

Open Frame



Size: 3in x 2in x 1.16in

U-Chassis



Size: 3.6in x 2.44in x 1.54in

Enclosed



Size: 3.6in x 2.44in x 1.54in

DIN Rail



Size: 3.6in x 2.45in x 1.54in

**OPTIONS**

- Package Type
  - Open Frame
  - U-Chassis
  - Enclosed
  - Din Rail
- Protection Type
  - Class I
  - Class II

**FEATURES**

- Input Voltage Range of 85~264VAC
- Low Standby Power Consumption
- Active Power Factor Correction
- Built-In EMI Filter
- Four Package Types Available
- Low Leakage Current
- Adjustable Output Voltage
- Alternate Screw Terminals Available
- 3000VAC Isolation
- Class I and Class II Protection Type
- Over Voltage, Over Load, and Short Circuit Protection
- CE Marked
- RoHS II Compliant
- REACH Compliant
- UL60950-1, EN60950-1, & IEC60905-1 Safety Approvals

**APPLICATIONS**

- Wireless Network
- Telecom/Datacom
- Industry Control System
- Measurement Equipment
- Semiconductor Equipment

**DESCRIPTION**

The PSTAD100 series of AC/DC power supplies offers up to 100 watts of output power in either an open frame, u-chassis, enclosed, or din rail case. This series consists of single output models with a wide input voltage range of 85~264VAC. Each model in this series has active power factor correction, low standby power consumption, low leakage current, and 3000VAC isolation. The PSTAD100 series also has over voltage, over load, and short circuit protection, class I and class II protection, and is RoHS II and REACH compliant. This series has UL60950-1, EN60950-1, and IEC60950-1 safety approvals.

**MODEL SELECTION TABLE**

Model Number	Input Voltage Range	Output Voltage	Output Current	Efficiency	Ripple & Noise	No Load Input Power	Output Power	Package Type
PSTAD100US-120	85~264VAC (120-370VDC)	12VDC	8.34A	91%	120mVp-p	0.3 Watts	Up to 100 Watts	Open Frame
PSTAD100US-150		15VDC	6.67A	92%	150mVp-p			
PSTAD100US-240		24VDC	4.17A	92%	160mVp-p			
PSTAD100US-280		28VDC	3.58A	92%	180mVp-p			
PSTAD100US-360		36VDC	2.78A	91%	190mVp-p			
PSTAD100US-480		48VDC	2.09A	91%	340mVp-p			
PSTAD100US-12U	85~264VAC (120-370VDC)	12VDC	8.34A	91%	120mVp-p	0.3 Watts	Up to 100 Watts	U-Chassis
PSTAD100US-15U		15VDC	6.67A	92%	150mVp-p			
PSTAD100US-24U		24VDC	4.17A	92%	160mVp-p			
PSTAD100US-28U		28VDC	3.58A	92%	180mVp-p			
PSTAD100US-36U		36VDC	2.78A	91%	190mVp-p			
PSTAD100US-48U		48VDC	2.09A	91%	340mVp-p			
PSTAD100US-12C	85~264VAC (120-370VDC)	12VDC	8.34A	91%	120mVp-p	0.3 Watts	Up to 100 Watts	Enclosed
PSTAD100US-15C		15VDC	6.67A	92%	150mVp-p			
PSTAD100US-24C		24VDC	4.17A	92%	160mVp-p			
PSTAD100US-28C		28VDC	3.58A	92%	180mVp-p			
PSTAD100US-36C		36VDC	2.78A	91%	190mVp-p			
PSTAD100US-48C		48VDC	2.09A	91%	340mVp-p			
PSTAD100US-12DN	85~264VAC (120-370VDC)	12VDC	8.34A	91%	120mVp-p	0.3 Watts	Up to 100 Watts	DIN Rail
PSTAD100US-15DN		15VDC	6.67A	92%	150mVp-p			
PSTAD100US-24DN		24VDC	4.17A	92%	160mVp-p			
PSTAD100US-28DN		28VDC	3.58A	92%	180mVp-p			
PSTAD100US-36DN		36VDC	2.78A	91%	190mVp-p			
PSTAD100US-48DN		48VDC	2.09A	91%	340mVp-p			

SPECIFICATIONS						
All specifications are typical at 230VAC input, Full Load, and 25°C unless otherwise noted. We reserve the right to change specifications based on technological advances.						
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
<b>INPUT SPECIFICATIONS</b>						
Operating Input Voltage Range	AC Input		85		264	VAC
	DC Input		120		370	VDC
Input Frequency	AC Input		47		63	Hz
Input Current	115VAC and Full Load				1.15	A
	230VAC and Full Load				0.55	
Leakage Current	264VAC				300	µA
Power Factor			0.95			
Inrush Current	230VAC				100	A
Input Protection	Internal Fuse		T3.15A/250VAC			
<b>OUTPUT SPECIFICATIONS</b>						
Output Voltage			See Table			
Voltage Accuracy	230VAC and Full Load		-1.0		+1.0	%
Line Regulation	Low Line to High Line at Full Load		-0.2		+0.2	%
Load Regulation	No Load to Full Load		-0.5		+0.5	%
	10% Load to 90% Load		-0.4		+0.4	
Voltage Adjustability			-10		+10	%
Output Power					100	W
Output Current			See Table			
Minimum Load				0		%
Ripple & Noise (20MHz bandwidth)	With a 10µF/25V 1206 X7R MLCC	12V		120		mVp-p
	With a 10µF/25V 1206 X7R MLCC	15V		150		
	With a 1µF/50V 1206 X7R MLCC	24V		160		
	With a 1µF/50V 1206 X7R MLCC	28V		180		
	With a 1µF/50V 1206 X7R MLCC	36V		190		
	With a 0.1µF/100V 1206 X7R MLCC	48V		340		
Transient Response Recovery Time	Load step from 50~75% Change at 2.5A/µs	Peak Deviation			3	% Vout
		Recovery Time		500		µs
Start-Up Time					1000	mS
Rise Time				20		mS
Hold Up Time	115VAC and Full Load		22			mS
Temperature Coefficient			-0.02		+0.02	%/°C
<b>PROTECTION</b>						
Short Circuit Protection			Continuous, Automatic Recovery			
Over Load Protection	% of Iout Rated; Hiccup Mode		115		150	%
Over Voltage Protection	% of Vout(nom); Latch Mode		115		135	%
<b>ENVIRONMENTAL SPECIFICATIONS</b>						
Operating Temperature	Natural convection and Full Load (with derating) -40°C Start Up: 80% Load, max @Vin > 100VAC -40°C Start Up: 100% Load, max @Vin > 200VAC		-40		+85	°C
Storage Temperature			-40		+85	°C
Operating Altitude					5000	m
Relative Humidity			5		95	%RH
Thermal Shock			MIL-STD-810F			
Shock			IEC60068-2-27			
Vibration			IEC60068-2-6			
MTBF	MIL-HDBK-217F, 25°C, Full Load			790,300		Hours
<b>GENERAL SPECIFICATIONS</b>						
Efficiency			See Table			
Switching Frequency				60		kHz
Isolation Voltage	1 Minute (Reinforced Insulation)	Input to Output	3000			VAC
		Input (Output) to F.G.	1500			
Isolation Resistance	500VDC		0.1			GΩ

**SPECIFICATIONS**

All specifications are typical at 230VAC input, Full Load, and 25°C unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

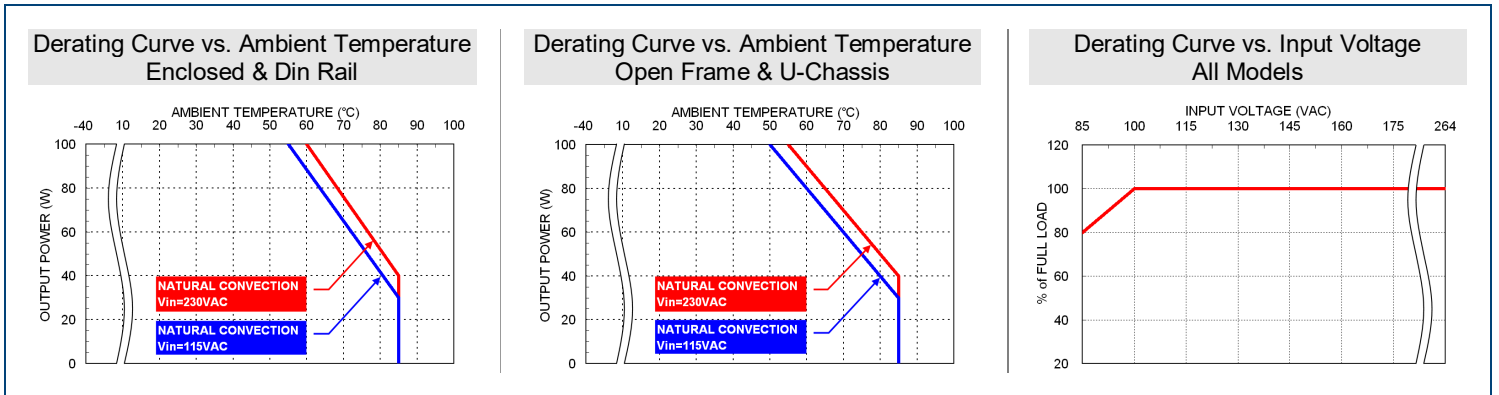
SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
<b>PHYSICAL SPECIFICATIONS</b>						
Weight	Open Frame Package			5.50oz (156g)		
	U-Chassis Package			6.84oz (194g)		
	Enclosed Package			7.41oz (210g)		
	Din Rail Package			8.18oz (232g)		
Dimensions (L x W x H)	Open Frame Package		3in x 2in x 1.16in (76.2mm x 50.8mm x 29.5mm)			
	U-Chassis Package		3.6in x 2.44in x 1.54in (91.4mm x 62mm x 39.2mm)			
	Enclosed Package		3.6in x 2.44in x 1.54in (91.4mm x 62mm x 39.2mm)			
	Din Rail Package		3.6in x 2.45in x 1.54in (91.4mm x 62mm x 39.2mm)			
<b>SAFETY CHARACTERISTICS</b>						
Safety Approvals	UL60950-1 <sup>(2)</sup> , EN60950-1, IEC60950-1					
EMI <sup>(1)</sup>	EN55011, EN55022 and FCC Part 15				Conducted: Class B Radiated: Class A	
Harmonic Currents	EN61000-3-2	Full Load	Class A and D			
Voltage Flicker	EN61000-3-3					
ESD	EN61000-4-2	Air±8kV and Contact±6kV	Perf. Criteria A			
Radiated Immunity	EN61000-4-3	20 V/m	Perf. Criteria A			
Fast Transient	EN61000-4-4	±2kV	Perf. Criteria A			
Surge	EN61000-4-5	DM ±1kV and CM±2kV	Perf. Criteria A			
Conducted Immunity	EN61000-4-6	20 Vr.m.s	Perf. Criteria A			
Power Frequency Magnetic Field	EN61000-4-8	10 A/m	Perf. Criteria A			
Dip and Interruptions	EN61000-4-11 and EN55024					

**NOTES**

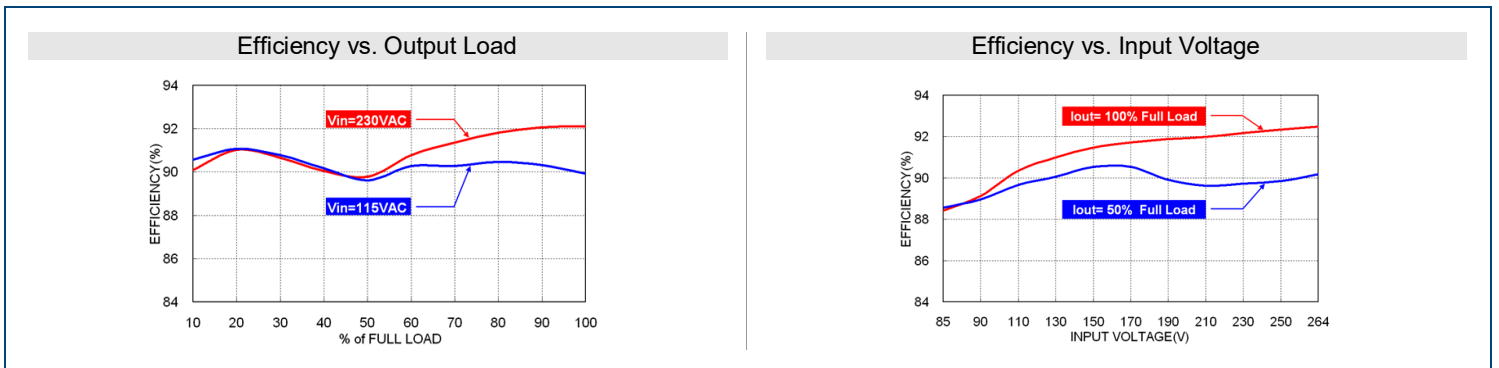
- External components may be required for class I application. Contact factory for more information.
- This product is Listed to applicable standards and requirements by UL.

*\*Due to advances in technology, specifications subject to change without notice.*

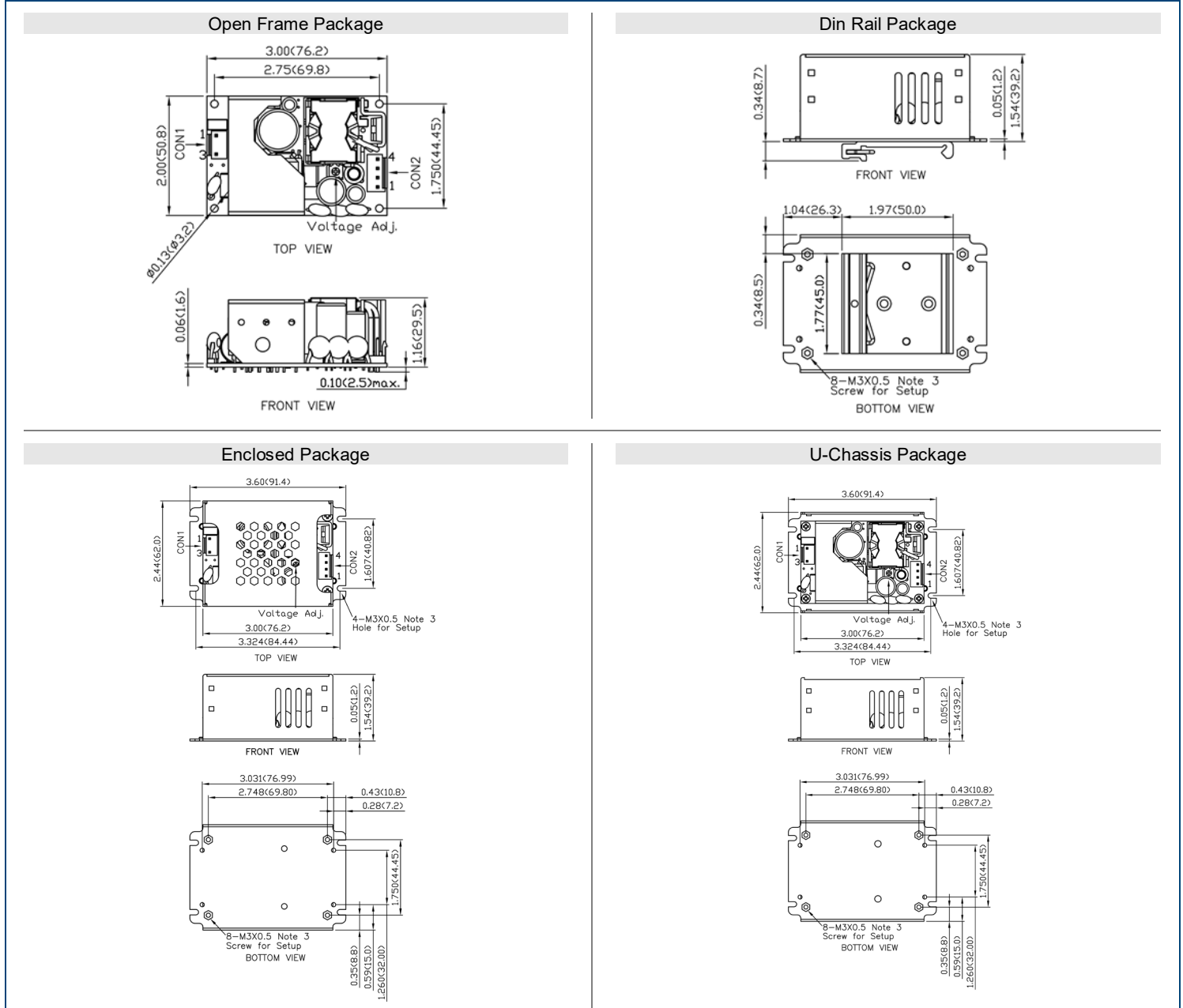
**DERATING CURVES**



**EFFICIENCY GRAPHS**



MECHANICAL DRAWINGS



- Notes:**
1. All dimensions in inch (mm)
  2. Tolerance: x.xx±0.02 (x.x±0.5) x.xxx±0.01 (x.xx±0.25)
  3. M3x0.5 screw locked torque MAX 5Kgf.cm/0.49N.m

**CON1-Input Connector**

Pin 1	Line
Pin 3	Neutral

Mates with:  
JST Housing: VHR-3N  
JST Crimp Terminals: SVH-21T-P1.1

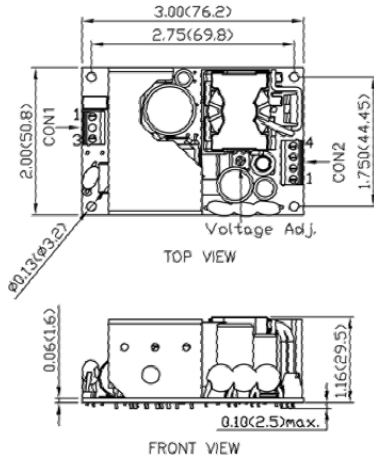
Either one of four screws holes of Open/Chassis type can be considered as PE connection for CLASS I application.

**CON2-Output Connector**

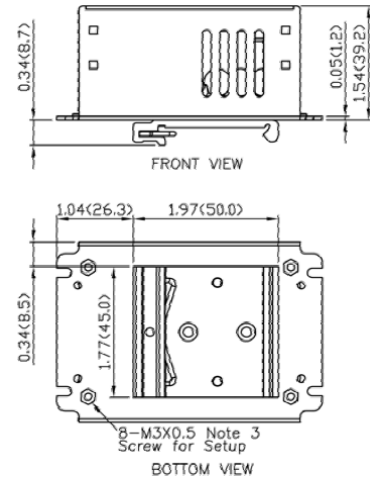
Pin 1, 2	-Vout
Pin 3,4	+Vout

Mates with  
JST Housing: VHR-4N  
JST Crimp Terminals: SVH-21T-P1.1

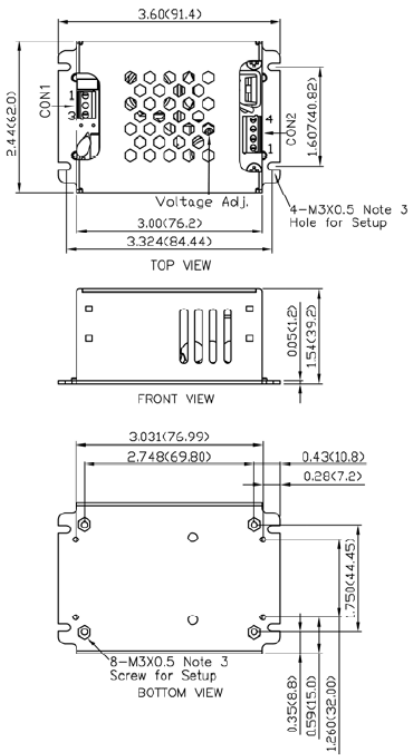
Open Frame Package (with "-T" Suffix)



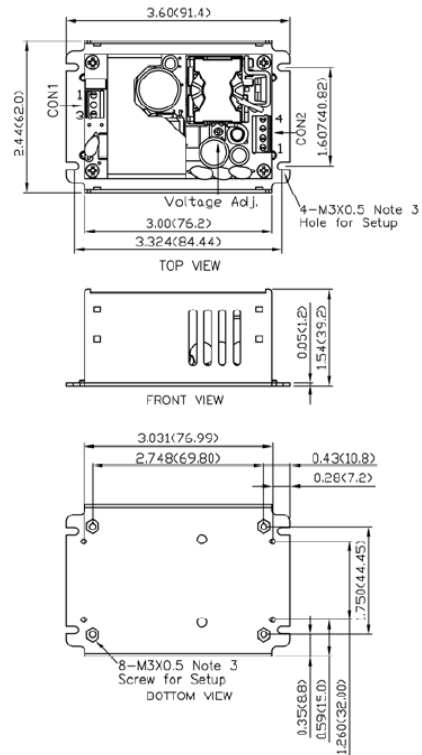
Din Rail Package (with "-T" Suffix)



Enclosed Package (with "-T" Suffix)



U-Chassis Package (with "-T" Suffix)



Notes:

1. All dimensions in inch (mm)
2. Tolerance: x.xx±0.02 (x.xx±0.5) x.xxx±0.01 (x.xx±0.25)
3. M3x0.5 screw locked torque MAX 5Kgf.cm/0.49N.m

CON1-Input Connector

Pin 1	Line
Pin 3	Neutral

Screw locked torque MAX 2Kgf.cm/0.2.m.  
Wire dimension range 26~16AWG

CON2-Output Connector

Pin 1, 2	-Vout
Pin 3,4	+Vout

Screw Locked Torque MAX 2Kgf.cm/0.2N.m  
Wire Dimension range 26~16AWG

MODEL NUMBER SETUP

PSTAD	100	U	S	-	12	U	B	-	T
Series Name	Output Power	Input Voltage	Output Quantity		Output Voltage	Package Type	Protection Type		Screw Terminal
	<b>100:</b> 100 Watts	<b>U:</b> Universal 85~264	<b>S:</b> Single		<b>12:</b> 12V <b>15:</b> 15V <b>24:</b> 24V <b>28:</b> 28V <b>36:</b> 36V <b>48:</b> 48V	<b>O:</b> Open Frame <b>U:</b> U-Chassis <b>C:</b> Enclosed <b>DN:</b> Din Rail	<b>B:</b> Class I <b>Blank:</b> Class II		<input type="checkbox"/> :None <b>T:</b> Terminal Block

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

Phone: ☎ (603)778-2300  
 Toll Free: ☎ (888)597-9255  
 Fax: ☎ (603)778-9797  
 E-mail: [sales@wallindustries.com](mailto:sales@wallindustries.com)  
 Web: [www.wallindustries.com](http://www.wallindustries.com)  
 Address: 37 Industrial Drive  
 Exeter, NH 03833

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