Section 9:

Gearboxes: Series W

A modular designed aluminium worm box available in a vast range of sizes and ratios for cost effective solutions.



- 9 Sizes with ratings from 0.09 to 7.5kW
- Ratios from 5:1 to 300:1 helical
- Modular design with multiple flange options to interchange aith other makes
- Hollow bore or solid shaft versions
- Accepts standard IEC motors

Geared Drives: Design Data Required	
Motorised (integral motor) or non-motorised?	> If motorised: electrical supply available any special motor features required (brake, clutch, flameproof etc.) > If non-motorised: type of prime mover, rotational speed of prime mover, power rating of prime mover, is an input shaft coupling required? If so, prime mover shaft dia.
Shaft mounting or flange mounted?	> If shaft mounted, machine shaft diameter/length > if shaft mounted, is an output shaft coupling required?
Type of driven machine	
Rotational speed of driven machine	> constant or variable over what range?
Power absorbed by driven machine (or required output torque)	
Hours/day duty & start/stop frequency	

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SERIES W

Vast range of sizes and ratios for cost effective solutions.

- > 11 Sizes with ratings from 0.06 to 15kW
- > Ratios from 5:1 to 5000:1 with helical or double worm combinations
- > Interchangeable dimensionally with other makes
- > Hollow bore or solid shaft versions
- > Accepts standard IEC motors

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Series W Gearboxes : Motorised selection

MOTORISED UNITS SELECTION PROCEDURE

(a) Service Factor
From Table 1 select the Mechanical Service Factor (Fm) applicable to the drive. If the unit is to be subjected to frequent stop/starts in excess of 10 times per day then multiply factor Fm by Factor Fs from table 2.

(b) Motor Power
Refer to the selection tables on pages 320 to 325 and choose a motor power equal to or in excess of that required, if the motor power is not known then from the formula below determine the power requirements of the driven machine and select a motor power in excess of the calculated machine absorbed power.

$$P_2 = \frac{M_2 \times n_2}{9550}$$

P_2 = machine absorbed power (kW)
M_2 = machine absorbed torque (Nm)
n_2 = machine speed (rev/min)

(c) Unit Selection
Refer to the selection tables on page 320 to 325 and choose a motor power equal to or closest above that calculated in step (b). Then read down the column headed "Nominal Output Speed" until a speed equal to or near to the required speed is found. On this line read across to the service factor column and check that the service factor exceeds the value from step (a). If the service factor is either lower or much higher than that required check the speeds at each side of the required speed to see if a more suitable unit and factor can be found.

(d) Overhung Loads
If the unit is to be fitted with an output shaft and an indirect drive attached to the shaft, calculate the overhung load value using the formula on page 339 and compare this value with the maximum allowable value given in column 5 of the selection tables.

If the value exceeds the maximum allowed, then either re-design the indirect drive or select a larger unit capable of supporting the overhung load.

(e) Shaft Mounted
If the unit is to be shaft mounted determine the relevant machine shaft size from the dimension tables on page 326. Torque arm dimensions can be found on page 329.

SELECTION EXAMPLE

A series W shaft mounted gearbox is required to drive a variable density mixer, which absorbs 450 Nm at 36 rev/min and operates for up to 8 hours per day. The mixer stops and starts on average 4 times a day. Specify the shaft diameter required to fit the unit selected, a torque arm bracket is also required please specify the relevant product code.

(a) Service Factor
From table 1, a variable density mixer is classed as a moderately loaded machine and when running for 8 hours per day has a service factor of 1.2.

The machine stops and starts only 4 times a day therefore an additional stop/start factor is not required.

(b) Motor Power
To determine the required motor power use the absorbed torque and the machine shaft speed in the formula given. Then use the next largest standard motor power above this.

Therefore the absorbed Power

$$P_2 = \frac{450 \times 36}{9550} = 1.7 \text{ kW}$$

(c) Unit Selection
The nearest standard motor power above 1.7 kW is 2.2 kW therefore we go to the 2.2kW geared motor selections on page 324.

Reading down the column headed nominal output speed it is found that there are 2 units listed at 36 rev/min, at the first one of these read across to maximum service factor column, it can be seen that the unit size 747A0645 has a service factor of 1.4.

This exceeds the 1.2 Service factor required and therefore is suitable for the application.

(d) Overhung Loads
The gearbox is to be shaft mounted therefore there are no overhung loads present.

(e) Shaft Mounted
The unit is to be shaft mounted, referring to page 326 we see that the hub bore size is 42 mm.

From page 329 the torque arm bracket to suit the size 747 unit selected has a product code of 748A9600.

TABLE 1 - MECHANICAL SERVICE FACTOR (Fm)

Types of Driven Machine	Operational Hours		
	Under 3	3 to 10	Over 10
Uniform Loads Agitators and Mixers – liquid or semi-liquid Blowers – centrifugal Bottling Machines Conveyors and Elevators – uniformly loaded Cookers Laundry Washing Machines – non-reversing Line Shafts Pumps – centrifugal and gear Wire Drawing Machines	0.80	1.00	1.20
Moderate Shock Loads Agitators and Mixers – variable density Conveyors – not uniformly loaded Cranes travel motion and hoisting Drawbench Feeders – pulsating load Hoists Kilns Laundry Tumblers Lifts Pumps – reciprocating with 3 or more cylinders Pump and Paper Making Machinery Rubber Mixers and Calendars Screens – rotary Textile Machinery	1.00	1.20	1.40
Heavy Shock Loads Brick Presses Briquetting Machines Conveyors – reciprocating and shaker Crushers Feeders – reciprocating Hammer Mills Pumps – reciprocating, 1 or 2 cylinders Rubber Masticators Screens – vibrating	1.50	1.75	2.00

For High Inertia Applications, consult your authorised distributor for verification of selection

TABLE 2 - STARTING FACTOR (Fs)

	Start/stops per hour					
	Up to 5	6 - 20	21 - 30	31 - 50	51 - 80	81 - 100
Uniform Load	1.00	1.05	1.10	1.15	1.20	1.25
Moderate Shock Load	1.05	1.10	1.20	1.25	1.35	1.40
Heavy Shock Load	1.20	1.25	1.30	1.40	1.45	1.50

Series W Gearboxes : Motorised selection

Bold print indicates 6 pole motor, italics indicates 2 pole motor, all others are 4 pole motors.

0.09 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
551	1.4	8.65	*741A0143*	474
367	2.0	5.50	*740A0243*	399
367	2.0	6.39	*741A0243*	542
276	2.6	4.73	*740A0343*	439
276	2.7	4.91	*741A0343*	597
264	2.8	6.36	741A0114	597
184	3.7	3.16	*740A0443*	503
184	3.8	3.43	*741A0443*	683
180	4.1	4.93	**741A0115**	692
180	4.2	9.63	**742A0115**	1331
176	4.2	2.64	740A0214	399
176	4.2	4.34	741A0214	683
138	4.9	2.47	*741A0543*	752
138	4.7	2.56	*740A0543*	553
132	5.4	2.27	740A0314	439
132	5.3	3.38	741A0314	752
120	6.0	3.37	**741A0215**	792
120	6.1	7.23	**742A0215**	1524
110	5.5	2.28	*740A0643*	633
110	5.8	2.78	*741A0643*	810
92	6.3	2.11	*740A0743*	633
92	6.7	2.26	*741A0743*	861
90	7.6	2.62	**741A0315**	871
90	7.9	5.56	**742A0315**	1677
88	7.7	1.52	740A0414	503
88	7.5	2.40	741A0414	861
69	8.2	1.70	*741A0843*	948
69	7.7	1.75	*740A0843*	697
66	9.8	1.23	740A0514	553
66	9.5	1.90	741A0514	948
60	10.6	1.89	**741A0415**	997
60	11.2	4.03	**742A0415**	1920
55	9.1	1.20	*740A0943*	751
55	9.7	1.35	*741A0943*	1021
55	10.6	2.83	*742A0943*	1964
53	11.6	1.09	740A0614	633
53	11.1	1.90	741A0614	1021
46	10.3	0.96	*740A1043*	798
46	10.9	1.11	*741A1043*	1085
46	12.2	2.31	*742A1043*	2104
45	13.4	1.50	**741A0515**	1098
45	14.3	3.08	**742A0515**	2113
44	13.1	1.01	740A0714	633
44	12.7	1.58	741A0714	1085
36	15.3	1.51	**741A0615**	1183
36	17.2	2.51	**742A0615**	2276
34	13.0	0.85	*741A1143*	1194
34	14.7	1.70	*742A1143*	2384
33	16.2	0.84	740A0814	697
33	15.4	1.18	741A0814	1194
30	17.5	1.21	**741A0715**	1257
30	18.9	2.60	**742A0715**	2419
28	16.9	1.37	*742A1243*	2664
26	18.9	0.58	740A0914	751
26	17.9	0.95	741A0914	1286
26	20.2	1.94	742A0914	2475
23	21.0	0.96	**741A0815**	1383
23	23.7	1.91	**742A0815**	2662
23	24.1	3.41	**743A0815**	3654
22	21.5	0.46	740A1014	798
22	19.9	0.81	741A1014	1367
22	22.7	1.59	742A1014	2630
18	24.4	0.74	**741A0915**	1490
18	27.2	1.55	**742A0915**	2868
18	28.2	2.74	**743A0915**	3936
17	22.9	0.57	741A1114	1540
17	27.1	1.22	742A1114	2895
15	31.0	1.27	**742A1015**	3047
15	31.5	2.29	**743A1015**	4183
13	30.6	0.95	742A1214	3118
12	40.1	0.80	**741A2015**	1706
12	47.3	1.21	**742A2015**	3283
11	36.7	0.96	**742A1115**	3354
11	37.4	1.82	**743A1115**	4604
10	46.4	0.63	**741A2115**	1813
10	51.6	1.32	**742A2115**	3488
9	41.1	0.78	**742A1215**	3490
9	42.0	1.34	**743A1215**	4840
8	55.0	0.48	**741A2215**	1820
8	61.9	0.99	**742A2215**	3490
8	63.0	1.83	**743A2215**	4840
6	63.0	0.39	**741A2315**	1820
6	71.6	0.79	**742A2315**	3490
6	73.1	1.51	**743A2315**	4840
5	79.1	0.68	**742A2415**	3490
5	80.8	1.22	**743A2415**	4840
4	94.0	0.48	**742A2515**	3490
4	94.0	0.86	**743A2515**	4840
3	103.1	0.40	**742A2615**	3490
3	106.0	0.70	**743A2615**	4840

0.12 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
551	1.9	6.49	*741A0147*	474
367	2.7	4.12	*740A0247*	399
367	2.7	4.79	*741A0247*	542
276	3.6	4.99	741A0148	597
276	3.7	9.21	742A0148	1149
276	3.5	3.55	*740A0347*	439
276	3.5	3.68	*741A0347*	597
184	5.3	3.41	741A0248	683
184	5.4	7.39	742A0248	1315
184	4.9	2.37	*740A0447*	503
184	5.1	2.58	*741A0447*	683
181	5.4	3.72	**741A0113**	692
181	5.5	7.27	**742A0113**	1331
138	6.8	2.65	741A0348	752
138	7.1	5.67	742A0348	1447
138	6.5	1.85	*741A0547*	752
138	6.2	1.92	*740A0547*	553
121	7.9	2.54	**741A0213**	792
121	8.1	5.46	**742A0213**	1524
110	7.4	1.71	*740A0647*	633
110	7.7	2.08	*741A0647*	810
92	9.6	1.88	741A0448	861
92	10.2	3.92	742A0448	1657
92	8.4	1.58	*740A0747*	633
92	8.9	1.70	*741A0747*	861
91	10.1	1.98	**741A0313**	871
91	10.5	4.19	**742A0313**	1677
69	12.1	1.49	741A0548	948
69	13.0	3.02	742A0548	1824
69	11.0	1.28	*741A0847*	948
69	10.3	1.31	*740A0847*	697
60	14.1	1.43	**741A0413**	997
60	14.8	3.04	**742A0413**	1920
55	14.1	1.49	741A0648	1021
55	15.6	2.45	742A0648	1964
55	12.1	0.90	*740A0947*	751
55	12.9	1.01	*741A0947*	1021
55	14.2	2.13	*742A0947*	1964
46	16.2	1.24	741A0748	1085
46	17.4	2.59	742A0748	2087
46	13.7	0.72	*740A1047*	798
46	14.5	0.83	*741A1047*	1085
46	16.2	1.73	*742A1047*	2104
45	17.7	1.13	**741A0513**	1098
45	19.0	2.32	**742A0513**	2113
36	20.3	1.14	**741A0613**	1183
36	22.8	1.89	**742A0613**	2276
35	19.6	0.92	741A0848	1194
35	21.6	1.90	742A0848	2298
35	22.3	3.42	743A0848	3153
34	17.3	0.64	*741A1147*	1194
34	19.6	1.28	*742A1147*	2384
30	23.2	0.91	**741A0713**	1257
30	25.1	1.96	**742A0713**	2419
28	22.8	0.75	741A0948	1286
28	25.8	1.52	742A0948	2475
28	26.2	2.80	743A0948	3397
28	22.5	1.03	*742A1247*	2664
23	28.9	1.25	742A1048	2630
23	29.4	2.32	743A1048	3610
23	27.9	0.72	**741A0813**	1383
23	31.4	1.44	**742A0813**	2662
23	31.9	2.57	**743A0813**	3654
18	38.0	0.77	741A2048	1200
18	43.0	1.15	742A2048	2833
18	32.3	0.56	**741A0913**	1490
18	36.1	1.17	**742A0913**	2868
18	37.4	2.07	**743A0913**	3936
17	34.6	0.96	742A1148	2895
17	35.2	1.85	743A1148	3973
15	42.6	0.62	741A2148	1621
15	47.1	1.24	742A2148	3011
15	41.0	0.96	**742A1013**	3047
15	41.8	1.73	**743A1013**	4183
14	39.0	0.75	742A1248	3118
14	40.7	1.36	743A1248	4280
12	53.2	0.61	**741A2013**	1706
12	62.7	0.91	**742A2013**	3283
12	51.8	0.45	741A2248	1785
12	57.8	0.92	742A2248	3314
12	58.8	1.67	743A2248	4548
11	48.6	0.72	**742A1113**	3354
11	49.6	1.37	**743A1113**	4604
10	61.5	0.48	**741A2113**	1813
10	68.4	1.00	**742A2113**	3488
9	58.5	0.36	741A2348	1880
9	67.3	0.73	742A2348	3490
9	68.5	1.33	743A2348	4840
9	54.5	0.59	**742A1213**	3490
9	55.7	1.01	**743A1213**	4840
8	74.7	0.62	742A2448	3490
8	82.2	1.01	743A2448	4840
8	72.9	0.36	**741A2213**	1820
8	82.1	0.75	**742A2213**	3490
8	83.6	1.38	**743A2213**	4840
6	83.6	0.29	**741A2313**	1820
6	95.0	0.59	**742A2313**	3490
6	96.9	1.14	**743A2313**	4840
6	87.7	0.46	742A2548	3490
6	89.7	0.84	743A2548	4840
5	104.8	0.51	**742A2413**	3490
5	107.1	0.92	**743A2413**	4840
5	97.2	0.38	742A2648	3490
5	99.7	0.66	743A2648	4840
4	124.6	0.37	**742A2513**	3490
4	124.6	0.65	**743A2513**	4840
3	136.8	0.30	**742A2613**	3490
3	140.6	0.53	**743A2613**	4840

0.18KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
554	2.8	4.35	*741A0101*	474
554	2.8	8.60	*742A0101*	912
369	4.1	3.22	*741A0201*	542
369	4.2	6.76	*742A0201*	1044
277	5.3	2.47	*741A0301*	597
277	5.5	5.32	*742A0301*	1149
276	5.4	3.33	741A0102	597
276	5.6	6.14	742A0102	1149
185	7.6	1.73	*741A0401*	683
185	7.8	3.97	*742A0401*	1315
184	8.0	2.27	741A0202	683
184	8.1	4.93	742A0202	1315
178	8.4	4.77	**742A0105**	1331
178	8.5	8.83	**743A0105**	1827
139	9.7	1.24	*741A0501*	752
139	10.2	2.85	*742A0501*	1447
138	10.2	1.77	741A0302	752
138	10.6	3.78	742A0302	1447
119	12.3	3.58	**742A0205**	1524

Series W Gearboxes : Motorised selection

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
119	12.5	6.75	**743A0205**	2091
111	11.5	1.40	*741A0601*	810
111	12.3	2.29	*742A0601*	1559
92	13.2	1.14	*741A0701*	861
92	14.2	2.41	*742A0701*	1657
92	14.4	1.26	741A0402	861
92	15.3	2.62	742A0402	1657
89	16.0	2.75	**742A0305**	1677
89	16.2	5.18	**743A0305**	2302
69	16.4	0.86	*741A0801*	948
69	17.9	1.74	*742A0801*	1824
69	18.1	3.26	*743A0801*	2503
69	18.2	0.99	741A0502	948
69	19.4	2.01	742A0502	1824
59	22.6	2.00	**742A0405**	1920
59	22.9	3.68	**743A0405**	2635
55	19.2	0.68	*741A0901*	1021
55	21.1	1.43	*742A0901*	1964
55	21.4	2.48	*743A0901*	2696
55	21.2	1.00	741A0602	1021
55	23.4	1.63	742A0602	1964
46	24.2	1.16	*742A1001*	2104
46	24.6	2.04	*743A1001*	2865
46	24.3	0.83	741A0702	1085
46	26.2	1.73	742A0702	2087
45	29.0	1.52	**742A0505**	2113
45	29.4	2.63	**743A0505**	2900
36	34.8	1.24	**742A0605**	2276
36	35.3	2.13	**743A0605**	3124
35	29.3	0.86	*742A1101*	2384
35	30.3	1.49	*743A1101*	3153
35	29.4	0.62	741A0802	1194
35	32.4	1.27	742A0802	2298
35	33.4	2.28	743A0802	3153
30	38.3	1.29	**742A0705**	2419
30	39.4	2.29	**743A0705**	3320
28	33.5	0.69	*742A1201*	2664
28	34.8	1.16	*743A1201*	3397
28	34.3	0.50	741A0902	1286
28	38.6	1.01	742A0902	2475
28	39.2	1.87	743A0902	3397
23	43.4	0.84	742A1002	2630
23	44.1	1.55	743A1002	3610
22	47.9	0.94	**742A0805**	2662
22	48.7	1.69	**743A0805**	3654
18	57.0	0.51	741A2002	1200
18	64.5	0.77	742A2002	2833
18	57.0	1.36	**743A0905**	3936
18	61.8	3.56	**745A0905**	6073
17	51.8	0.64	742A1102	2895
17	52.8	1.24	743A1102	3973
15	63.9	0.41	741A2102	1621
15	70.6	0.83	742A2102	3011
15	63.7	1.13	**743A1005**	4183
15	70.7	2.98	**745A1005**	6453
14	58.6	0.50	742A1202	3118
14	61.0	0.91	743A1202	4280
12	95.6	0.60	**742A2005**	3283
12	95.6	1.09	**743A2005**	4506
12	77.7	0.30	741A2202	1785
12	86.7	0.62	742A2202	3314
12	88.2	1.12	743A2202	4548
11	75.7	0.90	**743A1105**	4604
11	85.0	2.36	**745A1105**	7103
10	104.3	0.66	**742A2105**	3488
10	106.0	1.26	**743A2105**	4788
9	87.8	0.24	741A2302	1880
9	100.9	0.49	742A2302	3490
9	102.8	0.89	743A2302	4840
9	85.0	0.66	**743A1205**	4840
9	96.6	1.97	**745A1205**	7380
8	112.1	0.42	742A2402	3490
8	123.3	0.68	743A2402	4840
7	125.2	0.49	**742A2205**	3490
7	127.5	0.91	**743A2205**	4840
7	132.1	1.64	**744A2205**	6270
6	147.8	0.75	**743A2305**	4840
6	153.6	1.32	**744A2305**	6270
6	159.3	1.87	**745A2305**	7380
6	131.5	0.31	742A2502	3490
6	134.5	0.56	743A2502	4840
5	163.4	0.60	**743A2405**	4840
5	170.4	1.09	**744A2405**	6270
5	180.8	1.55	**745A2405**	7380
5	145.7	0.25	742A2602	3490
5	149.5	0.44	743A2602	4840
4	190.1	0.43	**743A2505**	4840
4	199.3	0.81	**744A2505**	6270
4	213.2	1.12	**745A2505**	7380
3	214.4	0.35	**743A2605**	4840
3	220.2	0.65	**744A2605**	6270
3	237.6	0.94	**745A2605**	7380

0.25W MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
552	3.9	3.12	*741A0103*	474
552	3.9	6.17	*742A0103*	912
368	5.7	2.31	*741A0203*	542
368	5.8	4.85	*742A0203*	1044
276	7.4	1.77	*741A0303*	597
276	7.6	3.81	*742A0303*	1149
272	7.8	4.36	742A0106	1149
272	7.8	7.94	743A0106	1577
184	10.5	1.24	*741A0403*	683
184	10.9	2.85	*742A0403*	1315
181	11.5	3.50	742A0206	1315
181	11.6	6.13	743A0206	1805
180	11.5	3.47	**742A0107**	1331
180	11.7	6.43	**743A0107**	1827
138	13.5	0.89	*741A0503*	752
138	14.2	2.05	*742A0503*	1447
136	14.9	2.69	742A0306	1447
136	15.1	4.77	743A0306	1987
120	16.9	2.61	**742A0207**	1524
120	17.1	4.91	**743A0207**	2091
110	16.0	1.00	*741A0603*	810
110	17.1	1.64	*742A0603*	1559
92	18.4	0.82	*741A0703*	861
92	19.7	1.73	*742A0703*	1657
91	21.6	1.86	742A0406	1657
91	21.6	3.43	743A0406	2274
90	22.0	2.00	**742A0307**	1677
90	22.3	3.77	**743A0307**	2302
69	22.8	0.62	*741A0803*	948
69	24.9	1.25	*742A0803*	1824
69	25.3	2.34	*743A0803*	2503
68	27.4	1.43	742A0506	1824
68	27.7	2.64	743A0506	2503
60	31.0	1.45	**742A0407**	1920
60	31.4	2.68	**743A0407**	2635
55	26.8	0.49	*741A0903*	1021
55	29.4	1.03	*742A0903*	1964
55	29.9	1.78	*743A0903*	2696
54	32.9	1.16	742A0606	1964
54	33.4	2.10	743A0606	2696
46	33.7	0.83	*742A1003*	2104
46	34.3	1.46	*743A1003*	2865
45	36.9	1.23	742A0706	2087
45	37.9	2.22	743A0706	2865
45	39.8	1.11	**742A0507**	2113
45	40.3	1.91	**743A0507**	2900
36	47.8	0.91	**742A0607**	2276
36	48.4	1.55	**743A0607**	3124
35	40.8	0.62	*742A1103*	2384
35	42.2	1.07	*743A1103*	3153
34	45.7	0.90	742A0806	2298
34	47.1	1.62	743A0806	3153
34	49.2	2.95	744A0806	4122
30	52.5	0.94	**742A0707**	2419
30	54.1	1.67	**743A0707**	3320
28	46.7	0.50	*742A1203*	2664
28	48.5	0.83	*743A1203*	3397
27	55.3	1.33	743A0906	3397
27	57.9	2.34	744A0906	4440
27	60.6	3.47	745A0906	5241
23	62.2	1.10	743A1006	3610
23	65.3	2.00	744A1006	4719
23	68.5	2.93	745A1006	5569
23	65.8	0.69	**742A0807**	2662
23	66.9	1.23	**743A0807**	3654
18	90.8	0.54	742A2006	2833
18	90.8	1.01	743A2006	3889
18	78.3	0.99	**743A0907**	3936
18	84.9	2.60	**745A0907**	6073
17	74.4	0.88	743A1106	3973
17	80.1	1.53	744A1106	5193
17	84.3	2.26	745A1106	6130
15	99.5	0.59	742A2106	3011
15	101.1	1.07	743A2106	4132
15	87.6	0.83	**743A1007**	4183
15	97.1	2.17	**745A1007**	6453
14	86.0	0.64	743A1206	4280
14	89.5	1.32	744A1206	5595
14	96.6	1.87	745A1206	6603
12	131.3	0.44	**742A2007**	3283
12	131.3	0.80	**743A2007**	4506
11	122.2	0.44	742A2206	3314
11	124.3	0.79	743A2206	4548
11	128.5	1.44	744A2206	5945
11	104.0	0.66	**743A1107**	4604
11	116.7	1.72	**745A1107**	7103
10	143.3	0.48	**742A2107**	3488
10	145.6	0.92	**743A2107**	4788
9	144.8	0.63	743A2306	4840
9	147.5	1.18	744A2306	6270
9	155.4	1.61	745A2306	7380
9	116.7	0.48	**743A1207**	4840
9	132.6	1.44	**745A1207**	7380
8	173.8	0.48	743A2406	4840
8	167.5	0.96	744A2406	6270
8	177.0	1.36	745A2406	7380
8	171.9	0.36	**742A2207**	3490
8	175.1	0.66	**743A2207**	4840
8	181.5	1.20	**744A2207**	6270
6	202.9	0.55	**743A2307**	4840
6	210.9	0.96	**744A2307**	6270
6	218.9	1.36	**745A2307**	7380
6	189.6	0.40	743A2506	4840
6	198.0	0.70	744A2506	6270
6	206.4	1.05	745A2506	7380
5	224.4	0.44	**743A2407**	4840
5	234.0	0.80	**744A2407**	6270
5	248.3	1.13	**745A2407**	7380
5	210.7	0.31	743A2606	4840
5	221.2	0.58	744A2606	6270
5	237.0	0.89	745A2606	7380
4	261.0	0.31	**743A2507**	4840
4	273.8	0.59	**744A2507**	6270
4	292.9	0.82	**745A2507**	7380
3	294.5	0.26	**743A2607**	4840
3	302.4	0.47	**744A2607**	6270
3	326.3	0.69	**745A2607**	7380

Series W Gearboxes : Motorised selection

Bold print indicates 6 pole motor, italics indicates 2 pole motor, all others are 4 pole motors.

0.37 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
560	5.7	4.23	*742A0109*	912
560	5.8	7.84	*743A0109*	1251
373	8.4	3.33	*742A0209*	1044
373	8.5	6.11	*743A0209*	1433
280	11.1	2.62	*742A0309*	1149
280	11.1	4.87	*743A0309*	1577
273	11.5	2.96	742A0108	1149
273	11.5	5.39	743A0108	1577
187	15.9	1.95	*742A0409*	1315
187	16.1	3.55	*743A0409*	1805
182	16.9	2.37	742A0208	1315
182	17.1	4.16	743A0208	1805
182	17.1	4.39	**743A0112**	1827
140	20.7	1.41	*742A0509*	1447
140	20.7	2.57	*743A0509*	1987
137	22.0	1.82	742A0308	1447
137	22.3	3.24	743A0308	1987
121	25.1	3.36	**743A0212**	2091
121	25.3	5.96	**744A0212**	2735
112	24.9	1.13	*742A0609*	1559
112	25.2	2.03	*743A0609*	2140
93	28.8	1.19	*742A0709*	1657
93	28.8	2.23	*743A0709*	2274
91	31.9	1.26	742A0408	1657
91	31.9	2.33	743A0408	2274
91	32.6	2.58	**743A0312**	2302
91	33.0	4.64	**744A0312**	3009
70	36.4	0.86	*742A0809*	1824
70	36.9	1.61	*743A0809*	2503
70	37.9	2.86	*744A0809*	3272
68	40.4	0.97	742A0508	1824
68	40.9	1.79	743A0508	2503
61	46.0	1.83	**743A0412**	2635
61	47.2	3.29	**744A0412**	3444
56	43.5	1.22	*743A0909*	2696
56	44.8	2.24	*744A0909*	3524
56	46.7	3.22	*745A0909*	4160
55	48.5	0.79	742A0608	1964
55	49.2	1.43	743A0608	2696
47	50.0	1.01	*743A1009*	2865
47	51.5	1.85	*744A1009*	3745
47	53.8	2.70	*745A1009*	4421
46	54.4	0.83	742A0708	2087
46	59.0	1.31	**743A0512**	2900
46	55.9	1.51	743A0708	2865
46	59.8	2.48	**744A0512**	3791
46	61.4	3.84	**745A0512**	4474
36	70.9	1.06	**743A0612**	3124
36	72.8	1.89	**744A0612**	4084
36	74.8	2.88	**745A0612**	4820
35	61.6	0.74	*743A1109*	3153
35	63.6	1.34	*744A1109*	4122
35	66.6	1.96	*745A1109*	4865
34	67.3	0.61	742A0808	2298
34	69.4	1.10	743A0808	3153
30	79.2	1.14	**743A0712**	3320
30	81.6	2.15	**744A0712**	4339
30	85.0	3.06	**745A0712**	5122
28	70.7	0.57	*743A1209*	3397
28	73.2	1.02	*744A1209*	4440
28	77.0	1.56	*745A1209*	5241
27	81.6	0.90	743A0908	3397
27	89.3	2.36	745A0908	5241
23	91.6	0.75	743A1008	3610
23	97.9	0.84	**743A0812**	3654
23	101.0	1.59	**744A0812**	4776
23	101.0	1.99	745A1008	5569
23	105.6	2.28	**745A0812**	5637
23	110.3	3.72	**746A0812**	6328
18	134.0	0.37	742A2008	2833
18	134.0	0.68	743A2008	3889
18	118.4	1.23	**744A0912**	5145
18	124.3	1.78	**745A0912**	6073
18	132.0	2.96	**746A0912**	6719
17	109.8	0.60	743A1108	3973
17	124.3	1.53	745A1108	6130
15	146.8	0.40	742A2108	3011
15	149.1	0.73	743A2108	4132
15	135.1	1.03	**744A1012**	5467
15	142.1	1.48	**745A1012**	6453
15	149.1	2.35	**746A1012**	7140
14	126.9	0.44	743A1208	4280
14	142.4	1.27	745A1208	6603
12	192.2	0.55	**743A2012**	4506
12	198.0	0.99	**744A2012**	5810
12	203.9	1.50	**745A2012**	6952
11	180.2	0.30	742A2208	3314
11	183.3	0.54	743A2208	4548
11	161.5	0.80	**744A1112**	6018
11	189.5	0.98	744A2208	5945
11	170.9	1.18	**745A1112**	7103
11	183.3	1.72	**746A1112**	7859
10	213.2	0.63	**743A2112**	4788
10	216.7	1.11	**744A2112**	6259
10	227.2	1.59	**745A2112**	7380
9	213.6	0.43	743A2308	4840
9	217.4	0.80	744A2308	6270
9	194.2	0.98	**745A1212**	7380
9	229.1	1.10	745A2308	7380
9	209.7	1.34	**746A1212**	8180
8	256.3	0.33	743A2408	4840
8	256.3	0.45	**743A2212**	4840
8	247.0	0.65	744A2408	6270
8	265.6	0.82	**744A2212**	6270
8	260.9	0.92	745A2408	7380
8	279.6	1.20	**745A2212**	7380
8	293.6	1.94	**746A2212**	8180
6	308.7	0.66	**744A2312**	6270
6	320.3	0.93	**745A2312**	7380
6	343.6	1.53	**746A2312**	8180
6	279.6	0.27	743A2508	4840
6	292.0	0.47	744A2508	6270
6	304.4	0.71	745A2508	7380
5	342.5	0.55	**744A2412**	6270
5	363.4	0.78	**745A2412**	7380
5	384.4	1.23	**746A2412**	8180
5	310.6	0.21	743A2608	4840
5	326.2	0.40	744A2608	6270
5	349.5	0.61	745A2608	7380
4	400.7	0.40	**744A2512**	6270
4	428.7	0.56	**745A2512**	7380
4	466.0	0.92	**746A2512**	8180
3	477.6	0.47	**745A2612**	7380
3	524.2	0.74	**746A2612**	8180

0.55 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
556	8.5	2.83	*742A0110*	912
556	8.6	5.24	*743A0110*	1251
371	12.6	2.23	*742A0210*	1044
371	12.8	4.08	*743A0210*	1433
282	16.6	3.75	743A0116	1577
278	16.6	1.75	*742A0310*	1149
278	16.6	3.25	*743A0310*	1577
188	24.6	2.89	743A0216	1805
188	24.6	5.21	744A0216	2360
185	23.8	1.31	*742A0410*	1315
185	24.1	2.37	*743A0410*	1805
182	25.4	2.96	**743A0117**	1827
141	32.0	2.25	743A0316	1987
141	32.4	4.02	744A0316	2597
139	31.0	0.94	*742A0510*	1447
139	31.0	1.72	*743A0510*	1987
121	37.2	2.26	**743A0217**	2091
121	37.7	4.01	**744A0217**	2735
111	37.3	0.76	*742A0610*	1559
111	37.8	1.35	*743A0610*	2140
94	45.8	1.62	743A0416	2274
94	46.4	3.02	744A0416	2973
93	43.1	0.79	*742A0710*	1657
93	43.1	1.49	*743A0710*	2274
91	48.5	1.74	**743A0317**	2302
91	49.1	3.12	**744A0317**	3009
71	58.9	1.25	743A0516	2503
71	60.4	2.24	744A0516	3272
71	61.1	3.44	745A0516	3862
70	54.4	0.57	*742A0810*	1824
70	55.2	1.07	*743A0810*	2503
70	56.7	1.91	*744A0810*	3272
61	68.4	1.23	**743A0417**	2635
61	70.1	2.22	**744A0417**	3444
56	70.8	0.99	743A0616	2696
56	72.7	1.79	744A0616	3524
56	74.5	2.69	745A0616	4160
56	65.2	0.82	*743A0910*	2696
56	67.1	1.50	*744A0910*	3524
56	69.9	2.15	*745A0910*	4160
47	80.5	1.05	743A0716	2865
47	82.7	1.94	744A0716	3745
47	84.9	2.71	745A0716	4421
46	74.8	0.67	*743A1010*	2865
46	77.1	1.24	*744A1010*	3745
46	80.5	1.81	*745A1010*	4421
46	87.7	0.88	**743A0517**	2900
46	88.9	1.67	**744A0517**	3791
46	91.2	2.58	**745A0517**	4474
36	105.3	0.72	**743A0617**	3124
36	108.2	1.27	**744A0617**	4084
36	111.1	1.94	**745A0617**	4820
35	99.8	0.77	743A0816	3153
35	104.3	1.40	744A0816	4122
35	107.3	2.06	745A0816	4865
35	111.8	3.23	746A0816	5383
35	92.2	0.49	*743A1110*	3153
35	95.2	0.90	*744A1110*	4122
35	99.8	1.31	*745A1110*	4865
30	117.8	0.77	**743A0717**	3320
30	121.2	1.45	**744A0717**	4339
30	126.4	2.06	**745A0717**	5122
28	122.9	1.10	744A0916	4440
28	128.5	1.64	745A0916	5241
28	134.1	2.54	746A0916	5799
28	105.8	0.38	*743A1210*	3397
28	109.6	0.68	*744A1210*	4440
28	115.3	1.05	*745A1210*	5241
24	138.6	0.94	744A1016	4719
24	145.3	1.38	745A1016	5569
24	154.2	2.08	746A1016	6163
23	145.5	0.57	**743A0817**	3654
23	150.1	1.07	**744A0817**	4776
23	157.0	1.53	**745A0817**	5637
23	163.9	2.51	**746A0817**	6328
19	192.8	0.48	743A2016	3889
19	198.4	0.83	744A2016	5083
19	204.0	1.26	745A2016	6000
18	176.1	0.83	**744A0917**	5145
18	184.7	1.20	**745A0917**	6073
18	196.3	1.99	**746A0917**	6719
18	169.9	0.72	744A1116	5193
18	178.8	1.07	745A1116	6130
18	187.8	1.52	746A1116	6783
16	214.6	0.51	743A2116	4132
16	217.9	0.92	744A2116	5300
16	228.0	1.32	745A2116	6375
15	200.9	0.69	**744A1017**	5467
15	211.3	1.00	**745A1017**	6453
15	221.7	1.58	**746A1017**	7140
14	204.9	0.88	745A1216	6603
14	219.8	1.23	746A1216	7306
12	285.7	0.37	**743A2017**	4506
12	294.4	0.67	**744A2017**	5810
12	303.0	1.01	**745A2017**	6952
12	263.7	0.38	743A2216	4548
12	272.7	0.68	744A2216	5945
12	281.6	1.00	745A2216	7017
12	295.0	1.63	746A2216	7764
11	240.1	0.54	**744A1117**	6018
11	254.0	0.79	**745A1117**	7103

Series W Gearboxes : Motorised selection

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
11	272.4	1.16	**746A1117**	7859
10	316.9	0.42	**743A2117**	4788
10	322.1	0.75	**744A2117**	6259
10	337.7	1.07	**745A2117**	7380
9	312.9	0.56	744A2316	6270
9	329.7	0.76	745A2316	7380
9	352.0	1.28	746A2316	8180
9	288.6	0.66	**745A1217**	7380
9	311.7	0.90	**746A1217**	8180
8	355.4	0.46	744A2416	6270
8	375.5	0.64	745A2416	7380
8	395.6	1.02	746A2416	8180
8	381.0	0.31	**743A2217**	4840
8	394.8	0.55	**744A2217**	6270
8	415.6	0.81	**745A2217**	7380
8	436.4	1.30	**746A2217**	8180
6	458.9	0.45	**744A2317**	6270
6	476.2	0.63	**745A2317**	7380
6	510.8	1.03	**746A2317**	8180
6	420.2	0.33	744A2516	6270
6	438.1	0.50	745A2516	7380
6	473.8	0.78	746A2516	8180
5	509.1	0.37	**744A2417**	6270
5	540.3	0.52	**745A2417**	7380
5	571.4	0.83	**746A2417**	8180
5	502.9	0.42	745A2616	7380
5	547.6	0.64	746A2616	8180
4	595.7	0.27	**744A2517**	6270
4	637.2	0.38	**745A2517**	7380
4	692.6	0.62	**746A2517**	8180
3	710.0	0.32	**745A2617**	7380
3	779.2	0.50	**746A2617**	8180

0.75KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
558	11.7	3.86	*743A0119*	1251
372	17.3	3.01	*743A0219*	1433
372	17.3	5.37	*744A0219*	1873
282	22.6	2.75	743A0118	1577
279	22.6	2.40	*743A0319*	1577
279	22.9	4.25	*744A0319*	2061
188	33.5	2.12	743A0218	1805
188	33.5	3.82	744A0218	2360
186	32.7	1.75	*743A0419*	1805
186	33.1	3.12	*744A0419*	2359
141	43.7	1.65	743A0318	1987
141	44.2	2.95	744A0318	2597
140	42.1	1.26	*743A0519*	1987
140	43.1	2.32	*744A0519*	2597
140	43.7	3.67	*745A0519*	3065
123	51.1	4.21	**745A0223**	3227
123	51.7	6.58	**746A0223**	3570
112	51.4	1.00	*743A0619*	2140
112	52.6	1.75	*744A0619*	2797
112	53.3	2.82	*745A0619*	3302
94	62.5	1.19	743A0418	2274
94	63.3	2.22	744A0418	2973
93	58.5	1.10	*743A0719*	2274
93	60.1	2.00	*744A0719*	2973
93	61.6	2.76	*745A0719*	3509
93	66.6	3.46	**745A0323**	3551
93	67.4	5.50	**746A0323**	3929
71	80.3	0.91	743A0518	2503
71	82.3	1.65	744A0518	3272
71	83.3	2.53	745A0518	3862
70	75.0	0.79	*743A0819*	2503
70	77.0	1.41	*744A0819*	3272
70	79.1	2.09	*745A0819*	3862
70	81.1	3.39	*746A0819*	4273
62	95.3	2.47	**745A0423**	4065
62	97.6	4.31	**746A0423**	4498
56	96.5	0.73	743A0618	2696
56	99.1	1.32	744A0618	3524
56	101.6	1.97	745A0618	4160
56	91.1	1.10	*744A0919*	3524
56	95.0	1.58	*745A0919*	4160
56	97.6	2.72	*746A0919*	4603
47	109.7	0.77	743A0718	2865
47	112.8	1.42	744A0718	3745
47	115.8	1.99	745A0718	4421
47	104.8	0.91	*744A1019*	3745
47	109.4	1.33	*745A1019*	4421
47	114.0	2.15	*746A1019*	4891
46	122.4	1.93	**745A0523**	4474
46	125.5	3.11	**746A0523**	4951
37	149.1	1.45	**745A0623**	4820
37	152.9	2.42	**746A0623**	5333
35	136.1	0.56	743A0818	3153
35	142.2	1.02	744A0818	4122
35	146.3	1.51	745A0818	4865
35	152.4	2.37	746A0818	5383
35	129.4	0.66	*744A1119*	4122
35	135.6	0.96	*745A1119*	4865
35	141.7	1.59	*746A1119*	5383
31	169.6	1.54	**745A0723**	5122
31	174.2	2.65	**746A0723**	5667
28	167.6	0.81	744A0918	4440
28	175.3	1.20	745A0918	5241
28	182.9	1.86	746A0918	5799
28	156.6	0.77	*745A1219*	5241
28	166.9	1.20	*746A1219*	5799
24	189.0	0.69	744A1018	4719
24	198.1	1.01	745A1018	5569
24	210.3	1.53	746A1018	6163
23	210.6	1.14	**745A0823**	5637
23	219.9	1.87	**746A0823**	6238
23	229.2	3.32	**747A0823**	7882
19	262.9	0.35	743A2018	3889
19	270.5	0.61	744A2018	5083
19	278.1	0.92	745A2018	6000
19	247.8	0.89	**745A0923**	6073
19	263.3	1.49	**746A0923**	6719
19	274.9	2.73	**747A0923**	8491
18	231.6	0.53	744A1118	5193
18	243.8	0.78	745A1118	6130
18	256.0	1.12	746A1118	6783
16	292.6	0.37	743A2118	4132
16	297.2	0.68	744A2118	5300
16	310.9	0.97	745A2118	6375
15	297.4	1.18	**746A1023**	7140
15	315.9	2.16	**747A1023**	9023
15	327.9	0.94	**745A2023**	6453
15	337.3	1.57	**746A2023**	7140
14	279.4	0.65	745A1218	6603
14	299.7	0.91	746A1218	7306
13	365.4	0.99	**745A2123**	6952
13	382.3	1.71	**746A2123**	7859
12	359.6	0.28	743A2218	4548
12	371.8	0.50	744A2218	5945
12	384.0	0.73	745A2218	7017
12	402.3	1.20	746A2218	7764
12	390.3	1.46	**747A1123**	9931
12	396.5	2.17	**749A1123**	12989
10	449.7	0.75	**745A2223**	7380
10	472.2	1.21	**746A2223**	8180
10	464.7	1.59	**747A2223**	10320
9	426.7	0.41	744A2318	6270
9	449.6	0.56	745A2318	7380
9	480.0	0.94	746A2318	8180
9	449.1	1.15	**747A1223**	10320
9	456.9	1.71	**749A1223**	13500
8	484.6	0.34	744A2418	6270
8	512.0	0.47	745A2418	7380
8	539.5	0.75	746A2418	8180
8	515.3	0.58	**745A2323**	7380
8	552.8	0.95	**746A2323**	8180
8	590.3	1.59	**747A2323**	10320
6	618.4	0.77	**746A2423**	8180
6	663.3	1.27	**747A2423**	10320
6	573.0	0.24	744A2518	6270
6	597.4	0.36	745A2518	7380
6	646.1	0.57	746A2518	8180
5	809.5	0.91	**747A2523**	10320
5	809.5	1.41	**749A2523**	13500
5	685.8	0.31	745A2618	7380
5	746.7	0.47	746A2618	8180
4	918.2	0.73	**747A2623**	10320
4	918.2	1.12	**749A2623**	13500

1.1 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
558	17.1	2.63	*743A0120*	1251
372	25.4	2.05	*743A0220*	1433
372	25.4	3.66	*744A0220*	1873
279	33.1	1.63	*743A0320*	1577
279	33.5	2.90	*744A0320*	2061
192	48.7	3.80	745A0224	2785
192	49.3	5.89	746A0224	3081
186	48.0	1.19	*743A0420*	1805
186	48.6	2.13	*744A0420*	2359
144	64.2	3.04	745A0324	3065
144	64.9	4.78	746A0324	3391
140	61.8	0.86	*743A0520*	1987
140	63.3	1.59	*744A0520*	2597
140	64.0	2.50	*745A0520*	3065
123	75.0	2.87	**745A0227**	3227
123	75.8	4.49	**746A0227**	3570
112	75.3	0.68	*743A0620*	2140
112	77.2	1.20	*744A0620*	2797
112	78.1	1.92	*745A0620*	3302
96	93.0	2.16	745A0424	3509
96	94.1	3.83	746A0424	3882
93	85.9	0.75	*743A0720*	2274
93	88.1	1.37	*744A0720*	2973
93	90.4	1.89	*745A0720*	3509
93	97.7	2.36	**745A0327**	3551
93	98.8	3.75	**746A0327**	3929
72	119.7	1.76	745A0524	3862
72	122.6	2.90	746A0524	4273
70	110.0	0.54	*743A0820*	2503
70	113.0	0.96	*744A0820*	3272
70	116.0	1.43	*745A0820*	3862
70	119.0	2.32	*746A0820*	4273
62	139.7	1.69	**745A0427**	4065
62	143.1	2.94	**746A0427**	4498
58	145.9	1.38	745A0624	4160
58	149.6	2.28	746A0624	4603
56	133.7	0.75	*744A0920*	3524
56	139.3	1.08	*745A0920*	4160
56	143.1	1.86	*746A0920*	4603
48	166.3	1.39	745A0724	4421
48	170.7	2.41	746A0724	4891
47	153.6	0.62	*744A1020*	3745
47	160.4	0.91	*745A1020*	4421
47	167.2	1.47	*746A1020*	4891
46	179.4	1.31	**745A0527**	4474
46	184.0	2.12	**746A0527**	4951
37	218.6	0.99	**745A0627**	4820
37	224.3	1.65	**746A0627**	5333
36	210.1	1.05	745A0824	4865
36	218.9	1.65	746A0824	5383
36	227.6	2.95	747A0824	6803
35	189.8	0.45	*744A1120*	4122
35	198.8	0.66	*745A1120*	4865
35	207.9	1.09	*746A1120*	5383
31	248.7	1.05	**745A0727**	5122
31	255.5	1.81	**746A0727**	5667
29	251.7	0.84	745A0924	5241
29	262.6	1.30	746A0924	5799
29	273.6	2.42	747A0924	7328
28	229.7	0.53	*745A1220*	5241
28	244.8	0.82	*746A1220*	5799

Series W Gearboxes : Motorised selection

Bold print indicates 6 pole motor, italics indicates 2 pole motor, all others are 4 pole motors.

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
24	302.0	1.06	746A1024	6163
24	315.2	1.96	747A1024	7787
24	322.2	0.80	745A2024	5569
24	331.0	1.33	746A2024	6163
23	308.9	0.78	**745A0827**	5637
23	322.5	1.28	**746A0827**	6238
23	336.2	2.26	**747A0827**	7882
20	360.1	0.84	745A2124	6000
20	376.0	1.47	746A2124	6783
19	363.4	0.61	**745A0927**	6073
19	386.1	1.02	**746A0927**	6719
19	403.2	1.86	**747A0927**	8491
18	391.0	1.32	747A1124	8571
18	396.9	2.12	749A1124	11210
15	436.1	0.81	**746A1027**	7140
15	463.4	1.48	**747A1027**	9023
15	481.0	0.64	**745A2027**	6453
15	494.7	1.07	**746A2027**	7140
15	444.9	0.63	745A2224	6603
15	466.1	1.03	746A2224	7306
15	494.3	1.64	747A2224	9838
14	459.6	1.06	747A1224	9232
14	466.9	1.59	749A1224	12076
13	535.9	0.68	**745A2127**	6952
13	560.7	1.16	**746A2127**	7859
12	520.8	0.49	745A2324	7017
12	556.1	0.81	746A2324	7764
12	582.6	1.38	747A2324	10320
12	572.4	1.00	**747A1127**	9931
12	581.5	1.48	**749A1127**	12989
10	625.0	0.65	746A2424	8180
10	667.3	1.07	747A2424	10320
10	659.6	0.51	**745A2227**	7380
10	692.6	0.82	**746A2227**	8180
10	681.6	1.09	**747A2227**	10320
9	658.7	0.79	**747A1227**	10320
9	670.1	1.17	**749A1227**	13500
8	755.8	0.40	**745A2327**	7380
8	810.8	0.65	**746A2327**	8180
8	865.7	1.08	**747A2327**	10320
7	805.0	0.79	747A2524	10320
7	819.2	1.19	749A2524	13500
6	907.0	0.52	**746A2427**	8180
6	972.9	0.87	**747A2427**	10320
6	935.7	0.61	747A2624	10320
6	935.7	0.92	749A2624	13500
5	1187.3	0.62	**747A2527**	10320
5	1187.3	0.96	**749A2527**	13500
4	1346.7	0.50	**747A2627**	10320
4	1346.7	0.76	**749A2627**	13500

1.5 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
377	34.6	3.76	*745A0226*	2210
377	35.0	6.01	*746A0226*	2446
283	45.6	3.18	*745A0326*	2433
283	45.6	5.15	*746A0326*	2692
192	66.4	2.79	745A0228	2785
192	67.2	4.32	746A0228	3081
188	66.2	2.27	*745A0426*	2785
188	66.9	4.04	*746A0426*	2785
144	87.6	2.23	745A0328	3065
144	88.5	3.51	746A0328	3391
141	86.2	1.86	*745A0526*	3065
141	88.2	2.95	*746A0526*	3391
125	100.6	2.14	**745A0237**	3227
125	101.7	3.35	**746A0237**	3570
125	101.7	6.39	**747A0237**	4511
113	105.2	1.43	*745A0626*	3302
113	107.8	2.33	*746A0626*	3653
96	126.8	1.58	745A0428	3509
96	128.3	2.81	746A0428	3882

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
94	121.7	1.40	*745A0726*	3509
94	124.8	2.49	*746A0726*	3882
94	131.1	1.76	**745A0337**	3551
94	132.6	2.80	**746A0337**	3929
94	134.1	5.32	**747A0337**	4965
72	163.2	1.29	745A0528	3862
72	167.1	2.13	746A0528	4273
71	156.2	1.06	*745A0826*	3862
71	160.2	1.72	*746A0826*	4273
71	166.3	3.05	*747A0826*	5399
63	187.5	1.26	**745A0437**	4065
63	192.0	2.19	**746A0437**	4498
63	194.3	3.91	**747A0437**	5684
58	199.0	1.01	745A0628	4160
58	203.9	1.67	746A0628	4603
57	187.6	0.80	*745A0926*	4160
57	192.7	1.38	*746A0926*	4603
57	200.3	2.48	*747A0926*	5816
48	226.8	1.02	745A0728	4421
48	232.8	1.77	746A0728	4891
47	225.2	1.09	*746A1026*	4891
47	234.3	1.93	*747A1026*	6181
47	246.9	1.58	**746A0537**	4951
47	253.0	2.87	**747A0537**	6256
38	301.0	1.23	**746A0637**	5333
38	308.6	2.46	**747A0637**	6739
36	286.5	0.77	745A0828	4865
36	298.4	1.21	746A0828	5383
36	310.4	2.17	747A0828	6803
35	292.1	1.37	*747A1126*	6803
35	296.1	2.00	*749A1126*	8897
31	342.9	1.35	**746A0737**	5667
31	347.5	2.42	**747A0737**	7161
31	356.6	3.29	**749A0737**	9366
29	343.2	0.62	745A0928	5241
29	358.1	0.95	746A0928	5799
29	373.1	1.77	747A0928	7328
28	349.9	1.06	*747A1226*	7328
28	355.0	1.47	*749A1226*	9584
24	411.9	0.78	746A1028	6163
24	429.8	1.44	747A1028	7787
24	439.3	0.59	745A2028	5569
24	451.4	0.98	746A2028	6163
24	451.1	1.69	**747A0837**	7882
24	457.2	2.41	**749A0837**	10309
20	491.1	0.62	745A2128	6000
20	512.8	1.08	746A2128	6783
19	541.0	1.39	**747A0937**	8491
19	548.6	1.92	**749A0937**	11105
18	533.2	0.97	747A1128	8571
18	541.2	1.56	749A1128	11210
16	621.8	1.10	**747A1037**	9023
16	630.9	1.49	**749A1037**	11801
15	606.7	0.47	745A2228	6603
15	635.6	0.76	746A2228	7306
15	674.1	1.21	747A2228	9838
14	626.7	0.78	747A1228	9232
14	636.7	1.17	749A1228	12076
12	710.2	0.36	745A2328	7017
12	758.3	0.60	746A2328	7764
12	794.4	1.01	747A2328	10320
12	780.3	1.11	**749A1137**	12989
10	852.2	0.47	746A2428	8180
10	910.0	0.79	747A2428	10320
9	899.1	0.87	**749A1237**	13500
7	1097.8	0.58	747A2528	10320
7	1117.0	0.87	749A2528	13500
6	1275.9	0.45	747A2628	10320
6	1275.9	0.68	749A2628	13500

2.2 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
379	50.5	2.58	*745A0229*	2210
379	51.1	4.12	*746A0229*	2446
284	66.6	2.18	*745A0329*	2433
284	66.6	3.53	*746A0329*	2692
190	98.4	1.88	745A0236	2785
190	99.5	2.92	746A0236	3081
190	99.5	5.55	747A0236	3893
189	96.6	1.56	*745A0429*	2785
189	97.7	2.77	*746A0429*	2785
143	129.8	1.51	745A0336	3065
143	131.2	2.37	746A0336	3391
143	131.2	4.56	747A0336	4285
142	125.8	1.28	*745A0529*	3065
142	128.7	2.02	*746A0529*	3391
125	147.5	1.46	**745A0245**	3227
125	149.2	2.28	**746A0245**	3570
125	149.2	4.36	**747A0245**	4511
114	153.5	0.98	*745A0629*	3302
114	157.2	1.60	*746A0629*	3653
95	188.0	1.07	745A0436	3509
95	190.2	1.90	746A0436	3882
95	190.2	3.45	747A0436	4905
95	177.6	0.96	*745A0729*	3509
95	182.0	1.71	*746A0729*	3882
94	192.2	1.20	**745A0345**	3551
94	194.5	1.91	**746A0345**	3929
94	196.7	3.63	**747A0345**	4965
71	247.7	1.44	746A0536	4273
71	250.7	2.57	747A0536	5399
71	227.9	0.73	*745A0829*	3862
71	233.8	1.18	*746A0829*	4273
71	242.7	2.09	*747A0829*	5399
63	274.9	0.86	**745A0445**	4065
63	281.6	1.50	**746A0445**	4498
63	285.0	2.67	**747A0445**	5684
57	302.3	1.13	746A0636	4603
57	309.6	2.20	747A0636	5816
57	273.7	0.55	*745A0929*	4160
57	281.1	0.95	*746A0929*	4603
57	292.2	1.70	*747A0929*	5816
48	345.0	1.19	746A0736	4891
48	349.4	2.08	747A0736	6181
48	353.9	2.94	749A0736	8084
47	328.5	0.75	*746A1029*	4891
47	341.8	1.33	*747A1029*	6181
47	362.1	1.08	**746A0545**	4951
47	371.0	1.96	**747A0545**	6256
38	441.4	0.84	**746A0645**	5333
38	452.6	1.68	**747A0645**	6739
36	460.0	1.46	747A0836	6803
36	460.0	2.29	749A0836	8897
36	426.1	0.94	*747A1129*	6803
36	432.0	1.37	*749A1129*	8897
31	502.9	0.92	**746A0745**	5667
31	509.6	1.65	**747A0745**	7161
31	523.0	2.24	**749A0745**	9366
29	552.9	1.20	747A0936	7328
29	552.9	1.78	749A0936	9584
28	510.5	0.73	*747A1229*	7328
28	517.9	1.01	*749A1229*	9584
24	636.9	0.97	747A1036	7787
24	636.9	1.42	749A1036	10185
24	661.6	1.15	**747A0845**	7882
24	670.5	1.65	**749A0845**	10309
19	793.5	0.95	**747A0945**	8491
19	804.6	1.31	**749A0945**	11105
18	802.1	1.05	749A1136	11210
16	911.9	0.75	**747A1045**	9023
16	925.3	1.02	**749A1045**	11801
14	943.6	0.79	749A1236	12076
12	1144.4	0.76	**749A1145**	12989
9	1318.7	0.60	**749A1245**	13500

Series W Gearboxes : Motorised selection

3.0 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
384	67.9	1.92	*745A0239*	2210
384	68.7	3.06	*746A0239*	2446
384	68.7	5.69	*747A0239*	3090
288	89.5	1.62	*745A0339*	2433
288	89.5	2.63	*746A0339*	2692
288	90.5	4.83	*747A0339*	3401
192	129.8	1.16	*745A0439*	2785
192	131.3	2.06	*746A0439*	2785
192	132.8	3.69	*747A0439*	3893
189	134.7	1.38	745A0238	2785
189	136.2	2.13	746A0238	3081
189	136.2	4.06	747A0238	3893
144	173.1	1.51	*746A0539*	3391
144	175.1	2.76	*747A0539*	4285
142	177.6	1.10	745A0338	3065
142	179.6	1.73	746A0338	3391
142	179.6	3.34	747A0338	4285
128	199.2	3.27	**747A0253**	4511
128	201.5	4.37	**749A0253**	5901
115	211.4	1.19	*746A0639*	3653
115	216.4	2.34	*747A0639*	4816
96	244.7	1.27	*746A0739*	3882
96	247.7	2.23	*747A0739*	4905
96	262.6	2.72	**747A0353**	4965
96	250.7	3.08	*749A0739*	6416
96	262.6	3.66	**749A0353**	6494
95	257.3	0.78	745A0438	3509
95	260.3	1.39	746A0438	3882
95	260.3	2.53	747A0438	4905
72	326.3	1.56	*747A0839*	5399
72	326.3	2.24	*749A0839*	7062
71	339.0	1.05	746A0538	4273
71	343.0	1.88	747A0538	5399
64	380.5	2.00	**747A0453**	5684
64	380.5	2.79	**749A0453**	7434
58	393.0	1.26	*747A0939*	5816
58	397.9	1.76	*749A0939*	7607
57	413.6	0.83	746A0638	4603
57	423.7	1.61	747A0638	5816
48	459.6	0.99	*747A1039*	6181
48	465.6	1.38	*749A1039*	8084
48	495.4	1.47	**747A0553**	6256
48	501.4	2.08	**749A0553**	8182
47	472.1	0.87	746A0738	4891
47	478.2	1.52	747A0738	6181
47	484.2	2.15	749A0738	8084
38	611.8	1.72	**749A0653**	8814
36	581.0	1.02	*749A1139*	8897
36	629.5	1.07	747A0838	6803
36	629.5	1.67	749A0838	8897
32	698.4	1.68	**749A0753**	9366
29	696.4	0.75	*749A1239*	9584
28	756.6	0.88	747A0938	7328
28	756.6	1.30	749A0938	9584
24	895.3	1.23	**749A0853**	10309
24	871.6	0.71	747A1038	7787
24	871.6	1.04	749A1038	10185
18	1097.6	0.77	749A1138	11210
14	1291.3	0.58	749A1238	12076

4.0 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
383	90.9	1.44	*745A0244*	2210
383	91.8	2.29	*746A0244*	2446
383	91.8	4.25	*747A0244*	3090
287	119.8	1.22	*745A0344*	2433
287	119.8	1.97	*746A0344*	2692
287	121.1	3.61	*747A0344*	3401
192	177.1	1.05	745A0246	2785
192	179.1	1.62	746A0246	3081
192	179.1	3.09	747A0246	3893
191	173.7	0.87	*745A0444*	2785
191	175.7	1.54	*746A0444*	2785
191	177.7	2.76	*747A0444*	3893
144	233.5	0.84	745A0346	3065
144	236.1	1.32	746A0346	3391
144	236.1	2.54	747A0346	4285
144	231.6	1.13	*746A0544*	3391
144	234.3	2.07	*747A0544*	4285
128	265.6	2.45	**747A0255**	4511
128	268.6	3.28	**749A0255**	5901
115	282.8	0.89	*746A0644*	3653
115	289.5	1.75	*747A0644*	4816
96	338.2	0.60	745A0446	3509
96	342.2	1.06	746A0446	3882
96	342.2	1.92	747A0446	4905
96	350.2	2.04	**747A0355**	4965
96	350.2	2.75	**749A0355**	6494
96	327.4	0.95	*746A0744*	3882
96	331.4	1.67	*747A0744*	4905
96	335.4	2.30	*749A0744*	6416
72	445.7	0.80	746A0546	4273
72	451.0	1.43	747A0546	5399
72	436.6	1.16	*747A0844*	5399
72	436.6	1.68	*749A0844*	7062
64	507.4	1.50	**747A0455**	5684
64	507.4	2.09	**749A0455**	7434
58	543.8	0.63	746A0646	4603
58	557.1	1.22	747A0646	5816
57	525.8	0.95	*747A0944*	5816
57	532.4	1.32	*749A0944*	7607
48	620.8	0.67	746A0746	4891
48	660.6	1.10	**747A0555**	6256
48	628.7	1.16	747A0746	6181
48	668.5	1.56	**749A0555**	8182
48	636.7	1.64	749A0746	8084
48	614.9	0.74	*747A1044*	6181
48	622.9	1.03	*749A1044*	8084
38	815.7	1.29	**749A0655**	8814
36	827.7	0.82	747A0846	6803
36	827.7	1.27	749A0846	8897
36	777.3	0.76	*749A1144*	8897
32	931.1	1.26	**749A0755**	9366
29	994.8	0.67	747A0946	7328
29	994.8	0.99	749A0946	9584
29	931.7	0.56	*749A1244*	9584
24	1146.0	0.54	747A1046	7787
24	1146.0	0.79	749A1046	10185
24	1193.8	0.93	**749A0855**	10309
18	1443.1	0.59	749A1146	11210
14	1697.8	0.44	749A1246	12076

5.5 KW MOTOR

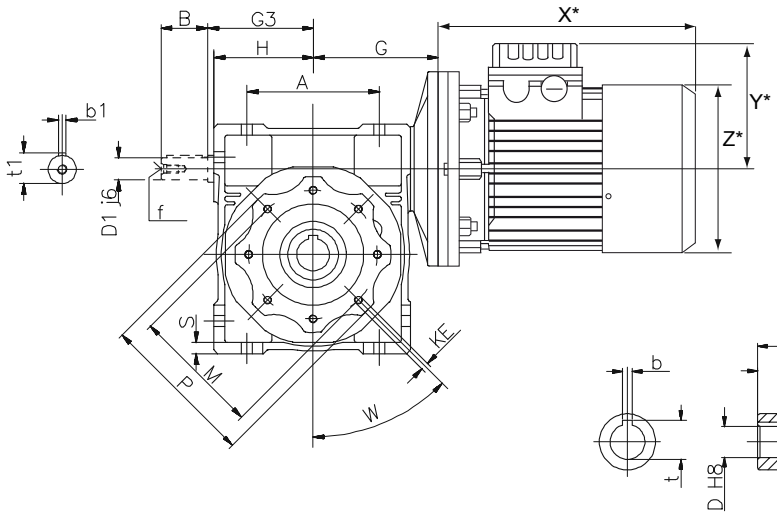
Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
388	124.6	3.14	*747A0252*	3090
388	124.6	4.18	*749A0252*	4042
291	164.3	2.67	*747A0352*	3401
291	164.3	3.54	*749A0352*	4449
195	242.8	2.28	747A0254	3893
195	245.5	3.06	749A0254	5092
194	241.0	2.03	*747A0452*	3893
194	241.0	2.79	*749A0452*	5092
146	320.2	1.87	747A0354	4285
146	320.2	2.57	749A0354	5605
146	317.7	1.53	*747A0552*	4285
146	317.7	2.08	*749A0552*	5605
128	365.2	1.78	**747A0257**	4511
128	369.3	2.39	**749A0257**	5901
116	392.6	1.71	*749A0652*	6038
97	464.1	1.42	747A0454	4905
97	469.5	1.96	749A0454	6416
97	454.9	1.70	*749A0752*	6416
96	481.5	1.49	**747A0357**	4965
96	481.5	2.00	**749A0357**	6494
73	611.6	1.06	747A0554	5399
73	618.8	1.48	749A0554	7062
73	592.0	1.24	*749A0852*	7062
64	697.6	1.09	**747A0457**	5684
64	697.6	1.52	**749A0457**	7434
58	755.5	1.24	749A0654	7607
49	863.4	1.21	749A0754	8084
48	908.3	0.80	**747A0557**	6256
48	919.2	1.14	**749A0557**	8182
38	1121.6	0.94	**749A0657**	8814
37	1122.5	0.94	749A0854	8897
32	1280.3	0.92	**749A0757**	9366
24	1641.4	0.68	**749A0857**	10309

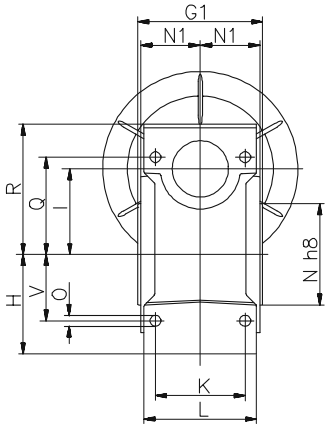
7.5 KW MOTOR

Nominal Output Rev/Min	Output Torque Nm	Service Factor	Unit Selection	Overhung Load N
388	169.8	2.30	*747A0258*	3090
388	169.8	3.07	*749A0258*	4042
291	224.0	1.96	*747A0358*	3401
291	224.0	2.59	*749A0358*	4449
194	328.6	1.49	*747A0458*	3893
194	332.3	1.67	747A0256	3893
194	328.6	2.04	*749A0458*	5092
194	336.0	2.24	749A0256	5092
146	433.2	1.12	*747A0558*	4285
146	438.1	1.37	747A0356	4285
146	433.2	1.53	*749A0558*	5605
146	438.1	1.88	749A0356	5605
116	535.4	1.26	*749A0658*	6038
97	635.0	1.04	747A0456	4905
97	620.3	1.25	*749A0758*	6416
97	642.4	1.44	749A0456	6416
73	836.9	0.77	747A0556	5399
73	807.3	0.91	*749A0858*	7062
73	846.7	1.08	749A0556	7062
58	1033.8	0.90	749A0656	7607
49	1181.5	0.89	749A0756	8084
36	1535.9	0.69	749A0856	8897

Series W Gearboxes : Dimensions motorised

TRIPLE REDUCTION





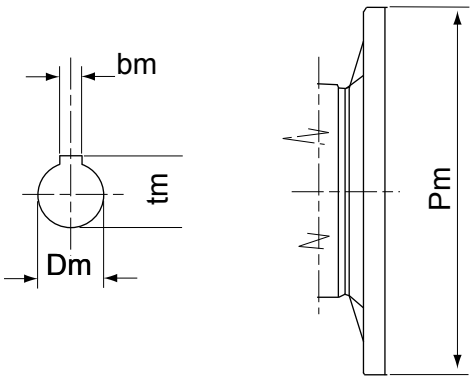
*for motor dimensions see page 314

Dimension (mm)	Unit Size								
	740	741	742	743	744	745	746	747	749
A	45	54	70	80	100	120	140	170	200
B	-	20	23	30	40	50	50	60	80
D†	11	14	18 (19)	25 (24)	25 (28)	28 (35)	35 (38)	42	45
D1	-	9	11	14	19	24	24	28	30
G	45	55	70	80	95	112.5	129.5	160	180
G1	50	63	78	92	112	120	140	155	170
G3	-	45	53	64	75	90	108	135	155
H	35	40	50	60	72	86	103	127.5	147.5
I	25	30	40	50	63	75	90	110	130
K	34	44	60	70	85	90	100	115	120
KE**	6.5 (3)	M6x11 (4)	M6x10 (4)	M8x10 (4)	M8x14(8)	M8x14(8)	M10x18(8)	M10x18(8)	M12x21(8)
L	42	56	71	85	103	112	130	144	155
M	55	65	75	85	95	115	130	165	215
N (h8)	45	55	60	70	80	95	110	130	180
N1	22.5	29.0	36.5	43.5	53.0	57.0	67.0	74.0	81.0
O	6.0	6.5	6.5	8.5	8.5	11.5	13.0	14.0	16.0
P	-	75	87	100	110	140	160	200	250
Q	35.5	44	55	64	80	93	102	125	140
R	48.0	57.0	71.5	84.0	102.0	119.0	135.0	167.5	187.5
S	5.0	5.5	6.5	7.0	8.0	10.0	11.0	16.0	15.5
T	16.0	21.0	26.0	30.0	36.0	40.0	45.0	50.0	60.0
V	22.5	27	35	40	50	60	70	85	100
W	100°	0°	45°	45°	45°	45°	45°	45°	45°
b†	4	5	6	8	8	8 (10)	10	12	14
t†	12.8	16.3	20.8 (21.8)	28.3 (27.3)	28.3 (31.3)	31.3 (38.3)	38.3 (41.3)	45.3	48.8
b1	-	3	4	5	6	8	8	8	8
t1	-	10.2	12.5	16.0	21.5	27.0	27.0	31.0	33.0
f	-	-	-	M6	M6	M8	M8	M10	M10
~kg	0.7	1.2	2.3	3.5	6.2	9.0	13.0	21.0	48.0

All dimensions in mm.
† Dimension in brackets are the alternative bore option.
** Number in brackets are the number of tapped holes with the exception of the size 740 where the holes are not tapped.
~kg refers to the approximate weight without motor.

Series W Gearboxes : Motor input dimensions

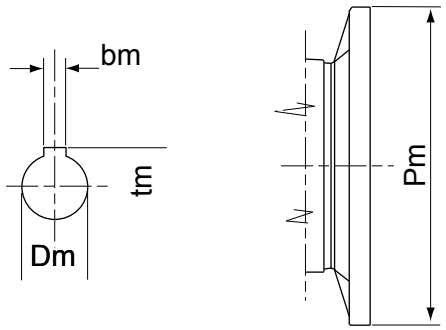
B5 FLANGE DIMENSIONS



B5 Flange	IEC Motor Frame Size										
	56	63	71	80	90	100	112	132	160	180	200
Pm	120	140	160	200	200	250	250	300	350	350	400
Dm	9	11	14	19	24	28	28	38	42	48	55
bm	3	4	5	6	8	8	8	10	12	14	16
tm	10.4	12.8	16.3	21.8	27.3	31.3	31.3	41.3	45.3	51.8	59.3

* Size 749 Dimension tm is 40.3 (IEC 132)

B14 FLANGE DIMENSIONS

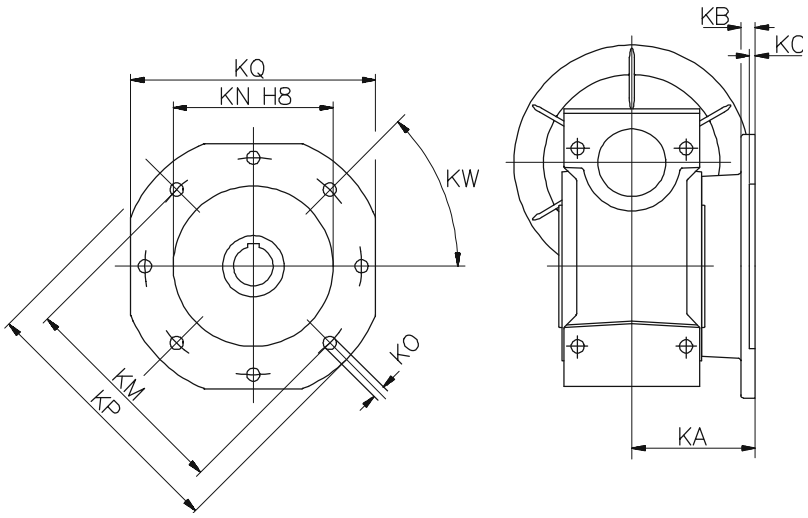


B14 Face	IEC Motor Frame Size										
	56	63	71	80	90	100	112	132	160	180	200
Pm	80	90	105	120	140	160	160	200	350	350	400
Dm	9	11	14	19	24	28	28	38	42	48	55
bm	3	4	5	6	8	8	8	10	12	14	16
tm	10.4	12.8	16.3	21.8	27.3	31.3	31.3	41.3	45.3	51.8	59.3

* Size 749 Dimension tm is 40.3 (IEC 132)

Series W Gearboxes : Output flange dimensions

TRIPLE REDUCTION



STANDARD OUTPUT FLANGE (Type FA)

Unit Size	KA	KB	KC	KM	KN	KO	KP	KQ	KW
740	45	6	3	55	40	6.5 (4)	75	70	45°
741	54.5	6	4	68	50	6.5 (4)	80	70	45°
742	67	7	4	80 min	60	9 (4)	110	95	45°
743	90	9	5	90 min	70	11 (4)	125	110	45°
744	82	10	6	150	115	11 (4)	180	142	45°
745	111	13	6	165	130	14 (4)	200	170	45°
746	111	13	6	175	152	14 (4)	210	200	45°
747	131	15	6	230	170	14 (8)	280	260	45°
749	140	15	6	255	180	16 (8)	320	290	22.5°

OUTPUT FLANGE (Type FB)

Unit Size	KA	KB	KC	KM	KN	KO	KP	KQ	KW
742	97	7	4	80 min	60	9 (4)	110	95	45°
743	120	9	5	90 min	70	11 (4)	125	110	45°
744	112	10	6	150	115	11 (4)	180	142	45°
745	90	13	6	130	110	14 (4)	160	-	45°
746	122	18	6	215	180	14 (4)	250	-	45°
747	180	15	6	230	170	14 (8)	280	260	45°

OUTPUT FLANGE (Type FC)

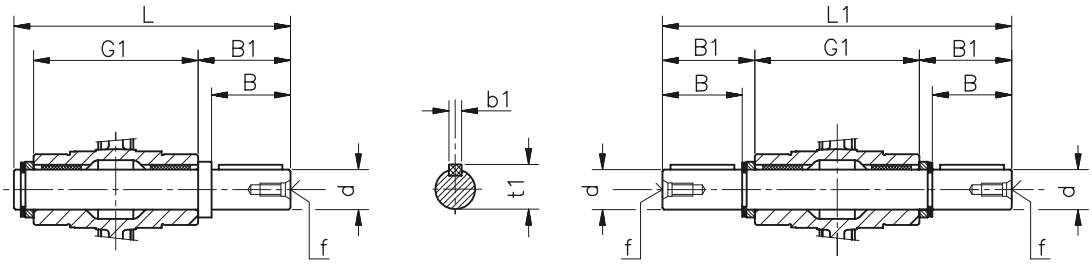
Unit Size	KA	KB	KC	KM	KN	KO	KP	KQ	KW
742	80	9	5	115	95	9.5 (4)	140	-	45°
743	89	10	5	130	110	9.5 (4)	160	-	45°
744	98	10	5	165	130	11 (4)	200	-	45°
745	-	-	-	-	-	-	-	-	-
746	110	17	6	165	130	11 (4)	200	-	45°

OUTPUT FLANGE (Type FD)

Unit Size	KA	KB	KC	KM	KN	KO	KP	KQ	KW
742	58	12	5	100	80	9 (4)	120	-	45°
743	72	14.5	5	115	95	11 (4)	140	-	45°
744	107	10	5	165	130	11 (4)	200	-	45°
745	-	-	-	-	-	-	-	-	-
746	151	13	6	175	152	14 (4)	210	-	45°

Series W Gearboxes : Accessories

OUTPUT SHAFTS



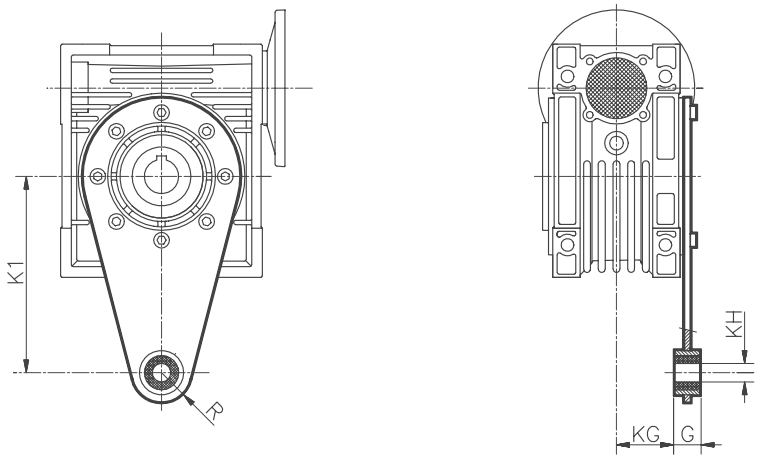
Single Extension

Double Extension

Unit Size	d h6	B	B1	G1	L	L1	f	b1	t1	Kg Single	kg Double
740*	11 g6	23	25.5	50	81	101	-	4	12.5	0.07	0.11
741	14	30	32.5	63	102	128	M6	5	16.0	0.14	0.16
742	18	40	43.0	78	128	164	M6	6	20,5	0.27	0.34
743	25	50	53.5	92	153	199	M10	8	28.0	0.60	0.75
744	25	50	53.5	112	173	219	M10	8	28.0	0.67	0.84
745	28	60	63.5	120	192	247	M10	8	31.0	0.94	1.20
746	35	80	84.5	140	234	309	M12	10	38.0	1.79	2.50
747	42	80	84.5	155	249	324	M16	12	45.0	2.70	3.44
749	45	80	85.0	170	265	340	M16	14	48.5	3.60	4.25

*Alternative small shaft available on request contact your local Authorised Distributor.
All dimensions in mm.

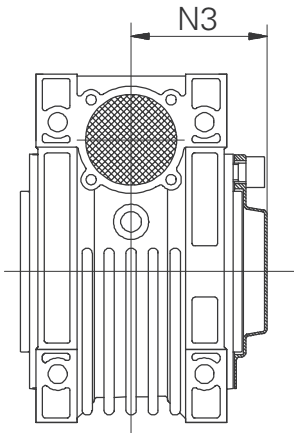
TORQUE ARM DIMENSIONS



Unit Size	K1	G	KG	KH	R	kg
740	70	14	17.5	8	15	0.17
741	85	14	24.0	8	15	0.18
742	100	14	31.5	10	18	0.24
743	100	14	38.5	10	18	0.27
744	150	14	49.0	10	18	0.57
745	200	25	47.5	20	30	1.1
746	200	25	57.5	20	30	1.26
747	250	30	62.0	25	35	1.92
749	250	30	69.0	25	35	2.23

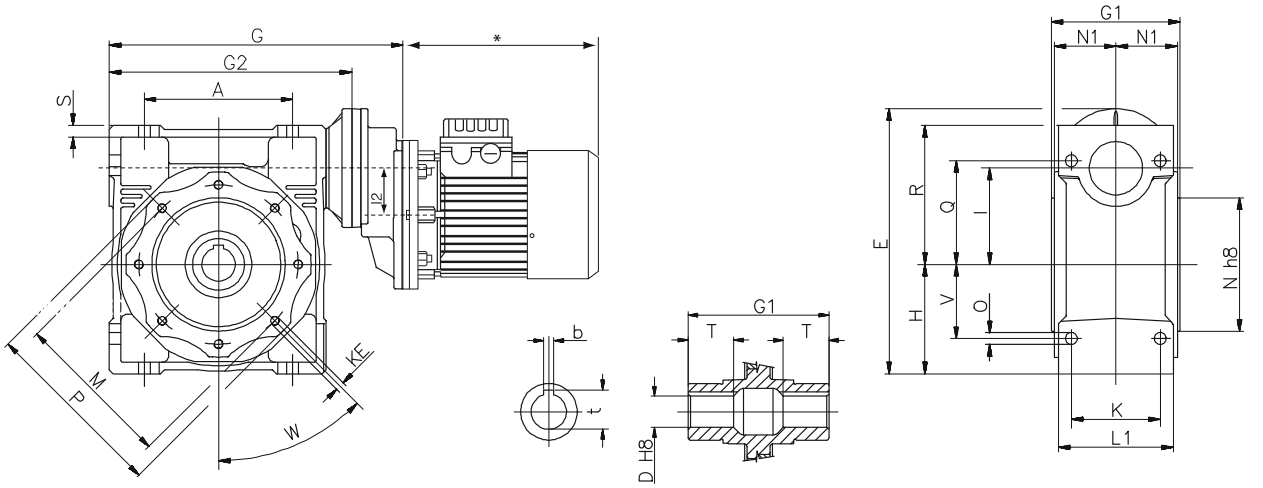
All dimensions in mm.
NOTE: Sizes 740 & 741 are not supplied with vibration resistant bushing

OUTPUT HUB DIMENSIONS



Unit Size	N3
741	42.0
742	50.0
743	57.5
744	68.5
745	73.5
746	85.5
747	94.0
748	94.0
749	102.0
750	117.0

Series W Gearboxes : Helical worm unit dimensions



*for motor dimensions see page 314

IEC Motor	63 Frame			71 Frame				80 & 90 Frame			
Size	742	743	744	743	744	745	746	745	746	747	749
A	70	80	100	80	100	120	140	120	140	170	200
E	147.0	167.0	192.0	177.5	202.5	228.5	260.5	241.0	273.0	317.5	357.5
G	165	185	212	193	220	251.5	285.5	267.5	301.5	356.5	396.5
G1	78	92	112	92	112	120	140	120	140	155	170
G2	120.0	140.0	167.0	140.0	167.0	198.5	232.5	198.5	232.5	287.5	327.5
H	50.0	60.0	72.0	60.0	72.0	86.0	103.0	86.0	103.0	127.5	147.5
I	40	50	63	50	63	75	90	75	90	110	130
I2	40	40	40	50	50	50	50	63	63	63	63
L1	71	85	103	85	103	112	130	112	130	144	155
K	60	70	85	70	85	90	100	90	100	115	120
KE**	M6x10(4)	M8x10(4)	M8x14(8)	M8x10(4)	M8x14(8)	M8x14(8)	M10x18(8)	M8x14(8)	M10x18(8)	M10x18(8)	M12x21(8)
M	75	85	95	85	95	115	130	115	130	165	215
N	60	70	80	70	80	95	110	95	110	130	180
N1	36.5	43.5	53.0	43.5	53.0	57.0	67.0	57.0	67.0	74.0	81.0
O	6.5	8.5	8.5	8.5	8.5	11.5	13.0	11.5	13.0	14.0	16.0
P	87	100	110	100	110	140	160	140	160	200	250
Q	55	64	80	64	80	93	102	93	102	125	140
R	71.5	84.0	102.0	84.0	102.0	119.0	135.0	119.0	135.0	167.5	187.5
S	6.5	7.0	8.0	7.0	8.0	10.0	11.0	10.0	11.0	16.0	15.5
T	26	30	36	30	36	40	45	40	45	50	60
V	35	40	50	40	50	60	70	60	70	85	100
W	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°	45°
D	18	25	25	25	25	28	35	28	35	42	45
b	6	8	8	8	8	8	10	8	10	12	14
t	20.8	28.3	28.3	28.3	28.3	31.3	38.3	31.3	38.3	45.3	48.8
~kg	3.4	4.6	7.3	5.1	7.8	10.6	14.6	12.4	16.4	24.4	51.4

All Dimesions in mm. For alternative hollow bore options see page 326 and the relevant motorised worm unit size.
The frame size of the electric motor fitted to a worm unit determines the helical gear part of the asembly,the relevant dimensions are given in the above table
Eg: Dimension G (the overall length) for a size 743 Helical Worm gearbox fitted with an IEC 71 Frame motor is 193mm.
** Number in brackets are the number of tapped holes.
~kg Refers to the approximate weight without motor. See page 314 for additional motor weight.

Series W Gearboxes : Non-motorised ratings : Input speed 500 rev/min

NON-MOTORISED RATINGS

Input speed 500 rev/min.

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
741	5.0	100	0.30	24	210	841
	7.5	66.7	0.21	24	210	963
	10	50.0	0.16	24	210	1060
	15	33.3	0.12	24	210	1213
	20	25.0	0.09	23	210	1336
	25	20.0	0.10	29	210	1439
	30	16.7	0.08	26	210	1529
	40	12.5	0.06	23	210	1683
	50	10.0	0.05	21	210	1813
	60	8.3	0.04	19	210	1830
	80	6.3	0.03	17	210	1830
742	5	100	0.60	49	350	1619
	7.5	66.7	0.45	54	350	1853
	10	50.0	0.35	54	350	2040
	15	33.3	0.26	55	350	2335
	20	25.0	0.19	52	350	2570
	25	20.0	0.15	49	350	2769
	30	16.7	0.16	58	350	2942
	40	12.5	0.12	53	350	3238
	50	10.0	0.10	49	350	3488
	60	8.3	0.08	46	350	3490
	80	6.3	0.06	40	350	3490
	100	5.0	0.05	36	350	3490
743	5	100	1.1	92	490	2222
	7.5	66.7	0.86	103	490	2544
	10	50.0	0.67	103	490	2800
	15	33.3	0.47	103	490	3205
	20	25.0	0.33	93	490	3528
	25	20.0	0.28	91	490	3800
	30	16.7	0.29	108	490	4038
	40	12.5	0.22	98	490	4445
	50	10.0	0.17	91	490	4788
	60	8.3	0.14	83	490	4840
	80	6.3	0.11	75	490	4840
	100	5.0	0.09	65	490	4840
744	7.5	66.7	1.50	184	700	3325
	10	50.0	1.20	185	700	3660
	15	33.3	0.85	187	700	4190
	20	25.0	0.63	178	700	4611
	25	20.0	0.48	164	700	4967
	30	16.7	0.54	200	700	5279
	40	12.5	0.40	185	700	5810
	50	10.0	0.32	173	700	6259
	60	8.3	0.26	160	700	6270
	80	6.3	0.19	137	700	6270
	100	5.0	0.16	128	700	6270
745	7.5	66.7	2.10	260	980	3925
	10	50.0	1.70	270	980	4320
	15	33.3	1.20	280	980	4945
	20	25.0	0.98	285	980	5443
	25	20.0	0.73	255	980	5863
	30	16.7	0.77	300	980	6231
	40	12.5	0.58	280	980	6858
	50	10.0	0.44	250	980	7380
	60	8.3	0.37	240	980	7380
	80	6.3	0.29	215	980	7380
	100	5.0	0.24	210	980	7380

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
746	7.5	66.7	3.30	410	1270	4343
	10	50.0	2.70	435	1270	4780
	15	33.3	2.10	490	1270	5472
	20	25.0	1.60	470	1270	6022
	25	20.0	1.20	440	1270	6487
	30	16.7	1.40	550	1270	6894
	40	12.5	0.95	480	1270	7588
	50	10.0	0.75	450	1270	8174
	60	8.3	0.59	400	1270	8180
	80	6.3	0.45	365	1270	8180
	100	5.0	0.35	330	1270	8180
747	7.5	66.7	5.50	690	1700	5488
	10	50.0	4.60	740	1700	6040
	15	33.3	3.40	790	1700	6914
	20	25.0	2.50	750	1700	7610
	25	20.0	2.10	790	1700	8198
	30	16.7	2.10	870	1700	8711
	40	12.5	1.50	810	1700	9588
	50	10.0	1.30	800	1700	10320
	60	8.3	0.98	710	1700	10320
	80	6.3	0.72	630	1700	10320
	100	5.0	0.56	570	1700	10320
749	7.5	66.7	8.60	1080	2100	7178
	10	50.0	7.10	1160	2100	7900
	15	33.3	5.50	1300	2100	9043
	20	25.0	4.00	1230	2100	9953
	25	20.0	3.20	1200	2100	10722
	30	16.7	3.30	1400	2100	11394
	40	12.5	2.40	1300	2100	12540
	50	10.0	1.90	1220	2100	13500
	60	8.3	1.50	1070	2100	13500
	80	6.3	1.10	970	2100	13500
	100	5.0	0.85	860	2100	13500

Series W Gearboxes : Non-motorised ratings : Input speed 900 rev/min

NON-MOTORISED RATINGS

Input speed 900 rev/min.

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
741	5	180	0.44	20	175	692
	7.5	120	0.30	20	175	792
	10	90.0	0.24	20	197	871
	15	60.0	0.17	20	197	997
	20	45.0	0.13	20	210	1098
	25	36.0	0.14	23	210	1183
	30	30.0	0.11	21	210	1257
	40	22.5	0.09	20	210	1383
	50	18.0	0.07	18	210	1490
	60	15.0	0.06	17	210	1583
	80	11.3	0.04	15	210	1743
742	5	180	0.87	40	290	1331
	7.5	120	0.65	44	319	1524
	10	90.0	0.50	44	350	1677
	15	60.0	0.36	45	350	1920
	20	45.0	0.28	44	350	2113
	25	36.0	0.23	43	350	2276
	30	30.0	0.23	49	350	2419
	40	22.5	0.17	45	350	2662
	50	18.0	0.14	42	350	2868
	60	15.0	0.11	39	350	3047
	80	11.3	0.09	35	350	3354
	100	9.0	0.07	32	350	3490
743	5	180	1.60	75	400	1827
	7.5	120	1.20	84	448	2091
	10	90.0	0.94	84	490	2302
	15	60.0	0.67	84	490	2635
	20	45.0	0.48	77	490	2900
	25	36.0	0.39	75	490	3124
	30	30.0	0.42	90	490	3320
	40	22.5	0.31	82	490	3654
	50	18.0	0.25	77	490	3936
	60	15.0	0.21	72	490	4183
	80	11.3	0.16	68	490	4604
	100	9.0	0.12	56	490	4840
744	7.5	120	2.20	151	580	2734
	10	90.0	1.70	153	661	3009
	15	60.0	1.20	155	670	3444
	20	45.0	0.91	148	700	3791
	25	36.0	0.69	137	700	4084
	30	30.0	0.79	175	700	4339
	40	22.5	0.58	160	700	4776
	50	18.0	0.45	145	700	5145
	60	15.0	0.37	138	700	5467
	80	11.3	0.29	128	700	6018
	100	9.0	0.25	124	700	6270
745	7.5	120	3.10	215	810	3227
	10	90.0	2.50	230	975	3551
	15	60.0	1.80	235	980	4065
	20	45.0	1.40	235	980	4474
	25	36.0	1.10	215	980	4820
	30	30.0	1.10	260	980	5122
	40	22.5	0.83	240	980	5637
	50	18.0	0.65	220	980	6073
	60	15.0	0.54	210	980	6453
	80	11.3	0.43	200	980	7103
	100	9.0	0.36	190	980	7380

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
746	7.5	120	4.8	340	1040	3570
	10	90.0	4.0	370	1270	3929
	15	60.0	3.1	420	1270	4498
	20	45.0	2.3	390	1270	4951
	25	36.0	1.8	370	1270	5333
	30	30.0	1.9	460	1270	5667
	40	22.5	1.4	410	1270	6238
	50	18.0	1.1	390	1270	6719
	60	15.0	0.86	350	1270	7140
	80	11.3	0.63	315	1270	7859
	100	9.0	0.49	280	1270	8180
747	7.5	120	8.0	565	1390	4511
	10	90.0	6.6	620	1700	4965
	15	60.0	4.9	660	1700	5684
	20	45.0	3.6	630	1700	6256
	25	36.0	3.1	660	1700	6739
	30	30.0	3.0	730	1700	7161
	40	22.5	2.2	690	1700	7882
	50	18.0	1.8	680	1700	8491
	60	15.0	1.4	620	1700	9023
	80	11.3	1.0	540	1700	9931
	100	9.0	0.8	490	1700	10320
749	7.5	120	12.3	880	1740	5901
	10	90.0	10.3	960	2100	6494
	15	60.0	7.8	1060	2100	7434
	20	45.0	5.8	1040	2100	8182
	25	36.0	4.8	1050	2100	8814
	30	30.0	4.7	1170	2100	9366
	40	22.5	3.5	1100	2100	10309
	50	18.0	2.7	1050	2100	11105
	60	15.0	2.1	940	2100	11801
	80	11.3	1.6	860	2100	12989
	100	9.0	1.2	780	2100	13500

Series W Gearboxes : Non-motorised ratings : Input speed 1400 rev/min

NON MOTORISED RATINGS

Input speed 1400 rev/min.

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
741	5	280.0	0.61	18	150	597
	7.5	186.7	0.41	18	150	683
	10	140.0	0.32	18	169	752
	15	93.3	0.23	18	169	861
	20	70.0	0.18	18	190	948
	25	56.0	0.18	21	210	1021
	30	46.7	0.15	20	210	1085
	40	35.0	0.11	18	210	1194
	50	28.0	0.09	17	210	1286
	60	23.3	0.08	16	210	1367
	80	17.5	0.05	13	210	1504
742	5	280.0	1.10	34	250	1149
	7.5	186.7	0.90	40	294	1315
	10	140.0	0.69	40	331	1447
	15	93.3	0.48	40	331	1657
	20	70.0	0.37	39	350	1824
	25	56.0	0.30	38	350	1964
	25	56.0	0.30	38	350	1964
	30	46.7	0.31	45	350	2087
	40	35.0	0.23	41	350	2298
	50	28.0	0.18	39	350	2475
	60	23.3	0.15	36	350	2630
	80	17.5	0.12	33	350	2895
	100	14.0	0.09	29	350	3118
743	5	280.0	2.00	62	350	1577
	7.5	186.7	1.60	71	401	1805
	10	140.0	1.20	72	490	1987
	15	93.3	0.88	74	490	2274
	20	70.0	0.68	73	490	2503
	25	56.0	0.54	70	490	2696
	30	46.7	0.57	84	490	2865
	40	35.0	0.42	76	490	3153
	50	28.0	0.34	73	490	3397
	60	23.3	0.28	68	490	3610
	80	17.5	0.22	65	490	3973
	100	14.0	0.16	55	490	4280
744	7.5	186.7	2.80	128	500	2359
	10	140.0	2.20	130	571	2597
	15	93.3	1.60	140	615	2973
	20	70.0	1.20	135	667	3272
	25	56.0	1.00	130	700	3524
	30	46.7	1.10	160	700	3745
	40	35.0	0.76	145	700	4122
	50	28.0	0.6	135	700	4440
	60	23.3	0.51	130	700	4719
	80	17.5	0.39	122	700	5193
	100	14.0	0.34	118	700	5595
745	7.5	186.7	4.10	185	700	2785
	10	140.0	3.20	195	830	3065
	15	93.3	2.30	200	851	3509
	20	70.0	1.90	210	980	3862
	25	56.0	1.50	200	980	4160
	30	46.7	1.50	230	980	4421
	40	35.0	1.10	220	980	4865
	50	28.0	0.89	210	980	5241
	60	23.3	0.75	200	980	5569
	80	17.5	0.58	190	980	6130
	100	14.0	0.48	180	980	6603

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
746	7.5	186.7	6.3	290	900	3081
	10	140.0	5.1	310	1082	3391
	15	93.3	4.1	360	1257	3882
	20	70.0	3.1	355	1270	4273
	25	56.0	2.4	340	1270	4603
	30	46.7	2.6	410	1270	4891
	40	35.0	1.8	360	1270	5383
	50	28.0	1.4	340	1270	5799
	60	23.3	1.1	320	1270	6163
	80	17.5	0.83	285	1270	6783
	100	14.0	0.67	270	1270	7306
747	7.5	186.7	10.4	480	1200	3893
	10	140.0	8.6	520	1463	4285
	15	93.3	6.5	570	1603	4905
	20	70.0	4.8	560	1700	5399
	25	56.0	4.1	590	1700	5816
	30	46.7	3.9	630	1700	6181
	40	35.0	2.9	610	1700	6803
	50	28.0	2.3	600	1700	7328
	60	23.3	1.9	560	1700	7787
	80	17.5	1.3	490	1700	8571
	100	14.0	1.1	460	1700	9232
749	7.5	186.7	16.1	750	1500	5092
	10	140.0	13.5	820	1845	5605
	15	93.3	10.3	920	2070	6416
	20	70.0	7.8	910	2100	7062
	25	56.0	6.5	930	2100	7607
	30	46.7	6.4	1040	2100	8084
	40	35.0	4.9	1050	2100	8897
	50	28.0	3.8	980	2100	9584
	60	23.3	3.1	900	2100	10185
	80	17.5	2.3	840	2100	11210
	100	14.0	1.7	740	2100	12076

Series W Gearboxes : Non-motorised ratings : Input speed 1280 rev/min

NON MOTORISED RATINGS

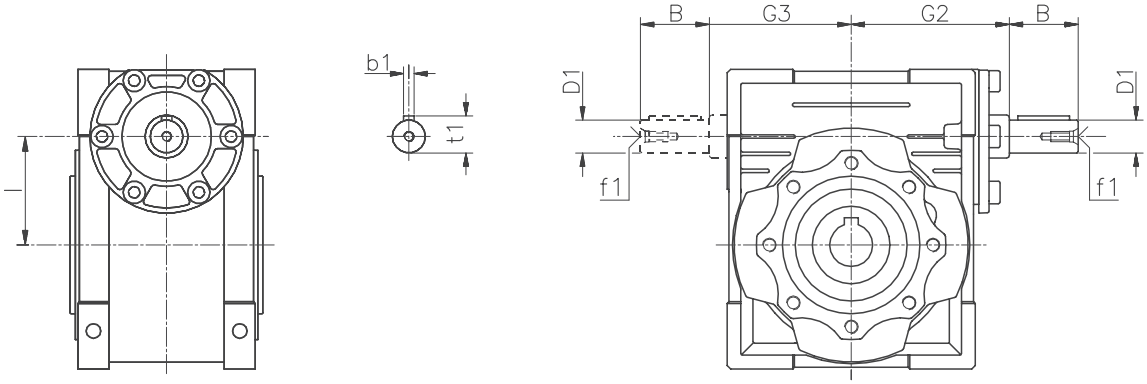
Input speed 2800 rev/min.

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
741	5	560.0	0.79	12	115	474
	7.5	373.3	0.58	13	125	542
	10	280.0	0.45	13	140	597
	15	186.7	0.31	13	140	683
	20	140.0	0.23	12	146	752
	25	112.0	0.25	16	210	810
	30	93.3	0.21	15	210	861
	40	70.0	0.16	14	127	948
	50	56.0	0.12	13	128	1021
	60	46.7	0.10	12	126	1085
	80	35.0	0.08	11	130	1194
742	5	560.0	1.6	24	200	912
	7.5	373.3	1.2	28	233	1044
	10	280.0	1.0	29	272	1149
	15	186.7	0.72	31	291	1315
	20	140.0	0.52	29	204	1447
	25	112.0	0.42	28	236	1559
	30	93.3	0.44	34	350	1657
	40	70.0	0.32	31	350	1824
	50	56.0	0.26	30	350	1964
	60	46.7	0.21	28	350	2087
	80	35.0	0.16	25	350	2298
	100	28.0	0.12	23	350	2475
743	5	560.0	2.9	45	280	1251
	7.5	373.3	2.3	52	324	1433
	10	280.0	1.8	54	378	1577
	15	186.7	1.3	57	399	1805
	20	140.0	0.95	53	417	1987
	25	112.0	0.75	51	482	2140
	30	93.3	0.82	64	490	2274
	40	70.0	0.59	59	490	2503
	50	56.0	0.45	53	490	2696
	60	46.7	0.37	50	490	2865
	80	35.0	0.27	45	490	3153
	100	28.0	0.21	40	490	3397
744	7.5	373.3	4.0	93	395	1873
	10	280.0	3.2	97	463	2061
	15	186.7	2.3	103	492	2359
	20	140.0	1.7	100	538	2597
	25	112.0	1.3	92	593	2797
	30	93.3	1.5	120	700	2973
	40	70.0	1.1	108	700	3272
	50	56.0	0.83	100	700	3524
	60	46.7	0.68	95	700	3745
	80	35.0	0.49	85	700	4122
	100	28.0	0.37	74	700	4440
745	7.5	373.3	5.6	130	560	2210
	10	280.0	4.7	145	703	2433
	15	186.7	3.4	150	727	2785
	20	140.0	2.8	160	872	3065
	25	112.0	2.1	150	980	3302
	30	93.3	2.1	170	980	3509
	40	70.0	1.6	165	980	3862
	50	56.0	1.2	150	980	4160
	60	46.7	1.0	145	980	4421
	80	35.0	0.72	130	980	4865
	100	28.0	0.58	120	980	5241

Unit Size	Ratio	Nominal Output Speed Rev/Min	Input Power kW	Output Torque Nm	Overhung Load Fr_1 N	Overhung Load Fr_2 N
746	7.5	373.3	8.9	210	715	2446
	10	280.0	7.7	235	900	2692
	15	186.7	6.0	270	1034	3081
	20	140.0	4.4	260	1120	3391
	25	112.0	3.4	250	1270	3653
	30	93.3	3.7	310	1270	3882
	40	70.0	2.6	275	1270	4273
	50	56.0	2.0	265	1270	4603
	60	46.7	1.6	245	1270	4891
	80	35.0	1.2	225	1270	5383
	100	28.0	0.9	200	1270	5799
747	7.5	373.3	14.4	340	950	3090
	10	280.0	12.2	380	1194	3401
	15	186.7	9.3	425	1336	3893
	20	140.0	7.0	420	1485	4285
	25	112.0	5.9	440	1700	4616
	30	93.3	5.7	480	1700	4905
	40	70.0	4.1	460	1700	5399
	50	56.0	3.3	450	1700	5816
	60	46.7	2.7	430	1700	6181
	80	35.0	1.9	380	1700	6803
	100	28.0	1.5	350	1700	7328
749	7.5	373.3	22.1	520	1190	4042
	10	280.0	18.7	580	1493	4449
	15	186.7	14.7	670	1725	5092
	20	140.0	11.0	660	1912	5605
	25	112.0	9.0	670	2100	6038
	30	93.3	9.0	770	2100	6416
	40	70.0	6.5	730	2100	7062
	50	56.0	5.1	700	2100	7607
	60	46.7	4.0	640	2100	8084
	80	35.0	3.0	590	2100	8897
	100	28.0	2.2	520	2100	9584

Series W Gearboxes : Worm reducer dimensions

SHAFT MOUNTED WORM REDUCER



Unit Size	B	D1 j6	G2	G3	l	b1	f1	t1	kg
741	20	9	51	45	30	3	-	10.2	1.2
742	23	11	60	53	40	4	-	12.5	2.3
743	30	14	74	64	50	5	M6	16.0	3.5
744	40	19	90	75	63	6	M6	21.5	6.2
745	50	24	105	90	75	8	M8	27.0	9.0
746	50	24	125	108	90	8	M8	27.0	13.0
747	60	28	142	135	110	8	M10	31.0	21.0
749	80	30	162	155	130	8	M10	33.0	48.0
750	80	35	195	175	150	10	M12	38.0	84.0

For all other dimensions consult page 326.

Series W Gearboxes : Mesh data

MESH DATA

Unit Size		Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
740	Z1	6	4	3	2	2	-	1	1	1	1	-	-
	γ	35°02′	25°03′	19°19′	13°09′	10°41′	-	6°40′	5°23′	4°31′	3°53′	-	-
	Mx	1.30	1.30	1.30	1.30	0.995	-	1.30	0.995	0.80	0.67	-	-
	ηd(1400)	0.87	0.85	0.83	0.79	0.75	-	0.67	0.62	0.58	0.55	-	-
	ηs	0.72	0.71	0.68	0.61	0.56	-	0.46	0.41	0.36	0.34	-	-
741	Z1	6	4	3	2	2	1	1	1	1	1	1	-
	γ	27°04′	18°49′	14°20′	9°40′	7°42′	5°35′	4°52′	3°52′	3°12′	2°45′	2°07′	-
	Mx	1.44	1.44	1.44	1.44	1.09	1.70	1.44	1.09	0.89	0.74	0.56	-
	ηd(1400)	0.87	0.85	0.82	0.77	0.73	0.68	0.65	0.59	0.55	0.51	0.44	-
	ηs	0.72	0.67	0.63	0.55	0.50	0.43	0.39	0.35	0.31	0.27	0.23	-
742	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	34°19′	24°28′	18°51′	12°49′	10°23′	8°43′	6°29′	5°14′	4°23′	3°47′	2°57′	2°25′
	Mx	2.06	2.06	2.06	2.06	1.57	1.27	2.06	1.57	1.27	1.06	0.81	0.65
	ηd(1400)	0.89	0.87	0.85	0.82	0.78	0.75	0.70	0.65	0.62	0.58	0.52	0.47
	ηs	0.74	0.71	0.67	0.60	0.55	0.51	0.45	0.40	0.36	0.32	0.28	0.24
743	Z1	6	4	3	2	2	2	1	1	1	1	1	1
	γ	33°37′	23°54′	18°23′	12°30′	10°06′	8°29′	6°19′	5°06′	4°16′	3°40′	2°52′	2°21′
	Mx	2.56	2.56	2.56	2.56	1.95	1.58	2.56	1.95	1.58	1.32	1.00	0.8
	ηd(1400)	0.89	0.88	0.86	0.82	0.79	0.76	0.72	0.67	0.63	0.59	0.53	0.49
	ηs	0.74	0.70	0.66	0.59	0.55	0.51	0.44	0.39	0.35	0.32	0.27	0.23
744	Z1	-	4	3	2	2	2	1	1	1	1	1	1
	γ	-	24°31′	18°53′	12°51′	10°25′	8°45′	6°30′	5°15′	4°24′	3°47′	2°58′	2°26′
	Mx	-	3.25	3.25	3.25	2.48	2.00	3.25	2.48	2.0	1.68	1.27	1.02
	ηd(1400)	-	0.88	0.87	0.83	0.81	0.78	0.74	0.70	0.66	062	0.57	0.51
	ηs	-	0.71	0.67	0.60	0.55	0.51	045	0.40	0.36	0.33	0.28	0.24
745	Z1	-	4	3	2	2	2	1	1	1	1	1	1
	γ	-	26°17′	20°20′	13°52′	11°18′	9°32′	7°02′	5°42′	4°48′	4°08′	3°14′	2°40′
	Mx	-	3.94	3.94	3.94	3.00	2.42	3.94	3.0	2.42	2.03	1.54	1.24
	ηd(1400)	-	0.89	0.88	0.85	0.82	0.80	0.76	0.72	0.69	0.65	0.60	0.55
	ηs	-	0.71	0.68	0.61	0.57	0.53	0.46	0.42	0.38	0.35	0.29	0.26
746	Z1	-	4	3	2	2	2	1	1	1	1	1	1
	γ	-	29°11′	22°44′	15°36′	12°50′	10°54′	7°57′	6°30′	5°30′	4°46′	3°45′	3°06′
	Mx	-	4.84	4.84	4.84	3.69	2.98	4.84	3.69	2.98	2.50	1.89	1.52
	ηd(1400)	-	0.90	0.89	0.86	0.84	0.82	0.78	0.75	0.72	0.69	0.63	0.59
	ηs	-	0.73	0.70	0.64	0.60	0.56	0.49	0.45	0.41	0.38	0.32	0.28
747	Z1	-	4	3	2	2	2	1	1	1	1	1	1
	γ	-	28°15′	21°57′	15°02′	14°41′	12°34′	7°39′	7°28′	6°22′	5°32′	4°24′	3°39′
	Mx	-	5.875	5.875	5.875	4.62	3.73	5.875	4.62	3.73	3.13	2.37	1,91
	ηd(1400)	-	0.90	0.89	0.86	0.85	0.84	0.79	0.78	0.75	0.72	0.67	0,63
	ηs	-	0.72	0.69	0.63	0.62	0.59	0.48	0.48	0.44	0.41	0.36	0,32
749	Z1	-	4	3	2	2	2	1	1	1	1	1	1
	γ	-	28°41′	22°19′	15°18′	13°52′	11°49′	7°47′	7°02′	5°58′	5°11′	4°07′	3°24′
	Mx	-	6.97	6.97	6.97	5.4	4.37	6.97	5.4	4.37	3.67	2.77	2.23
	ηd(1400)	-	0.91	0.89	0.87	0.86	0.84	0.80	0.78	0.75	0.72	0.68	0.64
	ηs	-	0.72	0.69	0.63	0.61	0.58	0.49	0.46	0.43	0.39	0.34	0.30

EFFICIENCY

Efficiency is a parameter which has a major influence on the sizing of certain applications, and basically depends on gear pair design elements.

The mesh data table above shows dynamic efficiency (n1=1400) and static efficiency values. Remember that these values are only achieved after the unit has been run in.

DYNAMIC IRREVERSIBILITY

Dynamic irreversibility is achieved when the output shaft stops instantly when drive is no longer transmitted through the worm shaft. This condition requires a dynamic efficiency of $\eta_d < 0.5$ (see table above).

STATIC IRREVERSIBILITY

Static irreversibility is achieved when, with the gear reducer at a standstill, the application of a load to the output shaft does not set in motion the worm shaft. This condition requires a static efficiency of $\eta_s < 0.5$ (see table above).

The tables opposite shows the approximate irreversibility classes.

Vibrations and shocks can affect a gear reducer's irreversibility.

For the irreversibility conditions of a combined geared unit one must consider that the efficiency of the group is given by the product of the efficiencies of each single reducer, i.e. $\eta_{tot} = \eta_1 \times \eta_2$

DYNAMIC IRREVERSIBILITY

η_d	Dynamic Reversibility
> 0.6	dynamic reversibilty
0.5 ÷ 0.6	low dynamic reversibilty
0.4 ÷ 0.5	good dynamic irreversibilty
< 0.4	dynamic irreversibilty

STATIC IRREVERSIBILITY

η_s	Static Reversibility
> 0.55	static reversibilty
0.5 ÷ 0.55	low static reversibilty
< 0.5	static irreversibilty

Series W Gearboxes : Ordering instructions

First Three digits: Gearmotor Size

Select from the tables on pages 320 to 325 for motorised units and pages 331 to 334 for non-motorised units.

Fourth digit: Mounting Type:

A: Standard Bore - Motorised worm gear unit
D: Standard Bore - Motor ready worm gear unit
G: Standard Bore - Speed reducer worm gear unit
Z: Alternative Bore - Motorised worm gear unit
W: Alternative Bore - Motor ready worm gear unit
T: Alternative Bore - Speed reducer worm gear unit

Fifth/Sixth digits: Gear Ratio Code

1. Assemblies A and Z use complete eight digit code obtained directly from selection tables. Exact gear ratios can be found on page 338.
2. For selection and specification for D or G assemblies then consult your local Authorised Distributor.

Seventh/Eighth digit: Type of drive code

1. Motorised units - use complete code from selection tables with if applicable, additional ninth digit for motor type.
2. Input Reducer assembly - use 00.
3. Unmotorised units ready for a motor fitting by a third party - use the three digit code as shown in the table below:

Code	Frame	Flange
63C	63	B14
63D	63	B5
71C	71	B14
71D	71	B5
80C	80	B14
80D	80	B5
90C	90	B14
90D	90	B5
10C	100	B14
10D	100	B5
11C	112	B14
11D	112	B5
13C	132	B14
13D	132	B5
16D	160	B5
18D	180	B5
20D	200	B5
22D	225	B5
25D	250	B5

Ninth digit: Additional feature.

Use eight digit code obtained from selection tables for required motor power and speed and then add the relevant letter code from table below of the motor variant required.

Code	Additional Feature
A	Anti-condensation heaters fitted
B	Backstop Fitted
M	Brake motor
N	Brake motor with Hand Release
Q	Refer to Original Quote - Special
S	Single Phase motor
T	Fitted with Thermistors
X	Fitted with Variator
Z	Fitted with Force Vent unit

Series W Gearboxes : Ratio codes

WORM GEAR UNIT RATIOS

Ratio Code	Ratio
01	5.0
02	7.5
03	10.0
04	15.0
05	20.0
06	25.0
07	30.0
08	40.0
09	50.0
10	60.0
11	80.0
12	100.0

HELICAL WORM GEAR UNIT RATIOS IEC63, 71 AND 80 FRAME UNITS

			IEC90 Frame Unit	
Ratio Code	Ratio Combination	Final Ratio	Ratio Combination	Final Ratio
20	3 x 25	75	2.42 x 30	72.6
21	3 x 30	90	2.42 x 40	96.8
22	3 x 40	120	2.42 x 50	121.0
23	3 x 50	150	2.42 x 60	145.2
24	3 x 60	180	2.42 x 80	193.6
25	3 x 80	240	2.42 x 100	242.0
26	3 x 100	300	-	-

WORM-WORM GEAR UNIT RATIOS (AVAILABLE ON REQUEST)

Ratio Code	Ratio Combination	Final Ratio
40	10 x 30	300
41	10 x 40	400
42	20 x 25	500
43	20 x 30	600
44	25 x 30	750
45	30 x 30	900
46	30 x 40	1200
47	50 x 30	1500
48	60 x 30	1800
49	60 x 40	2400
50	60 x 50	3000*
51	80 x 40	3200
52	50 x 80	4000
53	60 x 80	4800**
54	50 x 100	5000

*Not available on size 742
**Only available on size 743

ACCESSORY PRODUCT CODES

Ratio Code	Single Output Shaft	Double Output Shaft	Torque Arm	Output Flanges				Output Cover
				Type FA	Type FB	Type FC	Type FD	
740	740A9700	740A9800	740A9600	740A9900	-	-	-	-
741	741A9700	741A9800	741A9600	741A9900	-	-	-	741A9300
742	742A9700	742A9800	742A9600	742A9900	742A9901	742A9902	742A9903	742A9300
743	743A9700	743A9800	743A9600	743A9900	743A9901	743A9902	743A9903	743A9300
744	744A9700	744A9800	744A9600	744A9900	744A9901	744A9902	744A9903	744A9300
745	745A9700	745A9800	745A9600	745A9900	745A9901	-	-	745A9300
746	746A9700	746A9800	746A9600	746A9900	746A9901	746A9902	746A9903	746A9300
747	748A9700	748A9800	748A9600	748A9900	748A9901	-	-	748A9300
749	749A9700	749A9800	749A9600	749A9900	-	-	-	749A9300
750	750A9700	750A9800	750A9600	750A9900	-	-	-	750A9300

Series W Gearboxes : Overhung Load Capacities

ALLOWABLE OVERHUNG LOADS

Units are fitted with input and output bearings of ample proportions to cater for the radial and thrust loads imposed by the gear loads, leaving sufficient capacity for taking overhung loads. The calculated overhung load should be compared with the value in the selection tables.

These values may be exceeded at lower input speeds or if limited bearing lives are acceptable. In cases where higher overhung load capacities are necessary consult your distributor, quoting details of power, speed, direction of gearbox rotation, angle of application of load, distance of load application from gearbox and acceptable bearing life.

Permissible overhung loads vary according to the direction of rotation. The values tabulated are for the most unfavourable direction with the unit transmitting full rated power and the load applied midway along the shaft extension. Hence they can sometimes be increased for a more favourable direction of rotation, or if the power transmitted is less than the rated capacity of the gear unit, or if the load is applied nearer to the gear unit case.Refer to your Distributor for further details.

In any event, the sprocket, gear etc. should be positioned as close as possible to the gear unit case in order to reduce bearing loads and shaft stresses, and to prolong life. All units will accept a 100% momentary overload on stated capacities.

To determine the overhung load when a sprocket, gear or 'V' pulley is fitted to the output shaft, one or the following formulae may be used in the absence of accurate information.

(1) Calculation on a basis of Torque

$$\text{Overhung load (N)} = \frac{M_2 \times 1000 \times K}{r}$$

(2) Calculatio on a basis of Power

$$\text{Overhung load (N)} = \frac{P_2 \times 9550 \times 1000 \times K}{n_2 \times r}$$

Where:

M_2 = Absorbed torque at shaft in Nm.
P_2 = Absorbed power in kW.
r = Pitch radius of sprocket, gear or 'V' pulley in mm.
n_2 = Rev/min of shaft.
K = Application factor -
1.00 for a sprocket
1.25 for a gear or timing pulley
1.50 for a 'V' pulley

Overhung loads may be reduced by one of the following methods:

(1) Increase the diameter of the sprocket, gear or pulley within reasonable limits.

(2) Mount the sprocket, gear or pulley on a separate shaft, supported on its own bearings and couple to the gear unit output shaft by means of a Fenner shaft coupling.

(3) Use a special extended output shaft and support the free end with an outrigger bearing.

Axial Thrust Capacities (N)

No check or calculation is required for axial loads towards or away from the unit up to 50% of the permissible overhung load. If the axial thrust exceeds these values or if there is a combination of axial thrust loads and overhung loads please refer to your local Authorised Distributor.

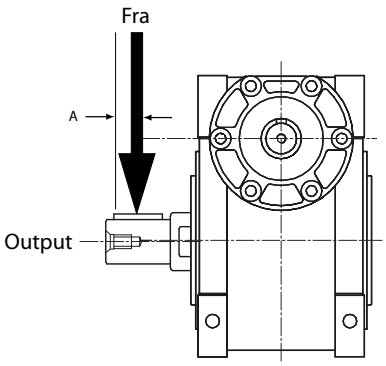
DISTANCE MIDWAY ALONG SHAFT EXTENSION

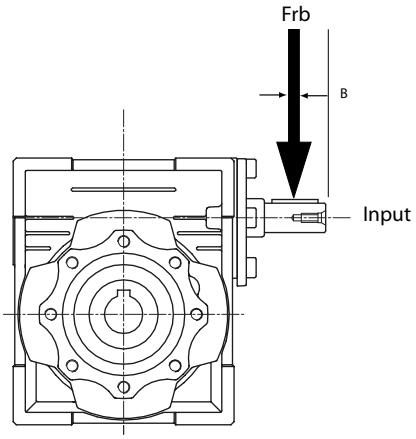
Unit Size	Dimension A (mm)	Dimension B (mm)
740	11.5	-
741	15	10
742	20	11.5
743	25	15
744	25	20
745	30	25
746	40	25
747	40	30
749	40	40

ALLOWABLE INPUT SHAFT OVERHUNG LOADS Frb (N) @1450 Rev/Min.

Unit Size	Max Load
740	-
741	210
742	350
743	490
744	700
745	980
746	1270
747	1700
749	2100

*For Output Shaft Overhung Load Capacities (Fra) see the relevant selection tables





Output shaft dimensions refer to both motorised and non motorised units.

Series W Gearboxes : Installation and Maintenance

Satisfactory performance depends on proper installation, lubrication and maintenance. All instructions given in the installation leaflet must be followed carefully.

SHAFT MOUNTING

Ensure that the shaft on to which the gear unit is to be mounted and the gear unit bore are clean and free from burrs.

Liberally smear the shaft and bore with lubricants to aid assembly and prevent fretting corrosion. Slide the unit on to the driven shaft. Fit side fitting key. DO NOT USE TAPER OR TOP FITTING KEY.

FOOT MOUNTING

Mount the unit securely to a rigid structure. Fit the output extension shaft as required. Use flexible couplings such as Fenaflex for shaft to shaft connections and ensure that shaft misalignment is within the coupling's capacity. When a pulley or sprocket is fitted to either shaft, mount it as close as possible to the gearcase.

When fitting or removing drive components do not hammer on shaft as this will damage the bearings, Fenner Taper Lock bushes permit easy fixing and dismantling without undue force.

LUBRICATION

Sizes 740 to 746 are pre-filled with IP TELIUM VSF 320 a synthetic gear oil suitable for permanent lubrication. They can be mounted in any position. Sizes 745, 746 & 747 should not be installed in the V5 or V6 position without prior consultation.
The synthetic oil used is suitable for ambient temperatures between -25°C and +50°C.

Sizes 747 - 749 are pre-filled for mounting position B3 with IP MELLANA OIL 220, a mineral based gear oil.

Other mounting positions must be specified on order.
The Mineral oil used is suitable to operate in ambient temperatures between -15°C and +25°C

HELICAL-WORM GEAR UNIT

The helical modules are supplied as a sealed for life unit complete with a long-life synthetic oil, AGIP TELIUM VSF320 and can be mounted in all positions.

The lubrication is separate from that of the worm gear unit.

BREATHERS/MOUNTING POSITIONS

Sizes 740 to 746 are supplied for operation without breathers, level & drain plugs.

Sizes 747 - 749 are supplied for operation with a breather but are dispatched with a closed transport plug. When the unit is in its operating position it is essential to replace the transport plug with the breather plug (supplied) in the position indicated on the installation leaflet prior to operating the unit.

MAINTENANCE

The high quality of Series W ensures that the unit will operate correctly with only the minimum amount of maintenance. Periodically check that the exterior of the assembly is clean, especially the cooling areas; periodically check for any oil leaks especially around the oil seals.

Sizes 740 to 746 are lubricated for life and do not require any special maintenance other than stated above.

Sizes 747 to 749 will require an oil change between 8,000-10,000 hours of use depending on the type of environment and use. Make sure the breather hole in the plug is clean and using the oil window, check for sufficient lubricant. Should it be necessary to top up the lubricant use the same type that is already in the unit or one that is compatible with it. If in doubt we recommend you empty the oil from the gearbox completely and before refilling with new oil, wash out the unit to remove any residue.

LUBRICATION CAPACITY

Unit Size	All Positions
740	0.02
741	0.04
742	0.08
743	0.15
744	0.30
745	0.55
746	1.00
747	1.60

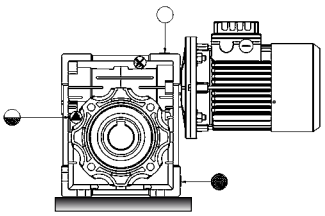
Mounting Position	749	750
B3	4.5	7.0
B8	3.3	5.1
B6-B7	3.5	5.4
V5	4.5	7.0
V6	3.3	5.1

RECOMMENDED TYPES

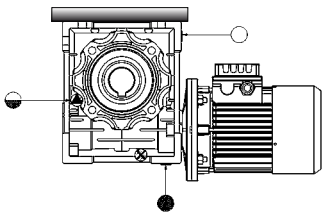
Supplier	Synthetic Oil Operation Temp ºC	Mineral Oil Operationg Temp ºC	
	-25ºC to +50ºC	-5ºC to +40ºC	-15ºC to +25ºC
AGIP	TELIUM VSF 320	BLASIA 460	BLASIA 220
BP	ENERGOL SG-XP320	ENERGOL GR-XP 460	ENERGOL GR-XP 220
CASTROL	ALPHASYN PG320	ALPHA MAX 460	ALPHA MAX 220
ESSO	S220	SPARTAN EP 460	SPARTAN EP 220
MOBIL	GLYGOYLE 30	MOBILGEAR 634	MOBILGEAR 630
OKS	-	-	OKS 3725
SHELL	TIVELA OIL SC320	OMALA OIL 460	OMALA OIL 220

MOUNTING POSITIONS

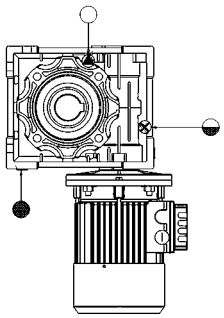
Standard Floor Mounting (B3)



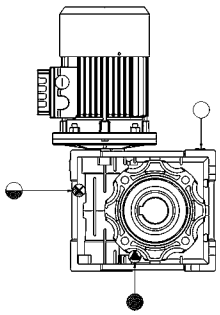
Ceiling Mounted (B8)



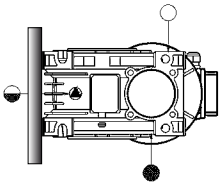
Wall Mounting Input (V6)



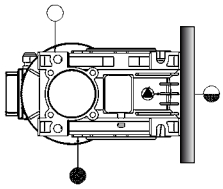
Wall Mounting Input (V5)



Left Hand Wall Mounting (B6)



Right Hand Wall Mounting (B7)



○ Ventilator/Filling Position
◒ Level Position
● Drain Position