

Table of Contents

Hilomast Warranty	2
Masts	
Important Information	3
General Information	4
Loading & Wind Speeds	5
Safety	6
Operating Instructions	7
Maintenance & Repair	8
Dismantling the Mast	9-12
PTFE & Piston Replacement	12
Peek Key Replacement	12
Magnetic Switch	13
Mast & Drain Kit Installation	14
Vehicle Bearings	15-16
Service Intervals	16
Compressors	
General Information	17
Use of Third Party Compressors	17
Operating Instructions	18
Types of Compressors	18
Winterize Your Mast	19
Spares	
Hilomast Approved Spares List	20-22
User Notes	
Warranty Card	

HILOMAST LLC WARRANTY

Subject to the conditions set below, Hilomast warrants that its products will correspond with the specifications current at the time of delivery and will be free from defects in materials and workmanship for a period of one year from the date of dispatch.

- (1) Maintenance on Hilomast products using only Hilomast recommended materials and in accordance with the Hilomast recommended frequency and procedures.
- (2) All warranty will be void if any work has been completed by anyone other than those who are appointed and approved service agents of Hilomast, and in accordance with the Hilomast recommended standard procedures and advice.
- (3) The warranty shall not apply if the products have been used in conjunction with accessories other than those approved by Hilomast or if the products have been altered in any way or if the serial number or nameplate of items has been altered, defaced or removed.
- (4) The warranty shall not extend to any defect or damage arising from misuse.
- (5) Warranty claims must be notified to Hilomast within a maximum period of 7 days from the defect occurring.
- (6) Hilomast's obligation under this warranty is limited to the repair or replacement, at its discretion, of the products, items, or defective parts, if the defect occurred within the warranty period.
- (7) This warranty excludes all consequential loss claims in any form whatsoever.

IMPORTANT INFORMATION



Before using the mast carefully read the operating instructions herein.



DO NOT use the mast unless it is fully extended.



DO NOT drive vehicle with the mast extended (ensure isolating magnetic switch is installed)



DO NOT attempt to rotate the mast unless fitted with a rotating system.
(NRB/229R)



Beware of overhead cables.



DO NOT exceed 25-p.s.i. maximum mast pressure
(Ensure supplied safety relief valve is installed directly into the base of the mast)



Only use Superfluid and Kilfrost as recommended by Hilomast LLC.



DO NOT operate the mast

- Outside of the operating temperature range -22°F to +131°F
- At wind speeds or payloads in excess of those recommended

Note that the warranty will be invalidated in the event that:

- ❖ Specified oils and lubricants are not used, or
- ❖ Recommended service intervals are not maintained, or
- ❖ The mast is operated only partially pressured or extended
- ❖ The mast is operated within a moving vehicle or trailer, or
- ❖ Maximum working pressures, loading or wind loading are exceeded, or
- ❖ The mast is operated at temperatures outside the recommended range, or
- ❖ Non-accredited installation, or service work is undertaken, or
- ❖ Hilomast LLC supplied spares are not used, or
- ❖ The installation and operating instructions are not adhered to.

LIABILITY WILL NOT BE ACCEPTED FOR DAMAGE OR INJURY CAUSED BY THE MAST CONTACTING POWER LINES OR BY ACTIONS OUTSIDE OF THOSE RECOMMENDED BY HILOMAST LLC.

MASTS

GENERAL INFORMATION

Telescopic masts are considered temporary structures and should not be expected to withstand all weather conditions indefinitely. The table on page 4 specifies the wind speed that each mast will withstand. For wind speeds in excess of those stated it is essential for the life of the mast and the safety of the operating personnel, to retract the mast.

The BR series of pneumatic masts operate at low pressures, normally between 16 and 25 p.s.i.

DO NOT operate at pressures above those recommended. The mast may not only be severely damaged but injury could occur to personnel. Any mast requiring higher air pressures or utilizing compressor equipment not supplied by the mast supplier/manufacturer should be referred back to Hilomast LLC, or our agent for consideration and advice.

Since telescopic masts are essentially composed of sliding sections, care should be taken to keep them clean and lubricated (see Maintenance section).

Hilomast BR series pneumatic telescopic masts are constructed from heat-treated aluminium alloy tubing. Each tube is fitted with a piston that incorporates a neoprene lip seal and a PTFE slide ring. The upper end of each tube is fitted with a guide collar that also incorporates a PTFE slide ring. BR series masts have special engaging screws (Dog Points) fitted into each of the collars to resist the torsion loads when the masts are fully extended.

The masts are designed to operate at the stated pressure when fully extended. **DO NOT USE THE MAST PARTIALLY EXTENDED OR WHEN TORSION SCREWS ARE NOT FULLY ENGAGED.**

To avoid wear and for safety reasons, the mast should never be operated with a moving vehicle or trailer.

Wear appropriate safety clothing and eye protection when working on masts.

Use suitable handling equipment when lifting masts and sections.

BR masts are pressure vessels and should be treated accordingly – stand and keep hands clear when extending or retracting masts.

All masts have inlet and exhaust ports at 3/8" NPT.

If U-bolts and clamps are used to fasten antennas directly to the top section of the mast, DO NOT over-tighten as this can damage the keyway. BR series masts have a flange which is a 5½" x 5½" x ½" thick rectangular plate secured with one quick release pin. It can be drilled to suit customers' requirements.

Long Duration Storage

If possible, store in an upright position to prevent seal distortion (see Maintenance section)

LOADING – WIND SPEEDS

Mast	Vertical Headload lbs.	Maximum wind speed (Unguyed) (m.p.h.)
BR 23/9	275	75
BR 25	110	91
BR 30	149	87
BR 33/9	275	75
BR 42	150	62.6
BR 48	200	56
BR52	175	45
BR 56	200	49

The above table shows the vertical head load each mast will support and the maximum operational wind speed. The payload, however, is not usually the main criterion when selecting a mast. The limiting factor is usually the 'side surface area' of the payload. The wind speeds shown are based upon a side surface area of 11.8 sq.ft. (1700 square inches) for all masts except the BR25 and BR30, this has a side surface area of 3.22 sq.ft. (464 square inches)

For areas in excess of those shown in table, the maximum wind speed will be reduced. Please ask for a computer check against your specific applications.

SAFETY

At all times, be aware of overhead obstructions **ESPECIALLY POWER LINES** (we recommend use of the **Sigalarm**, high voltage power line proximity warning system. Please call for further details). Note that in the interest of safety and reducing mast wear, the Sigalarm and air supply system must be arranged to dump air from the mast in the event of triggering the Sigalarm or any similar device. With vehicle mounted installations where a retracted mast projects above the roofline, always fix a notice in the driving cab advising the driver of the overall height. When a mast is vehicle or trailer mounted **DO NOT MOVE THE VEHICLE OR TRAILER WITH THE MAST EXTENDED** (see also Magnetic Switch page 13).

When erecting a mast, watch particularly for snagging cables.

Due to low pressures needed to extend masts, under no circumstances should standard commercial compressors; exceeding 30 psi without a regulator, be used without consultation with the supplier/manufacturer.

Mast Air pressure

BR Series Relief Valve – Are set to 25psi

Air pressure should not be increased above that stipulated without first referring to the supplier/manufacturer. Over pressurization severely strains the collar and base section screws and can, in extreme circumstances, force a collar off and allow the tube to blow out.

If a tube section sticks during the extension of a mast severely enough to cause it to crash into its relevant collar, the cause must be investigated immediately. Failure to do so will result in progressive mechanical damage. The most common causes are as follows:

Lack of lubrication: See Maintenance section (page 7)

Key sticking in keyway: See Maintenance section (page 12)

Bent or damaged section: Usually caused by overloading mast and/or operating at too high a wind speed.

If there is no obvious reason for a section to stick, that section must be removed for inspection and possibly also the next largest section into which it slides.

When fitting optional rotation handles, tighten sufficiently for the components to hold firmly. **DO NOT** over-tighten as this can distort the base tube and cause the mast to stick at that point.

DO NOT remove the exhaust valve in an attempt to retract a mast more quickly, especially when the mast is carrying a heavy head load, since this action removes control over the rate of descent. In extreme cases, the uncontrolled collapse of a mast can lead to the head load being damaged, together with applying shock loads to the mast fixings.

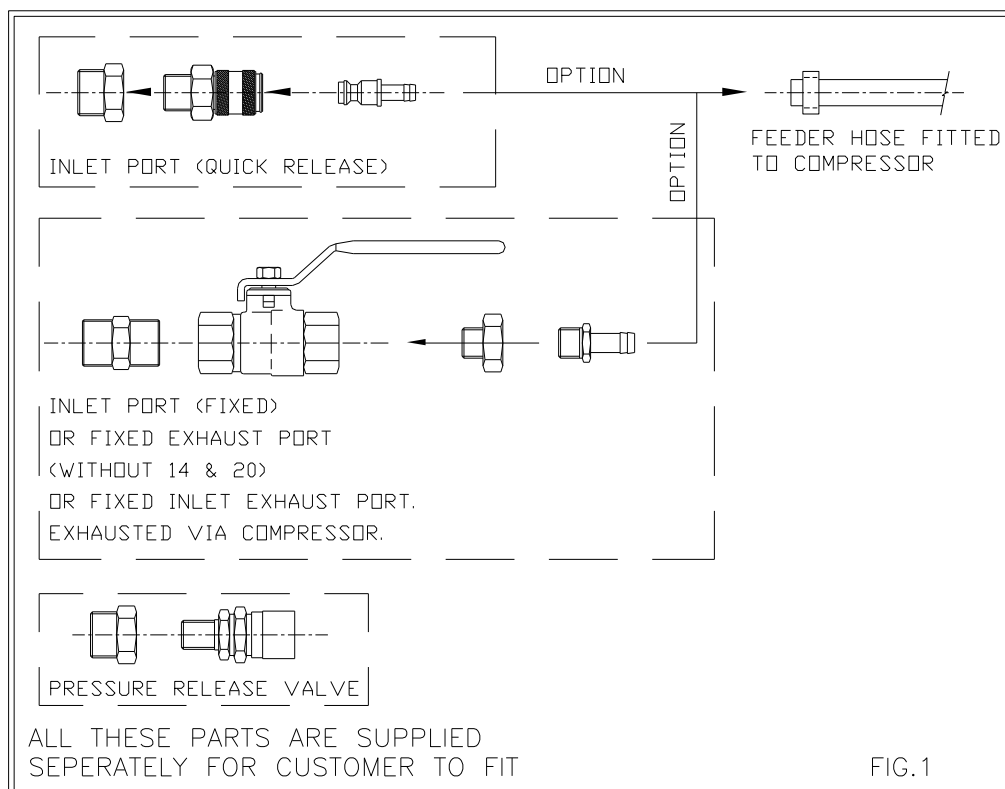
OPERATING INSTRUCTIONS

BR series masts are specifically designed for high accuracy/high load operation and would normally be installed through the roof of a vehicle.

Standard BR series masts are not supplied with locking collars, therefore, loads would normally be carried on a maintained air column (see maximum air pressures in Safety section).

Locking collars can be fitted during manufacture at an extra cost. (Ask for details)

- (1) Connect the air supply to the mast (see maximum air pressures in Safety section). The mast base has been configured such that it has four air supply ports available, 3 radially and 1 underneath, to suit multiple installation requirements. A normal configuration would consist of Inlet, Exhaust, Pressure relief and a Blanking plug (refer to diagram on page 8)
- (2) When pressurizing the mast, it is imperative to ensure the free running of all antenna feeders and other equipment cables. The mast extension could be powerful enough to snap the cable and the air pressure supplied to do this will cause the mast to shoot up, possibly with sections crashing into their respective collars, resulting in heavy shock loads.
- (3) Air must be exhausted in a controlled manner. Remember that the BR48 and 56 will carry up to 200lbs dead weight. All Hilomast compressors are fitted with either manually or electrically operated exhaust valves. If a remotely operated exhaust valve is fitted to the mast, a restriction nozzle may be required to give a maximum descent speed for the load the mast carries.



MAINTENANCE & REPAIR

Mast maintenance

Inspect and lubricate mast sections weekly or every 25 operations, whichever occurs first. If the mast has been used in a dusty environment resulting in a build up of contaminants, and old lubricant on the surface of the tubes, then it must be removed. This can be done by wiping each section with an oil soaked cloth. Hilomast build the masts using Hilomast lubricant oil (Part No. 000055500). To protect the seals, oil should be injected into the oiler hole situated in each collar. Alternatively, proprietary oil misters may be incorporated within the air supply line. Sufficient oil is needed to run down the inside of each tube. During periods of sustained cold and freezing conditions Hilomast LLC, recommend the use of Kilfrost (Part No. 000055600). Periodically oil the locking collar thumbscrew treads if fitted. Lubricant and dispensing cans are available from Hilomast LLC. Use of oils other than those prescribed by Hilomast LLC will invalidate the mast warranty.

FAILURE TO LUBRICATE THE MAST WILL RESULT IN DAMAGED SEALS THAT WILL NOT BE REPLACED UNDER WARRANTY.

In dusty conditions, it may help to use silicone spray (Part No. 990001300), which is almost dry in operation, on the sections. These products are available from Hilomast LLC. Hilomast also offers Dust Resisted Dampers at an additional cost.

- (1) It is possible for water to enter a mast in two ways.
 - a) By vapor carried down the compressor line condensing in the mast. This may be drained through the mast exhaust valve.
 - b) By rainwater running down the sections and collecting above the seals. This makes a mast vulnerable to icing up. It is therefore advisable to use a mast cover when the mast is retracted and to leave the exhaust valve open or remove it altogether, when the mast is not in use if the conditions so dictate. Great care should be exercised if the mast is likely to be used in freezing conditions.

In the event that ice plugs have formed at the base of each section, above the seal, inject Kilfrost into the lubrication points on each collar to assist in the ice removal.

- (2) Compressors should be placed on a level with or below the base of the mast to prevent moisture build up in the air lines. If a compressor has to be placed higher than the base of the mast, care must be taken not to allow water to become trapped in the air lines. Disconnect the air line from the mast and blow out the line at frequent intervals or fit a drain valve at the base level of the mast.

Hilomast Seal Replacement

If the mast will not extend due to air leakage, first check that air is not escaping from the inlet or air release valves.

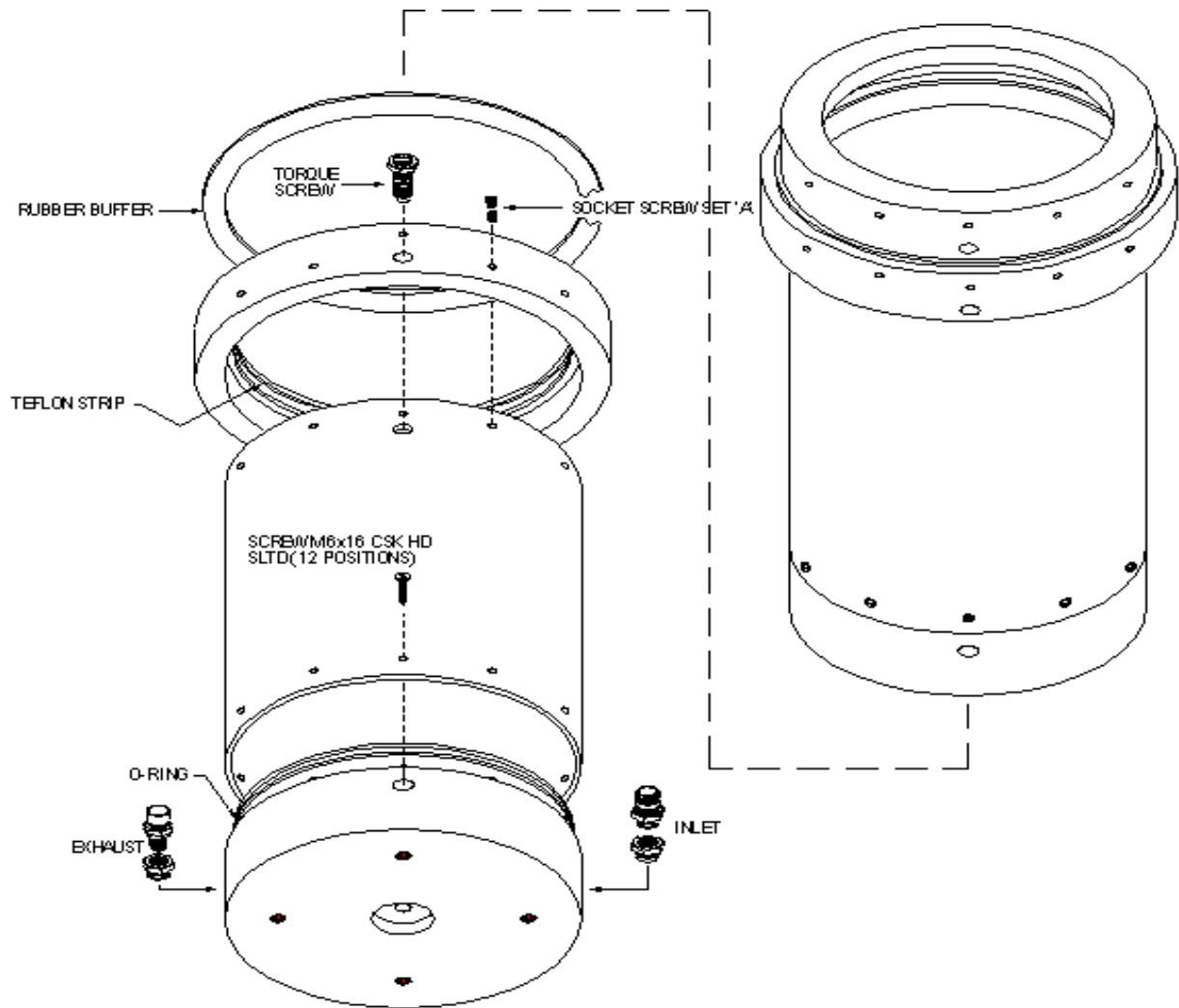
When the mast has been stored in a horizontal position, the seals may deform slightly and allow air to pass.

To correct this, stand the mast at a vertical position and inject some Hilomast lubricating oil, allowing it to drain down inside the tubes. Then pull out each section in turn and thrust downward (with the air release valve closed). This forces the lip of the seal back to its original position against the wall of the tube.

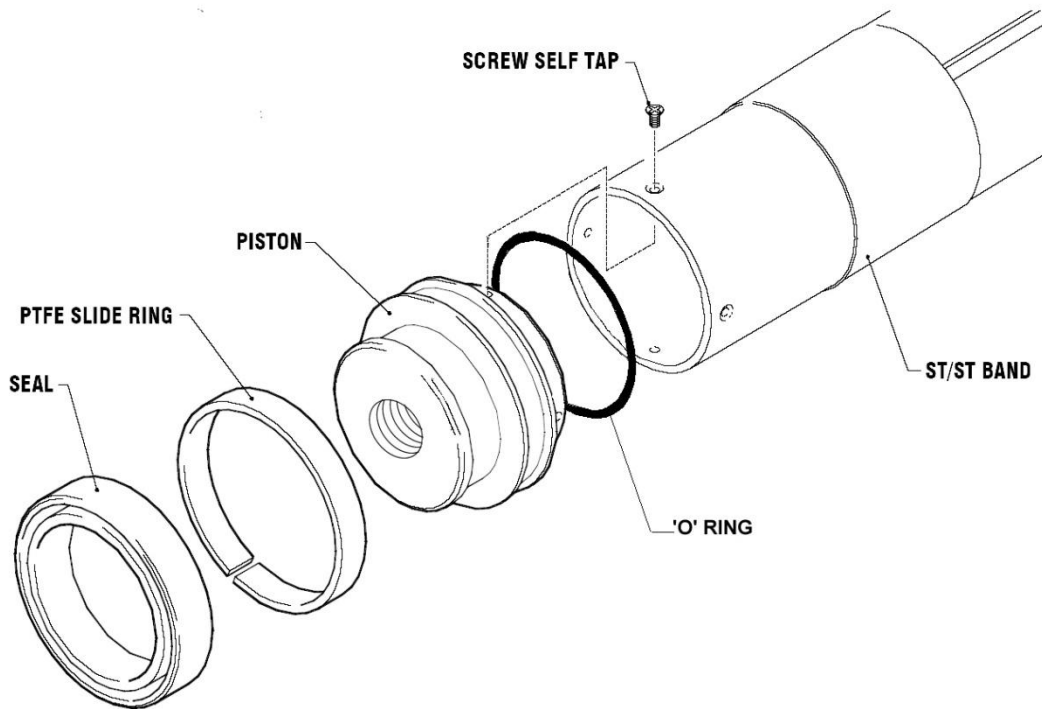
DISMANTLING THE MAST

If possible, lay the mast horizontally and pull out the sections to full extension. MAKE SURE TO PROVIDE THE MAST WITH SEVERAL SUPPORTS ALONG ITS LENGTH TO PREVENT THE TUBES BENDING. If the mast is mounted in a vehicle and cannot be removed, ensure that there is adequate headroom to remove each of the sections individually, starting with the smallest diameter.

Apply low air pressure to the mast and test for air leaks around the collars using a soap solution. If an air leak is discovered, remove the sections above that collar i.e. all the smaller sections, as one unit if possible, by releasing the collar from its tube (see following instructions). If no positive leaks are found by the above method, closely examine the keyways for cracks. If none can be found, proceed as follows:



- (1) Remove any sealing compound from screw holes to reveal screws. Loosen the socket set screws from the collar, except the one securing the Peek key. Note there are two screws in each hole. The outer screws are shorter and used to lock main screws.
- (2) Holding the collar onto its tube, pull out all the remaining sections (keeping them together as one unit) until the tube is against the collar.



- (3) Taking care to support the extended sections. **Note: The Piston should not require removal during normal operation;** slide the collar away from the bottom tube. Continue pulling the extended sections out until the piston is free from the bottom tube.
- (4) Remove the air inlet valve from the base of the mast or spares kit and fit into the tapped hole in the exposed position. With a foot pump attempt to extend the remaining sections. If they extend, it will indicate that the exposed seal is the one requiring replacement. If they do not extend, expose the next piston and seal using the same procedure – and so on – until the faulty seal is located.

Since it is unusual for a seal to fail, it is necessary at this stage to establish the cause if possible. If small particles of metal are found around the seal, it usually indicates that something has scraped the tube. This can happen if the mast has been violently abused, if some modification with different screws or clamps have been fitted by the customer or if the mast has not been serviced and lubricated regularly.

The recommended regularity of servicing is every 36 months, when seals must be replaced. Service kits and spares are available from Hilomast LLC, who can also organize the work to be carried out by an accredited service center, as required.

- (5) Clean the tubes with a cloth and examine the tube surfaces. If there are dents or sufficient surface damage to affect the seals, then the section will not function correctly and should be replaced.
- (6) Remove the faulty seal; in most cases, the damage is imperceptible. Having oiled or greased the new seal, fit into the piston groove using only the fingers, DO NOT USE METAL

TOOLS. The PTFE slide ring "E" should be replaced at this stage if necessary (see separate instructions at 6a next page).

- (7) The sections must now be refitted with great care. It is possible to damage the new seal on the edge of the receiving tube. Check the edge for sharpness or burrs also check the screw holes and ensure they are completely smooth. Then oil or grease it to help insertion of the section with the new seal.
- (8) Line up the section to be inserted, with the new seal at a slight angle to the mouth of the receiving tube. Hold the edge of the seal down with the thumb and turning the tube, allow the compressed part of the seal to enter the receiving tube. Once all the seal is inserted, correct the angle so that the tubes line up and insert Teflon slide ring. Keep the tube being fitted as concentric as possible with the receiving tube, until the stainless steel tube stop "C" has just entered. The collar can now be pushed forward onto the receiving tube and when secured it will maintain radial clearance.

The BR series mast has anti-rotation torque screw locking pins engaging in a slot in the stainless steel stop sleeve.

The mast should be assembled with these pins removed. Replace them as each section is built up.

- (1) Pull out section to its maximum i.e. until the stop sleeve comes against the support collar.
- (2) With a pencil, mark the section at the collar.
- (3) Push in section about 1in. Screw in locking pin until it touches the bottom of the keyway then unscrew one half to three quarters of a turn.
- (4) Pull out section. If the pin is engaging the slot the section will come out enough to enable the pencil mark to be seen again, i.e. the stop sleeve will be against the collar.
- (5) If the pin does not engage, push in the section again, continue to unscrew the locking pin and repeat instruction 4. The pin should only be unscrewed a few degrees at a time with each successive attempt.
- (6) Apply Loctite to threads on torque screw and lock nut down firmly.

PTFE Slide Ring Replacement

- (6a) The Teflon rings should be examined for scuffing and wear. If replacement is necessary, they should be fitted before the seals. A length of Teflon should be cut so that there is a small gap between the ends when it is wrapped around the piston groove. The piston should then be pushed into the receiving tube over its entire length of travel. Should any

tight spots be revealed, the PTFE should be finished down slightly with a sharp knife, finishing machine belt sander or abrasive paper, taking care to keep the thickness as even as possible. This procedure should continue until the piston slides freely.

Piston Replacement *(This should not be necessary during normal maintenance)*

After removing the seal and PTFE ring, check the inside of the tube for burring around the fixing holes and clean up as necessary. Coat the piston spigot with a sealing compound (Dow Corning Compound 111 valve lubricant & sealant) fit O-ring and insert into the tube. Should air leaks be evident, use further sealer on the screw heads and around the piston where it meets the end of the tube.

Note: Top piston has a magnet fitted; see Pace Maker cautions on page 13.

PEEK KEY REPLACEMENT

Tools required: 3mm Allen key and screwdriver; a fine file may also be needed.

- (1) For this operation, dismantle as described on page 9 onwards, but only the mast collars need to be removed, the tubes may be left in their nested position. Mark the base tube with a pencil so that the collar is assembled at the same place.
- (2) When the collars have been removed from the end of the tube, the tan peek key can be seen in its slot inside the main collar. After removing the old key, slide the appropriate tube out until the stainless steel 'stop band' shows (no further please) this is the lower end of the keyway channel. Slide the new key along this keyway to ensure it runs smoothly along the entire length, if there are any tight spots carefully dress the edge of the key with a fine file, until the key freely glides over the groove keyway.
- (3) There is an adjustment screw and locking screw behind the key slot in the collar, back these off and insert the new key – largest collar first. Replace the collar onto the tube using the pencil mark to locate the same place. Use the Allen key through one hole in the collar to locate the hole in the tube and line it up exactly so that the dog point screw will not miss it, failure to locate the screws in the tube means that it would come apart when pressurized.
- (4) Repeat this operation at the position directly opposite the first screw, then fit the rest, and the locking screws. Do not over tighten; when tight go further quarter turn but no more. Use a thread locking compound (Loctite 243) on the pan-head screws.

Now adjust the peek key screw, it should be just tight enough to allow the tube to run smoothly, again do not over tighten, and finish with the locking screw.

MAGNETIC SWITCH

Fitted into top piston

Fitting Instructions

- (1) The proximity switch should be strapped to the mast such that it may be moved up and down.
- (2) Connect a meter across the switch and move the switch up and down until the optimum position is found.

Note: If a length of the top section is being used to directly mount headload equipment, position the switch with this equipment in place.

- (3) Tighten straps.

Various methods may be used to hold the switch to the mast but obviously DO NOT drill fixing holes in the mast.

Retaining band and clamps supplied.

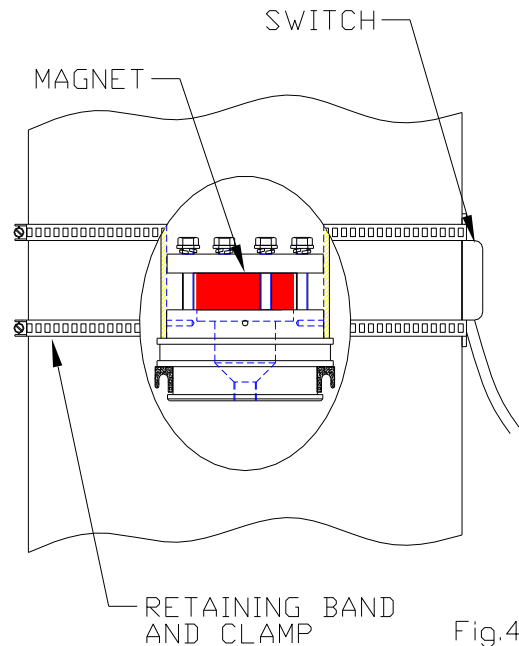


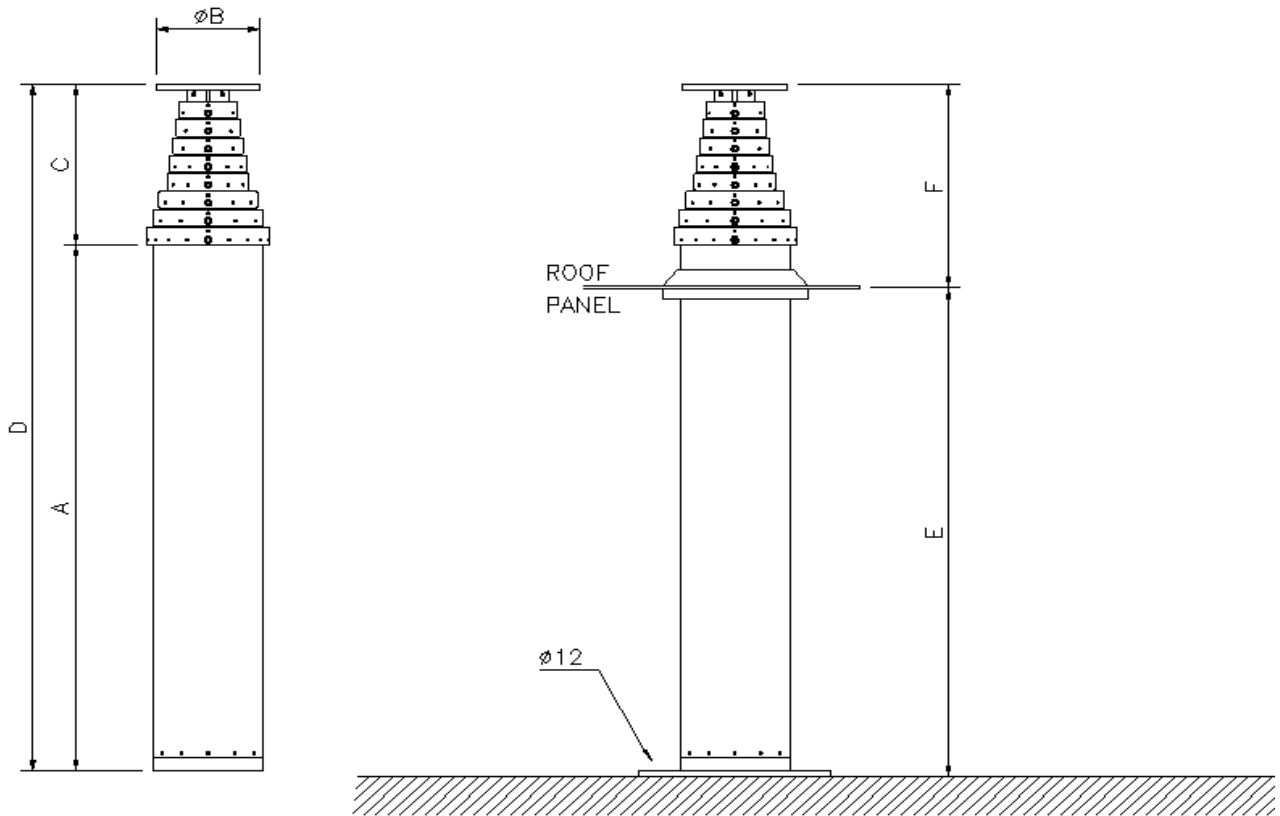
Fig.4

Safety Warning

- ~ Safe working distance for Pacemakers – 2M/6Ft plus.
- ~ Safe working distance for computer equipment and magnetic data – 2M/6Ft plus.
- ~ Avoid ferrous objects they will move at great speed and could damage eyes or hands.



MAST INSTALLATION DIMENSIONS



All Dimensions in the above table are in inches.

Please note that Dimension E will increase by 2.7" (68mm) if a rotating base is used.

Mast	A Dim	B Dim	C Dim	D Dim	E Dim	F Dim
BR 25	72	6	8.5	62.5	48	12
BR 30	71.66	6	8.34	80	68.1	11.96
BR 42	80	6	12.8	98.8	78.25	15.35
BR 48	80	6	14.5	94.5	78.25	17.0
BR 52	85.7	6	16.6	102.3	84	18.26
BR 56	148	6	9.5	157.5	146.4	12.0

DRAIN KIT INSTALLATION

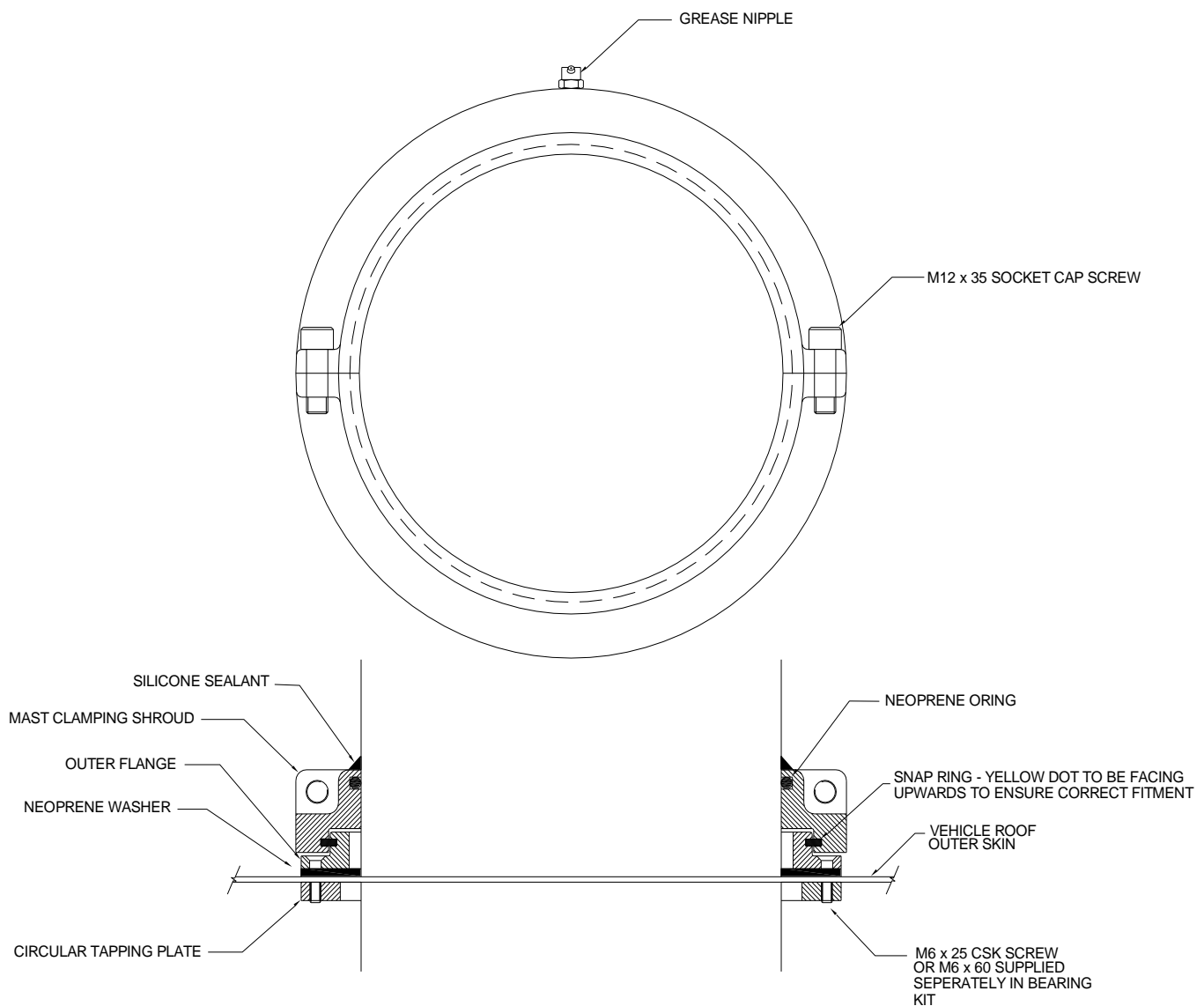
When fitting the drain kit to the base section of the mast, ensure that the elbow is not over-tightened and the hose is vented to the outside air.

VEHICLE BEARINGS

As can be seen on the drawing below, this is constructed differently from the other vehicle bearing kits and therefore, needs slightly different fitting.

There is no Teflon bearing, as the mast itself makes no contact with the roof bearing or tapping plate. Rotation is supported and guided by the mast-clamping shroud that fits snugly over the bearing and is lubricated with grease through the nipple provided.

Because the tolerance between the machined parts is critical, greater care must be taken to ensure that the base plate is placed with complete accuracy so that the mast is perfectly vertical. It is also very important that the roof surface and bearing are exactly horizontal otherwise rotation will not be smooth.



- (1) Select a suitable horizontal location for the roof bearing. Ensure that there are no obstructions for the base plate on the floor.
- (2) Cut a hole in the outer skin equal to the internal diameter of the tapping plate.
- (3) Clamp the bearing centrally over the hole and using it as a template, drill eight holes 6.5mm diameter.
- (4) Assemble the bearing and tapping plate as shown with the neoprene gasket sandwiched between the bearing and vehicle skin. The screw heads should be sealed with suitable compound (such as Silicone sealant) to prevent water ingress. If the surface of the roof is fluted, patterned or in some way not perfectly flat, it will be necessary to use car body filler to create a horizontal surface and a water tight seal.
- (5) Ensure that the base plate is in exactly the right position below the bearing by using a plumb line or similar device. Remember that the weight of the mast may be as much as 286lbs plus headload, which would affect the horizontal plane of the vehicle.
- (6) Remove all valves from the mast and fit the neoprene O-ring over the base tube, position it at the approximate height of the clamping shroud. The mast may now be lowered through the bearing onto its base plate. The fixed base plate will be screwed to the underside of the mast and then bolted to the floor. The rotating base plate accepts the special base spigot screwed to the mast base.
- (7) The two halves of the clamping shroud may be clamped into position. Smear silicone sealant in the groove of the shroud where the O-ring sits. The mating faces of the two halves of the shroud should be covered with silicone sealer compound to make them waterproof. Ensure that the O-ring is not pinched between the two halves of the shroud when bolted tight and that it is uniformly flush on the inner flange. If mast rotation is not required, the two parts can be coated with silicon sealer where they touch prior to bolting tight.

RECOMMENDED SERVICE INTERVALS

Visual inspection and lubrication of mast sections	Weekly or after 25 operations
Full service, including dismantling of the mast and replacement of seals and any worn parts	Every 2 Years

COMPRESSORS

GENERAL INFORMATION

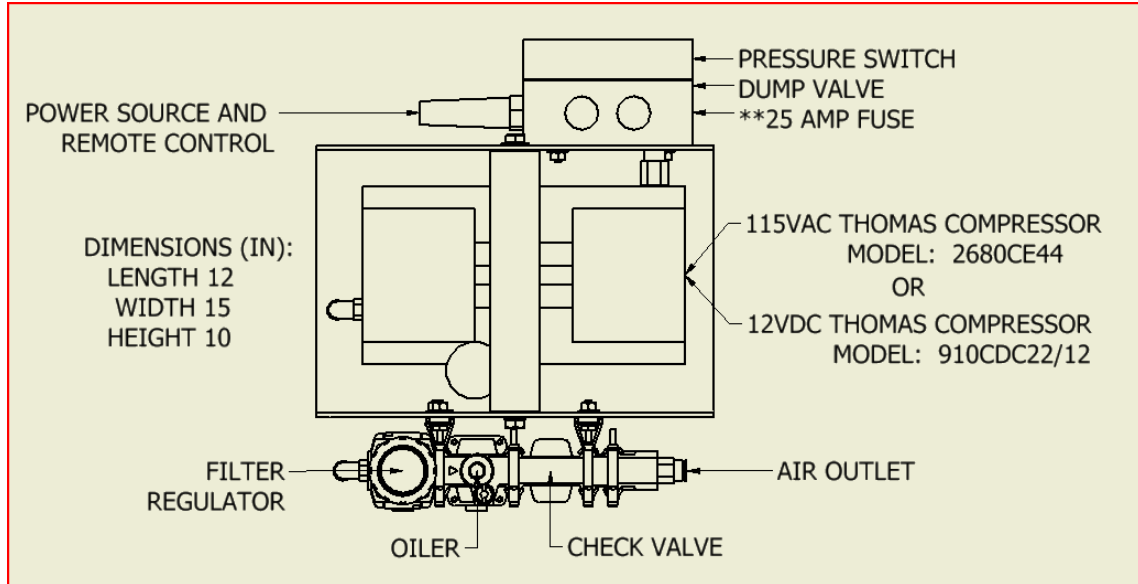
Hilomast compressors are air-cooled, oil-less electric motors of the diaphragm type (12VDC) and WOB-L Piston type (115VAC), enclosed in an aluminium U-shaped bracket. All models incorporate a pressure cut-off switch to maintain the correct mast working pressure. They are quiet, maintenance free and assembled from components that have a proven reliability over many years.

- (1) The Plug & Go Compressors are factory set to achieve the proper pressure for the mast indicated by the consumer. The preset pressure is determined by Hilomast for each product and set in house for each of the compressors. To ensure that no one is injured, please call our tech support for assistance in setting pressures or troubleshooting.
- (2) **Filter Regulator:** This component removes the moisture in the outside air before it gets into your mast. The excess moisture that collects in the bowl on the bottom of the Filter Regulator must be removed whenever visible. To remove press the black sliding button downward and rotate the bowl a ¼ turn, then pull the bowl off from the Filter Regulator. To replace, line the two small indentions up, press the bowl into the housing and rotate the bowl until the black button returns to the center. The Filter Regulator has been designed to release backpressure, created by the compressor and check valve. The pressurized air will bleed itself from the Filter Regulator bowl.
- (3) **Oiler:** The Oiler mixes small amounts of oil into the incoming air to lubricate the components inside your mast. The oiler has Max and Min oil lines listed on the outside of the bowl at the bottom of the Oiler, these lines must be adhered to, ensuring proper lubrication. To replenish the oil you must release the inlet pressure by dumping the pressure from the Filter Regulator. Hilomast recommends that only Hilomast Lubricant 'Superfluid' is used in the Oiler.
- (4) **Pressure Switch, Dump Valve and Electrical Components:** These components are all housed within the plastic Weatherproof Box. These components are factory-set for your specific application; any problems with them should be addressed to tech support at Hilomast.
- (5) Compressors should be placed on a level with or below the base of the mast to prevent moisture build up in the air lines. If a compressor has to be placed higher than the base of the mast, care must be taken not to allow water to become trapped in the air lines. Disconnect the air line from the mast below out the line at frequent intervals or fit a drain valve at the base level of the mast.

USE OF THIRD PARTY COMPRESSORS

When using third party compressors, ensure that the tank pressure is set to a maximum of 25 p.s.i. It is advisable to fit a pressure switch in the air line to stop the compressor if the pressure exceeds 25p.s.i. To ensure proper operation of the mast use the Hilomast approved lubricant 'Superfluid' in the compressor system.

TYPES OF COMPRESSORS



****As a safety measure, a 25-amp fuse has been placed into the electrical circuit to protect your compressor from damage due to large currents. If your compressor is unresponsive to your attempts to pressurize, check that the fuse has not blown. A 25-amp automotive blade type fuse will suffice as a replacement.**

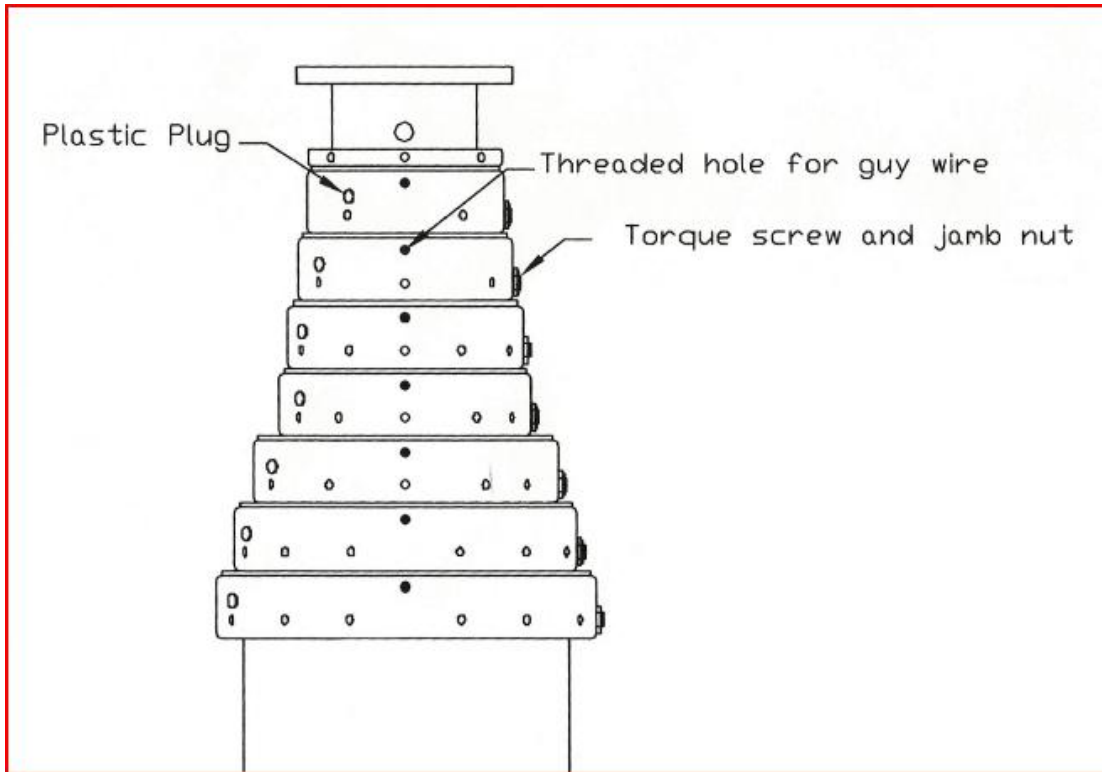
Plug-N-Go 115VAC	Plug-N-Go 12VDC
Weight: 30lbs	Weight: 23lbs
Starting Current: 14.6 amps	Current Drawn: 12.8amps
Operating Current: 5 amps	Flow Rate: 1.4 cfm
Flow Rate: 4.1 cfm	Motor: Permanent Magnet
Motor: Permanent Split Cap.	

OPERATING INSTRUCTIONS

Plug-N-Go Units

- (1) Connect compressor to suitable power supply.
- (2) Connect air line to mast inlet valve.
- (3) Close exhaust valve, if applicable at base of mast.
- (4) Hold the “U” or Up button on the remote control until mast fully extends.
- (5) To lower mast, press and hold the “D” or Down button. During retraction, the mast may be stopped at any height by releasing the button. However, the masts are meant to be used at full extension.

WINTERIZING YOUR MAST



Freezing weather conditions can affect the seal performance if moisture is present in the mast system. Adding a de-icer or antifreeze to the oiler system may not completely solve this problem. In some cases, moisture will freeze on the top side of the seal. We recommend adding KILFROST 400 de-icer to this location on each section. First, locate the large plastic plug (14.60mm diameter) on each collar. Remove this plug and use an oilcan or similar device to inject a small amount ($\frac{1}{2}$ ounce) of KILFROST 400 through this hole. Reinstall the plug and repeat this procedure on each section as needed.

When the conditions around your mast will be cold enough to freeze water, the procedure listed above should be performed. The most important time to use KILFROST 400 is when you are stowing the mast. When extended, the Hilomast will expel much of the KILFROST 400, and moisture it has absorbed, through the drain hole in each section. After using the mast and it is fully retracted, the above steps should be performed.

Hilomast Approved Spares

9" Base Tube with Base and Valves

BR 42	BR42SECT9
BR 48	BR48SECT9
BR 52	BR52SECT9
BR 56	BR56SECT9

8" Sliding Tube and Piston

BR 42	BR42SECT8
BR 48	BR48SECT8
BR 52	BR52SECT8
BR 56	BR56SECT8

7" Sliding Tube and Piston

BR 42	BR42SECT7
BR 48	BR48SECT7
BR 52	BR52SECT7
BR 56	BR56SECT7

6" Base Tube with Base and Valves

BR 25	BR25SECT6
BR 30	BR30SECT6

6" Sliding Tube and Piston

BR 42	BR42SECT6
BR 48	BR48SECT6
BR 52	BR52SECT6
BR 56	BR56SECT6

5.5" Sliding Tube and Piston

BR 25	BR25SECT5.5
BR 30	BR30SECT5.5
BR 42	BR42SECT5.5
BR 48	BR48SECT5.5
BR 52	BR52SECT5.5
BR 56	BR56SECT5.5

5" Sliding Tube and Piston

BR 25	BR25SECT5
BR 30	BR30SECT5

BR 42	BR42SECT5
BR 48	BR48SECT5
BR 52	BR52SECT5
BR 56	BR56SECT5
4.5" Sliding Tube and Piston	
BR 25	BR25SECT4.5
BR 30	BR30SECT4.5
BR 42	BR42SECT4.5
BR 48	BR48SECT4.5
BR 52	BR52SECT4.5
BR 56	BR56SECT4.5
4" Sliding Tube and Piston	
BR 25	BR25SECT4
BR 30	BR30SECT4
BR 42	BR42SECT4
BR 52	BR52SECT4
4" Sliding Tube, Piston Valves & Magnetic Housing (BR 48 & BR 56)	
BR 48	BR48SECT4
BR 56	BR56SECT4
3.5" Sliding Top Tube, Piston Valves & Magnetic Housing (BR 42 & BR 52)	
BR 42	BR42SECT3.5
BR 52	BR52SECT3.5
3.5" Sliding Top Tube & Piston	
BR 25	BR25SECT3.5
BR 30	BR30SECT3.5
Full Spares Kit BR 42, BR 48, BR 52, BR 56	BRSPAREKIT
Full Spares Kit BR 25, BR 30	BRSPAREKIT2
Includes: Dampers, Seals, PTFE, Valves, Torque Screws, Keyway Guides, O-Rings, Set Screws, Allen Key & Operating Instructions.	
Seal Kit (Seals & O-Rings)	BR SEAL KIT
Service Kit (Asst. Hardware & Keys)	BR SERVICE KIT
Damper Kit	BR DAMPER KIT
Small Key	294000000
Large Key	294000300
BR Peek Key Guide	2940003US
Pressure Relief Valve	370608100
Ball Valve	370620300
Hilomast Lubricant 1 Liter	000055500
Kilfrost Winter Lubricant	KILFROST
Lubricant Synthetic Spray	990001300
High Voltage Power Protection System	SIGALARM
Rotation System	NSM/229/R
18 in ³ Pump Action Oil Gun	910001300
Locking Collars (must be specified on order)	
BR25LC, BR30LC, BR42LC, BR42LC, BR48LC, BR52LC, BR56LC	

User Notes

Please register your Hilomast product
To ensure a record is kept for warranty purposes

Model.....

Serial No.....

Company.....

Address.....

.....

.....

Telephone.....

Fax.....

Email.....



Hilomast LLC

402 Chairman Court, Suite 100
Debary, FL 32713, USA

386-668-6784

386-668-6794 Fax

Toll Free (in the US) 877-668-HILO (4456)

sales@hilomast.com

www.hilomast.com