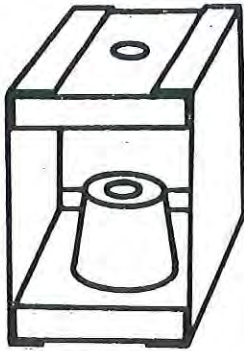
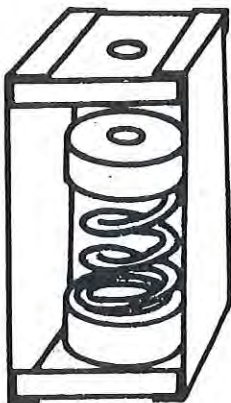


# VIBRA-CONTROL ANTI-VIBRATION EQUIPMENT HANGERS



**TYPE HN  
DOUBLE  
DEFLECTION  
NEOPRENE  
HANGER**

**APPLICATIONS :** Pipework, fan assemblies, fan coil units and ductwork, where low static deflection is acceptable.



**TYPE HS  
SPRING  
HANGER**

**APPLICATIONS :** As above, but where static deflection of approx. 1" is required.

Vibra-Control Hanger Boxes are of exceptionally robust design and will endure very high overloading without damage.

Spring Hangers are designed to prevent metallic contact between hanger rod and box.

CAT. NO.	MODEL	COLOUR CODE	LOAD	
			LBS.	kg.

## TYPE HN DOUBLE DEFLECTION NEOPRENE HANGER

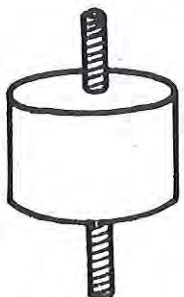
CAT. NO.	MODEL	COLOUR CODE	LBS.	kg.
590226	HN-A	White	12 to 40	5 to 18
590227	"	Red	30 to 70	13 to 32
590228	"	Green	60 to 120	27 to 55
590230	HN-B	Red	70 to 140	32 to 64
590231	"	Green	100 to 220	45 to 100
590232	"	Blue	170 to 350	77 to 160
590234	HN-C	Green	200 to 400	90 to 180
590235	"	Blue	300 to 580	136 to 264
590236	"	Yellow	500 to 1000	227 to 455

## TYPE HS SPRING HANGER

CAT. NO.	MODEL	COLOUR CODE	LBS.	kg.
590239	HS-A- 10	Brown and White	10	4.5
590240	- 20	Silver and Yellow	20	9.1
590241	- 30	White and Orange	30	13.6
590242	- 40	Gray and Red	40	18.2
590243	- 60	Black	60	27.3
590244	- 80	Purple and White	80	36.4
590245	- 100	Blue	100	45.5
590246	- 125	Green	125	56.8
590247	- 150	Yellow	150	68.2
590248	- 200	Orange	200	90.9
590249	- 300	Red	300	136.4
590251	HS-B- 200	Purple and White	200	90.9
590252	- 300	Blue	300	136.4
590253	- 400	Green	400	181.8
590254	- 500	Yellow	500	227.3
590255	- 600	Orange	600	272.7
590256	- 800	Red	800	363.6
590257	HS-C- 600	Blue	600	272.7
590258	- 800	Green	800	363.6
590259	-1000	Yellow	1000	454.5
590260	-1250	Orange	1250	568.2
590261	-1500	Red	1500	681.8
590262	-1750	Red. Tan Inner Spring	1750	795.5
590263	-2000	Red. Silver Inner Spring	2000	909.0

**NOTES:** 1. Combination Neoprene and Spring Hangers also available.  
2. Other types of mountings also available on request — e.g. Type SR Restrained Mounts, Type SFM Spring Floor Mount and NFM Neoprene Floor Mount.

## NEOPRENE MOUNTS

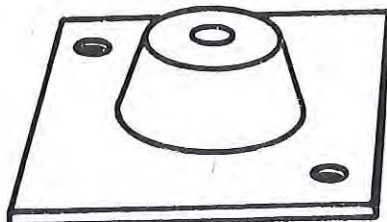


**TYPE CN  
CYLINDRICAL  
MOTOR  
MOUNTS**  
  
**MATERIAL  
50 DURO  
NEOPRENE**

**APPLICATIONS :** Electric Motors, Small Petrol Motors, Instruments (general), Compressors, Shaker Tables, Small fans etc.

CAT. NO.	MODEL	LOAD	
		LBS.	kg.
590275	CN-A	12	5.5
590276	CN-B	20	9.1
590277	CN-C	30	13.6
590278	CN-D	50	22.7
590279	CN-E	120	54.5
590282	CN-F	140	63.6

Loads shown are for Compression.  
Deflections at rated load approx. 0.1".



**TYPE SN  
SINGLE DEFLECTION  
&  
TYPE N  
DOUBLE DEFLECTION  
MOUNTS**

**APPLICATIONS :** Hangers, Fan Coil Units, Fans, Pumps.

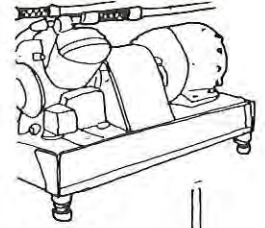
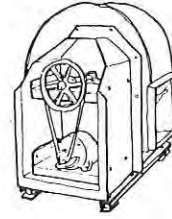
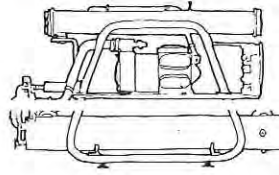
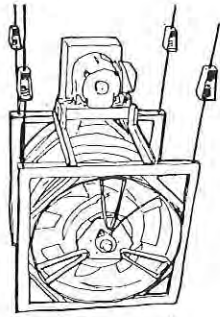
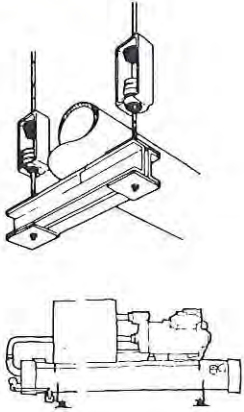
TYPE SN SINGLE DEFLECTION		TYPE N DOUBLE DEFLECTION		COLOUR * CODE	LOAD *	
CAT. NO.	MODEL	CAT. NO.	MODEL		LBS.	kg.
590187	SN-A	590201	N-A	White	12 to 40	5 to 18
590188	"	590202	"	Red	30 to 70	13 to 32
590189	"	590203	"	Green	60 to 120	27 to 55
590191	SN-B	590205	N-B	Red	70 to 140	32 to 64
590192	"	590206	"	Green	100 to 220	45 to 100
590193	"	590207	"	Blue	170 to 350	77 to 159
		590209	N-C	Green	200 to 400	90 to 182
		590210	"	Blue	300 to 580	136 to 264
		590211	"	Yellow	500 to 1000	227 to 455

\* Colour Code and Load applies to both Type SN and Type N Mounts.

VIBRA-CONTROL ANTI-VIBRATION EQUIPMENT — REFER ALSO PREVIOUS PAGE.



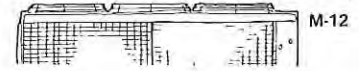
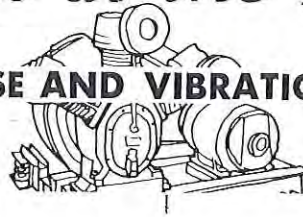
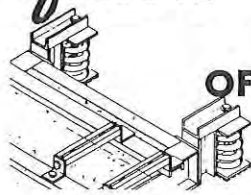
# MASON NOISE AND VIBRATION CONTROL PRODUCTS



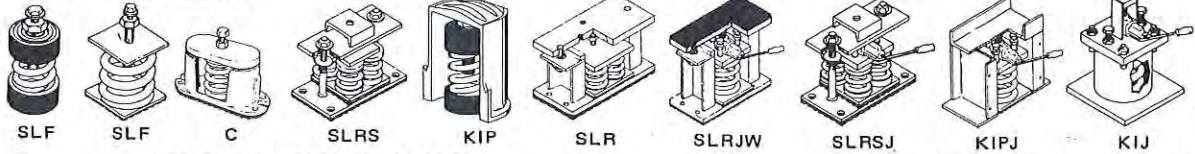
*It's almost twenty years since Mason started with little more than the firm belief that you would support a company dedicated to the promotion of a better product. You have reaffirmed that belief and in this short outline about the things we produce we will try to tell of our innovations that were and are new and better.*

## A quick look at the Mason line

### OF NOISE AND VIBRATION CONTROL PRODUCTS



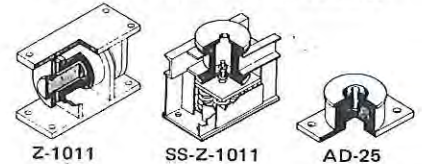
#### SPRING MOUNTS



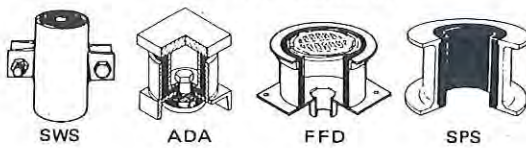
#### NEOPRENE MOUNTS and PADS



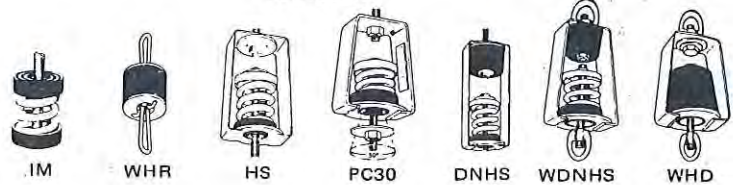
#### SEISMIC MOUNTS and SNUBBERS



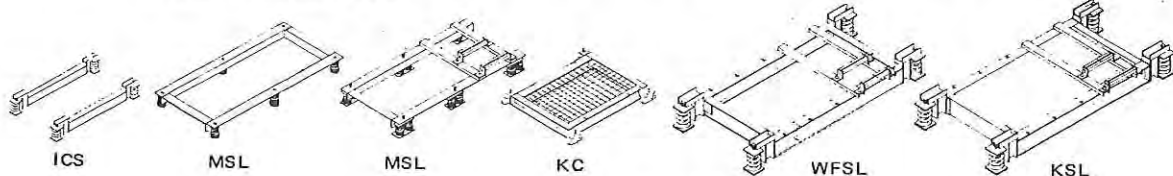
#### PIPING SPECIALTIES



#### HANGERS,

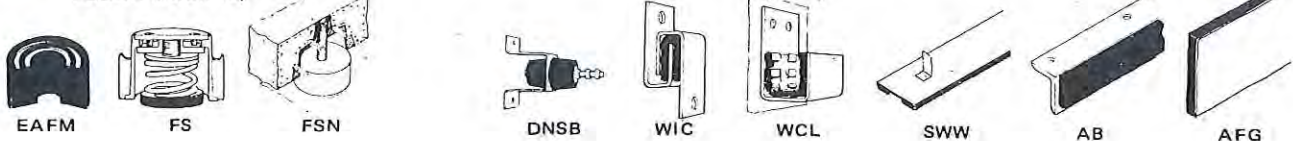


#### FAN BASES and RAILS,



#### WALL MOUNTS, etc.

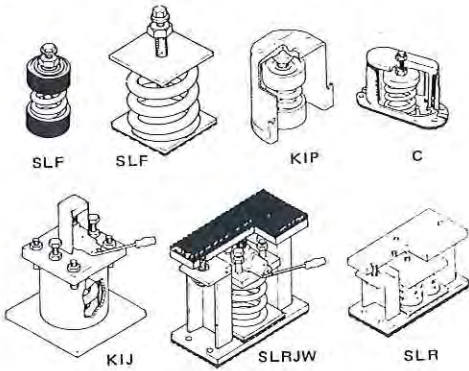
#### FLOOR MOUNTS,



7

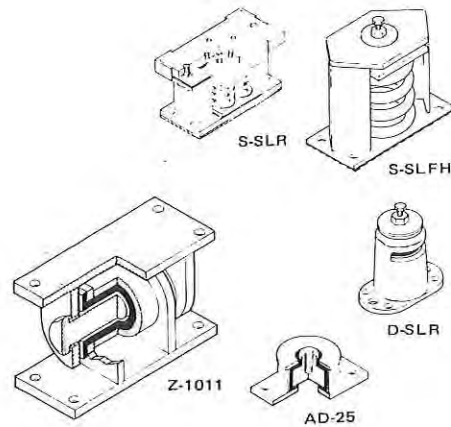


# NOISE AND VIBRATION CONTROL PRODUCTS



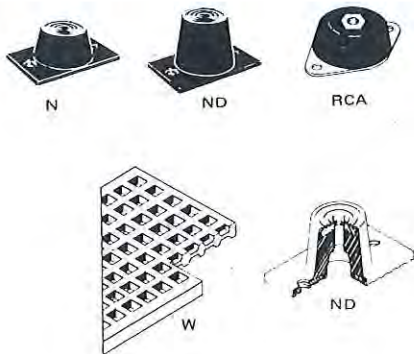
## SPRING MOUNTS

Helical spring mounts have been with us for many years, but Mason pioneered the use of springs designed with diameters equal to or approaching their operating heights. The stable SLF configuration can be used without housings for maximum vibration attenuation. While the telescoping Type C casting does introduce some damping, all of the other special purpose housings encase the spring without interfering with its action. The Type KIP and KIJ housings can be cast into foundations poured in place. They provide a means of loading the springs and elevating the foundations. Types SLR or SLRJW are restrained spring mountings with operating height equal to installed height and special features for safety in wind loads. The inclusion of vertical limit stops prevent spring extension when weight is removed. Mountings carrying 6820 kg (15,000 pounds) or more are usually designed with a hydraulic jack to save time and effort. Another Mason contribution to the art.



## SEISMIC SNUBBERS AND MOUNTS

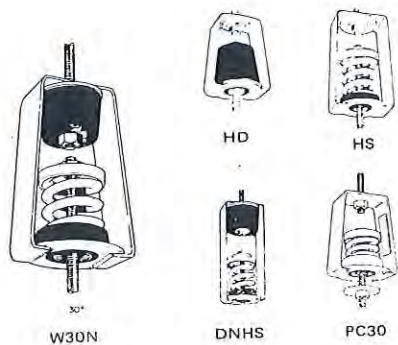
Most specifications for mountings used in seismic zones call for static g ratings in three planes. Simple welded designs such as the S-SLR and S-SLFH meet these requirements. The best snubbers are the all-directional Z-1011 series which have been tested and rated for stiffness and ultimate capacity. There are air gaps between the AASHO bridge-bearing neoprene bushings and the steel housings to prevent short circuiting of the isolation provided by the springs. The applications are normally backed up by a computer program developed for Mason by one of the seismologists at the University of California in Pasadena. The dynamic program accepts the earthquake input and predicts motions and accelerations at the bearings, mechanical service connections and structural attachments. This enables us to maintain specified motion and deceleration levels. Neoprene mountings such as the AD-25 are customized for 25 Hz, or other frequencies.



## NEOPRENE MOUNTS AND PADS

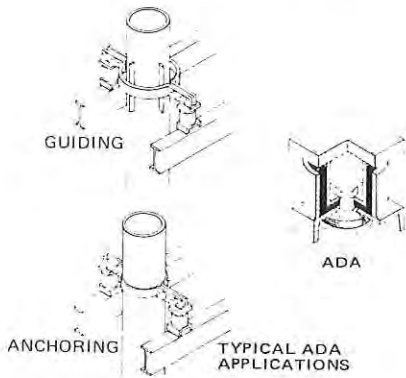
Neoprene mounts and pads are such simple commodities that there really isn't a great deal to talk about. However, when the Type N and ND mountings were designed 19 years ago, they were the first to have all metal parts covered by neoprene to prevent corrosion and to provide a nonskid surface. A second taller mount was designed to gain added deflection rather than copying the old technique of bolting two mountings in series. Individual neoprene mountings are available in load ranges from 7 to 1955 kg (15 to 4300 pounds) per mounting. The RCA mounting is a captive design suitable for mobile installations.

The Type W pad was one of the early waffle designs as compared to the more common ribbed variety. The advantage of the waffle is that it is self-sealing and the pads last longer. The continuous pattern on both sides normally provides for higher capacities in a given rubber hardness. Type W pads are available in cut sizes up to 18" x 36". Standard mounts and pads or custom products can be moulded in the Mason Plant in special materials such as natural rubber, hycar or bridge-bearing AASHO quality neoprene.



## HANGERS

Neoprene hangers (HD), spring hangers (HS) and combination spring and neoprene hangers (DNHS) were in existence before the formation of Mason, but we did develop the first double-deflection design using a single taller rubber element. The most sophisticated design is the 30N using a spring series even larger in diameter than those used for the SLF mountings. This enables us to enlarge the hole in the bottom of the hanger box so the suspension rods can swing through a full 30° arc, virtually eliminating the age old problem of hanger rods rubbing against the holes in the hanger boxes and short-circuiting the system. We have also provided neoprene bottom cups for the springs moulded with rubber hole bushings as an added precaution. All spring hangers can be supplied precompressed with a loading scale for simplified adjustment and load verification in the field. Special hangers are also available for pipe expansion problems.



### PIPING SPECIALTIES

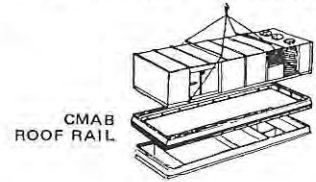
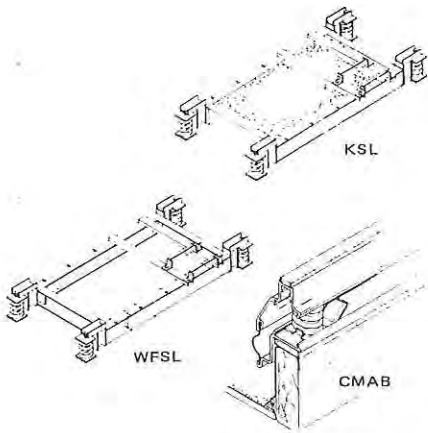
Resilient guiding and anchoring of piping has always been something of a problem. Many designs place the resilient material in direct contact with the piping surface. Since the materials are normally rubber or rubberlike there had always been the problem of heat sensitivity, friction and wear as the piping slid against the resilient surface. In some cases there was an unpleasant odour as well, as these materials tend to smell when warm.

The ADA pipe hanger or guide is an all-directional device that may be bolted or welded in any position. It is remote from the piping itself as it is used under the ends of a rugged clamp or an oversized guide ring, depending on whether anchoring or guiding is required. ADA anchors and guides are manufactured for all sizes of pipe and may be used as seismic anchors as well.

### BASES AND ROOF RAILS

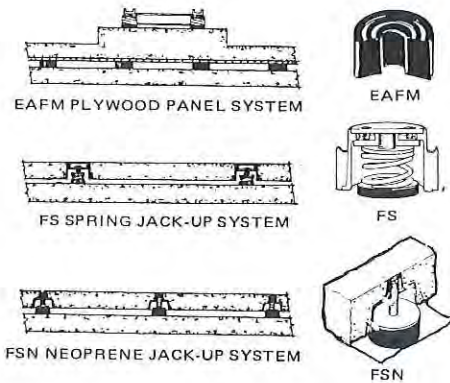
Type WFSL and KSL bases have become an industry standard because we have encouraged specifications calling for structural steel perimeters with a depth equal to 1/10th the length for WFSL frames and 1/12th the length for the concrete filled KSL designs. Height saving brackets are almost always used and bases are customized to fit 1½ HP close coupled pumps all the way up to 8000 ton centrifugal machines, with a variety of fan, pump, compressor, chiller, etc., base designs in between.

A more recent product is the Type CMAB curb mounted aluminium base for rooftop equipment. The extruded overlapping design made with a flexible neoprene weather-seal around the perimeter provides 25 mm (1") of static deflection. This heliarc welded base is normally shipped in one piece. In the short period it has been marketed it has gained widespread engineering and contractor acceptance because it does not leak, and it does not bind.



### FLOATING FLOOR MOUNTS

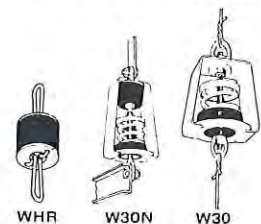
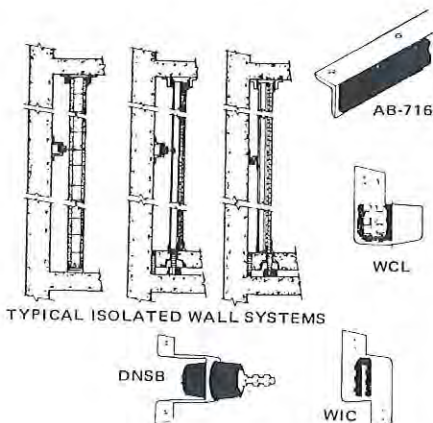
The idea of pouring a secondary floor on an elastic medium goes back as long as we can remember. Cork was the first material used, but because of its high frequency, the older floating floors were not too effective. The method of pouring concrete on plywood supported by fibreglass was improved upon by substituting EAFM-AASHO bridge-bearing neoprene mounts for the glass. Panels are not the best way to go, however, and we recommend the jack-up system, wherein you pour the secondary floor around FS or FSN mounts that have been placed on plastic sheeting spread over the sub floor. You lift the cured slab with the adjustment bolts in each mount. No plywood is left beneath the floors; there is no possibility of concrete breaking through the formwork to short-circuit the system, and larger more effective air gaps can be used at no increase in cost. Mountings are usually placed on 1200 mm (48") centres, with closer spacing in areas carrying heavier loads. The FS spring design is used for those applications where vibration rather than sound is the major problem. These jack-up systems were both developed and proven by Mason with acoustical and structural test data to back their recommendations.



### WALL MOUNTS AND CEILING HANGERS

Floating walls and suspended ceilings complete the isolation. Walls should be resting on a continuous pad, Type SWW, if not on the floating floor, and sealed at the top with AB-716 angle brackets. Buckling is prevented by means of DNSB sway braces or the simpler WIC or WCL commonly used with fabricated walls. All of these devices use neoprene as the isolation media.

Ceilings are suspended using all of the hangers normally used for piping. They are modified by introducing eye bolts at each end for wiring or bolting to black iron runners. The spring ceiling hangers are precompressed to minimize downward travel as construction proceeds. The WHR is a simple inexpensive device to prevent high frequency transmission at low cost.



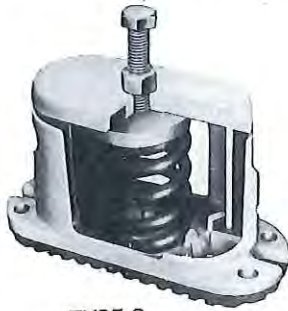
**7**



### TYPE SLF & C — Nominal 1" Deflection SPRING MOUNTINGS



SINGLE SPRING  
1" Deflection  
SLF MOUNT



TYPE C

**TYPE SLF MOUNTINGS :** SLF mountings of the proper deflection are recommended for all vibration control applications where it is not necessary to cope with weight removal or wind load problems. Excessive discharge pressures can be dealt with by adding mass through the use of floating inertia bases or in extreme cases, by the addition of horizontal thrust restraints.

**TYPE C SPRING MOUNTINGS :** These mountings provide a packaged solution to troublesome vibration problems. Since the static deflection of the spring element is much greater than that provided by most rubber materials, these units will perform where it is necessary to establish low natural frequencies or to use a mounting that is more yielding than the supporting floor. Type "C" mountings are specifically designed for noise and vibration free application in critical areas on light concrete or wooden floors.

TYPE SLF		TYPE C		CAPACITY		RATED DEFLECTION INS.	COLOUR CODE
CAT. NO.	MODEL	CAT. NO.	MODEL	LBS.	kg.		
591101	SLF-A- 45	591126	C-A- 45	45	20.5	1.60	Blue
591102	- 75	591127	- 75	75	34.1	1.50	Orange
591103	- 125	591128	- 125	125	56.8	1.33	Brown
591104	- 200	591129	- 200	200	90.9	1.15	Black
591105	- 310	591130	- 310	310	140.9	1.00	Yellow
591106	SLF-B- 60	591131	C-B- 60	60	27.3	2.14	Brown
591107	- 140	591132	- 140	140	63.6	1.97	Orange
591108	- 280	591133	- 280	280	127.3	1.60	Green
591109	- 450	591134	- 450	450	204.5	1.31	Red
591110	- 750	591135	- 750	750	340.9	1.12	White
591111	-1000	591136	-1000	1000	454.5	1.00	Blue
591112	SLF-C- 110	591137	C-C- 110	110	50.0	2.07	Purple
591113	- 225	591138	- 225	225	102.3	1.84	Blue
591114	- 435	591139	- 435	435	197.7	1.55	Gray
591115	- 735	591140	- 735	735	334.1	1.24	White
591116	-1000	591141	-1000	1000	454.5	1.06	Black
591117	-1350	591142	-1350	1350	613.6	1.00	Yellow
591118	-1675	591143	-1675	1675	761.4	1.00	Note 1
591119	-2100	591144	-2100	2100	954.5	1.00	Note 2

- NOTES:**
1. SLF-C-1675 and C-C-1675 Mountings have a GRAY spring inside a YELLOW spring.
  2. SLF-C-2100 and C-C-2100 Mountings have a RED spring inside a YELLOW spring.
  3. SLF Type Mountings are available in Capacities to 33600 lbs. (15273 kg.).
  4. C " " " " " " " " 8400 lbs. ( 3818 kg.).
  5. Capacities, Rated Deflection and Colour Codes apply to both SLF and C Types.

### TYPE ND NEOPRENE MOUNTINGS — Double Deflection



Rubber is the most widely accepted vibration control material. It may be natural or synthetic and moulded in a wide variety of shapes and sizes with or without metallic inserts depending on the service. The materials popularity is based on low cost, effectiveness in a wide band of frequencies and ease of application.

Type "ND" Neoprene Mountings are designed for both high static deflections and simplified installation. The rubber is loaded in both shear and compression to provide the desirable straight line Rubber-in-Shear deflection curves as well as overload protection. They are one piece moulded assemblies with skid resistant rubber ridged baseplates and circular rubber ridged tops.

CAT. NO.	MODEL	COLOUR CODE	CAPACITY RANGE	
			LBS.	kg.
591176	ND-A	Black	15 to 45	7 to 20
591177	"	Green	30 to 75	14 to 34
591178	"	Red	60 to 125	27 to 57
591179	ND-B	Black	50 to 100	23 to 45
591180	"	Green	75 to 150	34 to 68
591181	"	Red	110 to 235	50 to 107
591182	"	White	180 to 380	82 to 173
591183	"	Yellow	300 to 600	136 to 273
591184	ND-C	Green	140 to 260	64 to 118
591185	"	Red	200 to 400	91 to 182
591186	"	White	310 to 600	141 to 273
591187	"	Yellow	520 to 1000	236 to 454
591188	ND-D	Yellow	1060 to 2100	482 to 955
591189	ND-E	Yellow	2200 to 4300	1000 to 1955

It is not necessary to bolt these mountings to the floor on most installations. They can be used under flat based machines that have no bolt holes in much the same manner as vibration pads. When the equipment has a flush drain pan or tank on the bottom, they may be inverted so that the rectangular rubber covered steel baseplate provides support over a large area.

MASON VIBRATION CONTROL PRODUCTS — CONTINUED NEXT PAGE.

# NOISE AND VIBRATION CONTROL PRODUCTS



# 591-d MASON



**HD**  
NEOPRENE HANGER

## TYPE HD NEOPRENE HANGERS TYPE HS SPRING HANGERS

Resilient hangers are used primarily to prevent vibration and noise transmission from suspended piping and equipment, or to keep building vibrations and noises out of suspended ceilings. They may also be used for expansion problems such as those encountered with pipe line rises. Hangers are most commonly located in the suspension rods, straps or wires, although they may be attached directly to the structural or acoustical ceilings.

It is always best to locate hangers closest to the construction that is being protected. When piping or equipment is being isolated the best hanger location is close to the structural ceiling or suspension steel. Acoustical ceiling hangers should be down close to the floating ceiling.



**HS**  
SPRING HANGER

HD hangers are double deflection neoprene units with average static deflections of 0.4". Up until 1965 a single deflection hanger was manufactured with an average deflection of 0.2", but their performance was found to be so limited that they were dropped from the range. HD hangers are minimal devices that should be used for the isolation of very small equipment, or high frequencies only. They should not be considered at all for equipment running below 800 rpm if you wish to isolate vibration occurring at the operating speed. They are primarily noise isolators, and neoprene is used because of its excellent aging characteristics.

HS hangers are made with a steel spring centered within a neoprene cup. The neoprene cup provides some sound isolation but more importantly the projecting neoprene bushing prevents steel to steel contact between the hanger rod and the hanger box when the rods are off centre. While some of the lighter capacities in each size provide rather large deflections the HS-A, HS-B and HS-C are generally considered a 1" deflection series.

Spring hangers provide good isolation where there is a very small high frequency component and so they are generally recommended for applications like duct work suspension.

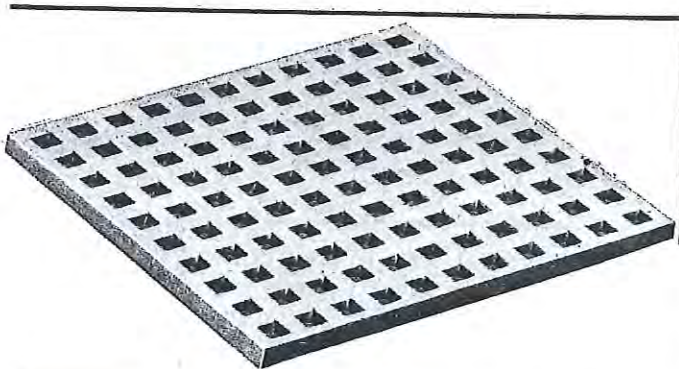
- NOTES: 1. HS Type Hangers are available in capacities up to 8400 lbs.  
2. 30° Angularity Hangers and Combination Spring and Neoprene Hangers are available on request.

### TYPE HD NEOPRENE HANGERS

CAT. NO.	MODEL	COLOUR CODE	LOAD	
			LBS.	kg.
591226	HD-A	Black	Up to 45	Up to 20
591227	"	Green	30 to 75	14 to 34
591228	"	Red	60 to 125	27 to 57
591229	HD-B	Red	Up to 235	Up to 107
591230	"	White	180 to 380	82 to 173
591231	"	Yellow	320 to 650	145 to 295
591232	HD-C	White	Up to 600	Up to 273
591233	"	Yellow	520 to 1000	236 to 455

### TYPE HS SPRING HANGERS

591251	HS-A- 45	Blue	45	20
591252	- 75	Orange	75	34
591253	- 125	Brown	125	57
591254	- 200	Black	200	91
591255	- 310	Yellow	310	141
591256	HS-B- 60	Brown	60	27
591257	- 140	Orange	140	64
591258	- 280	Green	280	127
591259	- 450	Red	450	205
591260	- 750	White	750	341
591261	-1000	Blue	1000	455
591262	HS-C- 110	Purple	110	50
591263	- 225	Blue	225	102
591264	- 435	Gray	435	198
591265	- 735	White	735	334
591266	-1000	Black	1000	455
591267	-1350	Yellow	1350	614
591268	-1675	Yell. & Gray	1675	761
591269	-2100	Yell. & Red	2100	955



### TYPE W VIBRATION PADS

Vibration Pads are used to reduce noise and vibration and to eliminate the need for bolting down. The flat configuration hardly elevates the machine to be isolated and in many cases this low cost method conveniently solves or prevents a problem that does not warrant the use of either rubber or spring mountings. As a general rule, pads are recommended to eliminate bolting, for minor vibration problems in upper stories or for ground floor and non critical applications.

THE TYPE "W" Neoprene Waffle has greater carrying capacity per square inch, increased holding power and a built in contamination seal. Identical rubber grids are moulded back to back for maximum rubber contact area and resistance to rib collapse or hinging. The interconnections form suction pockets for gripping smooth steel as well as rough surfaces and also act as dirt and oil dams at the perimeter regardless of how the pad is cut. The square waffle pattern is laid out on 1/2" centers to facilitate cutting pads to size in the field without the need for measuring.

While there is no need for bolting or cementing on most installations, Type "W" Adhesive may be used for securing machines that have exceptionally large horizontal forces. The adhesive is also useful when the pad is made part of an assembly or shipped cemented to machinery legs.

CAT. NO.	MODEL	SIZE	RECOMMENDED LOADING
591205	W	18" x 36"	60 lbs./sq. in.  (4.2 kg/sq. cm.)
591206	W	18" x 18"	
591207	W	12" x 12"	
591208	W	6" x 6"	
591209	W	4" x 4"	
591210	W	3" x 3"	
591211	W	2" x 2"	

### TYPE RCA RESTRAINED RUBBER MOUNTS



NON-OIL RESISTANT

\* Max. load on 60 Duro is the same as the 40 Duro when used in Shear or Tension i.e. 700 lbs.

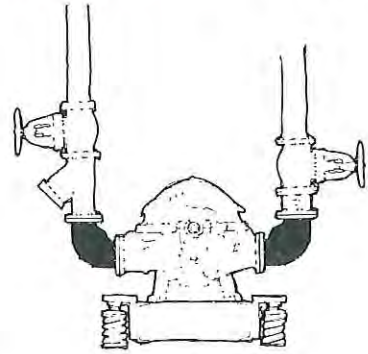
CAT. NO.	MODEL	DURO.	COMPRESSION	
			LBS.	kg.
591201	RCA-40	40	700	318
591202	RCA-60	60	1000 *	455



# FLEXIBLE CONNECTORS AND EXPANSION JOINTS MASON

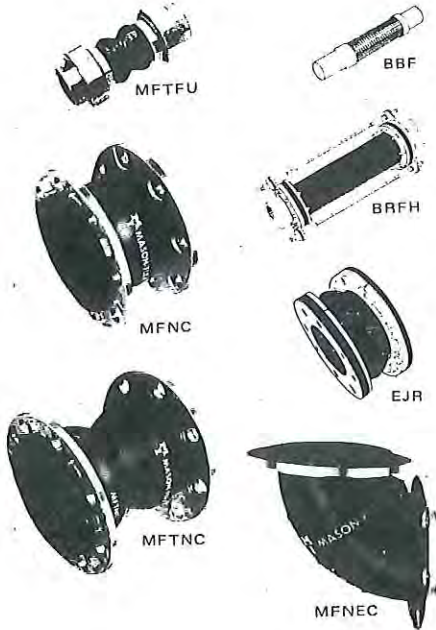


We offer the conventional stainless steel connectors and bronze freon connectors to meet demand. Quality is good and pricing competitive, but there's little that can be done to improve these commodities. When you swing over to rubber connectors, we still supply rubber flanged hose BRFH and the conventional rubber expansion joint EJR. These have been around for quite awhile as has the MFNC single sphere connector.



We don't stop there however, and the more interesting designs are the threaded and double sphered MFTFU up to 2" in diameter, the double sphered flanged MFTNC up to 12" diameter, and the most unique of all the MFNEC elbow design. These last four connectors are not wire reinforced and they are constructed of multiple plies of nylon tire cord and neoprene in a manufacturing process very similar to the manufacture of automotive tires. This construction enables these connectors to breath volumetrically and to be rated for maximum elongation so control rods are not necessary. We have been involved in intensive testing of these connectors through various acoustical firms such as Cerami & Assoc., Bolt Beranek & Newman, Newcomb & Boyd and Robin Towne & Assoc., to verify the fact that they are extremely effective in reducing both noise and vibration at pump impeller frequency (rpm times number of blades).

We believe that we are the only firm that has developed this sort of acoustical data and after all we should all know a little about the acoustics as well as the fact that they don't leak.



TYPE MFTFU CONNECTORS DOUBLE SPHERE - THREADED UNIONS (GALV.)			
CAT. NO.	SIZE	CONNECTIONS	
		Female BSP	Nom. Metric
5921	MFTFU-0.75	3/4"	19 mm
5922	MFTFU-1	1"	25 mm
5923	MFTFU-1.25	1 1/4"	32 mm
5924	MFTFU-1.5	1 1/2"	40 mm
5925	MFTFU-2	2"	50 mm

TYPE MFTNC CONNECTORS DOUBLE SPHERE - TABLE 'E' FLOATING FLANGES			
CAT. NO.	SIZE	CONNECTIONS	
		Table 'E' Fig.	Nom. Metric
59226	MFTNC- 1.5	1 1/2"	40 mm
59227	MFTNC- 2	2"	50 mm
59228	MFTNC- 2.5	2 1/2"	65 mm
59229	MFTNC- 3	3"	80 mm
59230	MFTNC- 4	4"	100 mm
59231	MFTNC- 5	5"	125 mm
59232	MFTNC- 6	6"	150 mm
59233	MFTNC- 8	8"	200 mm
59234	MFTNC-10	10"	250 mm
59235	MFTNC-12	12"	300 mm

TYPE MFNC CONNECTORS SINGLE SPHERE - TABLE 'E' FLOATING FLANGES			
CAT. NO.	SIZE	CONNECTIONS	
		Table 'E' Fig.	Nom. Metric
59212	MFNC- 2	2"	50 mm
59213	MFNC- 2.5	2 1/2"	65 mm
59214	MFNC- 3	3"	80 mm
59215	MFNC- 4	4"	100 mm
59216	MFNC- 5	5"	125 mm
59217	MFNC- 6	6"	150 mm
59218	MFNC- 8	8"	200 mm
59219	MFNC-10	10"	250 mm
59220	MFNC-12	12"	300 mm
59221	MFNC-14	14"	350 mm
59222	MFNC-16	16"	400 mm
59223	MFNC-18	18"	450 mm
59224	MFNC-20	20"	500 mm
59225	MFNC-24	24"	600 mm

TYPE MFNEC ELBOW CONNECTORS TABLE 'E' FLOATING FLANGES			
CAT. NO.	SIZE	CONNECTIONS	
		Table 'E' Fig.	Nom. Metric
59251	MFNEC- 2.5	2 1/2"	65 mm
59252	MFNEC- 3	3"	80 mm
59253	MFNEC- 4	4"	100 mm
59254	MFNEC- 5	5"	125 mm
59255	MFNEC- 6	6"	150 mm
59256	MFNEC- 8	8"	200 mm
59257	MFNEC-10	10"	250 mm
59258	MFNEC-12	12"	300 mm

FLANGES - TABLE 'F' - (MATCHES TABLE 'H') SUITS TYPES MFNC - MFTNC - MFNEC							
CAT. NO.	TYPE	SIZE		CAT. NO.	TYPE	SIZE	
		Ins.	Nom. Metric			Ins.	Nom. Metric
59275	F2.5	2 1/2"	65 mm	59280	F 8	8"	200 mm
59278	F5	5"	125 mm	59281	F10	10"	250 mm
59279	F6	6"	150 mm	59282	F12	12"	300 mm

WATER SERVICES by Uop

CHEMICATOR<sup>®</sup> brand WATER TREATMENT PRODUCTS

A RANGE OF WATER TREATMENTS, CORROSION PREVENTIVES AND ALLIED PRODUCTS ARE AVAILABLE FOR THE PROTECTION OF THE WATER SIDE OF HEAT TRANSFER EQUIPMENT AND OTHER UNITS WHICH HANDLE WATER FOR VARIOUS PURPOSES



Why Water Treatment for Air Conditioning Systems ?

Heat picked up by an air conditioning system is rejected at the cooling tower. This tower, a water-saving installation, requires only enough water to compensate for evaporation and blow-down. This blow-down limits the build-up of dissolved solids, which otherwise can form scale in the system. Condenser scale rapidly increases power consumption, decreases the system's capacity and contributes to wear and strain on system equipment.

While the amount of water used during evaporation is a function of the system's design, the amount of blow-down is determined by the chemical composition of the make-up water and type of chemical water treatment.

Over the years it has been found that certain chemicals have the ability to prevent the formation of scale, allowing more dissolved solids to circulate throughout the system. Thus, the proper usage of the right water treatment chemicals can assure more efficient air conditioning systems over a long period of operation.

Proper Water Treatment Helps Reduce Electric Power Usage

Clean, water-cooled equipment offers the most efficient air conditioning method available today. Should it be dirty (scale encrusted), efficiency decreases and power consumption increases. Normally, for each degree Celsius that the condensing temperature rises, the wattage input will increase about one percent and the system's capacity will decrease at least one percent.

The alternatives for scale control — heavy bleed-off, or minimal bleed-off and regular acid cleaning — are expensive . . . more expensive than a properly designed and properly implemented water treatment program when all factors are considered.

Boiler Water Treatment

While there are differences, boilers — as well as hot water and process heating systems — are exposed to many of the same types of water-related problems as are air conditioning systems. To assure their effective operation, chemical treatments are required to prevent corrosion and scale resulting from dissolved gases and minerals.

Other Products

These include descalers for removing scale in cooling water systems and boilers, cleaners for removing rust in chilled water systems or hot water systems, a number of special purpose cleaners and a special biocide for algae and slime control. These products are listed below and on the following page.

Blow-down . . . Important Facts You Should Know

Only pure water is evaporated from an open recirculating cooling tower. Impurities, inherent in the make-up water, must be controlled by blow-down and/or chemical water treatment. A large volume blow-down lowers the concentration of solids (impurities) in the tower water, while a reduced blow-down raises them.

When blow-down, alone, is used to control scale, it is usually set "heavy" and results in "cycles of concentration" (COC) of 1.5 or less. (COC defines the level of solids present and is the ratio between total solids in the tower water and total solids in the make-up water). When treatment chemicals as listed below are used, not only can the blow-down be reduced, but the COC is significantly increased.

COOLING WATER TREATMENT PACK No. 1	
For control of scale, corrosion and biological fouling in cooling systems 10 to 30 tons.	
CAT. NO.	DESCRIPTION
59325	1 - Chemicator Model E Briquette Feeder
—	M - 40 Algaecide:
59355	1 Gall. Bottle
59385	5 Gall. Pail
59359	1 Box Deep Purple Algaecide (12 briquettes/box)
59367	1 - Cooling Water Test Kit
—	Choice of Chemicator Refills:
59328	P & O Wide range. Can be used in all systems where make-up water total hardness does not exceed 200 ppm
59332	1 - Refill Tube No. 101/50 — if make-up water total alkalinity is between 50 - 100 ppm
59330	1 - Refill Tube No. J-2 — if make-up water total alkalinity is greater than 100 ppm

COOLING WATER TREATMENT PACK No. 2	
For control of scale, corrosion and biological fouling in cooling systems 40 to 200 tons.	
CAT. NO.	DESCRIPTION
59326	1 - Chemicator Model L - 1 Liquid Feeder (2 units for every 40 tons of cooling capacity)
59339	1 Gall. Bottle Formula No. 870 Scale and Corrosion Control
—	M55 Microbiocide:
59381	1 Gall. Bottle
59386	5 Gall. Pail
59359	1 Box Deep Purple Algaecide (12 briquettes/box) 1 box req'd for every 40 tons of cooling capacity
59367	1 - Cooling Water Test Kit

NOTE: For Cooling Water Treatment Pack Nos. 1 and 2 — Refer available literature for recommended bleed rates.

CONTINUED NEXT PAGE

7



CHEMICATOR<sup>®</sup> brand WATER TREATMENT PRODUCTS

A RANGE OF WATER TREATMENTS, CORROSION PREVENTIVES AND ALLIED PRODUCTS  
Continued from previous page

CAT. NO.	DESCRIPTION
<b>CLOSED SYSTEM TREATMENT PACK No. 1</b>	
For control of corrosion in chilled water systems and hot closed water systems	
—	Formula No. 890 Closed System Control
—	1 Gall. for every 100 galls. water in recirculating system or for approx. every 5 tons of cooling capacity
59383	5 Gall. Pail
59387	30 Gall. Drum
59388	55 Gall. Drum
59389	1 - Unit Model 5-HD By-Pass Feeder
59390	1 - PNI Test Kit

CAT. NO.	DESCRIPTION
<b>BOILER WATER TREATMENT PACK No. 1</b>	
For control of scale and corrosion in steam boilers under 25HP and under 90 psig operating pressure	
59391	B-86 Boiler Briquettes (1 brig./600 galls. feed water)
59392	5 Gall. Pail Formula No. 885 Steam Line Control Feed continuously to maintain ph 8.0 to 8.5 in condensate
59389	1 - Unit Model 5-HD By-Pass Feeder
59393	Boiler Water Test Kit No. 1

CAT. NO.	DESCRIPTION
<b>BOILER WATER TREATMENT PACK No. 2</b>	
For control of scale and corrosion in steam boilers up to 300 psig operating pressure	
—	Formula No. 883 (1 gall/4500-5000 galls.feed water)
59394	5 Gall. Pail
59395	30 Gall. Drum
59396	55 Gall. Drum
59392	5 Gall. Pail Formula No. 885 Steam Line Control Feed continuously to maintain ph 8.0 to 8.5 in condensate

CAT. NO.	DESCRIPTION
<b>DESCALING PACK FOR COOLING WATER SYSTEMS &amp; BOILERS</b>	
For removing scale in cooling water systems and boilers	
—	All-Met Descaler (4lbs/10 US galls.recirculating water)
59340	25 lb Pail
59397	50 lb Pail
59341	100 lb Pail
59382	8 oz. Bottle S.E. Defoamer
—	N-30 Acid Neutralizer (1lb/20 US galls.of spent acid solution)
59343	9 lb Case
59398	25 lb Pail
Note:	Quantities of All-Met Descaler and N-30 Acid Neutralizer depend on the amount of scale actually in the system and extent of acidity of spent acid solution. Above figures are estimates.
To prevent scale, see Cooling Water Treatment Pack No.1 or No.2.	

CAT. NO.	DESCRIPTION
<b>CLEAN-UP PACK FOR CLOSED WATER SYSTEMS</b>	
For removing rust in chilled water systems or hot water systems	
—	Formula No. 899 System Cleaner (1-2 galls/100 galls. system water)
59384	1 Gall. Bottle
59399	Case of 4 Galls.
593100	5 Gall. Pail
593101	30 Gall. Drum
593102	55 Gall. Drum
Note:	To prevent corrosion in closed water systems, see Closed System Treatment Pack No. 1

CAT. NO.	DESCRIPTION
<b>CLEAN-UP PACK FOR NEW COOLING WATER SYSTEMS AND BOILERS</b>	
For removing mill scale, weld scale, grease, dirt from new cooling water systems and boilers	
—	Formula No. 899 System Cleaner:—For Cooling Towers — 1-2 galls/100 galls. of system water. For Boilers — 2-4 galls/100 galls. of boiler water
59384	1 Gall. Bottle
59399	Case of 4 Galls.
593100	5 Gall. Pail
593101	30 Gall. Drum
593102	55 Gall. Drum

CAT. NO.	DESCRIPTION
<b>ICE MACHINE CLEANER</b>	
For removing deposits in ice machines	
—	Ice Machine Cleaner: 8 ozs/3 galls. of water in the system. Food Grade Acid. Contains special indicator dye.
593103	1 Gall. Bottle
59349	8 fl. oz. Bottle

CAT. NO.	DESCRIPTION
<b>KLEEN KOIL</b>	
For removing grease and oil dirt on refrigeration equipment Can be diluted for most cleaning jobs.	
59344	1 Gall. Bottle
59345	5 Gall. Pail
593104	30 Gall. Drum
593105	55 Gall. Drum

CAT. NO.	DESCRIPTION
<b>KLEEN KOIL II</b>	
A MORE CONCENTRATED CLEANER	
For removing grease and oil dirt on refrigeration equipment	
593106	1 Gall. Bottle
593107	5 Gall. Pail
593108	30 Gall. Drum
593109	55 Gall. Drum

CAT. NO.	DESCRIPTION
<b>ALU-KLEEN ALUMINIUM CLEANER</b>	
For removing dirt and grease from aluminium and copper-finned tubes — for difficult jobs use full strength	
59351	1 Gall. Bottle
593112	5 Gall. Pail
593113	30 Gall. Drum

CAT. NO.	DESCRIPTION
<b>NEUTRA-SOLV</b>	
For removing grease, oil and dirt from engine parts, machinery, tools, exhaust fans, ventilation hoods etc. (Dilute 1 part in 5 parts water for most applications)	
59347	1 Gall. Bottle
59348	5 Gall. Pail
593110	30 Gall. Drum
593111	55 Gall. Drum

CAT. NO.	DESCRIPTION
<b>KOOLER KARE</b>	
For removing scale from evaporative coolers (Use 2 briquettes for every 5 galls. of water in the system)	
59353	1 — Box 12 briquettes

CAT. NO.	DESCRIPTION
<b>2-CH ALGAECIDE</b>	
59358	25 lbs.

CAT. NO.	DESCRIPTION
<b>FORMULA No. 875</b>	
Scale and Corrosion Inhibitor for Cooling Systems over 200 galls. Use if total hardness of make-up water is 50 ppm or over.	
593114	30 Gall. Drum
593115	55 Gall. Drum

CAT. NO.	DESCRIPTION
<b>FORMULA No. 877</b>	
Scale and Corrosion Inhibitor for Cooling Systems over 200 tons. Use if total hardness of make-up water is under 50 ppm.	
593116	30 Gall. Drum
593117	55 Gall. Drum

CAT. NO.	DESCRIPTION
<b>K-25 PHOSPHATE PEARLS</b>	
Scale and Corrosion Inhibitor for once-through cooling systems or potable water systems	
593118	6/10 lb. Case
593119	25 lbs.
593120	50 lbs.

CAT. NO.	DESCRIPTION
<b>TRACELEAK</b>	
Liquid Leak Tracer for locating gas line leaks	
593121	8 oz. Bottle
593122	1 Gall. Bottle

## M100 DOUBLE SHEAR MOUNTING:

This mounting is a particularly versatile isolator which is suitable for ALL types of light and heavy machinery and structures.

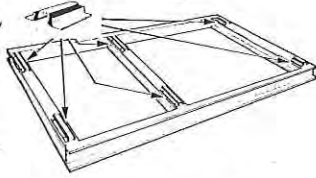
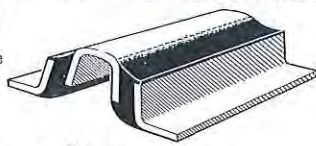
The M100 is well suited to installations that require the mounting to resist the sideways pull with belt driven loads and to maintain the centre distance for gears, without a loss of isolation efficiency in the vertical direction.

The mounting consists of three steel members which are securely bonded to two sections of rubber in its most effective manner, i.e., in shear with progressively increasing compression.

The M100 mounting is available in two rubber hardness, the M100-50 being the softer and the most effective isolator while the M100-60, being harder, provides increased stability in areas of application where this advantage is the important requirement. The mounting holes can be drilled to suit your own individual requirements. The mounting can be bolted or welded to a separate retention plate if preferred, but SECURE fixing is generally recommended.

**IMPORTANT.** THE M100 mountings should be securely fixed to the foundations before the load is applied to prevent the mount spreading and therefore, not allowing it to obtain the correct deflections.

The standard sizes available of the M100 mounting are 150 mm and 300 mm, but if you require a load rating that calls for smaller lengths it is an easy matter for you to cut to the required size.

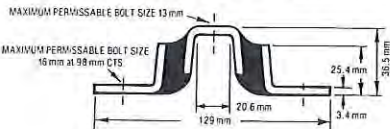


The M100 mountings provide excellent sideways stability with a good vertical isolation efficiency and are therefore ideal for belt drives, etc., but the mount should be installed with the tension as shown....

### LOAD RATING CHART:

Part No. and Duro	Length						CAT. NO.	P/N & Duro	Lgth. mm
	25 mm	50 mm	75 mm	100 mm	150 mm	300 mm			
M100-50	10 kg	26 kg	40 kg	58 kg	75 kg	160 kg	<b>5941</b>	<b>M100-50</b>	<b>150</b>
M100-60	22 kg	30 kg	87 kg	125 kg	170 kg	340 kg	<b>5942</b>	<b>M100-50</b>	<b>300</b>
							<b>5943</b>	<b>M100-60</b>	<b>150</b>
							<b>5944</b>	<b>M100-60</b>	<b>300</b>

As measured at 3mm deflection.

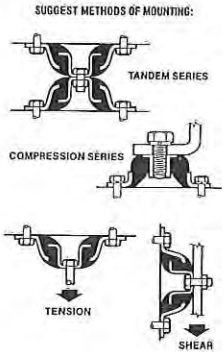


## General MACHINERY VIBRATION ISOLATORS:

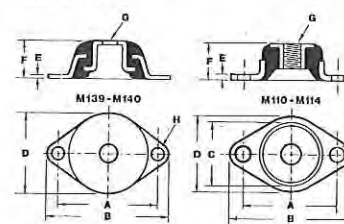
Mackay general machinery VIBRATION ISOLATORS are manufactured from metal and a special resilient rubber, bonded together to provide flexible isolators that are used to eliminate vibration and noise in installations such as:  
**MOTOR DRIVEN FANS • AIR CONDITIONING EQUIPMENT • MOTOR GENERATOR SETS • ELECTRICAL TRANSFORMERS • MARINE ENGINES** and all types of industrial and electrical machinery

A resilient type isolator can only be effective if the base of the machine to be isolated is itself firmer than the mounting. It may be necessary to strengthen the base of the machine to ensure that these isolators perform effectively.

These special mountings were developed to meet almost every type of machinery installation within the loading range, with telescopic metal inserts providing considerable stability in all directions. The two light duty mountings, M110 and M114 are equipped with upper metal inserts, tapped to receive standard bolts or set screws. The mounting can be fastened to the floor or other base, with bolts through the two lugs of the lower metal stamping. When using the heavy duty mountings M139 and M140, loads can be suspended as well as supported. Interlocking flanges incorporated in M139 and M140 isolators ensure suspension even if the rubber is completely destroyed by fire, etc.



### DIMENSIONS:



### LOAD RATING CHART:

Mounting	Nominal Diameter	Lead in Kgs	
		Compression	Shear
M110	40	25-40	20-35
M110	50	40-55	35-50
M114	40	40-60	25-40
M114	50	60-90	40-60
M114	60	90-130	60-80
M140	40	200-280	100-140
M140	50	280-350	120-180
M140	60	350-500	160-200
M140	80	650-880	200-280
M139	40	400-550	150-250
M139	50	550-725	250-400
M139	60	725-900	400-550

Part No.	A	B	C	D	E	F	G	H
M110	60.32 mm	76 mm	41 mm	48 mm	3 mm	22 mm	7/16" SAE	8.7 mm
M114	76.10 mm	92 mm	57 mm	60 mm	3 mm	29 mm	1/2" SAE	8.7 mm
M140	110 mm	141 mm	—	83 mm	3 mm	41 mm	17/32"	13.5 mm
M139	127 mm	157 mm	—	102 mm	3 mm	48 mm	13/16"	14.2 mm

**Deflection:**  
3 mm (M110-M114)  
4 mm (M139-M140)

CAT. NO.	P/N & Duro	CAT. NO.	P/N & Duro	CAT. NO.	P/N & Duro
<b>59420</b>	<b>M110-40</b>	<b>59425</b>	<b>M114-60</b>	<b>59429</b>	<b>M140-80</b>
<b>59421</b>	<b>M110-50</b>	<b>59426</b>	<b>M140-40</b>	<b>59430</b>	<b>M139-40</b>
<b>59423</b>	<b>M114-40</b>	<b>59427*</b>	<b>M140-50</b>	<b>59431</b>	<b>M139-50</b>
<b>59424</b>	<b>M114-50</b>	<b>59428</b>	<b>M140-60</b>	<b>59432</b>	<b>M139-60</b>

## CUSHION CONNECTORS:

Mackay Cushion Connectors are available in a wide range of load capacities and are particularly versatile mountings, suitable for all types of heavy and medium machinery and structures. Each Mackay Connector consists of a pair of round metal plates, between which is bonded a cylindrical shaped cushion of high tensile rubber.

This rubber to metal bonding offers the simplest form of vibration control for use in shear and/or compression loading, but is not recommended for use under permanent tension loading. Mackay Cushion Connectors are compact, lightweight, easy to install and combine excellent vibration and shock control characteristics.

High load carrying capacity and long service life permit the use of lighter, less expensive fabricating materials in the manufacture of equipment.

Because of simplicity of design and ease of installation, these mountings are both practical and economical. Mackay Cushion Connectors are used effectively to isolate vibration and shock in machinery of all types. The application of these mountings in either shear or compression or a combination of both, will solve the majority of your vibration problems providing a mounting system compatible with many types of equipment and machinery operating in diverse environments. Mackay Cushion Connectors are used extensively to provide the best combination of performance and economy for a wide range of commercial and industrial machinery and equipment, consumer products, vehicles, electronic equipment, etc.

If unable to find a cushion connector in our range to meet your specific requirement, please refer your problem to us, as special sizes can be manufactured in quantity to suit.

PART NO.	mm A	mm B	mm C	mm D	Thread Size E	COMPRESSION LOAD KG	TENSION LOAD KG	SHEAR LOAD KG	DEFLECTION mm
M160	12.7	12.7	12.7	12.7	3/16 whit.	5-6.8	3.4-4.5	1-1.3	1.5
M145	19	12.7	19	15.9	1/4 whit.	5-6.5	4-5.5	8-1.1	1.5
M163	22.2	19	22.2	19	1/4 whit.	7-9	5-7	1.5-1.9	1.5
M141-35	22.2	19	22.2	25.4	5/16 whit.	12-16	9-12	3.3-4.2	1.5
M141-40	22.2	19	22.2	25.4	5/16 whit.	18-22	12-16	4.5-5.7	1.5
M141-50	22.2	19	22.2	25.4	5/16 whit.	22-29	18-22	5-5.5	1.5
M141-60	22.2	19	22.2	25.4	5/16 whit.	35-42	24-31	6.5-8.5	1.5
M142-35	38.1	25.4	38.1	34.9	3/8 whit.	12-16	9-12	3-4	1.5
M142-40	38.1	25.4	38.1	34.9	3/8 whit.	17-21	13-16	4-5.5	1.5
M142-50	38.1	25.4	38.1	34.9	3/8 whit.	30-40	23-30	6-8	1.5
M142-60	38.1	25.4	38.1	34.9	3/8 whit.	48-65	36-50	10-16	1.5
M146-40	31.7	38.1	31.7	55.5	3/8 whit.	43-58	34-45	8-11	3
M146-50	31.7	38.1	31.7	55.5	3/8 whit.	62-84	46-60	12-16	3
M146-60	31.7	38.1	31.7	55.5	3/8 whit.	87-117	64-87	19-24	3
M195-40	19	44.4	19	66.7	M10	66-88	58-78	13-18	3
M195-50	19	4.4	19	66.7	M10	90-120	76-104	18-22	3
M195-60	19	44.4	19	66.7	M10	150-210	120-165	35-47	3



CAT. NO.	Part No.	CAT. NO.	Part No.
<b>59434</b>	<b>M160</b>	<b>59442</b>	<b>M142-40</b>
<b>59435</b>	<b>M145</b>	<b>59443</b>	<b>M142-50</b>
<b>59436</b>	<b>M163</b>	<b>59444</b>	<b>M142-60</b>
<b>59437</b>	<b>M141-35</b>	<b>59445</b>	<b>M146-40</b>
<b>59438</b>	<b>M141-40</b>	<b>59446</b>	<b>M146-50</b>
<b>59439</b>	<b>M141-50</b>	<b>59447</b>	<b>M146-60</b>
<b>59440</b>	<b>M141-60</b>	<b>59448</b>	<b>M195-40</b>
<b>59441</b>	<b>M142-35</b>	<b>59449</b>	<b>M195-50</b>
<b>59450</b>	<b>M195-60</b>		

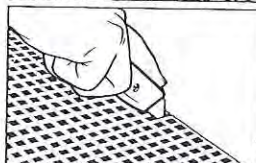
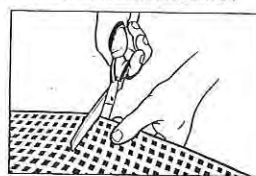
On Application

## M164 MACHINERY MOUNTING PAD:

The inexpensive material for effective control of machinery vibration, shock and acoustic noise.



When installing a M164 Pad, an overlap of 6mm across the feet of the machine should be allowed for.



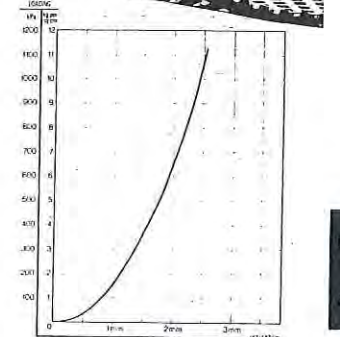
The Mackay M164 Mounting Pad is only available in a standard size of 457 mm x 457 mm. Using scissors or a knife, the pad can be easily cut to any required size.

### MULTIPLE LAYERS:

Where it is required to obtain increased deflection at the same kg/sq cm, the M164 Pad can be stacked in layers but, where more than two layers are used, separate each layer with a metal shim plate of 1.5 to 2 mm thickness. If several layers are required, the height of the stack should be less than the length or width.



**OIL-RESISTANT NEOPRENE**



### DEFLECTION GRAPH:

For optimum operation, the M164 Pad should be loaded at 3.5 kg/sq cm, but it is suitable for a load rating from 7 to 4.2 kg/sq cm. When used with impact type machinery such as punch presses, the pad should be loaded at 1.8 kg/sq cm.



CAT. No. 59451

Size 457 x 457 mm (18" x 18")

# 594-a

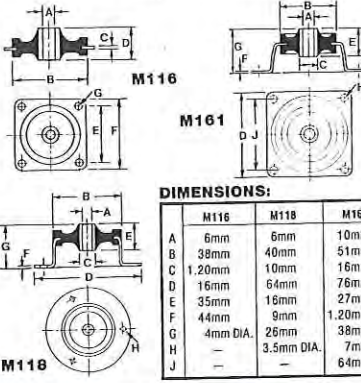
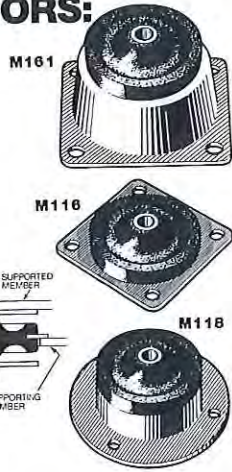
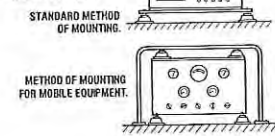
# MACKAY SILENTRUBA PRODUCTS



## INSTRUMENT ISOLATORS:

The Mackay range of PANEL MOUNTINGS are widely used to efficiently isolate steady static vibration and the control of occasional shock. These mountings are easy to install and are in configurations to suit a variety of design requirements. It is generally recommended that snubbing washers be used to provide an interlocking system of metal parts which act to prevent damage from overload or excessive shock impact. The snubbing washers act to restrict axial movement when space limitations must be considered, but they have no other effect upon the action or efficiency of the mounting. This type of isolator is particularly suitable for the isolation of noise transmission and similar high frequency vibration.

### SUGGESTED METHOD OF MOUNTING:



### DIMENSIONS:

	M116	M118	M161
A	6mm	6mm	10mm
B	38mm	40mm	51mm
C	1.20mm	10mm	16mm
D	16mm	64mm	76mm
E	35mm	16mm	27mm
F	44mm	9mm	1.20mm
G	4mm DIA.	26mm	38mm
H	—	3.5mm DIA.	7mm DIA.
J	—	—	64mm

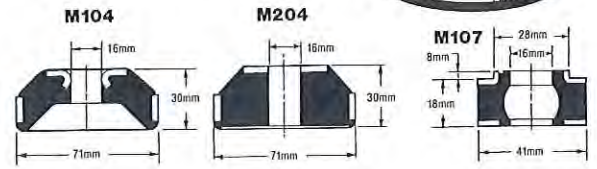
### LOAD RATING:

Part No.	Load	Deflection
M116-2	0.9kg	1.5mm
M116-4	1.8kg	1.5mm
M116-6	2.7kg	1.5mm
M116-8	3.6kg	1.5mm
M116-10	4.5kg	1.5mm
M116-12	5.4kg	1.5mm
M118-2	0.9kg	1.5mm
M118-5	2.3kg	1.5mm
M118-10	4.5kg	1.5mm
M161-10	4.5kg	1.5mm
M161-15	6.8kg	1.5mm
M161-20	0.9kg	1.5mm
M161-25	11.3kg	1.5mm

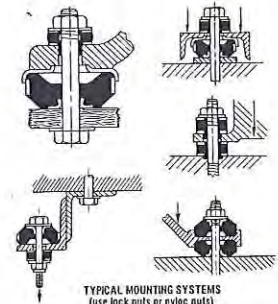
Cat. No.	Part No.	Cat. No.	Part No.	Cat. No.	Part No.
59469	M116-2	59474	M116-12	59479	M161-10
59470	M116-4	59476	M118-2	59480	M161-15
59471	M116-6	59477	M118-5	59481	M161-20
59472	M116-8	59478	M118-10	59482	M161-25
59473	M116-10				

## Combination MOBILE and MACHINERY ISOLATORS:

The combination ISOLATORS provide the excellent shock absorbing properties of rubber in shear and compression with good dynamic cushioning under rugged operating conditions. These ISOLATORS are designed to be used as an assembly. The rebound unit limits the free movement of the equipment to some extent, but this restriction is very desirable in mobile installations. Care must be taken when installing to ensure that the nut is not drawn too tightly so as to avoid any excessive preloading of the ISOLATOR and rebound unit.



Part No.	LOAD (kgs)	DEFLECTION (mm)
M104-4	57	4
M104-50	90	4
M104-60	125	4
M104-70	180	4
M204	270	4
M107-40	115	4
M107-50	170	4
M107-60	250	4
M107-70	280	4



Cat. No.	Part No.	Cat. No.	Part No.	Cat. No.	Part No.
59411	M104-4	59414	M104-70	59416	M107-50
59412	M104-50		M204	59417	M107-60
59413	M104-60	59415	M107-40	59418	M107-70

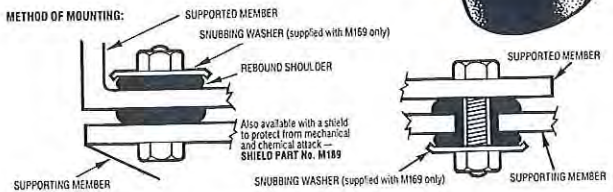
## MOBILE DUAL COMPRESSION ISOLATORS:

The Mackay dual compression mobile ISOLATORS have been engineered especially for controlling vibration, shock and noise in vehicular equipment which results in improved comfort and increased equipment life. They perform the primary function of isolating vibration in all directions.



### M169 and M187

### METHOD OF MOUNTING:

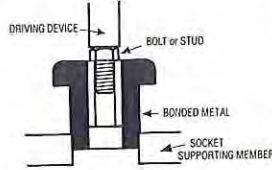


PART No.	A	B	C	D	Deflection
M169-40	50mm	34mm	13mm	16mm	1.5mm AT
M169-50	50mm	34mm	13mm	16mm	1mm 100kg LOAD
M169-60	50mm	34mm	13mm	16mm	0.6mm LOAD
M187-40	63mm	41mm	22mm	13mm	3.3mm AT
M187-50	63mm	41mm	22mm	13mm	2.3mm 200kg LOAD
M187-60	63mm	41mm	22mm	13mm	1.4mm LOAD

Mackay have available several other sizes — details can be supplied on request.

### INSTALLATION IS SIMPLE:

- Both the mounting and the socket should be lubricated with water.
- Insert part in socket and rotate part by hand, while applying axial force until partially positioned. Insert driving bolt, stud or assembly fixture in the metal inner member of the mounting. Care should be taken that the driving device does not overhang the outside diameter of the inner member in order to prevent damage to the Elastomer.
- Apply pressure to the driving device to seat the mounting into its socket.
- Assemble the other elements of the support, insert the mounting bolt and tighten by applying the required torque. When the nut is tightened against the snubbing washer, the rebound shoulder is formed automatically. The resulting pre-compression will ensure optimum performance.



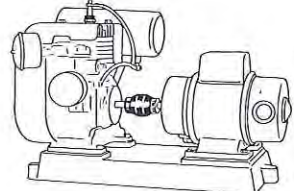
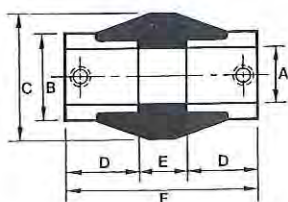
**INSTALLATION NOTE:** Tighten nut to pull mounting bracket and snubbing washer firmly against inner member.

## FLEXIBLE COUPLINGS:

Mackay fractional kW flexible COUPLINGS are specially developed couplings whereby torque is transmitted by rubber in shear, resulting in an unusually high degree of flexibility with effective absorption of torsional vibration. These couplings comprise two steel bushes bonded to a high tensile rubber. Having no ungainly projections, they are pleasing in appearance, and with no loose parts to handle are easy to install.



- Features:**
- MISALIGNMENT ACCOMMODATION**  
The metal sleeves are so spaced that some angular misalignment is permitted without undue stress either on the bond or in the body of the rubber. Parallel misalignment is also accommodated primarily through the shear stress of the rubber. It is advised, however, that misalignment between drive and driven units be kept to a minimum.
  - NOISE REDUCTION**  
Shear stressed rubber prevents telegraphic transmission of sound and all such high frequency vibrations — therefore stops gear tooth noise, motor hum, etcetera, ordinarily transmitted through the driving shaft.



The Mackay COUPLINGS are designed to adequately transmit the power as shown at 1440 r.p.m. The power rating increases with increased r.p.m.

PART No.	Power rating at 1440 rpm	A	B	C	D	E	F	Set Screw
M134-1/8	0.9kW	13mm	22mm	32mm	21mm	8mm	51mm	1/4 WHIT.
M134-1/4	1.9kW	13mm	28mm	41mm	24mm	16mm	64mm	1/4 WHIT.
M134-1/2	3.7kW	16mm	35mm	46mm	25mm	18mm	68mm	5/16 WHIT.
M134-3/4	5.6kW	19mm	38mm	51mm	27mm	19mm	73mm	5/16 WHIT.

The shaft MUST NOT extend into space 'E'

Cat. No.	Part No.	Cat. No.	Part No.	Cat. No.	Part No.
59484	M169-40	59486	M169-60	59488	M187-50
59485	M169-50	59487	M187-40	59480	M187-60

CAT. NO.	PART No.	CAT. NO.	PART No.
594151	M134 - 1/8	594153	M134 - 1/2
594152	M134 - 1/4	594154	M134 - 3/4

## BONDED BUFFERS:

For inexpensive and effective control of machinery vibration, shock and acoustic noise.

These buffers are equally adaptable when controlling impact or when used as machine feet, they also may be used as snubbing rubbers when excessive shock loads are encountered in resiliently mounted equipment.

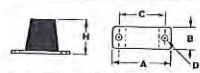
**Features:**  
Designed specifically to control impact and torque reaction loads.  
Built to limit movement and stabilize equipment at critical frequencies.  
A rugged rubber bonded to metal unit ensures simplicity of application and ease of installation.



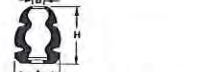
PART No.	MM A	MM B	C	MM D	STATIC LOAD KG	Deflection mm	BUFFING LOAD KG	Deflection mm
M171	21	21	1/4 BSF	14	17	3	45	8
M170	22	35	3/8 W	38	64	3	180	8
M175	36	63	1/2 W	33	115	5	400	12
M174	50	50	3/8 UNF	16	125	6	600	20



PART No.	MM A	MM B	C	MM D	STATIC LOAD KG	Deflection mm	BUFFING LOAD KG	Deflection mm
M172	50	42	3/8 UNF	16	42	8	175	20
M173	65	51	3/8 UNF	16	75	8	250	20



PART No.	MM H	MM A	MM B	MM C	MM D	STATIC LOAD KG	Deflection mm	BUFFING LOAD KG	Deflection mm
M176	73	127	44	102	10	87	10	200	20



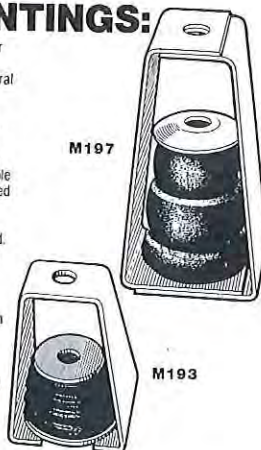
PART No.	MM H	MM A	MM B	STATIC LOAD KG	Deflection mm	BUFFING LOAD KG	Deflection mm
M190	103	79	20	150	25	450	45

CAT. NO.	PART No.	CAT. NO.	PART No.
59456	M171	59454	M172
59460	M170	59455	M173
59459	M175	59457	M176
59458	M174	59461	M190

## SUSPENSION MOUNTINGS:

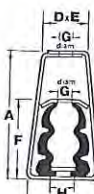
The Mackay SUSPENSION ISOLATORS have been designed for use in the building and construction industry. Use of these mounts will give satisfactory isolation of vibration and structural borne noise transmitted in piping and ductwork.

The MOUNTINGS work equally well when used in heavy pipe installations, air conditioning, ducting, suspended fan units or acoustical ceilings. Supplied in two parts, the mountings are easily installed. The frame is fixed to the building structure by loxin bolts, welding, or other suitable means. The rubber flexibile element is then installed in the frame and the hanger rod passed through the base of the assembled mount and fastened in position. Height adjustment can be made to ensure correct location of the suspended unit if threaded hanger rods are used. The smaller unit (M193) allows for pre-assembly of the hanger rod into the rubber element prior to raising into position. The assembled unit provides a strong, compact fallsafe mounting for the suspension of all types of equipment. The components form an interlocking link, thus preventing failure in the event of destruction or damage to the rubber flexibile element. All steel surfaces are treated to prevent corrosion. The smaller mountings (M193) are packaged in labelled boxes showing load ratings of the mounts, the rubber flexibile element is also colour coded as shown in the load rating chart.



### DIMENSIONS:

	M193	M197
A	73mm	178mm
B	36mm	102mm
C	51mm	76mm
D	35mm	64mm
E	25mm	76mm
F	37mm	106mm
G	19mm	19mm
H	25mm	32mm



### LOAD RATING:

Part No.	Load	Deflection at rated load.	Colour Coding
M193-45	20kg	11mm	Green
M193-50	30kg	11mm	Red
M193-55	45kg	11mm	Yellow
M193-60	68kg	11mm	White
M197	91kg	19mm	Plain
M197	272kg	37mm	Plain
M197	450kg	45mm	Plain

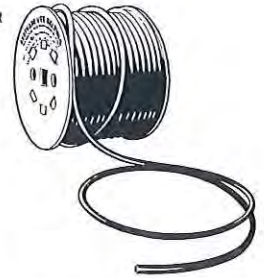
Detail drawing is typical only. Deflection tolerance  $\pm 1.6mm$ .

CAT. NO.	PART No.	CAT. NO.	PART No./Load
	M193-45		M197 - 91 kg
	M193-50		M197 - 272 kg
	M193-55		M197 - 450 kg
	M193-60		

## REDTHANE VEE BELTING:

Because of major advances in extrusion technology, Redthane Vee Belting has proved itself to be an exciting new development in the field of mechanical power transmission, both in terms of reliability and cost-saving.

**Something completely different from Mackay. Polyurethane Vee Belting — it's so different it really does save money!**

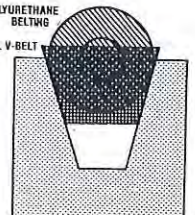


### FEATURES:

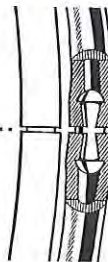
- Replaces almost all types of conventional belting ie A, M & B section vee belts, link belting and all round section belts.
- Precision-manufactured in the form of a Polyurethane based tube offering unique qualities of strength, durability, resistance to oils and abrasion, moisture, radiation and chemicals.
- Supplied in a continuous length. Required length is simply cut off, and fastened internally (as illustrated) to give smooth, trouble-free running. No motor/pulley adjustments are necessary before or after fitting.
- Reduces fitting time dramatically eg Conventional Belting on a Holtbrook Centre Lathe — 155 minutes; RBV — 20 mins. Crucial savings in terms of machine down-time, direct labour, production losses etc.
- Cuts belt wastage to a minimum. When just one portion of the belt is damaged, that portion can be cut and replaced with a new section. No question of scrapping the whole belt.
- Provides the complete answer where Stocks are concerned. Instead of having to stock up with countless different vee belt sizes, just one or more RBV coils will supply all your needs with the minimum of time and space taken up.

REDTHANE POLYURETHANE BELTING

CONVENTIONAL V-BELT



## SIMPLY CUT and FASTEN...



### SPECIFICATIONS:

Diameter	Approx. Min Pulley Dia	Supplied in Coils	Sections Replaced
12.7mm	150mm	25 metres	'B' section
10.2mm	100mm	50 metres	'A' and some 'M' sections
7.9mm	75mm	50 metres	Most 'M' sections
6.4mm	60mm	50 metres	Low power drives
4.8mm	25mm	100 metres	Low power drives

Foot per Minute	'A' Section Minimum Pulley Dia.	H.P. Rating	'B' Section Minimum Pulley Dia.	H.P. Rating
1000	4.0"	0.60	5.0"	1.00
1200	4.0"	0.60	5.0"	1.35
1400	4.0"	0.95	5.0"	1.60
1600	4.0"	1.05	5.0"	1.90
1800	4.0"	1.20	5.0"	2.07
2000	4.6"	1.25	6.0"	2.30
2200	4.6"	1.35	6.0"	2.45
2400	4.6"	1.45	6.0"	2.75
2600	4.6"	1.55	6.0"	2.90
2800	4.6"	1.60	6.0"	3.00
3000	4.6"	1.65	6.0"	3.15
3200	5.0"	1.70	7.0"	3.25
3400	5.0"	1.75	7.0"	3.33
3600	5.0"	1.80	7.0"	3.40
3800	5.0"	1.82	7.0"	3.45
4000	5.0"	1.85	7.0"	3.50

NOTE: H.P. RATING BASED ON 7% INITIAL TENSION

STATIC BEARING LOADS, POUNDS		
3%	52	104
4%	65	130
6%	79	160
7%	92	186

The maximum operating temperature of Redthane is 80°C.

CAT. NO. (per coil)	DIAM. mm	COIL SIZE	CAT. NO. (per metre)	Fasteners CAT. NO.
594160	12.7	25 m	594161	594170
594162	10.2	50 m	594163	594171
594164	7.9	50 m	594165	594172
594166	6.4	50 m	594167	594173
594168	4.8	100 m	594169	594174

## compothane hammers



### Cost "Savings"

- No lost work time due to broken handles.
- Eliminates flying heads — Compothane® hammers are cast in one piece — unicast.
- Reduced injuries — reducing costly medical and compensation claims.

### Safety

- Virtually unbreakable handle due to unique patented construction.
- Eliminates flying heads — Compothane® hammers are cast in one piece — unicast.
- Wrap-around grip and flanged butt provides better tool control and prevents tool slipping.

### MODELS:

**REGULAR MODELS**  
Basic industrial shapes in 5 sizes — dead blow heads in hard and medium hardness

**SLIMLINE MODELS**  
Deep throated for many specific applications where space is confined. Dead blow heads, hard or medium hardness, 4 sizes

**SLUDGE MODELS**  
Satisfies a wide span of industrial and construction needs. Performs maximum hand tool tasks from medium to full size sludge applications. H hardness only. 3 sizes

### The technical story . . .

**DEAD BLOW HEADS**  
The shock loaded dead blow head is featured on all of Compothane hammers in use. The dead blow head provides maximum striking force with minimum effort and eliminates rebound and vibration.

**TEMPERATURE RANGE**  
Compothane hammers can be used effectively in a temperature range of 0°C (32°F) to 94°C (200°F). Special formulated Compothane hammers can be supplied that retain their flexibility to -40°C (-40°F).

### FEATURES:

- Compothane® hammers replace lead, rawhide, leather, brass, copper and plastic tipped hammers, and last 10 times longer than these materials
- Compothane® hammers do not expose metal on the head or handle
- This means no sparking
- Compothane® hammers can be struck under the most flammable conditions
- urethane will not support flame
- costly and delicate equipment protected by urethane surface
- Compothane® hammers will not mark or dent sensitive sheet metal or pre-painted parts
- Compothane® hammers play an important role in plant noise abatement programmes

### IMPORTANT

A Compothane® soft-faced hammer is not a carpenter's tool. Repeated strikes on nail heads will rupture the face and expose the metal canister. If any metal is exposed on the head or handle, the hammer must be removed from service.

COMPLETE DETAILS & AVAILABLE RANGE SUPPLIED ON APPLICATION

# 594-c MACKAY SILENTRUBA PRODUCTS

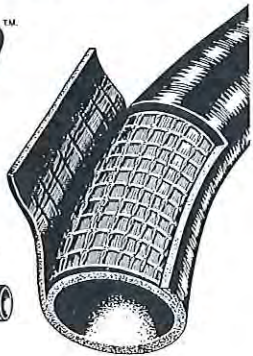


## Flexi-PLY™

### 90° UNIVERSAL HOSE BENDS:

Mackay 90 degree HOSE BENDS consist of a tough rayon reinforcing "knitted" into the rubber to ensure a good quality, durable hose for industrial applications. A versatile range is manufactured with sizes available from 13mm I.D. to 57 mm I.D. with a universal angle of 90°.

Sizes: 13mm I.D. to 57mm I.D.



## flex-i-cast®

### URETHANE HOSE PROTECTORS:

Designed and moulded to eliminate the damage and potential dangers resulting from abraded or cut hydraulic and mechanical hoses used in hard rock mining, the Flexicast® Polyurethane Hose Protector is proving to be the effective and economical answer to costly downtime, replacement expense and production delays.

The Flexicast® Hose Protector is particularly valuable to and has wide applications in the mining, forest products, quarrying and cement industries where abrasion and premature hose failure result in high maintenance costs. Hydraulic fluid losses are reduced to virtually zero and hose failure on air lines, electrical cable, welding, battery charging cable and water lines are few, even under the severest operating conditions.

The Polyurethane Hydraulic Hose Protector is available in five sizes. Each size will fit a range of sizes for hydraulic and other hoses and cables. The protector is self-gripping and comes in the standard lengths shown in the specification table. The protector is required only on those portions of the hose that are exposed or vulnerable to abrasive conditions.

The Flexicast® Protector can be installed on existing systems without dismantling the hose assembly. This eliminates the risk of contamination and simplifies field installations.

The Protector can also be used again in the event of a non-abrasion hose failure. Unlike metal protectors, there are no sharp edges to injure installers and the resilience of Flexicast® urethane means no "kinks" leading to premature hose failure.

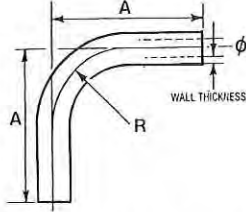


**Tough,  
easy-to-install,  
abrasion resistant,  
reduced  
down-time.**

### SPECIFICATIONS:

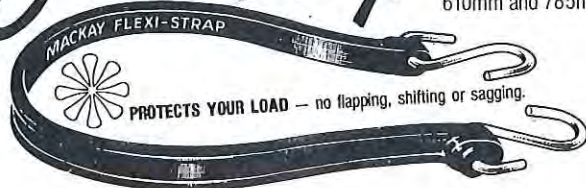
Part No.	Standard Length Metres	Standard Length Feet	To suit Hydraulic Hoses I.D.	To suit Air, Water or Fluid Hoses, Electrical Cables O.D.
U1 6 12	0 61	2	19mm 20mm	16mm 32mm
U3 12 20	0 91	3	20mm 30mm	32mm 64mm
U5 16 32	1 22	4	25mm 30mm	32mm 89mm
U7 28 64	1 22	4	45mm 100mm	64mm 152mm
U7 28 64 HD	1 22	4	45mm 100mm	64mm 152mm

Part No.	Internal Diameter	Length	
		A	R
UHB 13	13mm	105mm	50mm
UHB 16	16mm	105mm	50mm
UHB 19	19mm	105mm	50mm
UHB 25	25mm	105mm	50mm
UHB 31	31mm	120mm	60mm
UHB 38	38mm	120mm	60mm
UHB 44	44mm	140mm	70mm
UHB 50	50mm	140mm	70mm
UHB 57	57mm	170mm	85mm
UHB 100	13mm-16mm	870mm x 50mm	50mm



FULL DETAILS AND AVAILABILITY SUPPLIED ON REQUEST

## flexi-strap



PROTECTS YOUR LOAD — no flapping, shifting or sagging.

### RUBBER STRAPS and FASTENERS

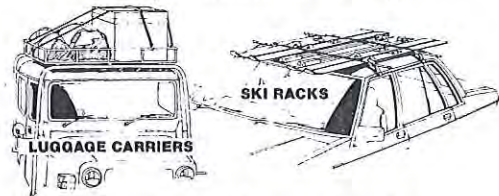
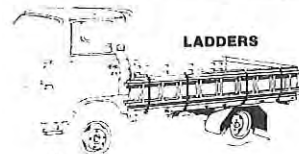
AVAILABLE IN 230mm, 380mm, 610mm and 785mm LENGTHS

- REINFORCED ENDS — hooks will not pull out
- QUICK ON/OFF HOOKS eliminate rope-tying.
- PLASTIC COATED HOOKS — will not chip or scratch paintwork.
- NON-STAINING, LONG-LIFE RUBBER — weather resistant compound.

For your protection, Mackay recommend that the use of "flexi-straps" DOES NOT EXCEED the specified stretch as listed:

Part No.	Length	Recommended Maximum Stretch
FHS9	230mm	285mm
FHS15	380mm	475mm
FHS24	610mm	765mm
FHS31	785mm	980mm

### TYPICAL APPLICATIONS



### ACTROL RECOMMENDATION — From Staff and Customer Experience

The Flexi-Strap is the answer to carrying Large Items in the boot of your sedan car, for situations where you cannot close the boot lid.

What do you normally do? — Protect the equipment being carried as best you can with cushions, blankets etc. and use a piece of rope to tie down the boot lid.

What happens? — As you go along the road, the boot lid inevitably starts "flapping" and the protective material becomes loose necessitating frequent and frustrating stops to check and readjust the ropes to prevent possible damage to your boot lid and the equipment being carried.

NO MORE — Use a Flexi-Strap — it overcomes all these problems as well as having many other useful purposes as illustrated above.

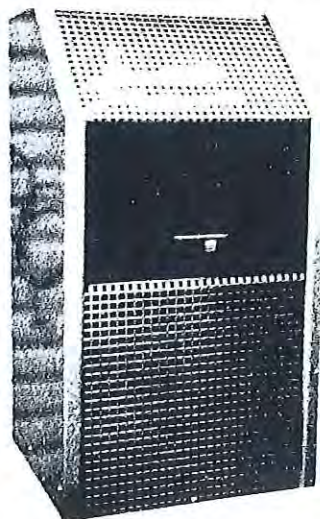
CAT. NO.	PART No.	LENGTH	
		mm	ins.
594220	FHS9	230	9"
594221	FHS15	380	15"
	FHS24	610	24"
594222	FHS31	785	31"

Note: Above Flexi-Straps are supplied singly (carded). For bulk supply contact Actrol for special bulk pricing.

### ALSO AVAILABLE

"TY-DOWNS" TORCORD — Reels of 152 metres Part No. 507	CAT. NO. 594250	FELK SAFETY TIE DOWN STRAPS Part No. 487475	CAT. NO. 594291
"TY-DOWNS" TORCORD HOOKS Part No. 508	CAT. NO. 594251		

## REFRIGERATED AIR DRIERS



# Frigematic

**CONSTRUCTION.** All Series R.A.D. dryers incorporate a hermetically sealed, air cooled refrigeration unit; electrically wired to starting and protecting devices, ON/OFF switch, POWER ON light, terminal box and connecting cable with 3 pin plug.

The refrigerated condenser, heat exchanger and connecting tubes are of copper construction with brass fittings for air inlet, air outlet and condensate drain connections. Components liable to sweat are fully insulated.

The complete assembly is contained in a welded and rust-protected steel frame and covered by easy removable heavy gauge ZINCSEAL panels which are finished on the outside in hammertone enamel. Ventilation covers are of chrome plated perforated sheet. Left and right hand cable outlets are provided.

**INSTALLATION AND MAINTENANCE.** All Series R.A.D. dryers are provided with mounting lugs for above floor installation, away from dust and fluff concentration which could clog the condenser. This reduces maintenance to an occasional dusting of the unit and an occasional cleaning of the externally mounted condensate discharge trap.

All units are fully factory tested and ready for plug in operation after airlines are connected and the condensate discharge trap has been screwed on to the drain fitting.

### SPECIFICATIONS FRIGEMATIC SERIES R A D refrigerated, non-cycling air dryers

DATA	MODEL						
	UNIT	RAD 10	RAD 20	RAD 30	RAD 40	RAD 60	RAD 80
CAT. NO.		5951	5952	5956	5953	5954	5955
CAPACITY AT 43.3°C (110°F) AMBIENT 690 kPa (100 PSI)/37.8°C (100°F)	litre/sec.	4.7	9.4	14.2	18.9	28.3	37.8
	SCFM	10	20	30	40	60	80
PRESSURE DEW POINT	°C	1.7	1.7	1.7	1.7	1.7	1.7
	°F	35	35	35	35	35	35
MAXIMUM OPERATING PRESSURE	kPa	2069	2069	2069	2069	2069	2069
	PSIG	300	300	300	300	300	300
ELECTRICAL REQUIREMENTS	240 Volt. Single Phase. 50 Hz.						
AIR CONNECTIONS	BSP-F	1/2"	1/2"	3/4"	3/4"	1"	1.1/4"
DRAIN CONNECTION	BSP-M	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
HEIGHT	Cm	58.4	66	86.3	86.3	101.5	116.8
	INCHES	23	26	34	34	40	46
WIDTH	Cm	40.6	35.5	40.6	40.6	40.6	48.2
	INCHES	16	14	16	16	16	19
DEPTH	Cm	33	33	38.1	38.1	40.6	45.7
	INCHES	13	13	15	15	16	18
WEIGHT	kg	30	38.2	54.5	60.9	75	94.1
	LBS	66	84	120	134	165	207

CAPACITY RATINGS for all Series R.A.D. dryers are based on the following operating conditions.

AIRFLOW CAPACITY — litre/sec. (SCFM) (Refer Note 1.)  
 OPERATING AIR PRESSURE — 690kPa (100psig) (Refer Note 2.)  
 INLET AIR TEMPERATURE — 37.8°C (100°F) (Refer Note 3.)  
 PRESSURE DEW POINT — 1.7°C (35°F) (Refer Note 3.)  
 AMBIENT TEMPERATURE — 43.3°C (110°F) (Refer Note 4.)  
 MAXIMUM OPERATING PRESSURE — 2069kPa (300psig) (Refer Note 2.)

**NOTES :**

- (1) SCFM = Standard Cubic Feet/Minute = Cubic Feet of Free Air/Minute. For airflow capacity refer to Series R.A.D. Model Specification Table above.
- (2) OPERATING AIR PRESSURE may be increased to maximum operating pressure with a suitable condensate discharge trap. Higher operating pressure will result in a lower atmospheric dew point which at 690kPa/1.7°C (100 psig/35°F) PDP = -23.3°C (-10°F) 1379kPa/1.7°C (200psig/35°F) PDP = -28.9°C (-20°F), 2069kPa/1.7°C (300psig/35°F) PDP = -34.4°C (-30°F).
- (3) INLET AIR TEMPERATURE and PRESSURE DEW POINT (PDP). Due to the high efficiency of the Frigematic heat exchanger the inlet air temperature can safely be exceeded by 50% without any ill effect to the unit. The pressure dew point however will raise slightly.
- (4) AMBIENT TEMPERATURE = temperature surrounding the R.A.D. unit. A lower ambient temperature permits an increase in airflow of 10% for each 8.3°C (15°F) reduction below 43.3°C (110°F).

**GUARANTEE :** The manufacturer warrants the complete unit against all defects in material and workmanship for a period of 12 months from date of delivery. Any part found defective will be replaced or repaired free of charge on delivery to our store.

# SELF ADHESIVE IDENTIFICATION PRODUCTS

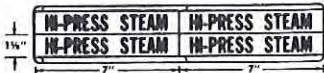
## BRADY® PIPE MARKERS

What's the difference in **BRADY** Pipe Markers?

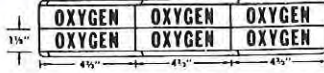
Brady offers a *complete system* of standardized pipe identification. There are seven styles of pressure-sensitive pipe markers that combine colors and legends for *all* sizes of pipe; two types of marker materials and adhesives for various pipe and insulation textures and environments: (1) Brady B-500 Vinyl Cloth General Purpose Pipe Markers and (2) Brady B-350 Perma-Code Thin Film Pipe Markers. In addition, there are *Directional Arrows* for showing line flow and valve locations; *Color-Coded Pipe Banding Tapes* for all-around-the-pipe identification; *Special* pipe markers and sizes with any colors or legends you need, plus *Blank Markers* with colored backgrounds you can write on.



### SMALL LEGENDS (3/4" high) – for pipes under 3" diameter



Style 4 – FOUR identical Markers, each 1 1/8" x 7", per dispenser card.



Style 6 – SIX identical Markers, each 1 1/8" x 4 3/8" per dispenser card.



Style 8 – EIGHT identical Markers, each 1 1/8" x 3 1/2" per dispenser card.

### LARGE LEGENDS (2" high) – for pipes over 3" diameter.



Style 1 – ONE 2 1/4" x 14" Marker per dispenser card.



Style 2 – TWO identical Markers, each 2 1/4" x 7" per dispenser card.



Style 3 – THREE identical Markers, each 2 1/4" x 4 3/8", per dispenser card.

## NUMBERS AND LETTERS

FOR FAST GENERAL PURPOSE MARKING,  
B-500 VINYL-CLOTH NUMBERS AND  
LETTERS ON DISPENSER CARDS



Printing on Marker	Y5 Series 1 3/4" x 5" Size	Y35 Series 1 1/2" x 3 1/2" Size	Y225 Series 7/8" x 2 1/4" Size	Y15 Series 7/8" x 1 1/2" Size	Y75 Series 9/16" x 3/4" Size	Y05 Series 1 1/32" x 1/2" Size	Y03 Series 1/4" x 3/8" Size
0	Y5-0	Y35-0	Y225-0	Y15-0	Y75-0	Y05-0	Y03-0
1	Y5-1	Y35-1	Y225-1	Y15-1	Y75-1	Y05-1	Y03-1
2	Y5-2	Y35-2	Y225-2	Y15-2	Y75-2	Y05-2	Y03-2
9	and so on through Y5-9	Y35-9	Y225-9	Y15-9	Y75-9	Y05-9	Y03-9
A	Y5-A	Y35-A	Y225-A	Y15-A	Y75-A	Y05-A	Y03-A
B	Y5-B	Y35-B	Y225-B	Y15-B	Y75-B	Y05-B	Y03-B
C	Y5-C	Y35-C	Y225-C	Y15-C	Y75-C	Y05-C	Y03-C
Z	and so on through Y5-Z	Y35-Z	Y225-Z	Y15-Z	Y75-Z	Y05-Z	Y03-Z
-(Dash)	Y5-DSH	Y35-DSH	Y225-DSH	Y15-DSH	Y75-DSH	Y05-DSH	Y03-DSH
Fractions (1/8 to 7/8)	—	—	—	Y15-FRC	Y75-FRC	Y05-FRC	—
All fractions mounted on same card: 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8.							
Combination Paces Letters* Numbers*	* Also available Y5-LC Y5-NC	Y35-LC Y35-NC	Y225-LC Y225-NC	Y15-LC Y15-NC	Y75-LC Y75-NC	Y05-LC Y05-NC	Y03-LC Y03-NC

ORDER BY DESCRIPTION AND BRADY NO.

REFER ALSO TO TECH. PAGE 596-a FOR ADDITIONAL BRADY PRODUCTS

# SELF ADHESIVE IDENTIFICATION PRODUCTS

# BRADY®

## WIRE MARKERS

Standardized Wire Identification Tells Which Wire Goes Where  
 . . . Eliminates Guesswork . . . Speeds Installation . . .  
 Saves Maintenance Time for Machine, Equipment Lighting  
 and Motor Wiring

Brady Self-Sticking Wire Markers provide permanent, standardized around-the-wire identification for existing wiring . . . new wiring. Markers are mounted on 2" x 9" quick-release convertible dispenser cards with double Zip-Strip feature to facilitate use of 1½" length or ¾" length. Markers peel off easily one at a time as needed. Application is quick—wrap marker completely around the wire, permanently, or "flag" for temporary identification.

### MARKERS FOR EVERY NEED

Over 5,000 different wire marker legends are stocked, ready for immediate delivery. Choose from: cards of solid numbers or letters (all markers on each card are identical), consecutive numbers and letters or symbols repeated. See stock lists.

**B-500 Vinyl Cloth** for general wire marking needs. Sturdy, tough, dirt-resistant—adaptable to many conditions.  
 Temperature range: —40° F. to 250° F.

**B-600 Polyester Film.** Legends are sub-surface printed on Mylar for permanent protection against abrasion and solvents.  
 Temperature range: —20° F. to 250° F.

**B-700 Vinyl Film** constructed from flexible vinyl backing and special oil-resistant adhesive. Exceptional conformability to small diameter wire. May be removed and reapplied.  
 Temperature range: —20° F. to 300° F.

**B-184 Aluminum Foil** for applications where constant high temperature is a determining factor. Good resistance to solvents, oil and abrasion.  
 Temperature range: —40° F. to 300° F.

Brady offers wire markers in three additional stock materials:

- B-191 Clear Vinyl Self-Laminating
- B-400 Vinyl-with-Polyester Film
- B-12 Acetate Cloth

**Solid Number Cards**

Legend
0
1
2
3
and so on
25
26
and so on
98
99
100
101
and so on
200
and so on
499
500
501
and so on
600

BRADY STOCK NO. WM-7

**Consecutive Number Cards**

Legend
1-33
34-66
67-99
100-124
250-274
275-299
475-499
500-524
975-999
1975-1999

BRADY STOCK NO. WM-1-33

**Consecutive Numbers Repeated**

Legend
1-3
1-4
1-5
1-6
1-8
1-9
0-9
1-10
0-10
1-12
1-16
1-18
19-36

BRADY STOCK NO. WM-1-3-14

**Solid Letter Cards**

Legend
A
B
C
and so on
Z
a
b
c
and so on
z

BRADY STOCK NO. WM-4

**Consecutive Letter Cards**

Legend
A thru Z (Capital Letters)
a thru z (Small Letters)
Plus A thru J
Plus 0 thru 9

BRADY STOCK NO. WM-A-1

## Other BRADY Quality Self-Sticking Products for Industry

**AISLE MARKERS**

**WARNING STRIPES**

**SAFETY SIGNS**

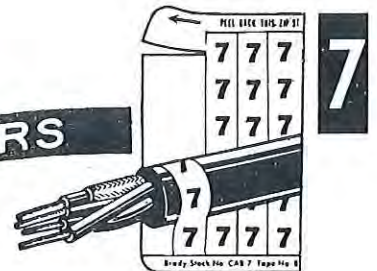
**NO SMOKING**

**WRITE-ON LABELS**

**CABLE MARKERS**

**PROPERTY TAG**

ASSET  
NO.



ORDER BY DESCRIPTION AND BRADY NO.

REFER ALSO TO TECH. PAGE 596 FOR ADDITIONAL BRADY PRODUCTS



MODERNOTECNICA

Index Rings

Cingo Wire Markers



They are made of self-adhesive cloth — size mm. 7.5 x 42. They come on a stiff support and are detached from it when applied. (see illustration).

They are arranged in packs, each composed of 20 wire markers and all have same marking repeated 6 times. It is recommended to apply the wire marker without touching the adhesive.

CINGO Packs (twenty markings). **CAT. NO. 6001**



Box 50 Packs — See illustration.

**CAT. NO. 6002**

On request : Numbers over 1000, Special markings, Larger print size.

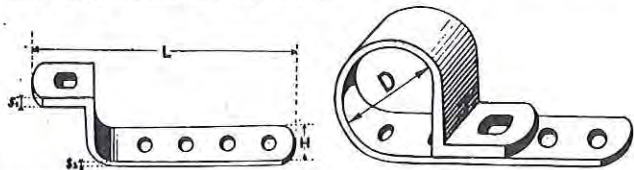
**CINGO BOOK** - They accommodate the packs with the desired marking in the necessary order so they are ready at hand and there is no waste. Packs can be interchanged. Book Cingo Model 20 (size cm. 10x15x3) containing 20 packs. **CAT. NO. 6003.**

Book Cingo Model 40 (size cm. 10x30x3) containing 40 packs. **CAT. NO. 6004.**

**CINGO CASE** - made of fire-painted steel sheets, size 39x50x21, suitable for containing 100 boxes of Cingo wiremarker each box holding 50 packs. **CAT. NO. 5006**

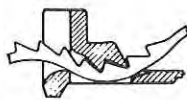
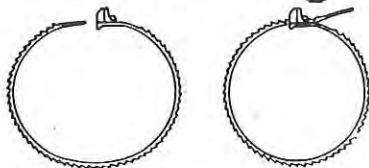
Looping Wire-Clamp

Made of flexible nylon, in natural color; are adjustable do not damage the cables, do not get old. Processing times and stocks are reduced.



Cat.No.	Model	H	L	S1	S2	D adjustable
60016	1	9	53	2	0.8	from 5 to 12 mm
60017	2	12	103	2.5	1	from 7 to 26 mm
60018	3	15	153	3	1.5	from 24 to 45 mm

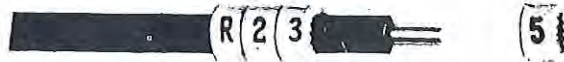
Trik Strings



Particolare

To make bundles of cables; self-adjustable for diameter from 5mm to 33mm. No tool is necessary for applying them and application is rapid. Made of nylon, in natural colour or black. Length 130 mm. — width 3 mm.

Packaging : Boxes with 1000 pieces. **CAT. NO. 6009**



**INDEX RINGS** - can be combined; absolutely indelible, do not get dirty, do not move or detach, do not rotate round the cable.

Material: they are made of PVC.

White with black markings : numbered from 0 to 9 — block letters — small letters — conventional markings.

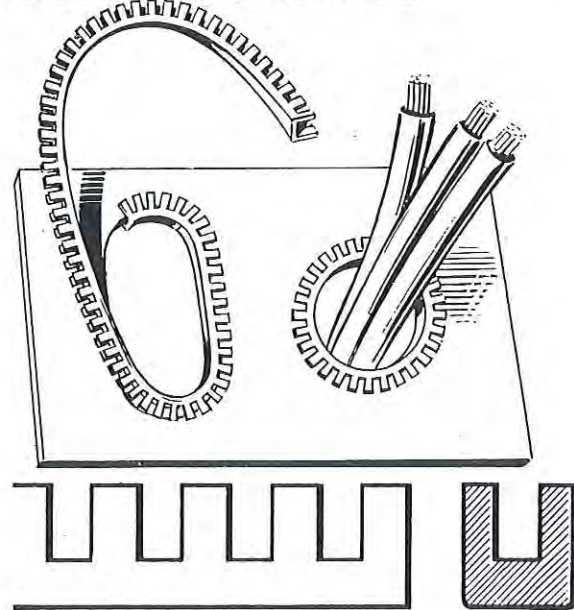
Colored : white, red, green, yellow, black, ash, bleu, rose, brown.

Packaging : boxes with extendable cover for easy and quick disposal.

Cat. No.	Inner Diameter mm	Width mm	Pieces in each Box
60010	1.5 - 2 - 2.5 - 3 - 3.5 - 4 - 4.5	4	1000
60011	5 - 5.5	4	500
60012	6 - 7	6	500
60013	8 - 9 - 10 - 11	6	250
60014	12 - 13 - 14 - 15	6	125

**CONTAINERS**: made of oven painted steel sheets — suitable to contain 10 boxes (size cm. 33x11.5x20). Each container can easily be joined by means of a special plate. **CAT. NO. 60015.**

Sole Grommet



Suitable for steel sheet thickness from 0.5 to 1.5 mm. It is of pleasant appearance and can be used to insulate holes of very limited dimensions.

Material: polyethylene B.P.; color : natural or black. It comes in bars length 12 cm. or 25 cm.

**Special nylon type** - natural color.

It comes in bars from 12 cm. or 25 cm.

Packaging: in bags containing 100 pieces each bag.

Cat.No.	Bar Length	Colour	Description
6007	12 cm	Natural	Polyethylene BP.
6008	25 cm	Natural	
	12 cm	Black	Polyethylene BP
	25 cm	Black	
	12 cm	Natural	Nylon Type
	25 cm	Natural	

PORTABLE INSTRUMENTS

rustrak miniature chart recorders

Dependable miniature instruments for permanently recording power, temperature, pressure, strain, events or virtually any parameter that can be converted into an electrical signal. • Inkless, dry writing, rectilinear recording with wide range of sensitivities, writing and chart speeds. • Operate as chart tearoff or reroll. Quick, easy chart review and rewind. Sliding access window. • Most units about 5 5/8" H, 3 5/8" W, 4 1/8" D. Weight about 3 1/2 lbs. • Rugged die-cast aluminum case in epoxy suede-like charcoal gray finish. • Accuracy ±2% of full scale. Response time 0.8 sec. to 1.0 sec. Usable chart widths: single channel — 2-5/16", dual channel — 1" each.



288

**Single Channel DC Recorder.**

Basic recorder in the Rustrak line. Ranges from 0-10 microamperes to 0-5 amperes DC; 0-10 millivolts to 0-500VDC. Multipliers and shunts available. Chart speeds 1/2" to 480" per hour. Many available options, features and accessories. AC models also available.

CAT. NO. 6031



2122

**Temperature Recorders.**

Wide variety of temperature recorders using thermocouples, thermistors or nickel wire sensors. Ranges from -100°F. to +2400°F. and custom spans as narrow as 25°F. Also available in °C. and in single or dual channels.

CAT. NO. 6035



292-4

**Event Recorders, Models 292-4**

Four or eight channels. Records worktime, productivity of machines and personnel; provides data for time study, cost analysis, security control. Chart speeds to 50 inches per minute with definition of up to 16 events per second.

CAT. NO. 6037



291

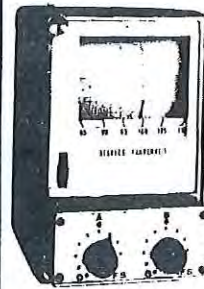
**Dual Channel DC Recorder.**

Same as basic Model 288 except dual channel with two galvanometers. Available in combinations of current and voltage or different ranges each channel. Useable chart width, 1" per channel. AC models also available.

CAT. NO. 6032

Let Rustrak engineering "knowhow" develop an instrument for your particular application.

- TRANSPORTATION
- OCEANOGRAPHY
- MILITARY
- COMMUNICATIONS
- ATOMIC ENERGY
- MEDICAL
- CHEMICAL
- PROCESSING
- RESEARCH
- ELECTRONIC

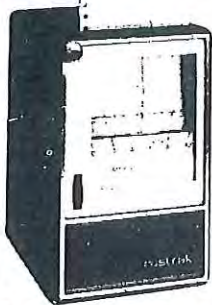


2133/F204AB

**Recording-Controller Feature.**

ON-OFF solid state controller feature available as option on most Rustrak recorders. Controls up to 5 amps resistive load at 30 VDC or 115 VAC. Set points continuously adjustable over entire chart range. Option price added to cost of companion recorder. Not available separately.

CAT. NO. 6038

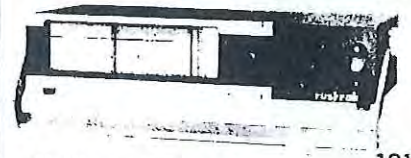


2194

**One Microampere DC Recorder.**

Solid state with full-scale sensitivity of 1 microampere, range of 0 to 10 millivolts DC and input impedance of 10,000 ohms. For use as temperature bridge and strain gauge read-out or as a recorder accessory for laboratory and process instruments.

CAT. NO. 6033

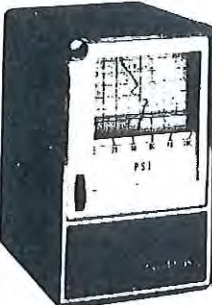


191

**Multipurpose Recorder.**

Two recording channels, one analog, one event. Twenty-one ranges up to 1000 millivolts, microamperes or milliamperes on analog channel. Displays 7 1/2 inches of chart. On-off event marker has 10 millisecond response time. Carrying handle doubles as tilting support.

CAT. NO. 6039

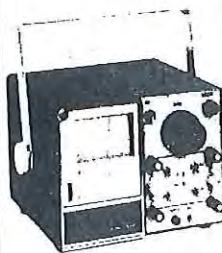


2162

**Pressure Recorder.**

Single channel pressure recording of most liquids and gases using a C-type Bourdon tube. Standard ranges 0-15, 0-30, 0-50, 0-100, 0-200, 0-300 and 0-500 psi. Many special offset ranges available.

CAT. NO. 6034



2195

**Strain Gage Recorder.**

Records resistance change of gages used for measuring strain, stress, displacement, load, torque, or any transducer using strain gauge sensing elements for static display. Maximum sensitivity: 500 micro-inches/inch. Self-contained instrument with regulated supply.

CAT. NO. 6036



192

**Dissolved Oxygen/Temperature Recorder.**

Simultaneously records dissolved oxygen and temperature. Temp. range, 0 to 40°C. Operates unattended for about four weeks from two inexpensive batteries. Chart speed regulation, ±0.5%. For surveys in water pollution control programs.

CAT. NO. 60310

WE CAN HANDLE YOUR ORDERS AS FAST AND AS CAREFULLY AS WE CAN  
WE TRY TO GIVE YOU THE VERY BEST SERVICE

## TEST EQUIPMENT

## BACHARACH OIL BURNER COMBUSTION TESTING KITS

## UTILITY KIT

UTILITY KIT	Code No. 10 - 5022	CAT. NO. 6061
UTILITY KIT (METRIC)	Code No. 10 - 5037	CAT. NO. 60616

Designed with the specific needs of the serviceman in mind, the Utility Kit contains the four basic instruments for checking CO<sub>2</sub>, Draft, Smoke and Stack Temperature. These instruments are ruggedly built, accurate, easy to use. Illustrations at right show the application of the Utility Kit Instruments in testing combustion efficiency. The Kit contains the FYRITE CO<sub>2</sub> Indicator with sampling hose assembly, TRUE-SPOT Smoke Tester with smoke scale and 40 filter strips, Model MZF Draft Gauge, TEMPOINT Dial Thermometer and Fire Efficiency Finder Slide Rule. The steel carrying case is sturdily constructed, with carrying handle and two snap-catch locks.



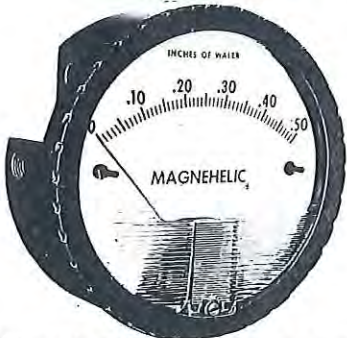
## KIT COMPONENTS MAY BE PURCHASED SEPARATELY AS UNDER

Cat. No.	Bacharach Code No.	Description
6062	10 - 5000	Fyrite Gas Analyser CO <sub>2</sub> 0 - 20%
6063	21 - 7006	True - Spot Smoke Tester.
6064	21 - 0019	True - Spot Filter Tips (40)
6065	13 - 7019	MZF Draft Gauge +0.05 to 0 to 0.25"W.

Cat. No.	Bacharach Code No.	Description
6066	12 - 7018	Tempoint Thermometer 12" (500°C)
6067	10 - 5064	Fire Efficiency Slide Rule.
6068	10 - 0100	Carrying Case (Large).

## FOR BACHARACH FLORITE AIR VELOCITY METERS AND INDICATORS

Refer Refrig./Air Cond. Section Page 335-c.



Magnehelic® Pressure Gages are offered in 30 ranges from, 0 to .5" WC to 0-150" WC and 5 psi. Zero center ranges to 15-0-15" WC. Special ranges or requirements on order.

## Air Velocity Instruments



## Series

## 2000 MAGNEHELIC® Differential Pressure Gages

2000 Series Dwyer Magnehelic Gages feature the exclusive "Magnetic Linkage." The "magnetic link" eliminates mechanical friction between the flexible diaphragm and the indicating pointer and permits over pressures to 25 psi without damage.

Designed for accurate, sensitive measurement of pressure, pressure differentials, or vacuum to 2% of full scale. The 2000 Series Magnehelic features a universal single case style for both surface and flush mounting with both side and back connections. A convenient zero-

Complete kits include inclined-vertical manometer, stainless steel pitot tube and all necessary instructions. Manometers read directly in feet per minute velocity and inches of water static.

## Kits available:

- No. 400-5, 0-5" W.C. and 400-9000 fpm,
- No. 400-10, 0-10" W.C. and 400-12,600 fpm
- No. 400-23, 0-23" W.C. and 600-19,200 fpm
- No. 115-AV, 0-0.25" W.C. and 500-2000 fpm
- No. 102-AV, 0-2" W.C. and 1500-5500 fpm

adjust screw is located on the exterior of the cover. Measure air velocity, furnace draft, filter resistance, fan and blower output, gas pressure and static pressures. Provide check on control equipment, automatic valves, gas-air ratio controls, and similar devices.

## Special Options:

- High pressure model for 100 psi total pressure.
- Adjustable signal flag.
- Portable kits.
- Air Filter accessories.

## Other instruments available:

- Flex-Tube Molded Plastic (requires pitot tube)
- No. 27, 0-7000 fpm
- No. 28, 0-10,500 fpm
- No. 460 Air Meter (hand held), 260-4000 fpm

## Pitot Tubes

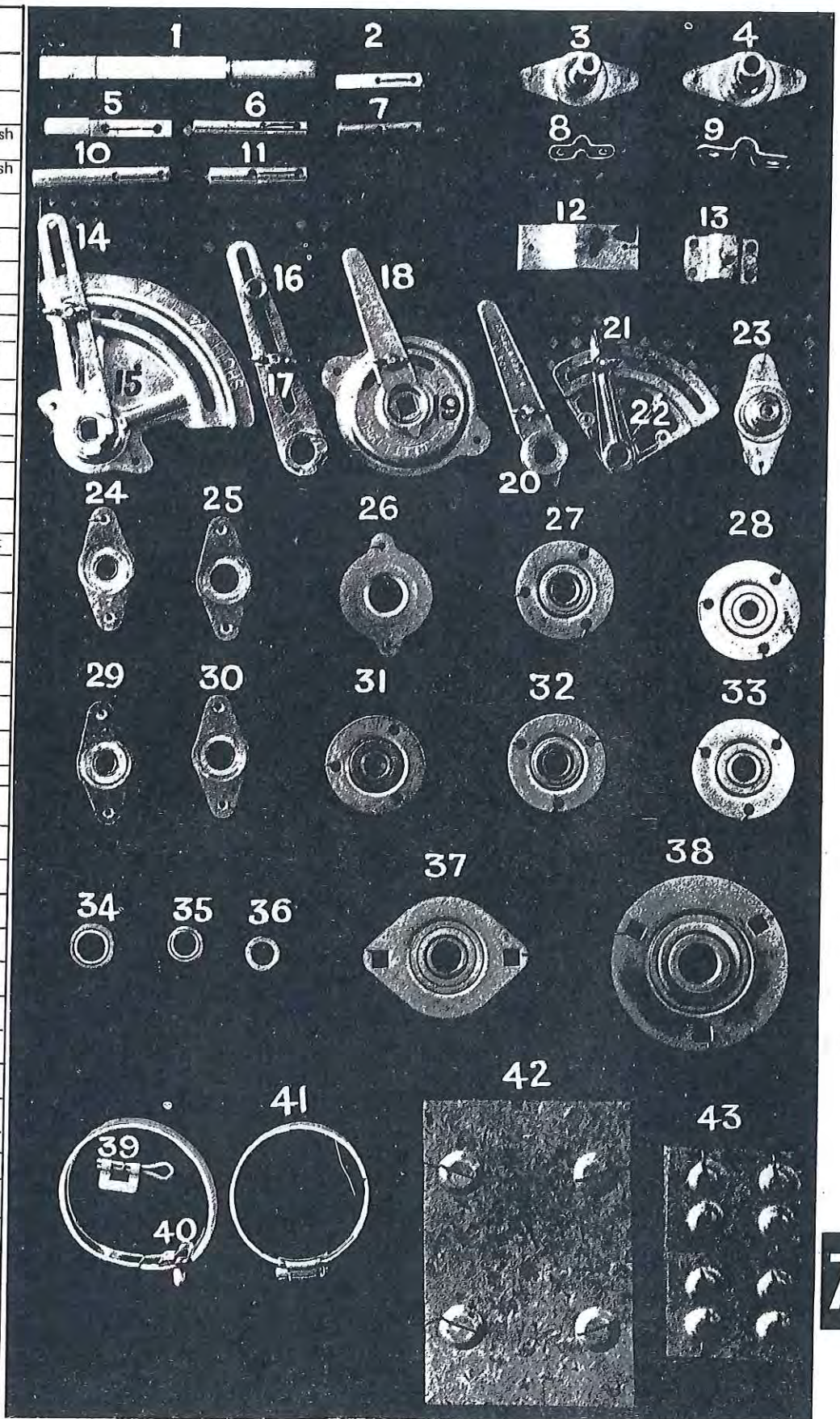
Stainless steel construction suitable for temperatures to 800°F. The stem is graduated in inches to show the depth of insertion. Design is approved by ASHRAE and AMCA.

5/16" diameter in insertion lengths of 12", 18", 24", 36", 48" and 60".

1/8" diameter in insertion lengths of 6" and 12", regular tip or short tip.

# DUCT HARDWARE

Cat. No.	Legend No.	Description
6121	1.	FS(X)1/2" Stub Shaft.
6122	2.	EM 5/16" Stub Shaft.
6123	3.	S.U.D. 3/16" Push Pull Kit.
6124	4.	S.U.D. 5/16" Push Pull Kit.
6125	5.	EM 3/8" Drive Shaft.
6126	6.	FS(L) 3/8" Stub Shaft.
6127	7.	FS(S) 3/8" Stub Shaft.
6128	8.	HP 3/16" Saddle
6129	9.	HP 5/16" Saddle
61210	10.	FS(L) 1/2" Stub Shaft.
61211	11.	FS(S) 1/2" Stub Shaft.
61212	12.	HV 1/2" Saddle
61213	13.	H 1/2" Saddle
61214	14.	A1(L) 3/8" Sq. Indicator Arm.
61215	15.	B(L) Quadrant Face.
61216	16.	QSW Swivel Joint
61217	17.	A1(L) 1/2" Rd. Indicator Arm.
61218	18.	A(S) 3/8" Sq. Indicator Arm.
61219	19.	B(S) Quadrant Face.
61220	20.	A1(S) 1/2" Rd. Indicator Arm.
61221	21.	A1(S) 3/8" Rd. Indicator Arm.
61222	22.	B1(S) 3/8" Quadrant Face.
61223	23.	KM Control Kit.
61224	24.	CT 3/8" Thru Bearing.
61225	25.	CT 1/2" Thru Bearing.
61226	26.	CT(P) 1/2" Thru Bearing.
61227	27.	PT(N) 1/2" Thru Ball Race.
61228	28.	PT 3/8" Thru Ball Race.
61229	29.	CB 3/8" Blind Bearing.
61230	30.	CB 1/2" Blind Bearing.
61231	31.	PB 1/2" Blind Ball Race.
61232	32.	PT(K) 1/2" Thru Ball Race.
61233	33.	PT 1/2" Thru Ball Race.
61234	34.	5/8" Bush.
61235	35.	1/2" Bush.
61236	36.	3/4" O/D., 1/2" I/D. Bush.
61237	37.	PT 3/4" Thru Ball Race.
61238	38.	PT(K) 3/4" Thru Ball Race.
61239	39.	JNC Nip Clip.
61240	40.	JNC-T Nip Clip with Tape.
61241	41.	Worm Drive Clip.
61242	42.	TV125 Vane Runner.
61243	43.	TV325 Vane Runner.

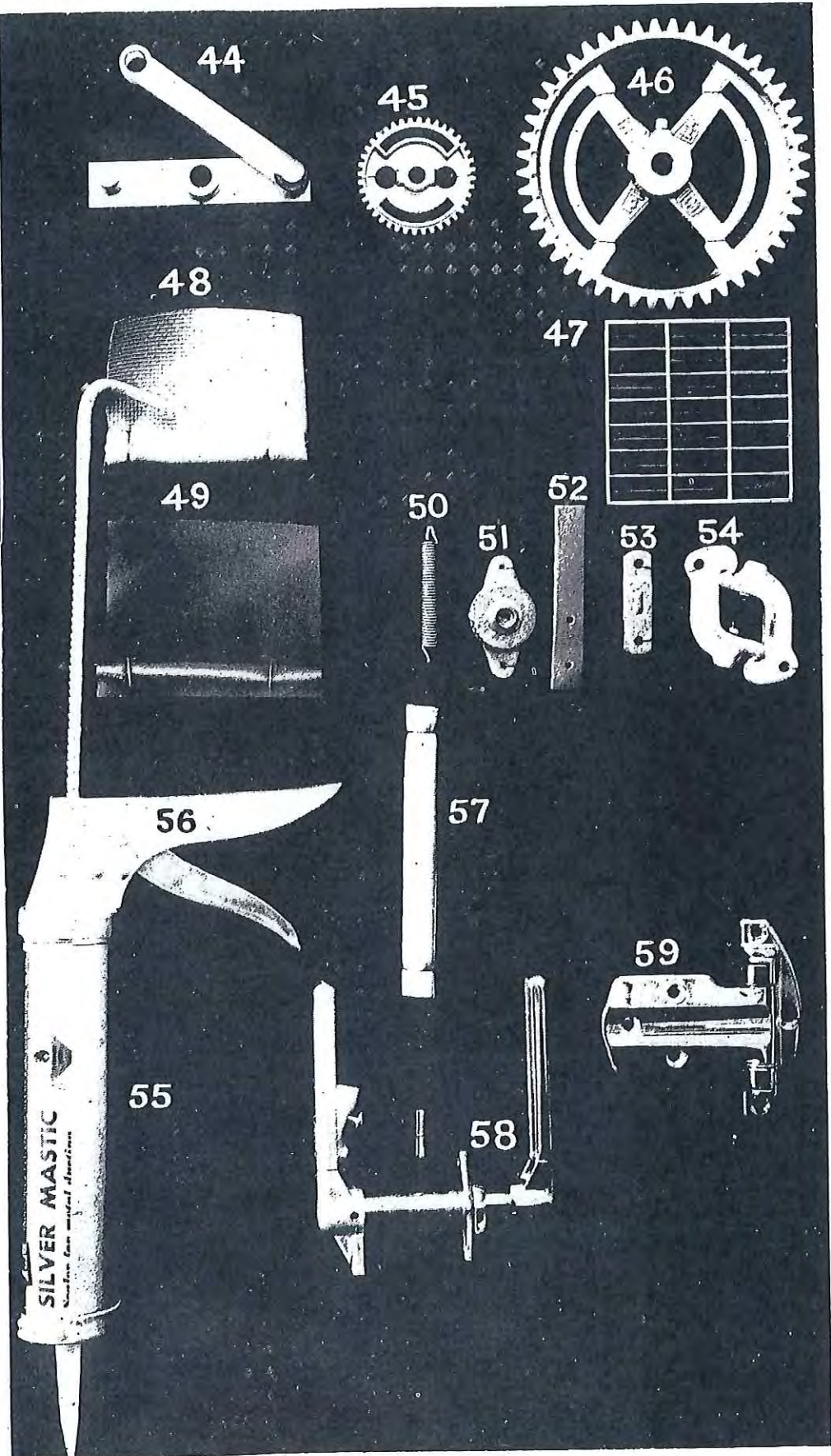


NOTE : FIRST 3 NUMERALS OF CAT. No. INDICATES PAGE No.

MAKE IT AN ACTROL PART — YOU'LL APPRECIATE THE SERVICE AND BACKING

# DUCT HARDWARE

Cat. No.	Legend No.	Description
61244	44.	Linkage Set
61245	45.	G250 Gear Wheel.
61246	46.	G600 Gear Wheel.
61247	47.	I.M.G. Modular Grille.
61248	48.	RV150 Vinyl Fabric.
61249	49.	Wavebar 120 Glass Fabric.
61250	50.	Damper Spring.
61251	51.	LT Kit.
61252	52.	M.C. Non Return Catch.
61253	53.	L160 Fusible Link.
61254	54.	Quartzoid Link.
61255	55.	"1706" Silver-mastic.
61256	56.	Mastic Gun.
61257	57.	Door Gasket.
61258	58.	Access Door Handle Set.
61259	59.	Type "A" Hinges.



REFER TO THE FOLLOWING PAGES FOR

FLEXIBLE DUCTING  
Page 238

RETURN AIR GRILLES  
WOODEN  
Pages 620 and 620-a

CEILING DIFFUSERS  
Pages 621 and 621-a

CEILING RETURN AND EXHAUST GRILLES  
Pages 622 and 622-a

WALL SUPPLY GRILLES  
Pages 623/623-a, b, c, d

OPPOSED BLADE DAMPERS & STREAM SPLITTER DAMPERS  
Page 624

WALL RETURN GRILLES  
Page 625

DOOR RELIEF GRILLES  
Page 626

ORIGINAL EQUIPMENT MANUFACTURERS (OEM)

YOU CAN PURCHASE ALL KINDS OF COMPONENTS AND EQUIPMENT FROM US AT A SAVING IN PRICE  
ASK US FOR A QUOTATION

# AVDEL FASTENING SYSTEMS

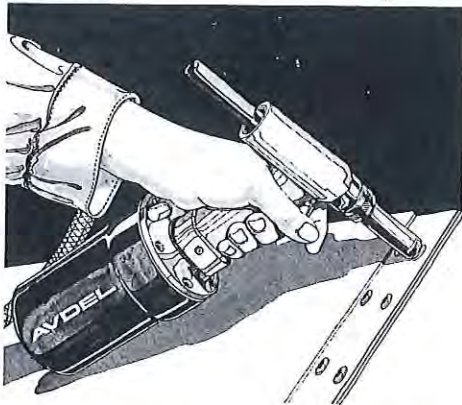
The Avdel range of fastening systems has been designed to replace conventional fasteners in nearly all modern applications.

Where nuts and bolts, solid rivets, self-tapping screws or welding are currently used to assemble components, an Avdel system can invariably give a better, quicker, permanent fastening at a lower overall installed cost.

With conventional fastening methods, about 80% of the cost of joining two components together is accounted for

by the labour. Avdel systems enable an unskilled operator to give you a high-quality, high-strength fastening in a fraction of the time – which means a fraction of the cost. Obviously, different applications require different fastenings. But, whatever your application, it is probable that one of the Avdel systems will give you an improved fastening at less cost.

Some of the more common and mostly used systems are detailed on this and the following pages.



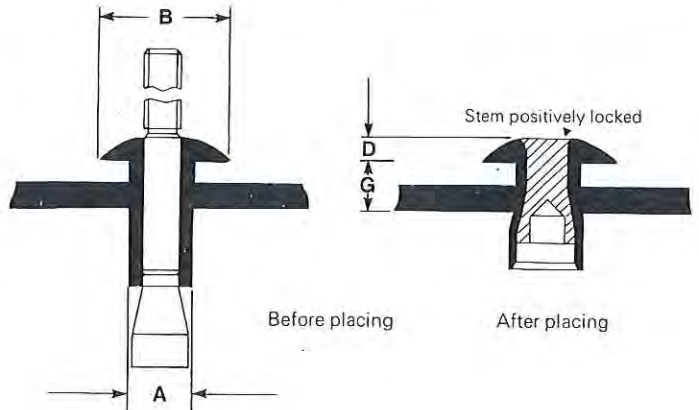
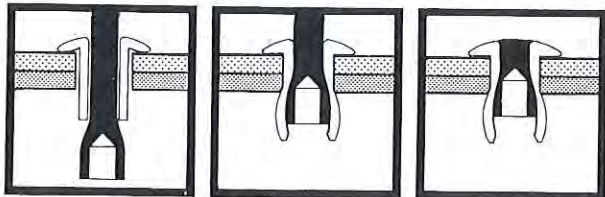
## MONOBOLT

The Avdel Monobolt is a unique structural fastener which requires access from one side of the workpiece only.

It is ideal for original assembly, or for replacing conventional 'two-sided' fasteners where access is difficult.

**Major features include:**

- High-shear, high-tension and high clamp-up.
- Can be placed in seconds by an unskilled operator.
- Very wide grip range.
- Vibration-resistant fastening.
- Reduced installed costs.



**How the Avdel Monobolt system works**

1. The Monobolt is loaded into the nose of the tool and then inserted into the prepared hole in the workpiece.
2. The tool grips the Monobolt stem and exerts an axial pull. This pull draws the stem through the bolt to give a high-clench joint and complete hole fill.
3. The placing tool automatically shears the stem flush with the head profile and mechanically locks the stem into the recess in the Monobolt shell.

## TECHNICAL DATA

Notes: Monobolts are supplied lubricated and should NOT be degreased.

CAT. NO.	Part Number	Material	Finish	Head Form	Nominal Diameter	Grip Range G	Head Diameter B	Shank Diameter A	Minimum Clearance Behind Sheet	Head Height Maximum D	Recommended Hole Size
61573	2771-0613	Steel	Zinc Plated	Protruding Head	3/16 (4.8)	.064 (1.63) .270 (6.86)	.395 (10.03) .375 (9.53)	.191 (4.85) .187 (4.75)	.410 (10.41)	.073 (1.85)	.201 (5.11) .191 (4.85)
61574	2771-0617	Steel	Zinc Plated	Protruding Head	3/16 (4.8)	.214 (5.44) .420 (10.67)	.395 (10.03) .375 (9.53)	.191 (4.85) .187 (4.75)	.410 (10.41)	.073 (1.85)	.191 (4.85) .195 (4.95)
61575	2771-0817	Steel	Zinc Plated	Protruding Head	1/4 (6.4)	.080 (2.03) .375 (9.53)	.525 (13.34) .505 (12.83)	.257 (6.53) .254 (6.45)	.480 (12.19)	.104 (2.64)	.260 (6.6) .276 (7.0)
61576	2771-0824	Steel	Zinc Plated	Protruding Head	1/4 (6.4)	.350 (8.89) .625 (15.88)	.525 (13.34) .505 (12.83)	.257 (6.53) .254 (6.45)	.480 (12.19)	.104 (2.64)	.260 (6.6) .264 (6.7)
61577	2774-0613	Al Alloy	Plain	Protruding Head	3/16 (4.8)	.064 (1.63) .270 (6.86)	.395 (10.03) .375 (9.53)	.190 (4.83) .187 (4.75)	.410 (10.41)	.073 (1.85)	.191 (4.85) .201 (5.11)
61578	2774-0617	Al Alloy	Plain	Protruding Head	3/16 (4.8)	.214 (5.44) .420 (10.67)	.395 (10.03) .375 (9.53)	.190 (4.83) .187 (4.75)	.410 (10.41)	.073 (1.85)	.191 (4.85) .195 (4.95)
61579	2774-0817	Al Alloy	Plain	Protruding Head	1/4 (6.4)	.080 (2.03) .375 (9.53)	.525 (13.34) .505 (12.83)	.256 (6.50) .254 (6.45)	.510 (12.95)	.104 (2.64)	.264/276 in Steel .260/276 in Alum 6.7/7.0 in Steel 6.6/6.70 in Alum
61581	7498-0031	MONOBOLT PNEUMATIC PLACING TOOL (Less Nose Assembly)									

Imperial Dimensions are in inches (unless otherwise stated).

Metric Dimensions (in brackets) are in millimetres (unless otherwise stated) and are for reference only.

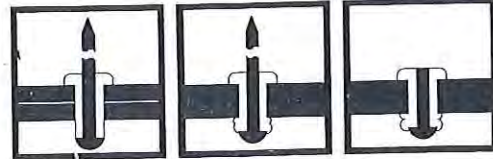
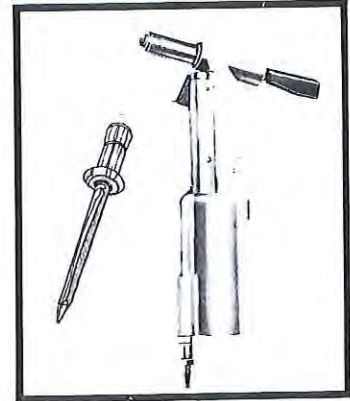
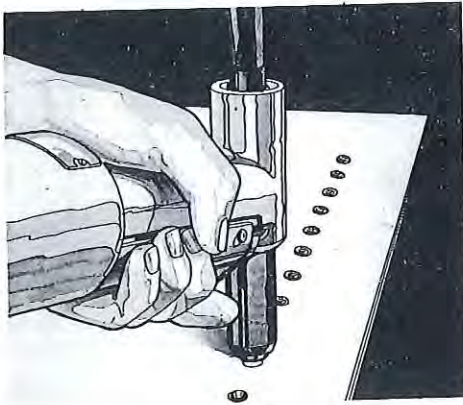
# AVDEL FASTENING SYSTEMS

## AVEX

The Avex multi-grip breakstem rivet is designed to join varying material thicknesses with just one length of rivet.

**Major features include:**

- Complete hole-fill, even in oversize or irregular holes.
- Positive stem retention.
- Weather-resistant fastening.
- No problems with hole line-up.
- Simplicity of operation.
- Reduced in-place costs.

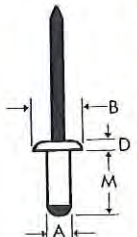


**How the Avex system works**

- The rivet stem is placed into the nose of the placing tool, the rivet is then located into prepared holes.
- The tool grips the stem and exerts a pull on it while reacting against the rivet head. This deforms the rivet tail, producing an enlarged blind tail which fills the hole and clamps the sheets tightly together.
- On completion of the cycle, the stem breaks at the break notch and is discarded.

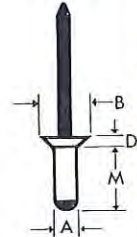
**COMMERCIAL SERIES 1661 — SNAP HEAD TYPE**

CAT. NO.	Material	Rivet Stem	Mg Alum Alloy Carbon Steel	Finish	Rivet Stem	Plan Phosphate Coated	Dimensions			
							Part Number	Rivet Diameter	Recommended Hole Size	Grip Range
6151	1661-0410	1/4 (3.2)	-129 (3.27) -133 (3.38) No. 30	Drill	031 (0.80) 187 (4.60)	125 (3.17) 128 (3.25)	260 (6.6)	040 (1.02)	387 (9.83)	
6153	1661-0414	1/4 (3.2)	-129 (3.27) -133 (3.38) No. 30	Drill	156 (4.00) 312 (7.90)	125 (3.17) 128 (3.25)	260 (6.6)	040 (1.02)	512 (13.00)	
6154	1661-0512	5/16 (4.0)	-161 (4.09) -166 (4.22) No. 20	Drill	047 (1.20) 250 (6.4)	160 (4.06) 156 (3.96)	319 (8.1)	050 (1.27)	468 (11.89)	
615106	1661-0516	5/16 (4.0)	-161 (4.09) -166 (4.22) No. 20	Drill	156 (4.00) 375 (9.50)	160 (4.06) 156 (3.96)	319 (8.1)	050 (1.27)	593 (15.06)	
6156	1661-0613	3/8 (4.8)	-193 (4.9) -198 (5.03) No. 10	Drill	052 (1.60) 250 (6.4)	190 (4.82) 186 (4.72)	394 (10.0)	060 (1.52)	524 (13.31)	
6158	1661-0619	3/8 (4.8)	-193 (4.9) -198 (5.03) No. 10	Drill	187 (4.80) 437 (11.10)	190 (4.82) 186 (4.72)	394 (10.0)	060 (1.52)	712 (18.08)	



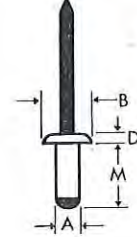
**COMMERCIAL SERIES 1600 — 120° COUNTERSUNK HEAD TYPE**

CAT. NO.	Material	Rivet Stem	Mg Alum Alloy Carbon Steel	Finish	Rivet Stem	Plan Phosphate Coated	Dimensions			
							Part Number	Rivet Diameter	Recommended Hole Size	Grip Range
6152	1604-0412	1/4 (3.2)	-128 (3.25) -133 (3.38) No. 30	Drill	093 (2.4) 250 (6.4)	125 (3.17) 128 (3.25)	215 (5.45) 200 (5.08)	030 (0.76)	460 (11.68)	
6155	1604-0514	5/16 (4.0)	-161 (4.09) -166 (4.22) No. 20	Drill	109 (2.8) 312 (7.9)	156 (3.96) 160 (4.06)	255 (6.48) 240 (6.10)	037 (0.91)	530 (13.46)	
6157	1604-0515	5/16 (4.0)	-193 (4.9) -198 (5.03) No. 10	Drill	125 (3.2) 312 (7.9)	186 (4.72) 190 (4.83)	349 (8.86) 334 (8.48)	050 (1.27)	590 (14.99)	
6159	1604-0621	3/8 (4.8)	-193 (4.9) -198 (5.03) No. 10	Drill	250 (6.4) 500 (12.7)	186 (4.72) 190 (4.83)	349 (8.86) 334 (8.48)	050 (1.27)	780 (19.81)	



**COMMERCIAL SERIES 1624 — SNAP HEAD STEEL**

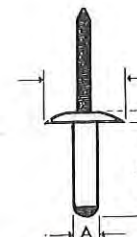
CAT. NO.	Material	Rivet Stem	Low Carbon Steel Carbon Steel	Finish	Rivet Stem	Zinc Plated Phosphate Coated	Dimensions			
							Part Number	Rivet Diameter	Recommended Hole Size	Grip Range
61512	1624-0411	1/4 (3.2)	-129 (3.28) -134 (3.40) No. 30	Drill	044 (1.12) 156 (4.0)	125 (3.17) 128 (3.25)	255 (7.49)	036 (0.91)	425 (10.79)	
61513	1624-0514	5/16 (4.0)	-161 (4.10) -166 (4.22) No. 20	Drill	058 (1.40) 196 (5.0)	160 (4.06) 157 (3.99)	330 (8.38)	055 (1.40)	515 (13.03)	
61514	1624-0612	3/8 (4.8)	-193 (4.90) -198 (5.03) No. 10	Drill	047 (1.20) 187 (4.60)	191 (4.85) 183 (4.78)	395 (10.03)	073 (1.85)	521 (13.23)	
61515	1624-0616	3/8 (4.8)	-193 (4.90) -198 (5.03) No. 10	Drill	156 (4.00) 250 (6.4)	191 (4.85) 188 (4.78)	395 (10.03)	073 (1.85)	638 (16.2)	



The Large Flange Avex Rivet — a rivet which has all the benefits of the standard Avex rivet but one which has been designed specifically to provide strong secure joints in wide tolerance hole applications. It also has a new style low profile head configuration which gives it greater bearing surface and makes it ideal for use on soft materials such as wood, plastic and fiberglass. Available in just 3 grip lengths this rivet will cover a range of material thicknesses from 0.062" to 0.781".

**COMMERCIAL SERIES 1641 — LARGE FLANGE AVEX RIVETS**

CAT. NO.	Material	Rivet Stem	Mg Alum Alloy Carbon Steel	Finish	Rivet Stem	Plan Phosphate Coated	Dimensions			
							Part Number	Rivet Diameter	Recommended Hole Size	Grip Range
61516	1641-0613	3/8 (4.8)	-193 (4.9) -199 (5.05) No. 10	Drill	062 (1.6) 250 (6.4)	186 (4.72) 190 (4.83)	635 (16.13)	074 (1.88)	534 (13.56)	
61510	1641-0621	3/8 (4.8)	-193 (4.9) -199 (5.05) No. 10	Drill	250 (6.4) 500 (12.7)	186 (4.72) 190 (4.83)	635 (16.13)	074 (1.88)	774 (19.66)	
61511	1641-0631	3/8 (4.8)	-193 (4.9) -199 (5.05) No. 10	Drill	500 (12.7) 781 (19.8)	186 (4.72) 190 (4.83)	635 (16.13)	074 (1.88)	1086 (27.58)	



CAT. NO.	PART No.	DESCRIPTION
61516	734	Basic Power Tool
61517	7340-9604	1/8" Nose Assembly for 734 Tool
61518	7340-9605	5/32" Nose Assembly for 734 Tool
61519	7340-9606	3/16" Nose Assembly for 734 Tool
61520	7340-9609	3/16" Steel Nose Assembly for 734 Tool
61521	7345-0004	Swivel Head Tool — for 1/8" Rivets
61522	7345-0005	Swivel Head Tool — for 5/32" Rivets
61523	7345-0006	Swivel Head Tool — for 3/16" Rivets
61524	7596	Hand Tool for 1/8" and 5/32" Rivets
61525	762	Workshop Kit
61526	7605	Extension Type Hand Tool — all sizes of Rivets
61527	7540	Long Arm Tool — for 5/32" and 3/8" Rivets



**7596 Hand Tool**

Heavy duty tradesman's tool to place 1/8" and 5/32" diameter Avex rivets.



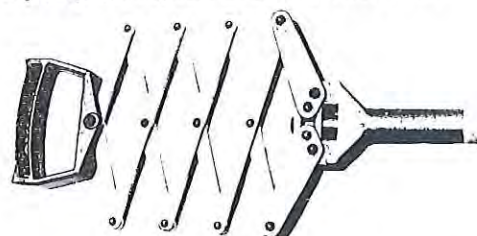
**7540 Long Arm Tool — heavy duty**

To place 5/32" 3/16" alloy and steel Avex rivets.



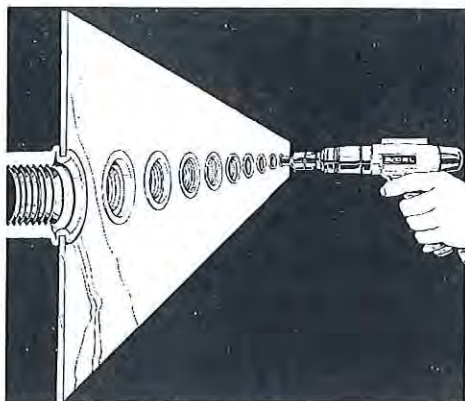
**7605 Hand Tool**

Heavy duty tool to place all sizes of Avex rivets.



# AVDEL FASTENING SYSTEMS

## NUTSERT



The Avdel Nutsert enables a high-strength threaded steel insert or anchor nut to be placed in thin sheet metals down to thicknesses of 0.02 ins.

### MAJOR FEATURES INCLUDE:

Access required to one side of the workpiece only. Can be placed after painting or plating. Takes only 4 seconds to place. Reduced installation costs.



### How the Avdel Nutsert system works

1. Nutsert is placed in pre-drilled hole.
2. On actuation the threaded shank of the placing tool pulls up the threaded section of the Nutsert until the threaded wall collapses radially outward, clenching it tight against the sheet.
3. The tool is withdrawn at a press of the trigger, leaving the Nutsert ready to receive a screw or bolt.

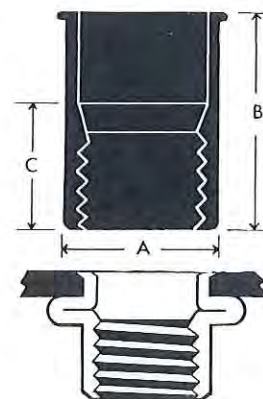


### THIN SHEET NUTSERT — COMMERCIAL SERIES 9650 — THREAD FORMS : B.S.W., and METRIC COARSE (I.S.O.)\*\*

NOTE: Thin Sheet Nutserts (with the exception of those marked thus \*) can be used in thicker material providing installation and functional tests prove suitable.

CAT. NO.	Part No.	Material	Finish	Thread Forms	Thread Size	Dimensions									Suggested Hole Size	
						Material Thickness Ins.	m.m.	A Max. Ins.	m.m.	B Max. Ins.	m.m.	C Max. Ins.	m.m.	Ins.	m.m.	
61552	9651-0614	Steel	Zinc Plated	B.S.W.	3/16	.020/.050	5/1.27	.280	7.11	.465	11.81	.240	6.1	9/32	7.2	
61553	9651-0819*				1/4	.030/.128	0.76/3.25	.374	9.5	.610	15.5	.335	8.51	3/8	9.6	
61555	9658-0413	Steel	Zinc Plated	M4x0.7	M4	.020	0.51	.249	6.32	.410	10.41	.250	6.35	1/4	6.4	
61556	9658-0514	Steel	Zinc Plated	M5x0.8	M5	.020	0.51	.280	7.11	.465	11.81	.240	6.10	9/32	7.2	
61557	9658-0619	Steel	Zinc Plated	M6x1.0	M6	.030	0.76	.374	9.5	.610	15.5	.335	8.51	3/8	9.6	
61558	9658-5821	Steel	Zinc Plated	M8x1.25	M8	.036	0.91	.416	10.57	.630	16.00	.365	9.27	.4175	10.6	

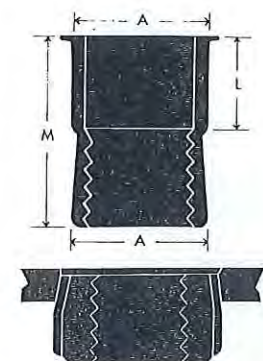
\*\* Thread Forms B.A., B.S.F., U.N.F., and U.N.C. also available on application.



### NUTSERT — COMMERCIAL SERIES 9500 — THREAD FORMS : B.S.W., B.S.F., U.N.C., U.N.F. and B.A.

NOTE: Hole sizes given in these tables are for guidance only and they will vary dependant upon the material thickness, hardness and brittleness.

CAT. NO.	Part Number	Material	Finish	Thread Form	Thread Size	Dimensions [ins.]			Suggested hole size	
						A MAX	L MAX	M MAX	Ins.	m.m.
61529	9501-0612	Steel	Zinc Plated	B S W	3/16	.280	.193	.380	9/32	7.2
61530	9501-0816				1/4	.374	.263	.520	3/8	9.6
61531	9501-1020				5/16	.499	.313	.620	1/2	12.7
61532	9501-1224				3/8	.562	.373	.740	9/16	14.3
	9503-0412	Steel	Zinc Plated	B.A.	4	.218	.193	.380	7/32	5.6
	9503-0212				2	.280	.193	.380	9/32	7.2
	9503-0016				0	.374	.263	.520	3/8	9.6
61533	9504-0816	Steel	Zinc Plated	U.N.C. Fractl.	1/4	.374	.263	.520	3/8	9.6
61534	9504-1020				5/16	.499	.313	.620	1/2	12.7
	9504-1224				3/8	.562	.373	.740	9/16	14.3
	9505-0412	Steel	Zinc Plated	U.N.C. Number	4	.1865	.193	.380	3/16	4.8
61535	9505-0612				6	.218	.193	.380	7/32	5.6
61536	9505-0812				8	.249	.193	.380	1/4	6.4
61537	9505-1012				10	.280	.193	.380	9/32	7.2
61538	9506-0816	Steel	Zinc Plated	U.N.F. Fractl.	1/4	.374	.263	.520	3/8	9.6
61539	9506-1020				5/16	.499	.313	.620	1/2	12.7
61540	9506-1224				3/8	.562	.373	.740	9/16	14.3
	9507-0612*	Steel	Zinc Plated	U.N.F. Number	6	.218	.193	.380	7/32	5.6
61541	9507-0812*				8	.249	.193	.380	1/4	6.4
61542	9507-1012				10	.280	.193	.380	9/32	7.2



### NUTSERT — COMMERCIAL SERIES 9500 — THREAD FORM : METRIC COARSE (I.S.O.)

CAT. NO.	Part No.	Material	Finish	Thread Form	Thread Size	Dimensions [m.m.]			Suggested hole size	
						A MAX	L MAX	M MAX	Ins.	m.m.
61546	9508-0312	Steel	Zinc Plated	M3x0.5	M3	4.74	4.91	9.66	3/16	4.8
61547	9508-0412			M4x0.7	M4	6.33	4.91	9.66	1/4	6.4
61548	9508-0512			M5x0.8	M5	7.12	4.91	9.66	9/32	7.2
61549	9508-0616			M6x1	M6	9.50	6.69	13.21	3/8	9.6
61550	9508-0820			M8x1.25	M8	12.68	7.96	15.75	1/2	12.7
61551	9508-1024			M10x1.5	M10	14.27	9.48	18.80	9/16	14.3

\* Items marked thus are normally non stocked and therefore are subject to special quotation and may be subject to delivery delay.

NUTSERT POWER TOOLS		
Cat. No.	Part No.	Description
61559	7441	Straight Pneumatic Tool
61560	7444	Straight Pneumatic Tool
61561	7524	Pistol Grip Pneumatic Tool
61562	7525	Pistol Grip Pneumatic Tool
61563	7526	Pistol Grip Pneumatic Tool
61564	7527	Pistol Grip Pneumatic Tool
61568	7484	Manual Tool (SN)
61571	7486	Manual Tool (TSN)
KITS		
61572	750	Kit (SN)
615102	770	Kit (TSN) Imperial Sizes
615103	780	Kit (TSN) Metric Sizes

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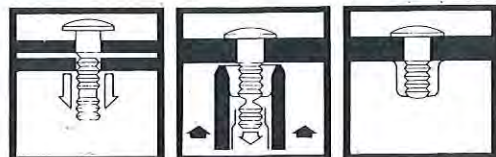
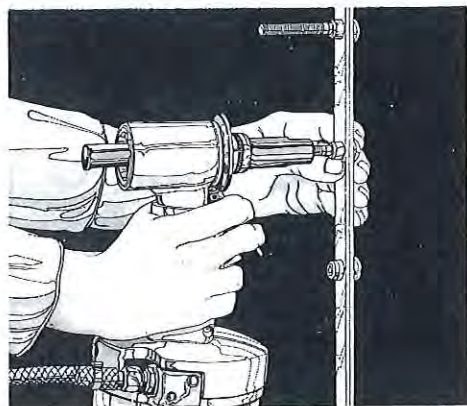
# AVDEL FASTENING SYSTEMS

## AVDELOK

The Avdelok is a two-piece, high-strength structural fastener which can be placed three times as fast as a conventional nut and bolt. In addition, the Avdelok gives the same strength with a smaller size: for instance, a 3/8 in. Avdelok can replace a 1/2 in. nut and bolt.

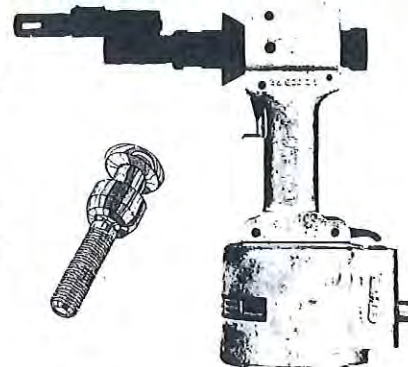
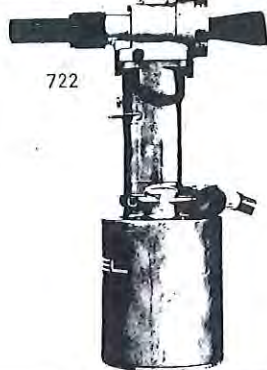
### MAJOR FEATURES INCLUDE:

Can be placed by unskilled operator.  
High-strength, high-clench, vibration-proof fastening. Replaces nuts and bolts, solid rivets or welding. Completed fastening requires visual inspection only. Reduced installed costs.



### How the Avdelok system works

1. The Avdelok pin is inserted through the prepared holes, and the collar slipped over the pin tail; the tool is placed over the pin tail, and the trigger pressed.
2. The tool grips the annular grooves of the pin tail and clenches the work tight, swaging the collar into the locking grooves.
3. The tail of the pin breaks flush with the collar and is ejected. If necessary, the Avdelok can be removed later with simple collar cutters.

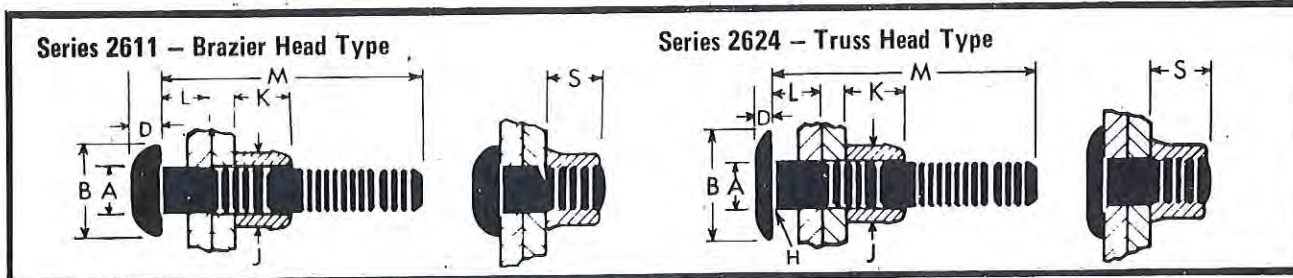


720

### AVDELOK PRODUCT CODES

Example: 2 6 1 1 - 0 6 0 3  
First four Numerals (2611) = Product Code.  
Next two (06) = Diameter Code:  
i.e. Shank Diam. in 32nd. inches.  
Last two (03) = Grip Length in 16th. ins.  
(Collar - Zeros only to complete Code).

Note: All grip ranges are shown with a full collar. If a half collar is used then the grip range is increased to that of the next largest pin and the dimension 'S' reduced accordingly.



### GENERAL DIMENSIONS - DRILL SIZES

TYPE	NOM. DIAM.	DIMENSIONS - INS.					DRILL SIZES	
		A	B	D (Nom)	J (Max)	H Rad. (Max)	INS.	mm
SERIES 2611 - BRAZIER HEAD	3/16	.195 / .191	.385 / .365	.131	.309	—	9 (.196)	5
	1/4	.259 / .254	.525 / .475	.152	.406	—	G (.261)	6.6
	5/16	.322 / .317	.656 / .594	.201	.492	—	P (.323)	8.2
	3/8	.385 / .380	.787 / .713	.248	.598	—	W (.386)	9.8
SERIES 2624 - TRUSS HEAD	5/16	.322 / .317	.781 / .719	.140	.492	.025	P (.323)	8.2

### AVDELOK PINS

CAT. NO.	PART No.	Nom. Dia. Ins.	DIMENSIONS - INS.			CAT. NO.	PART No.	Nom. Dia. ins.	DIMENSIONS - INS.		
			Grip Range	L	M				Grip Range	L	M
6161	2611-0603	3/16	.344 - .406	.390	1.55	61615	2611-0813	1/4	.781 - .843	.831	2.12
6162	2611-0604	3/16	.219 - .281	.265	1.42	61616	2611-0814	1/4	.843 - .906	.894	2.18
6163	2611-0608	3/16	.469 - .531	.515	1.67	61617	2611-0816	1/4	.969 - 1.031	1.019	2.31
6164	2611-0802	1/4	.094 - .156	.144	1.43	61618	2611-0820	1/4	1.219 - 1.281	1.269	2.56
6165	2611-0803	1/4	.156 - .219	.206	1.50	61619	2611-1004	5/16	.234 - .328	.300	1.80
6166	2611-0804	1/4	.219 - .281	.269	1.56	61620	2611-1006	5/16	.328 - .422	.394	1.90
6167	2611-0805	1/4	.281 - .344	.331	1.62	61621	2611-1007	5/16	.422 - .516	.487	1.98
6168	2611-0806	1/4	.344 - .406	.394	1.68	61622	2611-1009	5/16	.516 - .609	.581	2.08
6169	2611-0807	1/4	.406 - .469	.456	1.75	61623	2611-1204	3/8	.187 - .312	.268	2.02
61610	2611-0808	1/4	.469 - .531	.519	1.81	61624	2611-1206	3/8	.312 - .437	.393	2.15
61611	2611-0809	1/4	.531 - .594	.581	1.87	61625	2611-1208	3/8	.437 - .562	.518	2.27
61612	2611-0810	1/4	.594 - .656	.644	1.93	61626	2611-1210	5/16	.562 - .687	.643	2.40
61613	2611-0811	1/4	.656 - .718	.706	2.00	61627	2611-1212	5/16	.687 - .812	.768	2.52
61614	2611-0812	1/4	.718 - .781	.769	2.06	61628	2624-1222	5/16	1.250 - 1.500	1.336	3.21

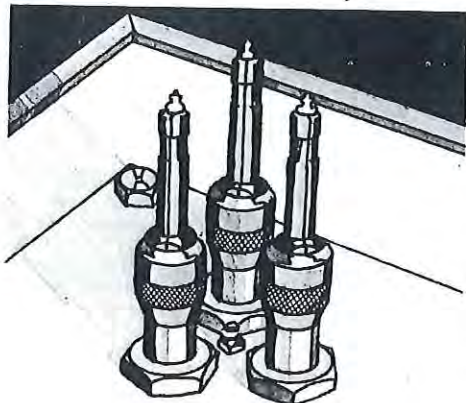
### AVDELOK COLLARS

CAT. NO.	PART No.	To Suit 2611 Pins	DIMENSIONS - INS.		CAT. NO.	PART No.	To Suit 2611 Pins	DIMENSIONS - INS.	
			S (Max)	K (Max)				S (Max)	K (Max)
FULL COLLARS					HALF COLLARS				
61629	2662-0600	3/16"	.31	.25	61633	2682-0600	3/16"	.25	.15
61630	2662-0800	1/4"	.42	.32	61634	2682-0800	1/4"	.36	.23
61631	2662-1000	5/16	.48	.38	61635	2682-1000	5/16"	.39	.24
61632	2662-1200	3/8"	.58	.46	61636	2682-1200	3/8"	.45	.31

### TOOLS

61637	720	Power Tool - for 3/16" & 1/4" Sizes (Adaptors & Nose Assemblies Available)	61639	722	Power Tool - up to 3/8" Size (Red. Adaptors req'd for 3/16 & 1/4)
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# AVDEL FASTENING SYSTEMS

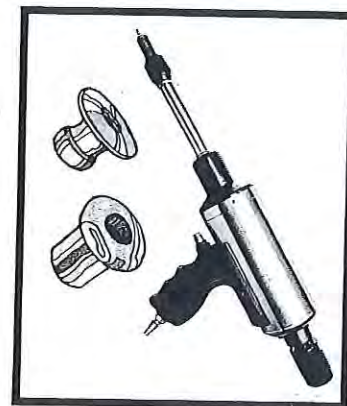


## REPETITION RIVETING Briv, Chobert

Avdel high-speed repetition riveting systems include a wide range of equipment and fasteners designed to cover all types of assembly applications. To satisfy the needs of high-volume production, multi-head set-ups are available.

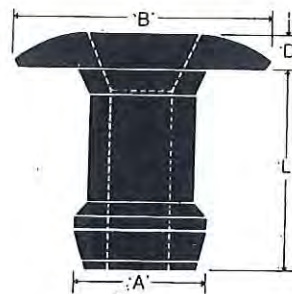
**Major features include:**

High-strength, vibration-proof fastening.  
Rivets placed from one-side of the workpiece  
A single tool can place up to 1500 rivets per hour.  
Operator fatigue reduced to a minimum.  
Reduced in-place costs.



**How the Avdel Briv system works**

1. Magazine-loaded rivet is placed into pre-drilled holes; operator presses trigger to withdraw mandrel.
2. Mandrel expands rivet to fill hole and draw components together.
3. Components clenched tightly together, placing tool automatically ready for next operation.



**BRIV RIVETS PRODUCT CODES**

**EXAMPLE: 1801 - 04 06**

First four Numerals (1801) = Product Code (Fastener type, material and finish)  
Next two Numerals (04) = Diameter Code (i.e. Shank Diameter in 32nd. inches)  
Last two Numerals (06) = Length Code (i.e. Rivet Length)

BRIV RIVETS - Aluminium Alloy - Plain Finish								
CAT. NO.	PART No.	Nom. Dia. INS.	DIMENSIONS - INS.				HOLE SIZE INS.	
			Grip Range	L (Max)	A (Max)	B (Max)		D (Max)
61722	1801 - 0404	1/8	.045 - .095	.170	.124	.255	.038	.1285 / .1315
61723	1801 - 0406	1/8	.085 - .135	.210				
61724	1801 - 0408	1/8	.125 - .175	.250				
61725	1801 - 0410	1/8	.165 - .215	.290				
61726	1801 - 0412	1/8	.205 - .255	.330				
61727	1801 - 0505	5/32	.026 - .115	.188	.153	.320	.038	.1562 / .1592
61728	1801 - 0507	5/32	.080 - .155	.235				
61729	1801 - 0509	5/32	.145 - .205	.285				
61730	1801 - 0511	5/32	.195 - .255	.335				
61731	1801 - 0513	5/32	.225 - .275	.348				
61732	1801 - 0607	3/16	.105 - .155	.228	.188	.380	.045	.191 / .194
61733	1801 - 0609	3/16	.145 - .205	.285				
61734	1801 - 0611	3/16	.195 - .255	.335				
61735	1801 - 0613	3/16	.245 - .305	.385				
61736	1801 - 0615	3/16	.295 - .355	.435				
TOOLS								
61738	7271	Repetition Riveting Pneumatic Tool - Hand Held - Automatic - Air Operated Jaws						
	7273	Repetition Riveting Pneumatic Tool - Remote Control - Bench Mounted						
Jaws and Accessories to suit available on application								

**NOTES:** Product Code 1821 Briv. Rivets (Steel - Zinc Plated) available on application.  
Above data relates to Briv rivets which are installed with Standard Front Jaws.  
Information for the Avlug, Chobert and Grovit Range of Rivets available on application.

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