

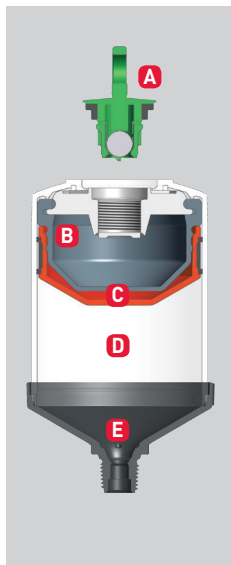
perma FUTURA



Quick Reference Pocket Guide

perma[®]

1. Operating principle



- A Activator** – Screws into the top of the lubricator. Rotate the eyelet until it shears off – do not push to the side.
- B Electrolyte*** – The electrolyte is contained within an elastic bladder. The activation pellet reacts with the electrolyte to produce gas. Refer to the product Safety Data Sheet for further details on contents. The SDS can be downloaded from www.perma.com.au
- C Lubricant Piston** – Gas accumulation builds pressure forcing the lubricant piston forward.
- D Plastic Body** – Corrosion resistant and transparent body allows inspection of piston position.
- E Support Flange** – Integrated with lubricator body with 1/4" BSP M thread.

*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	120cm ³
Ambient temperature range	0 to +40°C
Remote installations*	Up to 1 metre of 3/8" ID line

* Grease type, temperature and resistance to grease flow presented by the lubrication point can effect allowable grease line lengths.

2. Dispensing rates

Different rates are achieved by selecting from a range of 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.*

Colour	Type	Dispensing Rate, cm ³ per day
 Yellow	1	4*
 Green	3	1.4*
 Red	6	0.7*
 Grey	12	0.3*

* 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. Grease type and resistance to grease flow presented by the lubrication point can also effect dispensing rates.

perma
STAR VARIO
for higher
dispensing
rates and
longer
remote lines.

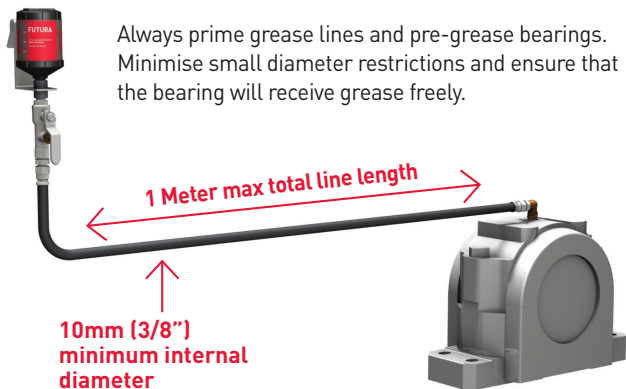


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3. Remote installations

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



4. Mounting System Overview

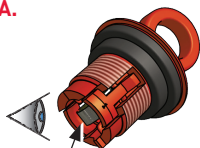


Refer to sections 8, 9 and 10 for more information. perma FUTURA lubricators are not included with kits.

5. Installation & servicing tips

1. Always ensure that newly installed bearings are correctly pre-packed prior to fitting lubricator.
2. Pre-grease bearings using a grease gun to ensure that the point can receive grease freely.
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:

A.



OK Check that the activation pellet is in place.

B.



Screw the activator in by hand until it is finger tight.

C.



Rotate the activator until the eyelet shears off. **DO NOT** snap the eyelet off by pushing to the side. Use a **ROTATING ACTION ONLY.**

D.



= OK

Shake the lubricator and **listen** for the rattle sound of the activator pellet.

6. Write the date of installation on the lubricator.
7. Screw the lubricator into the grease port by hand.
8. Once installed the lubricator should be periodically inspected to check that accidental damage has not occurred.

6. Trouble shooting

Correct installation is essential to lubricator operation.

Observation	Solution
Grease dispensing too quickly	Temperature too high for activator type <ul style="list-style-type: none">• Select slower activator type. <u>OR</u>• Remote mount away from heat source. <u>OR</u>• Change to STAR Vario for temperature independent dispensing.
Grease dispensing too slowly	Temperature too low for activator type <ul style="list-style-type: none">• Select faster activator type. <u>OR</u>• 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. <u>THEN</u>• Reduce grease line length <u>AND/OR</u> increase line diameter. <u>OR</u>• Eliminate restrictions caused by small diameter fittings. <u>OR</u>• Select faster activator type. <u>OR</u>• Select a grease with better pumpability and / or better resistance to oil bleed.
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 <u>THEN</u>• Reduce grease line length <u>AND/OR</u> increase line diameter. <u>OR</u>• 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 examples here demonstrate 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.



**Taconite seal
purging and bearing
relubrication on
a plummer block
bearing**



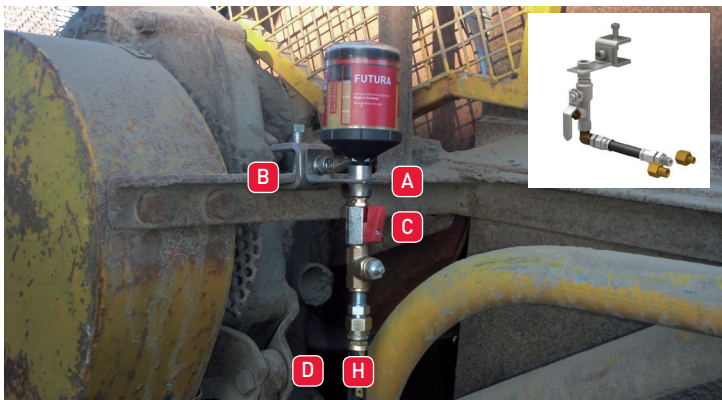
**Labyrinth seal
purging on a small
slurry pump**

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
MB01SBC30	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

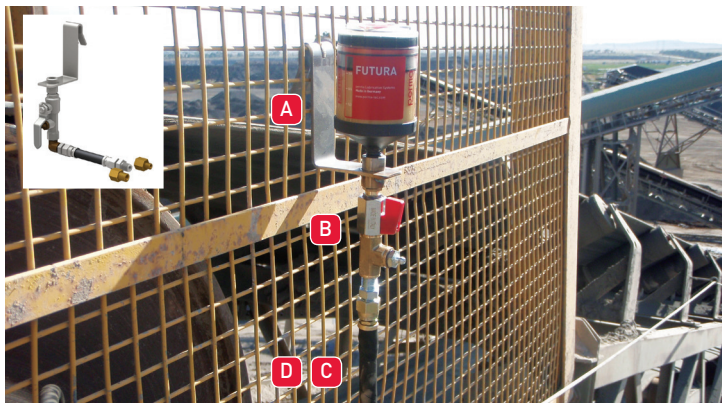
perma FUTURA lubricators are not included with Kit Assemblies.

9. Compact cage mount bracket & installation kits

For the cage mounting 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 cage 0.5m hose with fittings
K1CHS75	Kit SS 1 point cage 0.75m hose with fittings
K1CHS100	Kit SS 1 point cage 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 installation kits

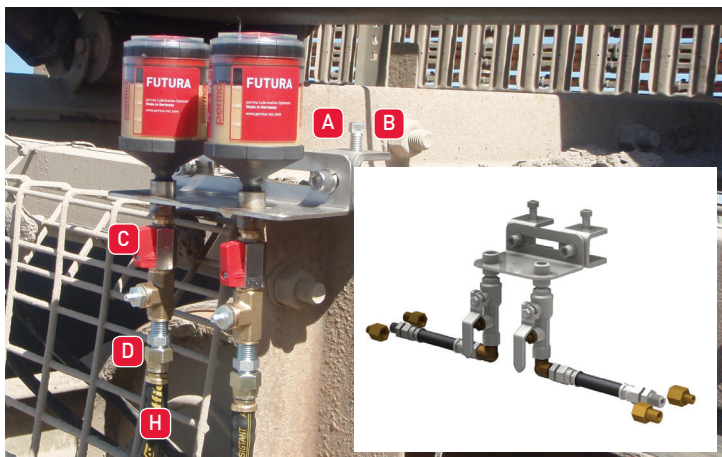
The range of perma FUTURA installation kits for multiple points are summarised in the table below.

Points	Kit with BC30*	Kit with BC65**	Cage Hanger
2 points	K230G	K265G	K2CHG

*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*

* "XXX" is replaced by a unique 3-digit code for each grease type.



12. Further Information

The information provided in this Quick Reference guide is of a general nature only. Potential users of perma FLEX should seek advice tailored to their particular circumstances by contacting HTL perma Australia.

Further information about the perma FLEX is available from www.perma.com.au and www.perma-tec.com

In particular the following documents are available for download:

- Safety Data Sheet
- Multi-language Operators Guide

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