**POWERGEAR™**

INVOLUTE POWERGEAR PVT. LTD.

Star Export House Recognized by Government of India
ISO 9001-2015 Certified Systems

Manufacturers of Drives and Transmissions

SHAFT MOUNTED GEAR UNIT

The **POWERGEAR™ Shaft Mounted Gear Units** are compact in size, mounting directly onto the driven shaft, thus eliminating the use of a foundation and couplings. The hardened and ground helical gears are manufactured from suitable alloy steels. The gear units are suitable for both forward and reverse motion.

The torque arm anchors the gear unit and provides an easy and quick method of adjustment of V-belts by means of a turnbuckle.

The gear units are currently manufactured in **fifteen** sizes from **A to M** with nominal ratios of **5:1, 13:1, 20:1 and 25:1**. A wide range of final speed ratios may be achieved by use of pulley combinations.

The gear units have been redesigned by changing the tooth design to give higher power to weight ratios within the same gear unit.

Shaft Mounted Taper Clamp Units are available as keyless gear unit.

Shaft Mounted Twin Taper Clamp Units are available with keyways.

The Taper Clamps and Support Bushes in both the above-mentioned units are manufactured in **Stainless Steel** to prevent fretting corrosion and for ease of removal. Various sizes of bores are available in the Taper Clamp Units providing a very easy method for mounting and dismounting on different shaft sizes.

XT Series Shaft Mounted Gear Units have been developed with imperial dimensions considering AGMA standards. The gear units are manufactured in **six sizes** from **XT1 to XT6** with nominal ratios of **9:1, 15:1 and 25:1** and are rated upto 65 HP.

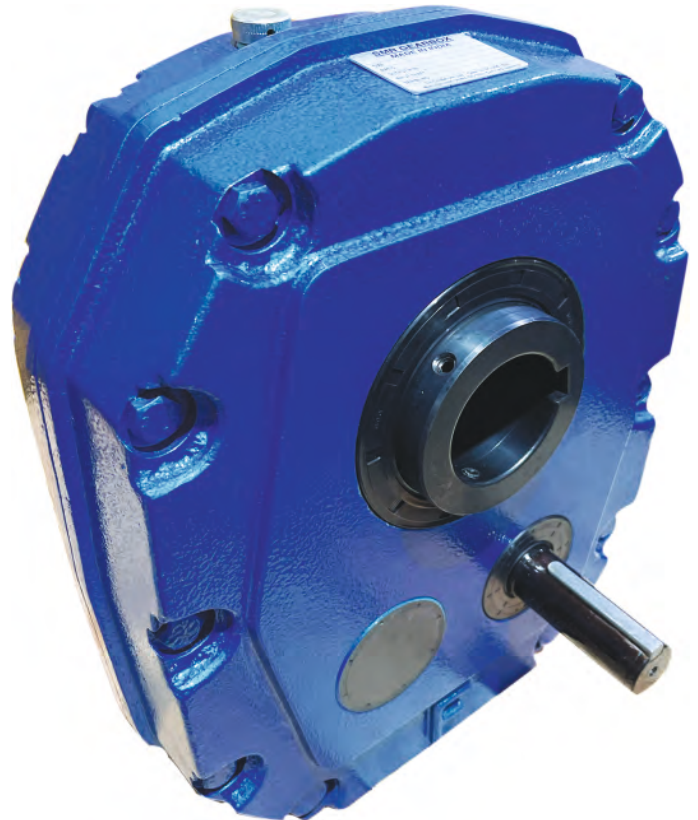
Three Stage Gear Unit

An additional 'gear-packet' for gear ratios upto 70:1

Accessories: Output hubs in stainless steels, labyrinth sealing, extraction collars, reducing bushes, safety covers, hydraulic motor mounts, motor mounts, anti roll back bush adapters and backstops are available.

Specials: Modifications to specific customer specifications, ratios, configurations and width of gear units.

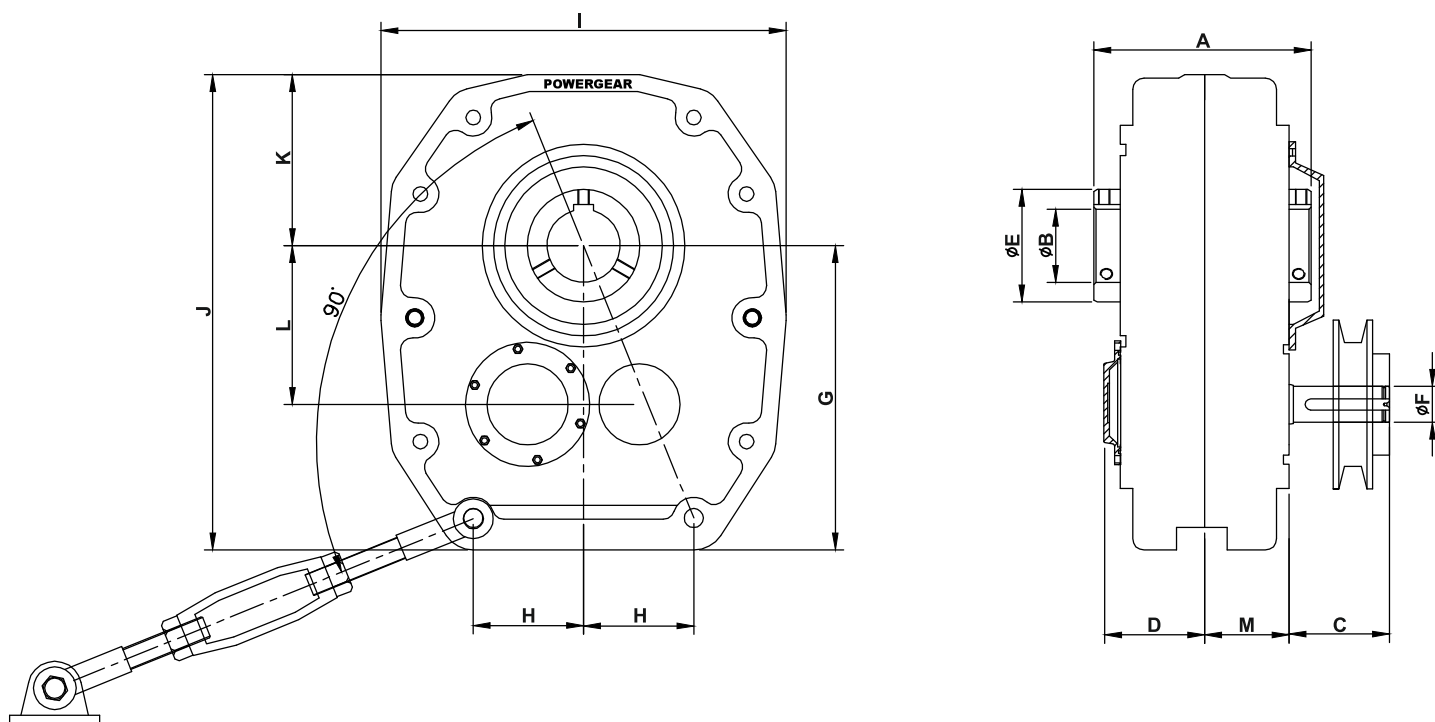
Outline drawings are available in dxf format for CAD utilisation. It is also possible to print documents with technical data of the gear unit.



Features :

- * Redesigned Gearing for Higher Power to Weight Ratio
- * Available with Keyed Bores or Taper Clamps
- * Numerous Accessories
- * Inter - changeable with Leading Brands
- * State of the Art Manufacturing Facilities
- * ISO 9001 - 2015 Certified Systems
- * All Gear Units Tested Prior to Dispatch
- * 100% Inspection and Traceability of All Components

**POWERGEAR™****POULIGEAR^{fr}**



Dimensions, Sizes A - M

Size	Mass Kg	A	KEYED HUB BORE ØB F7		C	D	ØE	ØF j 6	F KEY WAY	G	H	I	J	K	L	M
			STD	ALT												
A	13	124	30	-	50	50	45	14	5x3x40	128	51	163	215	75	67	40
B	15	134	30	40	63	59	55	19	6x3.5x50	131	55	185	225	80	75	52
C	22	142	40	50	72	65	65	22	6x3.5x56	155	60	220	270	95	90	55
D	32	152	50	55	77	68	75	25	8x4x63	188	75	260	325	120	110	61
E	45	170	55	65	85	76	85	28	8x4x70	221	90	280	370	130	125	66
F	65	189	65	75	90	87	100	32	10x5x70	242	98	360	430	158	140	75
Fx	85	222	65	75	91	102	100	32	10x5x70	242	98	360	430	158	140	90
G	95	215	75	85	105	110	110	42	12x5x90	282	110	370	485	180	155	86
H	140	245	85	100	115	115	130	48	14x5.5x100	330	90	440	561	195	190	95
J	230	260	100	120	135	120	150	55	16x6.0x100	425	100	545	702	255	255	105
Jx	280	280	100	120	118	130	150	55	16x6x100	424	100	545	702	255	255	115
S	350	305	120	125	170	154	160	60	18x7x150	517	90	622	804	288	267	122
K	580	350	125	135	185	157	180	65	18x7x175	668	240	710	1000	336	329	137
L	720	400	150	---	185	182	200	65	18x7x175	668	240	710	1000	336	329	162
M	900	425	190	---	200	223	250	85	22x12x190	668	240	710	1000	336	329	172

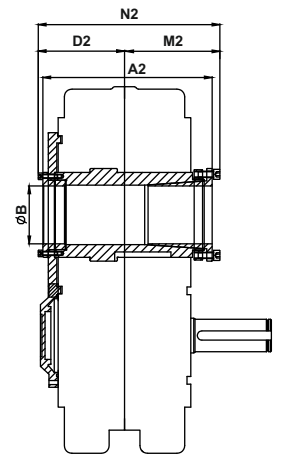
*For Power Rating Refer Page 4 & 5

All dimensions in mm

Nominal Ratio	Exact Gear Ratios											
	B	C	D	E	F	G	H	J	S	K	L	M
5:1	5.05	5.05	5.047	5.047	5.047	5.047	5.047	5.047	4.684	-	-	-
13:1	13.984	13.596	13.589	13.589	13.589	13.589	13.589	13.589	13.645	13.12	13.12	13.12
20:1	20.997	20.466	20.456	20.456	20.456	20.456	20.456	20.456	20.11	20.468	20.468	20.468

Shaft Mounted Taper Clamp Gear Units

- * Shaft Mounted Taper Clamp Units are available in sizes **B-M**
- * Suitable for key-less applications on the output end of the gearbox
- * Easy to install and even easier to remove
- * High torque carrying capacity
- * Bushes manufactured in **stainless steel**
- * Perfect for prevention of fretting corrosion after years of use
- * Bushes in multiple bore sizes available in Metric and Imperial sizes
- * Labyrinth Seals available for prevention of dust ingestion
- * Twin Taper Clamps with Keyways are also available in all sizes



Size	A2	D2	M2	N2	Taper Clamp Bush Sizes, ØB			Clamping Torque (Nm)
					STD	ALT (mm)	Inches	
B	150	78	84	162	30	25, 20	¾", 1"	820
C	155	81	87	168	40	35, 32, 30	1⅞", 1¼"	1450
D	165	86	94	180	50	45, 42, 40, 38	1⅝", 1¾", 1½", 1¼"	2530
E	180	92	102	194	55	50, 45, 42	2⅜", 2", 1¾", 1½"	3700
F	200	101	115	216	65	60, 55, 50	2⅞", 2¼", 2"	4380
G	219	112	123	235	75	70, 65, 60	2⅝", 2¾", 2½", 2¼"	8000
H	237	120	134	254	85	80, 75, 70	3⅞", 3", 2¾", 2½"	11370
J	258	130	145	275	100	95, 90	3⅝", 3½"	15580
Jx	275	134	160	294				
S	302	155	162	317	120	110, 100, 90	4⅞", 4½", 4, 3½"	23370
K	400	200	200	428	125	135, 120, 110	5⅞", 5", 4½", 4"	26875
L	450	225	225	478	150	140, 125, 120	5⅝", 5⅞", 5", 4½"	48100
M	475	252	252	504	190	175, 150	7", 6½"	76150



Selection

* SELECTION PROCEDURE

- 1) Determine required output speed
- 2) Determine power absorbed by the drive

$$\text{Absorbed Power (kW)} = \frac{\text{Absorbed Torque (Nm)} \times \text{Machine Speed (rpm)}}{9550}$$

- 3) Determine Service Factor from table
- 4) Multiply the absorbed power by the service Factor
- 5) Using Table for Power Rating select the smallest gear unit that is suitable for transmitting this power at the output speed

* EXAMPLE

A torque of 1000 Nm is required to be transmitted on a conveyor at 70 rpm

The conveyor is not uniformly loaded and operates for 12 hours a day

Absorbed power = $1000 \times 70 / 9550 = 7.32 \text{ kW}$

Service Factor from table = 1.4

Selection Power $7.32 \times 1.4 = 10.26 \text{ kW}$

From Power Rating chart at 70 rpm size “F or TF” double reduction gear unit at 13.2 kW is the smallest for this application

Driven Machine Types Service Factors	Daily Operating Hours		
	Below 10 hours	Between 10-16 hours	Above 16 hours
UNIFORM LOAD Liquid and semi liquid mixers Centrifugal discharged equipments Bottling machine Fixed load carrier Ovens Washing machines Transmission shafts Centrifugal and gear pumps Wire drawing machines	1.0	1.12	1.25
MODERATE SHOCK Variable density mixers Variable load conveyors Cranes, movable carriers and lifters Rolling machines Heavy load elevators Drying stove Drying machines Lifting machines Piston pumps with 3 or more cylinders Pulp machines Drying machines Honing cylinders Wet pressing machines Small mixers and calendars Rotary screens Textile machines	1.25	1.4	1.5
HEAVY SHOCK Brick press Briquette manufacturing machine Conveyor band moving forward / backward and shaking Breaking machines Hammer mill Piston pumps with 1 or 2 cylinders Extruders Vibrators Forging mills	1.6	1.8	2.0

Power Rating (kW)

SIZE RPM	A5	B5	C5	D5	E5	F5	FX5	G5
50	1.00	1.30	2.00	3.80	5.50	8.20	-	12.0
100	2.00	2.70	4.10	6.60	11.0	16.5	-	24.2
150	3.10	3.80	5.70	8.80	14.3	20.9	-	35.2
200	3.50	4.40	6.60	10.1	15.4	23.6	-	38.5
250	4.00	5.00	7.10	11.5	17.6	27.0	-	45.1
SIZE RPM	A13 A20	B13 B20	C13 C20	TD / D13 TD / D20	TE / E13 TE / E20	TF / F13 TF / F20	Fx13 Fx20	TG / G13 TG / G20
10	0.22	0.28	0.46	0.75	1.20	1.85	2.40	3.00
20	0.44	0.62	0.88	1.50	2.40	3.74	4.90	6.10
30	0.66	0.82	1.30	2.30	3.63	5.60	7.28	9.30
40	0.88	1.10	1.70	3.10	4.80	7.50	9.75	12.6
50	1.10	1.30	2.20	3.90	5.70	9.30	12.1	15.4
60	1.30	1.60	2.50	4.60	7.10	11.0	14.3	18.7
70	1.50	2.00	3.00	5.50	8.20	13.2	17.1	22.0
80	1.60	2.10	3.30	6.10	9.60	14.3	18.6	24.2
90	1.80	2.30	3.70	7.00	11.0	15.4	20.0	26.4
100	2.20	2.60	4.10	7.70	11.5	17.6	22.9	29.1
TORQUE AT 70 RPM NM	200	270	420	742	1100	1780	2340	2960
OIL Req'd. Lit.	0.4	0.5	0.7	1.2	1.90	2.5	3.5	4.5

For speeds higher than 70 rpm output use 13:1 or 5:1 ratios

Power Rating Calculation Based On Mineral Oil

Usage Of Synthetic Oil Increases Power Rating By 10%

Backstops

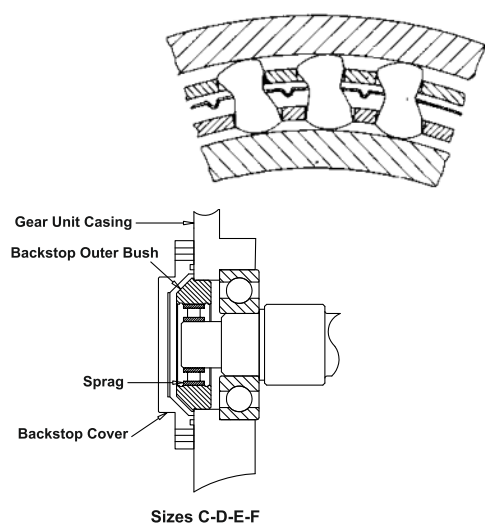
The simple accessory prevents reversal of the reducer and is ideal for use on inclined conveyors.

It is important that the backstop is installed correctly to ensure safe operation

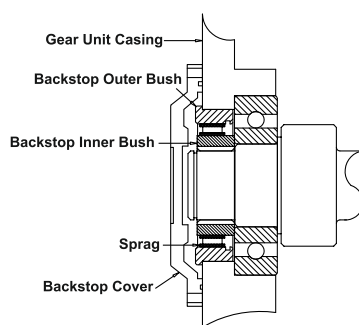
To install a backstop kit

- 1) Drain off oil if filled
- 2) Remove backstop cover
- 3) Fit the outer bush in the housing along with the key. The bush should fit in snugly in contact with the gear casing
- 4) Determine the direction of shaft rotation
- 5) Feed the backstop sprag assembly while rotating the shaft in direction of rotation.

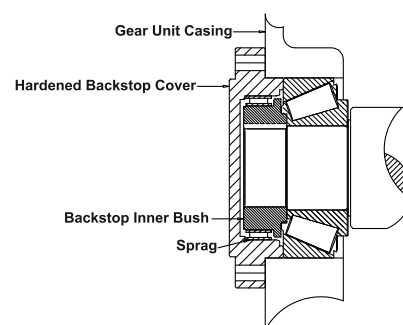
Note : If the opposite direction is required the backstop should be taken out and the sprag must be turned around end to end.



Sizes C-D-E-F



Sizes G-H-J-S



Sizes K-L-M

For sizes G to S

An inner bush is supplied which has to be inserted on top of the input pinion with keys prior to insertion of the backstop sprag.

- 6) Replace the backstop cover
- 7) Fill oil before use

For sizes K to M

An inner bush is supplied which has to be inserted on top of the input pinion with a key prior to insertion of the backstop sprag.

The backstop cover is hardened in sizes **K** to **M** and acts as the outer bush. Insert the sprag in the backstop cover & install on the gear unit.

IMPORTANT NOTE

It is most important that the backstop is pressed into the housing gently and no hammer is used. The assembly maybe tapped gently if necessary.

Change in direction of stoppage can be done at anytime with the removal of the sprag and turning it end to end in the housing.

The outer adaptor is provided with tapped holes to help in withdrawal of the outer bush.

Power Rating (kW)

RPM \ SIZE	H5	J5	Jx5	S5	K5	L5	M5
50	19.2	31.0	-	55.0	-	-	-
100	38.5	60.0	-	93.0	-	-	-
150	50.6	88.0	-	118.0	-	-	-
200	57.7	104.5	-	140.0	-	-	-
250	66.0	110.0	-	153.0	-	-	-
RPM \ SIZE	TH / H13 TH / H20	TJ / J13 TJ / J20	Jx13 Jx20	TS / S13 TS / S20	K13 K20	L13 L20	M13 M20
10	4.60	7.40	8.90	13.2	14.2	21.4	33.5
20	9.20	15.4	18.5	25.6	28.5	42.8	67.1
30	14.3	22.0	26.4	37.4	42.8	64.2	100.7
40	20.3	30.8	36.9	49.0	57.1	86.4	134.3
50	22.0	37.4	44.8	60.1	71.4	107.1	167.9
60	28.6	42.9	51.4	67.3	85.6	129.6	201.5
70	34.0	47.0	56.4	75.5	100.0	150.0	240.0
80	36.3	55.0	66.0	81.2	114.2	171.3	268.7
90	40.7	58.8	72.5	-	128.5	192.0	302.2
100	44.0	63.8	80.5	-	142.8	214.2	335.8
TORQUE AT 70 RPM NM	4500	6500	7695	11600	13640	20460	32075
OIL Req'd. Lit.	7.0	11.5	14	16.0	24	27	40

For speeds higher than 70 rpm output use 13:1 or 5:1 ratios

Power Rating Calculation Based On Mineral Oil

Usage Of Synthetic Oil Increases Power Rating By 10%

T-Series Round Shaft Mounted Gear Unit

The **Round Shaft Mounted Gear Unit** is a versatile gearbox developed as an alternative to our shaft mounted gear units.

The gear unit is compact in size mounting directly onto the driven shaft, thus eliminating the need of a foundation & coupling.

The torque arm anchors the speed reducer and provides easy & quick method of adjustment of V-belts by means of a turnbuckle.

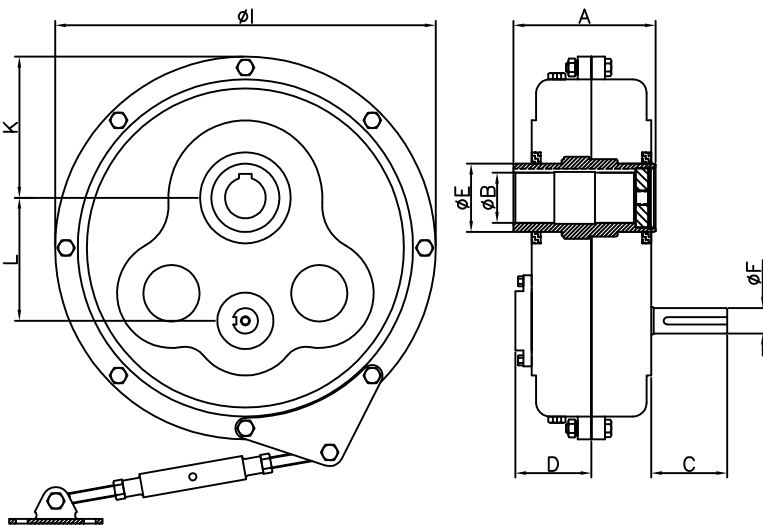
The gear units are available in **eight** sizes from **TC to TS** with nominal ratios of **13:1, 20:1, 25:1 and 30:1** with torque ratings upto 11000 Nm.

Special reduction ratios are available up on request.

A wider range of final speed ratios may be achieved by use of pulley combinations. The gearbox is suitable for both forward and reverse motion.

Accessories:

- * **Anti-Roll Back Adapters / Backstops:** A simple accessory that prevents reversal of the speed reducer and is ideal for inclined conveyors.
- * **Flanged Motor Mounts:** For directly coupling the electric motor to the gearbox.
- * **Flanged Hydraulic Mounts:** For directly coupling hydraulic motor.



Benefits:

- * **Hardened and Ground Gearing**
- * **Compact and Low Cost**
- * **High Efficiency of 96%**
- * **Multiple Bore Sizes**
- * **Backstop Provision in All Models**
- * **Interchangeable with Leading Brands**



Dimensions, Size TC - TS

Size	Mass Kg	A	Keyed Hub Bore ØB F7	C	D	ØE	ØF j6	F KEYWAY	I	K	L
TC35	20	128	30 / 35	42	51	50	19	6x3.5x30	258	177	77
TD40	35	143	40 / 45	75	77	65	25	8x4x63	370	140	120
TE45	45	157	45 / 50 / 55	84	84	75	28	8x4x70	420	155	135
TF50	70	175	50 / 55 / 60	90	91	85	32	10x5x70	470	175	150
TG60	100	199	60 / 65 / 70	105	109	100	42	12x5x90	550	205	166
TH70	145	223	70 / 75 / 80 / 85	116	118	110	48	14x5.5x100	580	216	199
TJ80	170	252	80 / 85 / 100	110	115	140	48	14x5.5x100	598	224	192
TS100	290	292	100 / 120 / 125	115	137	160	48	14x5.5x90	710	263	194

*For Power Rating Refer Page 4 & 5

*All Dimensions in mm

Applications : The gearbox is ideal for heavy bulk material handling machines meant for quarrying, mining and ready-mix plants etc. It is a reliable product capable of performing in rough environments.

XT Series Shaft Mounted Gear Unit

XT Series Shaft Mounted Gear Units have been designed with imperial dimensions for the American continent. The gear units are manufactured in **six sizes** from **XT1 to XT6** with nominal reduction ratios of **9:1, 15:1 and 25:1**. Two supplemental sizes for screw conveyors are also available, namely **SXT1 and SXT2**.

The gear units are manufactured with case hardened and ground helical gears which are enclosed in precision machined cast iron housings. The design of the gear units confirms or exceeds AGMA standards.

The gear units are offered with the option of Twin Taper Bushes or Hollow Keyed Output Hubs. These gear units are installed with taper roller bearings making them extremely robust for axial loads.

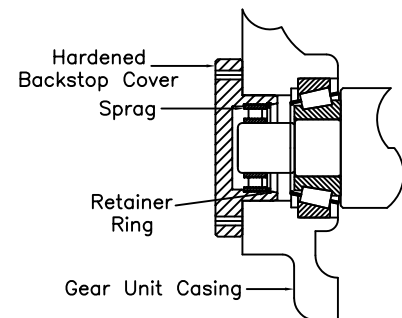
These versatile units are available with the option of installing hydraulic motors. The hydraulic motor shaft couples directly with the input pinion through a splined or keyed shaft.

Accessories:

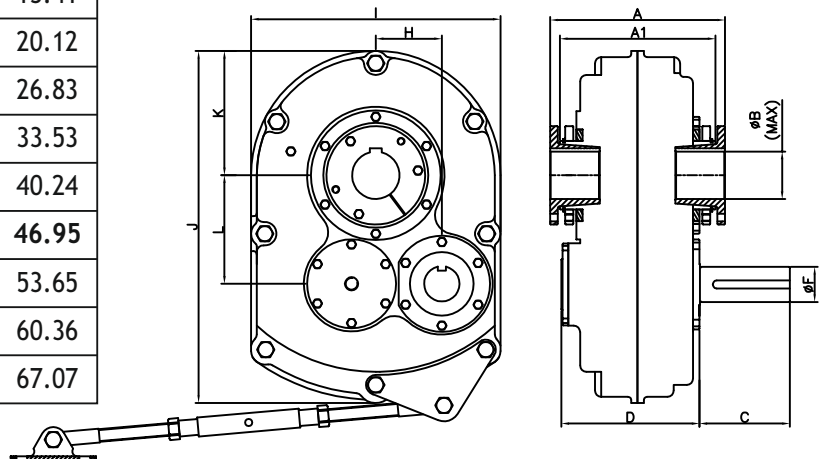
- Backstop kits with centrifugal lift off sprag clutches are designed for long lasting performance and high torque capacity.
- CEMA Flanges and Drive Shafts are available for screw conveyor operation for all sizes.

Power Rating (HP)

SIZE RPM	XT1	XT2	XT3	XT4	XT5	XT6
10	0.55	1.00	1.69	2.57	3.99	6.71
20	1.11	2.00	3.39	5.15	7.97	13.41
30	1.66	3.00	5.08	7.72	11.96	20.12
40	2.21	4.00	6.77	10.29	15.95	26.83
50	2.77	5.00	8.47	12.87	19.93	33.53
60	3.32	6.02	10.16	15.44	23.92	40.24
70	3.87	7.02	11.85	18.01	27.91	46.95
80	4.43	8.02	13.55	20.59	31.89	53.65
90	4.98	9.02	15.24	23.16	35.88	60.36
100	5.53	10.03	16.93	25.73	39.87	67.07



Backstop Layout



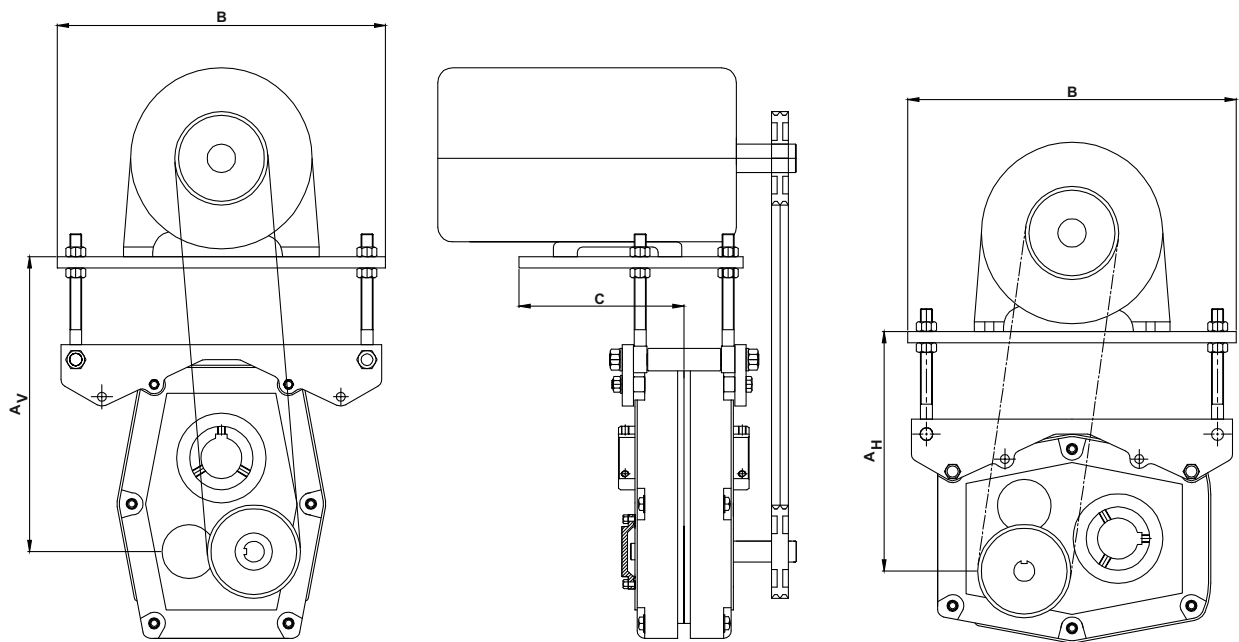
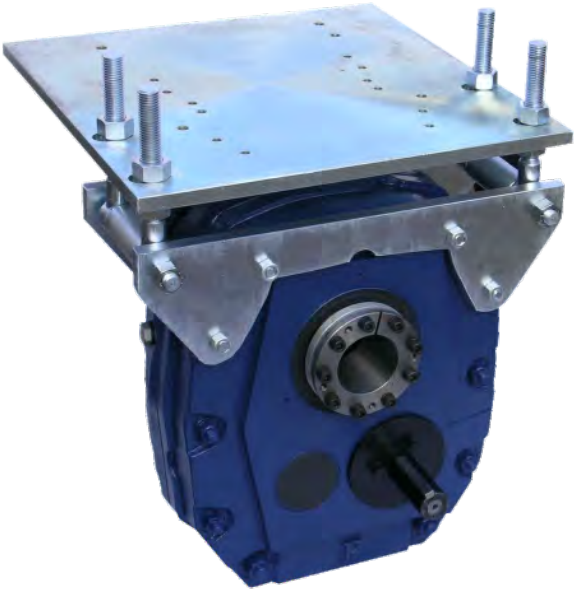
Dimensions, Sizes XT1-XT6

Size	Mass (lbs)	A1	A	Bore ØB	C	D	ØF	F KEYWAY	H	I	J	K	L
XT1	46	5.70	6.70	1 $\frac{1}{16}$ "	3.35	5.11	$\frac{3}{4}$ "	$\frac{3}{16}$ " x $\frac{1}{32}$ " x 3"	1.90	7.17	10.00	3.76	3.20
XT2	57	5.88	6.77	1 $\frac{1}{8}$ "	3.59	5.34	1 $\frac{1}{8}$ "	$\frac{1}{4}$ " x $\frac{1}{8}$ " x 3"	2.14	8.39	11.39	4.04	4.00
XT3	100	7.58	8.30	2 $\frac{3}{16}$ "	3.93	6.75	1 $\frac{1}{4}$ "	$\frac{1}{4}$ " x $\frac{1}{8}$ " x 3.1"	2.33	9.28	12.88	4.81	4.17
XT4	121	8.13	9.17	2 $\frac{7}{16}$ "	5.20	7.18	1 $\frac{1}{16}$ "	$\frac{3}{8}$ " x $\frac{3}{16}$ " x 4.35"	2.76	10.40	15.17	5.63	4.79
XT5	210	8.63	9.97	2 $\frac{15}{16}$ "	5.30	7.76	1 $\frac{15}{16}$ "	$\frac{1}{2}$ " x $\frac{1}{4}$ " x 4.5"	3.05	13.16	18.20	6.53	5.67
XT6	286	9.63	11.07	3 $\frac{1}{16}$ "	5.60	8.56	2 $\frac{3}{16}$ "	$\frac{1}{2}$ " x $\frac{1}{4}$ " x 4.75"	4.09	15.44	21.86	7.72	6.73

*All Dimensions in inches

Motor Mounts

- ✱ A motor mount is available to fit on both sides of the gear unit
- ✱ A rigid base plate accommodates wide range of motor frame sizes
- ✱ Adjustment is available to ensure that the belt can be tensioned with ease.
- ✱ Each base plate is predrilled for various motor sizes and no further drilling is required
- ✱ Each assembly is electro plated to prevent corrosion and easy disassembly on usage
- ✱ It is recommended that larger frame size motors be mounted on an independent base.
- ✱ 'A max' is a dimension which must allow for belt tensioning
- ✱ 'A min' is a dimension which must allow for belt fitting.



SIZE	A _V		A _H		B	C	METRIC MOTOR FRAME SIZE
	MIN.	MAX.	MIN.	MAX.			
B	210	265	165	220	320	140	63, 71, 80, 90S, 90L
C	260	330	200	270	370	190	63, 71, 80, 90S, 90L, 100L
D	300	370	235	305	370	165	71, 80, 90S, 90L, 100L, 112M
E	325	395	310	380	440	220	80, 90S, 90L, 100L, 112M, 132S, 132M
F	345	415	300	370	440	345	112M, 132S, 132M, 160M, 160L
G	375	425	300	370	520	445	112M, 132S, 132M, 160M, 160L, 180M, 180L
H	470	540	410	480	560	325	132S, 132M, 160M, 160L, 180M, 180L
J	580	675	480	580	600	470	132M, 160M, 160L, 180M, 180L, 200L, 225S
S	615	685	545	615	590	360	160M, 160L, 180M, 180L, 200L, 225S, 225M

Please consult us for NEMA mounting

Lubrication & Installation

Shaft Mounted Gear Units are supplied **without oil** and must be filled with the recommended quantity of lubricant before use. Correct quantity and type of oil being used is essential to ensure optimum operation and long life of the gear unit.

The **recommended tolerance** for the drive shaft for installing the gear unit is **"h7"**

A **breather plug** must be used to ensure no pressure builds up inside the gear unit such that subsequent oil seal failure does not occur. A breather plug is always supplied with the gear unit.

Make sure that the gear unit is securely installed on the drive to avoid sudden shocks and vibrations. The **torque arm must be installed in tension** to avoid sudden jerks on drive start-up.

Viscosity of oil for various ambient temperatures and reducer **input** speeds are shown below:-

Ambient Temp deg. C	Viscosity (mm ² /s (cSt) at 40 deg. C)	
	Input speed r.p.m.	
	500 to 1,000 r.p.m.	1,000 to 2,000
-10 to + 5	VG 100	VG 100
0 to + 40	VG 320	VG 220
+35 to + 45	VG 460	VG 320
+45 to + 60	VG 680	VG 460

Recommended Synthetic Oils :-

BP EnerSyn HTX	Castrol AlphaSyn T - range	Esso	Kluber Klubersynth Gh6	Mobil SHC SHC-XMP	Shell Tivela WA / WB
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Recommended Mineral Oils :-

BP Energol GR-XP	Castrol Alpha ZN / SP	Esso Spartan EP	Kluber Kluberoil GEM 1	Mobil Mobilgear	Shell Omala
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Casing Bolt Size	M8	M10	M12	M16
Tightening Torque (Nm)	25 Nm	50 Nm	85 Nm	215 Nm

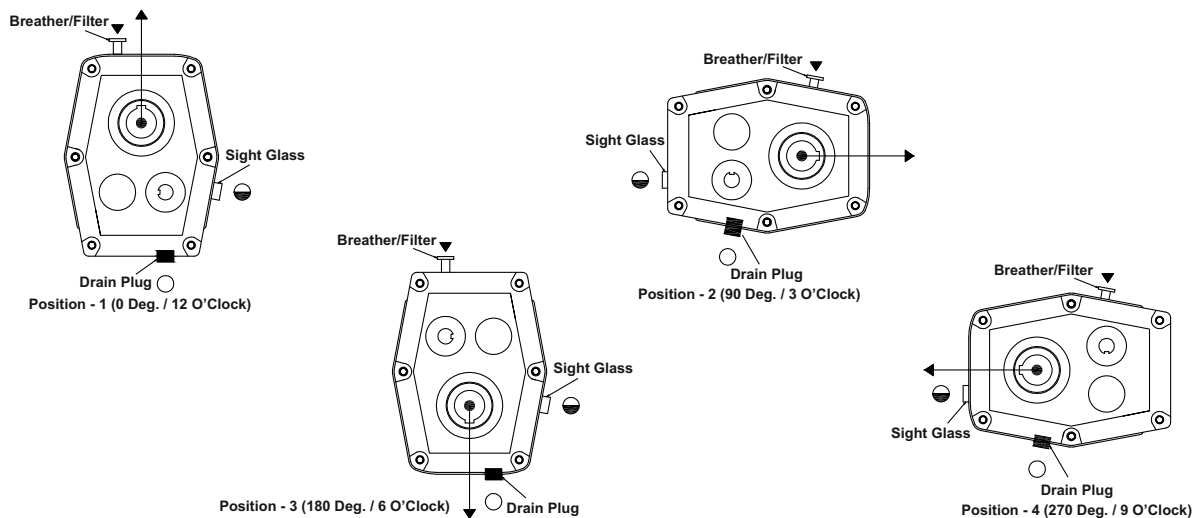
Maintenance:-

Running in Period : After 500 hours drain oil and refill.

Synthetic Oil : Replace every 12,000 hours use.

Mineral Oil : Replace every 2,500 hours use.

Quantity of lubricant and position of breather, sight glass and drain plug are shown in diagrams and table below:-



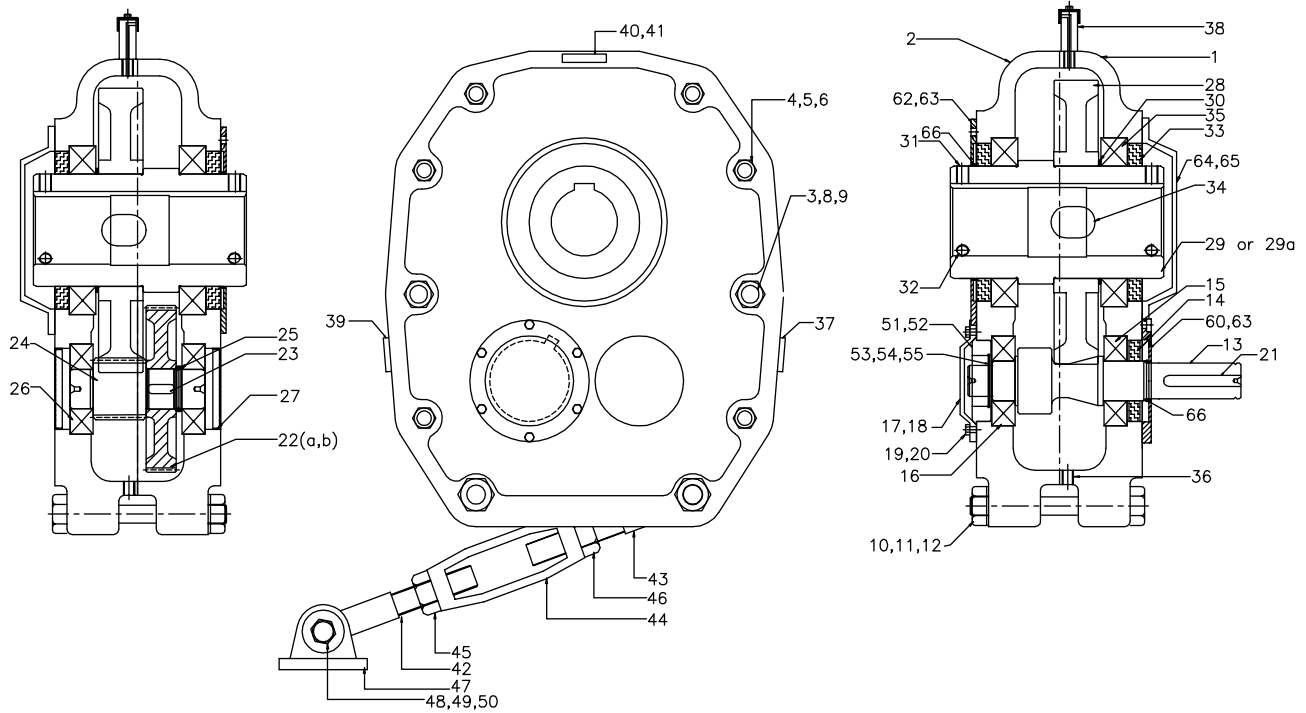
THE SIGHT GLASS CAN ONLY BE USED AS AN OIL LEVEL INDICATOR IN POSITIONS 1,2,3 or 4 .
 FOR ANY OTHER POSITION USE QUANTITY INDICATED AS ORIENTATION NEAREST IN TABLE BELOW :-

Approx. S.M.G.U. size/oil quantity - Litres

Unit Orientation		B	C	D	E	F	G	H	J	S	K	L	M
Position 1	0 deg. / 12 o'clock	0.4	0.6	1.1	2.0	2.5	4.0	6.7	11.5				
	30. deg. / 1 o'clock	0.5	0.6	1.2	1.9	2.7	4.2	6.8	11.4	14	25	28	34
	60. deg. / 2 o'clock	0.5	0.7	1.3	1.9	2.9	4.4	6.8	11.3				
Position 2	90 deg. / 3 o'clock	0.6	0.7	1.4	1.8	3.0	4.5	6.7	11.2				
	120. Deg. / 4 o'clock	0.6	0.7	1.3	2.0	2.9	4.1	6.2	10.1	21	28	30	36
	150. deg. / 5 o'clock	0.5	0.6	1.2	2.2	2.7	3.7	5.7	9.0				
Position 3	180 deg. / 6 o'clock	0.5	0.6	1.2	2.3	2.5	3.3	5.3	7.8	17	20	22	27
	210. deg. / 7 o'clock	0.5	0.6	1.2	2.2	2.6	3.4	5.6	8.5				
	240. deg. / 8 o'clock	0.6	0.7	1.3	2.0	2.6	3.4	5.9	9.1				
Position 4	270 deg. / 9 o'clock	0.6	0.7	1.3	1.8	2.7	3.5	6.2	9.7	19	21	23	27
	300 deg. / 10 o'clock	0.5	0.7	1.2	1.9	2.6	3.7	6.4	10.3				
	330. deg. / 11 o'clock	0.5	0.6	1.1	1.9	2.6	3.9	6.6	10.9				

Caution: Too much oil will lead to over-heating. Too little oil will cause gear, bearing and oilseal burnout/failure

Shaft Mounted Gear Unit

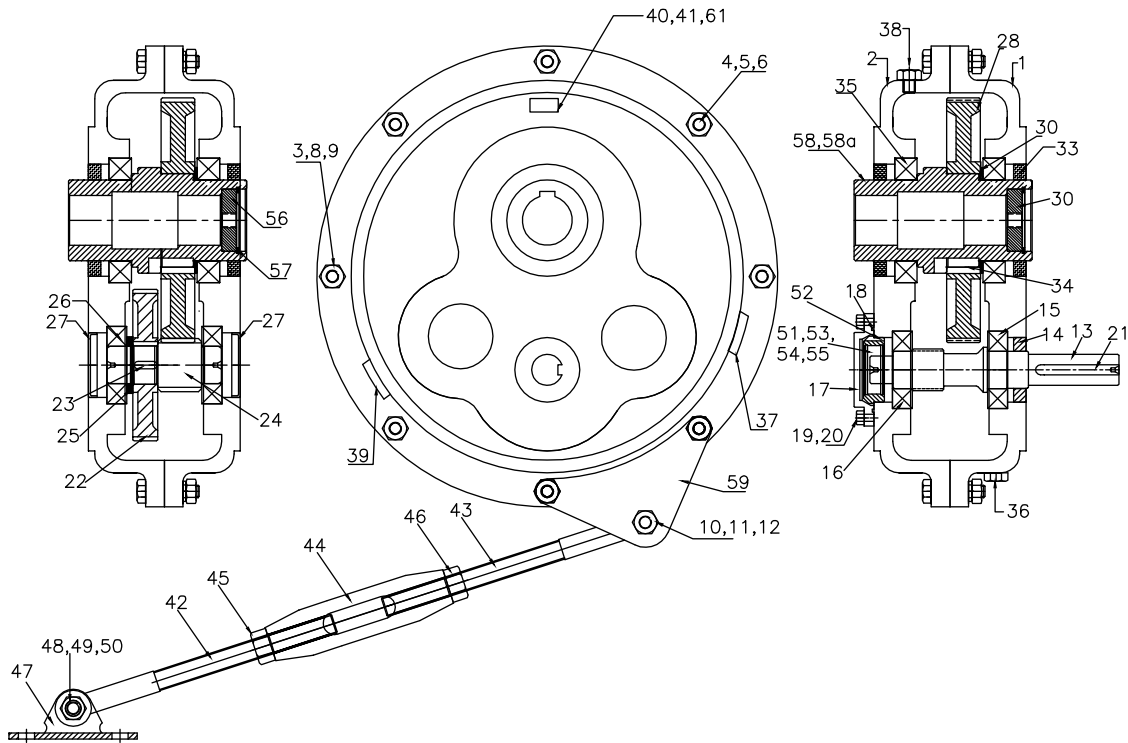


Parts List - SMGU & T-Series

1) Casing Half R.H.	24) Output Pinion	46) Nut R.H.
2) Casing Half L.H	25) Spacer For Inter Pinion	47) Fulcrum
3) Hollow Dowel	26) Intermediate Bearings	48) Fulcrum Hex Bolt
4) Hex Bolts	27) End Covers	49) Fulcrum Hex Nut
5) Hex Nuts	28) Output Gear	50) Fulcrum Lock Washer
6) Lock Washers	29) Output Hub - STD	51) Backstop Bush Outer
7)	29a) Output Hub - ALT	52) Back Stop Bush - Key
8) Plain Washer	30) Output Spacer	53) Back Stop Bush Inner
9) Hex Bolt / Nut / Lock / Washer	31) Hub Grub Screw on Key	54) Backstop Bush - Keys
10) Hex Bolt Torque Arm	32) Hub Grub Screw	55) Backstop Bush - Circlips
11) Hex Nut Torque Arm	33) Output Oil Seals	56) Hub Plate - T Series
12) Lock Washer Torque Arm	34) Output Gear Key	57) Hub Circlip - T Series
13) Input Pinion Ratio 5/13/20	35) Output Bearings	58) Hub STD - T Series
14) Oil Seal Input	36) Drain Plug	58a) Hub ALT - T Series
15) Bearing Input Front	37) Sight Glass	59) Torque Arm Bracket - T Series
16) Bearing Input Back	38) Breather Assembly	60) Labyrinth Front
17) Backstop Cover	39) Hex Oil Plug	61) Fill Oil - Sticker
18) Backstop O-Ring	40) Name Plate	62) Labyrinth Back
19) Backstop Bolts	41) Name Plate Dowels	63) Labyrinth Screws
20) Backstop Bolt Washers	42) Torque Arm L.H.	64) Hub Cover
21) Input Shaft Key	43) Torque Arm R.H.	65) Hub Cover Bolts
22) Intermediate Gear 13/20	44) Turnbuckle	66) O-Ring
23) Intermediate Gear Key	45) Nut L.H.	

*Improvements in design are continually being made
The dimensions are subject to alternation without notice.

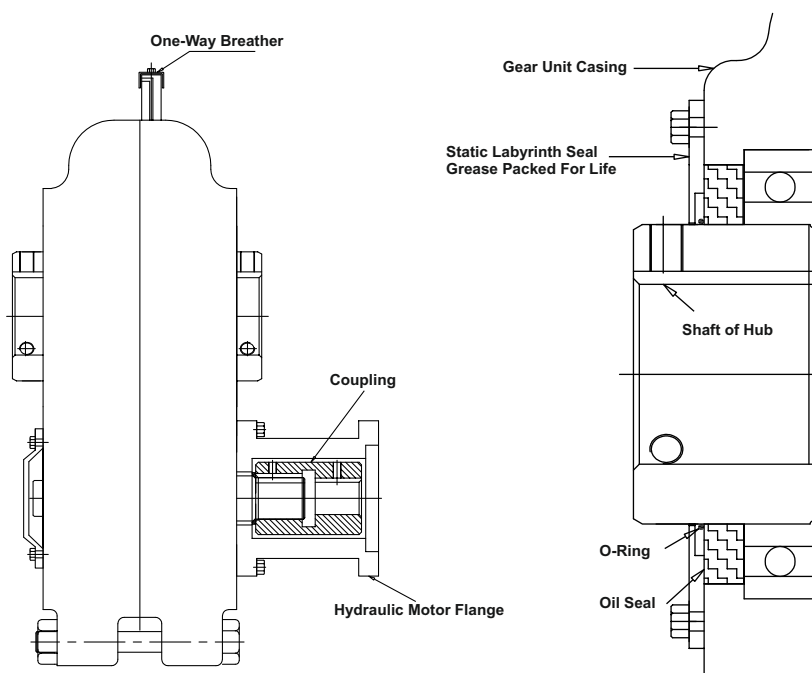
T-Series



Shaft Mounted Gear Unit - Other Accessories

- * **Labyrinth Sealing** is available for protection against abrasive environment.
- * **Output Hubs in Stainless Steels** are offered to achieve positive drive with a keyway and no fretting corrosion.
- * **Extraction Collars** are available to extract the gear unit from the shaft.
- * **Hydraulic Motor Mounts** are also available as an option.
- * **Reducing Bushes** are available in steels and stainless steels.
- * **Safety Covers** available at non- conveyor end.
- * **One - way Breathers**
- * Shaft Mounts available with **Foot Mounts**

Shaft Size	Shaft Keyway Width x Depth
20	6 x 6
25	8 x 7
30	8 x 7
35	10 x 8
40	12 x 8
45	14 x 9
50	14 x 9
55	16 x 10
60	18 x 11
65	18 x 11
70	20 x 12
75	20 x 12
80	22 x 14
85	22 x 14
90	25 x 14
95	25 x 14
100	28 x 16
110	28 x 16
120	32 x 18
125	32 x 18
130	32 x 18
140	36 x 20
150	36 x 20
190	45 x 25

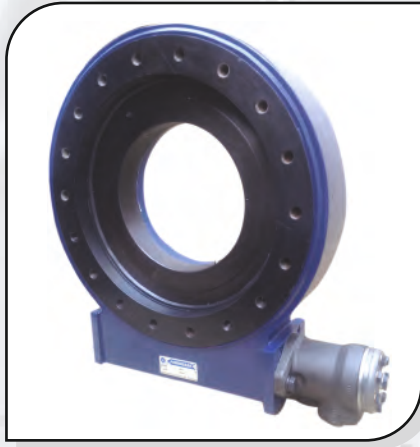


Recommendation

- * h7 Tolerance is Recommended for Shafts
- * Torque Arms must be Installed in Tension



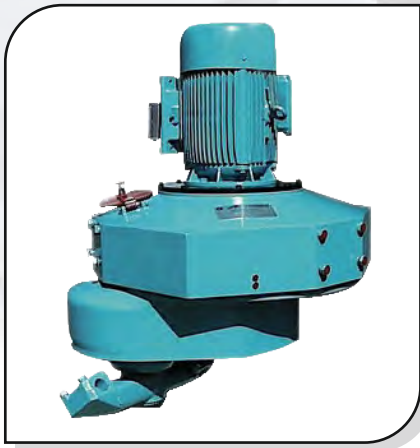
Other Products by Powergear



Worm Drive Slewing Rings



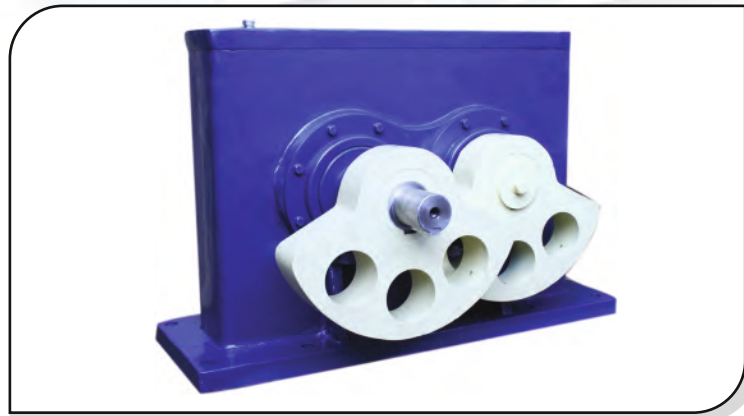
Hardened & Ground Gears



Planetary Counterflow Mixer Gearboxes



Helical Gearboxes



Directional Force Geared Exciter

Involute Powergear Pvt. Ltd.

Unit - I : Plot No. 65, Sec. 27-C, Faridabad 121 003 - INDIA

Unit - II : Plot No. 69, Sec. 27-A, Faridabad 121 003 - INDIA

Unit - III : Plot No. 63, Sec. 27-C, Faridabad 121 003 - INDIA

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