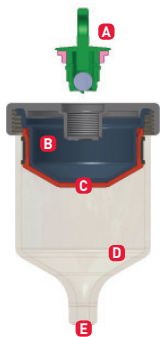




perma FUTURA

Quick Reference Pocket Guide

1. Operating Principle



- A Activator** – Screws into the top of the lubricator. Twist the eyelet until it shears off – do not push to the side.
- B Electrolyte*** – The electrolyte is contained within the elastic bladder. The activation pellet reacts with the electrolyte to produce gas which pressurises the bladder.
- C Lubricant Piston** – The bladder expands forcing the lubricant piston forward.
- D Plastic Body** – Corrosion resistant and transparent body to allow for quick inspection of piston position.
- E 1/4" BSP**

*The electrolyte does not contain potassium hydroxide.







Technical Data	Futura
Housing design	Transparent plastic (UV stable)
Operating principle	Electrochemical (gas)
Discharge period (at +20°C with NLGI 2 grease)	1,3,6 or 12 month activators
Lubricant volume	100cc
Ambient temperature range	0 to +40°C
Pressure build-up	4 bar / 58 psi maximum
Remote installations*	Up to 1 metre of 3/8" ID line

*Grease type, temperature and application back pressure can effect allowable line lengths

2. Dispensing Rates

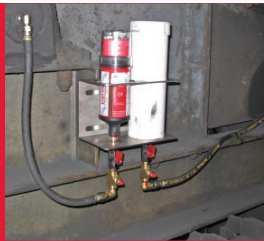
Different rates are achieved by selecting colour coded activators. There are 4 types: 1 (yellow), 3 (green), 6 (red) and 12 (grey).

A Type 1 activator will dispense the lubricator contents over a 1 month period when the average ambient temperature is 20°C, Type 3 dispenses in 3 months and so on.

Activator Color	Time Period	Dispensing Rate, cc per day
 Yellow	1 month	3.3 cc per day*
 Green	3 months	1.1 cc per day*
 Red	6 months	0.6 cc per day*
 Grey	12 months	0.3 cc per day*

* Dispensing rates are based on an average ambient temperature of 20°C. Higher average temperatures lead to faster dispensing and lower temperatures to slower dispensing.

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VARIO for
higher
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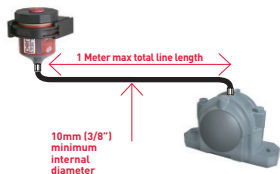
3. Remote Installations

Direct mount where safe to do so as this provides maximum pressure to the bearing. For remote mounting use lines which are no more than 1 meter long with an internal diameter of at least 10mm (3/8"). Smaller diameter lines increase resistance to grease flow.



Remote installed perma Futura

Always prime grease lines and pre-grease bearings. Minimise small diameter restrictions and ensure that the bearing will receive grease freely.



4. Mounting System Overview



MB01-S bracket with BC30 beam clamp



MB02 bracket with BC30 beam clamps and 708V purge kits



CH01-S cage hanger bracket

5. Installation & Servicing Tips

1. Always ensure that newly installed bearings are pre-packed prior to fitting lubricator.
2. Pre-grease bearings using a grease gun to ensure that the point can receive grease freely. Clean all fittings to prevent contamination.
3. Select the activator type to suit the application.
4. Decide whether to direct or remote mount depending on access and safety implications. Do not exceed the recommended line dimensions.
5. Activate the lubricator by screwing the activator until the eyelet shears off – twist only, do not push to the side to break eyelet.



6. Write the date of installation on the lubricator and record the date of installation in the site maintenance scheduling system.
7. Screw the lubricator into the grease port by hand – tools are not necessary.
8. Once installed the lubricator should be periodically inspected to check that accidental damage has not occurred.
9. Replace lubricator on the planned date.
10. When replacing empty lubricators manually purge the bearing to ensure that grease delivery conditions have not changed.

6. Trouble Shooting

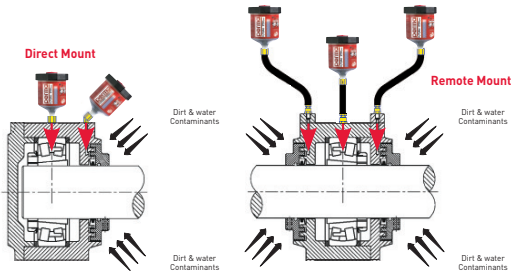
Correct installation is essential to lubricator operation.

Observation	Solution
Grease dispensing too quickly	Average ambient temperature too high for activator type <ul style="list-style-type: none">• Select slower activator type. OR• Remote mount away from heat source. OR• Change to STAR Vario for temperature independent dispensing.
Grease dispensing too slowly	Average ambient temperature too low for activator type <ul style="list-style-type: none">• Select faster activator type. OR• Change to STAR Vario for temperature independent dispensing. Resistance to grease flow too high <ul style="list-style-type: none">• Manually purge point to ensure that grease can be freely received by bearing. THEN• Reduce grease line length AND/OR increase line diameter. OR• Eliminate restrictions caused by small diameter fittings. OR• Select faster activator type. OR• Select grease with better pumpability.
Grease 'spurts' from lubricator when removed from service	Resistance to grease flow too high <ul style="list-style-type: none">• Manually purge point to ensure that grease can be freely received by bearing THEN• Reduce grease line length AND/OR increase line diameter. OR• Eliminate restrictions caused by small diameter fittings.• Change to STAR Vario for higher pressure output.

7. Contamination Prevention Strategies

Different bearing configurations have different greasing requirements. The example here demonstrates the importance of preventing the ingress of solid contaminants and water.

For sites where contamination levels are high it is common to apply grease directly to taconite or labyrinth seals, in addition to the bearing. This provides a positive purge of grease to prevent the entry of contaminants.



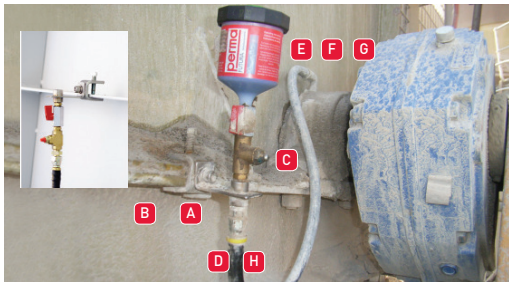
Bearing and seal lubrication on conveyor pulley bearing

8. Compact Beam Mount Bracket & Installation Kits

For the quick installation of Perma Futura lubricators a compact bracket is combined with a 30mm beam clamp. The bracket and clamp arrangement is also available in a range of pre-assembled kits.

Part Number	Description
MB015BC30	Bracket SS compact 1 point with 30mm beam clamp
K130S50	Kit SS 1 point BC30 0.5m hose with fittings
K130S75	Kit SS 1 point BC30 0.75m hose with fittings
K130S100	Kit SS 1 point BC30 1.0m hose with fittings

Example of Kit Assembly – K130S50



A	1 x 1 point compact beam bracket	E	1 x 90 degree elbow
B	1 x 30mm S/S beam clamp	F	1 x 1/4" BSPF - 1/8" BSPM reducer
C	1 x Manual purge kit	G	1 x 1/4" BSPF - 1/4" BSPM extension
D	2 x Female swivel hose ends	H	0.5m 3/8" ID grease line

Perma Futura lubricators are not included with Kit Assemblies.

9. Compact Cage Mount Bracket & Installation Kits

For the quick installation of Perma Futura lubricators a compact cage mount bracket is available. The cage mount bracket is also available in a range of pre-assembled kits.

Part Number	Description
CH01S	Bracket SS compact 1 point cage mount
K1CHS50	Kit SS 1 point BC30 0.5m hose with fittings
K1CHS75	Kit SS 1 point BC30 0.75m hose with fittings
K1CHS100	Kit SS 1 point BC30 1.0m hose with fittings

Example of Kit Assembly – K1CHS75



A	1 x 1 point compact cage bracket	E	1 x 90 degree elbow
B	1 x Manual purge kit	F	1 x 1/4" BSPF - 1/8" BSPM reducer
C	0.75m 3/8" ID grease line	G	1 x 1/4" BSPF - 1/4" BSPM extension
D	2 x Female swivel hose ends		

Perma Futura lubricators are not included with Kit Assemblies.

10. Multi-Point Brackets & Installation Kits

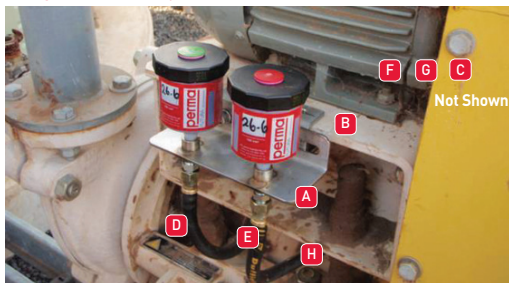
The range of Perma Futura brackets and installation kits for multiple points are summarised in the table below.

Points	Bracket Part No.	Kit with BC30*	Kit with BC65**
2 points	MB02	K230G	K265G
3 points	MB03	K330G	K365G
4 points	MB04	K430G	K465G

*BC30 = 30mm beam clamp

**BC65 = 65mm beam clamp

Example of Kit Assembly – K230G



A	1 x 2 point standard duty bracket	E	2 x 90 degree elbows
B	2 x 30mm S/S beam clamps	F	2 x 1/4" BSPF - 1/8" BSPM reducers
C	2 x Manual purge kits	G	2 x 1/4" BSPF - 1/4" BSPM extensions
D	4 x Female swivel hose ends	H	2m 3/8" ID grease line

Perma Futura lubricators are not included with Kit Assemblies.

11. Pre-Assembled Grease Lines

The selection of correct grease lines and fittings is critical to good quality lubricator installations. Perma recommends grease lines with 3/8" internal diameter.

Pre-assembled grease lines are available to reduce installation time and ensure correct line selection. Lines are available empty or pre-filled with grease. For filled lines the grease type is denoted by a 6 digit code, shown here as PSFXXX.

Line Length	Empty Line Part #'s	Filled Lines Part #'s
0.5 meter	90HD0.5	PSFXXX90HD0.5
0.75 meter	90HD0.75	PSFXXX90HD0.75
1.0 meter	90HD1.0	PSFXXX90HD1.0



12. Beam Clamps

All brackets and beam clamps are manufactured from stainless steel. Beam clamps are available in two sizes – 30mm and 65mm.

Beam clamps include assembly screws and case hardened, zinc plated set screws to provide an efficient means of attachment.



BC30 30mm beam clamp



BC65 65mm beam clamp



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