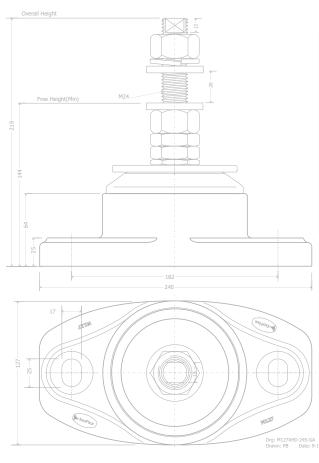


### **MINIMIZING VIBRATION**









### ENGINE & MACHINERY MOUNTS

(Imperial)

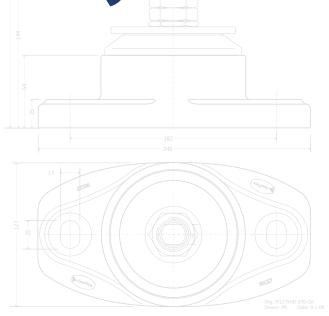


# The IsoFlex MAXImountsystem:

The IsoFlex MAXImount System designs each mount for maximum vibration isolation. The IsoFlex design improves the mount's ability to safely handle multi-directional loads as well as thrust in a 360 degree range.

There are no rubber components in an IsoFlex mount. Made of high quality engineering poly-urethane elastomers and high tensile metals, IsoFlex mounts provide superior resistance to degradation in petroleum environments.

Unlike competitive mounts, the selection process for the IsoFlex MAXImount System produces a mount and core combination which identifies mount performance prior to installation. And, IsoFlex's pre-installation software analysis will identify the level of vibration isolation through a range of RPM. So you'll know exactly what you'll be getting.



### IsoFlex MAXImounts are used in OEM manufacture, new installations and retrofits

Marine engines and gearboxes • Marine structure • Vehicle mounted machinery • Power generation units • Heating,
Ventilation and Air Conditioners • Desalination units • Motor homes, RVs and trailers • Machinery mounts for seismic
applications • Shock isolation • Compressors and pumps • Diesel engine applications • Hydraulic power packs • Instruments
• Industrial and manufacturing machinery • Off-highway and construction • Mining equipment • Defense • Electronics









## The dual-purpose system that isolates and minimizes vibration and produces maximum load-carrying ability in 360 degrees.











### **Features**

Vibration isolation.

Cast with high quality engineering grade polymer.

Patented co-polymer thrust ring.

Tailored installation using proprietary software analysis.

IsoFlex MAXImount System allows the mounts to be rebuilt by replacing cores if and when needed.

Manufactured from high quality materials: Polyurethane and high tensile metals.

### **Benefits**

Minimizing vibration reduces equipment fatigue, human fatigue, maintenance and associated noise.

No rubber components: IsoFlex polymers are resistant to oils, fuels, water and climatic conditions.

Improved stability with 360 degrees of control and up to 4 times more lateral stability.

The core selection process and vibration analysis provide the best vibration profile for each installation.

Lower long-term cost of ownership.

Durability and reduced corrosion and rust.



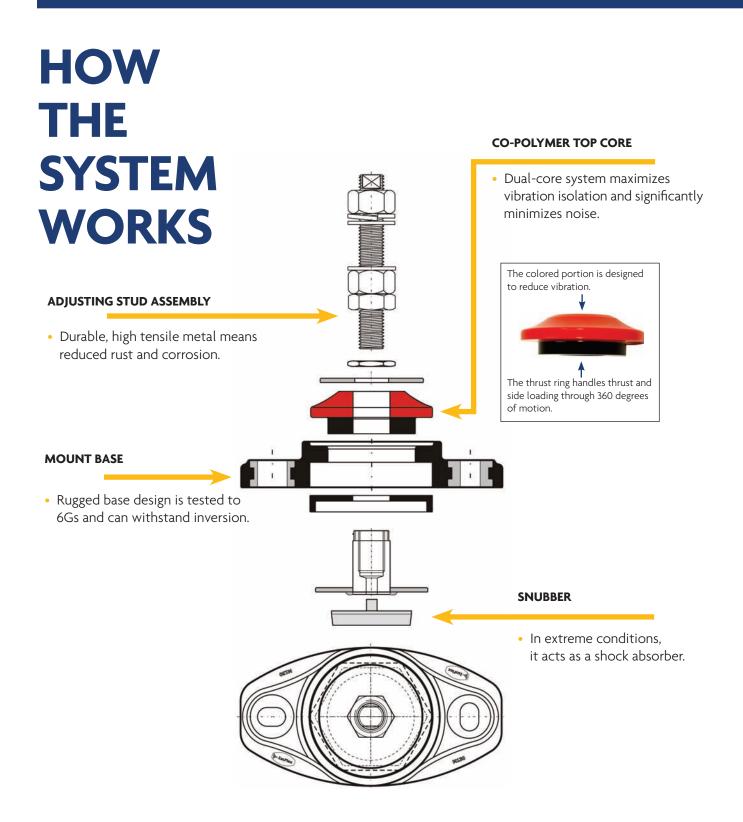
# USE ISOFLEX MAXImounts TO ISOLATE AND MINIMIZE VIBRATION

Advanced performance is the result of:

- Patented design features.
- High quality, engineering-grade polyurethanes, which perform better and last longer than rubber and other elastomers.
- Our daily commitment to improving software analysis, manufacturing efficiencies and product performance.

# INSTALL ISOFLEX MAXImounts IF YOU WANT:

- To minimize engine, drive line and machinery vibration.
- Improved stability. The IsoFlex thrust ring technology and co-polymer design produce 4 times the lateral stability of other mounts through a 360 degree range of motion.
- Better mounts for high performance engine and machinery applications.
- A custom solution to your specific need. The IsoFlex design allows you to create a mount that meets your objectives.
- To simplify a retrofit. The IsoFlex modular components can be easily configured to meet your needs.
- To maximize resistance to oil, fuel, hydraulic fluid, water and climatic conditions with high quality engineering polyurethane elastomers.
- Comprehensive support and diagnostic vibration modelling for your application.
- Rigorously tested products with Det Norske Veritas Type Approval.



### SELECTING THE PROPER MOUNT AND CORE

Each MAXImount is modular. This allows you to order one of five different top cores, each with a different durometer. Each unique top core produces a specific vibration isolation characteristic. The shape and durometer of each top core maximize vibration isolation and load-carrying capability.



### Use the chart below to help select the proper mount and core

### **Equipment to be mounted**

Describe the equipment to be mounted. An example for a marine application would be the engine model number and horse power rating, along with the transmission model number and gear reduction ratio

### Configuration for the mount

The engine and transmission above installed in a standard arrangement (i.e. not a v-drive) in a pleasure boat with no extra equipment on the engine.

### Determine the number of mounts needed and the weight

In the example above, 4 mounts are typically called for. Tides Marine/IsoFlex calculates the total weight of the engine and transmission and then estimates the weight on each mount.

### Select the proper base

Determine the bolt centers and stud size needed and any height restrictions. Then use the weight on each mount to select the mount base.

### **Data Sheets**

Review the data sheets for the mount selected and determine the proper core for the installation based on the weight and level of deflection.

### Vibration profile

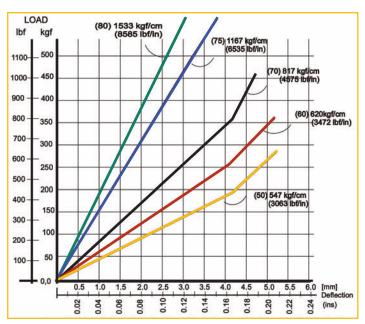
If needed, Tides Marine or IsoFlex, through proprietary software, can verify the vibration profile for the installation and produce a percentage vibration at engine idle.

### **Mount Data Sheets**

IsoFlex has prepared a Data Sheet for each mount they produce. A sample graph for the IM75-20S mount is displayed below. There are 5 possible top cores from which to choose. The resiliency of each top core under load is displayed as a line on the chart using a corresponding color (yellow top core = yellow line).

Once the engine assembly weight has been calculated and the number of mounts is known, the load per mount is determined by dividing the total assembly weight by the number of mounts. A 2,000 pound engine with four mounts puts 500 pounds of load on each mount.

Optimum mount performance is usually produced within a deflection range of .078" to .125" (2.0 to 3.0mm). The mid range is .094" (2.6mm).



Static Axial Vertical Load[kg] (A-direction) versus Deflection [mm] (ins) Data shown: (x) = SDH-a Hardness kgf/cm (lb/in) = Spring Rate

### **Load Direction**



- The core is selected based on the weight on the mount and the corresponding level of deflection.
- IsoFlex selects the best core for the application.
- Each core has a different hardness, which corresponds to a specific level of resiliency.











## VIBRATION ISOLATION ANALYSIS

IsoFlex will perform an analysis of the engine set-up or equipment to be mounted and tailor the core to isolate the maximum levels of vibration. This way, you will know how the mount will perform before installation.

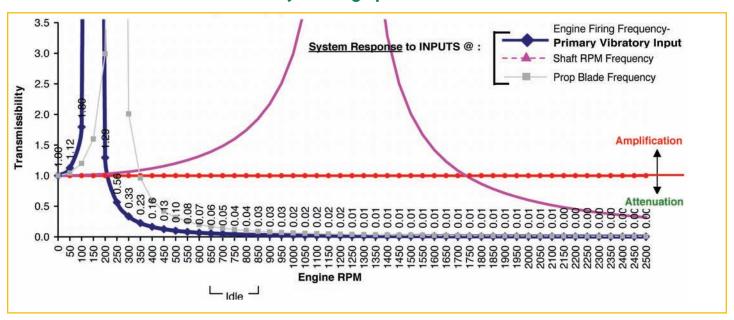
In the example below, the customer provided the following information:

- Engine model number and horsepower
- Transmission model number and gear reduction ratio
- Number of blades on a single propeller
- Machinery configuration (in-line, down-angle, V-drive, etc.)
- Vessel use (commercial or pleasure)

When this information is entered into the IsoFlex Software analysis program, the graph below is generated.

The graph shows how each engine and transmission package reacts to certain excitations, including the shaft RPM, prop blade passing firing order and natural frequencies. Each mount core will alter the dynamics shown. The best core selection will produce the highest percentage of vibration isolation at idle.

### Vibration Transmissibility v RPM graph for the 'Static Axial Deflection'



### **TESTIMONIALS**

### Philip Todkill at Viking Marine Services

Viking Marine Services Brisbane is a real one-stop-shop — the business does everything from boat building to servicing and maintenance. Viking Marine Services Brisbane's Operations Manager, Phillip Todkill, likes doing business with IsoFlex Technologies because "they listen." "We buy engine mounts from IsoFlex," Phillip explained. "They're more than just a parts supplier — they listen to us when we explain the issues we face in the factory and they offer solutions that help us to address those issues."

"IsoFlex actively makes improvements to their product range and they're always available when you need to talk to them. They really do stand behind what they sell."

### Steve Shale at Marine Diesel Pty Ltd

Steve Shale owns and manages Marine Diesel Pty Ltd. His business services marine diesel engines of all makes and models, although Marine Diesel specialises in sales and service for John Deere marine engines.

"From memory, it was John Deere who first put us onto IsoFlex about three years

ago," Steve explained. "We buy engine mounts and propeller shaft couplings from them. IsoFlex products are better quality than other similar products and they're very competitively priced.

"Their service is great too. They can match a mount exactly to suit any situation. They are real problem solvers," Steve added. "We really benefit from their technical expertise."

### Alex Fites at Driveline Services Australia

A market leader in the driveline automotive industry, Driveline Services Australia Pty Ltd has been doing business with IsoFlex Technologies for around three years.

"We had a technical problem that we couldn't solve," explained Alex Fites, General Manager, Driveline Services. "We got in touch with IsoFlex and they sorted it out. We've been doing business ever since. Their products are durable and offer long life hours, and the people at IsoFlex are very easy to deal with."

### Chris Brown at High Seas Yacht Service

One of our good customers in a 10 year old Oceanfast had a big problem with generator vibrations. Upon inspection is was clear that the old generator mounts had "pancaked" and lost all of the isolation properties.

After consulting with Tides Marine on new IsoFlex Mounts <a href="http://www.tidesmarine.com/IsoFlex.html">http://www.tidesmarine.com/IsoFlex.html</a> a new engine mount was recommended to fit the application. The installation was very simple since the IsoFlex mount used the exact same bolt pattern — no drilling or other modifications required. All eight mounts on two generators were changed in one day keeping labor cost very low.

As soon as the new mounts were installed the crew could not wait to fire up the gennies and run a test.

The initial feedback was excellent; "huge reduction in vibration — maybe 75%" was the subjective comment from the Captain.

The cost of the mounts is very reasonable and labor cost was low. This is an easy upgrade for your vessel.

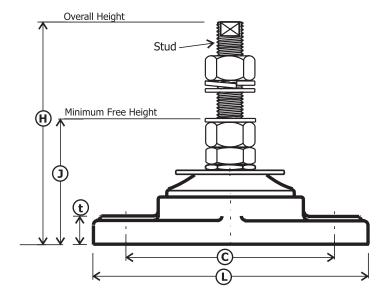
### S TYPE - ADJUSTING STUD ENGINE AND MACHINERY

### **Single and Double Core Mounts**

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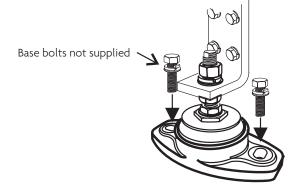
MOUNT MODEL	RECOMMENDED WORKING LOAD PER MOUNT	BASE FOOT- PRINT L x W	BASE BOLT CENTERS	BASE BOLT DIAMETER	BASE THICKNESS	STUD DIAMETER	MIN FREE HEIGHT	OVERALL HEIGHT	WEIGHT
	lb	in	in	in	in	mm	in	in	lb
M30-12S	44-165	4.13 x 2.52	3"	5/16"	0.51	12	2.36	3.94	1.0
MY30-16S	55-220	4.13 x 2.91	6.85"	1/2"	0.79	16	4.05	6.10	2.6
M55-12S	55-440	5.28 x 2.95	4" - 4 1/4"	3/8"	0.70	12	2.75	4.06	1.3
M55-16S	55-440	5.28 x 2.95	4" - 4 1/4"	3/8"	0.70	16	2.91	5.00	2.0
M75-16S	165-660	6.97 x 3.86	5"	1/2"	0.79	16	3.19	5.51	2.6
M75-20S	165-660	6.97 x 3.86	5"	1/2"	0.79	20	3.35	6.26	2.9
M85-16S	165-660	7.48 x 3.86	5 1/2"	1/2"	0.79	16	3.31	5.51	2.6
M85-20S	165-660	7.48 x 3.86	5 1/2"	1/2"	0.79	20	3.46	6.26	2.9
M90-20S	165-770	6.89 x 4.02	5"	1/2"	0.79	20	4.09	6.81	3.0
M90-24S	165-770	6.89 x 4.02	5"	1/2"	0.79	24	4.25	7.72	3.2
M100-20S	165-770	7.44 x 4.02	5 1/2"	1/2"	0.79	20	4.09	6.81	3.4
M100-24S	165-770	7.44 x 4.02	5 1/2"	1/2"	0.79	24	4.25	7.72	4.4
M110-20S	165-770	8.66 x 4.21	6.7"	1/2"	0.98	20	4.80	7.52	4.4
M110-24S	165-770	8.66 x 4.21	6.7"	1/2"	0.98	24	5.04	8.43	5.3
M125HD-20S	550-1650	9.45 x 5.00	6.7"	5/8"	0.98	20	5.04	7.72	5.3
M125HD-24S	550-1650	9.45 x 5.00	6.7"	5/8"	0.98	24	5.28	8.62	7.0
M125XHD-24S	1100-2640	9.45 x 5.00	6.7"	5/8"	0.98	24	5.28	8.62	7.0
M127HD-20S	550-1650	9.45 x 5.00	71/8"	5/8"	0.98	20	5.04	7.72	5.3
M127HD-24S	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	24	5.28	8.62	7.0
M127XHD-24S	1100-2640	9.45 x 5.00	7 1/8"	5/8"	0.98	24	5.28	8.62	7.0
M130HD-20S	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	20	4.09	6.81	5.3
M130HD-24S	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	24	4.33	7.72	6.3
M130XHD-24S	1100-2640	9.45 x 5.00	7 1/8"	5/8"	0.98	24	4.33	7.72	6.3
M130LPHD-24S	550-1650**	9.45 x 5.00	7 1/8"	5/8"	0.98	24	3.50	7.64	6.3
M130LPXHD-24S	1100-2640	9.45 x 5.00	71/8"	5/8"	0.98	24	3.50	7.64	6.3
M135HD-24S	1320-3520	9.45 x 5.71	7 1/8"	5/8"	0.98	24	4.96	8.62	8.4
M140HD-24S	1320-3520	9.45 x 5.59	71/8"	5/8"	0.98	24	4.25	7.88	7.8
MD100-24S	330-1540	11.81 x 3.94	9.84"	1/2"	0.79	24	5.31	9.13	9.9
MD100-24DS	330-1540	11.81 x 3.94	9.84"	1/2"	0.79	2 x 24	4.25	7.72	9.9
MD125HD-24DS	1100-3300	9.45 x 5.00	12 1/8"	5/8"	0.98	2 x 24	5.28	8.62	13.9
MD125XHD-24DS	2200-4400	9.45 x 5.00	12 1/8"	5/8"	0.98	2 x 24	5.28	8.62	14.1

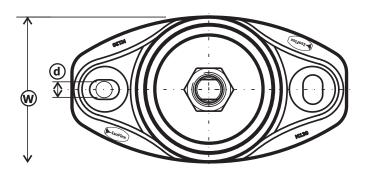
### S TYPE - ADJUSTING STUD **ENGINE AND MACHINERY**



All metal components zinc plated to ASTM B633 SC3 standard.

Resillent Element	Hardness SDH-A	
Yellow	50	
Red	60	
Black	70	48
Dark Blue	75 —	$\rightarrow$
Green	80	
Base Black	$\longrightarrow$	0
	,	Model: M110-24S





Designed specifically for marine, high performance and other thrust load installations where height adjustment is required.

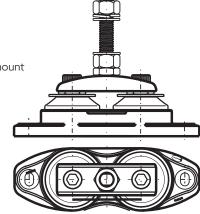
### Nomenclature for double mounts

Model: MD100-24S

'D' denotes double core mount with 1 x adjusting stud.

### Model: MD125-24DS

'DS' denotes 2 x adjusting studs.



Model: MD100-24S

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<sup>\*</sup>Specific mount performance data sheets are available at www.IsoFlex.com.au

### B TYPE - BOLT DOWN ENGINE AND MACHINERY

### **Single and Double Core Mounts**

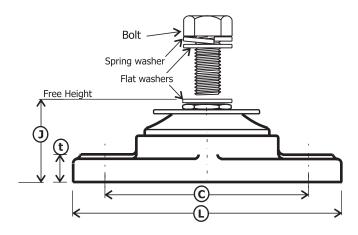
MOUNT MODEL	RECOMMENDED WORKING LOAD PER MOUNT	BASE FOOTPRINT L X W	BASE BOLT CENTERS	BASE BOLT DIAMETER	BASE THICKNESS	BOLT DIAMETER	MIN FREE HEIGHT	WEIGHT
	lb	in	in	in	in	mm	in	lb
M30-10B	44-165	4.13 x 2.52	3"	5/16"	0.51	12	1.77	3.9
M30-12B	55-220	4.13 x 2.91	3"	5/16"	0.51	12	1.77	3.9
MY30-16B	110-440	4.13 x 2.91	6.85"	1/2"	0.79	12	3.00	6.6
M55-12B	55-440	5.28 x 2.95	4" - 4 1/4"	3/8"	0.70	12	2.36	5.2
M55-16B	55-440	5.28 x 2.95	4" - 4 1/4"	3/8"	0.70	16	2.36	5.2
M75-16B	165-660	6.97 x 3.86	5"	1/2"	0.79	16	2.32	5.1
M75-20B	165-660	6.97 x 3.86	5"	1/2"	0.79	20	2.32	5.1
M85-16B	165-660	7.48 x 3.86	5 1/2"	1/2"	0.79	16	2.32	5.1
M85-20B	165-660	7.48 x 3.86	5 1/2"	1/2"	0.79	20	2.32	5.1
M90-20B	165-770	6.89 x 4.02	5"	1/2"	0.79	20	2.95	6.5
M90-24B	165-770	6.89 x 4.02	5"	1/2"	0.79	24	3.07	6.8
M100-20B	165-770	7.44 x 4.02	5 1/2"	1/2"	0.79	20	2.95	6.5
M100-24B	165-770	7.44 x 4.02	5 1/2"	1/2"	0.79	24	3.07	6.8
M110-20B	165-770	8.66 x 4.21	6.7"	1/2"	0.98	20	3.54	7.8
M110-24B	165-770	8.66 x 4.21	6.7"	1/2"	0.98	24	3.54	7.8
M125HD-20B	550-1650	9.45 x 5.00	6.7"	5/8"	0.98	20	3.74	8.2
M125HD-24B	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	24	3.74	8.2
M125XHD-24B	1100-2640	9.45 x 5.00	7 1/8"	5/8"	0.98	24	3.74	8.2
M127HD-20B	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	20	3.74	8.2
M127HD-24B	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	24	3.74	8.2
M127XHD-24B	1100-2640	9.45 x 5.00	7 1/8"	5/8"	0.98	24	3.74	8.2
M130HD-20B	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	20	2.95	6.5
M130HD-24B	550-1650	9.45 x 5.00	7 1/8"	5/8"	0.98	24	2.95	6.5
M130XHD-24B	1100-2640	9.45 x 5.00	7 1/8"	5/8"	0.98	24	2.95	6.5
M130LPHD-24B	550-1650**	9.45 x 5.00	71/8"	16	0.98	24	2.76	6.1
M130LPXHD-24B	1100-2640	9.45 x 5.00	7 1/8"	16	0.98	24	2.76	6.1
M135HD-24B	1320-3520	9.45 x 5.71	71/8"	5/8"	0.98	24	3.74	8.2
M140HD-24B	1320-3520	9.45 x 5.59	7 1/8"	16	0.98	24	2.95	6.5
MD100-24B	330-1540	11.81 x 3.94	9.84"	1/2"	0.79	24	4.10	9.0
MD100-24DB	330-1540	11.81 x 3.94	9.84"	12	0.79	2 x 24	3.07	9.0
MD125HD-24DB	1100-3300	9.45 x 5.00	12 1/8"	5/8"	0.98	2 x 24	3.74	13.0
MD125XHD-24DB	2200-4400	9.45 x 5.00	12 1/8"	5/8"	0.98	2 x 24	3.74	13.0

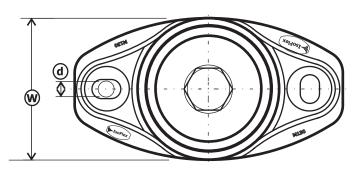
Metric Coarse bolt thread, unless stated.

### B TYPE - BOLT DOWN ENGINE MOUNTS

The bolt length required is dependent on the application. A standard length bolt is supplied. Allow a minimum of 1 x bolt diameter & maximum of 1.5 x bolt diameter into the mount.

2 x flat washers & 1 x spring washer supplied. Ensure that they are fitted as shown.





Designed for marine, generators and other general applications.

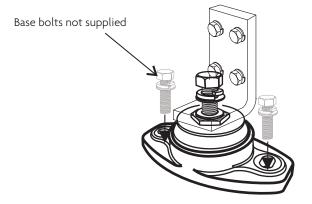
\*Specific mount performance data sheets are available at www.lsoFlex.com.au

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All metal components zinc plated to ASTM B633 SC3 standard

Resilient Element	Hardness SDH-A	
Yellow	50	
Red	60	
Black	70	
Dark Blue	75	
Green	80	
Base Black •	<b>→</b>	

Model: M85 - 16B



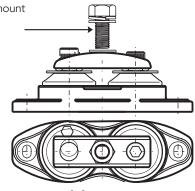
### Nomenclature for double mounts

### Model: MD100-24B

'D' denotes double core mount with 1 x bolt.

### Model: MD125-24DB

'D' denotes double core mount & 'DB' denotes 2 x bolts.



Model: MD100-24B



### LIGHT MACHINERY AND CYLINDRICAL MOUNTS

### Imperial

MOUNT MODEL	RECOMMENDED WORKING LOAD PER MOUNT	BASE FOOTPRINT L X W	BASE BOLT CENTERS	BASE BOLT DIAMETER	BASE THICKNESS	BOLT DIAMETER	MIN FREE HEIGHT	WEIGHT
	lb	in	in	in	in	mm	in	lbs
M5-6 (50) YEL	2-22	2.76 x 1.57	2.00	1/4	0.25	6	0.71	0.11
M5-6 (60) RED	12-33	2.76 x 1.57	2.00	1/4	0.25	6	0.71	0.11
M6-6 (50) YEL	2-22	3.58 x 2.02	2.55	1/4	0.32	6	0.79	0.22
M6-6 (60) RED	13-33	3.58 x 2.02	2.55	1/4	0.32	6	0.79	0.22
M6-6 (75) BLUE	22-88	3.58 x 2.02	2.55	1/4	0.32	6	0.79	0.22

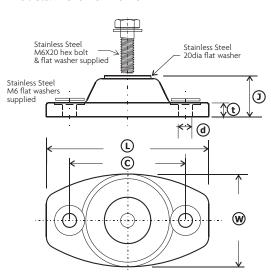
### Model: M6 - 6B

M6 = model number 6 = thread size B = bolt type



Hardness SDH-A
50
60
70
75

### Models: M5-6B & M6 - 6B



### Imperial

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MOUNT MODEL	RECOMMENDED WORKING LOAD PER MOUNT	DIAMETER BOLT DIAMETER		MIN FREE HEIGHT	WEIGHT
	lb	in	mm	in	lbs
CM6 (60) RED	2-88	0.87	6	1.26	0.05
CM6 (70) BLACK	44-110	0.87	6	1.26	0.05
CM8 (60) RED	33-110	1.08	8	1.36	0.09
CM8 (70) BLACK	88-176	1.08	8	1.36	0.09
CM10 (60) RED	33-110	1.18	10	1.57	0.15
CM10 (70) BLACK	88-176	1.18	10	1.57	0.15

Metric Coarse bolt thread, unless stated.

### Mounts: CM6, CM8 & CM10



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<sup>\*</sup>Specific mount performance data sheets are available at www.IsoFlex.com.au

### GENERAL PURPOSE MACHINERY MOUNTS

### Imperial

MOUNT MODEL	RECOMMENDED WORKING LOAD PER MOUNT	BASE FOOTPRINT L X W	BASE BOLT CENTERS	BASE BOLT DIAMETER	BASE THICKNESS	BOLT DIAMETER	MIN FREE HEIGHT	WEIGHT
	lb	in	in	in	in	mm	in	lbs
GPM6-6B	2-44	3.58 x 2.02	2.55	1/4	0.31	6	0.79	0.2
GPM7-12B	44-264	4.41 x 2.52	3.0-3.5	5/16	0.48	12	1.22	0.5
GPM7FS-12B	44-264	4.41 x 2.52	3.0-3.5	5/16	0.48	12	1.22	0.5
GPM10-12B	88-550	5.31 x 2.95	3.85-4.33	3/8	0.48	12	1.57	0.8
GPM10-16B	88-550	5.31 x 2.95	3.85-4.33	3/8	0.48	16	1.57	0.8
GPM10-1/2"B	88-550	5.31 x 2.95	3.85-4.33	3/8	0.48	1/2"	1.57	0.8
GPM10FS-16B	110-660	5.31 x 2.95	3.85-4.33	3/8	0.48	16	1.57	0.8
GPM10FS-1/2"B	110-660	5.31 x 2.95	3.85-4.33	3/8	0.48	1/2"	1.57	0.8
GPM10FS-16B	165-660	6.96 x 3.86	5.0	1/2	0.59	16	2.36	1.3
GPM15FS-20B	165-660	6.96 x 3.86	5.0	1/2	0.59	20	2.36	1.3

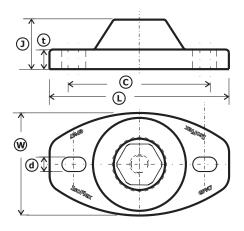
FS - Denotes Fail Safe mount Metric Coarse bolt thread, unless stated.

### Model: GPM7 - 12B

GPM7 = model number 12 = thread size B = bolt type



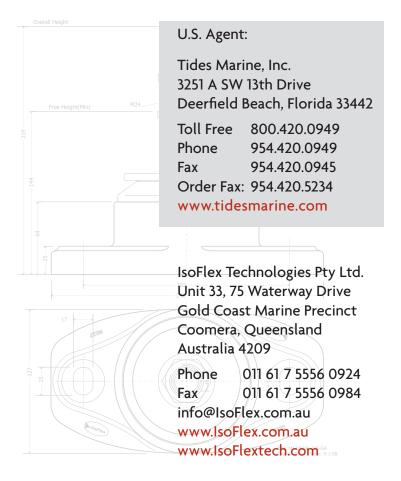
### Models: GPM Range



<sup>\*</sup>Specific mount performance data sheets are available at www.IsoFlex.com.au



### MINIMIZING VIBRATION



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