



BEARING LUBRICATION GUIDE **For ICS Mill Master 10x8 and up.**

It is recommended that lubricating grease used in rolling bearings should have the following characteristics:

A lithium complex soap thickener grease with EP additives and oxidation inhibitors.

N. L. G. I. Consistency No.2

Drop Point: >260°C

Work penetration @ 25°C A.S.T.M.:265 to 295

RECOMMENDED BEARING GREASE: MOBIL HP or equivalent.

Remember all ICS Mill Master Bearing Assembly Units are:

- All threaded components are metric
- The drive end shaft extension diameter is metric and metric keys are used
- No setting or adjusting of bearing end play is required
- Consequently, no shimming during assembly is required.
- Grease purged labyrinths are standard to assist in exclusion of dirt and moisture from assemblies.

A correctly assembled and pre-greased bearing assembly will have a long trouble-free life, provided that it is protected against ingress of water or other foreign matter and that it is adequately maintained. It must be left to the good judgement of maintenance personnel, to open the bearing housing at regular intervals (no more than twelve months) to inspect bearings and grease and to then determine each time the course of action for the period up to the next inspection. The frequency and amount of lubricant to be added periodically depends upon a number of factors and a combination of them:

- (a) speed and size of bearing
- (b) duration and
- (c) extent of on-off operation
- (d) environmental conditions such as ambient and operating temperatures, splash and the presence of contaminants.

If a regular addition of grease is judged necessary, or for unusual circumstances where extreme conditions warrant additional lubricant to be supplied ensure grease nipples are cleaned prior to use, to prevent ingress of dirt into the bearings whilst greasing. It is preferable to lubricate often and sparingly, then to add large amounts at long intervals.

BEARINGS MUST NEVER BE OVER GREASED



Excess Grease: The immediate effect of an excess of grease within a bearing is overheating due to the churning of the grease. This should be avoided. If bearings run too hot after a change of grease, the trouble is likely to be due to over greasing.

Under no circumstances add more lubricant to correct the overheating.

For ordinary conditions of continuous operation. Again, use only recommended clean grease.

LUBERICATION INTERVALS – HOURS

WET END BEARING - PUMP OPERATING SPEED

Frame	Addition per bearing (g)	200 RPM	400 RPM	600 RPM	800 RPM	1000 RPM	1200 RPM	1400 RPM	1600 RPM	1800 RPM	2000 RPM	2200 RPM	3000 RPM	3800 RPM
N	20	X	X	X	X	2300	1800	1600	1400	1200	1050	900	650	500
P	30	X	X	3100	2200	1700	1400	1200	1000	900	800	700	X	X
Q	55	X	X	2500	1800	1400	1100	900	750	650	550	500	X	X
R	85	X	3200	2000	1400	1100	800	620	500	X	X	X	X	X
S	115	X	2600	1500	1000	700	480	X	X	X	X	X	X	X
T	250	X	2000	1200	700	X	X	X	X	X	X	X	X	X
U	490	4000	1500	700	X	X	X	X	X	X	X	X	X	X

LUBERICATION INTERVALS – HOURS

DRIVE END BEARING - PUMP OPERATING SPEED

Frame	Addition per bearing (g)	200 RPM	400 RPM	600 RPM	800 RPM	1000 RPM	1200 RPM	1400 RPM	1600 RPM	1800 RPM	2000 RPM	2200 RPM	3000 RPM	3800 RPM
N	15	X	X	X	X	10000	8500	7500	6000	5500	4900	4500	3000	2000
P	20	X	X	16000	12000	9000	7000	6500	5100	4800	4000	3500	X	X
Q	35	X	X	13500	9000	7500	6000	5000	4500	3500	3000	2800	X	X
R	60	X	17000	11000	7500	5600	4500	3500	2700	X	X	X	X	X
S	75	X	13000	7500	5000	3500	2500	X	X	X	X	X	X	X
T	135	X	10000	5500	3500	X	X	X	X	X	X	X	X	X
U	190	17000	5500	2000	X	X	X	X	X	X	X	X	X	X



The above table's are based on normal operating conditions and intended to be a guideline.

Normal operating conditions include:

- Clean environment.
- Pumps under cover or protected from the weather (rain, snow, ice, dust etc.)
- Normal ambient temperatures (10 to 35°C).
- No spray from either badly maintained gland or from heavy washing down.
- Normal operating conditions-below full rating.
 - Tabulated figures are based on bearing temperatures of 70°C measured at the outer ring.
 - Intervals should be halved for every 15°C increase above 70°C, but the maximum permissible operating temperature for the grease should obviously not be exceeded.

Very dirty or damp atmospheric conditions or conditions that varied from those listed above would require that the recommendations be stepped up to a level that prevents contaminants from entering the bearings.

Pump Commissioning:S

The recommended initial quantities of grease are to be used for each bearing are:

Bearing Assembly	Drive End (g)	Wet End (g)
N	40	65
P	80	100
Q	160	250
R	350	500
S / ST	550	600
T / TU	800	1600
U	1300	3000