



**HYDRA-
ZORB™**

The obvious choice in piping cushion – clamp assemblies since 1966

**HYDRA-
ZORB™**

Hydra-Zorb Co., P.O. Box 214407, Auburn Hills, MI 48321-4407
(248) 373-5151 Fax (248) 373-0711 www.hydra-zorb.com

YOUR LOCAL DISTRIBUTOR:

INTRODUCTION

Hydra-Zorb Co. has been the leader in the strut-mounted clamp market for over 30 years, offering a wide variety of solutions when shock, vibration and corrosion are a problem. As the originator of the cushion clamp assembly, Hydra-Zorb is the name to request in the fluid power, pneumatic, refrigeration and HVAC industries.

Hydra-Zorb cushion clamps and moou-atak clamps:

- Cushion material is a thermoplastic elastomer rated from -65°F to +275°F.
- Resist most fuels, oils, gases, greases, solvents, mineral acids and other harsh materials.
- Allow fluid conductors to be added or removed from installations without disturbing adjacent lines.
- Permit various size lines to be mixed to suit installation.
- All metal components have a Tri-Valent (non-hex) plating.
- Provide fast and simple installation. Only one man and one tool needed for assembly after base channel is in place.
- Available in 304 and 316 stainless steel, aluminum, and galvanized powder coated.



STRUT MOUNTED CUSHION CLAMP ASSEMBLY NUMBERS

Ordering is simple. First, you must know if you require tube or pipe series. Second, the size of the line to be clamped. That's it.



All standard clamp assemblies consist of a 6-digit part number. A complete listing of part numbers for the pipe and tube series is listed on pages 4 and 5. The clamp assemblies are listed by series 100 and 200 as shown:

- 100 – tube (O.D. tube)
- 200 – pipe (Nominal pipe)

The cushion size is indicated by decimal inch. The example will show how to order both tube and pipe series.

EXAMPLE

Ordering a 3/4" O.D. tube assembly

100 075
series decimal inch

Ordering a 2 1/2" nominal pipe assembly

200 250
series decimal inch

All standard strut mounted cushion clamps have the following features:

- Cushion material is DuPont Hytrel rated from -65°F to 275°F.
- Clamps are 1008-1010 carbon steel.
- Studs are projection welded.
- Nylon insert locknut.
- All metal components have a zinc dichromate plating.

ADDITIONAL MATERIALS

Most commonly requested material for special applications.

Just add one of the following suffix numbers to your 6-digit part number.

series	decimal inch		
_____	_____	- 4 - 265	galvanized powder coated clamps 316 hex head bolt (loose) 304 locknut
_____	_____	- 4 - 555	304 stainless steel clamps 304 stainless stud (welded) 304 locknut
_____	_____	- 4 - 565	304 stainless steel clamps 316 hex head bolt (loose) 304 locknut
_____	_____	- 4 - 655	316 stainless steel clamps 304 stainless stud (welded) 304 locknut
_____	_____	- 4 - 666	316 stainless steel clamps 316 hex head bolt (loose) 316 locknut
_____	_____	- 4 - 865	aluminum (5052) clamps 316 hex head bolt (loose) 304 locknut

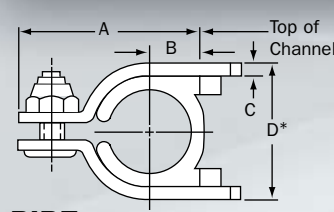


CUSHION CLAMP ASSEMBLIES

ENGINEERING INFORMATION & PIPING SELECTION CHART

TUBE

Tube Outside Diameter	.250	.312	.375	.470	.500	.625	.750	.875	1.000	1.125	1.190	1.250	1.375	1.500	1.625	1.750	1.875	2.000	2.125	2.250	2.375	2.500	2.625	3.000	3.125	3.625	4.125	
Clamp Assembly Part Number	100025	100031	100037	100047	100050	100062	100075	100087	100100	100112	100119	100125	100137	100150	100162	100175	100187	100200	100212	100225	100237	100251	100262	100300	100312	100362	100412	
Quantity Per Box	24	24	24	24	24	24	24	24	12	12	12	12	12	12	12	12	12	12	Each	Each	Each	Each	Each	Each	Each	Each	Each	Each
ACR Tube			■	■	■	■	■	■		■			■		■				■		■		■		■	■	■	
Refrigeration Serv.	■	■	■	■	■	■	■	■		■			■		■													
Type "K" Copper			■	■	■	■	■	■		■			■		■				■				■		■	■	■	
Type "L" Copper			■	■	■	■	■	■		■			■		■				■				■		■	■	■	
Type "M" Copper			■	■	■	■	■	■		■			■		■				■				■		■	■	■	
Steel	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Stainless Steel	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Aluminum			■		■	■	■	■	■			■		■				■	■			■	■	■	■	■	■	
PB			■		■	■		■		■			■		■				■				■		■	■	■	
PVC			■		■	■		■		■			■		■			■					■		■	■	■	
CPVC			■		■	■		■		■			■		■			■					■		■	■	■	
PE			■		■	■		■		■			■		■				■				■		■	■	■	

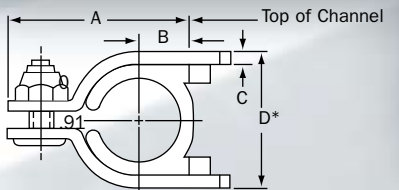


A	1.11	1.24	1.24	1.36	1.36	1.50	1.78	1.91	2.03	2.16	2.30	2.30	2.75	2.75	3.03	3.03	3.28	3.28	3.53	3.78	3.78	4.03	4.03	4.52	4.52	5.03	5.66
B	.22	.28	.28	.34	.34	.41	.53	.58	.66	.72	.72	.78	.91	.91	1.03	1.03	1.16	1.16	1.28	1.41	1.41	1.53	1.53	1.78	1.78	2.03	2.34
C	.075	.075	.075	.075	.075	.075	.075	.075	.105	.105	.105	.105	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119
D*	.62	.75	.75	.87	.87	1.00	1.33	1.45	1.66	1.79	1.92	1.92	2.22	2.22	2.47	2.47	2.47	2.72	2.97	3.22	3.22	3.47	3.47	3.97	3.97	4.47	5.09

*Minimum Required Installation Dimension

PIPE

Nominal Pipe Size	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Pipe O.D.	.54	.675	.84	1.05	1.315	1.66	1.90	2.375	2.875	3.5	4.0	4.5	5.563	6.625
Clamp Assembly Part Number	200025	200037	200050	200075	200100	200125	200150	200200	200250	200300	200350	200400	200500	200600
Quantity Per Box	24	24	24	12	12	12	12	Each	Each	Each	Each	Each	Each	Each
Carbon Steel 5S, 10S, 40 & 80	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Stainless 5S, 10S, 40 & 80	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Red & Yellow Brass & Copper	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Aluminum 5S, 10S, 40 & 80	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PVC 48, 80 & 120	■	■	■	■	■	■	■	■	■	■	■	■	■	■
CPVC 40 & 80	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PE 40 & 80	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PP 40 & 80	■	■	■	■	■	■	■	■	■	■	■	■	■	■
PVDF 80		■	■	■	■	■	■	■	■	■	■	■	■	■
PB 40		■	■	■	■	■	■	■	■	■	■	■	■	■
ABS 40 & 80		■	■	■	■	■	■	■	■	■	■	■	■	■
Fiberglass			■	■	■	■	■	■	■	■	■	■	■	■



A	1.41	1.59	1.91	2.16	2.75	3.03	3.28	3.78	4.27	4.91	5.53	6.03	7.03	8.03
B	.63	.45	.59	.72	.91	1.03	1.16	1.41	1.66	1.97	2.28	2.53	3.03	3.53
C	.075	.075	.075	.105	.119	.119	.119	.119	.119	.119	.119	.119	.135	.135
D*	.91	1.07	1.45	1.79	2.22	2.47	2.47	3.22	3.72	4.36	4.97	5.47	6.47	7.47

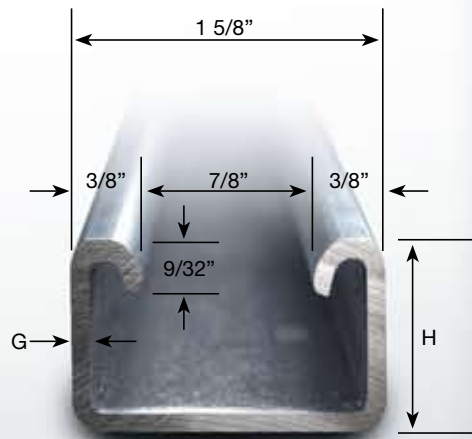
*Minimum Required Installation Dimension

For hoses: measure hose outside diameter and select nearest o.d. size

ANCHOR CHANNELS

SINGLE

Part Number	Height (H)	Gauge (G)	Material	Length
121036-1-203	1"	12 GA.	Steel	36"
121048-1-203	1"	12 GA.	Steel	48"
121120-1-203	1"	12 GA.	Steel	120"
121036-1-202	7/8"	12 GA.	Steel	36"
121048-1-202	7/8"	12 GA.	Steel	48"
121120-1-202	7/8"	12 GA.	Steel	120"
121048-1-101	13/16"	14 GA.	Steel	48"
121120-1-101	13/16"	14 GA.	Steel	120"
121048-5-101	13/16"	14 GA.	304 SS	48"
121120-5-101	13/16"	14 GA.	304 SS	120"
121048-6-101	13/16"	14 GA.	316 SS	48"
121120-6-101	13/16"	14 GA.	316 SS	120"
121048-8-202	7/8"	12 GA.	Aluminum	48"
121144-8-202	7/8"	12 GA.	Aluminum	144"



All channel widths are 1 5/8".

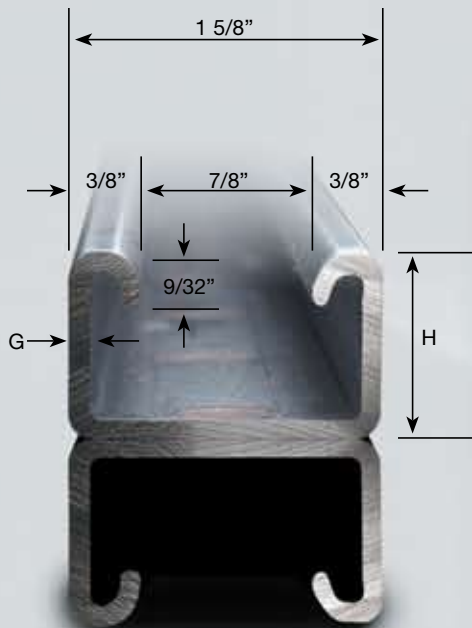
All steel channel shipped with plain finish (hot rolled p.o.).

Lengths listed are stock sizes. Special lengths are available; please contact your local distributor or the factory.

All special cut tolerances are $\pm 1/8"$.

DOUBLE

Part Number	Height (H)	Gauge (G)	Material	Length
122048-1-203	2"	12 GA.	Steel	48"
122120-1-203	2"	12 GA.	Steel	120"
122048-1-202	1 3/4"	12 GA.	Steel	48"
122120-1-202	1 3/4"	12 GA.	Steel	120"
122048-1-101	1 5/8"	14 GA.	Steel	48"
122120-1-101	1 5/8"	14 GA.	Steel	120"
122048-5-101	1 5/8"	14 GA.	304 SS	48"
122120-5-101	1 5/8"	14 GA.	304 SS	120"
122048-6-101	1 5/8"	14 GA.	316 SS	48"
122120-6-101	1 5/8"	14 GA.	316 SS	120"
122048-8-201	1 5/8"	12 GA.	Aluminum	48"
122144-8-201	1 5/8"	12 GA.	Aluminum	144"



All channel widths are 1 5/8".

All steel channel shipped with plain finish (hot rolled p.o.).

Lengths listed are stock sizes. Special lengths are available; please contact your local distributor or the factory.

All special cut tolerances are $\pm 1/8"$.

MODU-STAK APPLICATION INFORMATION

Hydra-Zorb's Modu-Stak cushion clamps are available in a wide variety of configurations. To assist in the ordering procedure, we are highlighting the most popular single and multi-tier assemblies.

General Characteristics

- Reduce noise, shock and vibration caused by surges in fluid conductors.
- Eliminate metal to metal contact between fluid conductors and clamps preventing galvanic reaction.
- Resists most fuels, oils, gases, greases, solvents, etc.
- Working temperature from -20°F to 212°F.
- Provide fast and simple installation.
- Extensive selection of components for assemblies can meet varying application requirements.
- Assemblies available in either single or double line.

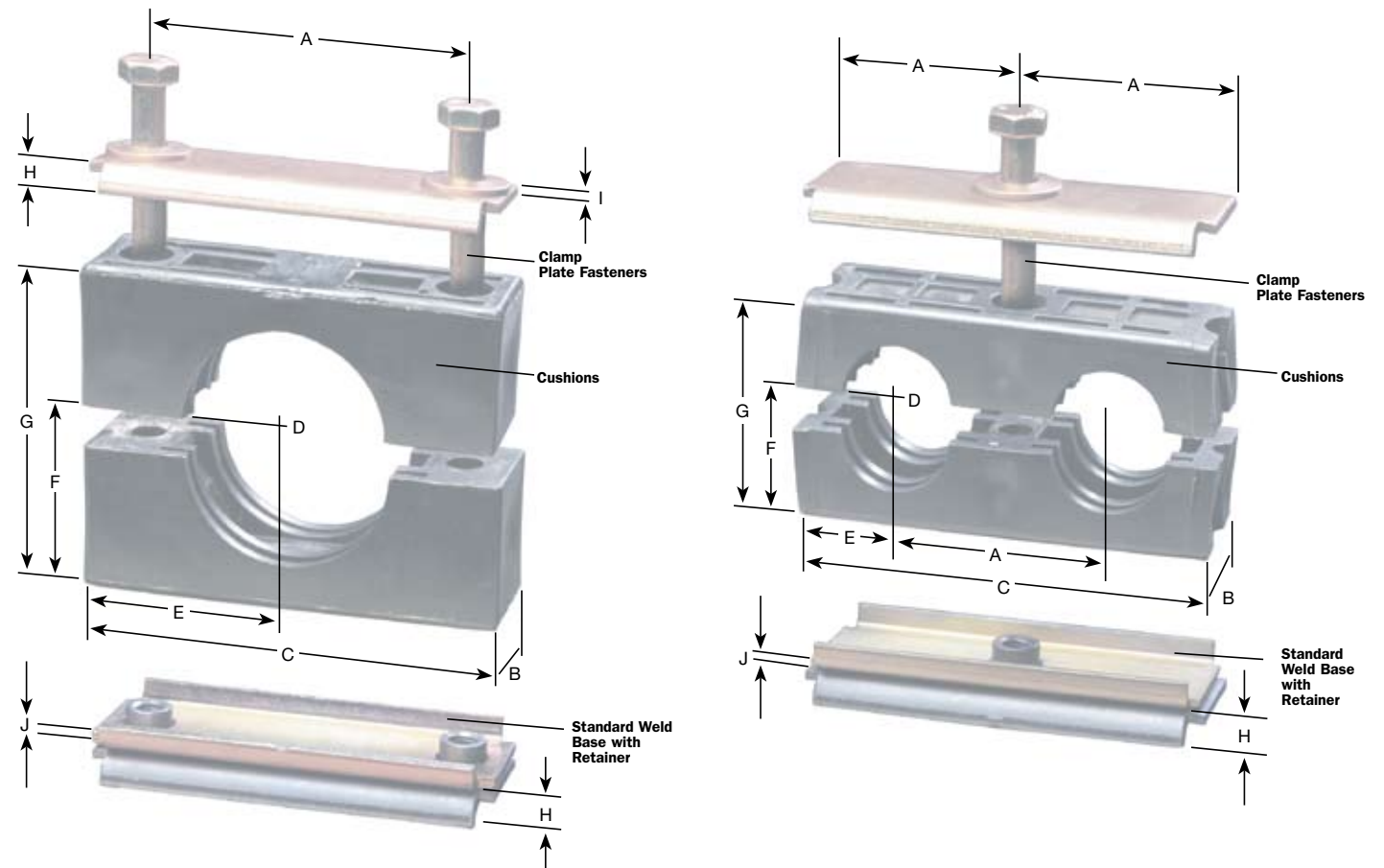
Mounting Features

- Clamp assemblies can use weld plates, be bolted directly into place, utilize channel mounting or be suspended using customer supplied threaded rod.
- Formed weld bases have integral weld nuts secured from the underside. Weld failure cannot cause clamp failure.
- Heavy weld plates, including integral weld nuts, are available for heavy duty applications.

Stacking and Tying

- Center distance of mounting holes (bolt holes) and height of the assembly are identical.
- All assembly sizes (like series) are the same width for good appearance when stacked together.
- Double retainer plates are used for heavier duty applications (required when stacking or tying).

MODU-STAK COMPONENT SELECTION



Modu-Stak are available in a wide variety of configurations. A twelve digit assembly number completely specifies all components of a standard assembly.

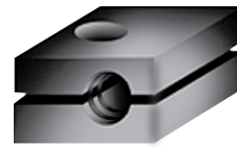
The first step is to determine the cushion series type, page 10. Next, determine the cushion I.D. size for your application, page 11. Pages 12 and 13 will show the most popular ways of mounting single and double tier Modu-Stak assemblies.

Clamp Series & Type	A	B	C	D	E	F	G	H	I	J
511		1.16	1.45	Cushion I.D. (see page 11)			.85			
521	1	1.16	1.90		.95	.425	.85	.30	.075	.075
522	1	1.16	1.94		.45	.425	.85	.30	.075	.075
524	1	1.16	3.88		.45	.425	.85	.30	.075	.075
531	1 1/2	1.16	2.40		1.20	.675	1.35	.30	.105	.075
532	1 1/2	1.16	2.94		.72	.675	1.35	.30	.105	.075
541	2	1.16	2.90		1.45	.925	1.85	.30	.105	.075
542	2	1.16	3.94		1.87	.925	1.85	.30	.105	.075
561	3	1.16	3.90		1.95	1.395	2.79	.30	.105	.105

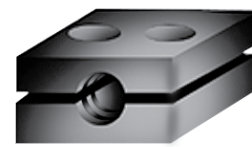
MODU-STAK CUSHION SERIES

5 0 0

See page 9 for dimensions



511



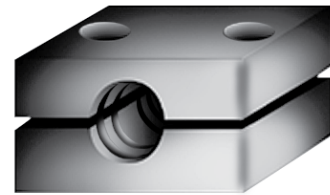
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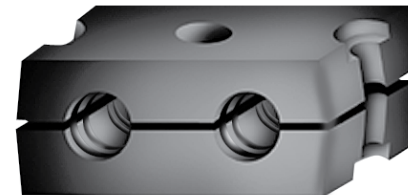
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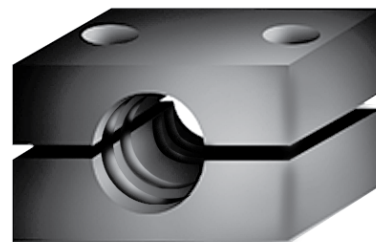
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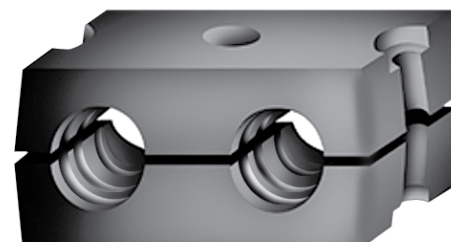
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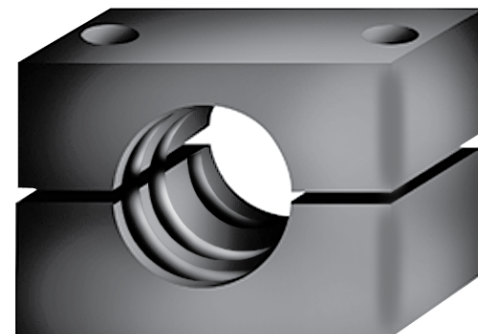
532



541



542



561

Drawings are 1/2" scale

MODU-STAK CUSHION I.D. SIZE



Modustak size and type										Cushion I.D. Size	D				
511	521	522	524	531	532	541	542	561	Tube O.D. Size		Nom. Pipe I.D. Size	Nom. ACR Tube I.D.	Bulkhead		
													Hex	Tube	
■	■	■	■							025	.25				
■	■	■	■							031	.31				
■	■	■	■	■	■					037	.37		.250	.500	1/4
■	■	■	■	■	■					050	.50		.375	.531	5/16
				■	■					054		1/4			
				■	■		■			062	.62		.500	.687	3/8
				■	■		■			067		3/8			
				■	■		■			075	.75		.625	.812	1/2
				■	■		■			084		1/2			
				■	■		■			087	.87		.750	.937	5/8
						■	■			100	1.00			1.125	3/4
						■	■			105		3/4			
						■	■			112			1.000	1.250	7/8
						■	■			125	1.25			1.370	1
						■	■			131		1			
						■	■			137			1.250		
								■		150	1.50			1.680	1 1/4
								■		162			1.500		
								■		166		1 1/4			
								■		175	1.75				
								■		190		1 1/2		2.000	1 1/2
								■		200	2.00				
								■		212			2.000		
								■		225	2.25				
								■		237		2			

Stock size shown shaded

Other cushion I.D. sizes are available when production quantities warrant, including two different cushion I.D. sizes in a double clamp. Use only single cushions for bulkhead applications.

**MODU-STAK SINGLE TIER
ARRANGEMENTS**

To simplify the ordering process, these pages show the most popular methods of mounting Modu-Stak assemblies. To complete the numbering process, you will need to indicate the series number and the cushion I.D. (Detailed on pages 10 and 11).



Standard Weld Base

series type cushion I.D. 00 1111



**Heavy Duty Weld Base (NEW)
(7 GA.)**

series type cushion I.D. 00 8111

Drill and Tap Mount

series type cushion I.D. 00 0111



**Spring Nut Mount
(Channel not included)**

series type cushion I.D. 00 3211



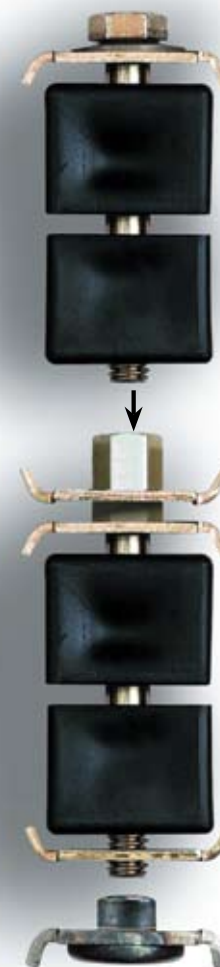
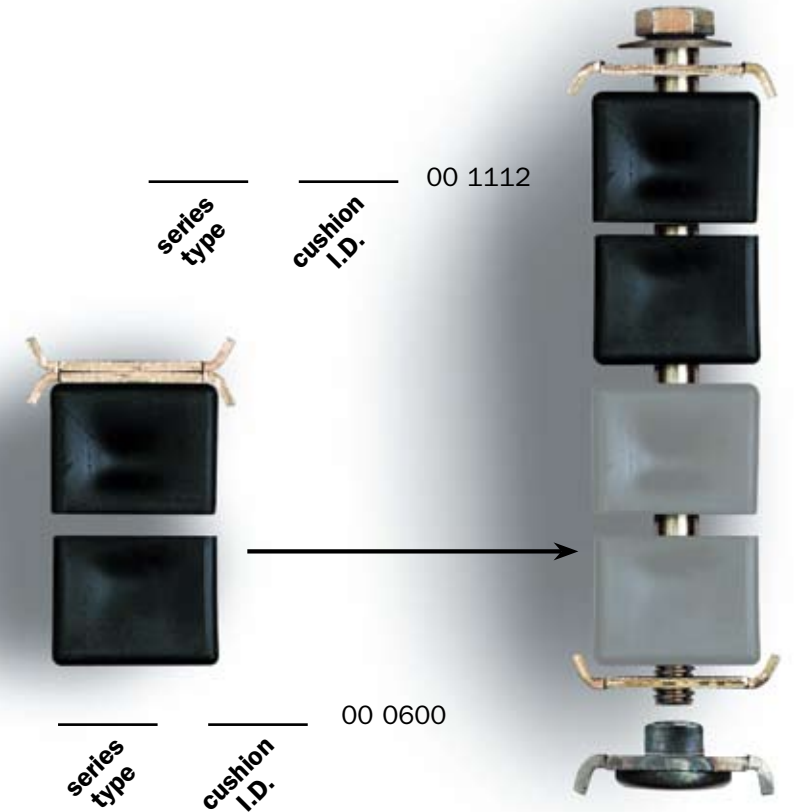
**Old Style Still Available
(.375" steel/special order)**

series type cushion I.D. 00 6111



**MODU-STAK MULTI-TIER
ARRANGEMENTS**

Pictured is the most common method of stacking our 521, 524, 531 and 532 series assemblies. When ordering stacking units, a part number needs to be specified for each tier. Various configurations are available. Contact your local distributor or the factory direct.



series type cushion I.D. 00 4111

series type cushion I.D. 00 1771

The most common way to stack our 541, 542 and 561 Modu-Stak series is shown. When ordering stacking units, a part number needs to be specified for each tier.

PARTS INTERCHANGE CHART

Hydra-Zorb produces the most comprehensive line of cushion clamps in the industry. There is a Hydra-Zorb cushion clamp that is an exact replacement for all competitive cushion clamp products on the market today.

To use this chart, simply locate the part number of the competitive cushion to locate the correct Hydra-Zorb part number. You are guaranteed that the Hydra-Zorb clamp will be an exact replacement and you will benefit from the high quality and superior performance that only Hydra-Zorb delivers.

REFRIGERATION APPLICATIONS

Superstrut Part No.	B-Line Part No.	Powerstrut Part No.	Hydra-Zorb Part No.
A716-1/4	BVT025	PSI400-1/4	100025
A716-3/8	BVT037	PSI400-3/8	100037
A716-1/2	BVT050	PSI400-1/2	100050
A716-5/8	BVT062	PSI400-5/8	100062
A716-3/4	BVT075	PSI400-3/4	100075
A716-7/8	BVT087	PSI400-7/8	100087
A716-1	BVT100		100100
A716-1 1/8	BVT112	PSI400-1 1/8	100112
			100119
A716-1-1/4	BVT125		100125
A716-1-3/8	BVT137	PSI400-1 3/8	100137
A716-1-1/2	BVT150		100150
A716-1-5/8	BVT162	PSI400-1 5/8	100162
A716-1-3/4	BVT175		100175
A716-1-7/8	BVT187		100187
A716-2	BVT200		100200
A716-2-1/8	BVT212	PSI400-2 1/8	100212
	BVT225		100225
A716-2-3/8	BVP200		100237
	BVT250		100251
A716-2-5/8	BVT262	PSI400-2 5/8	100262
	BVP250		100287
	BVT300		100300
A716-3-1/8	BVT312	PSI400-3 1/8	100312
	BVT362		100362
A716-4-1/8	BVT412	PSI400-4 1/8	100412

P716-1/4	BVP025		200025
P716-3/8	BVP037		200037
P716-1/2	BVP050		200050
P716-3/4	BVP075		200075
P716-1	BVP100		200100
P716-1-1/4	BVP125		200125
P716-1-1/2	BVP150		200150
P716-2	BVP200		200200
P716-2-1/2	BVP250		200250
P716-3	BVP300		200300
P716-3-1/2	BVP350		200350
P716-4	BVP400		200400
	BVP500		200500
	BVP600		200600

HYDRAULIC/FLUID POWER APPLICATIONS

Unistrut Part No.	Hycon Part No.	Hydro-Craft Part No.	Hydra-Zorb Part No.
004T008	H004T008	WS-04	100025
006T010	H006T010	WS-06	100037
008T012	H008T012	WS-08	100050
010T014	H010T014	WS-10	100062
012T016	H012T016	WS-12	100075
014T018	H014T018	WS-14	100087
016T020	H016T020	WS-16	100100
018T022	H018T022	WS-18	100112
			100119
020T024	H020T024	WS-20	100125
022T026	H022T026	WS-22	100137
024N028	H024N028	WS-24	100150
026N030	H026N030	WS-26	100162
028N032	H028N032	WS-28	100175
030N034	H030N034	WS-30	100187
032N036	H032N036	WS-32	100200
034N040	H034N040	WS-34	100212
		WS-36	100225
038N044	H038N044	WS-38	100237
040N046	H040N046	WS-40	100251
042N048	H042N048	WS-42	100262
046N052	H046N052	WS-46	100287
		WS-48	100300
050N056	H050N056	WS-50	100312
058N064	H058N064	WS-58	100362
066N074	H066N074	WS-66	100412

009N012	H009N012	WS-04P	200025
011N014	H011N014	WS-06P	200037
014N018	H014N018	WS-08P	200050
017N022	H017N022	WS-12P	200075
021N026	H021N026	WS-16P	200100
027N032	H027N032	WS-20P	200125
030N034	H030N034	WS-24P	200150
038N044	H038N044	WS-32P	200200
046N052	H046N052	WS-40P	200250
056N062	H056N062	WS-48P	200300
064N072	H064N072	WS-56P	200350
072N080	H072N080	WS-64P	200400
089N096	H089N096	WS-80P	200500
106N114	H106N114	WS-96P	200600



For all your refrigeration and fluid power clamping requirements, insist on the original cushion clamp . . . Hydra-Zorb.

NOTES
