



# **CRESCENT**



**WORM REDUCTION GEAR BOXES**

[www.gearboxindia.com](http://www.gearboxindia.com)

# CRESCENT

## Company Profile

Sokhi Heli-Wom Gears Pvt. Ltd. specializes in the design, development, production and marketing of high quality crescent industrial gears and power transmission products, to the highest specifications, with proven performance in diverse industries across the globe. An accent on quality combined with on going research and development has given us an international reputation for excellence. Consequently, we are today one of the fastest growing company in this industry. Despite this growth, we ensure that our customers receive due attention, with higher quality products and scheduled deliveries.

As a customer focus & technology driven organization offering quality products & services is our forte. By updating technology & infrastructure, we have continued to deliver high value products to our customers. Our gears & gear boxes are widely available under the brand name "**CRESCENT**". Maintaining the pace with time, we have carved a niche for ourselves within the industry globally.





## Crescent Worm Reduction Gear Units

### SPECIFICATION

#### GENERAL

Crescent single reduction gear units are robust construction, combining high standard of strength, wear resistance and thermal ratings in compact design. This enables economic mass production, comprehensive maintenance of stocks, favorable delivery period, ease of servicing. Computer aided sizing of gear based on geometric progression has result in optimization of gear geometry for high efficiency and load carrying capacity.

#### DESIGN STANDARDS

Wherever applicable, British as well as Indian standards are used. Worm conforms to case hardening alloy steel, worm wheel conforms to phosphor-bronze PB2-C as per British Standard B.S. 1400, while gear case conforms to C.I. grade FG 220 and for heavy duty FG 260, Indian standard I.S. 210.

#### GEAR CASE

Gear case is of streamline design, rugged in construction, made of close grain cast iron. It is completely oil-tight, dust proof and capable of being installed in the open without a separate cover. The face and bore are accurately bored and machined on latest precision machines to ensure perfect alignment and interchangeability.

#### WORM/ WORM WHEEL

The worm is made of case hardening alloy steel, carburised, ground and polished and is integral with the shaft. Bearing journal are accurately ground. Worm wheel is made of centrifugally cast phosphor-bronze rims, shrink fitted and brazed with C.I centers.

Worms are generated on special purpose worm milling machine machines. Gas carburised and ground on automatic work grinders.

Worm wheel are hobbled on precision hobbing machine with high accuracy hubs. Each and every wheel is checked to match with the master worms to ensure complete interchangeability.

#### BEARING

The worm and worm wheel are supported on ball or roller anti friction bearings of ample margin of safety to allow adequate journal as well as thrust loads.

Overhang loads arising out of sprocket or pinion drive are generally permissible because the gear case and bearing are designed for this duty. However, complete details should be given to us for confirmation. In case of heavy overhang loads, as extra roller bearing can be provided.

#### WHEEL SHAFT

The wheel shaft are made of high tensile carbon steel. It is of larger diameter to carry the torsional as well as bending loads which may be induced by overhang drives.

#### LUBRICATION

Lubrication to gears and bearings is by splash of oil from the sump. No special care is required except for the occasional topping up of oil to the required level. A large oil filter-cum-breather and inspection cover is provided together with the drain plug and ventilator. Neoprene lip-type oil seals are fitted on input and output shaft.

For very low input speed below 50 rpm And heavy loads in size larger than 14" size forced lubrication is required. In such case Crescent must be consulted.

#### COOLING

Air-cooling is effected by means of standard poly-propylene or metal fans which direct a continuous flow of air over the ribbed surface of the gear unit. The fan is designed to operate in both direction of rotation, and is so arranged in conjunction with the ribbing on the gear unit as to allow maximum heat dissipation.

#### HOLDBACK

Crescent Sprag type holdback can be fitted on all sizes of gears to prevent reverse rotation. In case where hold-back is required, the direction of rotation of the shaft should be mentioned.

#### POWER RATINGS

The ratings indicated in the catalogue holds good for 12 hours of continuous running under uniform load being driven by electric motor. They give minimum gear life of 26,000 hours, subject to limitation of maximum oil temperature of 100°C under full load, 20°C ambient.



**TABLE No. 1 Load Classification by Applications**

Driven Machine	Type of Load	Driven Machine	Type of Load
<b>Agitators &amp; Mixers</b>		Rod tumbling barrels	H
Pure Liquids, Semi-liquids	U	Cement Kilns	M
Liquids and Solids variable density	M	Dryers and coolers	M
Liquids with variable density	M	<b>Mixers</b>	
<b>Blowers</b>		Concrete mixer	M
Centrifugal, vane	U	<b>Sugar Industry</b>	
Lobe	M	Cane knives	M*
<b>Brewing &amp; Distilling</b>		Crushers	M*
Bottle machinery	U	Mills	H*
Brew Kettle continuous duty	U	<b>Oil Industry</b>	
Cooker, scale hopper (frequent start)	M	Chillers	M
<b>Cane filling Machinery</b>	U	Rotary kilns	M
<b>Cane Knives</b>	M	<b>Paper Mills</b>	
<b>Clarifiers</b>	U	Bleacher conveyor press, winder	
<b>Classifiers</b>	U	Calendar, agitators, beat and pulper	M
<b>Clay-working machinery</b>		<b>Pumps</b>	
Brick press, Briquette machine	H	Centrifugal	U
Pug mill, clay working machinery	M	Reciprocating (three or more cylinders)	M
<b>Compressors</b>		Gear, lobe type	U
Centrifugal	U	<b>Rubber and Plastic Industry</b>	
Lobe	M	Crackers	H*
Reciprocating multi-cylinder	M	Fixing mills	H*
Reciprocating single -cylinder	H	Laboratory equipments	M
<b>Conveyors-Uniformly loaded or fed</b>		Refiners	M*
Apron, Belt, Bucket, Screw	U	Sheeters	M*
<b>Conveyors-Heavy Duty-Not Uniformly fed</b>		Tubers and strainers	M*
Apron, Belt, Bucket, Screw	M	Warming mills	M*
Reciprocating and shaker	M	Tyre and Tube press	M*
<b>Cranes</b>		<b>Sand Mullers</b>	M
Main Hoist	M	<b>Screens</b>	
Bridge Travel	*	Air Washing	U
<b>Crushers</b>		Rotary - stone/ gravel	M
Ore, Stone	H	<b>Textile Industry</b>	
Sugar	M	Batches	M
<b>Elevators</b>		Calendars	M
Bucket-uniform load	U	Dying machine	M
Bucket-heavy load	M	Spinners	M
Bucket- continuous load	U	Washers	M
Centrifugal discharge	U	Winders	M
Gravity discharge	U	<b>Wire-drawing, flattening machine</b>	M
Passenger lifts	*	<b>Wire Winding machine</b>	M
<b>Fans</b>		* Should be selected on the basis of 24 hours/ day service only & consult Crescent.	
Centrifugal	U	<b>ENQUIRY</b>	
Induced draft	M	1. Type of prime mover, kW rating, speed rpm	
Large (mine, industrial, etc.)	M	2. Required reduction ratio & Handing.	
Light (small diameter)	U	3. Type of driven machine, actual power required, designed speed rpm, peak and shock (give magnitude and duration where possible)	
Cooling Towers	H	4. Type of drive employed between	
Induced draft	*	(i) Prime mover and reducer	
Forced draft	*	(ii) Reducer and driven machine	
<b>Feeders</b>		5. No. of hours/day the gear unit will be in operation.	
Apron	M	6. Ambient conditions i.e. temperature, humidity.	
Belt	M	7. Whether hold back required ? Specify direction of rotation if hold back is to be fitted.	
Disc.	U	8. Details of any external loads imposed on gear unit.	
Reciprocating	H	9. Give sketch of available space.	
Screw	M	<b>OVERLOADS</b>	
<b>Food Industry</b>		All the components of the reduction gears are so designed that they can withstand.	
Beef Slicer	M	100 per cent over load for 15 seconds.	
Cereal Cooker	U	50 per cent over load for one minute.	
<b>Reciprocating</b>		40 per cent over load for the 30 minutes.	
Washers, tumblers	M	25 per cent overload for two Hours.	
Line shaft	M		
<b>Mills</b>			
Hammers	H		
Ball kilns, pebbles	M		



**TABLE No. 2 Mechanical service factor (Fm)**

Prime Motor	Duration of Service hrs. per day	Load Classification Driven machine		
		Uniform	Moderate	Heavy Shock
Electric Motor Steam turbine or Hydraulic motor	Under: 3	0.08	1.00	1.50
	3 to 10	1.00	1.25	1.75
	Over 10 to 24	1.25	1.50	2.00
Multi Cylinder Internal Combustion Engine	Under: 3	1.00	1.25	1.75
	3 to 10	1.25	1.50	2.00
	Over 10 to 24	1.50	1.75	2.25
Single Cylinder Internal Combustion Engine	Under: 3	1.25	1.50	2.00
	3 to 10	1.50	1.75	2.25
	Over 10 to 24	1.75	2.00	2.50

**TABLE No. 3 Thermal service factor (Ft)**

Ambient Temp C	10	20	30	40	50	60
Factor	0.87	1.00	1.16	1.35	1.62	1.97

If the ambient temp. is other than 20° C, divide the catalogue thermal rating by the factor from Table No. 3

**OVERHUNG LOADS**  $P = \frac{KW \times 9550 \times K}{N \times R}$

Where, P = Equivalent overhung load in Newton's  
 KW = Power carried by shaft in kW  
 N = rpm of the shaft  
 R = Pitch radius of sprocket, pinion, sheave or pulley in meter  
 K = Service factor

OVERHUNG MEMBER	(K) FACTOR
SPROCKET	1.00
SPUR PINION	1.25
V-BELT SHEAVE	1.50
FLAT BELT PULLEY	2.00

**TROUBLE SHOOTING CHART**

Symptom	Typical Causes																				
	Lubricant			Oil seal Lip		Clogging of		Play		Improper		Backlash			Environmental			Alignment			
	Unsuitable	Insufficient	Overfilling	Hardened	Damaged	Breather	Excess	Less	Contact	More	Less	Dust	Heat	Chemical	Overload	Vibration	HighSpeed	Low Speed			
Oilseal Leakage	*	*	*	*	*	*						*	*	*	*			*			
Noise	*	*	*				*		*	*					*			*			
Over Heating	*	*	*			*	*	*	*	*	*	*	*	*	*		*	*			
Bearding Failure	*	*	*				*	*							*			*			
Warmwheel Worm Out	*	*	*				*	*	*	*	*				*			*			
Joint Leakage	*	*	*			*						*			*			*			
Oil Goozing out though Ventilator	*	*	*			*												*			
Oil Leakage through Output (V Type)			*															*			

**Special points to be observed:** •Use of correct grade of oil •Fill oil to the correct level •Change oil periodically •Check alignment of input and Output shaft •Ventilator to be kept clean

**EXACT STANDARD GEAR RATIOS**

Size Of Units	5	7.5	10	15	20	25	30	40	50	60	70
112	5.25	7.33	10.5	14.5	20	25	30	40	50	60	70
162	5.25	7.33	10.5	14.5	20	25	30	40	50	60	70
200	4.8	7.33	9.67	14.5	20	24	30	40	50	60	70
237	5	7.33	9.67	15	20	25	30	40	50	60	70
250	4.8	7	9.67	14.5	20	24	31	40	50	60	70
287	5.2	7.25	10.33	14.5	19.5	25	30	40	50	60	70
300	4.83	7.25	9.67	14.5	19.5	25	30	40	50	60	70
337	4.83	7.25	9.67	14.5	19.5	25	30	40	50	60	70
350	4.8	7.5	9.67	14.5	19.5	25	30	40	50	60	70
400	4.83	7.5	9.67	14.5	19.5	25	30	40	50	60	70
500	4.83	7.4	9.75	14.5	19.5	24.5	30	40	50	60	70
600	4.88	7.6	9.75	14.67	19.5	24.5	30	40	50	60	70
700	4.88	7.5	9.75	14.67	19.5	24.5	29.5	40	50	60	70
800	4.88	7.5	9.75	14.67	19.5	24.5	29.5	40	50	60	70
900	5.14	7.33	9.75	14.67	20.5	24.5	29.5	40	50	60	70
1000	4.89	7.33	9.8	14.67	20.5	24.5	29.5	40	50	60	70
1200	6.16	7.43	9.8	14.67	19.67	24.5	29.5	40	50	60	70
1400	5.1	7.33	9.8	14.75	19.67	24.5	29.5	40	50	60	70
1700	-	-	10.17	14.75	19.67	24.5	29.5	39.5	50	60	70

**EXAMPLE 1**

**EXAMPLE FOR THE SELECTION OF A SUITABLE GEAR BOX**

Worm reduction gear having input (worm) above the wheel required for belt conveyor where non-uniform material is fed on conveyor belt, operating for 8 hours per day. Speed required at conveyor shaft is 60 rpm the gear unit is driven directly using coupling by 10 kW, 1500 rpm electric motor.

Ratio:  $\frac{1500}{60} = 25:1$

**From Table No. 1**

Drive m/c = Belt conveyor  
 Material = Non-uniform feed  
 Type of load = Moderate shock (M)

**From Table No. 2**

Mechanical service factor (Fm) for 12.5 kW for 8 hours/ day = 1.25  
 Input power = 10 X 1.25 = 12.5 kW

Referring to power rating table for 1500 input rpm x 25:1 ratio, crescent STD CNO-600 gearbox can transmit 13 kW. This is the nearest suitable unit.

RECOMMENDED LUBRICANT BRAND	MANUFACTURER REFERENCE
KLUBER LUBRICATION	KLUBERSYNTH GH60-220/320/680 (Synthetic Gear Oil)
INDIAN OIL	SERVO SYSTEM 320
HINDUSTAN PETROLEUM	PARTHAN EP 220
BHARAT PETROLEUM	CABOL 320
INDROL	APLHA ZN 320



### EXAMPLE 2

Worm reduction gear unit under driven type is required to drive a bucket elevator heavily loaded, operating 24 hours per day at 29 rpm transmitting 30 kW. the gear unit is directly driven using coupling by 1500 rpm of an electric motor. The ambient temperature is around 30°C on plant.

- SOLUTION:**
- STEP: 1** Ratio required =  $\frac{\text{Input speed}}{\text{Output speed}} = \frac{1500}{29} = 51.7:1$   
Nearest standard ratio available is 50:1
- STEP: 2** From Table No. 1  
Driven m/c. - Bucket Elevator (Heavily Loaded)  
Type of Load - Moderate shock (M)  
From Table No. 2  
Mechanical Service Factor  $F_m = 1.5$  for 24 running hours/ day continuous
- STEP: 3** Equivalent output power (Mechanical) =  $30 \times 1.5 = 45 \text{ kW}$   
\* Equivalent output torque (Mechanical) =  $\frac{9550 \times 45}{29} = 14818.96 \text{ Nm}$   
From catalogue.  
Refer rating at input speed 1500 rpm, Ratio - 50:1  
\* Gear unit size 14, For ratio 50:1 having output torque (Mechanical) = 16457.4 Nm  
Input power (Mechanical) = 62 kW
- STEP: 4** From Table No. 3 Thermal service factor (Ft.) = 1.16  
For an ambient temp. of 30°C  
\* Equivalent output power (Thermal) =  $30 \times 1.16 = 34.8 \text{ kW}$   
Equivalent Output torque (Thermal) =  $\frac{9550 \times 34.8}{29} = 11460$
- STEP: 5** From catalogue, rating at input 1500 rpm. Ratio - 50:1, for 14 size  
Output torque (Thermal) = 10486.9 Nm, which is less than calculated equivalent  
Output torque (Thermal) = 11460 Nm  
\* Higher gear unit size CFU-1700, Ratio - 50:1 is to be selected where at input 1500 rpm  
Output torque (Mechanical) = 29064 Nm and Input power (Mechanical) = 110 kW  
\* Required Input power  
=  $\frac{\text{Calculated equivalent output torque (Mechanical)} \times \text{Rated power (Mechanical)}}{\text{Rated output torque (Mechanical)} \times F_m}$   
=  $\frac{14818.96 \times 110}{29064 \times 1.5} = 37.39 \text{ kW}$   
\* Nearest standard motor having 37 kW at 1500 rpm can be selected for the application

### EXAMPLE: 3

Worm reduction gear (under driven type) required to drive a clay-working machine for continuous 10 hours/ day. The power required at clay-working machine is 5 kW at 50 rpm ambient temperature is 40°C. Also suggest an electric motor power at 1500 rpm to drive the gear unit.

- SOLUTION**
- STEP: 1** Ratio required =  $\frac{\text{Input speed}}{\text{Output speed}} = \frac{1500}{50} = 30:1$
- STEP: 2** From Table No. 1  
Driven m/c - Clay-working machinery. Type of Load-Moderate shock (M)  
\* From Table No. 2  
Mechanical service factor (Fm) = 1.25 for 10 running hours/ day continuous  
\* From Table No.3  
Thermal service factor (Ft.) = 1.35 at 40°C ambient temperature  
\* The higher of the above two service factor i.e. 1.35 is to be considered as a service factor.
- STEP: 3** Equivalent output power =  $5 \text{ kW} \times 1.35 = 6.75 \text{ kW}$   
Equivalent output torque =  $\frac{9550 \times 6.75}{50} = 1289.25 \text{ Nm}$
- STEP: 4** From catalogue, Refer rating at Input speed 1500 rpm, Ratio - 30:1  
Gear unit size 6" CFU-600, Ratio 30:1 having  
Input power = 11.75 kW  
Output torque = 1880 Nm
- STEP: 5** Required Input power  
=  $\frac{\text{Calculated equivalent output torque} \times \text{Rated input power}}{\text{Rated output torque} \times \text{Service factor}}$   
=  $\frac{1289.25 \times 11.75}{1880 \times 1.35} = 5.96 \text{ kW}$   
\* Suggest nearest standard A.C. electric motor having 7.5 kW at 1500 rpm to drive gear unit size CFU-600/ CNU-600, Ratio 30:1



## RATINGS BASED ON INPUT SPEEDS OF 50 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			237	287	337	400	500	600	700	800	1000	1200	1400	1700
5	10	Input Power kW	0.4	0.6	1.2	1.4	2.3	4.3	5.8	8	14.1	21.2	29.6	–
		Output Torque Nm	340	490	911	1099	1889	3450	4797	6633	11485	17427	24519	–
7.5	6.7	Input Power kW	0.3	0.5	0.8	1	1.8	2.8	4.5	5.8	9.7	15.1	20.5	–
		Output Torque Nm	339	559	862	1141	2188	3428	5423	7167	11773	18707	26416	–
10	5	Input Power kW	0.26	0.38	0.64	0.88	1.66	2.42	3.37	4.37	6.69	12.03	16.28	32.2
		Output Torque Nm	381	601	955	1289	2517	3723	5219	6823	11131	19336	26426	54412
12.5	4	Input Power kW	–	–	–	0.6	–	–	–	–	–	9.5	14.8	–
		Output Torque Nm	–	–	–	1138	–	–	–	–	–	18774	30739	–
15	3.3	Input Power kW	0.2	0.4	0.6	0.7	1.2	2.1	2.9	3.9	5.8	8.2	15.1	25.3
		Output Torque Nm	479	774	1196	1436	2498	4550	6358	8693	13267	19266	36049	62747
20	2.5	Input Power kW	0.2	0.3	0.4	0.6	1.1	1.6	2.3	3.1	5.5	8.5	12.2	21.5
		Output Torque Nm	596	725	1123	1595	2940	4679	6325	8769	16809	25765	37362	66592
25	2	Input Power kW	0.2	0.3	0.4	0.5	0.8	1.3	2.1	2.8	4.6	7	9.7	13.8
		Output Torque Nm	563	876	1267	1577	2690	4336	6986	9698	16640	24840	35637	51673
30	1.7	Input Power kW	0.2	0.3	0.4	0.5	0.8	1.3	1.8	2.1	3.8	6.2	8.9	15.6
		Output Torque Nm	515	843	1317	1619	2956	4820	6754	8321	15610	26162	38869	67792
35	1.4	Input Power kW	–	–	–	0.4	0.8	1.2	1.6	–	–	4.3	–	–
		Output Torque Nm	–	–	–	1654	2993	4736	6697	–	–	21021	–	–
40	1.3	Input Power kW	0.1	0.2	0.3	0.4	0.7	1.1	1.5	2	3.6	5.6	7.6	8.3
		Output Torque Nm	427	722	1199	1664	2798	4932	7197	9614	17538	28110	40447	47038
50	1	Input Power kW	0.1	0.1	0.2	0.3	0.6	0.9	1.3	1.8	3	4.6	6.5	12.1
		Output Torque Nm	307	540	889	1366	2698	4626	7452	10017	17605	27388	40112	77502
60	0.8	Input Power kW	0	0.1	0.1	0.2	0.4	0.6	0.9	1.4	2.5	4	5.9	7.9
		Output Torque Nm	220	395	631	1059	2276	3699	5658	8543	16333	26942	42235	57345
70	0.7	Input Power kW	0	0.1	0.1	0.1	0.3	0.4	0.7	1	1.7	2.8	4.3	7.5
		Output Torque Nm	196	307	475	831	1615	2811	4413	6649	12614	21449	33971	61896

## RATINGS BASED ON INPUT SPEEDS OF 100 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			237	287	337	400	500	600	700	800	1000	1200	1400	1700
5	20	Input Power kW	0.7	1	1.9	2.3	3.8	7	9.5	13	22.9	34.4	48.1	–
		Output Torque Nm	287	413	766	923	1583	2886	4009	5536	9555	14471	20415	–
7.5	13.3	Input Power kW	0.5	0.8	1.3	1.6	3	4.6	7.3	9.6	15.9	24.8	33.6	–
		Output Torque Nm	288	473	730	964	1847	2890	4565	6029	9875	15673	22113	–
10	10	Input Power kW	0.43	0.64	1.07	1.45	2.73	3.97	5.53	7.18	10.99	19.74	26.71	56.56
		Output Torque Nm	324	512	811	1093	2132	3150	4409	5759	9385	16276	22211	48954
12.5	8	Input Power kW	–	–	–	1.1	–	–	–	–	–	15.6	24.3	–
		Output Torque Nm	–	–	–	1069	–	–	–	–	–	15852	25938	–
15	6.7	Input Power kW	0.4	0.6	1	1.2	2	3.4	4.7	6.3	9.6	13.6	24.9	41.6
		Output Torque Nm	410	661	1021	1223	2125	3870	5424	7377	11236	16306	30482	52971
20	5	Input Power kW	0.4	0.5	0.7	1	1.8	2.7	3.7	5	9.1	14	20	35.3
		Output Torque Nm	511	627	963	1364	2512	3996	5387	7466	14291	21883	31699	56376
25	4	Input Power kW	0.32	0.49	0.7	0.86	1.38	2.17	3.39	4.57	7.45	11.38	15.9	25.27
		Output Torque Nm	485	752	1087	1351	2332	3707	5969	8283	14139	21127	30293	49178
30	3.3	Input Power kW	0.3	0.4	0.6	0.8	1.3	2.1	2.9	3.7	6.4	10.2	14.5	25.5
		Output Torque Nm	444	726	1133	1390	2534	4126	5774	7769	13598	22311	33120	57630
35	2.9	Input Power kW	–	–	–	0.7	1.2	1.9	2.6	–	–	7.9	–	–
		Output Torque Nm	–	–	–	1422	2570	4061	5733	–	–	20132	–	–
40	2.5	Input Power kW	0.2	0.3	0.5	0.7	1.1	1.7	2.5	3.3	5.7	9	12.4	15.2
		Output Torque Nm	399	655	1034	1433	2403	4236	6174	8237	15004	24004	34521	45152
50	2	Input Power kW	0.1	0.2	0.3	0.5	0.9	1.4	2.2	2.9	4.8	7.4	10.4	19.5
		Output Torque Nm	296	520	856	1285	2376	4071	6410	8601	15098	23439	34296	66165
60	1.7	Input Power kW	0.1	0.1	0.2	0.4	0.7	1.1	1.6	2.4	4.2	6.3	9.5	12.6
		Output Torque Nm	212	382	609	1024	2197	3478	5469	8257	14739	23106	30206	49053
70	1.4	Input Power kW	0.1	0.1	0.2	0.3	0.5	0.8	1.2	1.8	3.1	5	7.8	13.4
		Output Torque Nm	190	298	460	805	1565	2724	4277	6443	17223	20784	32918	59472



## RATINGS BASED ON INPUT SPEEDS OF 150 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			237	287	337	400	500	600	700	800	1000	1200	1400	1700
5	30	Input Power kW	0.9	1.3	2.6	3.1	5	9.3	12.5	17.2	30.1	45.2	63.3	-
		Output Torque Nm	258	371	687	827	1416	2578	3578	4937	8503	12861	18117	-
7.5	20	Input Power kW	0.7	1.1	1.7	2.1	4	6.1	9.7	12.7	21.1	32.8	44.4	-
		Output Torque Nm	260	427	657	868	1660	2595	4095	5406	8837	14016	19762	-
10	15	Input Power kW	0.6	0.9	1.4	1.9	3.6	5.3	7.3	9.5	14.6	35.2	35.5	74.8
		Output Torque Nm	293	463	732	985	1921	2835	3965	5176	8430	14602	19906	43814
12.5	12	Input Power kW	-	-	-	1.6	-	-	-	-	-	20.8	32.3	-
		Output Torque Nm	-	-	-	1026	-	-	-	-	-	14251	23307	-
15	10	Input Power kW	0.5	0.8	1.3	1.5	2.6	4.5	6.3	8.4	12.7	18	33.2	55.3
		Output Torque Nm	372	600	925	1106	1921	3496	4895	6655	10121	14682	27430	47614
20	7.5	Input Power kW	0.5	0.6	0.9	1.3	2.4	3.6	4.9	6.7	12	18.6	26.6	46.9
		Output Torque Nm	464	570	874	1237	2276	3620	4871	6750	12908	19752	28531	50773
25	6	Input Power kW	0.4	0.7	0.9	1.1	1.8	2.9	4.5	6.1	9.9	15.1	21.1	34.6
		Output Torque Nm	441	684	987	1226	2117	3361	5409	7504	12841	19086	27358	45710
30	5	Input Power kW	0.3	0.5	0.8	1	1.8	2.8	3.8	4.9	8.4	13.5	19.2	33.8
		Output Torque Nm	406	661	1031	1263	2301	3744	6235	7046	12316	20193	29359	52047
35	4.3	Input Power kW	-	-	-	0.9	1.6	2.5	3.4	-	-	10.8	-	-
		Output Torque Nm	-	-	-	1294	2336	3689	5203	-	-	18790	-	-
40	3.8	Input Power kW	0.3	0.4	0.6	0.9	1.4	2.3	3.2	4.3	7.5	11.9	16.3	21.6
		Output Torque Nm	365	698	943	1305	2185	3852	5611	7478	13608	21744	31260	43840
50	3	Input Power kW	0.2	0.3	0.5	0.7	1.2	1.9	2.8	3.8	6.3	9.7	13.8	25.7
		Output Torque Nm	288	506	826	1172	2165	3708	5835	7821	13716	21265	31033	59924
60	2.5	Input Power kW	0.1	0.2	0.3	0.5	1	1.5	2.3	3.2	5.4	8.3	12.5	16.6
		Output Torque Nm	207	372	594	998	2142	3390	5296	7537	13403	20992	32883	44485
70	2.1	Input Power kW	0.1	0.1	0.2	0.4	0.7	1.1	1.7	2.4	4.3	7.1	10.6	17.7
		Output Torque Nm		291	449	786	1528	2659	4176	6290	11934	20292	30889	54006

## RATINGS BASED ON INPUT SPEEDS OF 300 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			237	287	337	400	500	600	700	800	1000	1200	1400	1700
5	60	Input Power kW	1.5	2.1	4.1	4.9	8	14.8	19.9	27.3	47.4	70.9	98.8	-
		Output Torque Nm	212	303	561	673	1151	2083	2895	3988	6836	10312	14483	-
7.5	40	Input Power kW	1.1	1.7	2.7	3.4	6.5	9.8	15.5	20.3	33.6	52.2	70.5	-
		Output Torque Nm	215	352	541	713	1362	2126	3347	4414	7188	11382	16028	-
10	15	Input Power kW	0.9	1.4	2.3	3.1	5.8	8.5	11.8	15.2	23.4	42	56.6	119.1
		Output Torque Nm	244	385	606	813	1583	2334	3257	4247	6907	11935	16238	35641
12.5	24	Input Power kW	-	-	-	2.62	-	-	-	-	-	33.31	51-77	-
		Output Torque Nm	-	-	-	902	-	-	-	-	-	11699	19416	-
15	20	Input Power kW	0.8	1.3	2	2.5	4.1	7.3	10	13.5	20.3	28.9	53.3	88.6
		Output Torque Nm	322	501	771	919	1533	2898	4052	5501	8343	12092	22563	39075
20	15	Input Power kW	0.9	1	1.5	2.1	3.8	5.7	7.9	10.7	19.2	29.9	42.8	75.1
		Output Torque Nm	390	478	733	1033	1899	3018	4046	5605	10698	16346	23626	41825
25	12	Input Power kW	0.7	1	1.5	1.8	2.9	4.6	7.2	9.7	15.8	24.1	33.8	55.3
		Output Torque Nm	371	575	828	1026	1771	2807	4513	6257	10684	15824	22665	37786
30	10	Input Power kW	0.5	0.9	1.3	1.6	2.8	4.4	6	7.9	13.5	21.5	30.7	53.5
		Output Torque Nm	342	557	867	1060	1928	3132	4371	5886	10265	16803	24900	43119
35	8.6	Input Power kW	-	-	-	1.5	2.5	3.9	5.3	-	-	17.2	-	-
		Output Torque Nm	-	-	-	1088	1962	3092	4351	-	-	15674	-	-
40	7.5	Input Power kW	0.4	0.6	1	1.3	2.2	3.6	5.1	6.7	11.9	18.7	25.9	36.3
		Output Torque Nm	309	506	796	1100	1836	3235	4707	6261	11371	18124	26037	38516
50	6	Input Power kW	0.3	0.5	0.7	1	1.8	3	4.5	5.9	10	15.2	21.6	40.5
		Output Torque Nm	272	470	700	990	1825	4124	4911	6568	11499	17777	25358	49925
60	5	Input Power kW	0.2	0.3	0.5	0.9	1.6	2.4	3.6	5	8.5	13	19.6	26
		Output Torque Nm	196	353	563	946	1850	2876	4466	6396	11257	17597	27549	37158
70	4.3	Input Power kW	0.2	0.2	0.4	0.6	1.1	1.8	2.9	4.2	7	11.2	16.6	27.8
		Output Torque Nm	177	276	427	748	1453	2529	3970	5305	10539	17305	25912	45233





## RATINGS BASED ON INPUT SPEEDS OF 500 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			112	162	200	225	300	350	400	500	600	700	800	900
5	100	Input Power kW	0.25	0.72	1.4	1.52	3.46	6.1	6.7	11.1	20.4	27.3	32.4	38
		Output Torque Nm	21.25	61.9	120.3	132.1	300.7	524.3	565	570	1758	2434	3345	3650
7.5	66.5	Input Power kW	–	0.61	0.95	1.16	3.65	4.2	4.7	9	13.6	21.5	28.2	28.5
		Output Torque Nm	–	81.2	114.3	144.5	388.7	511.2	608	1160	1808	2840	3740	3850
10	50	Input Power kW	0.186	0.47	0.85	0.98	2.6	3.52	4.3	8.2	11.9	16.4	21.3	25
		Output Torque Nm	27	73.3	133.1	161.6	442	567.4	696	1350	1990	2770	3615	4450
15	33.3	Input Power kW	0.13	0.41	0.68	0.74	1.9	2.8	3.4	5.8	10.2	14.1	18.9	19
		Output Torque Nm	26.7	85.8	156	179.2	468.6	669.7	790	1370	2491	3470	4710	4550
20	25	Input Power kW	0.11	0.32	0.51	0.62	1.36	2.2	3	5.2	8	11	15	15
		Output Torque Nm	26.6	89.2	156	189.5	481.2	687	895	1642	2607	3480	4825	4850
25	20	Input Power kW	0.1	0.3	0.43	0.49	1.29	1.75	2.5	4.1	6.4	10	13.6	14
		Output Torque Nm	28	100.3	175	175.5	469.9	651.8	885	1395	2430	3900	5405	1500
30	16.6	Input Power kW	0.08	0.27	0.36	0.42	1.15	1.66	2.2	3.9	6.1	8.4	11	11.8
		Output Torque Nm	26	101	175	176.4	502.8	802.2	920	1670	2710	3780	5095	5150
40	12.5	Input Power kW	0.06	0.23	0.37	0.93	1.35	1.8	3	5	7.1	9.3	9.8	
		Output Torque Nm	22.55	98.4	164	192.2	525.8	835.4	959	1596	2810	4080	5228	5280
50	10	Input Power kW	0.05	0.19	0.25	0.3	0.85	1.1	1.4	2.5	4.1	6.2	8.2	7.4
		Output Torque Nm	22	96.8	153	180	592.6	786.8	865	1590	2723	4272	5709	5350
60	8.33	Input Power kW	0.04	0.17	0.21	0.25	0.7	0.93	1.2	2.2	3.3	4.9	6.9	6.8
		Output Torque Nm	20	98.8	149.2	172	561.8	778.3	857	1615	2511	3898	5573	5600
70	7.14	Input Power kW	0.04	0.13	0.16	0.2	0.69	0.8	0.9	1.7	2.9	4.1	5.8	6.6
		Output Torque Nm	19	88.7	124.1	155.2	599.9	792	915	1385	2402	3550	5145	99.5

## RATINGS BASED ON INPUT SPEEDS OF 500 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
5	100	Input Power kW (M)	75	102.5	122	–
		Output Torque Nm (M)	6732	9298	11065	–
		Input Power kW (T)	47	56.6	96	–
		Output Torque Nm (T)	6300	7600	12780	–
7.5	66.7	Input Power kW (M)	35	45.48	50.2	–
		Output Torque Nm (M)	4700.5	6121.1	6756.3	–
		Input Power kW (T)	40	51.72	70.65	130.8
		Output Torque Nm (T)	7130	9185	12550	23550
10	50	Input Power kW (M)	40	51.72	70.65	130.8
		Output Torque Nm (M)	7130	9185	12550	23550
		Input Power kW (T)	29	40	49.25	96.72
		Output Torque Nm (T)	6175.3	7105.2	8748.3	17420.5
15	33.3	Input Power kW (M)	30	42.56	58.8	102.3
		Output Torque Nm (M)	7880	10985	15340	27300
		Input Power kW (T)	24	33.45	37.31	80.6
		Output Torque Nm (T)	6304.7	8633.7	9737	21497
20	25	Input Power kW (M)	22	35.2	45.6	91.5
		Output Torque Nm (M)	7365	11870	15675	31800
		Input Power kW (T)	20	29.8	34.3	72.76
		Output Torque Nm (T)	6723.2	10051.7	11792.3	2592.8
25	20	Input Power kW (M)	18	29	41.2	82
		Output Torque Nm (M)	7220	11722.7	17300	34650
		Input Power kW (T)	15	24.17	30.55	64.5
		Output Torque Nm (T)	6016.5	9937	12837.1	27257

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
30	16.6	Input Power kW (M)	16	25.6	33.85	64.35
		Output Torque Nm (M)	7545	12370	16735	32218
		Input Power kW (T)	14	19	26.6	56.42
		Output Torque Nm (T)	6604.4	9181.8	13160.6	28239
40	12.5	Input Power kW (M)	15	23.3	31.5	66.7
		Output Torque Nm (M)	8938	13880	19250	42800
		Input Power kW (T)	12	17.2	20.52	47.35
		Output Torque Nm (T)	7157	10249.8	12514.8	30387.3
50	10	Input Power kW (M)	14	18.6	26.6	48
		Output Torque Nm (M)	10025	13320	20065	36670
		Input Power kW (T)	10	14.16	17.35	37.27
		Output Torque Nm (T)	7162.5	10142.1	13086.1	28474.3
60	8.33	Input Power kW (M)	10	15.7	20.7	38
		Output Torque Nm (M)	8250	13130	18035	33980
		Input Power kW (T)	8.5	12.5	15.6	33.25
		Output Torque Nm (T)	7016.3	10461.4	13532.4	29733.4
70	7.14	Input Power kW (M)	8.8	14.35	16.1	30
		Output Torque Nm (M)	8592	13960	16170	30495
		Input Power kW (T)	6.9	11.5	14.2	28.7
		Output Torque Nm (T)	6737.2	11228.6	14244.8	29174.3

M Mechanical  
T Thermal



## RATINGS BASED ON INPUT SPEEDS OF 750 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			112	162	200	225	300	350	400	500	600	700	800	900
5	150	Input Power kW	0.35	0.98	1.8	2.1	4.04	6.1	8.5	14.1	26	32.61	42.91	45.48
		Output Torque Nm	18.14	54.7	110.6	117.3	234.1	349	492	839	1510	1954.1	2592.6	2753.7
7.5	100	Input Power kW	–	0.77	1.34	1.45	3.5	4.95	6.1	11.6	17.6	29.18	39.48	42.91
		Output Torque Nm	–	60.5	110.1	123.9	310.9	408	531	1010	1565	2600	3544.1	3864.3
10	75	Input Power kW	0.25	0.58	1.12	1.24	3.21	4.7	5.5	10.5	15.2	23.17	30.04	34.04
		Output Torque Nm	22.84	60.6	119.8	137.4	372	520	605	1180	1735	2723.14	3538.2	4295.4
15	50	Input Power kW	0.16	0.52	0.85	0.93	2.16	3.5	4.4	7.5	13.1	18.02	24.15	28.3
		Output Torque Nm	22.06	72.2	128.3	151	350.7	572	695	1205	2180	3118.3	4202.1	4884.4
20	37.5	Input Power kW	0.15	0.45	0.76	0.86	1.85	3.05	3.8	6.8	10.4	13.5	18	23.2
		Output Torque Nm	22.94	78.6	151	170.8	391	627	785	1450	2295	2993.5	4001.7	5180.8
25	30	Input Power kW	0.134	0.38	0.56	0.75	1.7	2.4	3.2	5.3	8.15	12.1	16.31	19.74
		Output Torque Nm	24.61	78.6	139.1	181.5	432.9	640	785	1355	2105	2370.2	4449.6	5423
30	25	Input Power kW	0.112	0.36	0.48	0.6	1.5	2.3	2.8	5	7.8	11.33	14.08	17
		Output Torque Nm	23	82.5	135.7	176.5	435.5	782.3	817	1480	2401	3492.7	4335.1	5374.4
40	18.8	Input Power kW	0.09	0.32	0.4	0.45	1.4	1.72	2.4	3.8	6.4	8.33	10.6	13.3
		Output Torque Nm	20.4	89.4	138.2	160	526.3	660.9	855	1415	2490	3228.6	4122.2	5371.1
50	15	Input Power kW	0.074	0.24	0.32	0.39	1.26	1.47	1.8	3.2	5.2	8	9.44	11
		Output Torque Nm	19.9	79.5	138.5	168.8	570.5	627.1	770	1420	2430	3739.3	4501.6	5253.3
60	12.5	Input Power kW	0.06	0.2	0.28	0.31	1.12	1.27	1.6	2.8	4.2	7	8.66	10
		Output Torque Nm	18.24	79.5	139.1	154	564.8	628.2	765	1440	2240	3632.1	4518.9	5737.5
70	10.71	Input Power kW	0.06	0.16	0.2	0.26	0.87	1.12	1.3	2.3	3.6	5.5	7	8.4
		Output Torque Nm	17.6	75.7	108.9	150.8	520.3	599.8	685	1330	2145	3475.3	4572	5685.5

## RATINGS BASED ON INPUT SPEEDS OF 750 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
5	150	Input Power kW (M)	105	146.12	200	–
		Output Torque Nm (M)	6350	8880	12170	–
		Input Power kW (T)	75	97.5	114	–
		Output Torque Nm (T)	4536.2	5897.1	6822.5	–
7.5	100	Input Power kW (M)	69	96.5	140	–
		Output Torque Nm (M)	6200	8755	12800	–
		Input Power kW (T)	50	85.5	130	–
		Output Torque Nm (T)	4488.5	7757	11794.3	–
10	75	Input Power kW (M)	53	72.5	105	171
		Output Torque Nm (M)	8200	8650	12560	20900
		Input Power kW (T)	45	65.3	86.75	137.5
		Output Torque Nm (T)	5271.6	7816	10272.9	16808
15	50	Input Power kW (M)	45	59	85	137.5
		Output Torque Nm (M)	5270	10350	15260	25212
		Input Power kW (T)	34	53.13	73	123.2
		Output Torque Nm (T)	5844.6	9336	13106.4	22590
20	37.5	Input Power kW (M)	38	46.85	62	101.6
		Output Torque Nm (M)	8615	10975	14530	24050
		Input Power kW (T)	27	42.88	58	88
		Output Torque Nm (T)	6119.6	10046.5	13441.3	20841.9
25	30	Input Power kW (M)	30	36.1	57	88.35
		Output Torque Nm (M)	8308	10280	16510	25560
		Input Power kW (T)	24	32	52	65
		Output Torque Nm (T)	6646.8	9168	15063.5	19243.3

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
30	25	Input Power kW (M)	23	33.7	45.15	72
		Output Torque Nm (M)	7205	11340	15500	14025
		Input Power kW (T)	21	31.25	41.25	68
		Output Torque Nm (T)	6578	10505	18890	30635
40	18.8	Input Power kW (M)	20	26.5	41.8	68.5
		Output Torque Nm (M)	8330	10950	18890	30635
		Input Power kW (T)	16	24	33	58
		Output Torque Nm (T)	6664.7	9997	14919.3	25927.2
50	15	Input Power kW (M)	18	23.2	32	52
		Output Torque Nm (M)	8938	11225	17720	28165
		Input Power kW (T)	15	21.45	22	48.75
		Output Torque Nm (T)	7449	10105.9	22185.8	26381.9
60	12.5	Input Power kW (M)	14	18.8	24.2	40.6
		Output Torque Nm (M)	8350	10770	16080	26055
		Input Power kW (T)	11	17	23	36
		Output Torque Nm (T)	6558.6	9741	15287.6	23103.4
70	10.71	Input Power kW (M)	10	16.5	20.8	34
		Output Torque Nm (M)	6890	11045	14850	24950
		Input Power kW (T)	8	14.8	19.5	32
		Output Torque Nm (T)	5355.1	9774.9	13923.4	23419

M Mechanical  
T Thermal



### RATINGS BASED ON INPUT SPEEDS OF 1000 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			112	162	200	225	300	350	400	500	600	700	800	900
5	200	Input Power kW	0.43	0.985	2.15	3	4.75	8.95	10.2	16.8	29.6	41.5	56.5	64.4
		Output Torque Nm	19.4	44.8	90.5	130	225	380	440	754	1290	1880	2580	2915
7.5	133.3	Input Power kW	-	0.84	1.48	2.25	3.85	5.85	7.2	14	20.5	33	43.3	45
		Output Torque Nm	-	52.5	94	145	255	390	480	912	1400	2210	2920	3280
10	100	Input Power kW	0.34	0.824	1.45	2.15	3.2	5.05	6.6	12.6	18.2	25.2	32.5	38
		Output Torque Nm	28.5	71.2	126	182	280	429	550	1080	1560	2180	2820	3350
15	66.7	Input Power kW	0.26	0.73	1.15	1.7	2.97	4.6	5.24	8.75	15.5	21.7	29.2	31.5
		Output Torque Nm	28.6	84	135	210	355	560	630	1080	1980	2750	3700	3750
20	50	Input Power kW	0.235	0.505	1.1	1.72	2.26	3.45	4.55	8.2	12.6	16.9	23.1	26.3
		Output Torque Nm	32	76.2	163	261	365	545	715	1310	2100	2770	3830	4150
25	40	Input Power kW	0.21	0.5	0.9	1.55	2.37	3.15	3.78	6.3	9.9	15.4	20.5	22
		Output Torque Nm	34.3	88	160	269	415	602	715	1230	1960	3120	43.1	4625
30	33.3	Input Power kW	0.17	0.458	0.74	1.18	2	2.92	3.38	5.7	8.8	12.3	17.2	18.8
		Output Torque Nm	32.2	93	155	256	468	630	745	1320	2150	2910	4050	4690
40	25	Input Power kW	0.126	0.338	0.55	0.88	1.35	2.05	2.78	4.43	7.35	10.6	14.1	15.6
		Output Torque Nm	27.5	85.9	145	235	369	565	770	1280	2150	3240	4340	4780
50	20	Input Power kW	0.09	0.3	0.4	0.65	1.08	1.65	2.1	3.75	6.15	9.25	12.5	13.5
		Output Torque Nm	18.4	70.2	124	203	358	505	695	1250	2185	3430	4540	49
60	16.7	Input Power kW	0.074	0.19	0.295	0.48	0.8	1.15	1.8	3.25	4.9	7.35	10.2	12.1
		Output Torque Nm	16.8	49.3	82.5	140	287	435	675	1295	2010	3120	4450	5270
70	14	Input Power kW	0.067	0.16	0.255	0.45	0.61	0.95	1.55	2.6	4.21	6.05	8.5	10.1
		Output Torque Nm	16.4	48	82.5	148	225	350	655	1170	1900	2850	4050	5960

### RATINGS BASED ON INPUT SPEEDS OF 1000 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
5	200	Input Power kW (M)	97.8	145	202	-
		Output Torque Nm (M)	4460	6630	9070	-
		Input Power kW (T)	70	100	154	-
		Output Torque Nm (T)	3208	4449.8	6710	-
7.5	133.3	Input Power kW (M)	71	108	148	-
		Output Torque Nm (M)	4800	7400	10100	-
		Input Power kW (T)	57	80	132	-
		Output Torque Nm (T)	3879.5	5353.3	8534.7	-
10	100	Input Power kW (M)	49.2	89.2	120	253
		Output Torque Nm (M)	4290.1	7815.3	9358.7	14101.53
		Input Power kW (T)	49	70	111	160.5
		Output Torque Nm (T)	4305.1	6229.3	9358.7	14101.53
15	66.7	Input Power kW (M)	43.5	62.5	114	190
		Output Torque Nm (M)	5600	8110	15100	25100
		Input Power kW (T)	41	60	96.6	139.3
		Output Torque Nm (T)	5342	7838.2	12076	18349.2
20	50	Input Power kW (M)	41.5	65	92.5	158
		Output Torque Nm (M)	7050	11100	15900	27800
		Input Power kW (T)	33	49	83.5	132
		Output Torque Nm (T)	5609.7	8358.1	1398.4	21430.2
25	40	Input Power kW (M)	34.3	51	73	120
		Output Torque Nm (M)	7090	10900	15400	25400
		Input Power kW (T)	28	40	67	89
		Output Torque Nm (T)	5749.1	8529.8	13361.22	18911.4

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
30	25	Input Power kW (M)	29	46.2	65.8	115
		Output Torque Nm (M)	7090	11500	16880	29000
		Input Power kW (T)	24	35	58	80
		Output Torque Nm (T)	5919.3	8665.2	13704.6	20419
40	18.8	Input Power kW (M)	25	39	54.5	77.5
		Output Torque Nm (M)	7930	12600	17750	25500
		Input Power kW (T)	18.5	30.5	36	62
		Output Torque Nm (T)	6007	9714.8	12135	23068.2
50	15	Input Power kW (M)	20.78	31.5	44.5	78
		Output Torque Nm (M)	7980	12200	17400	31100
		Input Power kW (T)	16	24	34.5	60
		Output Torque Nm (T)	6341.2	8986	13737	23779.5
60	12.5	Input Power kW (M)	17.6	26.7	41	67
		Output Torque Nm (M)	7770	12000	18900	31100
		Input Power kW (T)	13	22	25.8	50
		Output Torque Nm (T)	5774.3	9751.5	12301.7	23446
70	10.71	Input Power kW (M)	14.5	23.1	34	57.5
		Output Torque Nm (M)	7270	11900	17500	30200
		Input Power kW (T)	12	19	21.6	43
		Output Torque Nm (T)	6010.5	9335.2	12027	23260.6

M	Mechanical
T	Thermal



### RATINGS BASED ON INPUT SPEEDS OF 1500 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit											
			112	162	200	225	300	350	400	500	600	700	800	900
5	300	Input Power kW	0.54	1.24	2.7	3.8	6	10.5	12.75	20.8	38.4	51.5	70.4	82.4
		Output Torque Nm	16.5	38.15	77.5	112.5	168	315	370	625	1130	1560	2140	2800
7.5	200	Input Power kW	0.5	1.08	1.9	2.75	4.8	7.2	9.1	17.5	26.3	41.2	54.4	65
		Output Torque Nm	23	45.5	82.5	120	205	310	405	765	1190	1850	2440	3100
10	150	Input Power kW	0.432	1.05	1.85	2.5	3.85	6.3	8.35	15.9	23	31.9	41.3	49.5
		Output Torque Nm	24.6	61.8	110	140	230	350	465	910	1330	1840	2390	34.5
15	100	Input Power kW	0.325	0.94	1.5	2.1	3.8	5.75	6.65	11.25	20	27.6	37.1	45
		Output Torque Nm	25	73	142	180	310	475	540	925	1700	2360	3190	3700
20	75	Input Power kW	0.3	0.65	1.4	2.25	3.78	5.65	5.8	10.4	15.9	21.5	29.4	38
		Output Torque Nm	28	67	142	230	325	460	615	1130	1800	2370	3280	4200
25	60	Input Power kW	0.266	0.575	1.15	1.8	2.78	3.95	4.46	8	13	19.7	26.9	31
		Output Torque Nm	30	70.5	140	225	370	520	616	1060	1680	2680	3710	4400
30	50	Input Power kW	0.215	0.515	0.94	1.45	2.35	3.6	4.25	7.45	11.75	16.2	21.6	26
		Output Torque Nm	28.5	73	137	210	350	550	640	1160	1880	2610	3500	4600
40	37.5	Input Power kW	0.165	0.42	0.7	1.04	1.72	2.65	3.5	5.7	9.6	13.7	17.9	21.5
		Output Torque Nm	25.5	75	128	190	330	495	670	1110	1950	2830	3740	4800
50	30	Input Power kW	0.112	0.305	0.52	0.82	1.35	1.9	2.65	4.74	7.8	11.9	15.7	17.5
		Output Torque Nm	20.9	64	112	180	305	455	600	1110	1900	2980	3950	5125
60	25	Input Power kW	0.095	0.25	0.35	0.65	1	1.55	2.25	4.15	6.2	9.4	13.2	15.5
		Output Torque Nm	15	44	74	128	265	410	590	1140	1750	2720	3870	5300
70	21.42	Input Power kW	0.09	0.2	0.35	0.65	1	1.55	2.25	4.15	6.2	9.4	13.2	15.5
		Output Torque Nm	14.6	42.8	74	125	195	325	570	1030	1670	2490	3540	5600

### RATINGS BASED ON INPUT SPEEDS OF 1500 rpm

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
5	300	Input Power kW (M)	120	180	249	-
		Output Torque Nm (M)	3680	5470	7459	-
		Input Power kW (T)	90	119.4	162	-
		Output Torque Nm (T)	2707.7	2776.8	5485.7	-
7.5	200	Input Power kW (M)	87	135	185	-
		Output Torque Nm (M)	4020	6220	8400	-
		Input Power kW (T)	76	108.6	150	-
		Output Torque Nm (T)	3411.3	4806.9	6674.7	-
10	150	Input Power kW (M)	62	110	150	318
		Output Torque Nm (M)	3630	6580	8940	19200
		Input Power kW (T)	62	98.7	141	200
		Output Torque Nm (T)	3631.5	6164.6	8358.1	12224
15	100	Input Power kW (M)	56	79.1	145	242
		Output Torque Nm (M)	4800	6800	12800	21200
		Input Power kW (T)	56	76	110	177
		Output Torque Nm (T)	4813.2	6670.8	9790.8	15720.5
20	75	Input Power kW (M)	52.2	82.5	118	205
		Output Torque Nm (M)	6050	9450	13500	23700
		Input Power kW (T)	48	63	94.3	160
		Output Torque Nm (T)	5500.8	7239.8	10954.8	18366
25	60	Input Power kW (M)	43.5	65.5	93.1	150
		Output Torque Nm (M)	6070	19290	13100	21600
		Input Power kW (T)	39	50	71.6	135
		Output Torque Nm (T)	5462.6	6948.4	9947.3	19124

Nom. Redn. Ratio	Nom. Output rpm	Capacity	Size of Unit			
			1000	1200	1400	1700
30	50	Input Power kW (M)	36.8	59.25	84.5	147
		Output Torque Nm (M)	5462.6	6948.4	9947.3	24600
		Input Power kW (T)	32	45	61.2	121
		Output Torque Nm (T)	5195.2	7504.65	9761	20337
40	37.5	Input Power kW (M)	31.8	49.5	70	100
		Output Torque Nm (M)	6830	10800	15200	22000
		Input Power kW (T)	25	37	48	93
		Output Torque Nm (T)	5411.7	7857.8	10192.6	20131.4
50	30	Input Power kW (M)	26.6	40	62	110
		Output Torque Nm (M)	6880	10600	16457.4	29064
		Input Power kW (T)	22	31.3	39.5	81.6
		Output Torque Nm (T)	6750	10400	10486.9	21300
60	25	Input Power kW (M)	22.5	34.2	52.5	69.5
		Output Torque Nm (M)	6750	10400	16300	27900
		Input Power kW (T)	18	28.5	33.6	45.2
		Output Torque Nm (T)	5432	8397.4	10702.7	17712.6
70	21.42	Input Power kW (M)	18.5	29.5	28.4	57.3
		Output Torque Nm (M)	6340	10100	15200	26200
		Input Power kW (T)	20	22.5	28.4	57.3
		Output Torque Nm (T)	6961.7	7880.4	10320.1	20456.6

M Mechanical  
T Thermal



**DOUBLE REDUCTION kW RATING**

Type: CU, CO, CV

Nominal Ratio Speed rpm	Nominal Input Speed rpm	Nominal Output Speed rpm	Size of Unit									
			162		200		225		300		350	
			Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm
100/1	750	7.50	0.12	103.98	0.29	223.67	0.46	369.84	0.53	481.67	0.80	735.75
	1000	10.00	0.15	97.90	0.36	210.91	0.52	321.77	0.65	454.20	0.94	670.02
	1500	15.00	0.21	89.37	0.43	172.65	0.56	237.40	0.87	413.00	1.06	509.14
150/1	750	5.00	0.11	111.83	0.18	199.14	0.30	316.86	0.44	539.55	0.67	837.77
	1000	6.67	0.14	105.95	0.23	189.33	0.37	300.18	0.54	511.10	0.82	792.65
	1500	10.00	0.18	97.22	0.30	173.64	0.50	266.83	0.73	467.94	1.03	690.62
200/1	750	3.75	0.08	96.33	0.12	177.56	0.21	274.68	0.30	466.95	0.47	730.84
	1000	5.00	0.10	91.72	0.17	168.73	0.26	260.94	0.38	443.41	0.58	693.57
	1500	7.50	0.14	84.85	0.23	155.98	0.36	241.32	0.51	409.08	0.78	638.63
300/1	750	2.50	0.07	122.62	0.15	267.81	0.24	442.43	0.27	576.83	0.41	887.80
	1000	3.33	0.09	117.72	0.18	256.04	0.30	422.81	0.33	551.32	0.51	842.68
	1500	5.00	0.12	109.87	0.26	238.38	0.41	393.38	0.46	513.06	0.56	626.86
400/1	750	1.88	0.07	135.38	0.09	173.64	0.18	406.13	0.21	560.15	0.21	525.81
	1000	2.50	0.09	135.38	0.10	160.88	0.21	390.44	0.26	518.95	0.26	487.56
	1500	3.75	0.12	135.38	0.12	143.22	0.30	367.87	0.32	435.56	0.32	409.08
600/1	750	1.25	0.06	135.38	0.09	230.53	0.12	434.58	0.18	653.34	0.21	739.67
	1000	2.67	0.07	135.38	0.10	214.84	0.17	418.89	0.24	653.34	0.26	87.68
	1500	2.50	0.10	135.38	0.12	190.31	0.24	394.36	0.32	574.86	0.32	577.81
750/1	750	1.00	0.04	101.04	0.06	178.54	0.09	283.51	0.12	495.40	0.18	742.62
	1000	1.33	0.04	96.43	0.07	170.69	0.11	271.74	0.15	472.84	0.23	708.28
	1500	2.00	0.07	90.45	0.10	159.90	0.15	253.10	0.21	440.47	0.30	659.23
1000/1	750	0.75	0.04	135.38	0.08	296.26	0.11	489.52	0.14	654.33	0.21	1059.00
	1000	1.00	0.05	135.38	0.10	285.47	0.14	470.88	0.18	654.33	0.26	990.81
	1500	1.50	0.08	135.38	0.12	259.96	0.18	442.43	0.24	654.33	0.32	839.73
1200/1	750	0.63	0.04	135.38	0.07	272.72	0.10	437.52	0.12	654.33	0.20	1128.00
	1000	0.83	0.05	135.38	0.08	262.91	0.12	420.85	0.15	654.33	0.24	1128.00
	1500	1.25	0.07	135.38	0.11	248.19	0.15	396.32	0.21	654.33	0.32	981.00
2000/1	750	0.38	0.01	114.78	0.04	205.03	0.05	327.65	0.07	572.90	0.11	864.26
	1000	0.60	0.03	110.85	0.05	197.18	0.07	315.88	0.10	552.30	0.12	831.89
	1500	0.75	0.04	105.95	0.07	186.39	0.10	296.22	0.12	519.93	0.18	781.86
2800/1	750	0.27	0.01	101.04	0.03	176.58	0.04	287.43	0.06	480.69	0.08	746.54
	1000	0.36	0.01	97.90	0.04	170.69	0.05	277.62	0.07	464.01	0.10	719.07
	1500	0.54	0.04	92.90	0.05	161.86	0.07	261.93	0.10	437.52	0.14	676.89



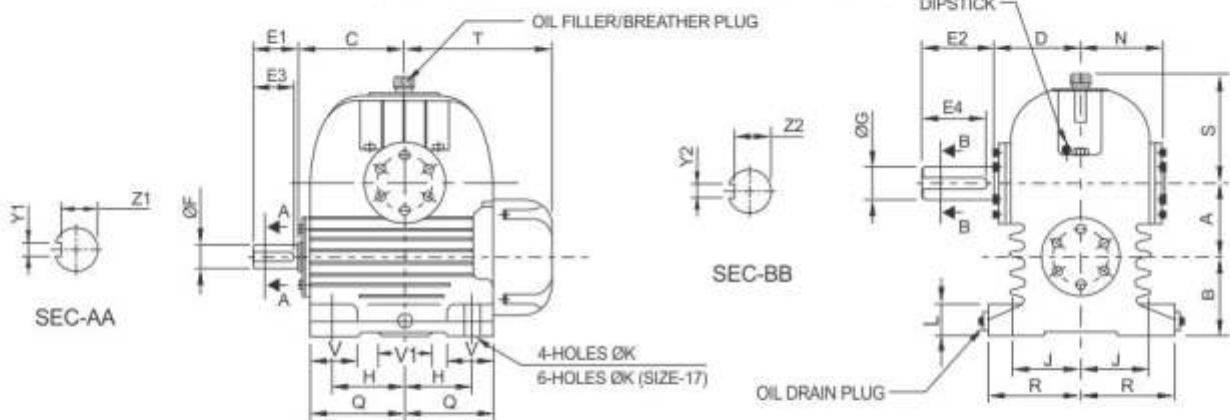
## DOUBLE REDUCTION kW RATING

Nominal Ratio Speed rpm	Nominal Input Speed rpm	Nominal Output Speed rpm	Size of Unit									
			400		500		600		700		800	
			Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm
150/1	750	5.00	0.83	972.17	1.53	1805	2.24	2864	3.15	4061	4.29	5709
	1000	6.66	1.07	931.95	1.94	1736	2.76	2737	3.95	3894	5.44	5572
	1500	10.0	1.42	883.88	2.53	15.99	3.65	2531	5.15	3482	7.17	5013
300/1	750	2.50	0.65	1157	1.00	2001	1.45	3345	2.01	4512	2.83	6779
	1000	3.33	0.82	1108	1.31	1913	1.71	3159	2.39	4238	3.43	6386
	1500	5.00	1.04	1000	1.77	1717	2.31	2874	3.21	3924	4.55	5758
500/1	750	1.50	0.46	1255	0.74	2236	1.04	3345	1.42	5140	1.64	6210
	1000	2.00	0.57	1206	0.97	2236	1.24	3345	1.79	4885	2.16	6210
	1500	3.00	0.74	1128	1.28	2080	1.71	3227	2.39	4512	3.13	6210
1000/1	750	0.75	0.30	1275	0.46	2197	0.65	3453	0.89	5140	1.12	6779
	1000	1.00	0.36	1236	0.57	2138	0.74	3384	1.12	5140	1.42	6779
	1500	1.50	0.48	1177	0.74	2030	1.06	3335	1.64	5140	2.01	6661
2000/1	750	0.38	0.19	1275	0.33	2246	0.35	3119	0.55	5199	0.74	7112
	1000	0.50	0.24	1236	0.41	2168	0.45	3119	0.67	5199	0.97	7112
	1500	0.75	0.32	1206	0.54	2109	0.61	3119	0.97	5199	1.27	7112
3000/1	750	0.25	0.12	1089	0.24	2374	0.27	2864	0.46	5307	0.59	7455
	1000	0.33	0.15	1089	0.30	2286	0.36	2864	0.56	5307	0.74	7455
	1500	0.50	0.21	1089	0.39	2109	0.48	2864	0.74	5307	1.04	7112

Nominal Ratio Speed rpm	Nominal Input Speed rpm	Nominal Output Speed rpm	Size of Unit							
			1000		1200		1400		1700	
			Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm	Input kW	Output Torque Nm
150/1	750	5.00	7.46	10055	10.44	15931	13.43	19659	23.87	38426
	1000	6.66	8.95	1378	12.68	14921	17.16	18847	30.58	36728
	1500	10.0	11.19	8191	16.41	12998	23.12	17403	41.03	33903
300/1	750	2.50	4.32	10791	5.52	14803	9.70	25427	15.66	42948
	1000	3.33	5.44	10281	6.93	14126	11.93	24074	20.14	41251
	1500	5.00	7.01	9211	8.95	12939	15.66	21238	26.85	37288
500/1	750	1.50	2.91	11870	3.58	14401	5.15	21474	9.70	40682
	1000	2.00	3.58	11242	4.69	14401	6.79	21474	12.68	40682
	1500	3.00	4.85	10055	6.86	14401	9.70	21474	17.90	40682
1000/1	750	0.75	1.64	10173	2.76	19433	3.80	25535	6.12	45773
	1000	1.00	2.16	10173	3.50	19041	4.55	25535	7.46	45773
	1500	1.50	3.13	10173	4.84	18080	6.64	25535	11.19	45773
2000/1	750	0.38	0.82	11634	1.56	19208	2.24	27124	3.88	50286
	1000	0.50	1.04	11634	2.01	19208	2.83	27124	5.15	50286
	1500	0.75	1.56	11634	2.90	19208	4.10	27124	7.46	50286
3000/1	750	0.25	0.74	11075	1.11	17403	1.56	25761	2.61	46332
	1000	0.33	0.97	11075	1.49	17403	2.01	25761	3.36	46332
	1500	0.50	1.42	11075	2.16	17403	2.19	25761	4.70	46332



**Size: 200 to 1700, Type: CFU  
(Foot Mounted Under Driven Gear Boxes)**

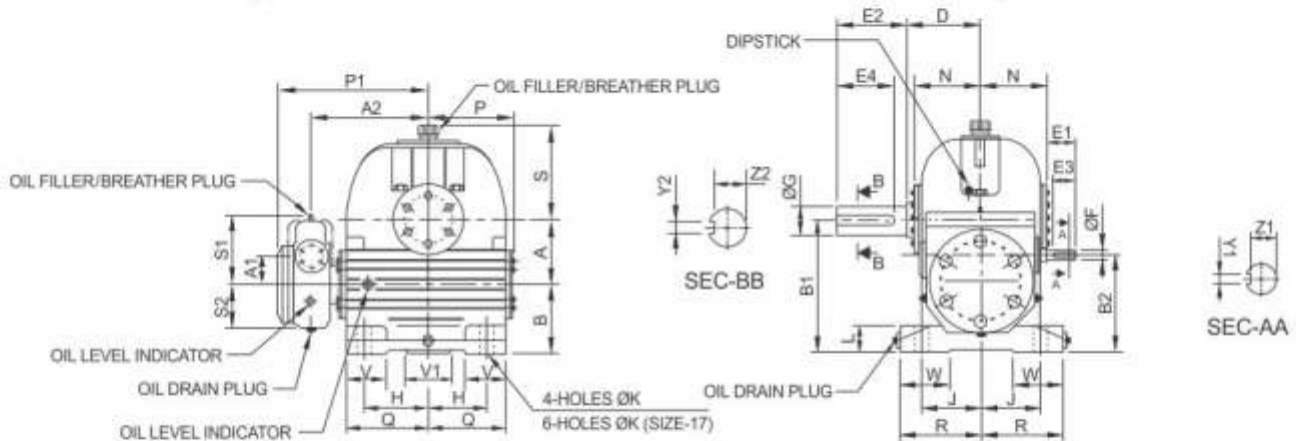


SIZE	A	B	C	D	E1	E2	E3	E4	F	G	H	J	K	L
CFU-200	50.8	55	92	77	52	52	50	50	20 +.021 +.008	23 +.021 +.008	57.5	57.5	11	22
CFU-250	63.5	63.5	113.5	89	55	56	50	50	25 +.021 +.008	28 +.021 +.008	71	75	11	22
CFU-300	76.2	89	120	110	60	60	50	50	30 +.021 +.008	33 +.025 +.009	80	87.5	14	25
CFU-350	88.9	105	143	125	62	85	60	80	30 +.021 +.008	38 +.025 +.009	90	95	14	25
CFU-400	101.6	108	167.5	130	67	89	62	85	32 +.025 +.009	45 +.030 +.011	108	102	22	38
CFU-500	127	114	199	147	72	102	70	97	38 +.025 +.009	50 +.030 +.011	124	111	22	54
CFU-600	152.4	127	213	159	85	110	80	100	38 +.025 +.009	57 +.030 +.011	133	121	24	64
CFU-700	177.8	146	236	165	86	127	80	120	45 +.025 +.009	65 +.030 +.011	152	133	26	70
CFU-800	203.2	146	259.5	165	89	140	80	130	45 +.025 +.009	70 +.035 +.013	171	133	27	75
CFU-900	228.6	159	248	210	102	146	97	140	50 +.025 +.009	75 +.035 +.013	200	155	27	75
CFU-1000	254	171.5	323	212.5	124	152	120	140	55 +.030 +.011	85 +.035 +.013	215.9	165.1	32	50
CFU-1200	304.8	190.5	377.5	226.5	124	171	120	160	60 +.030 +.011	95 +.035 +.013	260.4	184.2	35	50
CFU-1400	355.6	215.9	425	292	146	190.5	140	180	75 +.030 +.011	115 +.035 +.013	298.5	216	42	58
CFU-1700	431.8	254	517	343	181	203	170	200	85 +.030 +.011	140 +.040 +.015	381	254	42	75

SIZE	N	Q	R	S	T	V	V1	Y1	Y2	Z1	Z2	Net Wt. (Kg.)	Oil Required at 1st Filling (Ltr.)
CFU-200	75	70	74	85	170	32	-	6P9	8P9	16.5	19	20	1
CFU-250	85	92.5	90	100	190	38	-	8P9	8P9	21	23	24	1.50
CFU-300	97	100	105	115	200	45	-	8P9	8P9	26	29	40	1.75
CFU-350	105	115	115	120	240	55	-	8P9	10P9	26	33	62	2.5
CFU-400	121	140	127	133	250	64	-	8P9	10P9	28	40	71	3
CFU-500	140	167.5	137	168	290	70	-	10P9	14P9	33	44.5	104	4.4
CFU-600	142	179	149	195	320	79	-	10P9	16P9	33	51	137	5.5
CFU-700	151	208	162	215	348	89	-	14P9	18P9	39.5	58	175	8
CFU-800	159	230	171	240	370	100	-	14P9	20P9	39.5	62.5	222	9.1
CFU-900	187	280	195	280	450	140	-	14P9	20P9	44.5	67.5	283	13
CFU-1000	194	299	200	330	470	160	72	16P9	22P9	49	76.5	407	13.5
CFU-1200	216	356	222	375	495	165	85	18P9	25P9	53	86	600	20
CFU-1400	245	413	260	440	520	190	120	20P9	32P9	67.5	104	901	30
CFU-1700	295	502	300	530	630	200	130	22P9	36P9	76.5	128	1355	44



**Size: 300 to 1700, Type: CUFD  
(Under Driven Foot Mounted Double Reduction Gear Boxes)**



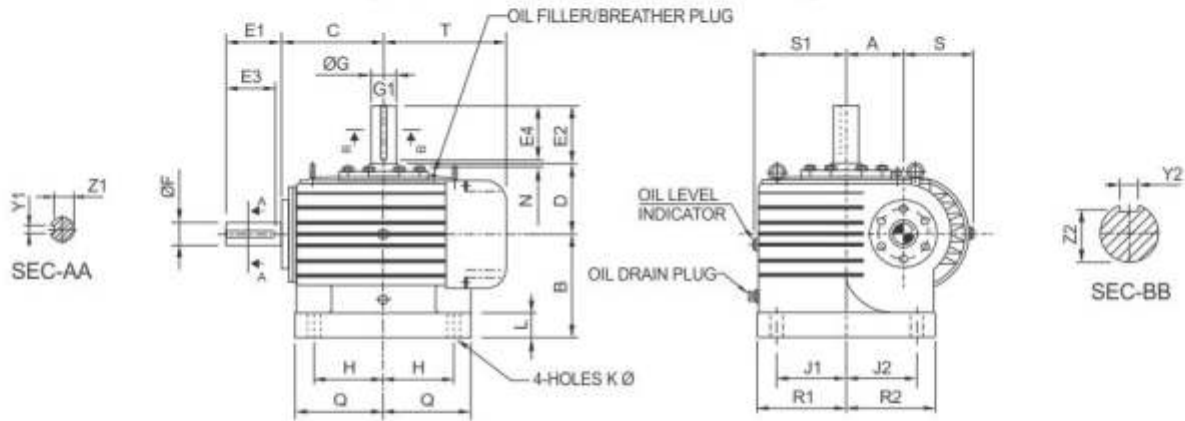
SIZE	A	A1	A2	B	B1	B2	D	E1	E2	E3	E4	F	G	H	J	K	L	N
CUFD-300 X 200	76.2	50.80	150	89	165.2	139.8	110	52	60	50	50 <sup>+0.021</sup> <sub>+0.008</sub>	20 <sup>+0.025</sup> <sub>+0.009</sub>	33	80	87.5	14	25	97
CUFD-400 X 200	101.6	50.80	189	108	209.6	158.8	130	52	89	50	85 <sup>+0.021</sup> <sub>+0.008</sub>	20 <sup>+0.025</sup> <sub>+0.009</sub>	45	108	102	22	38	121
CUFD-500 X 250	127	63.50	230	114	241	177.5	147	55	102	50	97 <sup>+0.021</sup> <sub>+0.008</sub>	25 <sup>+0.025</sup> <sub>+0.009</sub>	50	124	111	22	54	140
CUFD-600 X 300	152.4	76.20	247.5	127	279.4	203.2	159	60	110	50	100 <sup>+0.025</sup> <sub>+0.009</sub>	30 <sup>+0.030</sup> <sub>+0.011</sub>	57	133	121	24	64	142
CUFD-700 X 400	177.8	101.6	287.5	146	323.8	247.6	165	67	127	62	120 <sup>+0.025</sup> <sub>+0.009</sub>	32 <sup>+0.030</sup> <sub>+0.011</sub>	65	152	133	26	70	151
CUFD-800 X 400	203.2	101.6	310	146	349.2	247.6	165	67	140	62	130 <sup>+0.025</sup> <sub>+0.009</sub>	32 <sup>+0.030</sup> <sub>+0.011</sub>	70	171	133	27	75	159
CUFD-900 X 500	228.6	127	360	159	387.6	286	210	72	146	70	140 <sup>+0.025</sup> <sub>+0.009</sub>	38 <sup>+0.030</sup> <sub>+0.011</sub>	75	200	155	27	75	187
CUFD-1000 X 500	254	127	370	171.5	425.5	298.5	212.5	72	152	70	140 <sup>+0.025</sup> <sub>+0.009</sub>	38 <sup>+0.035</sup> <sub>+0.013</sub>	85	215.9	165.1	32	50	194
CUFD-1200 X 600	304.8	152.4	437.5	190.5	495.3	342.9	226.5	85	171	80	160 <sup>+0.025</sup> <sub>+0.009</sub>	38 <sup>+0.035</sup> <sub>+0.013</sub>	95	260.4	184.2	35	50	216
CUFD-1400 X 700	355.6	177.8	495	215.9	571.5	393.7	292	86	190.5	80	180 <sup>+0.025</sup> <sub>+0.009</sub>	45 <sup>+0.035</sup> <sub>+0.013</sub>	115	298.5	216	42	58	245
CUFD-1700 X 800	431.8	203.2	590	254	685.8	457.2	343	89	203	80	200 <sup>+0.025</sup> <sub>+0.009</sub>	45 <sup>+0.040</sup> <sub>+0.015</sub>	140	381	254	42	75	295

SIZE	P	P1	Q	R	S	S1	S2	V	V1	Y1	Y2	Z1	Z2	Net Wt. (Kg.)	Oil Required at 1st Filling Ltr.)
CUFD-300 X 200	125	215	100	115	110	110	80	45	-	6P9	8P9	16.5	29	70	1.75
CUFD-400 X 200	165	255	140	133	135	110	80	64	-	6P9	10P9	16.5	40	76	3
CUFD-500 X 250	195	305	167.5	137	168	130	100	70	-	8P9	14P9	21.0	44.5	113	4.4
CUFD-600 X 300	210	330	179	149	195	150	120	79	-	8P9	16P9	26.0	51	173	5.5
CUFD-700 X 400	235	385	208	162	215	190	140	89	-	8P9	18P9	28	58	225	8
CUFD-800 X 400	255	410	230	171	240	190	140	100	-	8P9	20P9	28	62.5	275	9.1
CUFD-900 X 500	295	475	280	195	280	240	150	140	-	10P9	20P9	33	67.5	349	13
CUFD-1000 X 500	315	485	299	200	330	240	160	160	72	10P9	22P9	33	76.5	429	13.5
CUFD-1200 X 600	375	560	356	222	375	280	190	165	85	10P9	25P9	33	86	647	20
CUFD-1400 X 700	425	630	413	260	440	310	220	190	120	14P9	32P9	39.5	104	955	30
CUFD-1700 X 800	515	735	502	300	530	350	250	200	130	14P9	36P9	39.5	128	1666	40





**Size: 200 to 1700, Type: CFV  
(Foot Mounted Vertical Gear Boxes)**

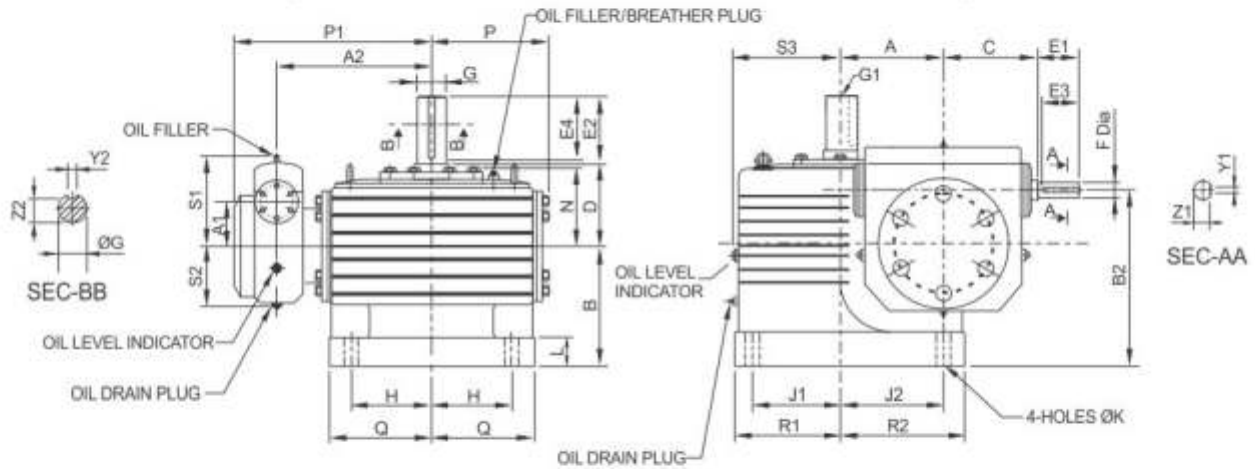


SIZE	A	B	C	D	E1	E2	E3	E4	F	G	G1	H	J1	J2	K	L
CFV-200	50.8	89	92	90	52	52	50	50	20 +.021 +.002	23 +.021 +.002	M8	62.5	62.5	62.5	11	15
CFV-250	63.5	105	113.5	90	55	56	50	50	25 +.021 +.002	28 +.021 +.002	M10	80	80	80	11	18
CFV-300	76.2	125	120	110	60	60	50	50	30 +.021 +.002	33 +.021 +.002	M12	97.5	97.5	97.5	17	20
CFV-350	88.9	135	143	125	62	85	60	80	30 +.021 +.002	38 +.021 +.002	M12	100.5	100.5	100.5	17	25
CFV-400	101.6	171	167.5	130	67	89	62	85	32 +.025 +.009	45 +.025 +.009	M16	118	118	118	22	30
CFV-500	127	190	199	147	72	102	70	97	38 +.025 +.009	50 +.025 +.009	M16	140	140	140	22	32
CFV-600	152.4	210	213	159	85	110	80	100	38 +.025 +.009	57 +.030 +.011	M20	152	152	152	26	38
CFV-700	177.8	229	236	165	86	127	80	120	45 +.025 +.009	65 +.030 +.011	M20	178	178	178	26	38
CFV-800	203.2	241	259.5	165	89	140	80	130	45 +.025 +.009	70 +.030 +.011	M20	203	203	203	27	45
CFV-900	228.6	254	248	210	102	146	97	140	50 +.025 +.009	75 +.030 +.011	M20	205	205	205	27	50
CFV-1000	254	279	323	212.5	124	152	120	140	55 +.030 +.011	85 +.035 +.013	M20	260	260	260	32	51
CFV-1200	304.8	305	371.5	226.5	124	171	120	160	60 +.030 +.011	95 +.035 +.013	M24	317.5	317.5	317.5	35	57
CFV-1400	355.6	330	425	292	146	190.5	140	180	75 +.030 +.011	115 +.035 +.013	M24	355.5	355.5	355.5	42	64
CFV-1700	431.8	406.5	517.5	343	181	203	170	200	85 +.035 +.013	140 +.040 +.015	M30	431.8	431.8	431.8	42	76

SIZE	N	Q	R1	R2	S	S1	T	Y1	Y2	Z1	Z2	Net Wt. (Kg.)	Oil Required at 1st Filling (Ltr.)
CFV-200	78	75	75	75	60	-	170	6P9	8P9	16.5	19	16	1
CFV-250	85	100	100	100	70	-	190	8P9	8P9	21	23	28	1.5
CFV-300	100	120	120	120	90	-	200	8P9	8P9	26	29	42	1.6
CFV-350	110	127.5	127.5	127.5	72	-	240	8P9	10P9	26	33	65	2.25
CFV-400	121	140	140	140	115	155	250	8P9	10P9	28	40	80	2.8
CFV-500	135	165	165	165	127	182	290	10P9	14P9	33	44.5	112	6.2
CFV-600	144	184	184	184	136	197	320	10P9	16P9	33	51	148	7.5
CFV-700	151	210	210	210	146	222	340	14P9	18P9	39.5	58	212	12.5
CFV-800	159	238	238	238	155	247	370	14P9	20P9	39.5	62.5	268	15.3
CFV-900	187	245	245	245	162	263	450	14P9	20P9	44.5	67.5	300	20
CFV-1000	194	311	298	298	164	367	470	16P9	22P9	49	76.5	484	23
CFV-1200	216	368	355	355	183	414	495	18P9	25P9	53	86	688	40
CFV-1400	254	425	413	413	190	468	518	20P9	32P9	67.5	104	939	70
CFV-1700	305	502	502	502	242	570	629	22P9	36P9	76.5	128	1745	109



**Size: V300 to V1700, Type: CVFD  
(Vertical Foot Mounted Double Reduction Gear Boxes)**



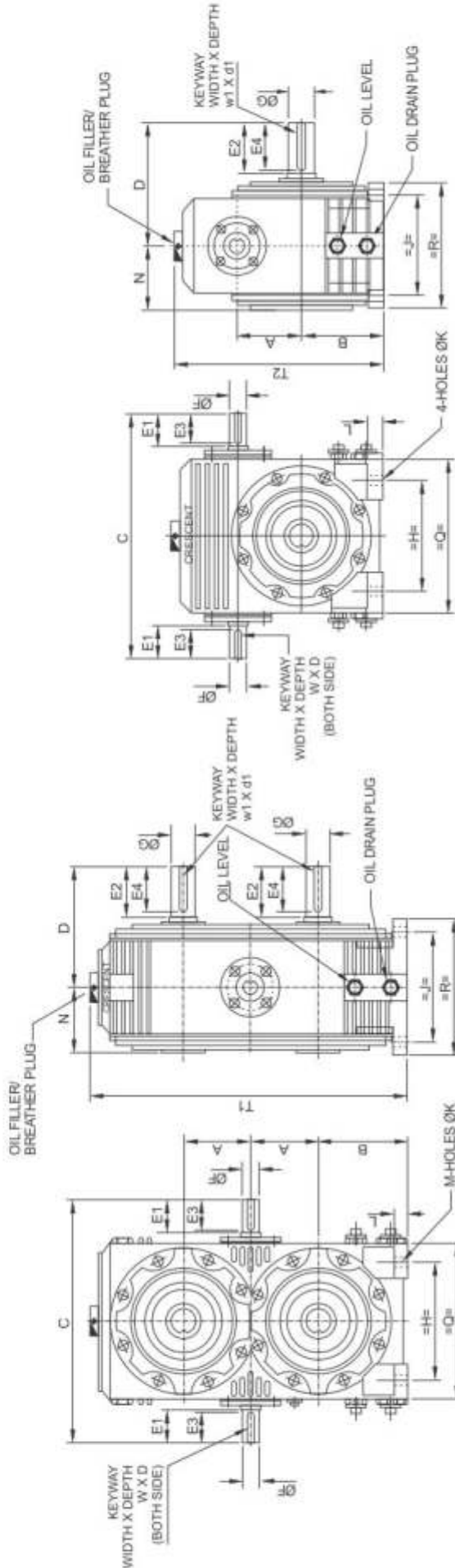
SIZE	A	A1	A2	B	B2	C	D	E1	E2	E3	E4	F	G	G1	H	J1	J2
CVFD-300 X 200	76.2	50.8	150	125	175.8	92	110	52	60	50	50	20 <sup>+0.021</sup> <sub>+0.002</sub>	33 <sup>+0.021</sup> <sub>+0.002</sub>	M12	97.5	97.5	97.5
CVFD-400 X 200	101.6	50.80	189	171	221.8	92	130	52.0	89	50	85	20 <sup>+0.021</sup> <sub>+0.008</sub>	45 <sup>+0.025</sup> <sub>+0.009</sub>	M16	118	118	118
CVFD-500 X 250	127	63.50	230	190	253.5	113.5	147	55.0	102	50	97	25 <sup>+0.021</sup> <sub>+0.008</sub>	50 <sup>+0.025</sup> <sub>+0.009</sub>	M16	140	140	140
CVFD-600 X 300	152.4	76.20	247.5	210	286.2	121	159	60.0	110	50	100	30 <sup>+0.021</sup> <sub>+0.008</sub>	57 <sup>+0.030</sup> <sub>+0.011</sub>	M20	152	152	152
CVFD-700 X 400	177.8	101.6	287.5	229	330.6	167.5	165	67.0	127	62	120	32 <sup>+0.025</sup> <sub>+0.009</sub>	65 <sup>+0.030</sup> <sub>+0.011</sub>	M20	178	178	178
CVFD-800 X 400	203.2	101.6	310	241	342.6	167.5	165	67.0	140	62	130	32 <sup>+0.025</sup> <sub>+0.009</sub>	70 <sup>+0.030</sup> <sub>+0.011</sub>	M20	203	203	203
CVFD-900 X 500	228.6	127	360	254	381	199	210	72.0	146	70	140	38 <sup>+0.025</sup> <sub>+0.009</sub>	75 <sup>+0.030</sup> <sub>+0.011</sub>	M20	205	205	205
CVFD-1000 X 500	254	127	370	279.5	406.5	199	212.5	72.0	152	70	140	38 <sup>+0.025</sup> <sub>+0.009</sub>	85 <sup>+0.035</sup> <sub>+0.013</sub>	M20	260	260	260
CVFD-1200 X 600	304.8	152.4	437.5	305	457.4	213	226.5	85.0	171	80	160	38 <sup>+0.025</sup> <sub>+0.009</sub>	95 <sup>+0.035</sup> <sub>+0.013</sub>	M24	317.5	317.5	317.5
CVFD-1400 X 900	355.6	177.8	495	330	507.8	236	292	86.0	190.5	80	180	45 <sup>+0.025</sup> <sub>+0.009</sub>	115 <sup>+0.035</sup> <sub>+0.013</sub>	M24	355.5	355.5	355.5
CVFD-1700 X 800	431.8	203.2	590	406.5	609.7	259.5	343	89.0	203	80	198	45 <sup>+0.025</sup> <sub>+0.009</sub>	140 <sup>+0.040</sup> <sub>+0.015</sub>	M30	431.8	431.8	431.8

SIZE	K	L	N	P	P1	Q	R1	R2	S1	S2	S3	Y1	Y2	Z1	Z2	Net Wt. (Kg.)	Oil Reqd. at 1st Filling (Lt.)
CVFD-300 X 200	17	20	100	125	215	120	120	120	110	80		6P9	8P9	16.5	29		2.1
CVFD-400 X 200	22	30	121	165	255	140	140	140	110	80	155	6P9	10P9	16.5	40	84	2.8
CVFD-500 X 250	22	32	134	195	305	165	165	165	130	100	182	8P9	14P9	21.0	44.5	139	6.2
CVFD-600 X 300	26	38	142	210	330	184	184	184	150	120	197	8P9	16P9	26.0	51	194	7.5
CVFD-700 X 400	26	38	151	235	385	210	210	210	190	140	222	8P9	18P9	28	58	261	12.5
CVFD-800 X 400	27	45	159	255	410	238	238	238	190	140	247	8P9	20P9	28	62.5	315	15.5
CVFD-900 X 500	27	50	187	295	475	245	245	245	240	150	263	10P9	20P9	33	67.5	369	20
CVFD-1000 X 500	32	51	194	315	485	311	298	298	240	160	367	10P9	22P9	33	76.5	550	23
CVFD-1200 X 600	35	57	216	375	560	368	355	355	280	190	414	10P9	25P9	33	86	801	40
CVFD-1400 X 900	42	64	254	425	630	425	413	413	310	220	468	14P9	32P9	39.5	104	1104	70
CVFD-1700 X 800	42	76	305	515	735	502	502	502	350	250	570	14P9	36P9	39.5	128	1806	109

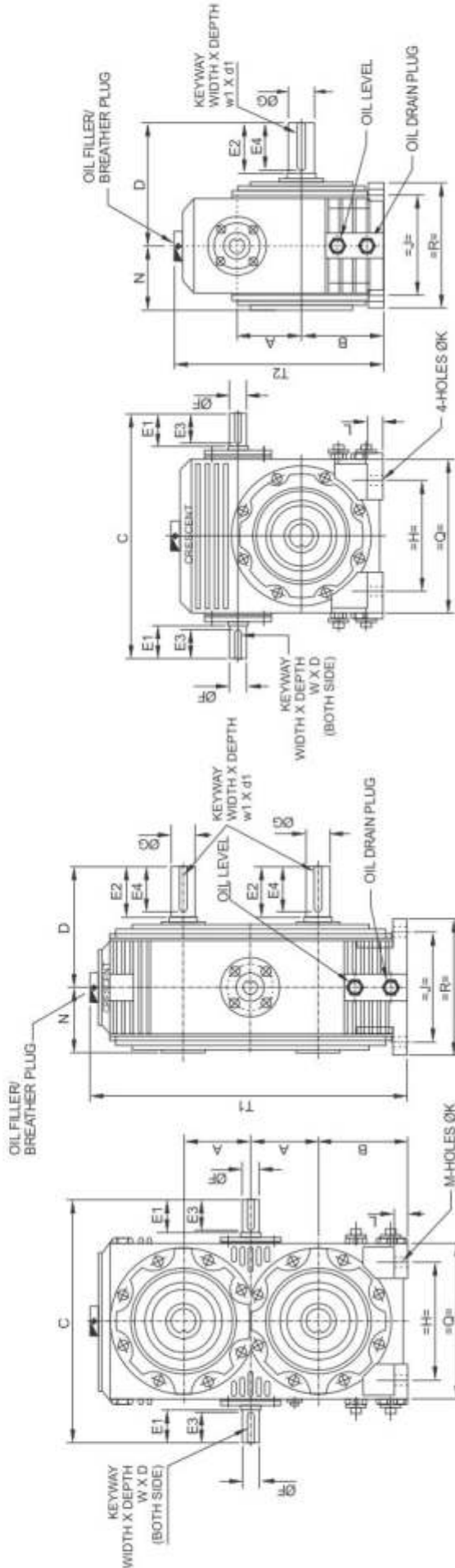


**CTO / CO SERIES TUBE MILL GEAR BOXES**

**TYPE-A: CTO - 200 x 200 TO 400 x 400**



**TYPE-B: CO - 200 TO 400**

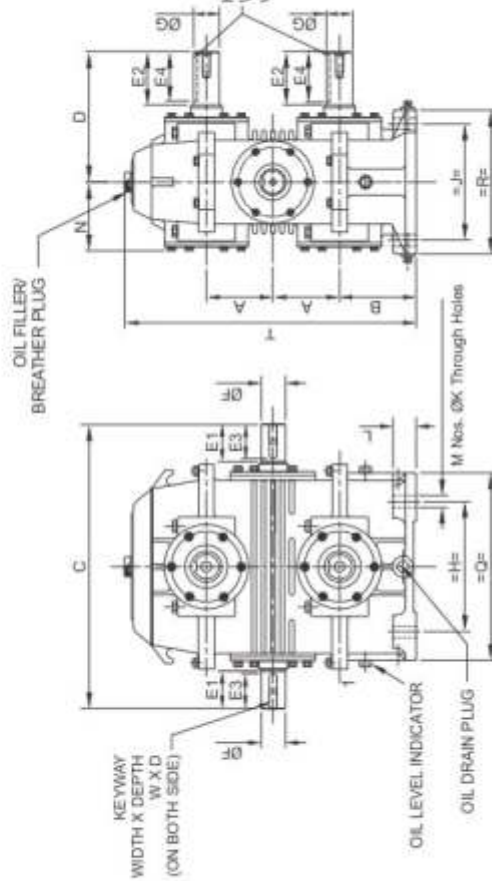


DESCRIPTION	A	B	C	D	E1	E2	E3	E4	ØF	ØG	H	J	K	L	M	N	Q	R	T1	T2	W	D	w1	d1	TYPE
CTO/ CO-200 X 200	50.8	83	288	140	52	50	50	48	20 <sup>+0.021</sup> <sub>+0.008</sub>	23 <sup>+0.021</sup> <sub>+0.008</sub>	95	100	11	15	4	70	142	125	280	230	6P9	3.5	8P9	4	A & B
CTO/ CO-250 X 250	63.5	95	337	146	55	56	50	50	25 <sup>+0.021</sup> <sub>+0.008</sub>	28 <sup>+0.021</sup> <sub>+0.008</sub>	142	150	11	20	4	85	180	180	335	260	8P9	4	8P9	4	A & B
CTO/ CO-300 X 300	76.2	105	360	170	60	60	50	50	30 <sup>+0.021</sup> <sub>+0.008</sub>	33 <sup>+0.025</sup> <sub>+0.009</sub>	160	175	14	20	4	82	200	210	390	315	8P9	4	8P9	4	A & B
CTO / CO-350 X 350	88.9	115	410	210	62	85	60	80	30 <sup>+0.021</sup> <sub>+0.008</sub>	38 <sup>+0.025</sup> <sub>+0.009</sub>	180	220	18	24	4	100	230	260	445	345	8P9	4	10P9	5	A & B
CTO/ CO-400 X 400	101.6	130	469	219	67	89	62	85	32 <sup>+0.025</sup> <sub>+0.009</sub>	45 <sup>+0.025</sup> <sub>+0.009</sub>	220	260	22	30	4	120	280	300	490	390	8P9	4	10P9	5	A & B

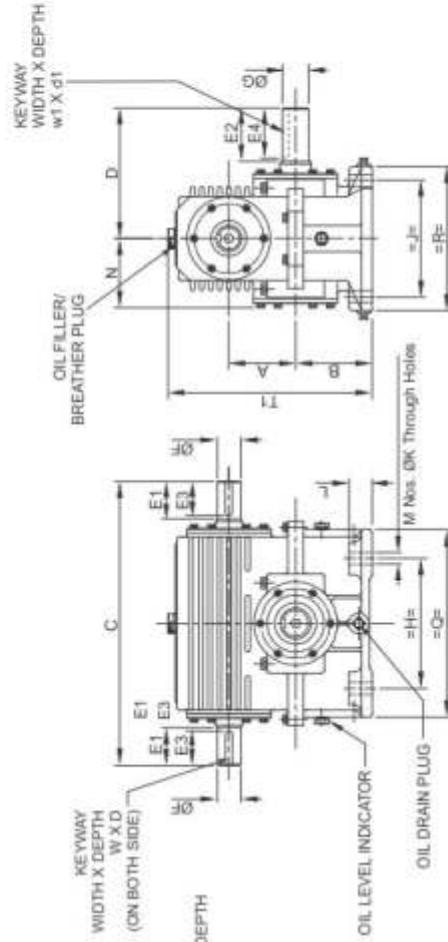


**CTO / CO SERIES TUBE MILL GEAR BOXES**

**TYPE-A: CTO - 500X500 TO 1200X1200**



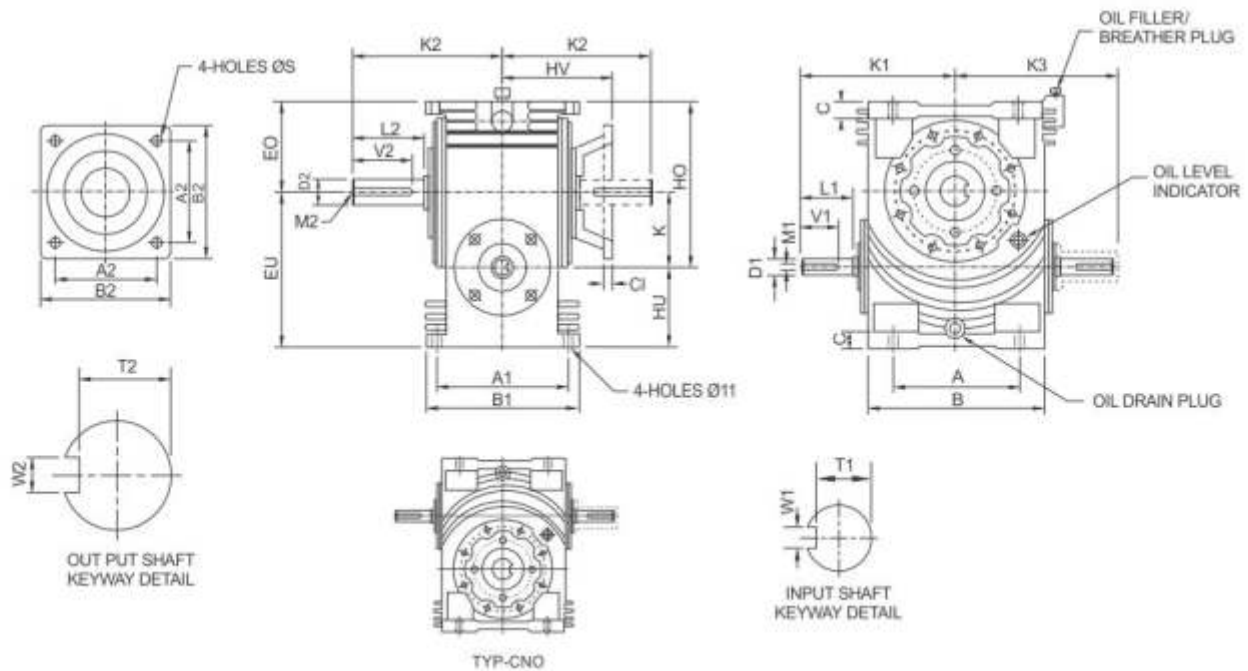
**TYPE-B: CO - 500 TO 1200**



DESCRIPTION	A	B	C	D	E1	E2	E3	E4	F	G	H	J	K	L	M	N	Q	R	T	T1	W	D	w1	d1	TYPE	
CTO/ CO-500 X 500	127	146	542	249	72	102	70	97	45 <sup>+0.025</sup> <sub>+0.009</sub>	50 <sup>+0.025</sup> <sub>+0.009</sub>	248	222	22	44	4	134	358	274	568	400	14P9	5.5	14P9	5.5	5.5	A & B
CTO/ CO-600 X 600	152.4	171	596	269	85	110	80	100	50 <sup>+0.025</sup> <sub>+0.009</sub>	57 <sup>+0.030</sup> <sub>+0.011</sub>	266	242	24	40	4	142	410	298	680	460	14P9	5.5	16P9	6.0	6.0	A & B
CTO/ CO-700 X 700	177.8	197	644	292	86	127	80	120	55 <sup>+0.030</sup> <sub>+0.011</sub>	65 <sup>+0.030</sup> <sub>+0.011</sub>	304	266	26	50	4	151	472	324	778	530	18P9	7	18P9	7.0	7.0	A & B
CTO/ CO-800 X 800	203.2	222	697	305	89	140	80	130	60 <sup>+0.030</sup> <sub>+0.011</sub>	70 <sup>+0.030</sup> <sub>+0.011</sub>	342	266	27	55	4	159	520	342	895	590	18P9	7	20P9	7.5	7.5	A & B
CTO/ CO-900 X 900	228.6	254	810	356	102	146	97	140	65 <sup>+0.030</sup> <sub>+0.011</sub>	75 <sup>+0.030</sup> <sub>+0.011</sub>	400	310	27	75	4	187	560	370	1035	680	18P9	7	20P9	7.5	7.5	A & B
CTO/ CO-1000 X 1000	254	273.1	894	364.5	124	152	120	140	70 <sup>+0.030</sup> <sub>+0.011</sub>	85 <sup>+0.035</sup> <sub>+0.013</sub>	432	330	32	75	4	205	598	400	1110	760	20P9	7.5	22P9	8.5	8.5	A & B
CTO/ CO-1200 X 1200	304.8	330.2	1003	397.2	124	171	120	160	80 <sup>+0.030</sup> <sub>+0.011</sub>	95 <sup>+0.035</sup> <sub>+0.013</sub>	520.8	368.4	35	80	4	216	712	444	1336	880	22P9	8.5	25P9	9	9	A & B



**Size: 162 to 350, Type: CNU, CNO, CNV  
(NU Series Under Driven, Over Driven & Vertical Gear Boxes)**

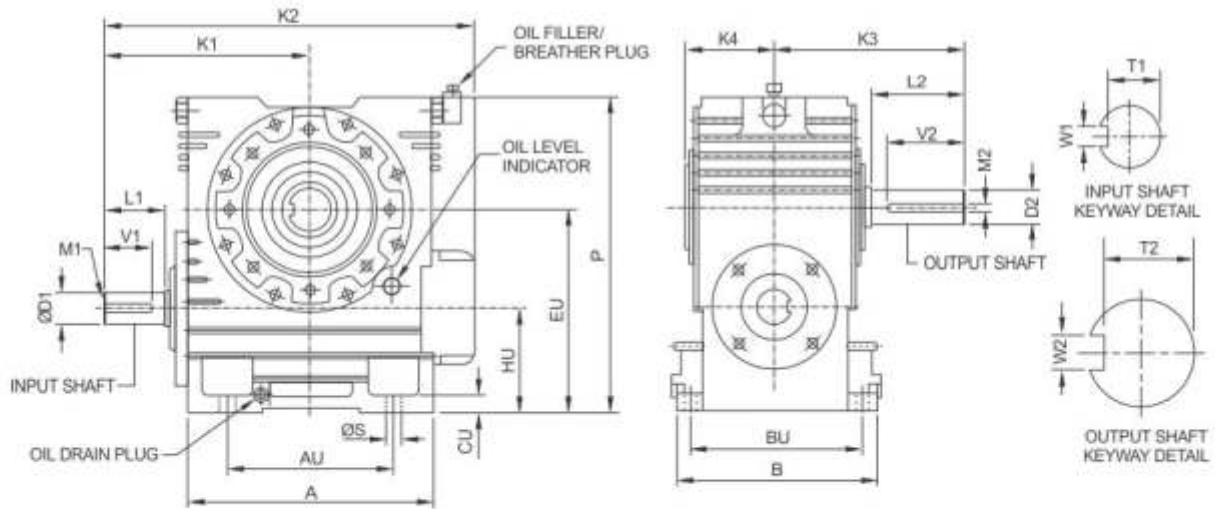


SIZE	A	B	A1	B1	C	A2	B2	C1	S	HU	EU	HO	EO	HV	K
CN-U/O/V-162	80	140	70	90	6	-	-	-	9	35	76.275	97.5	56.225	65	41.275
CN-U/O/V-200	95	142	100	125	14	120	150	14	11	70	120.8	133.8	83	94	50.8
CN-U/O/V-225	105	152	105	132	14	120	150	14	11	70	127.15	142.15	85	100	57.15
CN-U/O/V-300	160	200	175	210	20	200	240	16	14	105	181.2	181.2	105	160	76.2
CN-U/O/V-350	165	220	200	240	22	220	260	20	18	105	193.9	223.9	135	170	88.9

SIZE	K1	K2	K3	D1	L1	M1	T1	W1	D2	L2	M2	T2	W2	V1	V2
CN-U/O/V-162	125	110	130	16 <sup>+0.18</sup> / <sub>+0.007</sub>	41	M5	13	5P9	20 <sup>+0.021</sup> / <sub>+0.008</sub>	48	M6	16.5	6P9	36	45
CN-U/O/V-200	133	128	140	16 <sup>+0.18</sup> / <sub>+0.007</sub>	47	M5	13	5P9	25 <sup>+0.021</sup> / <sub>+0.008</sub>	57	M10	21	8P9	45	55
CN-U/O/V-225	142	136	150	22 <sup>+0.021</sup> / <sub>+0.008</sub>	50	M8	18.5	6P9	25 <sup>+0.021</sup> / <sub>+0.008</sub>	60	M10	21	8P9	45	55
CN-U/O/V-300	180	172	190	30 <sup>+0.021</sup> / <sub>+0.008</sub>	60	M8	26	8P9	33 <sup>+0.025</sup> / <sub>+0.009</sub>	60	M12	33	10P9	50	50
CN-U/O/V-350	200	208	205	30 <sup>+0.021</sup> / <sub>+0.008</sub>	65	M10	26	8P9	40 <sup>+0.025</sup> / <sub>+0.009</sub>	100	M16	35	12P9	60	95



**Size: 400 to 1050, Type: CNU  
(NU Series Under Driven Gear Boxes)**

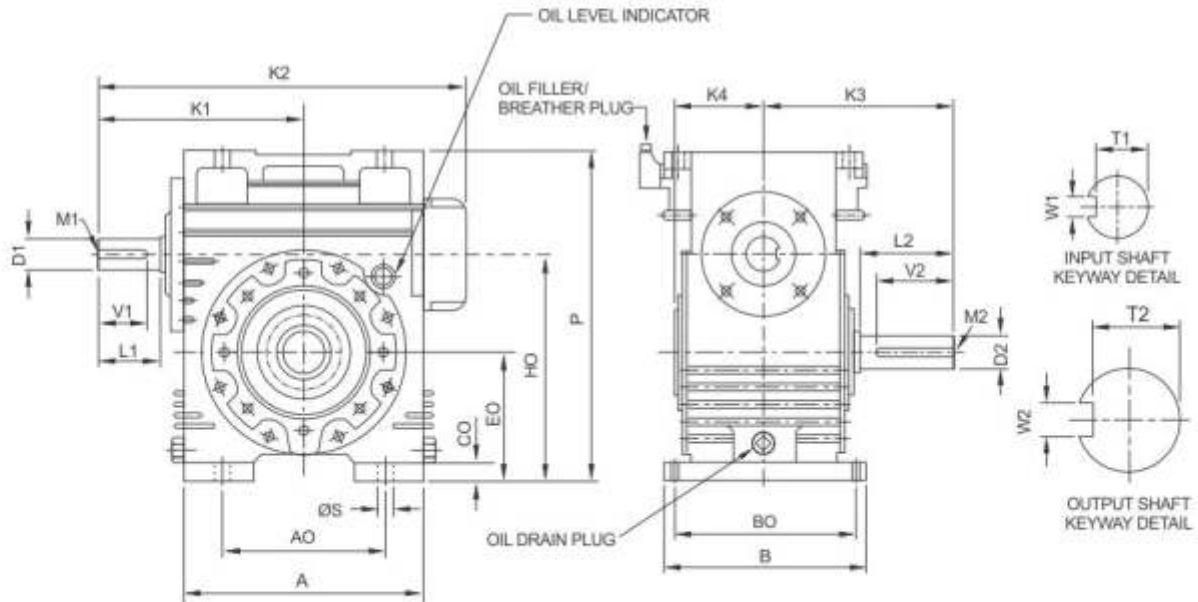


SIZE	A	AU	B	BU	CU	ØS	HU	EU	P	D1	L1	V1	M1
CNU-400	250	180	200	160	25	18	108	209.6	325	32 +0.025 +0.009	65	60	M12
CNU-500	300	220	252	200	30	18	118	245	385	35 +0.025 +0.009	70	65	M12
CNU-600	354	266	302	241	30	22	127	279.4	450	38 +0.025 +0.009	75	70	M12
CNU-700	400	306	340	266	36	22	146	323.8	524	40 +0.025 +0.009	82	80	M16
CNU-800	440	343	400	266	40	27	146	349.2	574	45 +0.025 +0.009	88	85	M16
CNU-900	490	390	344	282	40	27	154	382.6	635	50 +0.025 +0.009	95	92	M16
CNU-1050	590	432	430	330	50	33	172	438.7	720	60 +0.030 +0.011	115	110	M20

SIZE	T1	W1	K1	K2	D2	L2	V2	M2	T2	W2	K3	K4
CNU-400	27	10P9	215	440	45 +0.025 +0.009	89	85	M16	39.5	14P9	215	115
CNU-500	30	10P9	245.5	530	50 +0.025 +0.009	102	97	M16	44.5	14P9	249	130
CNU-600	33	10P9	279	596	57 +0.030 +0.011	110	100	M20	51	16P9	269	158
CNU-700	35	12P9	311	656	65 +0.030 +0.011	127	120	M20	58	18P9	292	165
CNU-800	39.5	14P9	342	725	70 +0.030 +0.011	140	130	M20	62.5	20P9	345	185
CNU-900	44.5	14P9	375	776	75 +0.030 +0.011	145	140	M20	67.5	20P9	325	180
CNU-1050	53	18P9	450	925	80 +0.030 +0.011	150	147	M20	71	22P9	352	200



**Size: 400 to 1050, Type: CNO  
(Nu Series Over Driven Gear Boxes)**

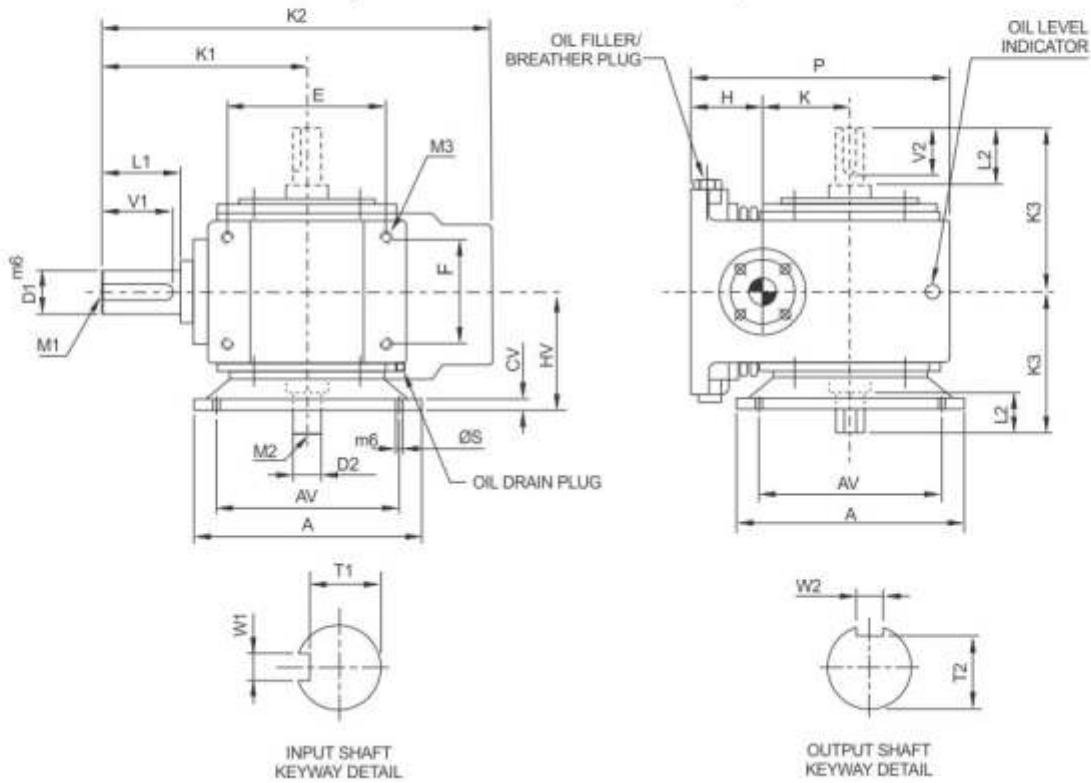


SIZE	A	AO	B	BO	CO	ØS	HO	EO	P	D1	L1	V1	M1
CNO-400	250	180	240	200	25	18	241.6	140	350	32 +0.025 +0.009	65	60	M12
CNO-500	300	220	270	230	25	18	292	165	410	35 +0.025 +0.009	70	65	M12
CNO-600	354	266	310	250	30	22	352.4	200	479.4	38 +0.025 +0.009	75	70	M12
CNO-700	400	306	340	266	44	22	421.8	244	568	40 +0.025 +0.009	82	80	M16
CNO-800	440	343	400	310	44	27	472.2	269	618	45 +0.025 +0.009	88	85	M16
CNO-900	490	390	414	340	44	27	524.6	296	679	50 +0.025 +0.009	95	92	M16
CNO-1050	590	432	484	400	50	33	597.7	331	770	60 +0.030 +0.011	115	110	M20

SIZE	T1	W1	K1	K2	D2	L2	V2	M2	T2	W2	K3	K4
CNO-400	27	10P9	215	440	45 +0.025 +0.009	89	85	M16	39.5	14P9	219	115
CNO-500	30	10P9	245.5	530	50 +0.025 +0.009	102	97	M16	44.5	14P9	249	130
CNO-600	33	10P9	279	596	57 +0.030 +0.011	110	100	M20	51	16P9	269	158
CNO-700	35	12P9	311	656	65 +0.030 +0.011	127	120	M20	58	18P9	292	165
CNO-800	39.5	14P9	342	725	70 +0.030 +0.011	140	130	M20	62.5	20P9	345	185
CNO-900	44.5	14P9	375	776	75 +0.030 +0.011	145	140	M20	67.5	20P9	325	180
CNO-1050	53	18P9	450	925	80 +0.030 +0.011	150	147	M20	71	22P9	352	200



**Size: 400 to 1050, Type: CNV  
(NU Series Vertical Gear Boxes)**



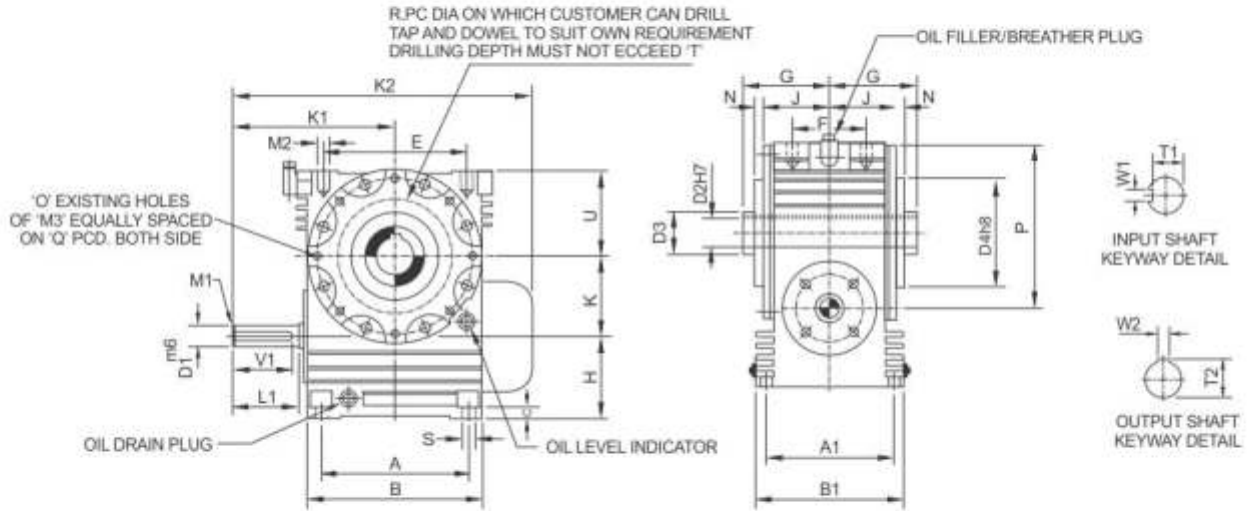
SIZE	A	AV	CV	D1	D2	E	F	H	K	K1	K2	K3	L1	L2
CNV-400	280	235	20	32 +0.025 +0.009	45 +0.025 +0.009	200	100	108	101.6	215	440	215	65	89
CNV-500	320	260	22	35 +0.025 +0.009	50 +0.025 +0.009	240	130	118	127	245.5	530	249	70	102
CNV-600	340	270	25	38 +0.025 +0.009	57 +0.030 +0.011	280	150	127	152.4	279	596	269	75	110
CNV-700	400	320	40	40 +0.025 +0.009	65 +0.030 +0.011	320	150	146	177.8	311	656	292	82	127
CNV-800	440	360	40	45 +0.025 +0.009	70 +0.030 +0.011	340	160	146	203.2	342	725	345	88	140
CNV-900	490	410	40	50 +0.025 +0.009	75 +0.030 +0.011	386	180	154	228.6	375	776	325	95	145
CNV-1050	560	480	40	60 +0.030 +0.011	80 +0.030 +0.011	440	220	172	266.7	450	925	352	115	150

SIZE	HV	M1	M2	M3	P	ØS	T1	T2	V1	V2	W1	W2
CNV-400	140	M12	M16	M16	325	18	27	39.5	60	85	10P9	14P9
CNV-500	185	M12	M16	M16	385	18	30	44.5	65	97	10P9	14P9
CNV-600	180	M12	M20	M20	450	22	33	51	70	100	10P9	16P
CNV-700	200	M16	M20	M20	524	22	35	58	80	120	12P9	18P9
CNV-800	240	M16	M20	M24	574	27	39.5	62.5	85	130	14P9	20P9
CNV-900	240	M16	M20	M24	635	27	44.5	67.5	92	140	14P9	20P9
CNV-1050	260	M20	M20	M30	720	33	53	71	110	147	18P9	22P9





**Size: 225 to 1050 Type: CNSM  
(NU Series Shaft Mounted Gear Boxes)**

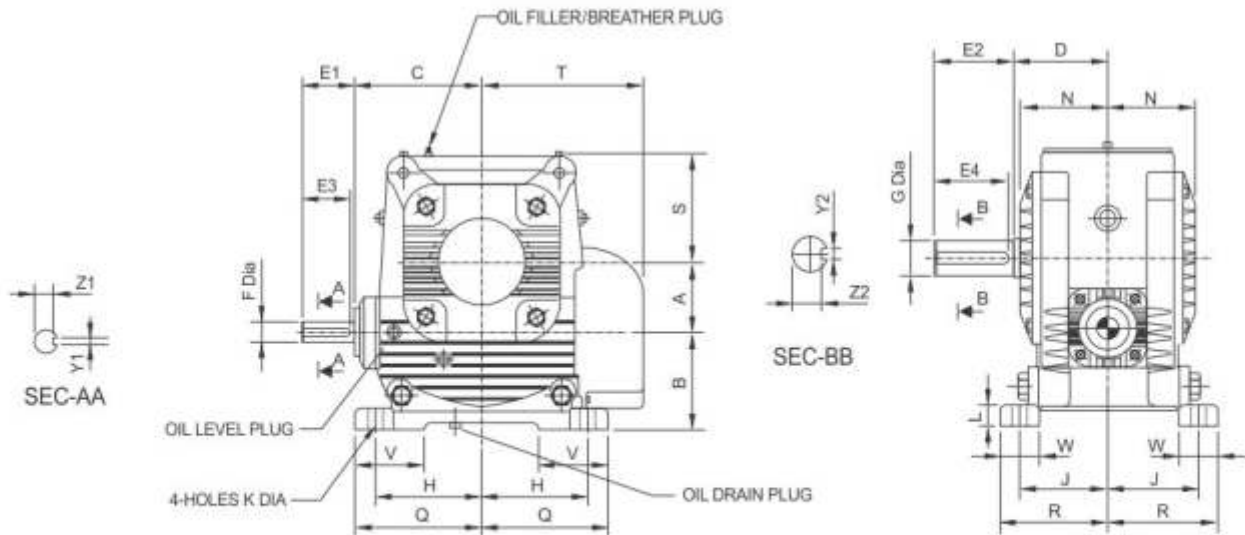


SIZE	A	A1	B	B1	C	D1	D2	D3	D4	E	F	G	H	J	K	K1
CNSM-225	105	105	152	132	14	22	30	50	105	105	105	75	70	58	57.15	160
CNSM-300	160	175	200	210	20	30	50	80	138	160	175	100	105	80	76.2	180
CNSM-350	165	200	220	240	22	25	55	85	130	165	200	105	105	90	88.9	200
CNSM-400	180	160	250	200	25	32	65	95	146	200	100	115	108	100	101.6	215
CNSM-500	220	200	300	252	30	35	70	105	195	240	130	145	118	117	127	245.5
CNSM-600	266	241	354	302	30	38	75	105	205	280	150	165	127	134	152.4	279
CNSM-700	306	266	400	340	36	40	80	120	222	320	150	165	146	141.5	177.8	311
CNSM-800	343	266	440	400	40	45	90	130	263	340	160	185	146	158	203.2	342
CNSM-900	390	282	490	344	40	50	95	140	266	386	180	190	154	157	228.6	375
CNSM-1050	432	330	590	430	50	60	100	152	292	440	220	205	172	180	266.7	450

SIZE	K2	L1	M1	M2	M3	N	O	P	Q	R	T	T1	T2	U	V1	W1	W2
CNSM-225	295	50	M8	Ø11	M8	4	8	135	124	-	-	18.5	33.3	85	45	6P9	8H8
CNSM-300	370	60	M10	Ø14	M8	6	8	177	158	-	-	26	53.8	105	50	8P9	14H8
CNSM-350	410	65	M10	Ø18	M8	6	8	223.9	180	-	-	26	59.3	135	60	8P9	16H8
CNSM-400	440	65	M12	M16	M8	10	8	222	200	165	20	27	69.4	115	60	10P9	18H8
CNSM-500	530	70	M12	M16	M10	10	8	272	250	210	20	30	74.9	140	65	10P9	20H8
CNSM-600	596	75	M12	M20	M10	18	8	330	305	250	20	33	79.9	170	70	10P9	20H8
CNSM-700	665	82	M16	M20	M10	18	12	380	355	280	20	35	85.9	200	80	12P9	22H8
CNSM-800	725	88	M16	M24	M12	18	12	435	405	318	20	39.5	95.4	225	85	14P9	25H8
CNSM-900	776	95	M16	M24	M12	18	12	492	460	330	20	44.5	100.6	252.4	92	14P9	25H8
CNSM-1050	925	115	M20	M30	M12	18	12	540	510	380	20	53	106.6	281.3	110	18P9	28H8



**Size: 112 to 337, Type: CAU  
(Adaptable Series Under Driven Gear Boxes)**

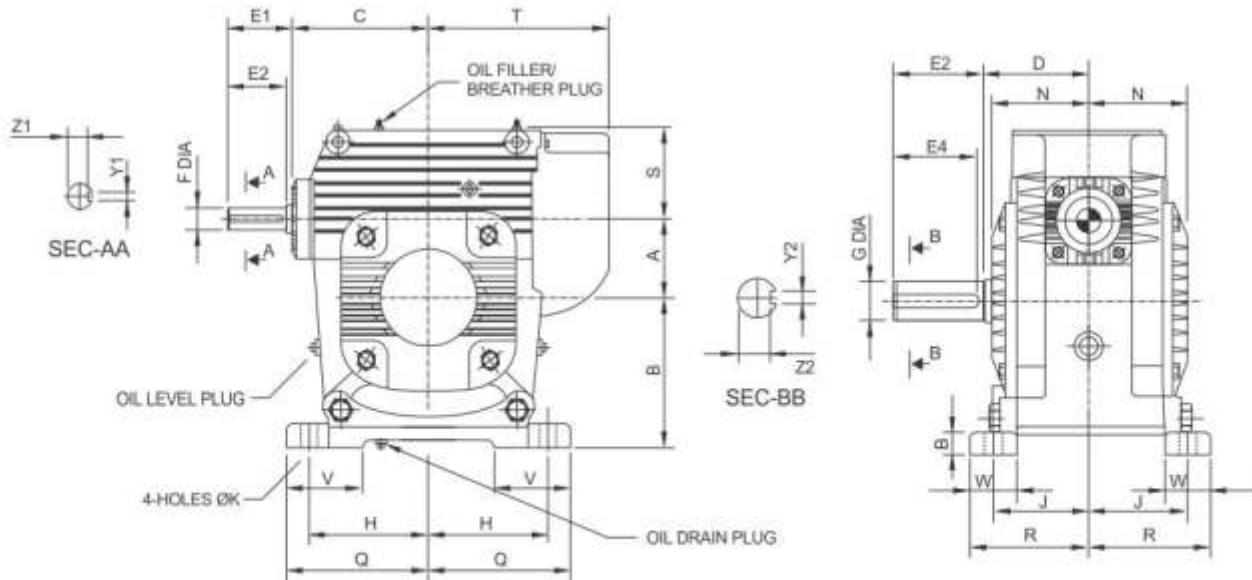


SIZE	A	B	C	D	E1	E2	E3	E4	F	G	H	J	K	L
CAU-112	28.575	52.4	62	46.5	28.5	35	26	32	11 +.018 +.007	16 +.018 +.007	52	41	9	13
CAU-162	41.275	60.3	70.5	52	41	47.5	40	40	16 +.018 +.007	19 +.021 +.008	59	49	11	14
CAU-200	50.8	69.9	85	61	48	57	46	53	16 +.018 +.007	25 +.021 +.008	76	57.3	11	15
CAU-237	60.325	84.1	101	71	57	70	55	65	19 +.021 +.008	28 +.021 +.008	87.5	68.3	12	18
CAU-287	73.025	95.3	122	87.5	70	82	67	70	22 +.021 +.008	32 +.025 +.009	106.5	82.5	14	21
CAU-337	85.725	109.6	136	108	83	98	80	90	25 +.021 +.008	38 +.025 +.009	119.5	97	15	22

SIZE	N	Q	R	S	T	V	W	Y1	Y2	Z1	Z2	Net Wt. (Kg.)	Oil Required at 1st Filling (Ltr.)
CAU-112	42	62	51	55	83	35	20	4P9	5P9	8.5	13	5.5	0.1
CAU-162	49	70	60.5	64	92	38	23	5P9	6P9	13	15.5	9	0.18
CAU-200	59	91	72	76	114	50	28	5P9	8P9	13	21	16	0.29
CAU-237	68	103	84	86	133	55	32	6P9	8P9	15.5	24	22	0.47
CAU-287	81	124	100	109	157	62	35	6P9	8P9	18.5	28	35.5	0.92
CAU-337	98	138	116	121	182	67	38	8P9	10P9	21	33	51	1.55



**Size: 112 to 337, Type: CAO  
(Adaptable Series Over Driven Gear Boxes)**

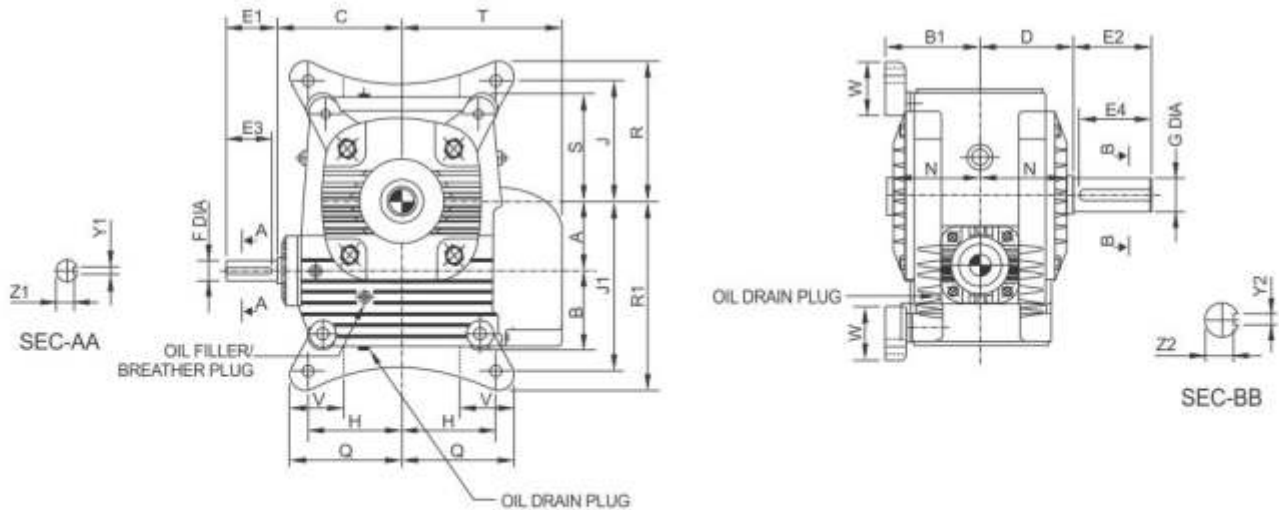


SIZE	A	B	C	D	E1	E2	E3	E4	F	G	H	J	K	L
CAO-112	28.575	58.8	62	46.5	28	35	26	32	11 +.018 +.007	16 +.018 +.007	52	41.3	9	13
CAO-162	41.275	66.7	70.5	52	41	47.5	40	40	16 +.018 +.007	19 +.021 +.008	59	49.2	11	14
CAO-200	50.8	82.5	85	61	48.5	57	46	53	16 +.018 +.007	25 +.021 +.008	76	57.3	11	15
CAO-237	60.325	100	101	71	57	70	55	65	19 +.021 +.008	28 +.021 +.008	87.5	68.3	12	18
CAO-287	73.025	120.7	122	87.5	70	82	67	70	22 +.021 +.008	32 +.025 +.009	106.5	82.5	14	21
CAO-337	85.725	135	136	108	83	98	80	90	25 +.021 +.008	38 +.025 +.009	119	97	15	22

SIZE	N	Q	R	S	T	V	W	Y1	Y2	Z1	Z2	Net Wt. (Kg.)	Oil Required at 1st Filling (Ltr.)
CAO-112	42	62	51	49	83	35	20	4P9	5P9	8.5	13	5.5	0.08
CAO-162	49	70	60.5	58	92	38	23	5P9	6P9	13	15.5	9	0.09
CAU-200	59	91	72	63	114	50	28	5P9	8P9	13	21	14	0.25
CAO-237	68	103	84	71	133	55	32	6P9	8P9	15.5	24	22	0.38
CAO-287	81	124	100	84	157	62	35	6P9	8P9	18.5	28	35.5	0.8
CAO-337	98	138	116	94	182	67	38	8P9	10P9	21	33	51	1.45



**Size: 112 to 337, Type: CAV  
(Adaptable Series Vertical Driven Gear Boxes)**



SIZE	A	B	B1	C	D	E1	E2	E3	E4	F	G	H	J	J1	K	L
CAV-112	28.575	49	54	62	46.5	28.5	35	26	32	11 <sup>+0.018</sup> / <sub>+0.007</sub>	16 <sup>+0.018</sup> / <sub>+0.007</sub>	52	57.2	79.4	9	13
CAV-162	41.275	58	63.5	70.5	52	41	47.5	40	40	16 <sup>+0.018</sup> / <sub>+0.007</sub>	19 <sup>+0.021</sup> / <sub>+0.008</sub>	59	65.1	100	11	16
CAV-200	50.8	63	69.9	85	61	48.5	57	46	53	16 <sup>+0.018</sup> / <sub>+0.007</sub>	25 <sup>+0.021</sup> / <sub>+0.008</sub>	76	82.5	120.7	11	14
CAV-237	60.325	71	82.6	101	71	57	70	55	65	19 <sup>+0.021</sup> / <sub>+0.008</sub>	28 <sup>+0.021</sup> / <sub>+0.008</sub>	87.5	95.3	139.7	12	21
CAV-287	73.025	84	98.4	122	87.5	70	82	67	70	22 <sup>+0.021</sup> / <sub>+0.008</sub>	32 <sup>+0.025</sup> / <sub>+0.009</sub>	106.5	114.3	161.9	14	24
CAV-337	85.725	94	114.3	136	108	83	98	80	90	25 <sup>+0.021</sup> / <sub>+0.008</sub>	38 <sup>+0.025</sup> / <sub>+0.009</sub>	119	128.6	188.9	15	24

SIZE	N	Q	R	R1	S	T	V	W	Y1	Y2	Z1	Z2	Net Wt. (Kg.)	Oil Required at 1st Filling (Ltr.)
CAV-112	42	63.5	68.2	90.4	55	83	45	36	4P9	5P9	8.5	13	5.5	0.13
CAV-162	49	71.5	77.6	112.5	64	92	41	39	5P9	6P9	13	15.5	9	0.2
CAV-200	59	89	95.5	133.7	76	114	57	45	5P9	8P9	13	21	14	0.3
CAV-237	68	103	110.8	155.2	86	133	57	52	6P9	8P9	15.5	24	22	0.73
CAV-287	81	124	131.8	179.4	109	157	67	62	6P9	8P9	18.5	28	35.5	1.35
CAV-337	98	138	147.6	207.9	121	182	75	67	8P9	10P9	21.5	33	51	2.60



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