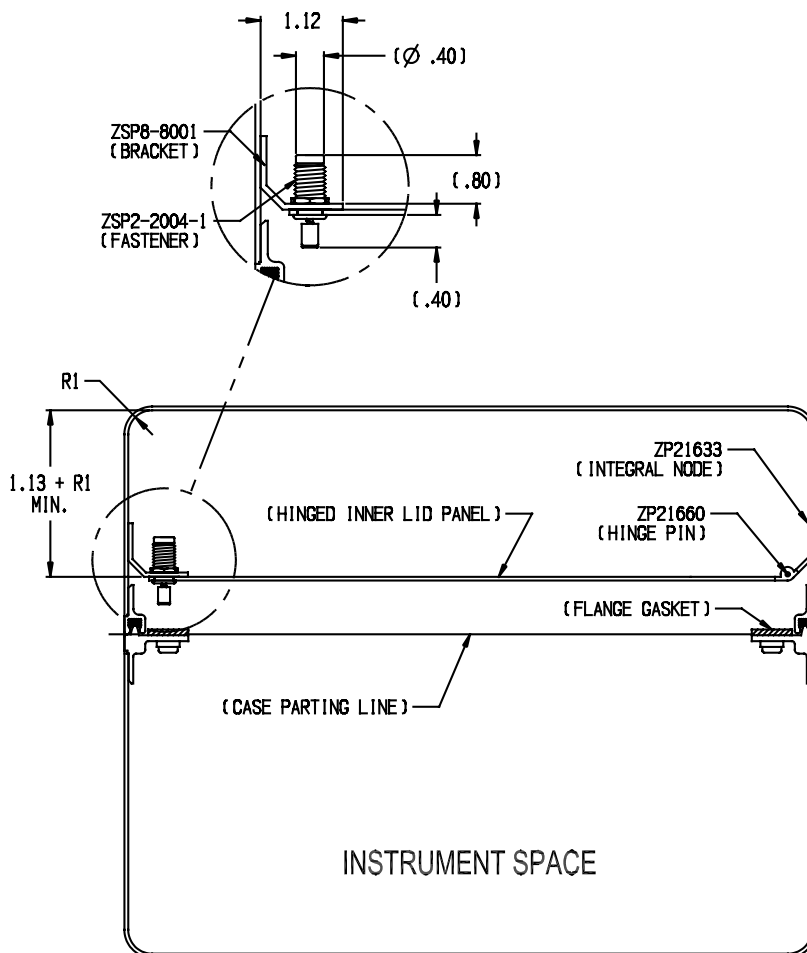


H = Deep recessed flange with  
nut plates, flange gasket and  
Inner lid assembly.

# Inner Lid Assembly



Hinged aluminum inner lids are available in most VAL-AN cases to make the upper part of the case into a storage compartment. The inner lid is secured with special push button fasteners.



To determine approximate weight of Inner Lid Assembly, multiply the square foot area by 1.12 lbs. per square foot.

# How to Choose the Correct VAL-AN 900 Series Case

MODEL NO.	DESCRIPTION	HARD MOUNT	SHOCK MOUNT
900	FRONT OPENING CASE WITH STANDARD SPRING-LOADED LATCHES.	✓	
905	FRONT OPENING CASE WITH "T" HANDLE LATCHES.	✓	
910	DOUBLE-ENDED OPENING CASE WITH STANDARD SPRING LATCHES.	✓	
915	DOUBLE-ENDED OPENING CASE WITH "T" HANDLE LATCHES ON FRONT COVER & STANDARD SPRING LATCHES ON REAR COVER.	✓	
920	FRONT OPENING CASE WITH STANDARD SPRING LATCHES ON COVER. AVAILABLE WITH MIL-T-28800 OPTIONAL BUMPERS.	✓	
925	FRONT OPENING CASE WITH "T" HANDLE LATCHES ON COVER. AVAILABLE WITH MIL-T-28800 OPTIONAL BUMPERS.	✓	
930	DOUBLE-ENDED OPENING CASE WITH STANDARD SPRING LATCHES ON COVERS. OPTIONS: MIL-T-28800 BUMPERS & SEALED PANEL.	✓	
935	DOUBLE-ENDED CASE WITH STANDARD SPRING AND "T" HANDLE LATCHES ON COVERS. OPTIONS: MIL-T-28800 BUMPERS & SEALED PANEL.	✓	
940	FRONT OPENING CASE WITH STANDARD SPRING LATCHES ON COVER.		✓
945	FRONT OPENING CASE WITH "T" HANDLE LATCHES ON COVER.		✓
950	DOUBLE-ENDED OPENING CASE WITH STANDARD SPRING LATCHES ON COVERS. OPTIONS: EMI SHIELDED RACK.		✓
955	DOUBLE-ENDED OPENING CASE WITH STANDARD SPRING & "T" HANDLE LATCHES ON COVERS. OPTIONS: EMI SHIELDED RACK.		✓
960	DOUBLE-ENDED OPENING CASE WITH "T" HANDLE & SCREW LATCHES ON COVERS. OPTIONAL STACKING LATCHES AVAILABLE.		✓

## Finish Options (LESS FINISH ON LATCHES, HANDLE GRIPS, HINGES, AND VALVE)

A = No Finish  
 B = Chem Film per MIL-C-5541, CL3 All Aluminum Surfaces & Epoxy Prime per MIL-PRF-23377, Type I, Class C (Ext. only).  
 C = Same as B Plus Light Gray Semi-gloss Baked Enamel per MIL-E-15090, Type I or II, Class 2.  
 D = Same as B Plus Light Gray Gloss Baked Enamel per MIL-E-15090, Type I or II, Class 1.  
 E = Same as B Plus Yellow Gloss Baked Enamel, Color No. 13538 of FED-STD-595.  
 F = Same as B Plus Strata Blue Gloss Baked Enamel, Color No. 15045 of FED-STD-595.  
 G = Same as B Plus Green Semi-gloss Baked Enamel, Color No. 24300 of FED-STD-595.  
 H = Same as B Plus Olive Drab Semi-gloss Enamel, Color No. 24084 of FED-STD-595.  
 J = Same as B Plus Olive Drab Lusterless Baked Enamel, Color No. 34088 of FED-STD-595.  
 K = Same as B Plus Aliphatic Polyurethane Camouflage (CARC) per MIL-C-46168, Color No. 383. Color: Green #34094 of FED-STD-595.  
 S = Special Order - Please Specify.  
 W = Chemical Film per MIL-C-5541, CL3 All Aluminum Surfaces.  
 Epoxy Primer per MIL-P-53022, Type II or Waterbase.  
 Epoxy Primer per MIL-P-53030, Paint with Polyurethane coating per MIL-PRF-85285, Type II, Color No. 17925 (White) of FED-STD-595 or Epoxy Coating per MIL-C-22750, Type I.

## Other Colors and Finishes Available Upon Request

Commercial or military specifications can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

Panel Fabrication  
 - silk-screening  
 - engraving  
 - custom fabrication

Case Customization  
 - stenciling  
 - designation printing  
 - decals / labels  
 - silk-screening

# VAL-AN 900 SERIES

## VERSATILE INSTRUMENT CASES

- Shock mounted or hard mounted configurations.
- Choice of EMI shielded or environmentally-protected panels
- Front and rear access through removable covers.
- 7 basic styles, in panel heights from 5.25" to 17.50".
- 19" panel width, with standard EIA hole pattern.
- Waterproof construction.
- Meets applicable requirements of MIL-STD-108, MIL-STD-810, and MIL-T-28800.

This versatile line of rugged aluminum cases have been thoughtfully engineered to satisfy the growing need for rackmounted electronics in the field. They are ideal for the safe transportation and field operation of delicate electronic instruments, and offer a host of practical user benefits.

They feature an internal chassis, which is either hard mounted or shock mounted within the center section of the case. Installation or rack mounted equipment is quick and easy, with total accessibility from the front and rear. In transit or storage, instrument panels are thoroughly protected by covers which are latched to the case. The cases are designed to be stacked, allowing users to set up a "cabinet" type system in the field. Specially designed T-type latches on the front cover permit accessibility to instruments and contents in the stacked mode; virtual impossibility in cases using traditional latch systems.

These cases feature recessed handles, waterproof construction with pressure relief valve, and optional EMI shielding or environmental protection. They are available in 13 standard configurations, in panel heights from 5.25" to 17.50", and depths from 12.00" to 22.00". Front or rear covers may be optionally equipped with inner lids for storage.



Stacking Latch

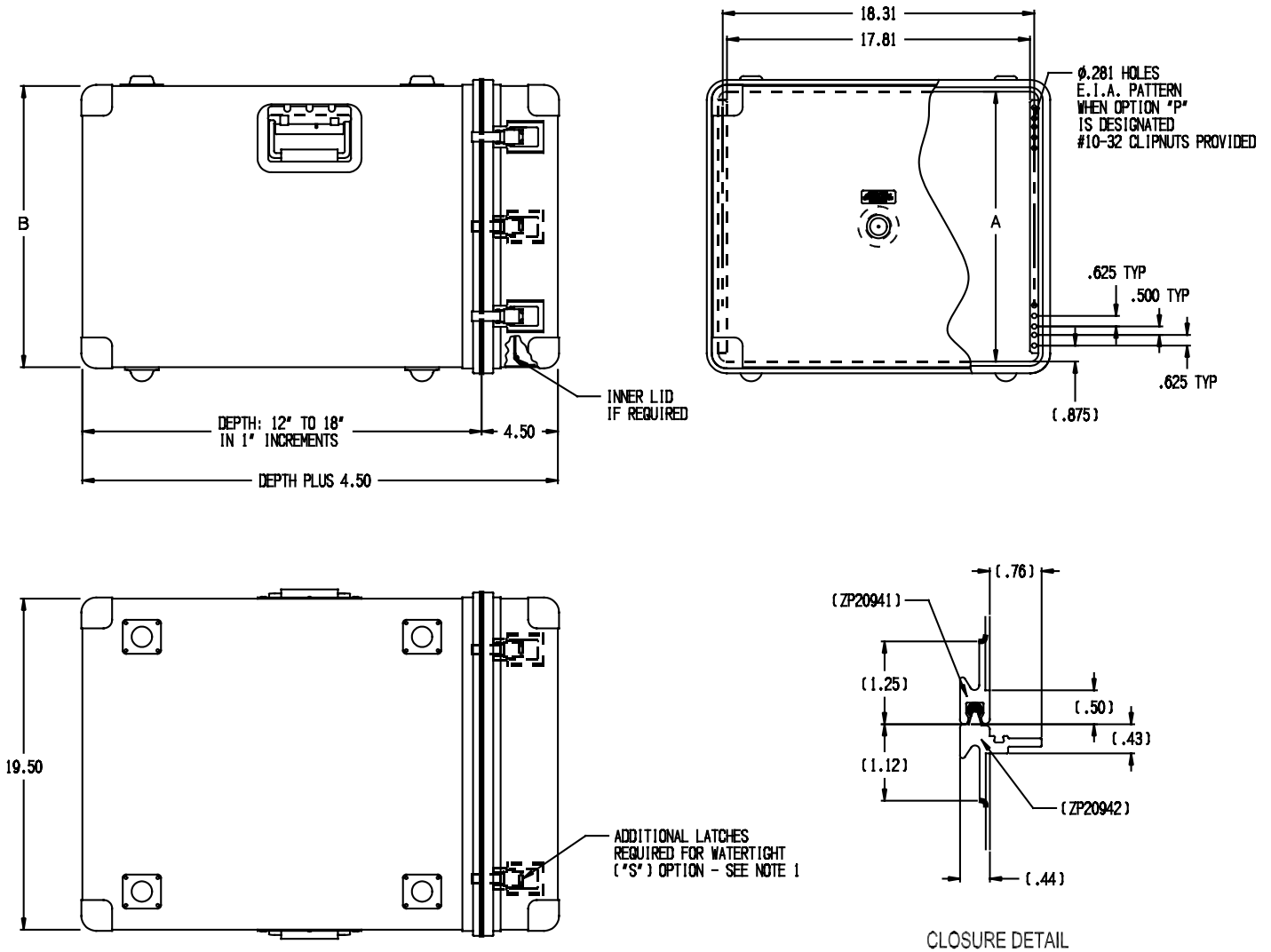


Top: T-Latch  
Bottom: Screw Latch



Grounding Strap

# VAL-AN 900 Series - Model 900



PART NUMBER

900    □   □   □   □   □   □   □   □

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = INNER LID FOR COVER

FINISH (see page 46 )

DEPTH: IN 1" INCREMENTS  
12" MIN TO 18" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108

## CASE SERIES

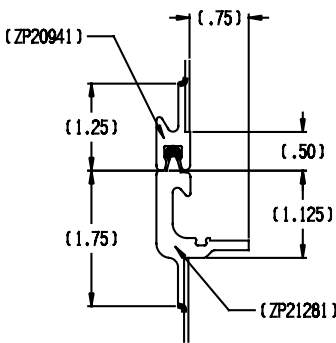
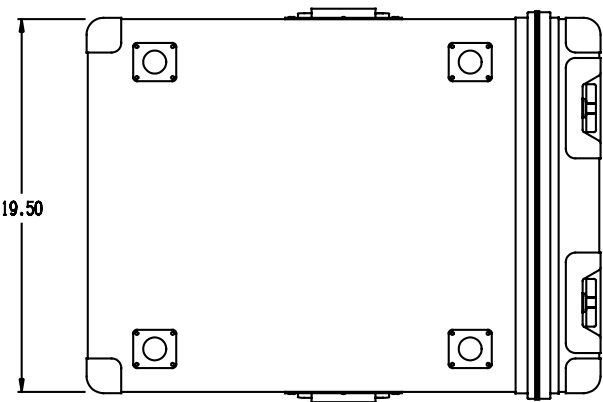
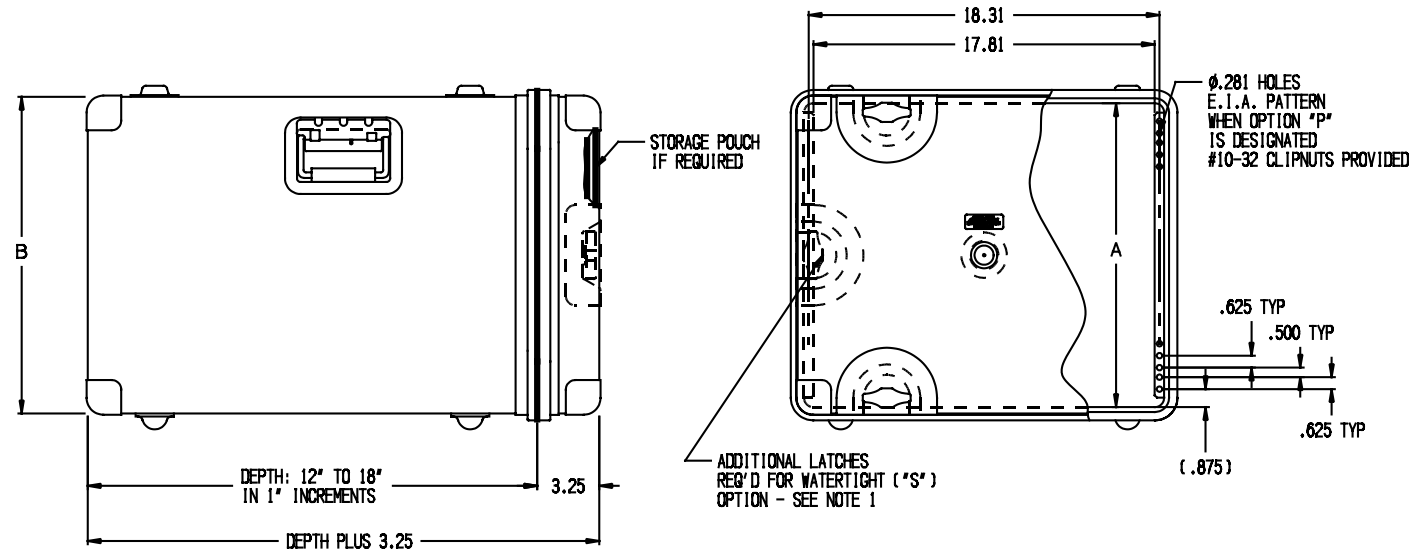
PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.25	(3U)	6.12
-7	7.00	(4U)	7.87
-8	8.75	(5U)	9.62
-10	10.50	(6U)	11.37
-14	14.00	(8U)	14.87
-17	17.50	(10U)	18.37
-21	21.00	(12U)	21.87
-24	24.50	(14U)	25.37
-28	28.00	(16U)	28.87

NOTES:

1. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
 PANEL HEIGHT DASH NO. 5 THRU 7 ADD: 4 LATCHES (6 TOTAL)  
 PANEL HEIGHT DASH NO. 8 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
 PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)



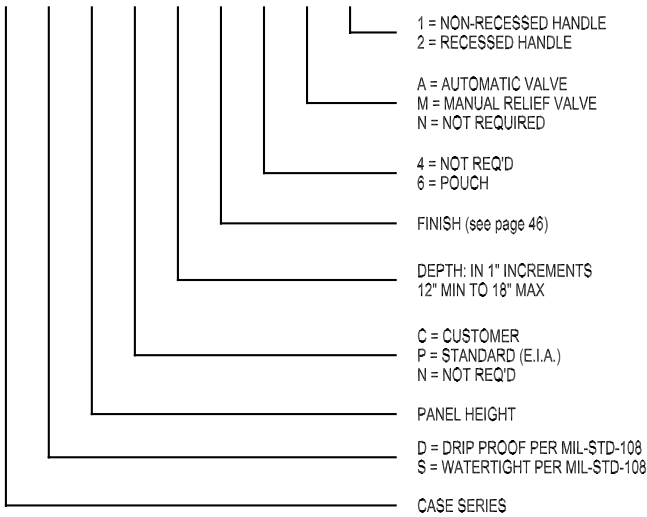
VAL-AN 900 Series - Model 905



CLOSURE DETAIL

PART NUMBER

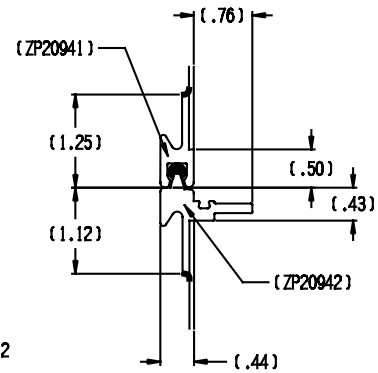
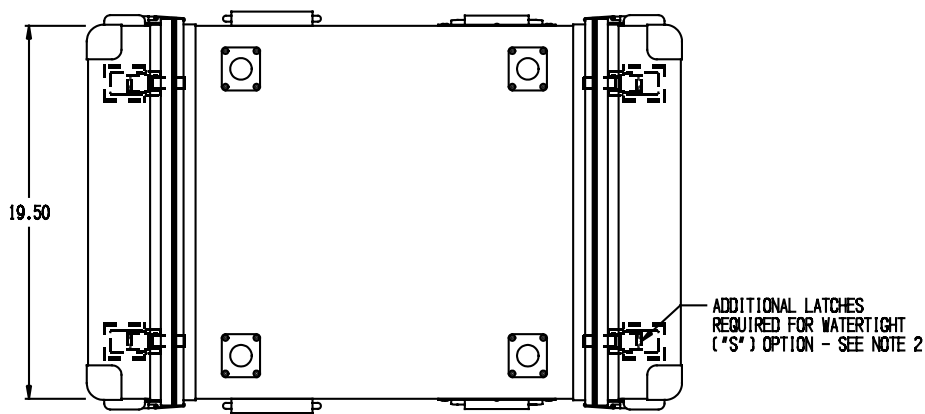
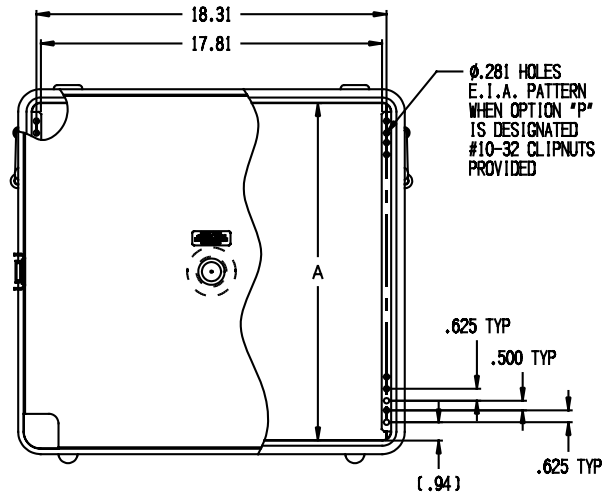
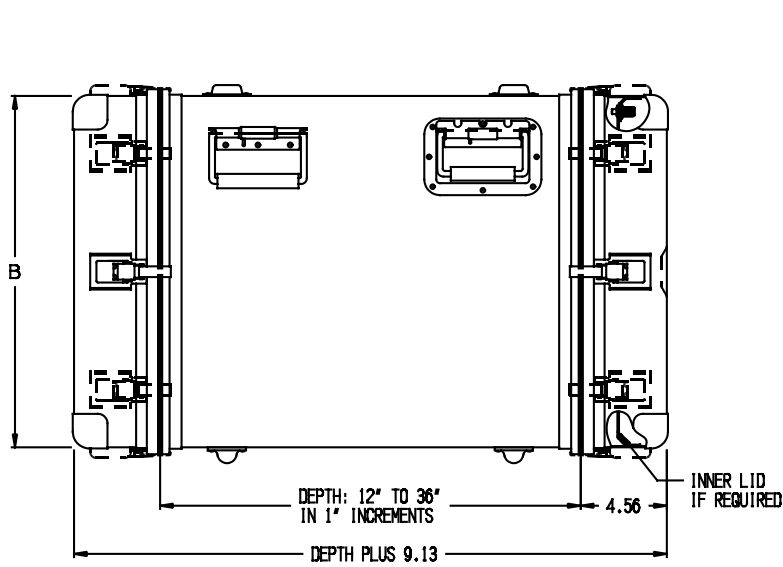
905 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐



PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-7	7.00	(4U)	7.87
-8	8.75	(5U)	9.62
-10	10.50	(6U)	11.37
-14	14.00	(8U)	14.87
-17	17.50	(10U)	18.37
-21	21.00	(12U)	21.87
-24	24.50	(14U)	25.37
-28	28.00	(16U)	28.87

- NOTES:
1. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION. PANEL HEIGHT DASH NO. 14 THRU 28 ADD: 2 LATCHES (6 TOTAL)

# VAL-AN 900 Series - Model 910



CLOSURE DETAIL

## PART NUMBER

910 ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = INNER LID FRONT COVER  
6 = INNER LID REAR COVER  
7 = INNER LID BOTH COVERS

FINISH (see page 46)

DEPTH: IN 1" INCREMENTS  
12" MIN TO 36" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108

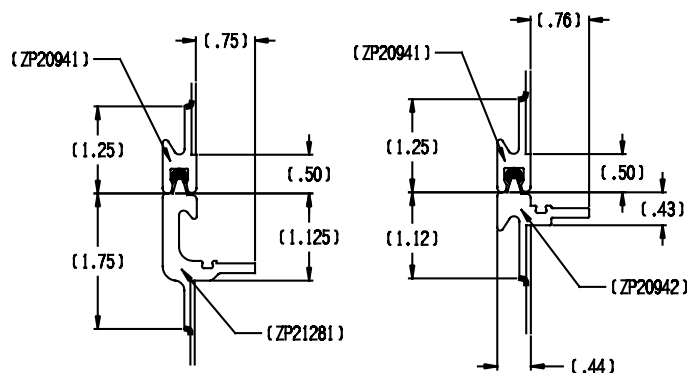
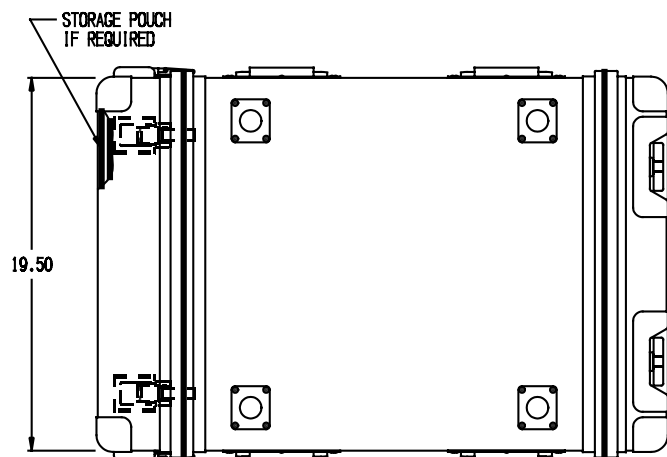
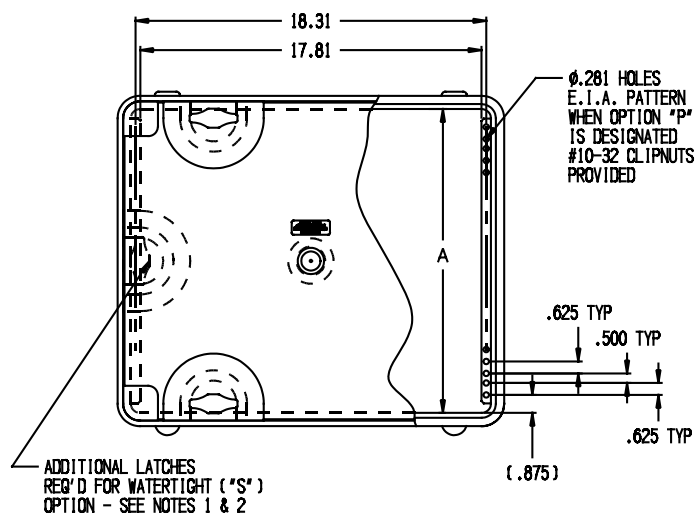
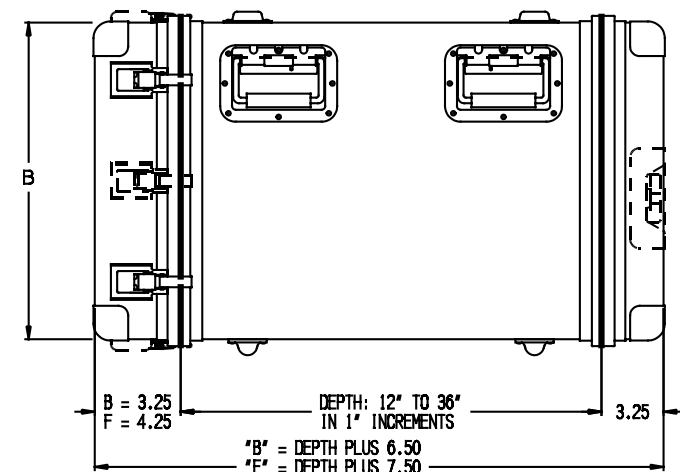
CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.25	(3U)	6.12
-7	7.00	(4U)	7.87
-8	8.75	(5U)	9.62
-10	10.50	(6U)	11.37
-14	14.00	(8U)	14.87
-17	17.50	(10U)	18.37
-21	21.00	(12U)	21.87
-24	24.50	(14U)	25.37
-28	28.00	(16U)	28.87

## NOTES:

- HANDLES:  
2 REQUIRED FOR DEPTHS OF 12 TO 18 INCHES.  
4 REQUIRED FOR DEPTHS OF 19 TO 36 INCHES.
- ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 5 THRU 8 ADD: 8 LATCHES (12 TOTAL)  
PANEL HEIGHT DASH NO. 10 THRU 17 ADD: 8 LATCHES (16 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 8 LATCHES (20 TOTAL)

# VAL-AN 900 Series - Model 915



CLOSURE DETAIL  
("T" LATCH)

CLOSURE DETAIL  
(SPRING LATCH)

PART NUMBER

915

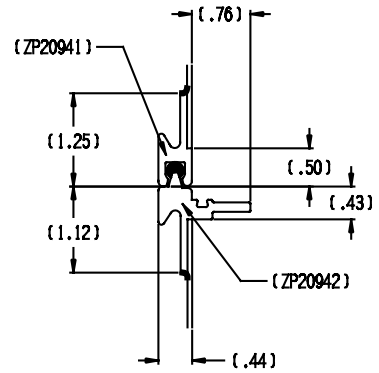
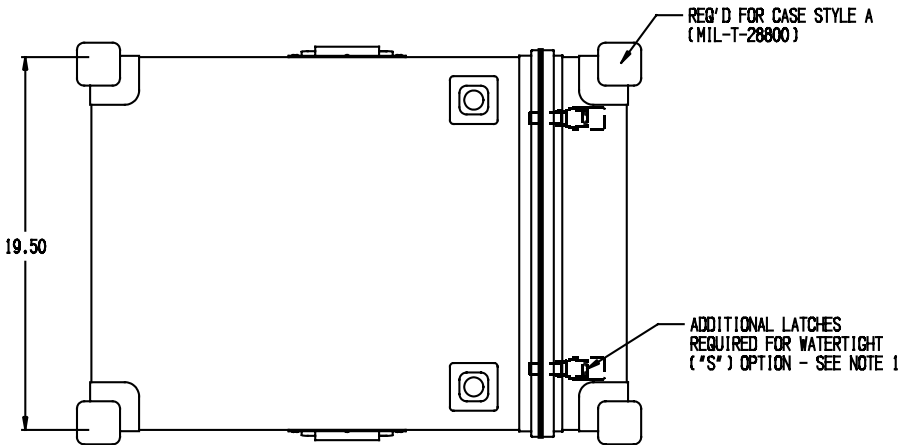
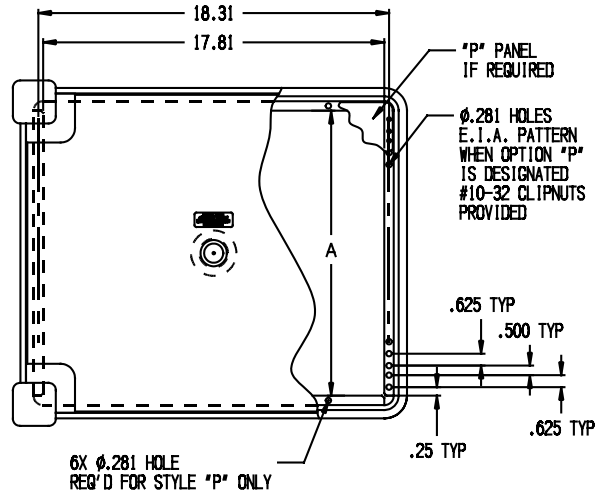
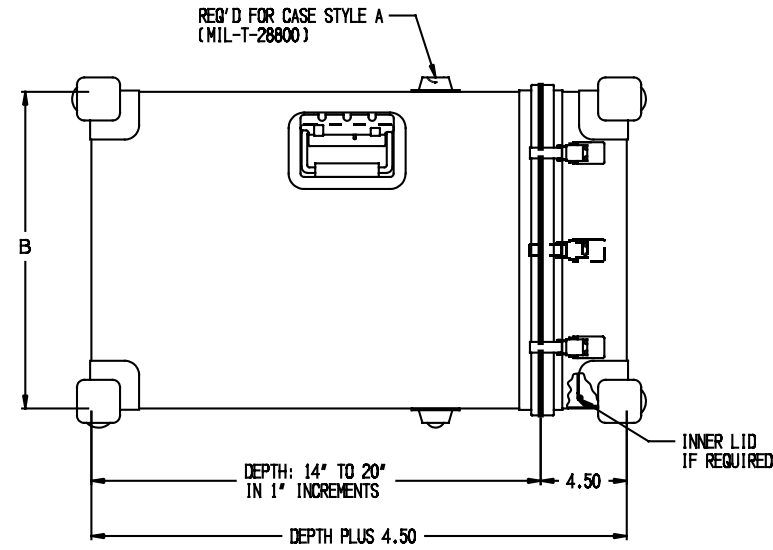
B = BOTH COVERS "T" LATCH  
 F = RECESSED "T" LATCH  
 (SPRING LATCH REAR COVER)  
 1 = NON-RECESSED HANDLE  
 2 = RECESSED HANDLE  
 A = AUTOMATIC VALVE  
 M = MANUAL RELIEF VALVE  
 N = NOT REQUIRED  
 4 = NOT REQ'D  
 6 = POUCH (REAR COVER ONLY)  
 FINISH (see page 46)  
 DEPTH: IN 1" INCREMENTS  
 12" MIN TO 36" MAX  
 C = CUSTOMER  
 P = STANDARD (E.I.A.)  
 N = NOT REQ'D  
 PANEL HEIGHT  
 D = DRIP PROOF PER MIL-STD-108  
 S = WATERTIGHT PER MIL-STD-108  
 CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-7	7.00	(4U)	7.87
-8	8.75	(5U)	9.62
-10	10.50	(6U)	11.37
-14	14.00	(8U)	14.87
-17	17.50	(10U)	18.37
-21	21.00	(12U)	21.87
-24	24.50	(14U)	25.37
-28	28.00	(16U)	28.87

NOTES:

1. ADDITIONAL SPRING LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 5 THRU 8 ADD: 4 LATCHES (6 TOTAL)  
PANEL HEIGHT DASH NO. 10 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)
2. ADDITIONAL "T" LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 14 THRU 28 ADD: 2 LATCHES (6 TOTAL)

# VAL-AN 900 Series - Model 920



### CLOSURE DETAIL

PART NUMBER

920

P = WITH PANEL (REQ'D FOR MIL-T-28800)  
N = WITHOUT PANEL

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = INNER LID FOR COVER

FINISH (see page 46)

DEPTH: IN 1" INCREMENTS  
14" MIN TO 20" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108  
A = MIL-T-28800, STYLE A

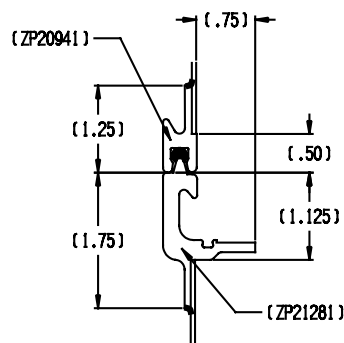
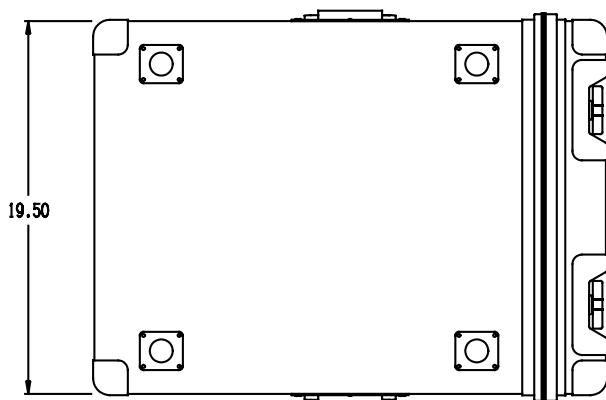
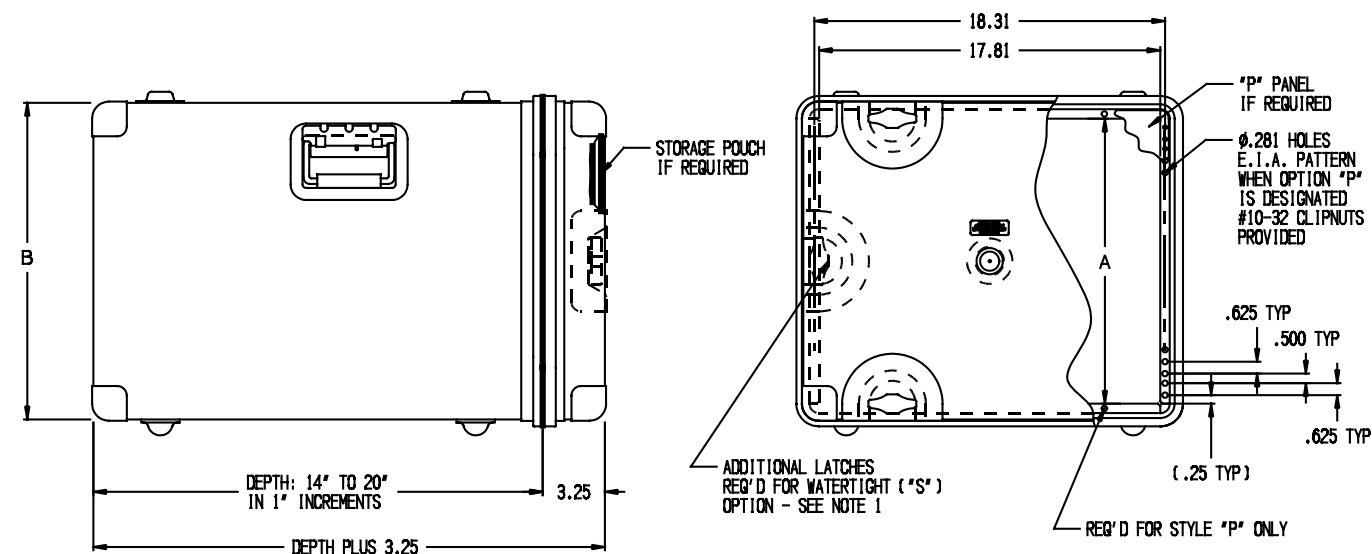
CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.25	(3U)	6.94
-7	7.00	(4U)	8.69
-8	8.75	(5U)	10.44
-10	10.50	(6U)	12.19
-14	14.00	(8U)	15.69
-17	17.50	(10U)	19.19
-21	21.00	(12U)	22.69
-24	24.50	(14U)	26.19
-28	28.00	(16U)	29.69

NOTES:

1. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
 PANEL HEIGHT DASH NO. 5 ADD: 4 LATCHES (6 TOTAL)  
 PANEL HEIGHT DASH NO. 7 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
 PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)

# VAL-AN 900 Series - Model 925



### CLOSURE DETAIL

## PART NUMBER

925

P = WITH PANEL  
N = WITHOUT PANEL

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = INNER LID FOR COVER

FINISH (see page 46)

DEPTH: IN 1" INCREMENTS  
14" MIN TO 20" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108

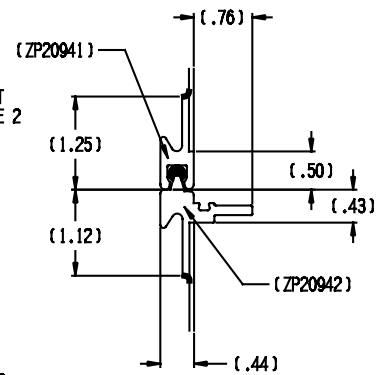
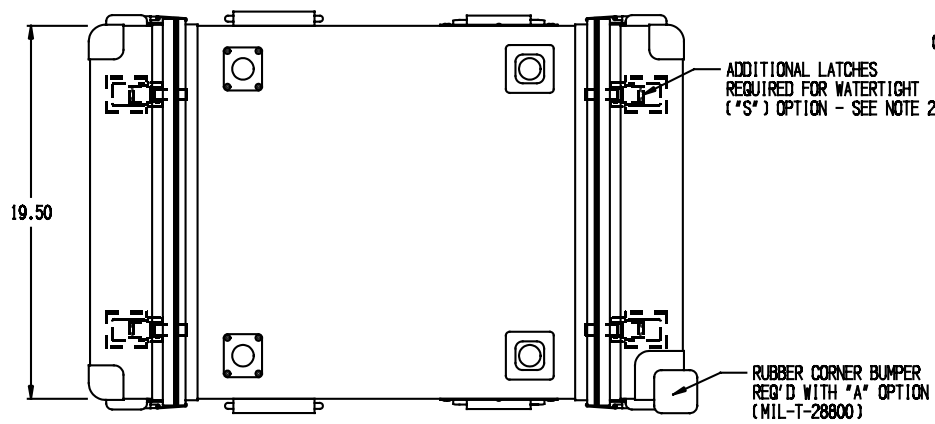
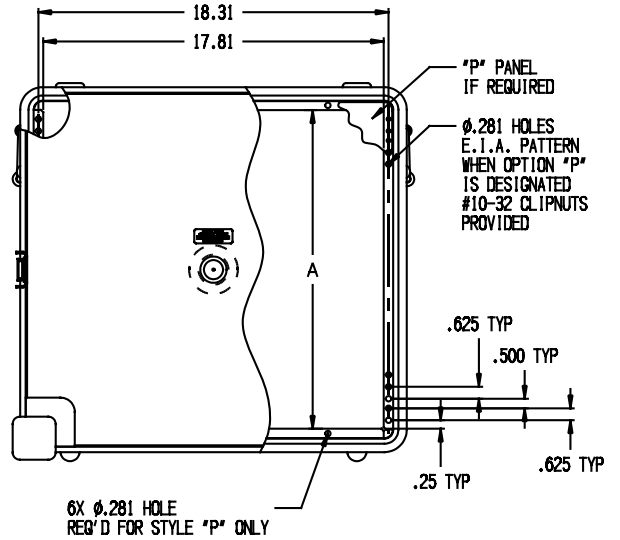
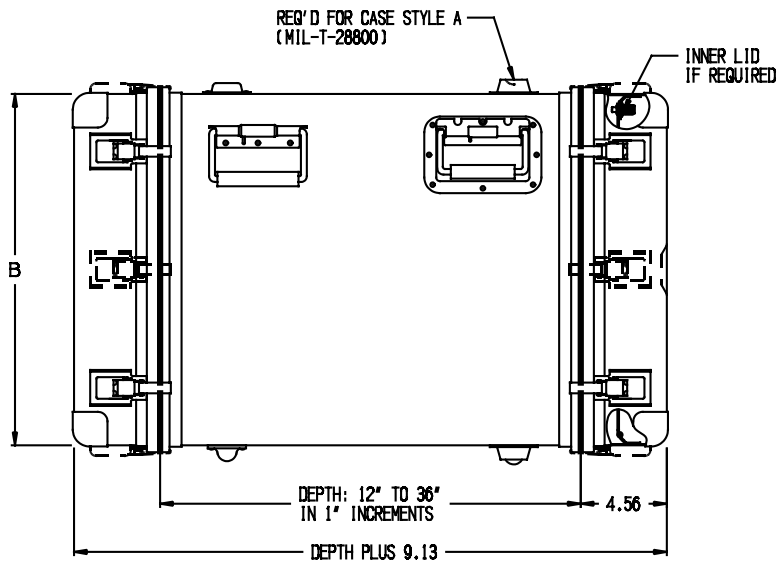
CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	Not Available - See 920 Series		
-7	7.00	(4U)	8.69
-8	8.75	(5U)	10.44
-10	10.50	(6U)	12.19
-14	14.00	(8U)	15.69
-17	17.50	(10U)	19.19
-21	21.00	(12U)	22.69
-24	24.50	(14U)	26.19
-28	28.00	(16U)	29.69

NOTES:

1. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 7 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)

# VAL-AN 900 Series - Model 930



### CLOSURE DETAIL

## PART NUMBER

930 □ □ □ □ □ □ □ □ —

P = WITH PANEL (REQ'D FOR MIL-T-28800)  
N = WITHOUT PANEL

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = INNER LID FRONT COVER  
6 = INNER LID REAR COVER  
7 = INNER LID BOTH COVERS

FINISH (see page 46)

DEPTH: IN 1" INCREMENTS  
12" MIN TO 36" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108  
A = MIL-T-28800, STYLE A

CASE SERIES

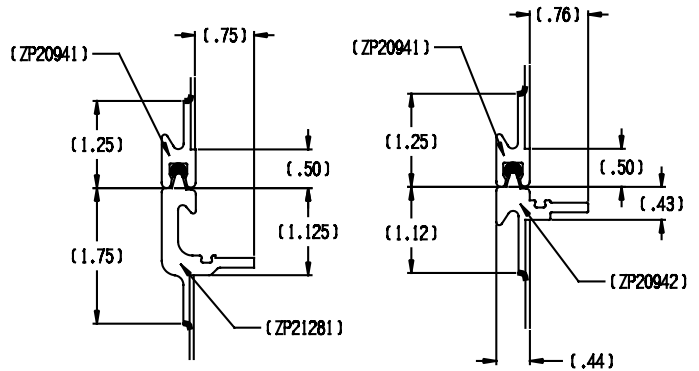
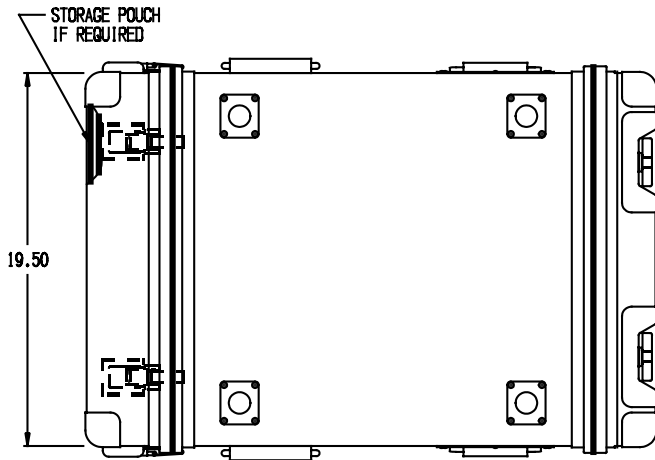
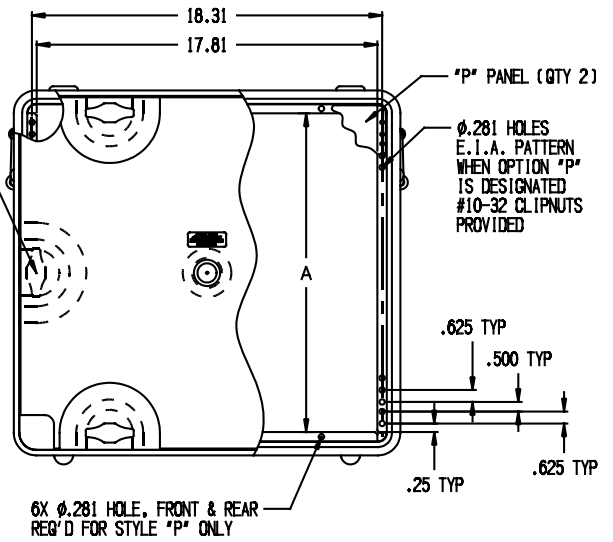
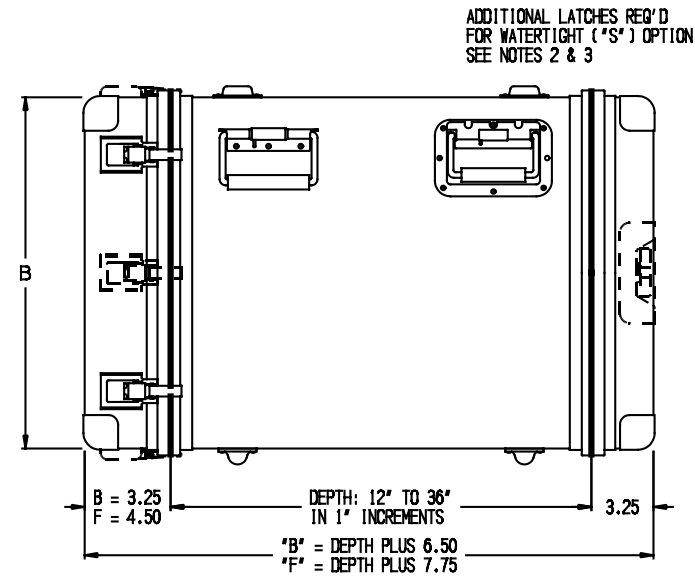
PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.25	(3U)	6.94
-7	7.00	(4U)	8.69
-8	8.75	(5U)	10.44
-10	10.50	(6U)	12.19
-14	14.00	(8U)	15.69
-17	17.50	(10U)	19.19
-21	21.00	(12U)	22.69
-24	24.50	(14U)	26.19
-28	28.00	(16U)	29.69

NOTES:

1. HANDLES:  
2 REQUIRED FOR DEPTHS OF 12 TO 18 INCHES.  
4 REQUIRED FOR DEPTHS OF 19 TO 36 INCHES.
2. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 5 ADD: 4 LATCHES (6 TOTAL)  
PANEL HEIGHT DASH NO. 7 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)



# VAL-AN 900 Series - Model 935



CLOSURE DETAIL  
("T" LATCH)

CLOSURE DETAIL  
(SPRING LATCH)

PART NUMBER

935

P = WITH PANEL (MIL-T-28800, C)  
N = WITHOUT PANEL

B = BOTH COVERS "T" LATCH  
F = RECESSED "T" LATCH (REAR SPRING)

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE (MIL-T-28800, C)

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
6 = POUCH (REAR COVER ONLY)

FINISH (see page 46)

DEPTH: IN 1" INCREMENTS  
12" MIN TO 36" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108  
A = MIL-T-28800, STYLE C

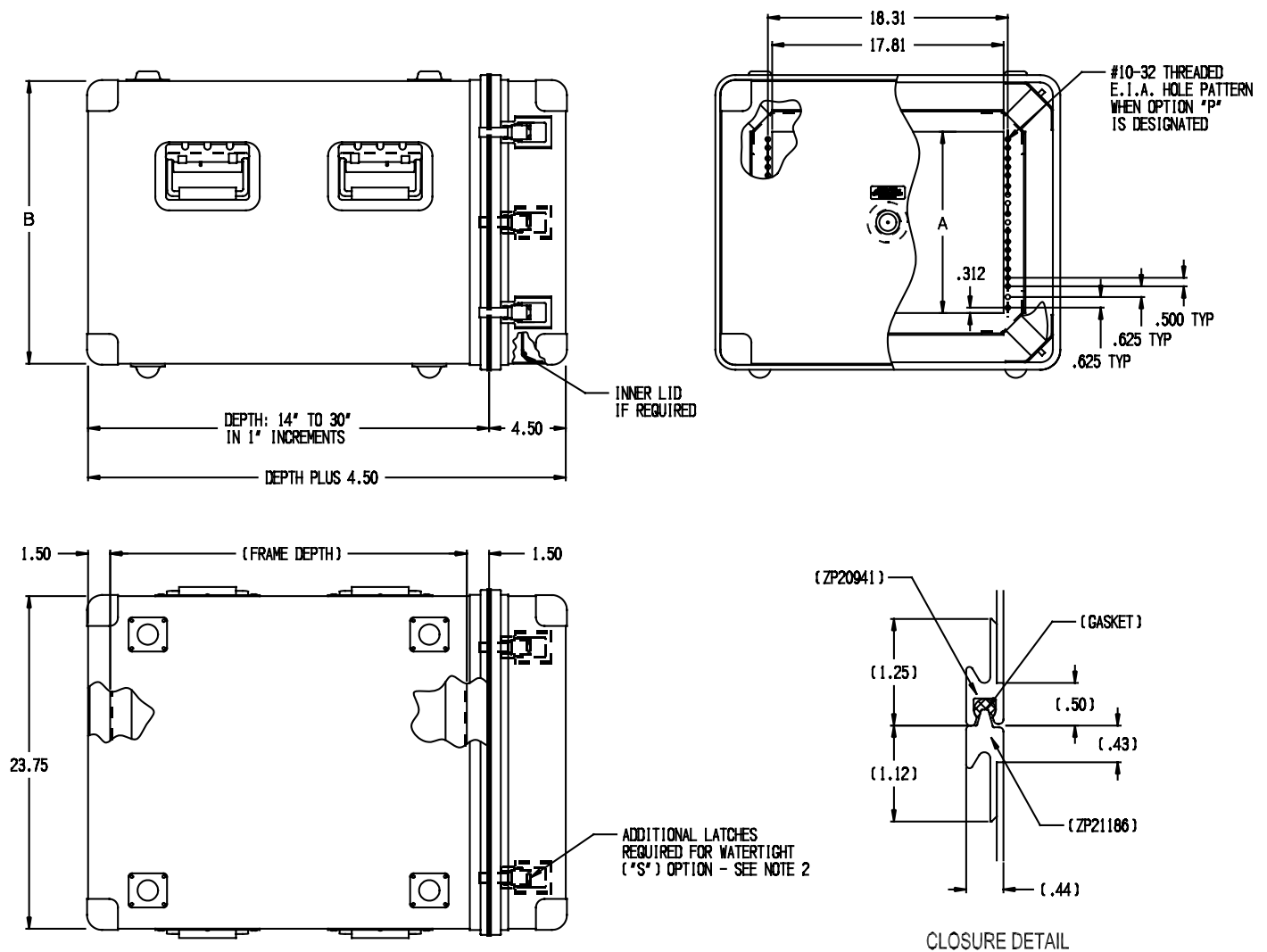
CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-7	7.00	(4U)	8.69
-8	8.75	(5U)	10.44
-10	10.50	(6U)	12.19
-14	14.00	(8U)	15.69
-17	17.50	(10U)	19.19
-21	21.00	(12U)	22.69
-24	24.50	(14U)	26.19
-28	28.00	(16U)	29.69

NOTES:

1. HANDLES:  
2 REQUIRED FOR DEPTHS OF 12 TO 18 INCHES.  
4 REQUIRED FOR DEPTHS OF 19 TO 36 INCHES.
2. ADDITIONAL SPRING LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 7 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)
3. ADDITIONAL "T" LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 17 THRU 21 ADD: 2 LATCHES (6 TOTAL)  
PANEL HEIGHT DASH NO. 24 THRU 28 ADD: 4 LATCHES (8 TOTAL)

# VAL-AN 900 Series - Model 940



PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.37	(3U)	11.31
-7	7.12	(4U)	13.06
-8	8.87	(5U)	14.81
-10	10.62	(6U)	16.56
-14	14.12	(8U)	20.06
-17	17.62	(10U)	23.56
-21	21.12	(12U)	27.06
-24	24.62	(14U)	30.56
-28	28.12	(16U)	34.06

NOTES:

1. HANDLES:  
2 REQUIRED FOR DEPTHS OF 14 TO 20 INCHES.  
4 REQUIRED FOR DEPTHS OF 21 TO 30 INCHES.
2. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 5 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)

PART NUMBER

940

1 = 20-49 LBS OF EQUIP.  
2 = 50-99 LBS OF EQUIP.  
3 = 100-150 LBS OF EQUIP.

E = EMI SHIELDED RACK  
N = NON-SHIELDED RACK

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = INNER LID FOR COVER

FINISH (see page 46)

DEPTH: (FRAME + 3.00")  
IN 1" INCREMENTS 14" MIN TO 30" MAX

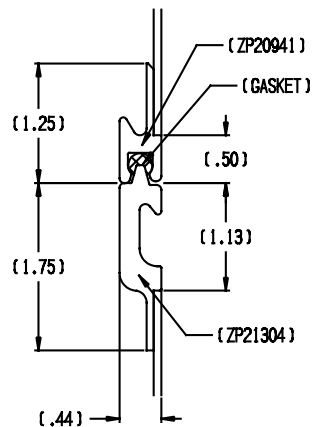
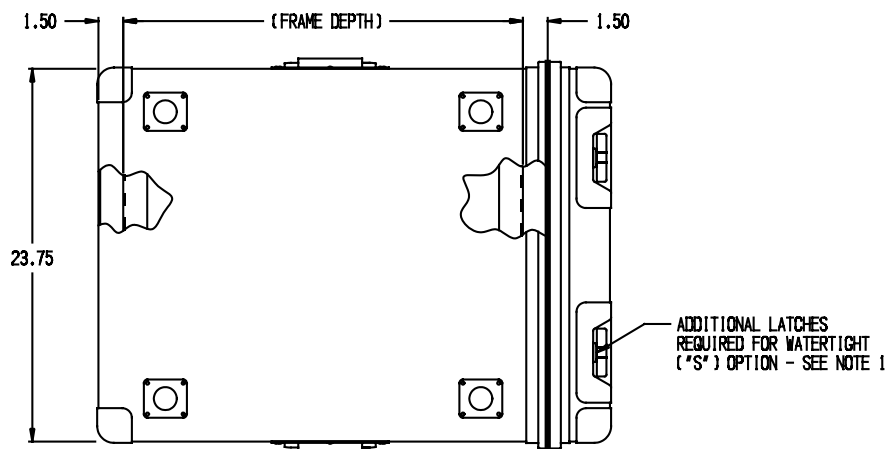
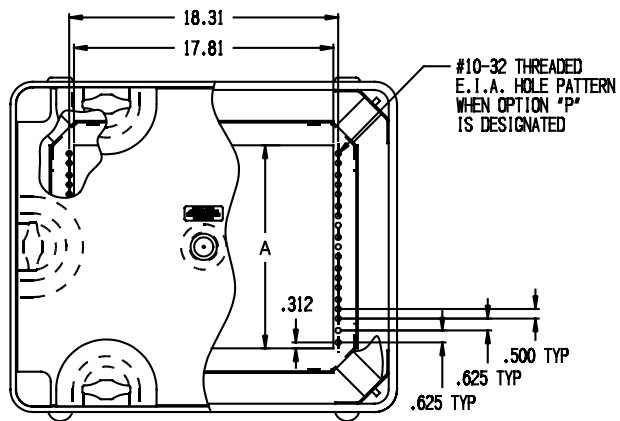
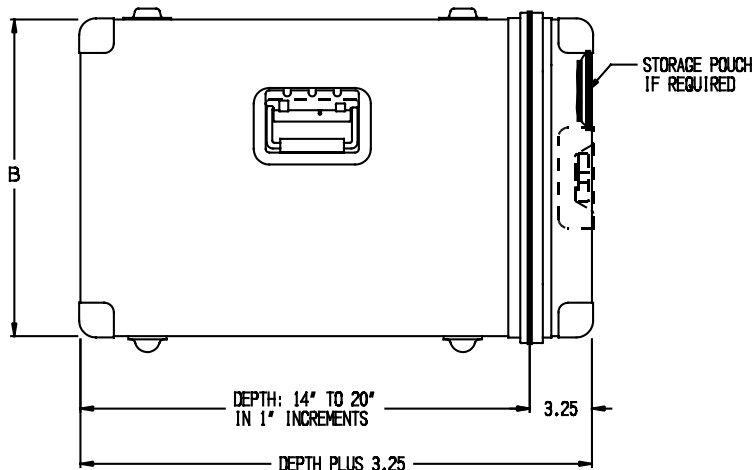
C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108

CASE SERIES

# VAL-AN 900 Series - Model 945



### CLOSURE DETAIL

PART NUMBER

[illegible]

1 = 20-49 LBS OF EQUIP.  
2 = 50-99 LBS OF EQUIP.  
3 = 100-150 LBS OF EQUIP.

E = EMI SHIELDED RACK  
N = NON-SHIELDED RACK  
1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ  
5 = POUCH

FINISH (see page 46)

DEPTH: (FRAME + 3.00")  
IN 1" INCREMENTS 14" MIN TO 20" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108

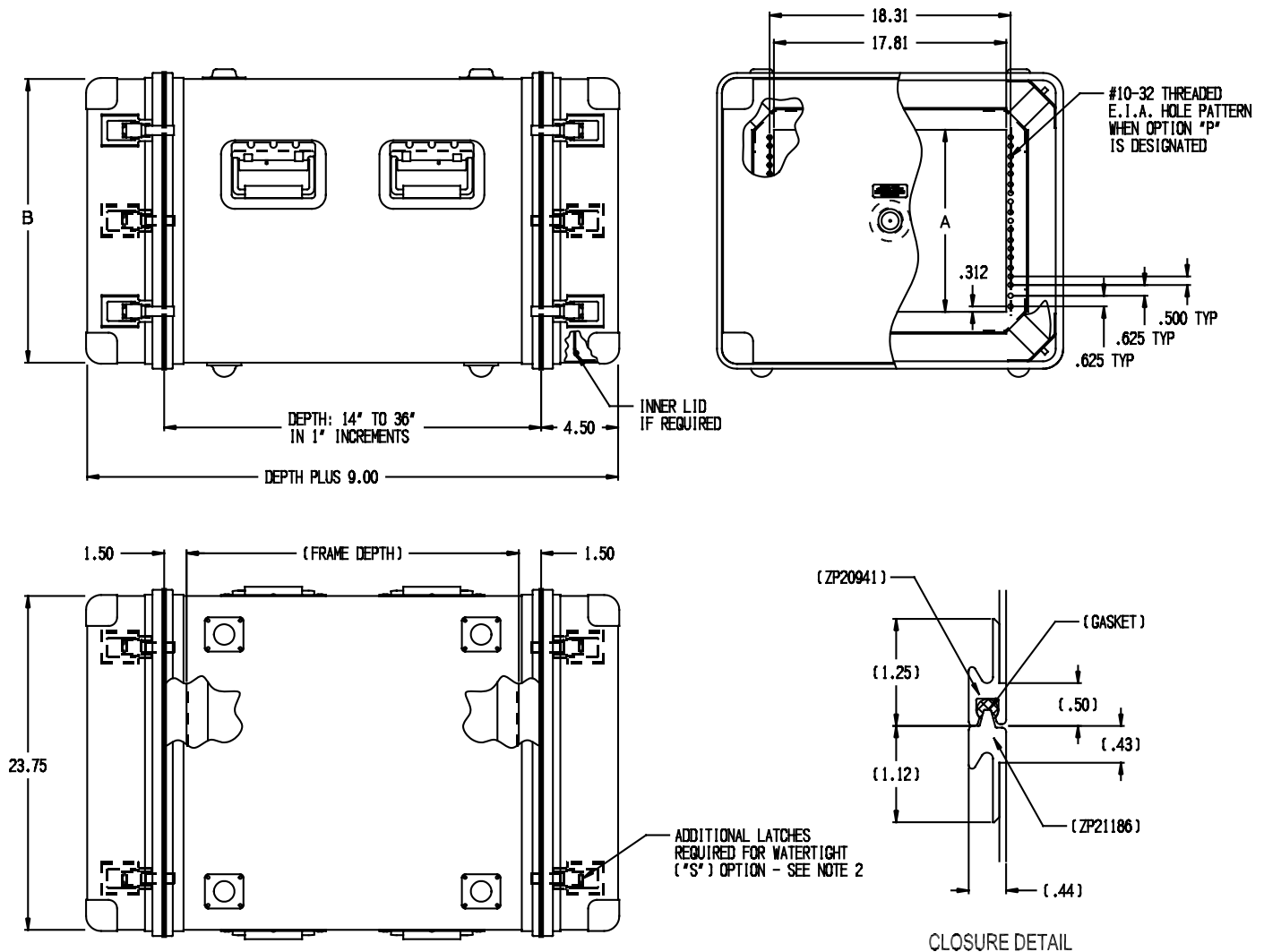
## CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.37	(3U)	11.31
-7	7.12	(4U)	13.06
-8	8.87	(5U)	14.81
-10	10.62	(6U)	16.56
-14	14.12	(8U)	20.06
-17	17.62	(10U)	23.56
-21	21.12	(12U)	27.06
-24	24.65	(14U)	30.56
-28	28.12	(16U)	34.06

NOTES:

1. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 14 THRU 17 ADD: 4 LATCHES (6 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 4 LATCHES (8 TOTAL)

# VAL-AN 900 Series - Model 950



PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.37	(3U)	11.31
-7	7.12	(4U)	13.06
-8	8.87	(5U)	14.81
-10	10.62	(6U)	16.56
-14	14.12	(8U)	20.06
-17	17.62	(10U)	23.56
-21	21.12	(12U)	27.06
-24	24.62	(14U)	30.56
-28	28.12	(16U)	34.06

NOTES:

1. HANDLES:  
2 REQUIRED FOR DEPTHS OF 14 TO 18 INCHES.  
4 REQUIRED FOR DEPTHS OF 19 TO 36 INCHES.
2. ADDITIONAL LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 5 THRU 17 ADD: 8 LATCHES (16 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 12 LATCHES (20 TOTAL)

PART NUMBER

950 □ □ □ □ □ □ □ □ □ -

1 = 20-49 LBS OF EQUIP.  
2 = 50-99 LBS OF EQUIP.  
3 = 100-150 LBS OF EQUIP.

E = EMI SHIELDED RACK  
N = NON-SHIELDED RACK

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = INNER LID FRONT COVER  
6 = INNER LID REAR COVER  
7 = INNER LID BOTH COVERS

FINISH (see page 46)

DEPTH: (FRAME + 3.00")  
IN 1" INCREMENTS 14" MIN TO 36" MAX

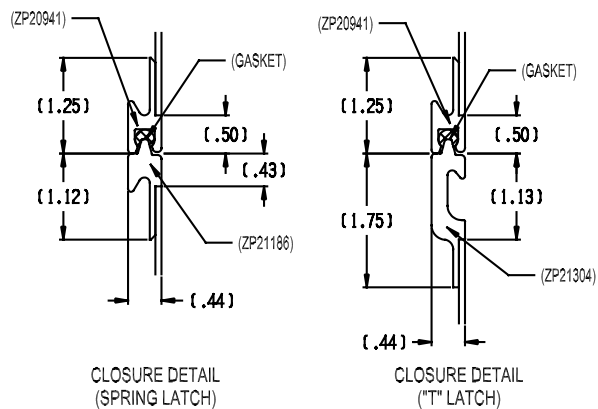
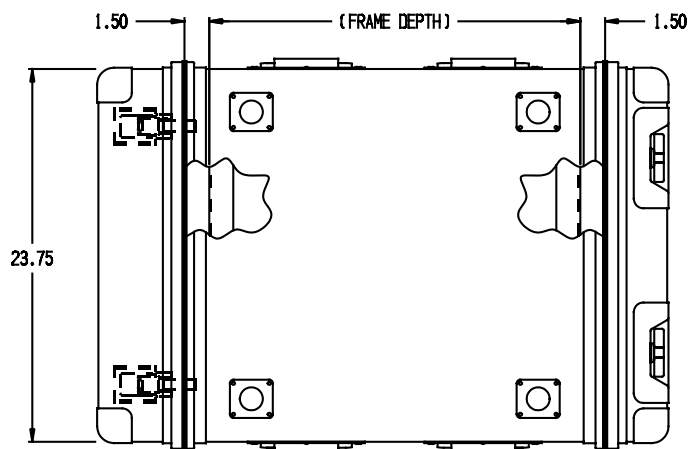
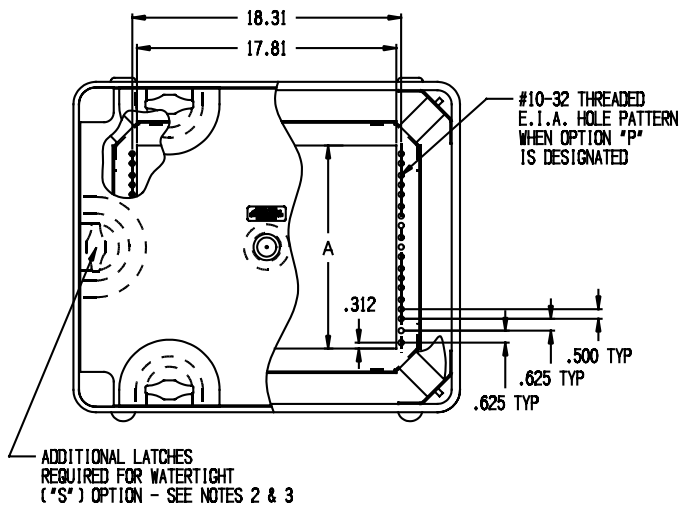
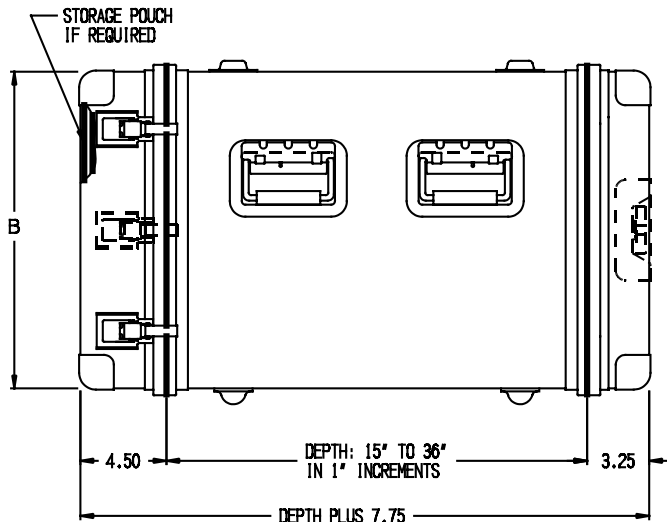
C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108

## CASE SERIES

# VAL-AN 900 Series - Model 955



## PART NUMBER

955 □ □ □ □ □ □ □ □ □ □ —

1 = 20-49 LBS OF EQUIP.  
2 = 50-99 LBS OF EQUIP.  
3 = 100-150 LBS OF EQUIP.

B = BOTH COVERS "T" LATCH  
F = RECESSED "T" LATCH (REAR SPRING)

E = EMI SHIELDED RACK  
N = NON-SHIELDED RACK

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = POUCH (REAR COVER ONLY)

FINISH (see page 46)

DEPTH: (FRAME + 3.00")  
IN 1" INCREMENTS \$ 15" MIN TO 36" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
\$ = WATERTIGHT PER MIL-STD-108

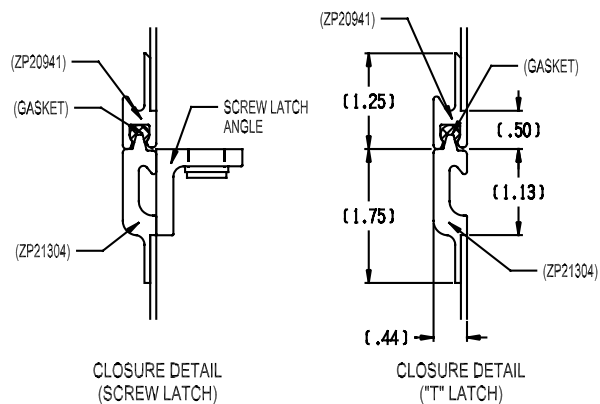
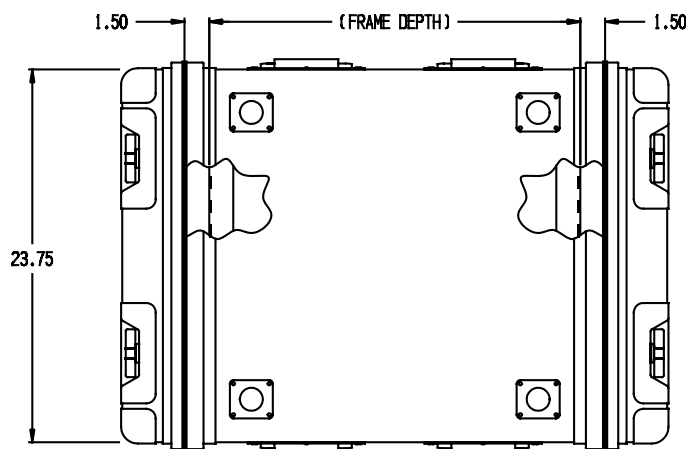
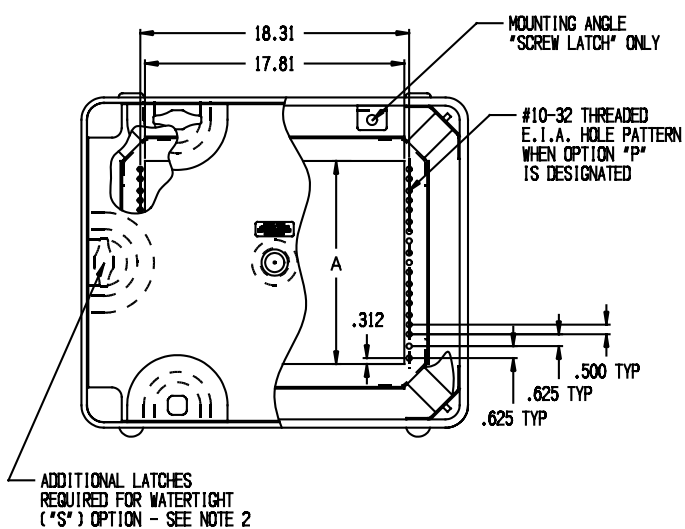
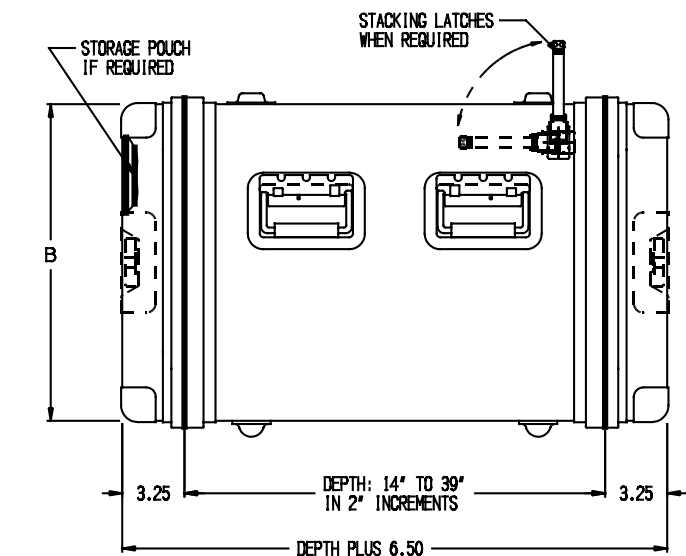
## CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	5.37	(3U)	11.31
-7	7.12	(4U)	13.06
-8	8.87	(5U)	14.81
-10	10.62	(6U)	16.56
-14	14.12	(8U)	20.06
-17	17.62	(10U)	23.56
-21	21.12	(12U)	27.06
-24	24.62	(14U)	30.56
-28	28.12	(16U)	34.06

NOTES:

1. HANDLES:  
2 REQUIRED FOR DEPTHS OF 15 TO 18 INCHES.  
4 REQUIRED FOR DEPTHS OF 19 TO 36 INCHES.
2. ADDITIONAL SPRING LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 5 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 6 LATCHES (10 TOTAL)
3. ADDITIONAL "T" LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 14 THRU 17 ADD: 2 LATCHES (6 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 4 LATCHES (8 TOTAL)

# VAL-AN 900 Series - Model 960



## PART NUMBER

960 □ □ □ □ □ □ □ □ □ □ —

1 = 20-49 LBS OF EQUIP.  
2 = 50-99 LBS OF EQUIP.  
3 = 100-150 LBS OF EQUIP.

S = SCREW LATCH  
T = "T" LATCH

E = EMI SHIELDED RACK  
N = NON-SHIELDED RACK

1 = NON-RECESSED HANDLE  
2 = RECESSED HANDLE

A = AUTOMATIC VALVE  
M = MANUAL RELIEF VALVE  
N = NOT REQUIRED

4 = NOT REQ'D  
5 = POUCH (REAR COVER ONLY)

FINISH (see page 46)

DEPTH: (FRAME + 3.00")  
IN 1" INCREMENTS 14" MIN TO 39" MAX

C = CUSTOMER  
P = STANDARD (E.I.A.)  
N = NOT REQ'D

PANEL HEIGHT

D = DRIP PROOF PER MIL-STD-108  
S = WATERTIGHT PER MIL-STD-108

## CASE SERIES

PANEL HEIGHT			
Dash No.	"A" Dim.	"U" Size	"B" Dim.
X	Special Size		
-5	N/A	N/A	N/A
-7	7.12	(4U)	13.06
-8	8.87	(5U)	14.81
-10	10.62	(6U)	16.56
-14	14.12	(8U)	20.06
-17	17.62	(10U)	23.56
-21	21.12	(12U)	27.06
-24	24.62	(14U)	30.56
-28	28.12	(16U)	34.06

NOTES:

1. HANDLES:  
2 REQUIRED FOR DEPTHS OF 15 TO 18 INCHES.  
4 REQUIRED FOR DEPTHS OF 19 TO 39 INCHES.
2. ADDITIONAL "T" / SCREW LATCHES REQUIRED FOR WATERTIGHT ("S") OPTION.  
PANEL HEIGHT DASH NO. 14 THRU 17 ADD: 4 LATCHES (8 TOTAL)  
PANEL HEIGHT DASH NO. 21 THRU 28 ADD: 8 LATCHES (12 TOTAL)



# Pre-Engineered Ruggedized Cases

## Design and Engineering

Do you want to be sure that your equipment will be safely, efficiently, and economically packaged? Would you like help with your packaging ideas?

To eliminate the worry of questionable packaging, Zero Manufacturing, Inc. recommends the use of its vast and varied technological packaging "know-how." A staff of technically competent packaging engineers and draftsmen is available to transfer your ideas into workable designs.

Unusual packaging never presents a problem for Zero Manufacturing, Inc.. Designing of packaging for even the most complicated product, with the most demanding characteristics, is considered "all in a day's work" for the Zero professional packaging team.

## Special Engineering Services

Even the best of Man's ideas are only that—ideas, until proven. Zero Manufacturing, Inc. constantly undertakes research and development programs to prove the soundness of ideas. Out of research, progress is born.

Does your product require packaging reliability that can only be ensured through research? These questions receive prompt attention from Zero Manufacturing, Inc.. Our research engineers are interested in working with you.

Packaging research by Zero may prove mutually advantageous. This, in turn, is reflected in Zero Manufacturing, Inc.'s low research costs.

Zero Manufacturing, Inc. invites your research inquiry. Take advantage of our packaging experience and save valuable dollars by researching with us.

## Military Specifications

All Military Cases shown in this catalog are designed and fabricated to the latest military specifications.

Ordering a case meeting a specific military specification has been simplified. Order by part number only; no cumbersome hang-on notations are required. Specially mounted cases, to meet the most stringent of packaging



requirements, can be efficiently supplied by requesting a Zero Manufacturing, Inc. engineering proposal.

- *Want a case that meets the watertight requirements of MIL-STD-108? Choose any case shown in this section, except Model "L".*
- *Want a case that meets the requirements of MIL-T-28800\*, Style A, C, or T? Choose any case shown on pages 72 through 79 in this catalog.*
- *Want a case that meets the requirements of MIL-C-4150, MIL-STD-810, MIL-T-4734, or other specifications? Zero designs and fabricates to all military case specifications.*

\* Cases shown on pages 70 and 71 can also be made to meet the requirements of MIL-T-28800. However, due to complications when mounting all the hardware required by MIL-T-28800 on such small case sizes Zero recommends a less costly approach—the consideration of a slightly larger case size.

## Testing

After the case has been designed and fabricated, are there any doubts about the design validity? Put your mind at ease; have Zero Manufacturing, Inc. test the package. We submerge it and check for watertight integrity; pressurize it and check for pressure-tight requirements; drop it and check for shock requirements; or conduct any other test which may be applicable.

Zero Manufacturing, Inc. can coordinate all such tests to ensure conformance to your individual specifications.

Should your package product require further special tests, the Zero Manufacturing, Inc. test facilities are always at your disposal.

Be sure of your packaging; have Zero Manufacturing, Inc. validate the package by testing.

\* The latest specification is now titled MIL-PRF-28800. Since the environmental and dynamic requirements of MIL-T-28800 is far more severe than that of MIL-PRF-28800 and offers our customers more case options, Zero Manufacturing, Inc. will continue to identify and manufacture the cases as meeting the requirements of MIL-T-28800 in this catalog.

## Vibration and Shock Isolation

A free consultation with a Zero Manufacturing, Inc. packaging engineer can save you time and money. Knowing how to efficiently and economically dissipate the energies of shock and vibration without damage to the packaged product is a specialized pursuit. Zero Manufacturing, Inc. has designed and fabricated more than half a million military cases, each with its own vibration and shock isolation system. The Zero Manufacturing, Inc. professional packaging engineers would like to share their accumulated wealth of vibration and shock isolation knowledge with you. Show them your packaging requirement. After careful analysis we will recommend a technique, probably utilizing one of the following systems:

1. Polyurethane foam cushions
2. Polyethylene foam cushions
3. Shear and vibration mounts

**Polyurethane Foam** (MIL-PRF-26514) is a low-cost cellular packaging material with predictable and excellent performance characteristics in the

broad temperature range (-10°F to +185°F). This material can be coated for added moisture and abrasion resistance. The ease of fabrication into a variety of shapes makes polyurethane foam especially adaptable for use as a multicavity cushion material. It is available in flat sheet stock or it can be molded into any required shape.

Though various colors and densities are available, gray in densities of either 2 or 4 lbs/cu ft is the most common. This is probably the most frequently used cushioning material in military case packaging.

**Polyethylene Foam** per A-A-59136 is a low-cost cellular packaging material with predictable performance characteristics. The virtue of this material lies chiefly in its ability to withstand high bearing loads and temperature ranges from -65° to +165°F.

**Shear and Vibration Mounts** utilize elastomer materials or other dampener methods which are available in a wide range of sizes and load-carrying capacities. Elastomer shear mounts are recommended when the packaged item

is very fragile and requires a large deflection during shock inputs. Performance characteristics are predictable. Large and heavy items are usually packaged using this method.

Operational temperature range can be determined by the selection of a specific elastomer material. Synthetic and natural rubber mounts may be used for operational temperature ranges of -65° to 170°; silicone mounts may be used for operational temperature ranges of -65°F to 170°F.

Amplification due to vibration at the resonant frequency is controlled by designing a mounting system with a natural frequency outside the critical operation range. If necessary, a cradle is designed for attachment to the protected equipment. The case is given reinforcement at the elastomer mount attachment points. To the equipment is mounted the cradle, and between the cradle and the case is mounted the elastomer shear mounts.

## Anti-Static Foams

Both polyurethane and polyethylene foams are available in anti-static versions. These foams minimize static charge generation so they contribute to the important objective of creating a static free environment. They also provide quick, but controlled, dissipation of electrostatic charges emitted from other materials.



# Design Guide for Case Selection

Zero Manufacturing, Inc. has prepared the following in a step by step fashion in an attempt to make the ordering of a case a simple as possible.

## Step 1 Establishing the type of equipment support

- A -** For flange or hard mounted equipment, select the desired flange arrangement from pages 80-83.
- B -** For equipment that requires shock protection refer to the charts below. Divide the gross equipment weight, pounds, by the projected area (surface that will rest on the foam), square inches. This will establish the foam loading, pounds per square inch (psi). For loading .1 to .3 psi use 2.0 pound/cubic foot polyurethane, for .3 to .6 psi, use 4.0 pound/cubic foot polyurethane, for .5 to 1.0 use 2.0 pound/cubic foot polyethylene. Enter Chart 2 at the fragility level, proceed horizontally to intersect the curves at the required height of drop move vertically from this point of intersection down to the indicated foam thickness required. Repeat for each axis of drop.

Chart 1 can be used as a guide if the "fragility" of the item in question is not known.

## Step 2 Determining Case Size

For flange mounted equipment determine panel and overall chassis dims. Check available case sizes (pages 70-79) according to required panel space and chassis clearance. Select optimum case size and adjust panel size to fit case chosen.

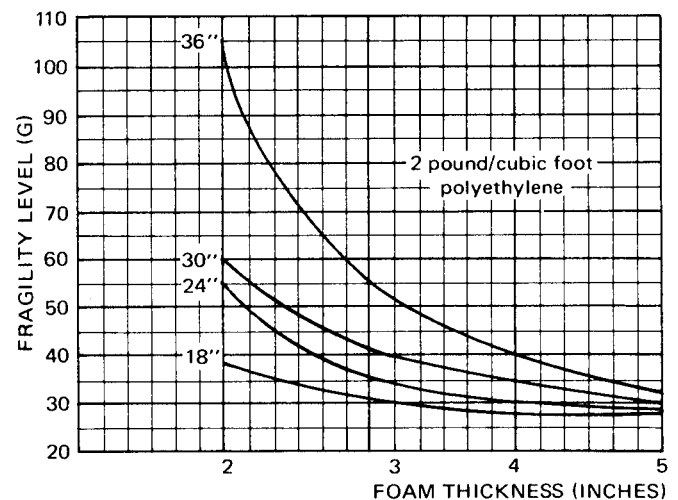
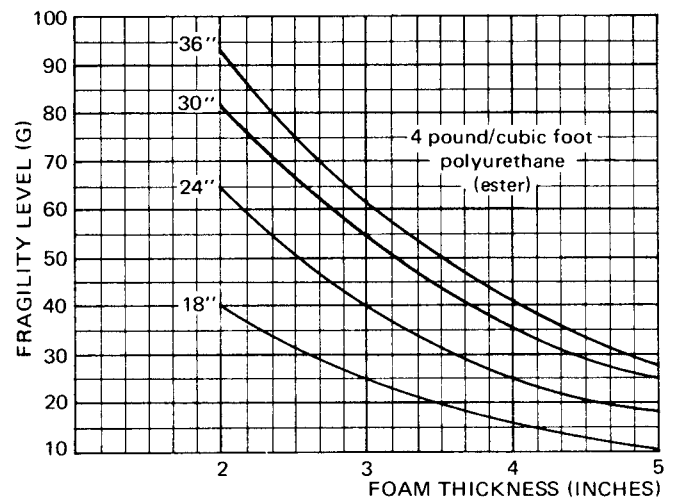
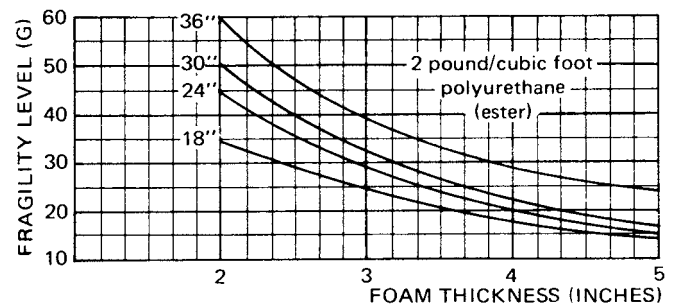
### For Cases With Foam

Add to the size of the equipment, *twice* the thickness of foam as determined in step 1B, and an allowance for shell material thickness as follows:

Equipment Size	W =	<input type="text"/>	L =	<input type="text"/>	H =	<input type="text"/>
Foam Thickness	X2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Shell Thickness	X2	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total		<input type="text"/>	X	<input type="text"/>	X	<input type="text"/>

**Chart 1**  
**Approximate Fragility of Typical Packaged Articles**

Extremely fragile	Missile guidance systems, precision aligned test instruments	15 - 25 G's
Very delicate	Mechanically shock mounted instruments and electronic equipment (shock mounts should be firmly secured prior to packaging. They are provided for in-service protection only.)	25 - 40 G's
Delicate	Aircraft accessories, electric typewriters cash registers, and other electronically operated office equipment	40 - 60 G's
Moderately delicate	Television receivers, aircraft accessories	60 - 85 G's
Moderately rugged	Laundry equipment, refrigerators, appliances	85 - 115 G's
Rugged	Machinery	115 G's and up



Note: These curves represent most conservative case conditions.

### Step 3 Establishing Actual Case No.

With the case size, enter the appropriate section of the tables to find the case part number. Cross check Model availability and applicability of the required military specification.

Proceed to complete the ordering information as indicated. Refer to steps 4 and 5 below for Model and type coding.

### Step 3 Selecting the Case Model

All cases listed on pages 70-79 comply with MIL-STD-108 except Model L.

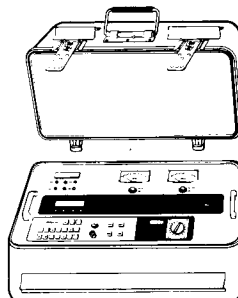
Cases per MIL-T-28800 require different shell thicknesses and closure designs depending on equipment weight. Table 1 indicates the recommended Model.

Equipment Weight	Case Size	Model				
		A	B&C	F	G,H & J	K
	Under 12" x 12"		✓	✓	✓	
Up to 20 lbs.	12" x 12" x 18" x 24"	FOR CASE CHOICES IN THIS AREA CONSULT ZERO MANUFACTURING, INC. FOR DESIGN GUIDES			✓	✓
	Over 84" Periphery				✓	✓
	Under 12" x 12"				✓	
Over 20 lbs. and up to 40 lbs.	12" x 12" x 18" x 24"				✓	✓
	Over 84" Periphery					✓
	Under 14" x 18"				✓	✓
Over 40 lbs. and up to 100 lbs.	14" x 18" x 18" x 24"				✓	✓
	Over 82" Periphery					✓

For weight calculation contact the factory after case size is determined.

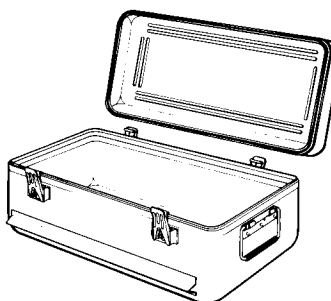
### Step 5 Coding the Case Type

The two basic types of cases are:  
A *Combination Case* serves the dual function of protection during transportation and as a housing for the operating equipment. MIL-T-28800 requires that the strikes be located on the case and the latches on the lid.



### Combination Case MIL-T-28800

A *Transit Case* is used primarily for transportation and storage of an instrument or other contents. MIL-T-28800 requires that the strikes be located on the lid.



### Transit Case MIL-T-28800

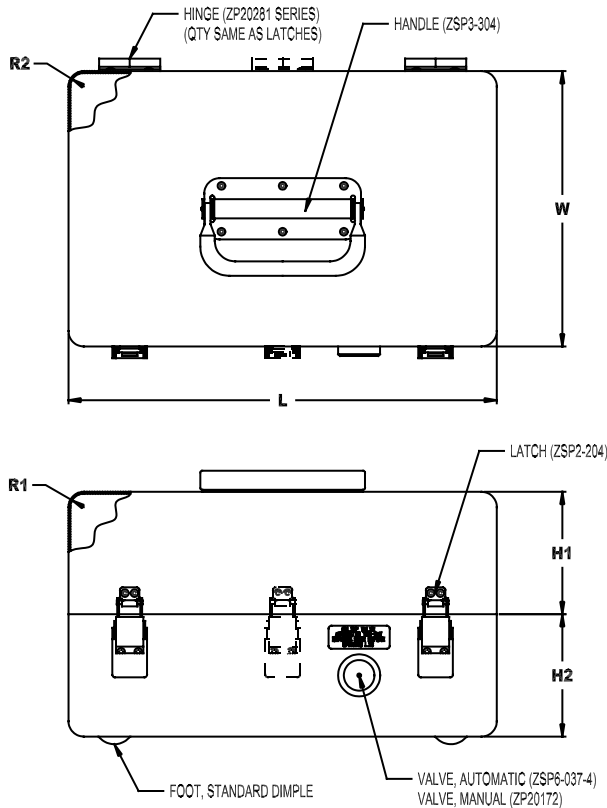
The military specifications covered are: MIL-STD-108 and MIL-T-28800. Cases covered by these specifications are standard items and can be ordered by catalog part number. Cases are also available to MIL-STD-810 and MIL-C-4150 through other ordering means. Contact your Zero Manufacturing, Inc. Representative with your requirements.

**Due to the variation of case size and equipment load weights, the application of these specifications does not imply the availability of certified test reports.**

## MODELS A & C

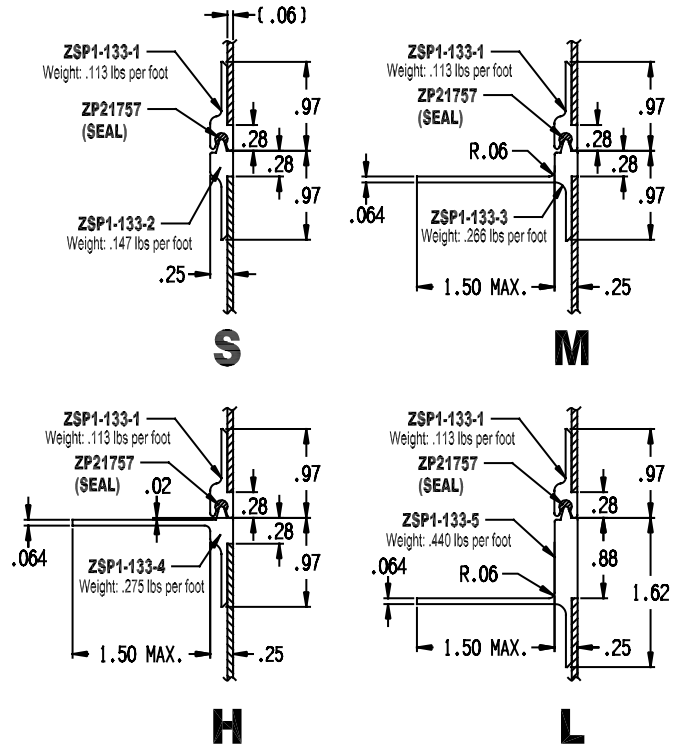
See availability column on pages 70-79.

# Drawings



### GASKETED CLOSURE DETAILS:

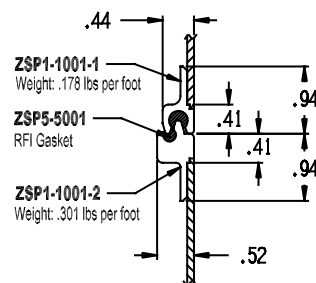
Light Duty Closures for Model A.  
For .063" Cases.



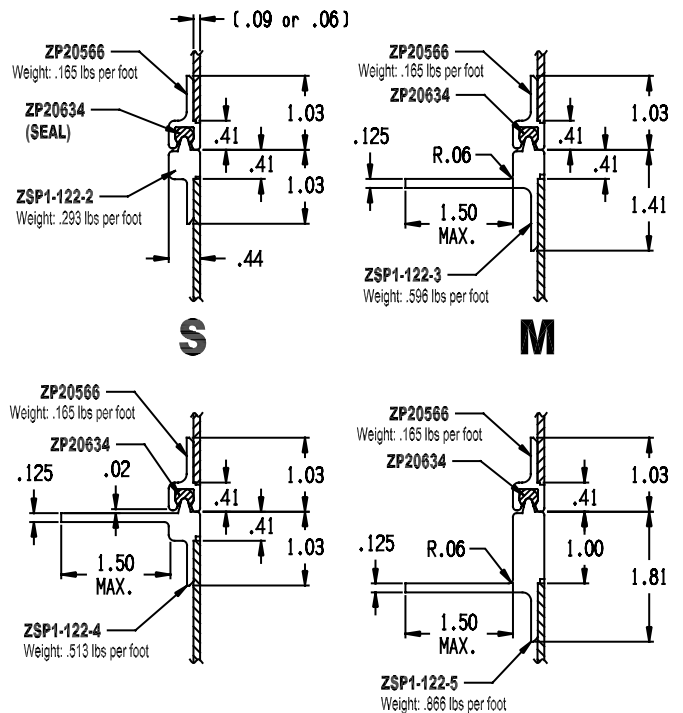
Zero Manufacturing, Inc.'s DEEP DRAWN MILITARY cases are sealed with mating gasketed aluminum extrusions. This method of closure permits maximum sealing and aligns the two halves of the case permitting the use of separable hinges without the need for shear keys, alignment guides and/or other weight-adding devices. Choose from the available closures shown.

Medium Duty Closures for Model C.  
For .090" Cases.

### RFI SHIELDED



R\*

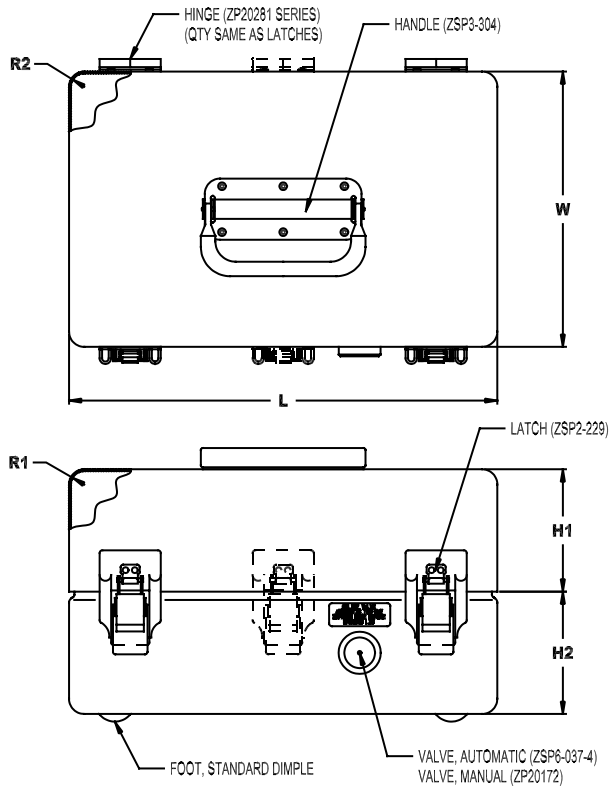


H

\* NOTE: AVAILABLE ON CASES WITH MINIMUM R2 OF .75" ONLY.

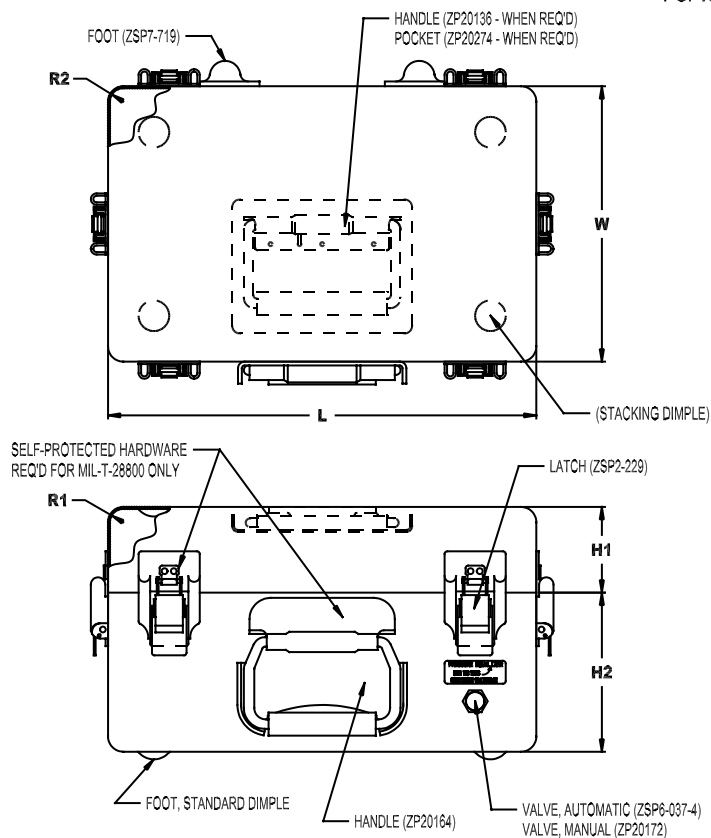
## MODEL B

See availability column on pages 70-79.

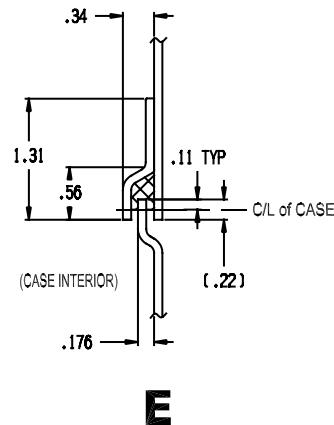


## MODEL F

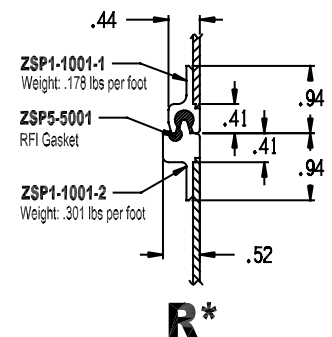
MIL-T-28800 transit case shown.  
See availability column on pages xx-xx.



## CLOSURE DETAILS:

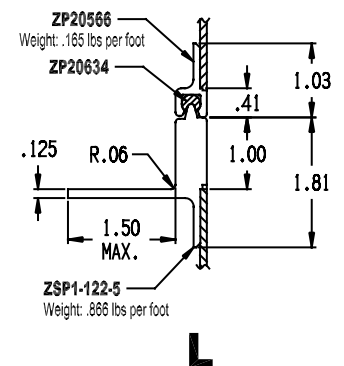
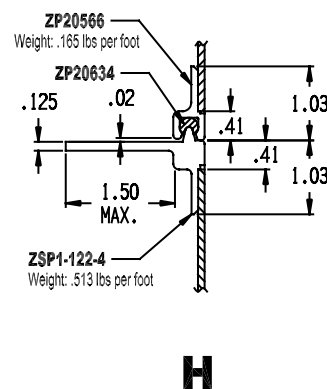
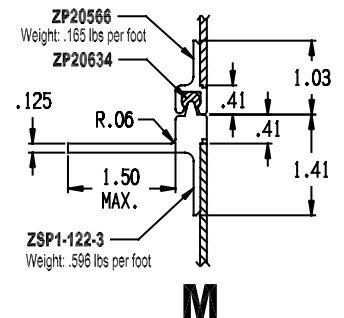
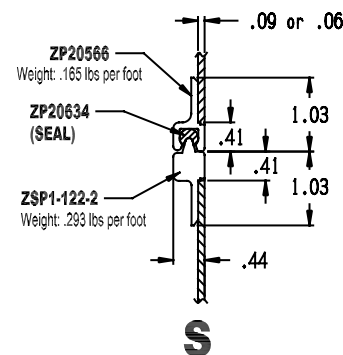


## RFI SHIELDED



## GASKETED CLOSURE DETAILS:

Medium Duty Closures for Model F.  
For .063" and .090" Cases.

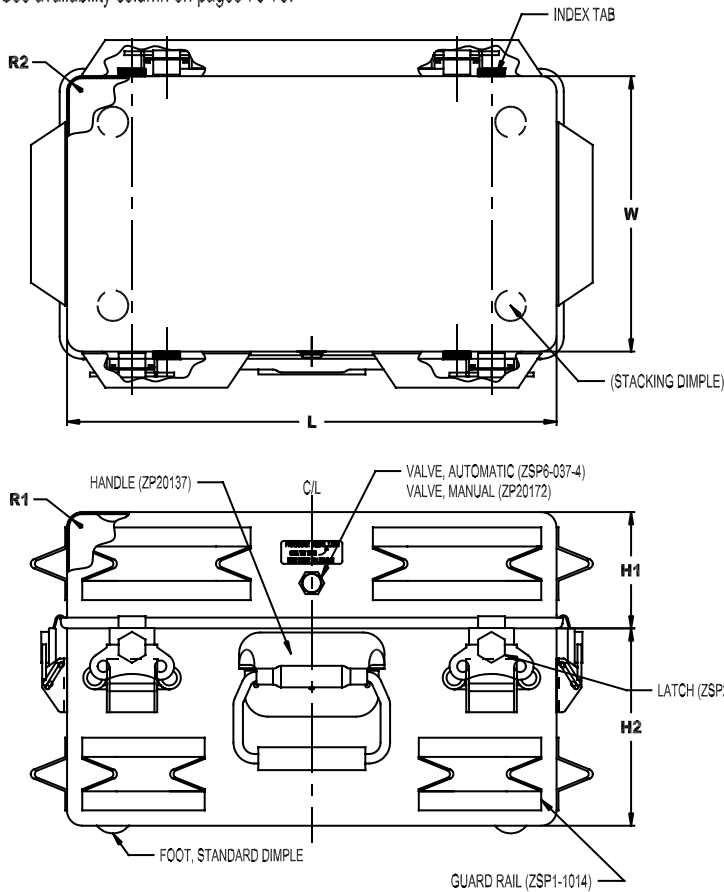


\* NOTE: AVAILABLE ON CASES WITH MINIMUM R2 OF .75" ONLY.



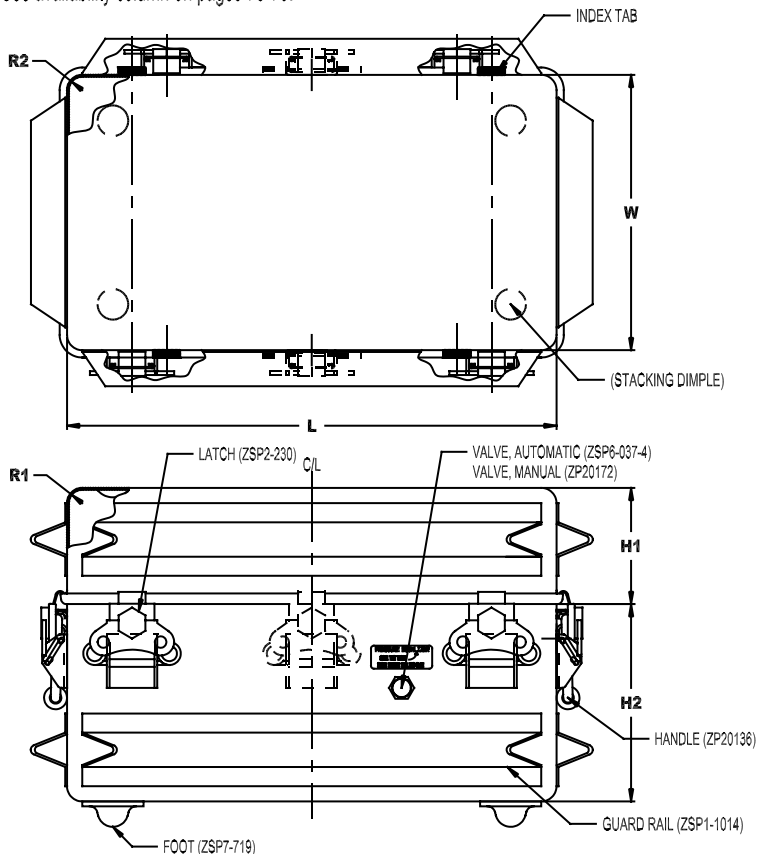
## MODEL G

MIL-T-28800 transit case shown.  
See availability column on pages 70-79.



## MODEL H

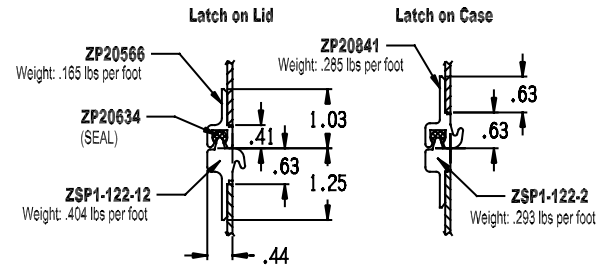
MIL-T-28800 transit case shown.  
See availability column on pages 70-79.



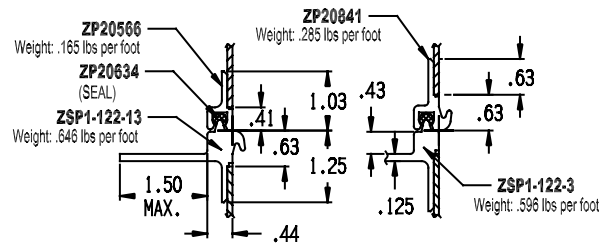
## GASKETED CLOSURE DETAILS:

Medium Duty Integral for Models G & H.  
Strike Closures for .090" Cases.

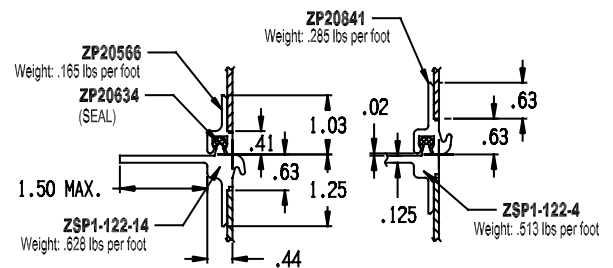
This unique development in extrusions eliminates the need for separate strikes. The integral strike provides exceptional strength for difficult closure requirements. Select from the styles below.



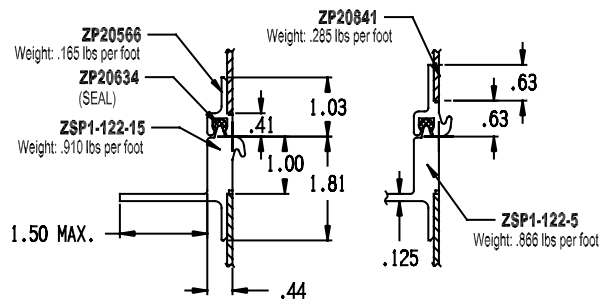
**S**



**M**



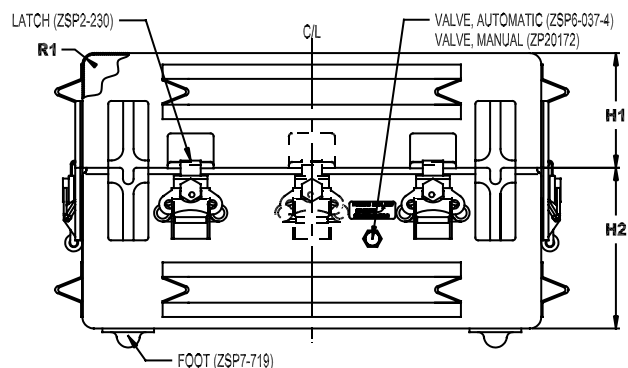
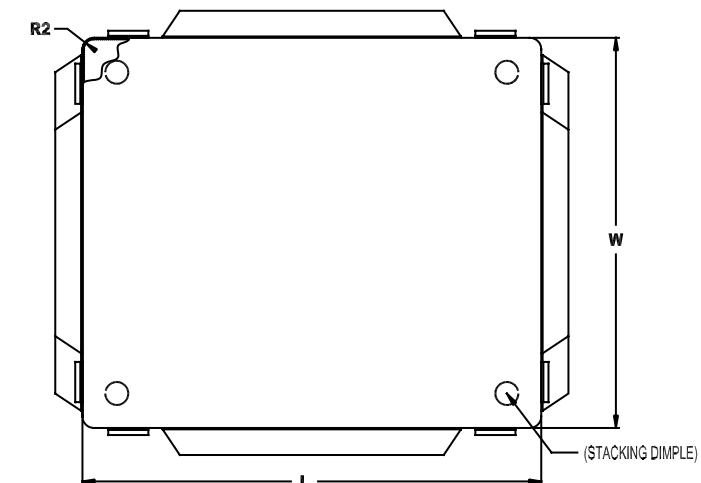
**H**



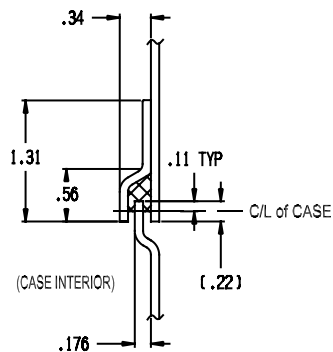
**L**

## MODEL J

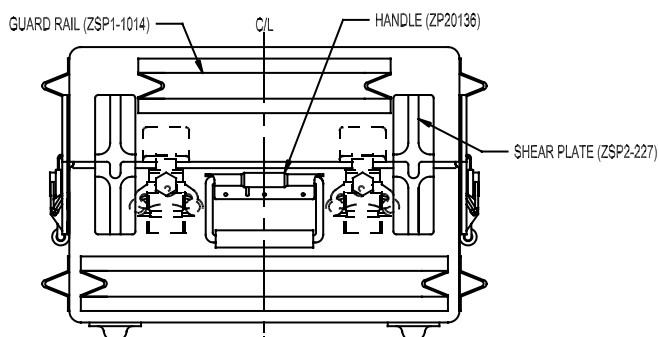
See availability column on pages 70-79.



## CLOSURE DETAILS:

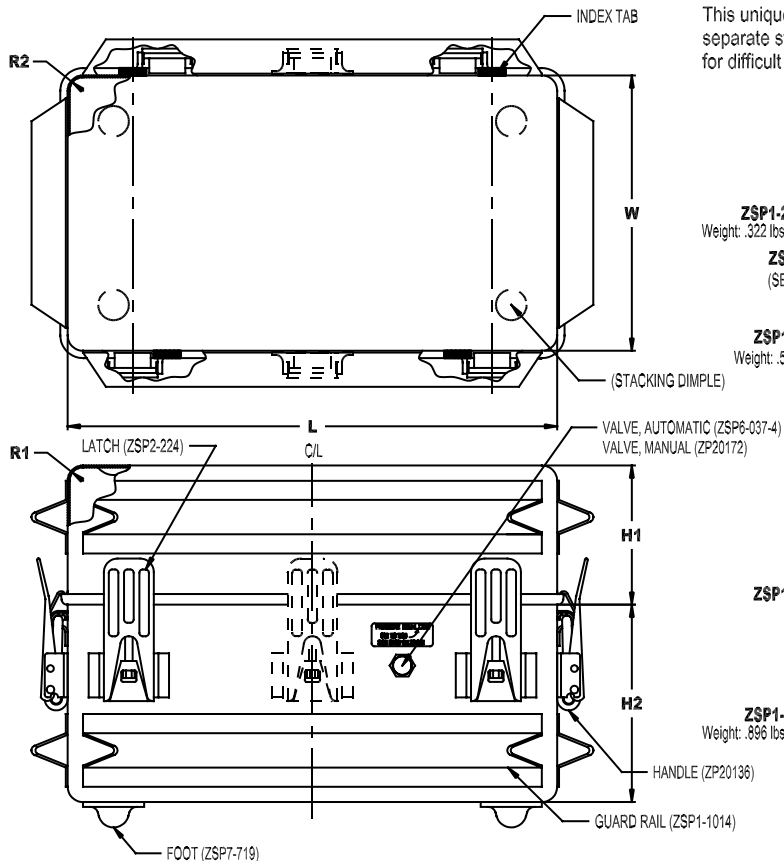


**E**



## MODEL K

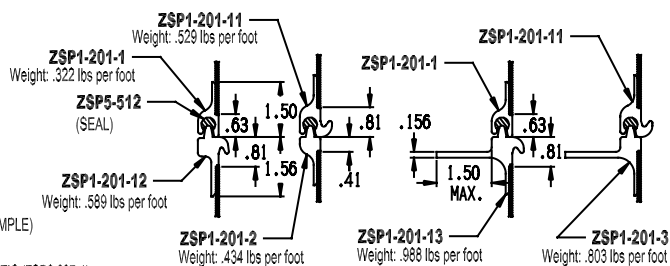
MIL-T-28800 transit case shown.  
See availability column on pages 70-79.



## GASKETED CLOSURE DETAILS:

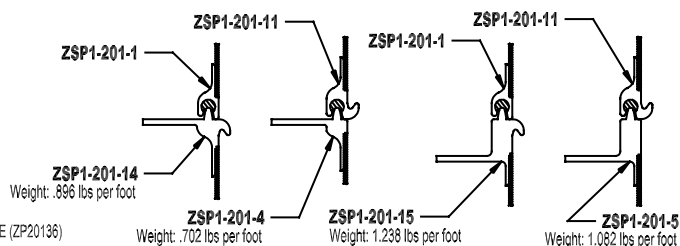
Heavy Duty Integral for Model K.  
Strike Closures for .090" Cases.

This unique development in extrusions eliminates the need for separate strikes. The integral strike provides exceptional strength for difficult closure requirements. Select from the styles below.



**S**

**M**

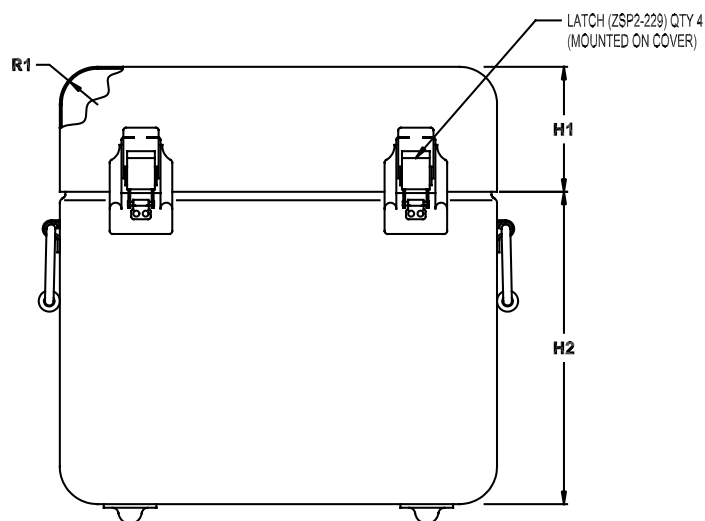
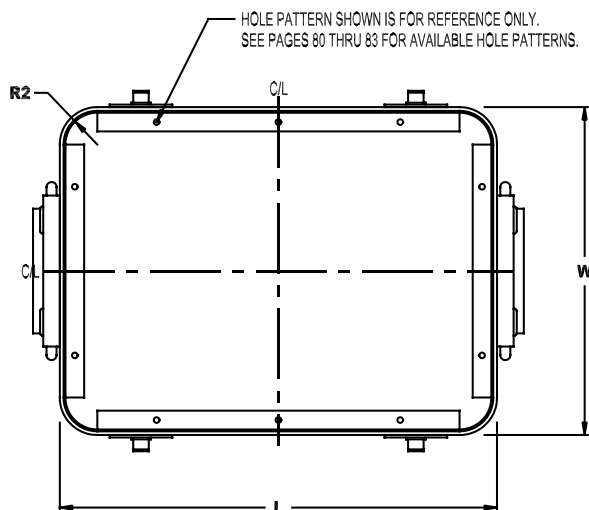


**H**

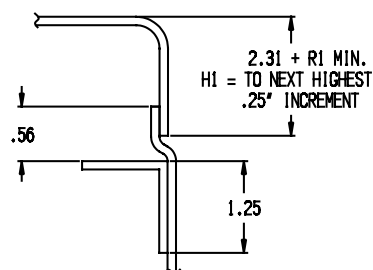
**L**

## MODEL L, STYLE C

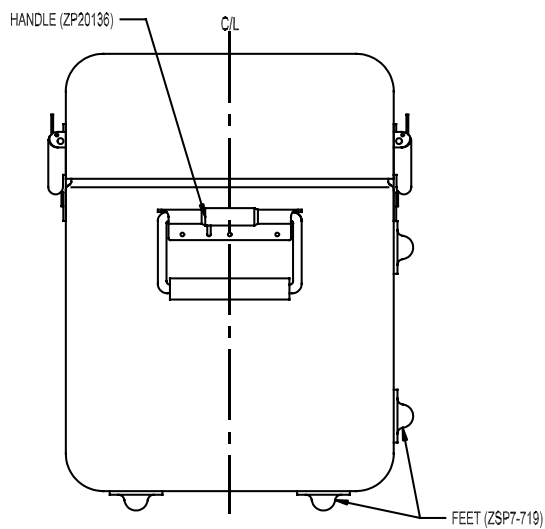
See availability column on pages xx-xx.



## CLOSURE DETAILS:



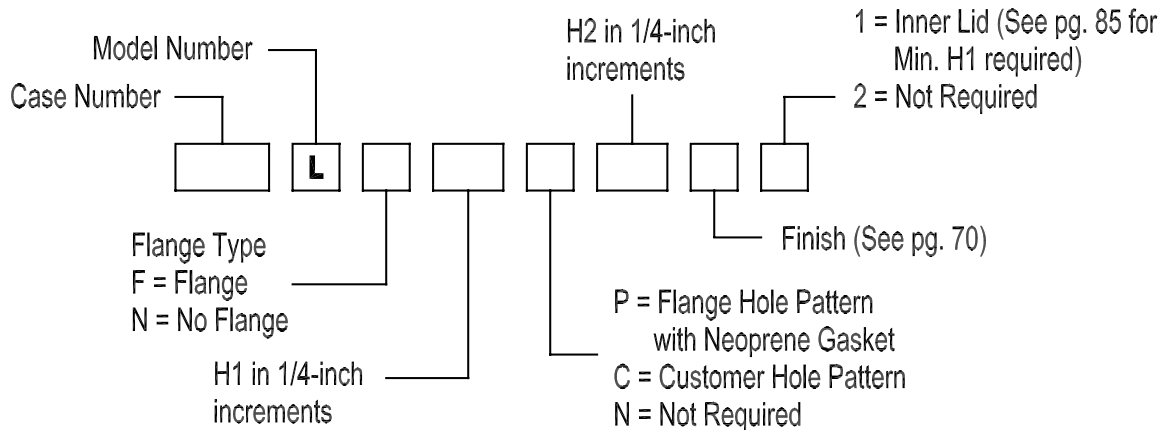
**J**



## Ordering Information - Model L

Case Sizes 4.00" to 28.25" wide

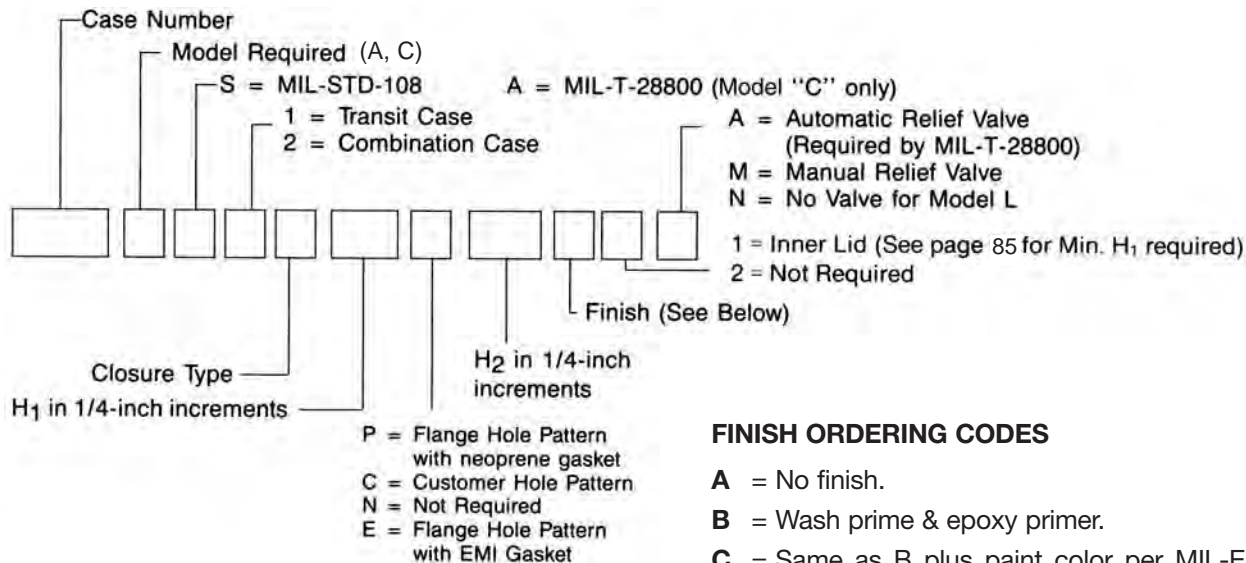
(Beading Pattern supplied where indicated, unless otherwise specified)



# Tabulated List Of Sizes

## CASE SIZES 3.83" TO 8.38" WIDE

Beading pattern supplied where indicated, unless otherwise specified.



### GENERAL INFORMATION

1. Cases built to MIL-T-28800 Styles A & T are available only on special order.
2. All cases are 6061-0 aluminum alloy unless otherwise specified.
3. Inner lids available with all cases meeting minimum height requirement listed on page 85.
4. To order case accessories, list by Zero Manufacturing, Inc. part number under case designation and advise location dimensions.

### NOTES TO DIMENSIONING DATA (page 71)

- ① Letter within circle (example: (A)) indicates that standard flange hole pattern and panel are available. See pages 80 through 83 for details.
- ② Number of Latches applies only to Model A & C. Model L case will have a minimum of 4 latches.
- ③ Number of handles applies only to Models A & C. Model L requires a minimum of 2 handles.
- ④ Add .50 inch to H<sub>2</sub> minimum whenever "L" type closure is used.

### FINISH ORDERING CODES

- A** = No finish.
- B** = Wash prime & epoxy primer.
- C** = Same as B plus paint color per MIL-E-15090, (light gray semi gloss enamel).
- D** = Same as B plus paint color per MIL-E-15090, (light gray gloss enamel).
- E** = Same as B plus paint yellow gloss enamel, color No. 13538 or FED-STD-595.
- F** = Same as B plus paint strata blue gloss enamel, color No. 15045 of FED-STD-595.
- G** = Same as B plus paint green semi-gloss enamel, color No. 24300 of FED-STD-595.
- H** = Same as B plus paint olive drab semi-gloss enamel, color No. 24084 of FED-STD-595.
- J** = Same as B plus paint olive drab lusterless enamel No. 34088 of FED-STD-595.
- K** = Same as B plus aliphatic polyurethane camouflage coating per MIL-C-46168 "CARC" color No. 383, Green #34094 of FED-STD-595.
- S** = Special order—please specify.
- W** = Chemical film per MIL-C-5541, CL.1A. Epoxy primer per MIL-P-53022, type II or waterbase epoxy primer per MIL-P-53030. Paint with polyurethane coating per MIL-PRF-85285, type II, color white No. 17925 of FED-STD-595 or epoxy coating per MIL-C-22750, type I.

### OTHER COLORS AND FINISHES AVAILABLE ON REQUEST

Commercial or military specification can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

- Panel Fabrication
  - silk screening
  - engraving
  - custom fabrication
- Case Customization
  - stenciling
  - designation printing
  - decals
  - silk screening
  - labeling

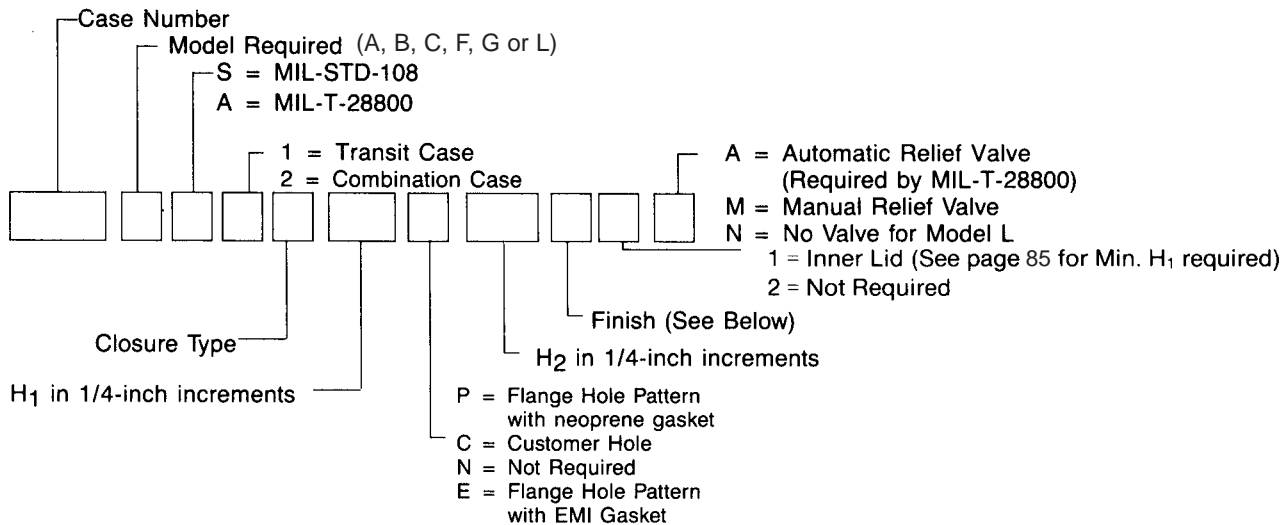
CASE NO.	W IN.	L IN.	MAX H <sub>1</sub> -H <sub>2</sub>	MATL THK	R <sub>1</sub> IN.	R <sub>2</sub> IN.	MODELS A, C, & L <sup>④</sup>				NO. OF LATCHES <sup>②</sup>	NO. OF HANDLES <sup>③</sup>	BEADING PATTERN	AVAILABLE IN MODEL <sup>①</sup>
							LATCH ON CASE		LATCH ON COVER					
							H <sub>1</sub> MIN.	H <sub>2</sub> MIN.	H <sub>1</sub> MIN.	H <sub>2</sub> MIN.				
102	3.83	6.84	4.00	.063	.25	.69	1.50	3.00	2.25	3.00	2	1		A
104	4.00	6.50	7.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		A
(a)106	4.00	7.00	6.75	.063	.31	.31	1.50	3.00	2.25	3.00	2			A
108	4.00	7.00	4.75	.063	.38	.75	1.50	3.00	2.25	3.00	2	1		Ⓐ - C - Ⓛ
(a)110	4.50	5.00	4.25	.063	.31	.31	1.50	2.75	2.50	2.75	2	1		A
(a)112	4.69	7.50	6.25	.063	.50	.50	1.50	3.00	2.50	3.00	2	1		A
114	4.75	7.75	5.75	.063	.50	1.58	1.75	3.00	2.00	3.25	2	1		A - C
116	4.75	12.00	7.00	.090	.50	.75	1.75	3.00	2.00	3.25	2	1		C
(a)118	5.00	5.00	5.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		A
(a)120	5.00	6.00	5.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		Ⓐ
(a)122	5.00	7.00	5.00	.063	.31	.31	1.50	3.00	2.50	3.00	2	1		A
124	5.25	6.38	4.00	.063	.34	.50	1.50	3.00	2.50	3.00	2	1		A
126	5.25	9.75	4.00	.063	.31	.50	1.50	3.00	2.50	3.00	2	1		Ⓐ
(a)128	5.88	6.75	4.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		A
(a)130	6.00	6.00	5.00	.063	.31	.31	1.75	3.25	2.50	3.75	2	1		A
(a)132	6.00	7.00	5.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		Ⓐ
(a)134	6.00	8.00	6.00	.063	.38	.31	1.50	3.00	2.25	3.00	2	1		A
(a)136	6.00	9.00	5.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		A
138	6.00	9.63	5.25	.063	.31	.50	1.50	3.00	2.25	3.00	2	1		A
(a)140	6.00	14.50	5.25	.063	.44	.50	1.75	3.25	2.00	3.25	2	1		Ⓐ
142	6.13	11.13	4.00	.090	.50	.75	1.75	3.25	2.00	3.25	2	1		C
144	6.19	16.88	6.00	.063	.50	.50	1.75	3.25	2.00	3.25	2	1		Ⓐ - Ⓛ
146	6.25	7.38	3.00	.063	.31	.50	1.50	3.00	2.25	3.00	2	1		A
(a)148	6.50	6.50	7.50	.063	.25	.44	1.50	3.00	2.25	3.00	2	1		A
150	6.50	8.25	6.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		Ⓐ
152	6.50	15.50	7.00	.063	.50	.50	1.75	2.75	2.75	2.75	2	1		A
154	6.50	17.00	6.50	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		A
158	6.88	8.38	4.50	.063	.31	.50	1.50	3.00	2.25	3.00	2	1		A
(a)160	7.00	7.00	6.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		A
(a)162	7.00	8.00	6.00	.063	.31	.31	1.50	3.00	2.25	3.00	2	1		Ⓐ
164	7.00	9.00	7.00	.063	.44	.44	1.75	3.75	2.75	3.75	2	1		Ⓐ
166	7.00	11.00	7.00	.063	.50	.31	1.75	3.75	2.75	3.75	2	1		Ⓐ
170	7.06	10.56	9.00	.063	.75	.75	2.00	3.75	2.50	4.25	2	1		A - C
172	7.13	8.25	4.50	.063	.31	.50	2.00	3.25	3.00	3.00	2	1		A
174	7.13	9.63	4.00	.063	.31	.50	2.00	3.25	3.00	3.00	2	1		A
176	7.53	18.97	8.00	.063	.38	.38	1.50	3.00	2.25	3.00	2	1		Ⓐ
178	7.75	10.50	6.00	.063	.50	.50	1.75	2.75	2.75	2.75	2	1		A
180	8.00	8.00	7.00	.063	.63	.63	2.00	3.50	2.75	3.50	2	1		A - C
182	8.00	11.00	7.50	.063	.88	.88	2.00	4.00	3.00	4.00	2	1		Ⓐ - C - Ⓛ
184	8.00	14.00	7.00	.063	.88	.88	2.00	4.00	3.00	4.00	2	1		Ⓐ - C - Ⓛ
186	8.00	21.00	8.50	.090	.75	.75	2.00	3.75	2.50	4.25	2	1		Ⓒ - Ⓛ
190	8.38	11.50	7.00	.063	.50	.56	2.50	5.25	2.50	5.25	2	1		Ⓐ

(a) 1100-0 Aluminum Alloy

Virtually unlimited additional sizes available. Mail or fax your case requirements to Zero Manufacturing, Inc. today!

# CASE SIZES 8.50" TO 11.63" WIDE

Beading pattern supplied where indicated, unless otherwise specified.



## GENERAL INFORMATION

- All cases are 6061-0 aluminum unless otherwise indicated.
- Inner lids available with all cases meeting minimum height requirement listed on page 85 (Special order for Model "L").
- Cases ordered to MIL-STD-108 (models F, G, H, J) supplied as shown with the following exceptions.
  - Non-protected latches, Models F and G.
  - Non-protected handle, Models F and G.
  - No stacking dimples.
  - Latches on cover for transit cases and latched on case for combination cases.
- To order case accessories, list by Zero Manufacturing, Inc. part number under case designation and advise location dimensions.

## NOTES TO DIMENSIONING DATA (page 73)

- MIL-T-28800 cases will have Handle recessed in Cover.\*
- Letter within circle (example: (A)) indicates that standard flange hole pattern and panel are available.
- Minimums shown are for MIL-T-28800 condition only. For MIL-STD-108 subtract 2.00".
- Beading pattern supplied where indicated unless otherwise specified.
- Number of Handles applies only to Models A,B,C,F & G. Model L requires a minimum of 2 Handles.
- Case 218 comes with 1 Handle located on each end..
- Model B cases available to MIL-T-28800 on special orders only.
- MIL-STD-108 cases supplied with beading pattern only, no feet. MIL-T-28800 supplied with stacking features, but no beading pattern.
- Add .50 inch to H<sub>2</sub> minimum whenever "L" type closure is used.
- Number of Latches applies to Models F and G. Quantities of Latches for Models A, B, C and L may be less.

## FINISH ORDERING CODES

- A = No finish.  
 B = Wash prime & epoxy primer.  
 C = Same as B plus paint color per MIL-E-15090, (light gray semi gloss enamel).  
 D = Same as B plus paint color per MIL-E-15090, (light gray gloss enamel).  
 E = Same as B plus paint yellow gloss enamel, color No. 13538 or FED-STD-595.  
 F = Same as B plus paint strata blue gloss enamel, color No. 15045 of FED-STD-595.  
 G = Same as B plus paint green semi-gloss enamel, color No. 24300 of FED-STD-595.  
 H = Same as B plus paint olive drab semi-gloss enamel, color No. 24084 of FED-STD-595.  
 J = Same as B plus paint olive drab lusterless enamel No. 34088 of FED-STD-595.  
 K = Same as B plus aliphatic polyurethane camouflage coating per MIL-C-46168 "CARC" color No. 383, Green #34094 of FED-STD-595.  
 S = Special order—please specify.  
 W = Chemical film per MIL-C-5541, CL.1A. Epoxy primer per MIL-P-53022, type II or waterbase epoxy primer per MIL-P-53030. Paint with polyurethane coating per MIL-PRF-85285, type II, color white No. 17925 of FED-STD-595 or epoxy coating per MIL-C-22750, type I.

## OTHER COLORS AND FINISHES AVAILABLE ON REQUEST

Commercial or military specification can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

- Panel Fabrication
  - silk screening
  - engraving
  - custom fabrication
- Case Customization
  - stenciling
  - designation printing
  - decals
  - silk screening
  - labeling

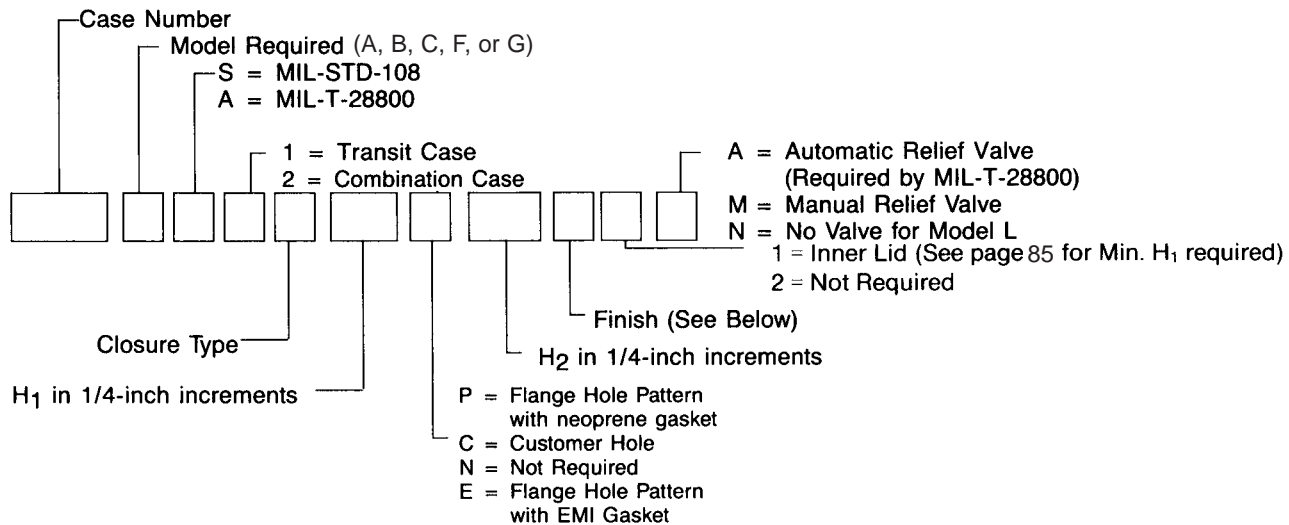


CASE NO.	W IN.	L IN.	MAX H <sub>1</sub> -H <sub>2</sub>	MATL THK	R <sub>1</sub> IN.	R <sub>2</sub> IN.	MODELS A, B, C, F, L ⑨				MODEL G ⑨				NO. OF LATCHES ②	NO. OF HANDLES ⑤	BEADING PATTERN ④	AVAILABLE IN MODEL ③
							LATCH ON CASE		LATCH ON COVER		LATCH ON CASE		LATCH ON COVER					
							H <sub>1</sub> MIN.	H <sub>2</sub> MIN.	H <sub>1</sub> MIN.	H <sub>2</sub> MIN.	H <sub>1</sub> ③ MIN.	H <sub>2</sub> MIN.	H <sub>1</sub> ③ MIN.	H <sub>2</sub> MIN.				
①⑦192	8.50	8.50	12.00	.090	1.00	1.00	2.25	5.00	3.00	4.38	—	—	—	—	4	1		B - F
194	8.50	12.00	10.00	.090	1.00	1.00	2.25	6.00	3.25	6.00	—	—	—	—	4	1		B - F - L
⑦①196	8.50	12.62	8.00	.090	.50	.75	2.00	3.75	2.75	4.00	—	—	—	—	4	1		F
198	8.50	19.50	8.00	.090	.50	.75	2.00	5.50	2.75	5.50	3.75	6.00	6.00	5.75	4	1		F - G
⑦ 200	8.50	20.50	8.50	.090	1.00	1.00	2.25	6.00	3.00	6.00	4.50	6.75	6.75	6.50	4	1		B - F - G - L
204	8.75	17.95	6.00	.063	.50	.50	2.00	5.50	2.75	5.50	—	—	—	—	4	1		A
① 206	8.75	9.13	8.00	.090	.50	.75	2.00	4.00	3.00	4.00	—	—	—	—	4	1		F
210	8.75	12.00	8.00	.090	.75	.75	2.25	5.75	3.00	5.75	—	—	—	—	4	1		F - L
212	8.75	13.75	10.00	.090	.50	.75	2.00	5.75	2.75	5.50	3.75	6.25	6.25	5.75	4	1	X	F - G
⑥ 218	9.00	27.00	7.00	.090	.75	.75	2.25	5.75	3.00	5.75	4.00	6.25	6.50	6.00	6	⑥		F - G - L
⑦⑧ 224	9.19	13.25	9.00	.090	1.13	1.13	3.25	4.25	3.25	4.25	3.50	6.75	6.75	5.50	4	1		B - F - G
⑦ 226	9.38	14.50	10.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	4	1		B - F - G
① 230	9.75	11.50	8.00	.090	.50	.75	2.00	4.00	2.75	4.00	3.75	6.25	6.25	3.75	4	1	X	F - G
⑦ 232	9.88	20.50	8.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	4	1		B - F - G - L
①⑧⑦ 234	9.94	9.94	9.00	.090	1.38	1.38	2.75	4.75	3.50	4.75	4.75	7.00	7.00	4.75	4	1		B - F - G
① 236	10.00	10.38	8.75	.063	.50	.50	2.00	4.00	2.75	4.00	—	—	—	—	4	1		A
⑦① 238	10.00	12.00	9.00	.090	1.00	1.00	2.50	4.50	3.25	4.50	—	—	—	—	4	1		B - F - L
⑦ 242	10.00	16.00	9.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	4	1		B - F - G - L
⑦ 244	10.00	16.00	9.00	.090	.63	.63	2.00	5.75	2.75	5.75	—	—	—	—	4	1		B
⑦ 246	10.00	18.06	9.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.50	6.75	6.75	6.50	4	1		B - F - G - L
① 248	10.13	11.63	8.00	.090	.75	.75	2.25	4.25	3.00	4.25	4.00	6.50	6.50	4.00	4	1		F
250	10.19	24.50	8.00	.063	.81	.81	2.25	6.00	3.00	6.00	4.25	6.50	6.50	6.25	4	1		F - G - L
① 252	10.25	11.75	5.00	.090	.50	.75	2.00	4.00	2.75	4.00	—	—	—	—	4	1		F
⑦①254	10.50	12.50	8.00	.090	.50	1.00	2.00	4.00	2.75	4.00	3.75	6.25	6.25	3.75	4	1		B - F - G - L
⑦⑧256	10.69	20.94	8.00	.090	1.13	1.13	2.50	6.25	3.25	6.25	4.50	6.75	6.75	6.50	4	1	X	B - F - G - L
258	10.75	16.00	8.00	.090	.50	.75	2.00	5.50	2.75	5.50	—	—	—	—	4	1		F - L
260	10.81	16.88	9.00	.063	.75	.75	2.25	5.75	3.00	5.75	4.00	6.50	6.50	6.00	4	1		A - F - G - L
⑦①262	11.00	11.00	9.00	.090	1.00	1.00	2.50	4.50	3.25	4.50	—	—	—	—	4	1		B - F - L
⑦ 266	11.00	18.00	10.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.50	6.75	6.75	6.50	4	1	X	B - F - G - L
270	11.44	13.06	9.00	.063	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	4	1	X	A - F - G - L
272	11.44	13.75	10.25	.090	.88	.88	2.25	6.00	3.00	6.00	4.25	6.50	6.50	6.25	4	1		F - G - L
⑦ 276	11.56	15.06	8.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	4	1		B - F - G - L
⑦ 278	11.63	20.13	10.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	4	1		B - F - G - L

Virtually unlimited additional sizes available. Mail or fax your case requirements to Zero Manufacturing, Inc. today!

# CASE SIZES 11.75" TO 15.88" WIDE

Beading pattern supplied where indicated, unless otherwise specified.



## GENERAL INFORMATION

- All cases are 6061-0 aluminum alloy unless otherwise indicated.
- Inner lids available with all cases meeting minimum height requirement listed on page 85. (Special order for Model "L").
- Cases ordered to MIL-STD-108 (models F, G, H, J) supplied as shown with the following exceptions.
  - Non-protected latches, Models F and G.
  - Non-protected handle, Models F and G.
  - No stacking dimples.
  - Latches on cover for transit cases and latches on case for combination cases.
- To order case accessories, list by Zero Manufacturing, Inc. part number under case designation and advise location dimensions.

## NOTES TO DIMENSIONING DATA (page 75)

- MIL-T-28800 cases will have Handle recessed in cover.
- Letter within circle (example: (A)) indicates that standard flange hole pattern and panel are available.
- Minimum H<sub>1</sub> shown are for MIL-T-28800 cases only. For MIL-STD-108 cases subtract 2.00" (approx.).
- Beading pattern supplied where indicated unless otherwise specified.
- Number of Latches applies only to Model F. Quantities of Latches for Models B, G and L may be less.
- Model B cases available to MIL-T-28800 on special orders only.
- MIL-STD-108 cases supplied with beading pattern only, no Feet. MIL-T-28800 supplied with stacking features, but no beading pattern.
- Add .50 inch to H<sub>2</sub> minimum whenever "L" type closure is used.

## FINISH ORDERING CODES

- A** = No finish.
- B** = Wash prime & epoxy primer.
- C** = Same as B plus paint color per MIL-E-15090, (light gray semi gloss enamel).
- D** = Same as B plus paint color per MIL-E-15090, (light gray gloss enamel).
- E** = Same as B plus paint yellow gloss enamel, color No. 13538 or FED-STD-595.
- F** = Same as B plus paint strata blue gloss enamel, color No. 15045 of FED-STD-595.
- G** = Same as B plus paint green semi-gloss enamel, color No. 24300 of FED-STD-595.
- H** = Same as B plus paint olive drab semi-gloss enamel, color No. 24084 of FED-STD-595.
- J** = Same as B plus paint olive drab lusterless enamel No. 34088 of FED-STD-595.
- K** = Same as B plus aliphatic polyurethane camouflage coating per MIL-C-46168 "CARC" color No. 383, Green #34094 of FED-STD-595.
- S** = Special order—please specify.
- W** = Chemical film per MIL-C-5541, CL.1A. Epoxy primer per MIL-P-53022, type II or waterbase epoxy primer per MIL-P-53030. Paint with polyurethane coating per MIL-PRF-85285, type II, color white No. 17925 of FED-STD-595 or epoxy coating per MIL-C-22750, type I.

## OTHER COLORS AND FINISHES AVAILABLE ON REQUEST

Commercial or military specification can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

- Panel Fabrication
  - silk screening
  - engraving
  - custom fabrication
- Case Customization
  - stenciling
  - designation printing
  - decals
  - silk screening
  - labeling

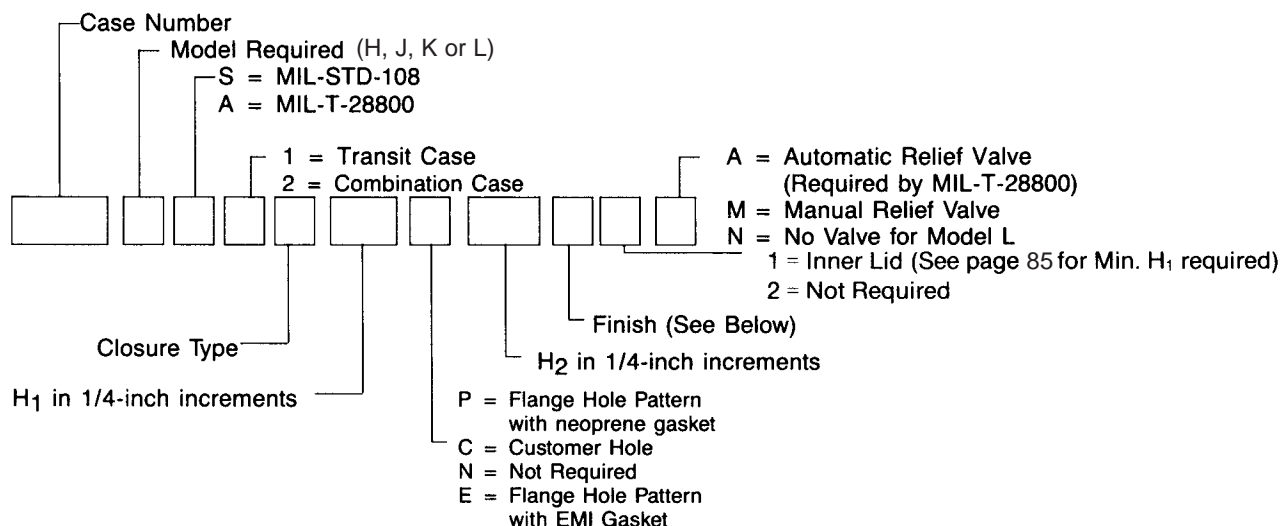
CASE NO.	W IN.	L IN.	MAX H1-H2	MATL THK	R1 IN.	R2 IN.	MODELS B & F ⑧				MODEL G ⑧				NO. OF LATCHES ⑤	NO. OF HANDLES	BEADING PATTERN ④	AVAILABLE IN MODEL ②
							LATCH ON CASE		LATCH ON COVER		LATCH ON CASE		LATCH ON COVER					
							H1 MIN.	H2 MIN.	H1 MIN.	H2 MIN.	H1 ③ MIN.	H2 MIN.	H1 ③ MIN.	H2 MIN.				
① 280	11.75	13.00	5.50	.090	.75	.75	2.25	4.25	3.00	4.25	—	—	—	—	6	1		B - F - L
⑦ ⑧ (a) 282	11.75	14.50	10.00	.100	1.13	1.13	2.50	6.25	3.25	6.25	4.50	6.75	6.75	4.50	6	1	X	B - F - G - L
① 288	12.00	12.00	10.00	.090	1.00	1.00	2.50	4.50	3.25	4.50	—	—	—	—	6	1		B - F - L
⑦ 292	12.00	18.00	10.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	6	1	X	B - F - G - L
294	12.00	18.00	9.00	.063	.50	1.03	2.00	5.50	2.75	5.50	3.75	6.25	6.25	5.75	6	1	X	F - G - L
296	12.19	14.63	7.00	.063	.50	.75	2.00	5.50	2.75	5.50	3.75	6.25	6.25	5.75	6	1	X	F - G - L
306	13.63	15.00	9.00	.090	.75	.75	2.25	5.75	3.00	5.75	4.00	6.50	6.50	6.00	6	1	X	F - G - L
314	14.00	14.00	8.00	.090	.50	.47	2.00	5.50	2.75	5.50	—	—	—	—	6	1		F
316	14.13	15.63	8.00	.063	.50	1.00	2.00	5.50	2.75	5.50	3.75	6.25	6.25	5.75	6	1	X	F - G - L
318	14.13	15.63	9.00	.090	.50	.94	2.00	5.50	2.75	5.50	3.75	6.25	6.25	5.75	6	1	X	F - G - L
⑦ 320	14.13	16.13	10.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.25	6	1	X	B - F - G - L
322	14.50	17.00	12.00	.090	.69	.80	2.25	5.75	3.00	5.75	4.00	6.25	6.25	6.00	6	1	X	F - G - L
324	14.63	16.13	7.00	.063	.50	1.02	2.00	5.50	2.75	5.50	3.75	6.25	6.25	5.75	6	1	X	F - G - L
334	15.00	15.50	9.00	.090	.75	.75	2.25	5.75	3.00	5.75	4.00	6.50	6.50	6.00	6	1	X	F - G - L
336	15.00	15.50	9.00	.063	.75	.75	2.25	5.75	3.00	5.75	4.00	6.50	6.50	6.00	6	1	X	F - G - L
338	15.00	18.50	10.00	.090	.75	.75	2.25	5.75	3.00	5.75	4.00	6.50	6.50	6.00	6	1	X	F - G - L
⑦ 344	15.88	15.88	9.00	.090	1.00	1.00	2.50	6.00	3.25	6.00	4.25	6.75	6.75	6.75	6	1	X	B - F - G - L

(a) 6061-T4 Aluminum Alloy

Virtually unlimited additional sizes available. Mail or fax  
your case requirements to Zero Manufacturing, Inc. today!

# CASE SIZES 11.75" TO 16.94" WIDE

Beading pattern supplied where indicated, unless otherwise specified.



## GENERAL INFORMATION

- All cases are 6061-0 aluminum alloy unless otherwise indicated.
- Inner lids available with all cases meeting minimum height requirement listed on page 85. (Special order for Model "L").
- Cases ordered to MIL-STD-108 (models F, G, H, J) supplied as shown with the following exceptions.
  - Less guard rail.
  - No stacking dimples.
  - Latches on cover for transit cases and latches on case for combination cases.
- To order case accessories, list by Zero Manufacturing, Inc. part number under case designation and advise location dimensions.

## NOTES TO DIMENSIONING DATA (page 77)

- MIL-T-28800 with H<sub>1</sub> and H<sub>2</sub> greater than 10.00" will have an extra set of Guard Rails.
- Letter within circle (example: (H)) indicates that standard flange hole pattern and panel are available. See pages 82 through 90 for details.
- Minimums shown are for MIL-T-28800 cases only. For MIL-STD-108 cases subtract 2.00" (approx.) from H<sub>1</sub> and H<sub>2</sub> minimums.
- Beading pattern supplied where indicated unless otherwise specified.
- Add .50 inch to H<sub>2</sub> minimum whenever "L" type closure is used.
- Number of latches applies only to models H, J and K. Model L cases will have a minimum of 4 latches.

## FINISH ORDERING CODES

- A** = No finish.
- B** = Wash prime & epoxy primer.
- C** = Same as B plus paint color per MIL-E-15090, (light gray semi gloss enamel).
- D** = Same as B plus paint color per MIL-E-15090, (light gray gloss enamel).
- E** = Same as B plus paint yellow gloss enamel, color No. 13538 or FED-STD-595.
- F** = Same as B plus paint strata blue gloss enamel, color No. 15045 of FED-STD-595.
- G** = Same as B plus paint green semi-gloss enamel, color No. 24300 of FED-STD-595.
- H** = Same as B plus paint olive drab semi-gloss enamel, color No. 24084 of FED-STD-595.
- J** = Same as B plus paint olive drab lusterless enamel No. 34088 of FED-STD-595.
- K** = Same as B plus aliphatic polyurethane camouflage coating per MIL-C-46168 "CARC" color No. 383, Green #34094 of FED-STD-595.
- S** = Special order—please specify.
- W** = Chemical film per MIL-C-5541, CL.1A. Epoxy primer per MIL-P-53022, type II or waterbase epoxy primer per MIL-P-53030. Paint with polyurethane coating per MIL-PRF-85285, type II, color white No. 17925 of FED-STD-595 or epoxy coating per MIL-C-22750, type I.

## OTHER COLORS AND FINISHES AVAILABLE ON REQUEST

Commercial or military specification can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

- Panel Fabrication
  - silk screening
  - engraving
  - custom fabrication
- Case Customization
  - stenciling
  - designation printing
  - decals
  - silk screening
  - labeling

							③ MODELS H, K & L ⑤				③ MODEL J ⑤				NO. OF LATCHES ⑥	NO. OF HANDLES	BEADING PATTERN ④	AVAILABLE IN MODEL ②
							LATCH ON CASE		LATCH ON COVER		LATCH ON CASE		LATCH ON COVER					
CASE NO.	W IN.	L IN.	MAX H1-H2	MATL THK	R1 IN.	R2 IN.	H1 MIN.	H2 MIN.	H1 MIN.	H2 MIN.	H1 MIN.	H2 MIN.	H1 MIN.	H2 MIN.				
350	11.75	27.25	9.00	.090	.69	.69	4.25	6.75	6.50	7.00	—	—	—	—	4	2		H - L
352	12.00	21.50	10.00	.090	.88	.88	4.25	7.00	6.75	6.25	5.75	5.75	6.00	5.50	4	2	X	J - H - L
358	12.00	24.00	7.50	.090	.75	.75	4.25	6.75	6.75	7.00	5.50	5.75	5.75	5.50	4	2		H - L
362	12.44	20.81	8.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	4	2		H - J - K - L
368	13.00	22.50	8.00	.090	.75	.75	4.25	6.75	6.75	7.00	5.50	5.75	5.75	5.50	4	2	X	H - L
370	13.50	20.31	12.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	4	2		H - J - K - L
372	13.63	20.63	10.00	.090	1.25	1.50	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	4	2	X	H - J - K - L
374	13.75	26.13	14.00	.090	1.53	1.53	5.00	7.50	7.50	7.75	6.25	6.50	6.50	6.25	4	2	X	H - J - K - L
382	14.50	20.63	14.50	.090	1.25	1.50	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	4	2	X	H - J - K - L
384	14.50	23.63	7.00	.090	.75	.75	4.25	6.75	6.75	7.00	5.50	5.75	5.75	5.50	4	2	X	H - L
386	14.75	26.00	9.00	.090	.75	.75	4.25	6.75	6.75	7.00	5.50	5.75	5.75	5.50	4	2	X	H - L
(a)392	15.00	21.50	8.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	4	2		H - J - K - L
394	15.00	29.25	10.00	.090	1.00	1.00	4.50	7.00	7.00	7.00	5.75	5.75	6.00	5.75	4	2	X	H - J - K - L
396	15.25	20.25	16.00	.090	2.00	1.50	5.50	8.00	8.00	8.25	6.75	7.00	7.00	6.75	4	2	X	H - J - K - L
400	15.44	27.44	11.00	.090	1.50	1.50	5.00	7.50	7.50	7.75	6.25	6.50	6.50	6.25	4	2	X	H - J - K - L
404	15.50	30.38	8.00	.063	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	6	2	X	H - K - L
(b)408	15.56	48.56	12.50	.100	1.38	1.38	5.00	7.50	7.25	6.25	6.25	6.50	6.50	6.00	6	2	X	H - J - K - L
410	15.63	19.13	11.00	.090	.88	.88	4.25	7.00	6.75	7.25	5.75	5.75	6.00	5.50	4	2	X	H - L
414	15.81	27.81	9.50	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	4	2	X	H - J - K - L
416	16.00	20.00	11.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	4	2		H - J - K
420	16.13	26.13	10.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	4	2	X	H - J - K - L
422	16.50	20.00	10.00	.063	.50	.88	4.00	6.50	6.50	6.75	5.25	5.25	5.50	6.25	4	2	X	H - L
426	16.50	20.00	10.00	.090	.88	.88	4.25	7.00	6.75	7.25	5.75	5.75	6.00	5.50	4	2	X	H - L
428	16.88	20.13	13.00	.090	1.50	1.50	5.00	7.50	7.50	7.75	6.25	6.50	6.50	6.25	4	2	X	H - K - L
430	16.94	21.94	10.00	.063	.88	1.50	4.25	7.00	6.75	7.25	5.75	5.75	6.00	5.50	4	2	X	H - K - L
432	16.94	21.94	10.00	.090	1.50	1.50	5.00	7.50	7.50	7.75	6.25	6.50	6.50	6.25	4	2	X	H - J - K - L
434	16.94	32.94	14.00	.090	1.09	1.09	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	6	2	X	H - J - K - L

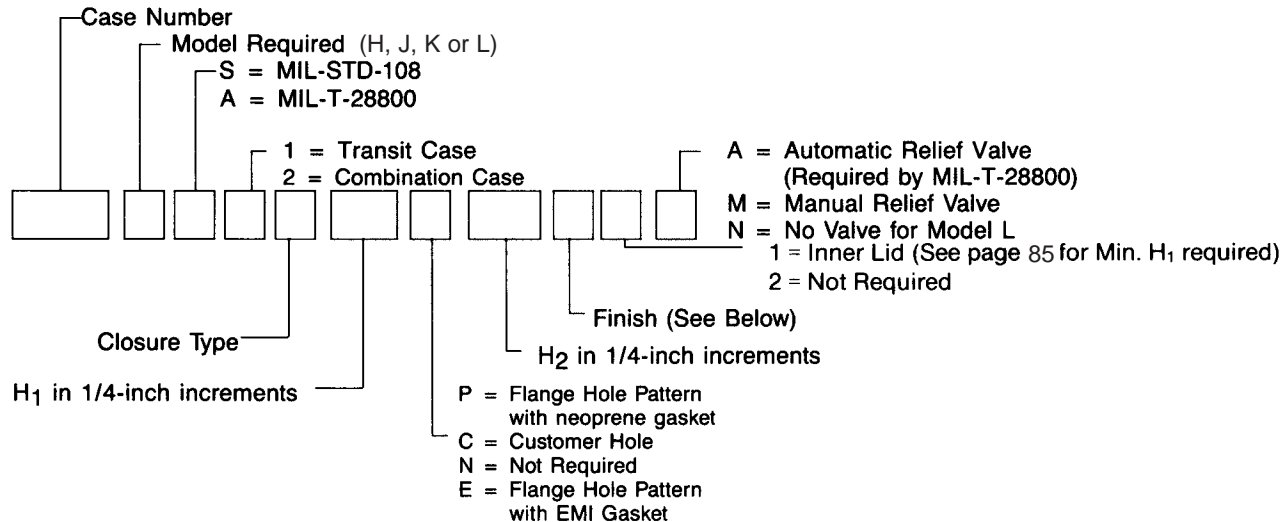
(a) 3003-0 Aluminum Alloy

(b) 6061-T4 Aluminum Alloy

Virtually unlimited additional sizes available. Mail or fax your case requirements to Zero Manufacturing, Inc. today!

# CASE SIZES 17.00" TO 28.25" WIDE

Beading pattern supplied where indicated, unless otherwise specified.



## GENERAL INFORMATION

- All cases are 6061-0 aluminum alloy unless otherwise indicated.
- Inner lids available with all cases meeting minimum height requirement listed on page 85. (Special order for Model "L").
- Cases ordered to MIL-STD-108 models (F, G, H, J) supplied as shown with the following exceptions.
  - Less guard rail.
  - No stacking dimples.
  - Latches on cover for transit cases and latches on case for combination cases.
- To order case accessories, list by Zero Manufacturing, Inc. part number under case designation and advise location dimensions.

## NOTES TO DIMENSIONING DATA (page 79)

- MIL-T-28800 with H<sub>1</sub> and H<sub>2</sub> greater than 10.00" will have an extra set of Guard Rails.
- Letter within circle (example: (A)) indicates that standard flange hole pattern and panel are available. See pages 82 through 90 for details.
- Minimums shown are for MIL-T-28800 cases only. For MIL-STD-108 subtract 2.00" (approx.) from H<sub>1</sub> and H<sub>2</sub> minimums.
- Beading pattern supplied where indicated unless otherwise specified.
- Add .50 inch to H<sub>2</sub> minimum whenever "L" type closure is used.
- Number of latches applies only to H, J and K.

## FINISH ORDERING CODES

- A** = No finish.
- B** = Wash prime & epoxy primer.
- C** = Same as B plus paint color per MIL-E-15090, (light gray semi gloss enamel).
- D** = Same as B plus paint color per MIL-E-15090, (light gray gloss enamel).
- E** = Same as B plus paint yellow gloss enamel, color No. 13538 or FED-STD-595.
- F** = Same as B plus paint strata blue gloss enamel, color No. 15045 of FED-STD-595.
- G** = Same as B plus paint green semi-gloss enamel, color No. 24300 of FED-STD-595.
- H** = Same as B plus paint olive drab semi-gloss enamel, color No. 24084 of FED-STD-595.
- J** = Same as B plus paint olive drab lusterless enamel No. 34088 of FED-STD-595.
- K** = Same as B plus aliphatic polyurethane camouflage coating per MIL-C-46168 "CARC" color No. 383, Green, #34094 of FED-STD-595.
- S** = Special order—please specify.
- W** = Chemical film per MIL-C-5541, CL.1A. Epoxy primer per MIL-P-53022, type II or waterbase epoxy primer per MIL-P-53030. Paint with polyurethane coating per MIL-PRF-85285, type II, color white No. 17925 of FED-STD-595 or epoxy coating per MIL-C-22750, type I.

## OTHER COLORS AND FINISHES AVAILABLE ON REQUEST

Commercial or military specification can be met, and Zero Manufacturing, Inc. can supply any color per FED-STD-595.

- Panel Fabrication
  - silk screening
  - engraving
  - custom fabrication
- Case Customization
  - stenciling
  - designation printing
  - decals
  - silk screening
  - labeling



CASE NO.	W IN.	L IN.	MAX H1-H2	MATL THK	R1 IN.	R2 IN.	③ MODELS H,K & L ⑤				③ MODEL J ⑤				⑥ NO. OF LATCHES	NO. OF HANDLES	④ BEADING PATTERN	② AVAILABLE IN MODEL
							LATCH ON CASE		LATCH ON COVER		LATCH ON CASE		LATCH ON COVER					
							H1 MIN.	H2 MIN.	H1 MIN.	H2 MIN.	H1 MIN.	H2 MIN.	H1 MIN.	H2 MIN.				
440	17.00	20.31	12.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	4	2	X	H - J - K - L
442	17.25	22.88	9.00	.090	.75	.75	4.25	6.75	6.75	7.00	5.50	5.50	5.75	5.50	4	2	X	H - J - K - L
450	18.00	18.00	7.00	.090	.38	.75	4.00	6.50	6.25	6.75	5.25	5.25	5.50	5.00	4	2	X	H - L
452	18.00	18.00	10.00	.090	.75	.75	4.25	6.75	6.75	7.00	5.50	5.50	5.75	5.50	4	2	X	H - L
456	18.00	21.00	16.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	8	2	X	H - J - K - L
458	18.00	27.00	10.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	10	2	X	H - J - K - L
460	18.00	27.00	8.50	.063	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	10	2	X	H - K
462	18.48	22.13	8.00	.063	.69	.69	4.25	6.75	6.75	7.00	5.50	5.50	5.75	5.50	8	2	X	H - L
464	18.63	22.75	13.00	.063	.88	1.50	4.25	7.00	6.75	7.25	5.75	5.75	6.00	5.50	8	2		H - J - K - L
470	19.00	22.00	9.00	.090	.75	.75	4.25	6.75	6.75	7.00	5.50	5.50	5.75	5.50	8	2	X	H - L
474	19.56	21.50	10.00	.063	.88	.88	4.25	7.00	6.75	7.25	5.75	5.75	6.00	5.50	8	2	X	H - L
480	20.00	26.00	11.50	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	8	2	X	H - J - K - L
484	20.13	21.38	10.00	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	8	2	X	H - J - K
486	20.13	32.13	10.50	.090	1.50	1.50	5.00	7.50	7.50	7.75	6.25	6.50	6.50	6.25	10	2	X	H - J - K - L
488	20.25	21.25	14.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.75	6.25	6.00	8	2	X	H - J - K - L
490	20.31	20.50	13.50	.090	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	8	2	X	H - J - K - L
492	20.56	22.13	13.50	.090	.75	1.25	4.25	6.75	6.75	7.00	5.50	5.50	5.75	5.50	8	2		H - J - K - L
494	20.63	28.13	14.00	.090	1.25	1.50	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	8	2	X	H - J - K - L
(a)498	21.00	32.00	13.25	.100	1.38	1.38	5.00	7.50	7.25	7.75	6.25	6.25	6.50	6.00	10	2	X	H - J - K
500	21.22	26.25	11.00	.063	1.00	1.00	4.50	7.00	7.00	7.25	5.75	5.75	6.00	5.75	8	2	X	H - J - K - L
502	22.50	22.50	8.00	.090	.88	.88	4.25	7.00	6.75	7.25	5.75	5.75	6.00	5.50	8	2	X	H - L
504	23.00	23.00	10.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	8	2	X	H - J - K - L
510	24.00	26.00	14.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.75	6.25	6.00	8	4	X	H - J - K - L
514	25.00	32.00	11.00	.090	1.50	1.50	5.00	7.50	7.50	7.75	6.25	6.50	6.50	6.25	10	4	X	H - J - K
516	25.50	33.50	9.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	10	4	X	H - J - K
520	27.25	37.25	10.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	10	4	X	H - J - K - L
522	28.00	54.19	10.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	12	4	X	H - J - K
526	28.25	28.25	9.00	.090	1.25	1.25	4.75	7.25	7.25	7.50	6.00	6.25	6.25	6.00	10	4	X	H - J - K - L

(a) 6061-T4 aluminum alloy

Virtually unlimited additional sizes available. Mail or fax your case requirements to Zero Manufacturing, Inc. today!

# HOLE PATTERNS AND GASKETS

Standard tooling is now available, without charge, to drill mounting hole patterns as listed in the following tables. Neoprene gaskets (.090" thickness) per AMS-3207 are available for each of the standard hole patterns, except Model L.

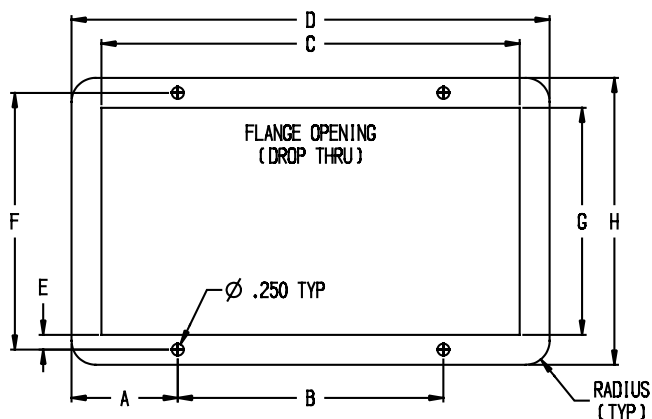
All flanges with hole patterns will be supplied with #10-32 floating clinch nuts and associated gasket.

Gasket widths are as follows:

- \* Gaskets for .63" wide flanges are .50" wide.
- \* Gaskets for .75" wide flanges are .63" wide.
- \* Gaskets for .88" wide flanges are .75" wide.
- \* Gaskets for 1.00" wide flanges are .88" wide for the majority of the cases.

Hole pattern drawings are shown on the following pages, indexed by ZERO part number for the basic case configuration.

## STANDARD 4-HOLE PATTERN CONFIGURATION (SEE TABLE 1, BELOW)



## STANDARD HOLE PATTERN CONFIGURATION (SEE TABLE 2, PAGES 81 THRU 83)

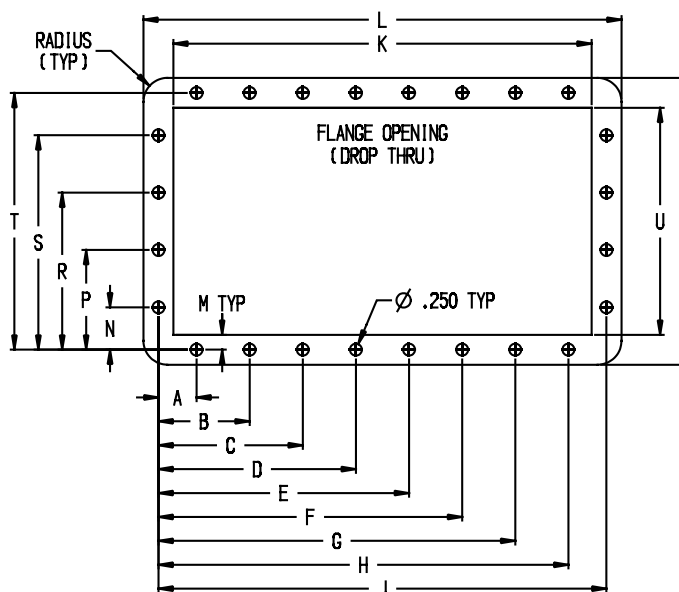


TABLE 1 - STANDARD 4-HOLE PATTERNS

CASE #	HOLE PATTERN/GASKET DIMENSIONS									HOLE PATTERN NO.
	A	B	C	D	E	F	G	H	R (RADIUS)	
108 (4.00 X 7.00)	1.13	4.00	5.25	6.25	0.25	2.75	2.25	3.25	0.44	DJ-AA
120 (5.00 X 6.00)	1.12	3.00	4.25	5.25	0.25	3.75	3.25	4.25	0.13	DJ-AD
126 (5.25 X 9.75)	2.00	5.00	8.00	9.00	0.25	4.00	3.50	4.50	0.19	DJ-AG
132 (6.00 X 7.00)	1.50	3.25	5.25	6.25	0.25	4.75	4.25	5.25	0.13	DJ-AK
150 (6.50 X 8.25)	1.75	4.00	6.50	7.50	0.25	5.25	4.25	5.75	0.13	150P
162 (7.00 X 8.00)	1.00	5.25	6.25	7.25	0.25	5.75	5.25	6.25	0.13	DJ-AS

TABLE 2 - STANDARD HOLE PATTERNS

CASE # (SIZE)	HOLE PATTERN / GASKET DIMENSIONS																				Hole Pattern No.
	A	B	C	D	E	F	G	H	J	K	L (Model # = .XX)	M (TYP)	N	P	R	S	T	U	V (Model # = .XX)	Radius (Model # = .XX)	
<b>140</b> (6.00 X 14.50)	3.00	10.25	-	-	-	-	-	-	13.25	12.75	13.75	0.25	2.38	-	-	-	4.75	4.25	5.25	0.19	140P
<b>144</b> (6.19 X 16.88)	2.00	7.81	13.62	-	-	-	-	-	15.62	15.13	16.13	0.25	2.47	-	-	-	4.94	4.44	5.44	0.19	DJ-AN
<b>164</b> (7.00 X 9.00)	1.50	6.25	-	-	-	-	-	-	7.75	7.25	8.25	0.25	2.88	-	-	-	5.75	5.25	6.25	0.13	DJ-AV
<b>166</b> (7.00 X 11.00)	2.00	7.75	-	-	-	-	-	-	9.75	9.25	10.25	0.25	2.88	-	-	-	5.75	5.25	6.25	0.13	DJ-AY
<b>174</b> (7.13 X 9.63)	1.50	6.88	-	-	-	-	-	-	8.38	7.88	8.88	0.25	2.94	-	-	-	5.88	5.38	6.38	0.19	174P
<b>182</b> (8.00 X 11.00)	2.00	7.75	-	-	-	-	-	-	9.75	9.25	10.25	0.25	3.38	-	-	-	6.75	6.25	7.25	0.56	DJ-BB
<b>184</b> (8.00 X 14.00)	3.00	9.75	-	-	-	-	-	-	12.75	12.25	13.25	0.25	3.38	-	-	-	6.75	6.25	7.25	0.56	DJ-BE
<b>186</b> (8.00 X 21.00)	2.62	9.50	16.38	-	-	-	-	-	19.00	18.38	19.88	0.31	3.00	-	-	-	6.00	5.38	6.88	0.28	186P
<b>190</b> (8.38 X 11.50)	2.00	8.25	-	-	-	-	-	-	10.25	9.75	10.75	0.25	3.56	-	-	-	7.12	6.62	7.62	0.25	190P
<b>192</b> (8.50 X 8.50)	1.19	5.69	-	-	-	-	-	-	6.88	6.38	7.38	0.25	3.44	-	-	-	6.88	6.38	7.38	0.53	192P
<b>194</b> (8.50 X 12.00)	2.00	8.00	-	-	-	-	-	-	10.00	9.38	10.88	0.31	3.25	-	-	-	6.50	5.88	7.38	0.53	194P
<b>198</b> (8.50 X 19.50)	0.72	6.20	11.68	17.16	-	-	-	-	17.88	17.38	18.38	0.25	3.44	-	-	-	6.88	6.38	7.38	0.28	198P
<b>200</b> (8.50 X 20.50)	0.75	6.51	12.27	18.12	-	-	-	-	18.88	18.38	19.38	0.25	3.44	-	-	-	6.88	6.38	7.38	0.50	DJ-HD
<b>204</b> (8.72 X 17.95)	2.41	8.41	14.41	-	-	-	-	-	16.83	16.20	17.32	0.31	3.79	-	-	-	7.59	6.97	8.09	0.19	204P
<b>210</b> (8.75 X 12.00)	2.00	8.00	-	-	-	-	-	-	10.00	9.38	10.88	0.31	3.38	-	-	-	6.75	6.12	7.62	0.28	210P
<b>218</b> (9.00 X 27.00)	3.62	9.62	15.62	21.62	-	-	-	-	25.25	24.62	25.88	0.31	3.62	-	-	-	7.25	6.62	7.88	0.25	DJ-HG
<b>226</b> (9.38 X 14.50)	1.00	6.44	11.88	-	-	-	-	-	12.88	12.38	13.38	0.25	1.38	6.38	-	-	7.75	7.25	8.25	0.53	226P
<b>232</b> (9.88 X 20.50)	3.50	9.44	15.38	-	-	-	-	-	18.88	18.38	19.38	0.25	1.25	7.00	-	-	8.25	7.75	8.75	0.50	DJ-HK
<b>236</b> (10.00 X 10.38)	1.25	4.56	8.00	-	-	-	-	-	9.13	8.63	9.63	0.25	4.38	-	-	-	8.75	8.25	9.25	0.19	DJ-BW
<b>238</b> (10.00 X 12.00)	1.25	5.19	9.13	-	-	-	-	-	10.38	9.88	10.88	0.25	4.19	-	-	-	8.38	7.88	8.88	0.53	DJ-HN
<b>242</b> (10.00 X 16.00)	2.00	7.19	12.38	-	-	-	-	-	14.38	13.88	14.88	0.25	4.19	-	-	-	8.38	7.88	8.88	0.50	DJ-HS
<b>246</b> (10.00 X 18.00)	3.00	8.22	13.44	-	-	-	-	-	16.44	15.94	16.94	0.25	1.25	7.13	-	-	8.38	7.88	8.88	0.50	DJ-HV
<b>250</b> (10.19 X 24.50)	2.40	8.40	14.40	20.40	-	-	-	-	22.81	22.19	23.44	0.31	1.75	6.75	-	-	8.50	7.88	9.12	0.34	250P
<b>254</b> (10.50 X 12.50)	2.25	8.25	-	-	-	-	-	-	10.50	9.88	11.38	0.31	1.25	7.25	-	-	8.50	7.88	9.38	0.53	254P
<b>256</b> (10.69 X 20.94)	3.47	9.47	15.47	-	-	-	-	-	18.94	18.31	19.81	0.31	1.34	7.34	-	-	8.69	8.06	9.56	0.66	256P
<b>258</b> (10.75 X 16.00)	2.00	7.00	12.00	-	-	-	-	-	14.00	13.38	14.88	0.31	4.38	-	-	-	8.75	8.12	9.63	0.28	258P
<b>260</b> (10.81 X 16.88)	1.59	7.59	13.59	-	-	-	-	-	15.19	14.56	A = 16.06 F-G = 15.81	0.31	1.56	7.56	-	-	9.13	8.50	A = 10.00 F-G = 9.75	A = .41 F-G = .28	260P
<b>262</b> (11.00 X 11.00)	2.00	7.38	-	-	-	-	-	-	9.38	8.88	9.88	0.25	2.00	7.38	-	-	9.38	8.88	9.88	0.50	DJ-HY
<b>266</b> (11.00 X 18.00)	3.00	8.19	13.38	-	-	-	-	-	16.38	15.88	16.88	0.25	2.00	7.38	-	-	9.38	8.88	9.88	0.50	DJ-JB
<b>270</b> (11.44 X 13.06)	1.19	5.56	9.93	-	-	-	-	-	11.12	10.50	A = 12.25 F-G = 12.00	0.31	4.75	-	-	-	9.50	8.88	A = 10.62 F-G = 10.38	A = .69 F-G = .53	270P
<b>272</b> (11.44 X 13.75)	1.25	6.06	10.88	-	-	-	-	-	12.12	11.63	12.63	0.25	4.91	-	-	-	9.82	9.31	10.31	0.38	DJ-JE
<b>276</b> (11.56 X 15.06)	2.00	6.72	11.44	-	-	-	-	-	13.44	12.94	13.94	0.25	2.00	7.94	-	-	9.94	9.44	10.44	0.50	DJ-JH

**TABLE 2 - STANDARD HOLE PATTERNS**

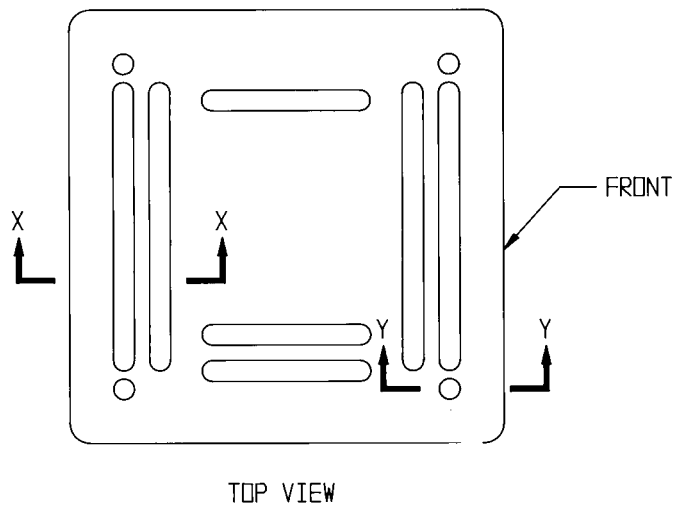
CASE # (SIZE)	HOLE PATTERN / GASKET DIMENSIONS																				Hole Pattern No.
	A	B	C	D	E	F	G	H	J	K	L (Model # = .XX)	M (TYP)	N	P	R	S	T	U	V (Model # = .XX)	Radius (Model # = .XX)	
278 (11.63 X 20.13)	3.06	9.06	15.06	-	-	-	-	-	18.12	17.50	19.00	0.31	1.81	7.81	-	-	9.62	9.00	10.50	0.53	278P
280 (11.75 X 13.00)	2.50	8.50	-	-	-	-	-	-	11.00	10.38	11.88	0.31	1.88	7.88	-	-	9.75	9.12	10.62	0.28	280P
282 (11.75 X 14.50)	3.25	9.23	-	-	-	-	-	-	12.48	11.85	13.38	0.31	1.88	7.85	-	-	9.73	9.10	10.62	0.66	282P
288 (12.00 X 12.00)	1.25	5.19	9.13	-	-	-	-	-	10.38	9.88	10.88	0.25	2.50	7.88	-	-	10.38	9.88	10.88	0.50	DJ-JP
292 (12.00 X 18.00)	3.00	8.19	13.38	-	-	-	-	-	16.38	15.88	16.88	0.25	2.00	8.38	-	-	10.38	9.88	10.88	0.50	DJ-JT
294 (12.00 X 18.00)	2.15	8.03	13.91	-	-	-	-	-	16.06	15.44	F-G = 16.94	0.31	2.15	7.91	-	-	10.06	9.44	F-G = 10.94	F-G = .50	294P
296 (12.19 X 14.63)	2.97	9.97	-	-	-	-	-	-	12.94	12.31	F-G = 13.56	0.31	2.25	8.25	-	-	10.50	9.88	F-G = 11.12	F-G = .41	296P
306 (13.63 X 15.00)	1.50	6.50	11.50	-	-	-	-	-	13.00	12.38	13.88	0.31	2.81	8.81	-	-	11.62	11.00	12.50	0.28	306P
316 (14.13 X 15.63)	1.81	6.81	11.81	-	-	-	-	-	13.62	13.00	F-G = 14.50	0.31	3.06	9.06	-	-	12.12	11.50	F-G = 13.00	F-G = .47	316P
318 (14.13 X 15.63)	1.81	6.81	11.81	-	-	-	-	-	13.62	13.00	F-G = 14.50	0.31	3.06	9.06	-	-	12.12	11.50	F-G = 13.00	F-G = .47	318P
320 (14.13 X 16.13)	1.06	7.06	13.06	-	-	-	-	-	14.12	13.50	15.00	0.31	3.06	9.06	-	-	12.12	11.50	13.00	0.53	320P
322 (14.50 X 17.00)	1.50	7.50	13.50	-	-	-	-	-	15.00	14.38	15.88	0.31	3.25	9.25	-	-	12.50	11.88	13.38	0.33	322P
324 (14.63 X 16.13)	1.06	7.06	13.06	-	-	-	-	-	14.12	13.50	F-G = 15.00	0.31	3.31	9.31	-	-	12.62	12.00	F-G = 13.50	F-G = .48	324P
334 (15.00 X 15.00)	1.25	6.88	12.50	-	-	-	-	-	13.75	13.13	14.38	0.31	4.00	9.25	-	-	13.25	12.62	13.88	0.25	DJ-KJ
336 (15.00 X 15.00)	1.40	6.90	12.40	-	-	-	-	-	13.81	13.19	F-G = 14.44	0.31	3.15	10.16	-	-	13.31	12.69	F-G = 13.94	F-G = .19	336P
338 (15.00 X 18.50)	2.25	8.25	14.25	-	-	-	-	-	16.50	15.88	17.38	0.31	3.00	10.00	-	-	13.00	12.38	13.88	0.28	338P
344 (15.88 X 15.88)	1.44	6.94	12.44	-	-	-	-	-	13.88	13.25	F-G = 14.75	0.31	3.44	10.44	-	-	13.88	13.25	F-G = 14.75	F-G = .53	344P
350 (11.75 X 27.25)	3.75	9.75	15.75	21.75	-	-	-	-	25.50	24.88	26.13	0.31	2.00	8.00	-	-	10.00	9.38	10.63	0.19	DJ-JL
352 (12.00 X 21.50)	2.88	9.88	16.88	-	-	-	-	-	19.75	19.13	20.38	0.31	2.00	8.25	-	-	10.25	9.62	10.88	0.38	DJ-JW
358 (12.00 X 24.00)	2.00	8.00	14.00	20.00	-	-	-	-	22.00	21.38	22.88	0.31	2.00	8.00	-	-	10.00	9.38	10.88	0.28	358P
362 (12.44 X 20.81)	2.41	9.41	16.41	-	-	-	-	-	18.81	18.19	H = 19.69 K = 19.44	0.31	2.22	8.22	-	-	10.44	9.81	H = 11.31 K = 11.06	H = .53 K = .41	362P
368 (13.00 X 22.50)	3.00	10.38	17.75	-	-	-	-	-	20.75	20.13	21.38	0.31	3.00	8.25	-	-	11.25	10.62	11.88	0.25	DJ-JZ
370 (13.50 X 20.31)	3.15	9.15	15.15	-	-	-	-	-	18.31	17.69	H = 19.19 K = 18.94	0.31	2.75	8.75	-	-	11.50	10.88	H = 12.38 K = 12.12	H = .53 K = .41	370P
372 (13.63 X 20.63)	3.00	9.44	15.88	-	-	-	-	-	18.88	18.25	19.50	0.31	3.00	8.88	-	-	11.88	11.25	12.50	1.00	DJ-KC
374 (13.75 X 26.13)	3.06	9.06	15.06	21.06	-	-	-	-	24.12	23.50	H = 25.00 K = 24.75	0.31	2.38	9.38	-	-	11.75	11.12	H = 12.62 K = 12.38	H = 1.06 K = .94	374P
382 (14.50 X 20.63)	3.00	9.44	15.88	-	-	-	-	-	18.88	18.25	19.50	0.31	2.50	10.25	-	-	12.75	12.13	13.38	1.00	DJ-KF
384 (14.50 X 23.63)	1.81	7.81	13.81	19.81	-	-	-	-	21.62	21.00	22.50	0.31	2.75	9.75	-	-	12.50	11.88	13.38	0.28	384P
386 (14.75 X 26.00)	3.00	9.00	15.00	21.00	-	-	-	-	24.00	23.38	24.88	0.31	3.38	9.38	-	-	12.75	12.12	13.62	0.28	386P
392 (15.00 X 21.50)	2.75	9.75	16.75	-	-	-	-	-	19.50	18.88	H = 20.38 K = 20.12	0.31	3.00	10.00	-	-	13.00	12.38	H = 13.88 K = 13.62	H = .53 K = .41	392P
394 (15.00 X 29.25)	3.13	10.13	17.13	24.13	-	-	-	-	27.25	26.62	H = 28.12 K = 27.88	0.31	3.00	10.00	-	-	13.00	12.38	H = 13.88 K = 13.62	H = .53 K = .41	394P
396 (15.25 X 20.25)	3.13	9.13	15.13	-	-	-	-	-	18.25	17.62	H = 19.12 K = 18.88	0.31	3.13	10.13	-	-	13.25	12.62	H = 14.12 K = 13.88	H = 1.03 K = .91	396P
400 (15.44 X 27.44)	3.72	9.72	15.72	21.72	-	-	-	-	25.44	24.81	H = 26.31 K = 26.06	0.31	3.22	10.22	-	-	13.44	12.81	H = 14.31 K = 14.06	H = 1.03 K = .91	400P

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CASE # (SIZE)	HOLE PATTERN / GASKET DIMENSIONS																				Hole Pattern No.
	A	B	C	D	E	F	G	H	J	K	L (Model # = .XX)	M (TYP)	N	P	R	S	T	U	V (Model # = .XX)	Radius (Model # = .XX)	
404 (15.50 X 30.38)	2.22	10.22	18.22	26.22	-	-	-	-	28.44	27.81	H = 29.31 K = 29.06	0.31	2.00	6.78	11.56	-	13.56	12.94	H = 14.44 K = 14.19	H = .53 K = .41	404P
410 (15.63 X 19.13)	2.50	8.69	14.88	-	-	-	-	-	17.38	16.75	18.00	0.31	4.00	9.88	-	-	13.88	13.25	14.50	0.38	DJ-KM
414 (15.81 X 27.81)	3.91	9.91	15.91	21.91	-	-	-	-	25.81	25.19	H = 26.69 K = 26.44	0.31	2.19	10.91	-	-	13.81	13.19	H = 14.69 K = 14.44	H = .53 K = .41	414P
420 (16.13 X 26.13)	4.19	12.19	20.19	-	-	-	-	-	24.38	23.75	25.00	0.31	1.25	7.19	13.13	-	14.38	13.75	15.00	0.50	DJ-KR
428 (16.88 X 20.13)	3.12	9.12	15.12	-	-	-	-	-	18.25	17.75	19.00	0.25	1.17	4.67	10.42	13.92	15.09	14.50	15.72	1.00	DJ-KU
430 (16.94 X 21.94)	3.47	10.00	16.53	-	-	-	-	-	20.00	19.38	H = 20.56 K = 20.31	0.31	2.47	7.50	12.53	-	15.00	14.38	H = 15.56 K = 15.31	H = .88 K = .75	430P
432 (16.94 X 21.94)	3.09	10.09	17.09	-	-	-	-	-	20.18	19.56	20.81	0.31	4.00	7.59	11.18	-	15.18	14.56	15.81	1.00	DJ-KX
434 (16.94 X 32.94)	1.59	8.59	15.59	22.59	29.59	-	-	-	31.19	30.56	31.81	0.31	2.00	7.59	13.19	-	15.19	14.56	15.81	0.63	DJ-LA
440 (17.00 X 20.31)	3.15	9.15	15.15	-	-	-	-	-	18.31	17.69	H = 19.19 K = 18.94	0.31	1.50	7.50	13.50	-	15.00	14.38	H = 15.88 K = 15.62	H = .53 K = .41	440P
442 (17.25 X 22.88)	3.00	10.56	18.12	-	-	-	-	-	21.12	20.50	21.75	0.31	2.50	7.75	13.00	-	15.50	14.88	16.13	0.25	DJ-LD
450 (18.00 X 18.00)	3.00	8.12	13.25	-	-	-	-	-	16.25	15.63	16.88	0.31	3.00	8.12	13.25	-	16.25	15.63	16.88	0.25	DJ-LG
452 (18.00 X 18.00)	3.00	8.12	13.25	-	-	-	-	-	16.25	15.63	16.88	0.31	3.00	8.12	13.25	-	16.25	15.63	16.88	0.25	DJ-LG
456 (18.00 X 21.00)	3.50	9.50	15.50	-	-	-	-	-	19.00	18.38	H = 19.88 K = 19.62	0.31	2.00	8.00	14.00	-	16.00	15.38	H = 16.88 K = 16.62	H = .78 K = .66	456P
458 (18.00 X 27.00)	2.12	9.12	16.12	23.12	-	-	-	-	25.25	24.62	25.88	0.31	2.00	8.12	14.25	-	16.25	15.62	16.88	0.50	DJ-LK
462 (18.48 X 22.13)	2.21	10.21	18.21	-	-	-	-	-	20.43	19.81	21.06	0.31	2.08	8.08	14.08	-	16.78	16.16	17.41	0.21	462P
464 (18.63 X 22.75)	3.53	10.41	17.28	-	-	-	-	-	20.81	20.19	H = 21.69 K = 21.44	0.31	2.46	8.34	14.23	-	16.69	16.06	H = 17.56 K = 17.31	H = 1.03 K = .88	464P
470 (19.00 X 22.00)	4.00	10.00	16.00	-	-	-	-	-	20.00	19.38	20.88	0.31	2.50	8.50	14.50	-	17.00	16.38	17.88	0.28	470P
474 (19.56 X 21.50)	2.06	9.91	17.75	-	-	-	-	-	19.81	19.19	20.44	0.31	4.09	8.74	13.78	-	17.88	17.25	18.50	0.38	474P
480 (20.00 X 26.00)	1.38	3.13	8.38	15.88	21.13	22.88	-	-	24.25	23.62	24.88	0.31	3.13	9.13	15.13	-	18.25	17.62	18.88	0.75	DJ-LN
486 (20.13 X 32.13)	1.75	3.50	8.75	12.25	18.00	21.50	26.75	28.50	30.25	29.75	31.00	0.31	3.13	9.13	15.13	-	18.25	17.75	19.00	1.00	DJ-LV
488 (20.25 X 21.25)	3.63	9.63	15.63	-	-	-	-	-	19.25	18.62	H = 20.12 K = 19.88	0.31	3.13	9.13	15.13	-	18.25	17.62	H = 19.12 K = 18.88	H = .78 K = .66	488P
490 (20.31 X 20.50)	3.25	9.25	15.25	-	-	-	-	-	18.50	17.88	H = 19.38 K = 19.19	0.31	3.15	9.15	15.15	-	18.31	17.69	H = 19.19 K = 18.94	H = .53 K = .41	490P
492 (20.56 X 22.13)	1.06	7.06	13.06	19.06	-	-	-	-	20.12	19.50	H = 21.00 K = 20.75	0.31	3.28	9.28	15.28	-	18.56	17.94	H = 19.31 K = 19.19	H = .78 K = .66	492P
494 (20.63 X 28.13)	1.06	9.06	17.06	25.06	-	-	-	-	26.13	25.50	H = 27.00 K = 26.75	0.31	3.31	9.31	15.31	-	18.63	18.00	H = 19.50 K = 19.25	H = 1.06 K = .94	494P
500 (21.22 X 26.25)	3.28	9.28	15.03	21.03	-	-	-	-	24.31	23.69	H = 25.19 K = 24.94	0.31	3.75	9.64	15.53	-	19.28	18.66	H = 20.16 K = 19.19	H = .53 K = .41	500P
502 (22.50 X 22.50)	3.25	10.25	17.25	-	-	-	-	-	20.50	19.88	21.38	0.31	3.25	10.25	17.25	-	20.50	19.88	21.38	0.38	502P
504 (23.00 X 23.00)	1.50	7.50	13.50	19.50	-	-	-	-	21.00	20.38	H = 21.88 K = 21.62	0.31	3.50	10.50	17.50	-	21.00	20.38	H = 21.88 K = 21.62	H = .78 K = .66	504P
510 (24.00 X 26.00)	3.00	9.00	15.00	21.00	-	-	-	-	24.00	23.38	H = 24.88 K = 24.62	0.31	3.50	11.00	18.50	-	22.00	21.38	H = 22.88 K = 22.62	H = .78 K = .66	510P
520 (27.25 X 37.25)	1.62	9.62	17.62	25.62	33.62	-	-	-	35.25	34.62	H = 36.12 K = 35.88	0.31	2.62	12.62	22.62	-	25.25	24.62	H = 26.12 K = 25.88	H = .78 K = .66	520P
526 (28.25 X 28.25)	1.12	9.12	17.12	25.12	-	-	-	-	26.25	25.62	H = 27.12 K = 26.88	0.31	3.12	13.12	23.12	-	26.25	25.62	H = 27.12 K = 26.88	H = .78 K = .66	526P

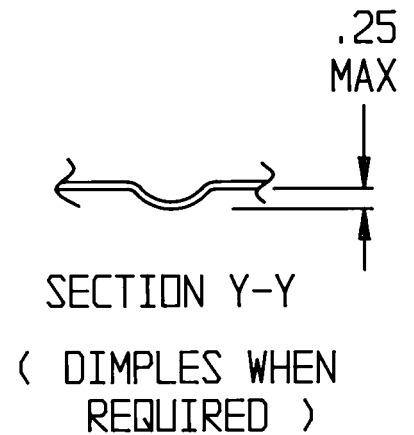
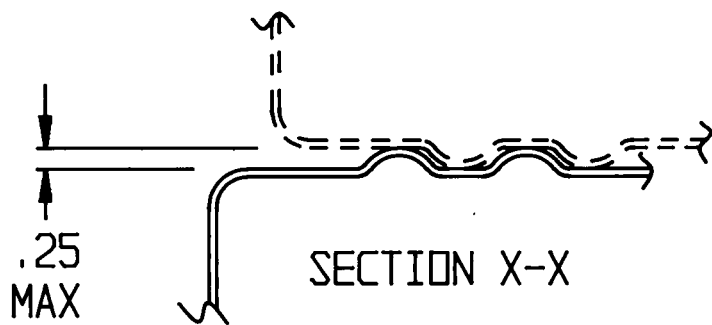
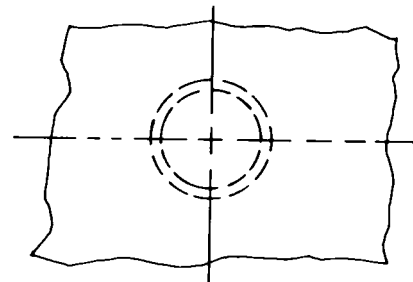
# TYPICAL BEADING PATTERN

Beading pattern in drawing shows top of container. For bottom of case, reverse short beads.



## DIMPLES

Dimples can be supplied on special order in any Zero Manufacturing, Inc. Case, in the lid and/or bottom, located wherever desired within normal limitations.





# Hardware, Components and Accessories

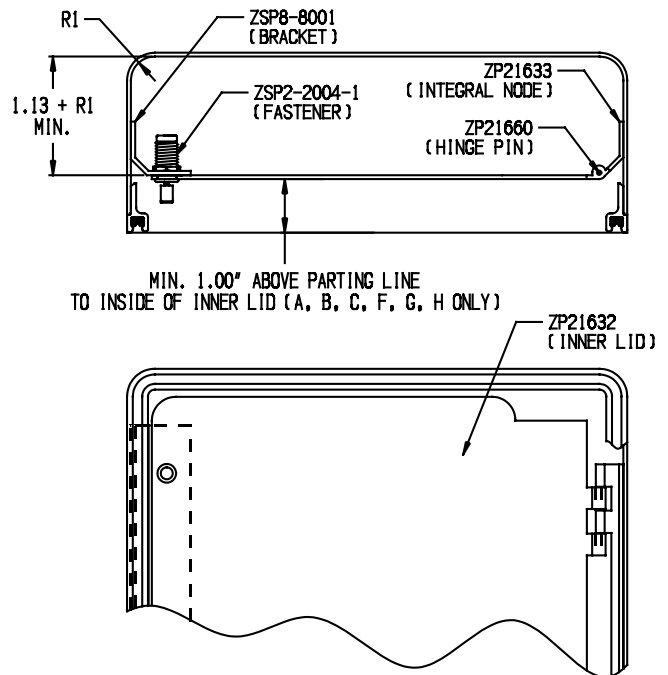
## Inner Lid Assembly

### ZP21361 (Standard Assembly)

MATERIAL: 5052-H32 X .08 thick aluminum alloy per QQ-A-250/8.

PERFORMANCE DATA: Push button latches are specially designed for use with Arctic mittens. Card or book clips may be attached directly to lid. Lid is contoured to match radius with reliefs cut in hinged edge to permit opening over 90°.

NOTE: Lowest possible position of lid is 1.00" above parting line. Minimum storage height is  $R1 + 1.13$ ". Minimum H1 (height of cover) when inner lid assembly is required is  $2.19" + R1 + \text{material thickness}$ .

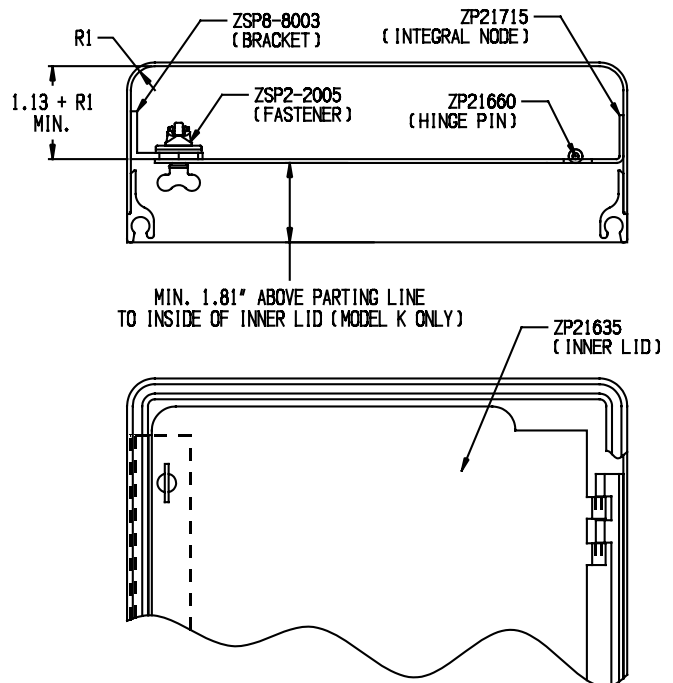


### ZP21634 (Use with Model "K" Case)

MATERIAL: 5052-H32 X .08 thick aluminum alloy per QQ-A-250/8..

PERFORMANCE DATA: Heavy duty 1/4 turn fasteners. Card or book clips may be attached directly to lid. Lid is contoured to match radius with reliefs cut in hinged edge to permit opening over 90°.

NOTE: Lowest possible position of lid is 1.81" above parting line. Minimum storage height is  $R1 + 1.13$ ". Minimum H1 (height of cover) when inner lid assembly is required is  $2.00" + R1 + \text{material thickness}$ .

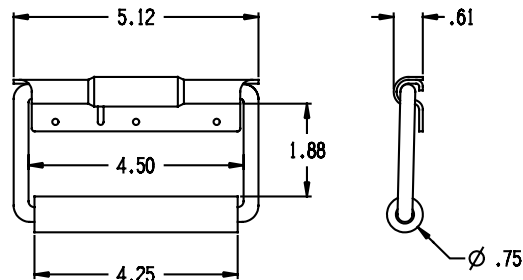


NOTE: All dimensions, weight & performance data given for reference only.  
Parts used will be in accordance with Zero Manufacturing, Inc. standards at time of production.

# Handles:

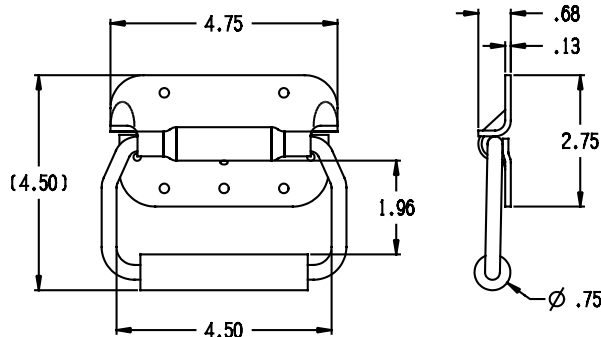
## ZP20136

MATERIAL: Steel plate and bail. Grip: non-rigid synthetic resin composition.  
 WEIGHT: .43 lbs.  
 PERFORMANCE DATA: Design load: 100 lbs. Bail stops at 90° open position.  
 Spring returns bail to position shown.



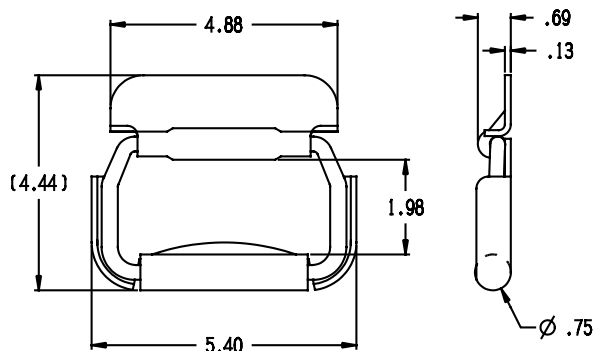
## ZP20137-1 (without holes) ZP20137-2 (with holes)

MATERIAL: Aluminum plate, steel bail with rubber grip.  
 WEIGHT: .50 lbs.  
 PERFORMANCE DATA: Design load: 150 lbs. Bail stops at 90° open position.  
 Spring returns bail to position shown. Rattle proof.



## ZP20164-1 (without holes) ZP20164-2 (with holes)

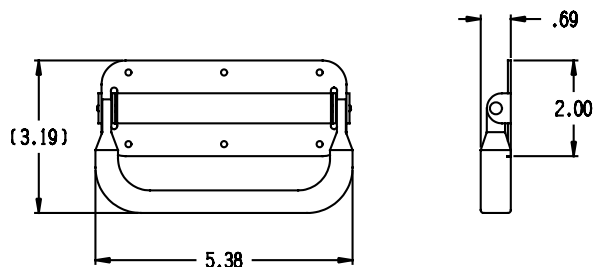
MATERIAL: Aluminum plate, steel bail with  $\phi .75$  rubber grip.  
 WEIGHT: .69 lbs.  
 PERFORMANCE DATA: Design load: 150 lbs. Bail stops at 90° open position.  
 Spring returns bail to position shown. Provides protection for handle per MIL-T-28800.



## ZSP3-304

MATERIAL: Aluminum plate and bail. Grip: molded neoprene  
 WEIGHT: .183 lbs.  
 PERFORMANCE DATA: Design load: 50 lbs. Bail has 180° free swing.

PART NUMBER	MOUNTING HOLES	COLOR OF GRIP
ZSP3-304-1	Yes	Gray
ZSP3-304-2	Yes	Yellow
ZSP3-304-3	No	Gray
ZSP3-304-4	No	Yellow



NOTE: All dimensions, weight & performance data given for reference only.  
 Parts used will be in accordance with Zero Manufacturing, Inc. standards at time of production.

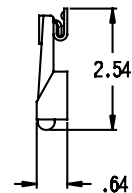
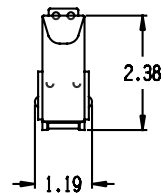
# Latches

## TC82Z20-01 (Centurion Polaris)

MATERIAL: Cold rolled steel.

WEIGHT: .108 lbs.

PERFORMANCE DATA: Positive locking bail type.

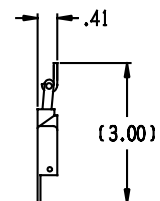
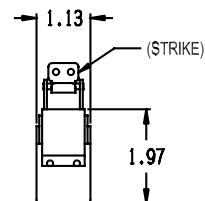


## ZSP2-204

MATERIAL: SAE 1010 steel and cres. Cadmium plated.

WEIGHT: .10 lbs.

PERFORMANCE DATA: Preloading of 70 lbs. Design load: 180 lbs.

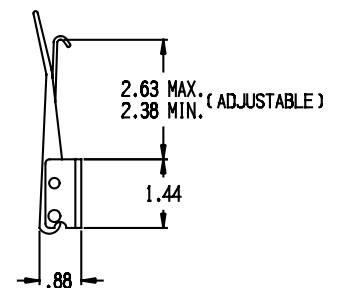
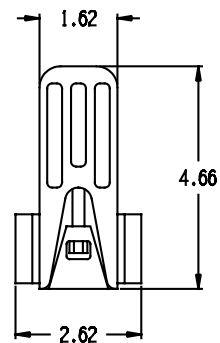


## ZSP2-224

MATERIAL: Aluminum base/strike. Steel latch body.

WEIGHT: .250 lbs.

PERFORMANCE DATA: Design load: 1000 lbs. Ultimate strength: 1500 lbs.

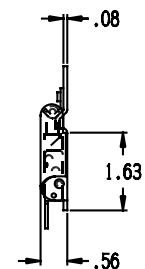
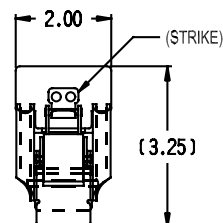


## ZSP2-229

MATERIAL: Aluminum plates. SAE 1010 steel latch and strike.

WEIGHT: .16 lbs.

PERFORMANCE DATA: Preloading of 70 lbs. Design load: 180 lbs.

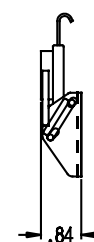
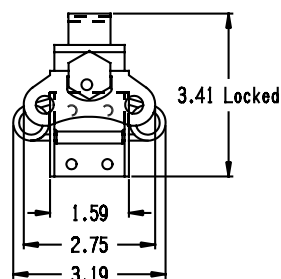


## ZSP2-230

MATERIAL: Steel hook and body, aluminum plate and stainless steel spring.

WEIGHT: .31 lbs.

PERFORMANCE DATA: Design load: 250 lbs. Cam action, positive locking.

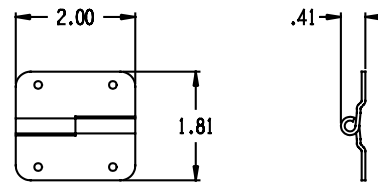


NOTE: All dimensions, weight & performance data given for reference only.  
Parts used will be in accordance with Zero Manufacturing, Inc. standards at time of production.

# Hinges

ZP20281-1 (Long Pin)  
 ZP20281-2 (Short Pin)  
 ZP20281-3 (Non-separable)

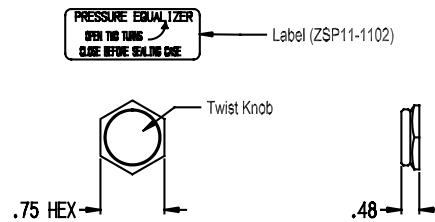
MATERIAL: Stainless steel. Finish: passivate.  
 WEIGHT: .104 lbs.  
 PERFORMANCE DATA: Available in separable or non-separable versions.



# Valves

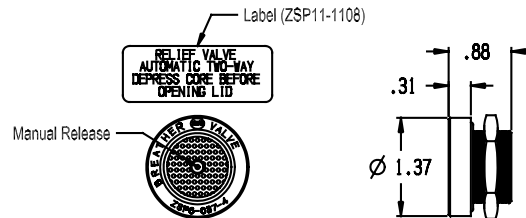
ZP20172 (Manual Relief Valve)

MATERIAL: Aluminum alloy.  
 WEIGHT: .02 lbs.  
 PERFORMANCE DATA: Complies with MS18014-1.



ZSP6-037-4 (Automatic Relief Valve)

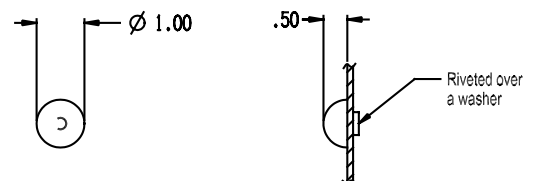
MATERIAL: Aluminum alloy, stainless steel spring.  
 WEIGHT: .05 lbs.  
 PERFORMANCE DATA: Operating media: air or nitrogen.  
 Temperature range: -65° to +160°F.  
 Nominal ratings: Vacuum = 3.5 PSI. Pressure = 2.5 PSI.



# Feet

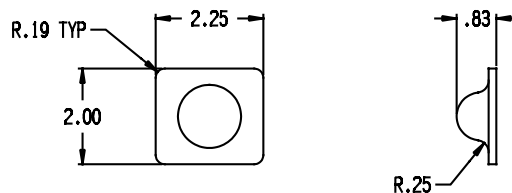
ZP20118

MATERIAL: 6061-T6 aluminum alloy.  
 WEIGHT: .06 lbs.



ZSP7-719

MATERIAL: 6061-T6 aluminum alloy.  
 WEIGHT: .06 lbs.  
 PERFORMANCE DATA: Meets requirements of MIL-T-28800.

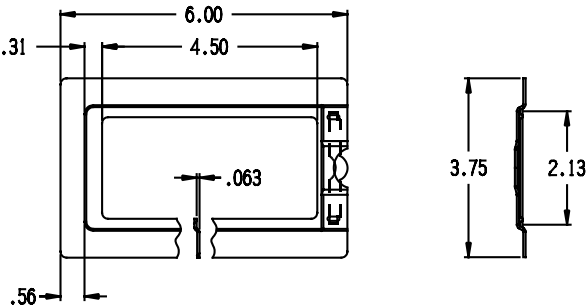


NOTE: All dimensions, weight & performance data given for reference only.  
 Parts used will be in accordance with Zero Manufacturing, Inc. standards at time of production.

# Card Holder

## ZSP9-9008

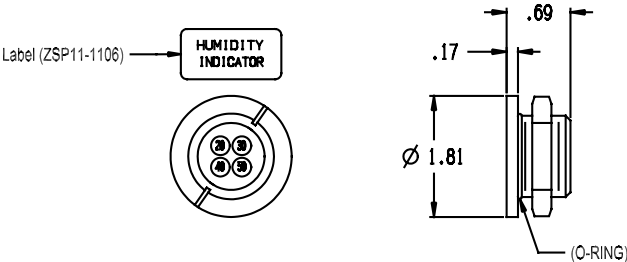
MATERIAL: Aluminum with beryllium copper spring.  
WEIGHT: .062 lbs.  
PERFORMANCE DATA: Will hold card with maximum dimensions of 2.5 X 5.0 inches.



# Humidity Indicators

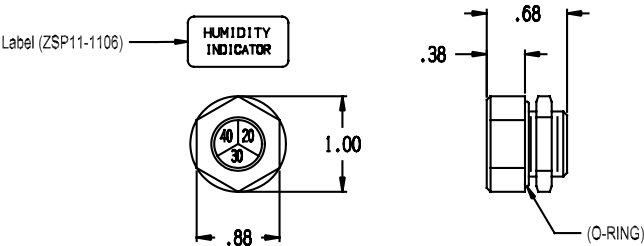
## ZSP6-608

MATERIAL: 2024-T4 Aluminum alloy.  
WEIGHT: .07 lbs.  
PERFORMANCE DATA: Registers relative humidity to 50%.  
Humidity is indicated by lavender color in one of the four circles.



## ZSP6-636

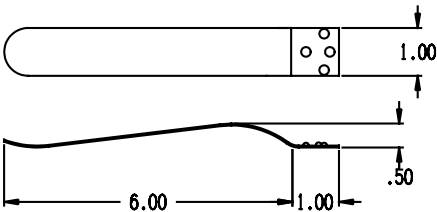
MATERIAL: Brass  
WEIGHT: .085 lbs.  
PERFORMANCE DATA: Registers relative humidity to 40% @ 5% accuracy at temperatures ranging from -40° to 200°F with internal pressure up to 30 psig.



# Card Clips

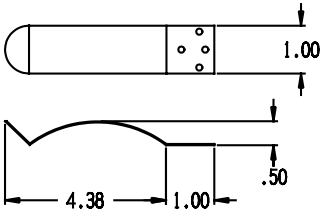
## ZSP9-902

MATERIAL: Spring tempered steel.  
WEIGHT: .09 lbs.  
PERFORMANCE DATA: .43 lbs. clamping force when deflected .13 inches.



## ZSP9-903

MATERIAL: Spring tempered steel.  
WEIGHT: .04 lbs.  
PERFORMANCE DATA: .27 lbs. clamping force when deflected .06 inches.

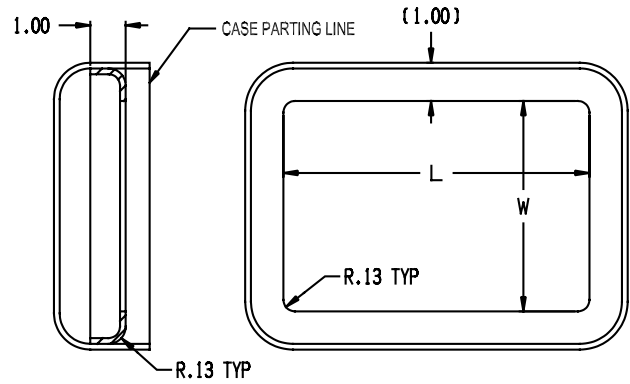


NOTE: All dimensions, weight & performance data given for reference only.  
Parts used will be in accordance with Zero Manufacturing, Inc. standards at time of production.

# Panel Flanges

There are three types of panel flanges available as Zero Mfg. Inc. standards:

- Integral flange on the closure
  - Custom fabricated sheet metal flange
  - Deep drawn part with routed opening to any size or configuration desired (shown)
- Panel flanges are available for most sizes of military cases as shown in this catalog. Contact your ZERO sales engineer or inquire directly from the factory for availability. 1-800-500-ZERO (9376)



# Guard Rails

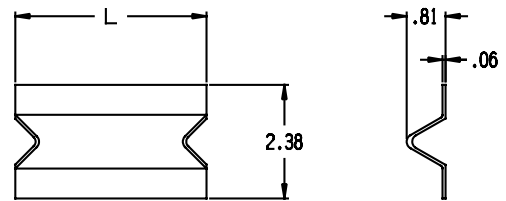
## ZSP1-158

MATERIAL: 6061-T6 Aluminum alloy.

WEIGHT: .188 lbs/ft.

PERFORMANCE DATA: Provides protection per MIL-T-28800.

Note: The parts shown here are typical. Alternate and special parts and accessories are available. Contact your Zero Mfg. Inc. sales engineer or send your requirements directly to the factory. sales@zerocases.com

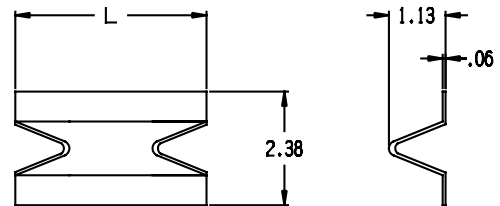


## ZSP1-1014

MATERIAL: 6061-T6 Aluminum alloy.

WEIGHT: .293 lbs.

PERFORMANCE DATA: Provides protection per MIL-T-28800.



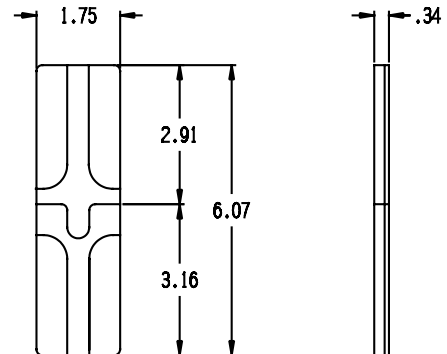
# Shear Plate

## ZSP2-227

MATERIAL: 6061-0 Aluminum alloy, .090 thick.

WEIGHT: .12 lbs.

PERFORMANCE DATA: Provides closing stop for joggled cases and prevents over compression of gasket.



NOTE: All dimensions, weight & performance data given for reference only.  
Parts used will be in accordance with Zero Manufacturing, Inc. standards at time of production.



# MODULAR CONTAINERS

**REUSABLE** — One of the major economies to be gained in specifying aluminum Zero Manufacturing, Inc. Modular Containers. Your *first* cost is your *last* cost when you choose these rugged, attractive shipping / storage containers.

**LIGHT WEIGHT REDUCES SHIPPING COSTS** — Not only does the unique construction hold weight down to a minimum, but the Modular Container also has a high strength-to-weight ratio for maximum protection at minimum transportation cost. It can pay for itself in transportation savings *alone*.

**CHOICE OF RUGGED STYLES** — Zero Manufacturing, Inc. Modular Containers Type A & B have sheet aluminum alloy 5052-H32 panels in .063 and .090 thickness. Integral construction components match each size in corresponding ruggedness.

**TINKERTOY CONCEPT** — Modular Containers can be constructed in any size and configuration because the system is based on the familiar Tinkertoy concept of standard components joined together.

**CONSTRUCTION FLEXIBILITY** — Not only does the Tinkertoy® concept lend itself to economies of construction, but Modular Containers can be specified to *any exact size* without incurring extra expense.

**MEET ALL APPLICABLE MILITARY SPECIFICATIONS** — Modular type containers meet applicable provisions of MIL-C-4150, MIL-T-2880, MIL-STD-108, and MIL-STD-810.

**MEET ALL LOGISTICAL REQUIREMENTS** — Containers can be equipped for handling manually, by crane, hoist or fork lift truck. They can be stacked and palletized. Regardless of the handling or logistical requirement, Modular Containers can be easily adapted to comply using *standardized* methods.

**NO TOOLS REQUIRED TO ASSEMBLE/**



**DISASSEMBLE** — Many types of containers require tools both to open and close. No tools of any kind are needed for Modular Containers.

**SHOCK & ISOLATION PROTECTION** — One of the big reasons you should specify Modular Containers is because the system was developed by Zero Manufacturing, Inc. to afford the maximum shock isolation and environmental protection possible. Zero Manufacturing, Inc. engineers can help you solve any shock or vibration requirements.

**ATTRACTIVE DESIGN** — Modular Containers have an esthetic appeal inherent in their design and construction. The distinctive appearance of Modular Containers has an added advantage: Because of their "image impact" they receive greater care from freight handlers than ordinary packaging.

**EASY, FAST, ECONOMICAL ACCESSORIZING WITH STANDARD OPTIONS** — Because of the unique construction methods employed in Modular Container construction, accessories can be quickly and economically attached to the various skin and structural members prior to

assembly. The clean interior permits optimum placement of accessories.

**FAMILY RESEMBLANCE IN PACKAGING SYSTEMS** — Due to the versatility of the modular container system, entire systems can be packaged with a strong family resemblance, regardless of the individual size or shape of the product to be contained.

**SERVES AS ITS OWN WAREHOUSE** — Modular Containers provide optimum environmental protection even when placed in open storage. In effect, each container serves as its own warehouse.

**HANDLING FIXTURES** — Zero Manufacturing, Inc. can provide a handling fixture integral with the case for safe storage, with easy access to fragile items.

TINKERTOY E.G. Spalding & Bros. Co  
Modular Container Patent Numbers  
3,044,656 and 3,044,658

# METHOD OF CONSTRUCTION

## SHEET ALUMINUM PANELS

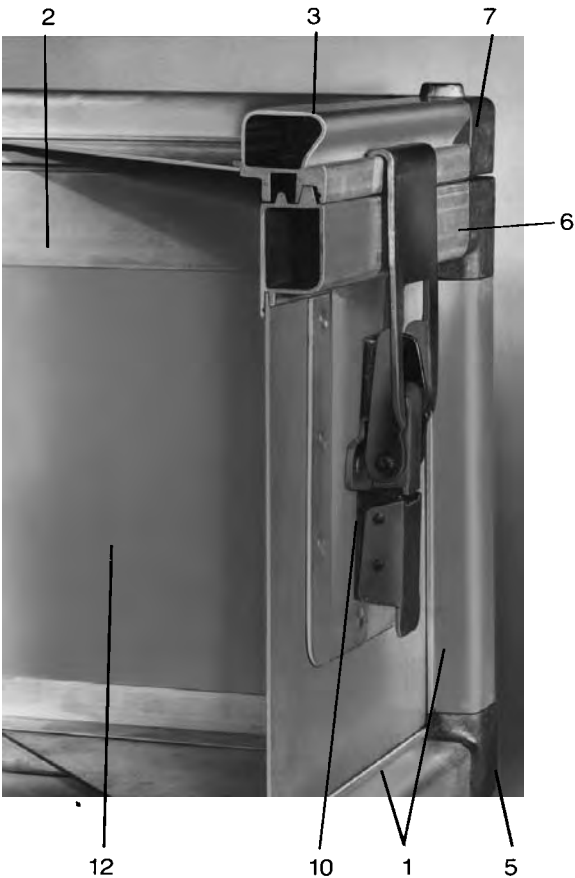
MEETS ALL APPLICABLE PROVISIONS OF MIL-C-4150; MIL-STD-108; MIL-T-28800 AND MIL-STD-810.

The modular container is made of 5052-H32 aluminum alloy side panels, either .063" or .090" thick.

A unique feature of this type case is that the external frame, constructed of high strength bonded aluminum extrusions, carries the load. The side panels are epoxy bonded into these extrusions, thereby adding to the already significant load bearing characteristic of the structure and the rigidity of the case.

The sheet-metal construction lends itself easily to volume production, as handles, latches, and bracketry can be spot-welded in the flat prior to assembly. Outside hardware is automatically recessed, due to the overhang of the extrusions.

Sheet-metal modular cases are especially useful as housings for suspension or shock-isolation systems for odd-shaped products, and in pallet-and-shroud constructions. In this latter type of packaging, the equipment is anchored to a heavy-duty pallet, and a lightweight shroud is fastened in place over it. The pallet provides the structural strength; the shroud provides the required environmental protection, yet allows easy and complete access when the equipment is to be used.



### WEIGHT APPROXIMATION GUIDE

The following weight information should be helpful in computing approximate case weight once you have established a configuration.

Part	Material Thickness	Material Thickness
	.063	.090
1. Corner Rail	.585 #/ft.	.900 #/ft.
2. Top Rail Case	.520 #/ft.	.754 #/ft.
3. Lid Rail (Shallow)	.677 #/ft.	1.18 #/ft.
4. Lid Rail Split (Deep)	.594 #/ft.	1.11 #/ft.
5. Casting Corner Regular	.475 #	.786 #
6. Casting Corner Closure (Case)	.478 #	.725 #
7. Casting Corner Closure Cover (Shallow)	.354 #	.650 #
8. Casting Corner Closure Cover (Deep)	.422 #	.744 #
9. Stiffener-Panel	.300 #/ft.	.410 #/ft.
10. Latch	.66 #	.98 #
11. Handle	.52 #	.52 #
12. Panel (Aluminum)	.907 #/ft <sup>2</sup>	1.296 #/ft <sup>2</sup>

# DESIGN AND SPECIFICATIONS

## Sheet Aluminum Panels

### THE MODULAR ENVELOPE

The Modular Envelope is available in various configurations to suit the packaging requirements. Sizes may range from as small as 2-ft. x 2-ft. x 2-ft. on up to the practical limit. Zero Manufacturing, Inc. has manufactured modular cases up to 50 feet in length for submarine periscopes. The basic envelope in the Modular Container system consists of aluminum panels which are fitted into a rigid framework of special extrusions in sections, and then joined by means of die-cast corner castings. The entire assembly is then epoxy bonded to provide a watertight, airtight container. The quick-opening lids are engineered to provide a positive seal. Lids may be either the shallow or deep type and can be located for top, end, side opening, or as required.

### PANELS

Sheet aluminum alloy 5052-H32 panels are .063" or .090" thickness.

### EXTRUSIONS

Aluminum alloy 6063-T6.

### EXTERIOR COMPONENTS

All exterior accessories are aluminum or steel as specified for the individual component. All exterior components are recessed except strap of latch claw.

### INTERIOR COMPONENTS

Aluminum alloy or as specified.

### CORNER CASTINGS

Aluminum base die castings per MIL-A-15153 Class 10.

### ADHESIVES

Structural epoxy that complies with military specifications.

### SEALING GASKETS

MIL-R-6855, Class II. All joints bonded to form continuous gasket.

### METHODS

Spot welds of high quality, shear strength and metallurgy comparable to that defined in MIL-W-6858, Class B, except that welds for primary structural strength are Class A. Fusion welding is performed by operators certified to MIL-STD-1595 and MIL-STD-2219.

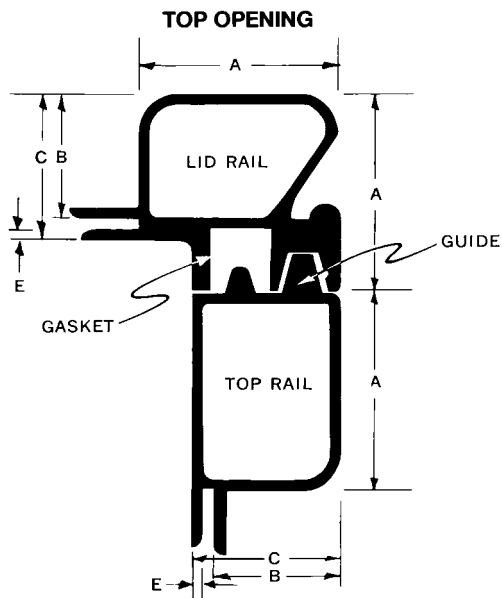
### FINISHES

Zero Manufacturing, Inc. maintains its own facilities for application of chemical films, epoxy finishing, enameling and painting. Commercial or military specifications can be met.

*NOTE: Stiffeners will be located where needed for rigidity. Hinges and latches will be supplied and located for proper sealing. The handles will be located wherever possible for easiest handling.*



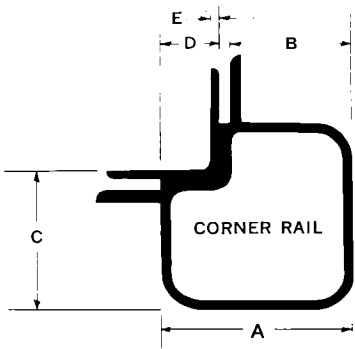
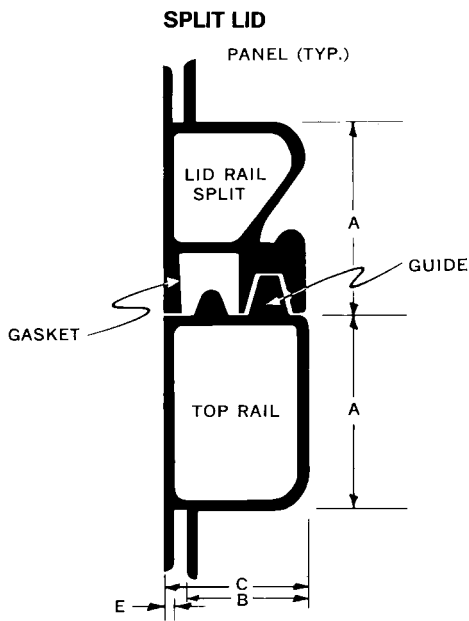
# DETAIL SPECIFICATIONS



DIMENSIONS, INCHES		CLOSURE MEMBERS			FIGURE I
Panel Thickness	A	B	C	E	Gasket compressed when closed, %
.063	1.282	.815	.967	.080	33-1/3%
.090	1.680	1.086	1.270	.090	33-1/3%

DIMENSIONS, INCHES		CLOSURE MEMBERS			FIGURE II
Panel Thickness	A	B	C	D	E
.063	1.282	.815	.967	.395	.080
.090	1.680	1.086	1.270	.50	.090

E The thickness of the grip, subtract 2 x E from length and width dimension to determine size of opening.



CORNER MEMBER FIGURE II

CLOSURE MEMBERS FIGURE I

# SHOCK/VIBRATION ISOLATION

Zero Manufacturing, Inc.'s engineering experience in solving shock and vibration problems can often save customers considerable time and money. Through the experience gained in producing more than 200,000 containers to military specifications, including the shock/vibration protection of contents. Zero Manufacturing, Inc. engineers are able to provide the optimum protection for the minimum expenditure.

## METHODS

The three most common methods of shock/vibration protection for Modular Containers are polyurethane foam cushioning, polyethylene foam cushioning, and shear/vibration mounts. The following is a review of the basic characteristics of each.

### 1. POLYURETHANE FOAM CUSHIONS\*

(MIL-PRF-26514)—Available in flat sheet, low density polyurethane (4 lbs./ft<sup>3</sup> and under) is an excellent cushion for absorbing energy under impact. It has little rebound, and will not dust, crumble or flake. It has predictable performance characteristics in temperatures ranging from -10°F to +185°F. It is generally more efficient than rubberized hair cushions and somewhat higher in cost. It is especially adaptable for storage and protection of small items in multicavity pads. Has good damping characteristics under vibration. It is not a suitable material where large deflections are required because of severe handling and low fragility factor of equipment. It is not a suitable material where high unit bearing loads are required.

### 2. POLYETHYLENE FOAM CUSHIONS\*

(A-A-59136)—Closed cell material capable of supporting high loads. It has predictable performance characteristics in the range of -60°F to +160°F

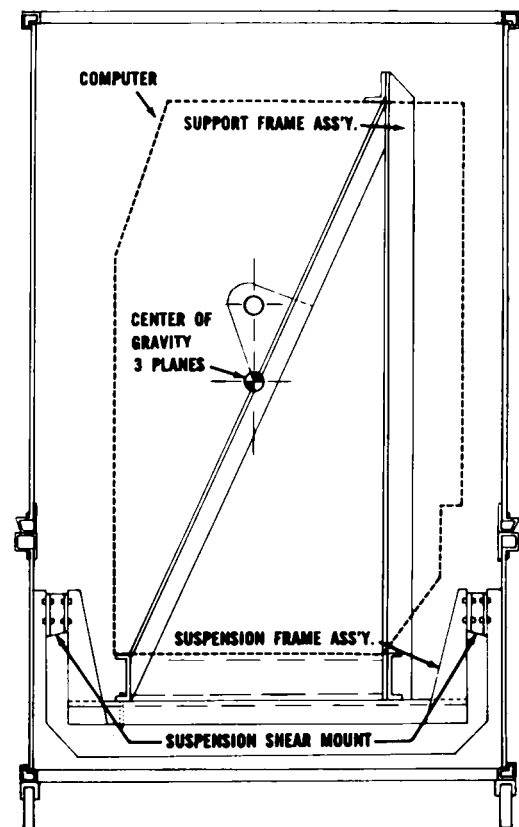
### 3. SHEAR AND VIBRATION MOUNTS

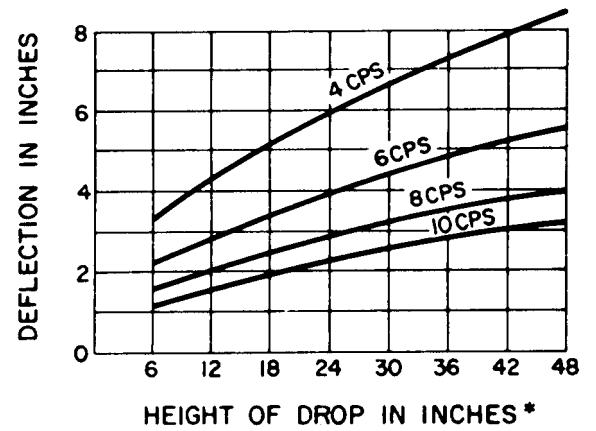
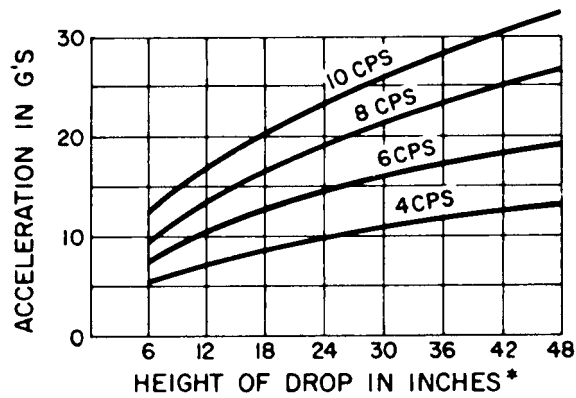
Available in a wide range of sizes and load capacities. The

\*See page 63 for reference.

preferred method where large deflection is required because of low fragility level of equipment. Adaptable to cover a wide range of rough handling conditions over a wide range of fragility levels. Extremely large and heavy items can be protected by this method. Mounts of natural rubber may be used over a temperature range from -40°F to +185°F. Silicone mounts (broad temperature range mounts) may be used from -65° to +185°F. Amplification due to vibration in the resonant frequency ranges may be controlled by designing the system to have a natural frequency outside of the critical operation range; or, a damping system may be designed. This mounting system may be used for items having fragile protrusions, since mounting is made to specific strong points.

*This drawing shows how a computer is mounted in a Modular Container using a suspension frame assembly with elastomer shear mounts.*





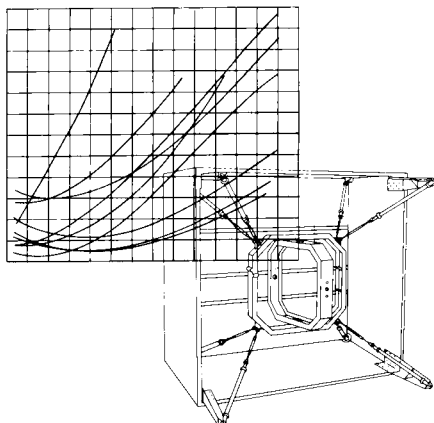
These charts show the relationship of a drop height, deflection, fragility factor and natural frequency of a suspension system. (Courtesy of Lord Corporation)



Typical use of polyurethane foam in a Modular Container. This material is especially adaptable for storage and protection of small items in multicavity pads which can be fabricated to any configuration.



Typical interior modification of a Modular Container with four elastomeric shock mounts to protect the contents against shock and vibration.



#### FREE CONSULTATION

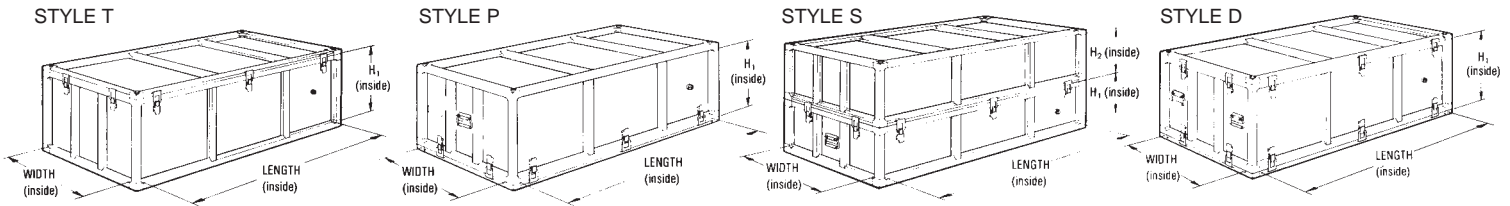
The proper type of shock/vibration isolation system to meet your particular requirements is dependent upon many variables. We suggest that you consult the Zero Manufacturing, Inc. engineering staff. Working in consultation with you, they can provide the most suitable and economical solution to your problem.



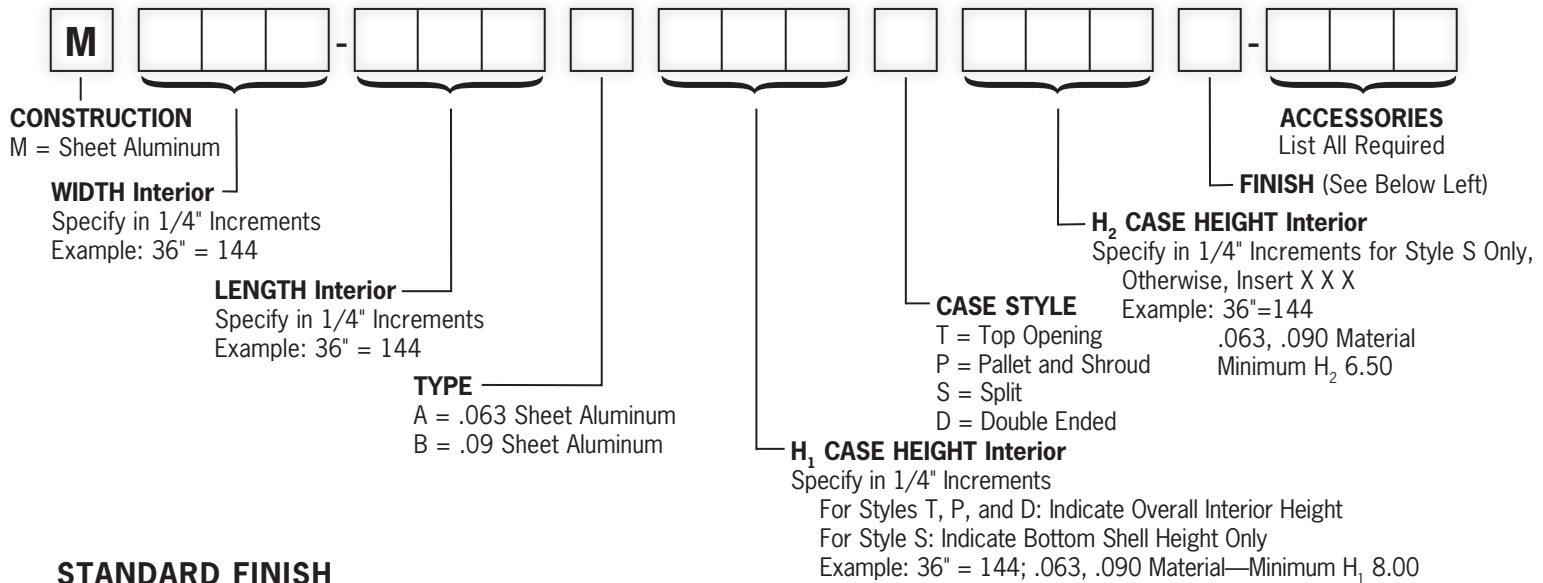
# BUILD YOUR MODULAR

## Standard Configurations

Toll Free (US) 800.500.9376  
Direct 801.298.5900 | Fax 801.299.7389  
www.zerocases.com | sales@zerocases.com



Ordering a Modular Container can be as easy as composing a part number. Simply choose the construction best suited to your needs, determine your size requirements, style, color and optional accessories. ZERO will design and manufacture containers to meet applicable requirements.



## STANDARD FINISH

- A= No Finish.  
B= Wash Prime & Epoxy Primer.  
C= Same as B Plus Paint Polyurethane Coating, Light Gray Semi-Gloss Color #26307 of FED-STD-595.  
D= Same as B Plus Paint Polyurethane Coating, Light Gray Gloss Color #16307 of FED-STD-595.  
E= Same as B Plus Paint Yellow Gloss Enamel, Color #13538 or FED-STD-595.  
F= Same as B Plus Paint Strata Blue Gloss Enamel, Color #15045 of FED-STD-595.  
G= Same as B Plus Paint Green Semi-Gloss Enamel, Color #24300 of FED-STD-595.  
H= Same as B Plus Paint Olive Drab Semi-Gloss Enamel, Color #24084 of FED-STD-595.  
J= Same as B Plus Paint Olive Drab Lusterless Enamel #34088 of FED-STD-595.  
K= Same as B Plus Aliphatic Polyurethane Camouflage Coating (CARC) per MIL-DTL-53039, Type I, Color #383 Green, #34094 of FED-STD-595.  
S= Special Order—Please Specify.  
W=Chemical Film Per MIL-DTL-5541, Class 1A. Epoxy Primer per MIL-DTL-53022, Type II, or Water-base Epoxy Primer per MIL-DTL-53030, Type I. Paint with Polyurethane Coating Per MIL-PRF-85285, Type II, Class H, Color #17925 (White) of FED-STD-595 or Epoxy Coating Per MIL-PRF-22750.

## OTHER COLORS AND FINISHES AVAILABLE ON REQUEST

Paint interior and exterior with Light Gray Semi-Gloss Enamel per FED-STD-595, is standard on Military Cases unless otherwise specified.

Any commercial or military specification can be met in our completely equipped and staffed paint facility. In addition to supplying any color per FED-STD-595, ZERO has coded swatches to match any color.

Other services include panel fabrication and complete silk screen and engraving facilities for labeling, designation printing, decals, stenciling and call outs.

## STANDARD CONTAINER FEATURES

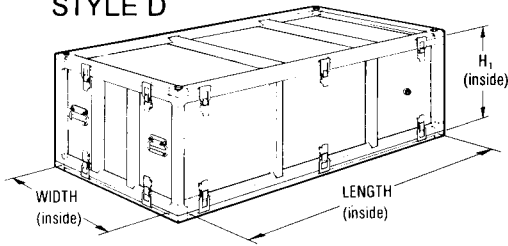
- Panel Stiffeners (as required)
- ZP20137 Handles (Type A & B)
- Continuous Neoprene Seal
- Designed to be Watertight at a Pressure Differential 0.4 psig
- ZSP 6-037-1 Automatic Pressure Relief Valve
- ZSP 2-2001 Latches on Type A (as required) to Maintain Waterproof Seal
- ZSP 2-216 Latches on Type B (as required) to Maintain Waterproof Seal
- Proper Placement and Location of Optional Accessories



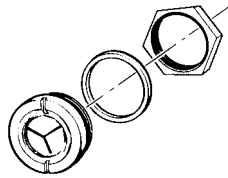
# HOW TO ORDER

## Custom or Special Configurations

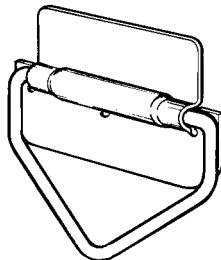
### STYLE D



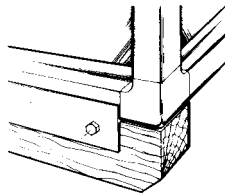
This optional configuration features a removable top and base, both firmly secured by sufficient latches.



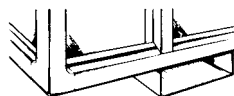
R-1 Humidity indicator



R-2 Hoisting Grapple (Set of 4)



R-3 Standard skid rails (set of 2)



R-4 Fork lift guides

Other accessories available on special order. For more information, contact your nearest ZERO plant or your local sales engineering representative.

(Submit sketch or verbal description)

### CONTENTS

Is access to contents in container required or preferred:

- a) From top?
- b) From either end (or both ends)?
- c) From all sides (Pallet-and-Shroud types)?

### INFORMATION ON CONTENTS

- a) Submit outline drawing of component(s) showing overall size, including projections.
- b) In lieu of drawing, furnish components: (1) Width, length, height (including projections).
- c) Weight and center of gravity.
- d) Points of attachment (if none, state forbidden bearing areas).

### PROTECTION REQUIRED (SHOCK & VIBRATION)

- a) Fragility in G's. Specify maximum G shock in each of three major axes with drop specified in inches.
- b) Vibration. Specify frequency, excursion, planes and duration.

### PROTECTION REQUIRED (ENVIRONMENTAL)

- a) Altitude (pressure).
- b) Temperature range.
- c) Water.

### HANDLING

Specify manual, fork-lift, sling or pallet.

### TRANSPORTATION CONTAINER IS DESIGNED FOR

Specify truck, rail, aircraft or ship.

### APPLICABLE MILITARY OR CUSTOMER PACKAGING SPECIFICATIONS

- a) State applicable Military Specification(s).
- b) If no Military Specifications are required, state your own packaging specifications.

## NOTES

## NOTES



# Products



## DEEP DRAWN COMPONENTS

- Precision Miniatures
- Stock Enclosures
- Value Added Enclosures
- In-Stock Deep Drawn



## CARRYING CASES

- Style-Lite
- Valuline
- Centurion Elite
- Centurion MIL-Spec
- Centurion On Demand



## 19" RACK MOUNTS

- Warrior
- Scout
- Val-An 700
- Val-An 900
- ZERAK



## TRANSIT AND STORAGE CONTAINERS

- Transittainer
- Val-An
- Pre-Engineered Cases
- Modular Containers

# Services

## DESIGN

- Product Design
- Product Engineering
- Custom Foam
- Prototyping

## FABRICATION

- Production/Manufacturing
- Assembly
- Drop Testing
- Environmental Testing

## FINISHING

- Anodizing
- Chemical Etching
- Painting
- Powder Coating
- Silkscreening

- Heat Treating
- Perforating
- Sheet Metal Fabrication
- Tool and Die Creation
- Welding

# Industries

- Military & Defense
- Aerospace

- Broadcast/Telecom
- Medical

- Electronics
- Industrial

- Homeland Defense

## ZERO Knows...

### PLASTIC & METAL

ZERO is the premier manufacturer of both metal and plastic protective enclosures.

### DEEP DRAWN

ZERO perfected the deep draw process and has the largest range of tooling in the world. Large or small, we can handle virtually any deep draw requirement.

### CUSTOM SOLUTIONS

ZERO's capabilities range from very small custom enclosures to very large and complex fabricated assemblies.

### SPEED

Manufacturing accelerates production lead times, so your product reaches you faster! Ask about our Quick-SHIP, In-Stock and 'On-Demand' Programs.

### SUCCESS

ZERO's solutions are time-tested and field proven. With over 100 years engineering experience and 50 years, ZERO cases have been the benchmark for durability and longevity.

### ZERO MANUFACTURING, INC.

500 West 200 North | North Salt Lake, Utah 84054 USA  
Toll Free US 800.500.9376 (ZERO)  
Direct 801.298.5900 | Fax 801.299.7389  
Email [sales@zerocases.com](mailto:sales@zerocases.com) | Web [www.zerocases.com](http://www.zerocases.com)