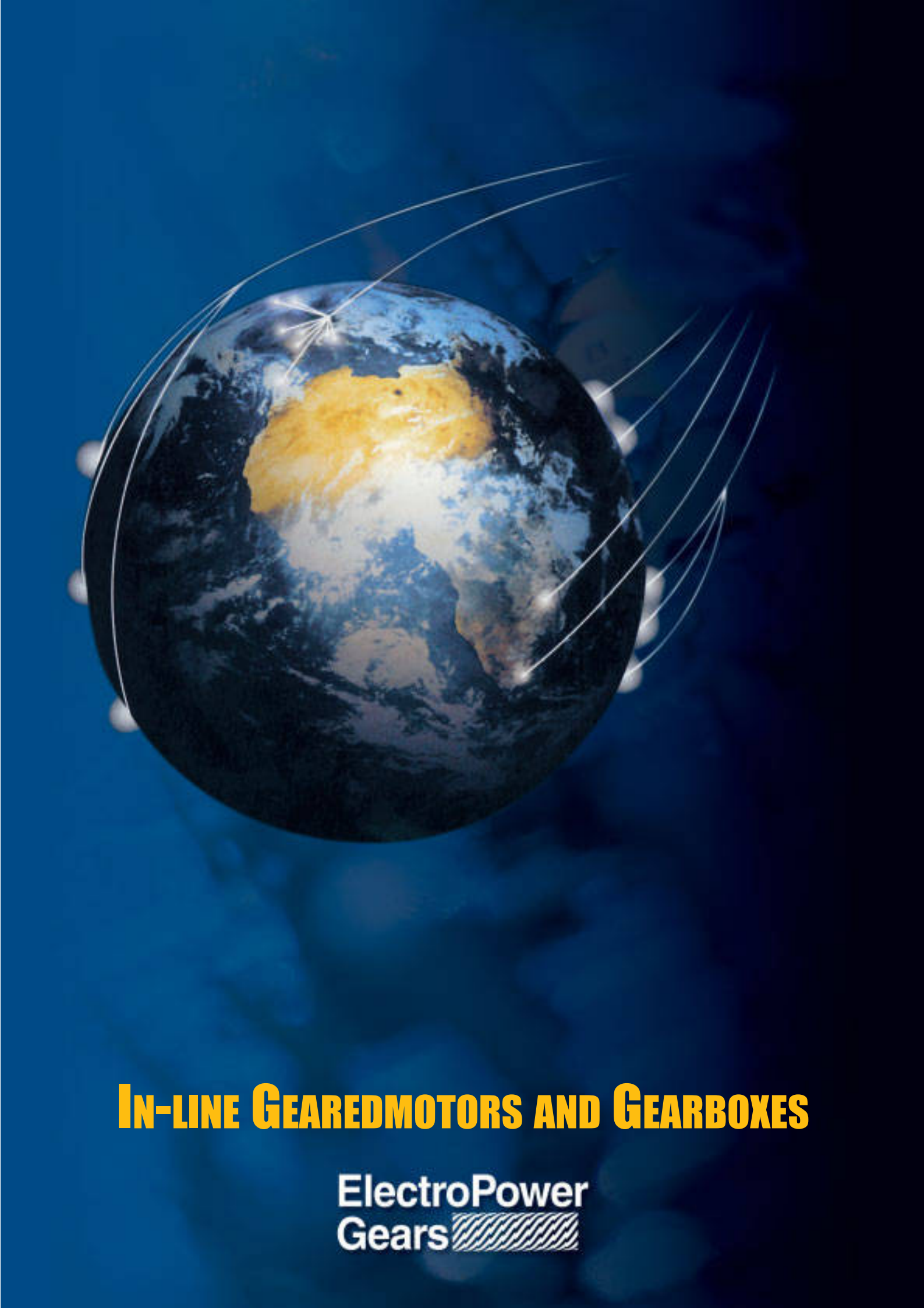

In-line Gearedmotors and Gearboxes

ElectroPower Gears

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General

Gearcases are generally one piece construction from Grey Cast Iron BS1452 grade 220.

Gears and shafts are made from high tensile Alloy Steel, heat treated where required. Bearings are Deep Groove Ball or Taper Roller. Heavy duty Spherical Roller output bearings are available on ESR1 to ESR3 (suffixed H) to increase overhung load capacity and are fitted as standard on ESR35 and above.

Lubrication method preferred is by oil although smaller units up to ESR3 can be grease lubricated. Units are normally supplied **without** oil. Lubricant quantities, types and replacement intervals are given on the relevant pages of this catalogue.

All units except single reduction gearboxes can be fitted with an internal backstop to prevent unit reversing. This must be stated on order as this cannot be retro-fitted.

Special diameter, length or stainless steel output shafts can be supplied with most units if required. Double oilseals are fitted on ESR35 and above in vertical down mountings as standard. Double oilseals and high temperature Viton oilseals can be fitted on most units if required.

Ratios available range from 1.58:1 to over 13,500:1 giving output speeds ranging from 890 to 0.1 RPM using a standard 4 pole motor.

Maintenance - periodic changes of the lubricant at recommended intervals and regular checks for lubricant level and that breather plugs are clear, are all that are needed. Transparent level plugs are available on request.

On installation follow the instructions given on the data sheet supplied with the unit. A tapped hole is supplied in the shaft end for fitting or removing couplings. If a pulley or sprocket is fitted, ensure it is positioned as close to gearcase as possible to reduce overhung load on output bearing.

Gearboxes can be fitted with any type of motor, AC or DC. Electro-magnetic/Pneumatic Clutch Brakes, Disco or Eddy Current Variable speed drives can also be fitted and supplied. Standard Metric IEC and NEMA inputs are available in most sizes. All direct mounted drives must be fitted with an oilseal. There are some limitations on motor pinion maximum bore sizes, see relevant page in catalogue. Units are also available with input shaft.

Selection

Calculate service factor required from the data on the relevant page in this catalogue. Note that service factors from other manufacturers are not necessarily directly comparable. Starting and peak loads must not exceed 100% of normal continuous load.

If the output drive is by chain, pulley or gear, determine the overhung load using the relevant formula on page 9. Check against the table to ensure figure does not exceed maximum load. If an axial thrust load is present ensure that it does not exceed the relevant figure given in the appropriate table.

Please quote the following information when ordering;

Gearhead only

Unit type	*ie ESR1*
Mounting	*ie Flange*
Mounting position	*ie B5*
Ratio	*ie 117.9:1*
Input	*ie IEC71 (B5)*

Geared motor

Unit type	*ie ESR1*
Mounting	*ie Flange*
Mounting position	*ie B5*
Output speed	*ie 12 RPM*
Motor details	*ie 1.1kW AC 400V 3PH 50Hz IP55*

If in any doubt about correct unit please contact sales.

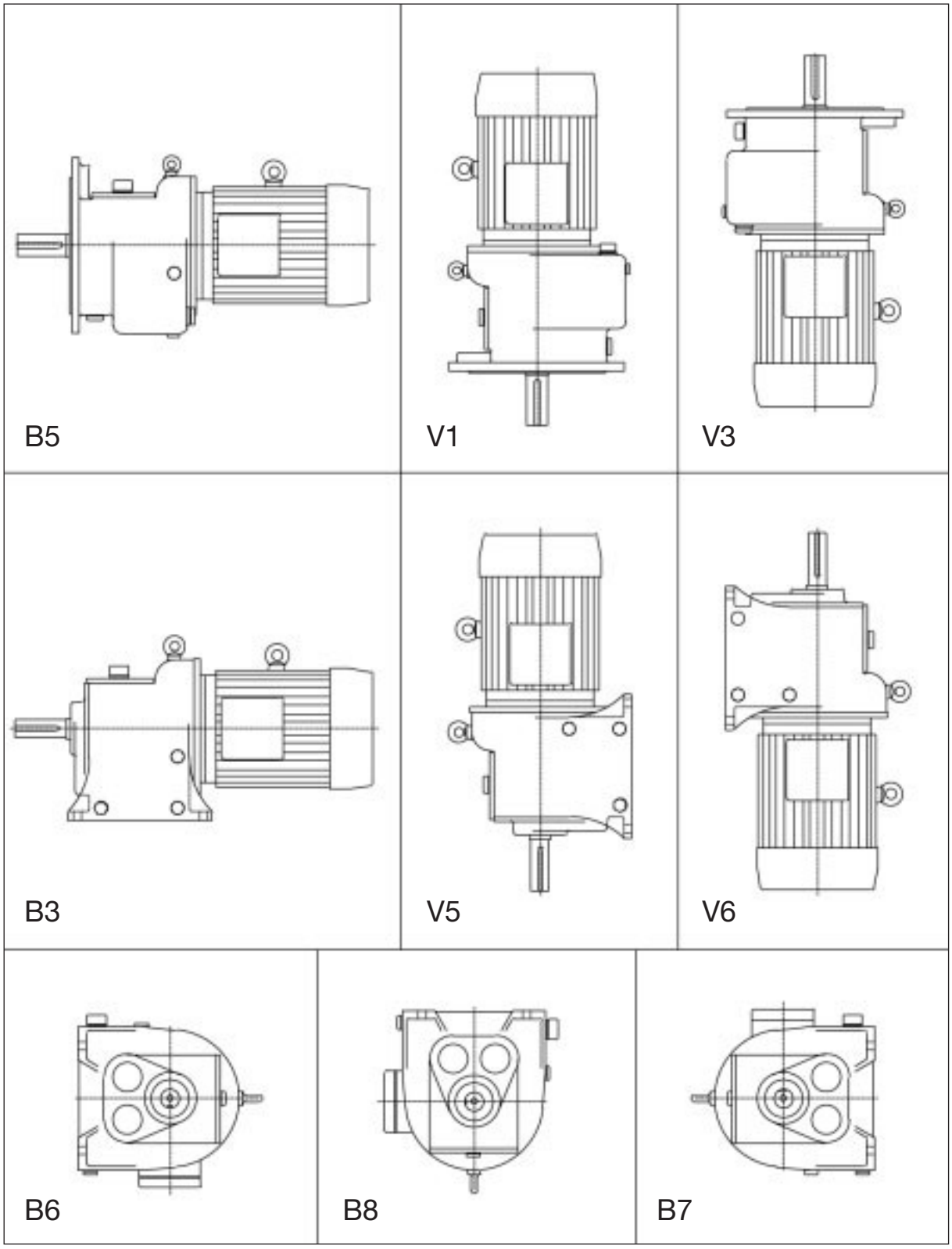
Motor ratings

MOTOR RATING KW	3PH AC Induction				1PH Cap Start Induction Run			DC Permanent Magnet			
	2 Pole 3000 Rpm	4 Pole 1500 Rpm	6 Pole 1000 Rpm	8 Pole 750 Rpm	2 Pole 3000 Rpm	4 Pole 1500 Rpm	6 Pole 1000 Rpm	IP22 2000 Rpm	IP44 2000 Rpm	IP22 2000 Rpm	IP44 2000 Rpm
0.09			D71		D63	D63					
0.12		D63	D71		D63	D71		714A	714A	714A	714A
0.18	D63	D63	D71	D80	D71	D71		714A	714A	714A	714A
0.25	D63	D71	D71	D80	D71	D71		714A	714C	714A	714A
0.37	D71	D71	D80	D90S	D71	D80	D90S	714C	805C	714A	714C
0.55	D71	D80	D80	D90L	D80	D80	D90L	805C	805E	714C	805C
0.75	D80	D80	D90S	D100L	D80	D90S	D100L	805E	907E	805C	805E
1.1	D80	D90S	D90L	D100L	D90S	D90L	D100L	907E		805G	907B
1.5	D90S	D90L	DD100L	D112M	D90L	D100L				907E	907E
2.2	D90L	D100L	D112M	D132S	D100L	D100L				907E	
3.0	D100L	D100L	D132S	D132M							
4.0	D112M	D112M	D132M	D160M							
5.5	D132S	D132S	D132M	D160M							
7.5	D132S	D132M	D160M	D160L							
11.0	D160M	D160M	D160L	D180L							
15.0	D160M	D160L	D180L	D200L							
18.5	D160L	D180M	D200L	D225S							
22.0	D180M	D180L	D200L	D225M							
30.0	D200L	D200L	D225M	D250S							
37.0	D200L	D225S	D250S	D250M							
45.0	D225M	D225M	D250M	D280S							
55.0	D250S	D250S	D280S	D280M							
75.0	D250M	D250M	D280M	D315S							
90.0	D280S	D280S	D315S	D315M							
110.0	D280M	D280M	D315M	D315L							
132.0	D315S	D315S	D315L								
150.0	D315M	D315M									
185.0	D315L	D315L									
200.0	D315L	D315L									
	Standard Voltage: D63-D100L 230/400 D112M-D200L 400 D225M-D315L 400				Standard Voltage: All frames 230			Standard Voltage: All frames 180A Form Factor 1.6		Standard Voltage: All frames 180A Form Factor 1.05	

AC motor frame sizes are based on TEFV IP55 enclosures and continuous S1 duty.
Wound Field DC machines are also available.
All motors must be fitted with an oilseal at the drive end to prevent lubricating oil or grease from entering the motor.

Mounting positions

The following table shows the standard mounting positions.



Service Factors For Gearbox Selection

The Service Factor required for an application is derived by multiplying together the following factors -

a) Running and load factor C_H
b) Power source factor C_M
c) Starting factor C_A

$SF = C_H \times C_M \times C_A$

RUNNING & LOAD FACTOR C_H

Type of load	Working hours per day at full load				
	Up to 3 hours	3 to 8 hours	8 to 12 hours	12 to 16 hours	16 to 24 hours
Uniform	0.85	1	1.1	1.2	1.3
Moderate	1.25	1.4	1.5	1.65	1.8
Heavy	1.75	2	2.15	2.3	2.5

For guide to load types see page 6

POWER SOURCE FACTOR C_M

Electric/Hydraulic/Air motor	1
Eddy current/Disco V.S. drive	1
Electro mechanical clutch brake	1.2
Pneumatic clutch brake	1.5
3 or more cylinder I.C. engine	1.25
Single and twin cylinder I.C. engine	1.5

STARTING FACTOR C_A

Number of starts per hour		
up to 120	**120 - 300**	**300 - 1200**
1	1.15	1.25

Typical load classifications

Application	*Load Class*
AGITATORS	
pure liquids	uniform
liquids & solids	moderate
BLOWERS	
centrifugal, vane	uniform
lobe	moderate
BREWING	
bottling machinery	uniform
brew kettles, cookers, mash tubs	uniform
scale hoppers	moderate
CAN FILLING MACHINES	uniform
CLARIFIERS	uniform
CLAY WORKING MACHINERY	
brick press	heavy
briguette machine	heavy
pug mill	moderate
COMPRESSORS	
centrifugal	uniform
lobe	moderate
reciprocating (multi-cylinder)	moderate
reciprocating (single cylinder)	heavy
CONVEYORS (Uniformly loaded or fed)	
apron, belt, bucket, chain, screw	uniform
CONVEYORS (not uniformly loaded or fed)	
apron, belt, bucket, chain, screw	moderate
reciprocating, shaker	heavy
CRANES	
main hoists, auxiliary	uniform
dry dock (room luffing)	uniform
dry dock (tracking drive wheels)	moderate
dry dock (tracking drive wheels)	moderate
CRUSHERS	
ore, stone	heavy
DREDGERS	
cable reels, winches, conveyors	moderate
cutter head drives, jig drives	heavy
screen drives	heavy
ELEVATORS	
bucket (uniformly loaded)	uniform
bucket (not uniformly loaded)	moderate
centrifugal & gravity discharge	uniform
escalators	uniform
freight	moderate
EXTRUDERS (plastic)	
film, sheet, coating, rods, tubing	moderate
pre-plasticers, blow moulders	heavy
FANS	
centrifugal and small industrial	uniform
forced, induced draft	moderate
large industrial and mine	moderate
FOOD INDUSTRY	
cereal cooker	uniform
beet slicer, dough, mixer, meat grinder	moderate
GENERATORS (not welding)	uniform
HAMMER MILLS	heavy
HOISTS	
skip, medium duty	moderate
heavy duty	heavy
LAUNDRY WASHERS & TUMBLERS	moderate
LINE SHAFTS	
driving processing equipment	moderate
light duty	uniform
LUMBER INDUSTRY	barkers
spindle fed	moderate
barkers main feet	heavy
burner conveyor	moderate
main log & slab conveyor	moderate
merry-go-round & transfer conveyor	moderate
chains, floor & green	moderate
cut-off saws, chain & drag	moderate
gang feeds	heavy
edger & trimmer feeds	moderate
planer feed & tilting hoist	moderate
tipple hoist	moderate
craneway transfers	moderate
tray drives	moderate
log deck	heavy
log hauls & turning devices	heavy
sorting table	moderate
roll cases	heavy
debarking drums	heavy

Application	*Load Class*
MACHINE TOOLS	
bending roll, main drives	moderate
punch press, plate planers	heavy
tapping machine	heavy
METAL MILLS	
draw bench, carriage and main drive	moderate
pinch, dryer, scrubber rolls reversing slitters	moderate
wire drawing, flattening and winding machines	moderate
MILLS (rotary type)	
ball, pebble	heavy
cement kilns	heavy
dryers, coolers	heavy
tumbling barrels	heavy
MIXERS	
concrete	moderate
constant density	uniform
variable density	moderate
OIL INDUSTRY	
chillers	moderate
paraffin filter press	moderate
rotary kilns	moderate
PAPER MILLS	
agitators (mixers)	moderate
barker (mechanical & hydraulic)	moderate
barking drum	heavy
beater & pulper	moderate
bleacher	uniform
calendars	moderate
converting machines	moderate
couch	moderate
cutters platers	heavy
cylinders, dryers	moderate
felt stretcher	moderate
felt whipper, jordans	heavy
presses	uniform
pulp machine reel	moderate
stock chests	moderate
suction roll	uniform
washers & thickeners	moderate
winders	uniform
PUMPS	
centrifugal	uniform
proportioning, reciprocating rotary	moderate
single acting (3 or more cylinders)	moderate
double acting (2 or more cylinders)	moderate
gear, lobe, vane	uniform
RUBBER/PLASTIC INDUSTRY	
laboratory equipment	moderate
mixing mills, refiners	heavy
rubber calendars	heavy
warming mills	heavy
rubber mills	moderate
SAND MULLER	
moderate	
SEWAGE DISPOSAL EQUIPMENT	
big screens, collectors	uniform
chemical feeders	uniform
dewatering screws	moderate
scum breakers	moderate
slow or rapid mixers	moderate
thickeners	moderate
vacuum filters	moderate
SCREENS	
air washing	uniform
rotary stone or gravel	moderate
STOKERS	uniform
SUGAR INDUSTRY	
cane knives	heavy
crushers, mills	heavy
TEXTILE INDUSTRY	
batchers, cards	moderate
dry cans, dryers	moderate
dyeing machinery	moderate
looms, mangles	moderate
slashers, soapers, spinners	moderate
winders	moderate

Lubrication details

All units are supplied without lubrication. Units must be filled to correct level with the appropriate grade of oil (see table 1) before use.

The oil in a new unit should be changed after the first 500 hours duty and then every 24 months or 5000 hours thereafter.

Lubricants recommended (see table 2) are for standard industrial applications only. If unit is to be used in food, pharmaceutical or cosmetic applications where lubricant could come in contact with product, an approved food quality lubricant must be used. Contact sales office for recommendations.

Gearboxes size ESR50, 1, 2 & 3 may be supplied grease filled for an additional charge.

Gearboxes must be mounted in their designed attitude with vent plugs uppermost.
ESR50, 1, 2 & 3 are supplied for universal mounting.

Table 1 Lubricant quantity (Litres).

Unit Size	Oil Grade	Oil Quantity			
		Horizontal B3 B5 B6 B7 B8		Vertical V1 V3 V5 V6	
		primary	secondary	primary	secondary
ESR501	220	0.43	1.7	0.49	2.0
ESR502	460	0.43	3.5	0.49	4.4
ESR13	460	1.7	8.6	2.0	9.7
ESR235	460	3.5	12.4	4.4	17.6
ESR24	460	3.5	20.5	4.4	24.8
ESR24SS	460	3.5	18.2	4.4	23.5
ESR3425	680	8.6	52.0	9.7	66.0*
ESR3545	680	9.7	88.5	17.6	102.0*
ESR61	220	0.36	1.7	0.43	2.0
ESR62	460	0.36	3.5	0.43	4.4
ESR73	460	0.85	8.6	1.1	9.7
ESR735	460	0.85	12.4	1.1	17.6
ESR74	460	0.85	20.5	1.1	24.8
ESR84SS	460	1.45	18.2	2.0	23.5
ESR8425	680	1.45	52.0	2.0	66.0*
ESR845	680	1.45	88.5	2.0	102.0*

Unit Size	Oil Grade	Oil Quantity	
		Horizontal B3 B5 B6 B7 B8	Vertical V1 V3 V5 V6
ESR50	220	0.43	0.49
ESR1	220	1.7	2.0
ESR2	460	3.5	4.4
ESR3	460	8.6	9.7
ESR35	460	12.4	17.6
ESR4	460	20.5	24.8
ESR4SS	460	18.2	23.5
ESR425	680	52.0	66.0*
ESR45	680	88.5	102.0*

* These units can be supplied with an internal oil pump for V1 mounting which reduces the oil requirement by 50%.

ESR4, 4SS, 425 & 45 units in V3 & V6 mounting positions are fitted with a grease nipple for re-greasing main bearing. Lubrication interval is 2500 hours or 6 months with NLG1 2 MoS2 grease.

Unit Size	Oil Grade	Oil Quantity	
		Horizontal B3 B5 B6 B7 B8	Vertical V1 V3 V5 V6
ESR6	220	0.36	0.43
ESR7	460	0.85	1.1
ESR8	460	1.45	2.0

Table 2 Oil manufacturers/suppliers recommended grades Standard mineral and Synthetic

Manufacturer/supplier	Oil type	ISO VG220	ISO VG460	ISO VG680
BP	Standard	ENERGOL GRXP220	ENERGOL GRXP460	ENERGOL GRXP680
CASTROL	Standard	ALPHA SP 220	ALPHA SP 460	ALPHA SP 680
CENTURY	Standard	CENTILUBE F76	CENTILUBE H76	CENTILUBE S76
CHEVRON	Standard	NL GEAR COMP 220	NL GEAR COMP 460	NL GEAR COMP 680
DUCKHAMS	Standard	GALEX EP220	GALEX EP460	
EDGAR VAUGHAN	Standard	COSMOLUBE 220	COSMOLUBE 460	COSMOLUBE 680
ESSO	Standard	SPARTAN 220	SPARTAN 460	SPARTAN 680
	Synthetic	GLYCOLUBE 220	GLYCOLUBE 460	GLYCOLUBE 680
FINA	Standard	GIRAN L220	GIRAN L460	GIRAN L680
GULF	Standard	EP LUB HD 220	EP LUB HD 460	EP LUB HD 680
KLUBER	Standard	KLUBEROIL GEMI 220	KLUBEROIL GEMI 460	KLUBEROIL GEMI 680
	Synthetic	KLUBERSYNTH GEM 4-220	KLUBERSYNTH GEM 4-460	KLUBERSYNTH GEM 4-680
	Synthetic	KLUBERSYNTH GH6 -220	KLUBERSYNTH GH6 -460	KLUBERSYNTH GH6 -680
LUBRICATION ENG	Standard	ALMAGARD 607	ALMAGARD 608	ALMAGARD 609
MOBIL	Standard	MOBILGEAR 630	MOBILGEAR 634	MOBILGEAR 636
	Synthetic	MOBILGEAR SHC 220	MOBILGEAR SHC 460	
OPTIMOL	Standard	OPTIGEAR 220	OPTIGEAR 460	OPTIGEAR 680
	Synthetic	OPTIGEAR BM	OPTIGEAR BM	OPTIGEAR BM
Q8	Standard	GOYA 220	GOYA 460	GOYA 680
SHELL	Standard	OMALA 220	OMALA 460	OMALA 680
	Synthetic	TIVELA SB	TIVELA SD	TIVELA SD
TEXACO	Standard	MEROPA 220	MEROPA 460	MEROPA 680
TOTAL	Standard	CARTER EP220	CARTER EP460	CARTER EP680

Table 3 Oil manufacturers/suppliers recommended grades Food, Pharmaceutical and Cosmetic.

Manufacturer/supplier	ISO VG220	ISO VG460	ISO VG680
KLUBER US FDA & USDA H1 Approval	KLUBEROIL 4UH1-220N	KLUBEROIL 4UH1-460N	KLUBEROIL 4UH1-680N
MOBIL US FDA Approval	DTE FM 220	DTE FM 460	
SHELL US FDA Approval	CASSIDA GL220	CASSIDA GL460	
SLIPSTREAM LUBRICANTS Selective Services Ltd PO Box 3 Bexhill-on-sea Sussex TN39 4JF	GF 220	GF 460	GF 680

These tables give manufacturers trade names for those oils meeting relevant requirements for gear oil. Before mixing oils from different manufacturers consult relevant manufacturer regarding compatibility. Synthetic and standard mineral oils should not be mixed and if changing from mineral oil to synthetic, gearbox must be thoroughly cleaned to remove old oil.

Overhung and thrust load tables

Overhung Loads

Overhung loads are frequently imposed on the output shaft bearings of a gearmotor resulting from the drive loads of a spocket, gear or pulley which may be fitted to the gearmotor output shaft. The ESR1, ESR2 and ESR3 can be supplied with a heavy duty bearing designated with the sufix H, e.g. ESR 2H, to cope with greater overhung loads than can be allowed for the standard bearings. The larger gearmotors are equipped with a heavy duty bearing (double row spherical roller type) as standard.

Overhung loads are calculated as follows:

Pinion or sprocket load =

$$\frac{\text{KW x 1945600}}{\text{output rev/min x pitch diam (mm)}} \text{ (kgs)}$$

$$\frac{\text{HP x 126034}}{\text{output rev/min x pitch diam (ins)}} \text{ (lbs)}$$

V belt load =

$$\frac{\text{KW x 1945600 x 1.3}}{\text{output rev/min x pitch diam (mm)}} \text{ (kgs)}$$

$$\frac{\text{HP x 126034 x 1.3}}{\text{output rev/min x pitch diam (ins)}} \text{ (lbs)}$$

Flat belt load =

$$\frac{\text{KW x 1945600 x 2}}{\text{output rev/min x pulley diam (mm)}} \text{ (kgs)}$$

$$\frac{\text{HP x 126034 x 2}}{\text{output rev/min x pulley diam (ins)}} \text{ (lbs)}$$

The overhung loads are calculated as a load acting halfway along the gearbox output shaft. Any increase or decrease in the shaft length will alter the permissible overhung load.

For overhung loads not acting at midpoint along the output shaft, please apply to Head Office for leaflet TDS 1006.

Tables de charges de butee et en porte-a-faux

Charges en porte-à-faux

Les paliers de l'arbre de transmission d'un moteur à engrenages sont souvent soumis à des charges en porte-à-faux provenant des charges de débit d'un pignon, d'un engrenage ou d'une poulie qui peut être monté sur l'arbre de transmission du moteur à engrenages. Les ESR1, ESR2 et ESR3 peuvent être fournis équipés d'un palier qui peut être soumis à un travail très dur, désigné par un H, p.ex. ESR2H, pour supporter les charges en porte-à-faux plus grandes que celles permises pour les paliers standards. Les moteurs à engrenages plus grands types sont toujours équipés d'un palier qui peut être soumis à un travail très dur (type à rouleaux sohériques sur deux rangs).

Les charges en porte-à-faux sont calculées ainsi:

Charge sur pignon ou dent =

$$\frac{\text{KW x 1945600}}{\text{tpm x diamètre primitif (mm)}} \text{ (kgs)}$$

$$\frac{\text{qv x 126034}}{\text{tpm x diamètre primitif (ins)}} \text{ (lbs)}$$

Charge sur courroie trapézoidale =

$$\frac{\text{KW x 1945600 x 1.3}}{\text{tpm x diamètre primitif (mm)}} \text{ (kgs)}$$

$$\frac{\text{qv x 126034 x 1.3}}{\text{tpm x diamètre primitif (ins)}} \text{ (lbs)}$$

Charge sur courroie à plat =

$$\frac{\text{KW x 1945600 x 2}}{\text{tpm x diamètre de la poulie (mm)}} \text{ (kgs)}$$

$$\frac{\text{qv x 126034 x 2}}{\text{tpm x diamètre de la poulie (ins)}} \text{ (lbs)}$$

La charge en porte-à-faux et calculée comme une charge agissant à la moitié de l'arbre de transmission du moteur à engrenages. Toute augmentation ou diminution de la longeur de l'arbre changera la charge en porte-à-faux.

Pour les charges en porte-à-faux qui n'agissent pas à moitié de l'arbre de transmission, s'addresser au Siége Social pour la fiche TDS 1006.

Radial-und Axiabelastungs-tabellen

Radialbelastungen.

Die Getriebeabtriebswelle wird häufig durch den Antrieb der Kettenräder, Zahnräder oder Riemenscheiben, die sich an der Gertriebeabtriebswelle befinden,einer radialen Belastung ausgesetz. Der ESR1, ESR2, und ESR3 kann mit einem Hochleistungsgetriebe geliefert werden, um der stärkeren Radialbelastung standzuhalten, die mit einem Standardgetriebe nicht möglich ist. Die Kennzeichnung erfolgt durch die Ziffer H, z.B.ESR 2H. Die grösseren Getriebemotoren sind in der Standardusführung mit einem Hochleistungsgetriebe (doppelreihiges Tonneniager) ausgerüstet.

Die Radialbelastung wird wie folgt errechnet:

Ritzel oder Kettenradbelastung =

$$\frac{\text{KW x 1945600}}{\text{Leistung Umdrehung/Min. x Zahnteilungsdurchmesser (mm)}} \text{ (Kg)}$$

$$\frac{\text{HP x 126034}}{\text{Leistung Umdrehung/Min. x Zahnteilungsdurchmesser (Zoll)}} \text{ (lbs)}$$

V-Riemenbelastung =

$$\frac{\text{KW x 1945600 x 1.3}}{\text{Leistung Umdrehung/Min. x Zahnteilungsdurchmesser (mm)}} \text{ (Kg)}$$

$$\frac{\text{HP x 126034 x 1.3}}{\text{Leistung Umdrehung/Min. x Zahnteilungsdurchmesser (Zoll)}} \text{ (lbs)}$$

Flachriemenbelastung =

$$\frac{\text{KW x 1945600 x 2}}{\text{Leistung Umdrehung/Min. x Riemenscheibendurchmesser (mm)}} \text{ (Kg)}$$

$$\frac{\text{HP x 126034 x 2}}{\text{Leistung Umdrehung/Min. x Riemenscheibendurchmesser (Zoll)}} \text{ (lbs)}$$

Die Radialbelastungen sind als Belastungen in der Mitte des Getriebeabtriebwellenendes errechnet. Jede Verlängerung oder Kürzung der Wellenlänge ändert die zugelassene Radialbelastung.

Bei Radialbelastungen, die nicht in der Mitte der Abtriebswelle wirken, wenden Sie sich an das Hauptbüro mit der Bitte um Informationsblatt TDS 1006.

Overhung Loads

Maximum permissible overhung loads kg *lbs*

	Gearmotor size ESR											
Nominal output speed rev/min		1 61 501	1H 61H 501H	2 62 502	2H 62H 502H	3 73 13	3H 73H 13H	35 735 235	4 74 24	4SS 84SS 24SS	425 8425 3425	45 845 3545
	50											
up to		390	572.9	475	876.8	735	1474.2	2270	3000	3450	4536	6080
10.5		*860*	*1263*	*105*	*1933*	*1620*	*3250*	*5000*	*6600*	*7500*	*10000*	*13400*
12	95.3	376.5	572.9	462.7	876.8	716.8	1474.2	2230.8	2912	3310	4408.9	5960.2
	210	*830*	*1263*	*1020*	*1933*	*1580*	*3250*	*4918*	*6420*	*7300*	*9720*	*13140*
14	93	360.6	548.4	444.5	842.3	696.7	1430.6	2181.8	2812.3	3245	4256.9	5806
	205	*795*	*1209*	*980*	*1857*	*1536*	*3154*	*4810*	*6200*	*7150*	*9385*	*12800*
16	90.7	344.7	523.9	427.3	807.4	675.9	1388.9	2135	2712.5	3130	4107.3	5654
	200	*760*	*1155*	*942*	*1780*	*1490*	*3062*	*4707*	*5980*	*6900*	*9055*	*12465*
18	88.4	328.4	449	408.2	773.4	654.5	1347.1	2087.4	2617.2	3066.3	3955.3	5499.8
	195	*724*	*1100*	*900*	*1705*	*1443*	*2970*	*4602*	*5770*	*6760*	*8720*	*12125*
20	86.2	313	476.3	390.1	739.4	635	1306.3	2041.2	2517.4	2903	3810.2	5352.4
	190	*690*	*1050*	*860*	*1630*	*1400*	*2880*	*4500*	*5550*	*6400*	*8400*	*11800*
22	83.5	299.4	455.9	379.7	716.7	606.9	1270	1968.6	2426.7	2825.9	3680.9	5225.4
	184	*660*	*1005*	*837*	*1580*	*1338*	*2800*	*4340*	*5350*	*6230*	*8115*	*11520*
25	79.1	281.2	425.9	362.9	684.9	566.5	1221.5	1864.3	2293.8	2705.7	8492.6	5050.7
	174.5	*620*	*939*	*800*	*1510*	*1249*	*2693*	*4110*	*5057*	*5965*	*7700*	*11135*
27	76.4	269.9	405.9	353.8	663.6	538.9	1188.4	1796.2	2204.5	2594.5	3365.6	4930.5
	168.5	*595*	*895*	*780*	*1463*	*1188*	*2620*	*3960*	*4860*	*5720*	*7420*	*10870*
30	72.1	251.7	376.5	337.9	635	499	1093.1	1891.9	2066.6	2481.1	3181.9	4760.4
	159	*555*	*830*	*745*	*1400*	*1100*	*2410*	*3730*	*4556*	*5470*	*7015*	*10495*
33	69.4	239.5	354.7	327.9	610.1	471.3	1013.8	1623.9	1973.1	2322.4	3052.7	4630
	153	*528*	*782*	*723*	*1345*	*1039*	*2235*	*3580*	*4350*	*5120*	*6730*	*10225*
37	65.8	220.0	328.9	306.6	567	427.3	948.0	1486.4	1859.7	2222.6	2821.3	4399.8
	145	*485*	*725*	*676*	*1250*	*942*	*2090*	*3277*	*4100*	*4900*	*6220*	*9700*
43	63.5	208.7	318.9	275.8	517.1	411.9	875.4	1424.3	1820.7	2152.3	2535.6	4161.7
	140	*460*	*703*	*608*	*1140*	*908*	*1930*	*3140*	*4014*	*4754*	*5590*	*9175*
47	62.1	205.9	313.9	257.2	501.7	405.5	855.9	1409.3	1801.2	2104.7	2474.3	4095.9
	137	*454*	*692*	*567*	*1106*	*894*	*1887*	*3107*	*3971*	*4640*	*5455*	*9030*
51	60.3	203.7	308.4	248.1	489	399	841.4	1396.2	178.6	2063.8	2422	4023.3
	133	*449*	*680*	*547*	*1078*	*880*	*1855*	*3078*	*3930*	*4550*	*5340*	*8870*
57	58.5	199.6	303.9	240.4	479.4	392.4	829.6	1380.7	1759.9	2032.1	2363.2	3955.3
	129	*440*	*670*	*530*	*1057*	*865*	*1829*	*3044*	*3880*	*4480*	*5210*	*8720*
65	56.7	195.5	299.4	233.6	469.5	385.6	814.2	1365.3	1732.7	1998.1	2286	3866.9
	125	*431*	*663*	*515*	*1035*	*850*	*1795*	*3010*	*3820*	*4405*	*5040*	*8525*
76	54.9	191.4	293.9	229.1	459.5	377.8	797.4	1358.5	1713.2	1961.8	2159.1	3753.5
	121	*422*	*648*	*505*	*1013*	*833*	*1758*	*2995*	*3777*	*4325*	*4760*	*8275*
85	53.1	187.8	285.8	226.8	451.3	370.6	775.6	1292.7	1662	1905.1	2106.9	3683.2
	117	*414*	*630*	*500*	*995*	*817*	*1710*	*2850*	*3664*	*4200*	*4645*	*8120*
94	51.3	184.6	279.9	224.1	443.6	363.3	757.5	1261.0	1623.9	1877.9	2063.8	3612.8
	113	*407*	*617*	*494*	*978*	*801*	*1670*	*2780*	*3580*	*4140*	*4550*	*7965*
103	49.4	181.4	274.4	220.9	436.4	357.4	742.5	1229.2	1596.6	1848.4	2023	3533.5
	109	*400*	*605*	*487*	*962*	*788*	*1637*	*2710*	*3520*	*4075*	*4460*	*7790*
114	48.1	176.9	270.3	217.7	429.5	351.5	729.4	1195.2	1560.3	1816.6	1988.5	3447.3
	106	*390*	*596*	*480*	*947*	*775*	*1608*	*2633*	*3440*	*4005*	*4384*	*7600*
128	46.7	174.2	264.4	215.9	423.2	344.7	716.7	1161.2	1533.1	1775.8	1940.5	3318
	103	*384*	*583*	*476*	*933*	*760*	*1580*	*2560*	*3380*	*3915*	*4278*	*7315*
138	44.9	170.1	285.5	212.3	419.6	339.3	703.1	1121.7	1496.8	1741.8	1878.8	3111.6
	99	*375*	*570*	*468*	*925*	*748*	*1550*	*2473*	*3300*	*3840*	*4220*	*7150*
151	43.1	166.5	253.1	208.7	407.3	331.1	689.5	1088.6	1460.6	1741.8	1878.8	3111.6
	95	*257*	*558*	*460*	*898*	*730*	*1520*	*2400*	*3220*	*3840*	*4142*	*6860*
164	42.2	163.3	248.1	204.1	400.1	324.8	679.5	1052.8	1428.8	1694.6	1864.3	3039.1
	93	*360*	*547*	*450*	*882*	*716*	*1498*	*2321*	*3150*	*3736*	*4110*	*6700*
177	41.3	161.0	244.0	201.8	396.0	321.1	674.0	1041.0	1408.4		1845.2	2961.9
	91	*355*	*538*	*445*	*873*	*708*	*1486*	*2295*	*3105*		*4068*	*6530*
190	39.5	156.5	237.7	196.0	384.2	311.2	659.5	1013.8	1369.8	1650.2	1826.2	2896.2
	87	*345*	*524*	*432*	*847*	*686*	*1454*	*2235*	*3020*	*3638*	*4026*	*6385*
210	38.6	152.9	230.0	191.0	375.1	302.5	638.7	983.4	1331.3	1598.5	1794.4	2812.3
	85	*337*	*507*	*421*	*827*	*667*	*1408*	*2168*	*2935*	*3524*	*3956*	*6200*
230	37.0	148.8	223.6	186.4	364.7	293.0	630.5	952.5	1288.2	1560.3	1775.8	2748.8
	81.5	*328*	*493*	*411*	*804*	*646*	*1390*	*2100*	*2840*	*3440*	*3915*	*6060*
254	35.6	145.1	217.3	182.3	355.2	282.6	616.0	929.0	1251.9	1518.6	1741.8	2662.6
	78.5	*320*	*479*	*402*	*783*	*623*	*1358*	*2048*	*2760*	*3348*	*3840*	*5870*
278	34.5	140.2	209.1	177.8	344.7	271.7	598.7	897.2	1204.3	1476.4	1701.9	2569.6
	76	*309*	*461*	*392*	*760*	*599*	*1320*	*1978*	*2655*	*3255*	*3752*	*5665*
303	34.0	137.4	203.7	174.2	334.7	262.2	583.8	870.9	1172.5	1433.3	1671.0	1120.4
	75	*303*	*449*	*384*	*738*	*578*	*1287*	*1920*	*2585*	*3160*	*3684*	*5470*
348	32.4	131.5	196.9	169.6	322.0	250.4	560.6	836.4	1131.7	1385.7	1602.1	2354.3
	71.5	*290*	*434*	*374*	*710*	*552*	*1236*	*1844*	*2495*	*3055*	*3532*	*5190*
385	32.2	127.9	189.6	165.1	309.3	239.5	540.2	806.5	1090.9	1351.7	1545.8	2245.3
	71	*282*	*418*	*364*	*682*	*528*	*1191*	*1778*	*2405*	*2980*	*3408*	*4950*
417	31.1	122.5	181.4	158.8	296.6	226.3	516.2	775.2	1036.5	1308.2		
	68.5	*270*	*400*	*350*	*654*	*499*	*1138*	*1709*	*2285*	*2884*		
455	30.2	119.3	172.8	153.8	286.7	215.5	495.8	748.9	988.8	1268.2	1476.0	2116.0
	66.5	*263*	*381*	*339*	*632*	*475*	*1093*	*1651*	*2180*	*2796*	*3254*	*4665*
501	29.0	115.2	162.8	147.0	276.7	201.8	470.4	723.9	941.2	1222.4	1402.5	1973.1
	64	*254*	*359*	*324*	*610*	*445*	*1037*	*1596*	*2075*	*2695*	*3092*	*4350*
559	28.1	112.0	154.2	141.1	269.4	190.5	446.3	674.0	891.3	1149.4	1322.7	1814.4
	62	*247*	*340*	*311*	*594*	*420*	*984*	*1486*	*1965*	*2534*	*2916*	*4000*
613	27.2	108.9	143.3	134.3	263.1	179.2	419.1	628.2	836.4	1086.3	1251.0	1673.7
	60	*240*	*316*	*296*	*580*	*395*	*924*	*1385*	*1844*	*2395*	*2758*	*3690*

Thrust Loads (away)

Maximum permissible thrust loads applied to output shaft away from gearbox kg *lbs*

	Gearmotor size ESR								
		1	2	3	35	4	4SS	425	45
Nominal		1H	2H	3H	735	74	84SS	8425	845
output		61	62	73	235	24	24SS	3425	3545
speed		61H	62H	73H					
rev/min		501	502	13					
	50	501H	502H	13H					
up to	-	408	545	862	1272	1820	2270	3450	4080
10.5	-	*900*	*1200*	*1900*	*2800*	*4000*	*5000*	*7600*	*9000*
12	49.9	395.0	478.0	766.0	1220.0	1740.0	2235	3320.0	3920.0
	110	*870*	*1055*	*1690*	*2690*	*3840*	*4925*	*7300*	*8630*
14	48.8	372	460.3	714.4	1159.8	1687.3	2200	3061.7	3592.4
	107.5	*820*	*1015*	*1575*	*2557*	*3720*	*4850*	*6750*	*7920*
16	47.8	355.6	449.9	689.4	1133.9	1660.1	2170	2968.3	3492.6
	105.5	*784*	*992*	*1520*	*2500*	*3660*	*4775*	*6544*	*7700*
18	47.2	341.5	441.3	670.8	1115.4	1638.4	2136.4	2893.9	3425.5
	104	*753*	*973*	*1479*	*2459*	*3612*	*4710*	*6380*	*7552*
20	46.3	329.3	434.0	654.0	1097.7	1619.3	2111.5	2836.7	3374.7
	102	*726*	*957*	*1442*	*2420*	*3570*	*4654*	*6254*	*7440*
22	45.4	317.5	427.3	639.5	1080.9	1601.2	2086.5	2778.7	3321.6
	100	*700*	*942*	*1410*	*2383*	*3530*	*4600*	*6126*	*7323*
25	44.2	306.2	417.7	617.8	1059.1	1577.6	2044.8	2707.0	3256.8
	97.5	*675*	*921*	*1362*	*2335*	*3478*	*4508*	*5968*	*7180*
27	43.5	299.8	412.7	605.1	1045.9	1562.6	2032	2667.1	3218.7
	96	*661*	*910*	*1334*	*2306*	*3445*	*4460*	*5880*	*7096*
30	42.6	291.2	404.6	587.4	1026.9	1542.2	1999	2614.9	3163.3
	94	*642*	*892*	*1295*	*2264*	*3400*	*4407*	*5765*	*6974*
33	42	283.0	396.9	570.1	1009.7	1521.8	1975.8	2571.8	3111.6
	92.5	*624*	*875*	*1257*	*2226*	*3355*	*4356*	*5670*	*6860*
37	40.8	273.5	387.5	548.8	987.5	1496.8	1950.4	2526.5	3048.1
	90	*603*	*855*	*1210*	*2177*	*3300*	*4300*	*5570*	*6720*
43	39.7	260.8	375.6	530.2	957.1	1466.9	1930.9	2468.4	2970.1
	87.5	*575*	*828*	*1169*	*2110*	*3234*	*4257*	*5442*	*6548*
47	38.8	253.1	368.7	518.9	938.9	1448.3	1919.1	2428.5	2923.8
	85.5	*558*	*813*	*1144*	*2070*	*3193*	*4231*	*5254*	*6446*
51	38.1	245.8	361.9	508.9	922.1	1435.1	1906.9	2389.5	2882.1
	84	*542*	*798*	*1122*	*2033*	*3164*	*4204*	*5268*	*6354*
57	37.0	235.8	352.4	495.3	897.6	1407.0	1889.2	2330.1	2824.9
	81.5	*520*	*777*	*1092*	*1979*	*3102*	*4165*	*5137*	*5228*
65	35.4	223.6	341.1	479.9	867.3	1376.6	1865.6	2279.8	2757.8
	78	*493*	*752*	*1058*	*1912*	*3035*	*4113*	*4960*	*6080*
76	33.3	207.7	327.0	461.7	830.9	1339.9	1837.0	2140.9	2671.6
	73.5	*458*	*721*	*1018*	*1832*	*2954*	*4050*	*4720*	*5890*
85	31.7	197.3	317.5	449.0	807.4	1315.4	1814.4	2050.2	2612.6
	70	*435*	*700*	*990*	*1780*	*2900*	*4000*	*4520*	*5760*
94	30.8	195.0	299.4	427.7	764.7	1293.2	779	1955.9	2551.4
	68	*430*	*660*	*943*	*1686*	*2851*	*3922*	*4312*	*5625*
103	29.9	192.3	289.4	412.7	739.3	1272.3	1746.3	1911.9	2512.0
	66	*424*	*638*	*910*	*1630*	*2805*	*3850*	*4215*	*5538*
114	29	189.6	280.8	400.0	716.7	1254.2	1710.5	1871.9	2467.5
	64	*418*	*619*	*882*	*1580*	*2765*	*3771*	*4127*	*5440*
128	27.9	186.4	270.8	385.5	692.2	1229.2	1670.1	1829.3	2420.3
	61.5	*411*	*597*	*850*	*1526*	*2710*	*3682*	*4033*	*5336*
138	27	184.1	265.3	376.5	675.8	1213.3	1644.3	1802.6	2387.7
	59.5	*406*	*585*	*830*	*1490*	*2675*	*3625*	*3974*	*5264*
151	25.8	181.4	258.5	366.5	657.2	1196.6	1612	1769.0	2350.0
	57	*400*	*570*	*808*	*1449*	*2638*	*3554*	*3900*	*5181*
164	24.9	179.2	251.7	358.3	639.6	1179.3	1587.6	1741.7	2317.8
	55	*395*	*555*	*790*	*1410*	*2600*	*3500*	*3840*	*5110*
177	24.5	176.9	246.3	349.7	622.3	1165.7	-	1726.8	2284.7
	54	*390*	*543*	*771*	*1372*	*2570*	-	*3807*	*5037*
190	24.3	175.1	241.3	342.5	606.4	1153.0	1551.3	1713.2	2252.5
	53.5	*386*	*532*	*755*	*1337*	*2542*	*3420*	*3777*	*4966*
210	23.8	171.9	233.6	331.1	583.3	1137.1	1524	1691.9	2207.2
	52.5	*379*	*515*	*730*	*1286*	*2507*	*3360*	*3730*	*4866*
230	23.6	168.7	227.7	321.6	561.9	1111.3	1499.1	1675.5	2165.9
	52	*372*	*502*	*709*	*1239*	*2450*	*3305*	*3694*	*4775*
254	23.1	165.1	220.4	310.7	537.0	1086.8	1470.1	1647.4	2118.3
	51	*364*	*486*	*685*	*1184*	*2396*	*3241*	*3632*	*4670*
278	22.9	161.5	214.1	300.7	514.8	1062.8	1442.4	1622.5	2072.9
	50.5	*356*	*472*	*663*	*1135*	*2342*	*3180*	*3577*	*4570*
303	22.4	157.8	207.7	292.1	493.0	1038.2	1416.1	1597.9	2030.2
	49.5	*348*	*458*	*644*	*1087*	*2289*	*3122*	*3523*	*4476*
348	22	148.3	197.3	276.7	458.1	990.2	1373	1551.3	1959.5
	48.5	*327*	*435*	*510*	*1010*	*2183*	*3027*	*3420*	*4320*
385	21.3	144.7	191.8	268.5	438.2	952.5	1341.7	1513.2	1912.8
	47	*319*	*423*	*592*	*966*	*2100*	*2958*	*3336*	*4217*
417	21.1	140.1	186.8	261.7	420.9	920.8	1317.2	-	-
	46.5	*309*	*412*	*577*	*928*	*2030*	*2904*	-	-
455	20.6	133.8	181.4	253.1	400.9	881.3	1291.8	1439.7	1812.5
	45.5	*295*	*400*	*558*	*884*	*1943*	*2848*	*3174*	*3996*
501	20.4	127.0	174.6	242.7	376.4	834.6	1270	1392.5	1741.8
	45	*280*	*385*	*535*	*830*	*1840*	*2800*	*3070*	*3840*
559	20	117.4	167.8	229.5	345.6	773.8	1246.9	1330.8	1663.7
	44	*259*	*370*	*506*	*762*	*1706*	*2749*	*2934*	*3668*
613	19.7	109.7	158.7	217.7	317.5	716.7	1230.1	1275.5	1590.3
	43.5	*242*	*350*	*480*	*700*	*1580*	*2712*	*2812*	*3506*

Thrust Loads (towards)

Maximum permissible thrust loads applied to output shaft away from gearbox kg *lbs*

	Gearmotor size ESR								
Nominal output speed rev/min	50	1 1H 61 61H 501 501H	2 2H 62 62H 502 502H	3 3H 73 73H 13 13H	35 735 235	4 74 24	4SS 84SS 24SS	425 8425 3425	45 845 3545
up to	-	363	453	681	908	1272	2270	1635	2050
10.5	-	*800*	*1000*	*1500*	*2000*	*2800*	*5000*	*3600*	*4500*
12	49.9	362.9	453.6	680.4	907.2	1270.1	2235	1632.9	2041.2
	110	*800*	*1000*	*1500*	*2000*	*2800*	*4925*	*3600*	*4500*
14	48.8	346.5	438.2	627.3	870.9	1192.9	2200	1573.9	1973.1
	107.5	*764*	*966*	*1383*	*1920*	*2630*	*4850*	*3470*	*4350*
16	47.8	332.5	428.6	611	834.1	1120.4	2170	1519.5	1909.6
	105.5	*733*	*945*	*1347*	*1839*	*2470*	*4775*	*3350*	*4210*
18	47.2	319.8	420.5	598.7	797.4	1049.6	2136.4	1465.1	1845.2
	104	*705*	*927*	*1320*	*1758*	*2314*	*4710*	*3230*	*4068*
20	46.3	309.8	411.9	588.3	760.7	978.8	2111	1410.7	1783.5
	102	*683*	*908*	*1297*	*1677*	*2158*	*4654*	*3110*	*3932*
22	45.4	299.4	403.7	579.2	725.7	907.2	2086.5	1360.8	1723.6
	100	*660*	*890*	*1277*	*1600*	*2000*	*4600*	*3000*	*3800*
25	44.2	290.3	392.4	566.5	687.6	851.8	2044.8	1287.3	1665.1
	97.5	*640*	*865*	*1249*	*1516*	*1878*	*4508*	*2838*	*3671*
27	43.5	282.6	386.9	558.4	664.1	831.4	2023	1251.4	1640.6
	96	*633*	*853*	*1231*	*1464*	*1833*	*4460*	*2759*	*3617*
30	42.6	278.5	376.9	546.6	635.9	810.6	1999	1204.7	1606.2
	94	*614*	*831*	*1205*	*1402*	*1787*	*4407*	*2656*	*3541*
33	42	271.2	368.3	535.2	611.9	790.6	1973.8	1169.8	1574
	92.5	*598*	*812*	*1180*	*1349*	*1743*	*4356*	*2579*	*3470*
37	40.8	263.1	358.3	521.6	589.7	771.1	1950.4	1134	1542.2
	90	*580*	*790*	*1150*	*1300*	*1700*	*4300*	*2500*	*3400*
43	39.7	253.1	350.2	503.5	578.3	753	1903.9	1096.8	1500.5
	87.5	*558*	*772*	*1110*	*1275*	*1660*	*4257*	*2418*	*3308*
47	38.8	247.2	344.7	492.1	570.6	742.1	1919.1	1074.5	1474.2
	85.5	*545*	*760*	*1085*	*1258*	*1636*	*4231*	*2369*	*3250*
51	38.1	240.4	339.7	481.7	562.9	733	1906.9	1051.4	1447.9
	84	*530*	*749*	*1062*	*1241*	*1616*	*4204*	*2318*	*3192*
57	37	230.9	331.6	467.6	551.6	720.3	1889.2	1021.9	1407.9
	81.5	*509*	*731*	*1031*	*1216*	*1588*	*4165*	*2253*	*3104*
65	35.4	217.7	321.1	451.3	536.6	705.3	1865.6	981.6	1355.3
	78	*480*	*708*	*995*	*1183*	*1555*	*4113*	*2164*	*2988*
76	33.3	200.5	307.1	435.9	516.2	690.4	1837	938	1283.7
	73.5	*442*	*677*	*961*	*1138*	*1522*	*4050*	*2068*	*2830*
85	31.7	186	294.8	426.4	498.9	680.4	1814.4	907.2	1224.7
	70	*410*	*650*	*940*	*1100*	*1500*	*4000*	*2000*	*2700*
94	30.8	183.7	283.9	412.3	489	661.3	1779	872.2	1197
	68	*405*	*626*	*909*	*1078*	*1458*	*3922*	*1923*	*2639*
103	29.9	181	275.8	401	472.2	641.4	1746.3	850.5	1166.6
	66	*399*	*608*	*884*	*1041*	*1414*	*3850*	*1875*	*2572*
114	29	179.2	265.3	389.6	467.2	620.5	1710.5	826.9	1138.5
	64	*395*	*585*	*859*	*1030*	*1368*	*3771*	*1823*	*2510*
128	27.9	176	254	375.1	447.2	593.7	1670.1	796	1106.8
	61.5	*388*	*560*	*827*	*986*	*1309*	*3682*	*1755*	*2440*
138	27	173.3	244.9	364.7	438.2	577	1644.3	780.2	1085.9
	59.5	*382*	*540*	*804*	*966*	*1272*	*3625*	*1720*	*2394*
151	25.8	170.5	237.2	352.9	429.1	558.4	1612.1	762	1061.4
	57	*376*	*523*	*778*	*946*	*1231*	*3554*	*1680*	*2340*
164	24.9	167.8	231.3	340.2	421.8	544.3	1587.6	748.4	1043.3
	55	*370*	*510*	*750*	*930*	*1200*	*3500*	*1650*	*2300*
177	24.5	165.6	227.7	331.6	417.3	537	-	736.6	1021.9
	54	*365*	*502*	*731*	*920*	*1184*	-	*1624*	*2253*
190	24.3	163.7	224.5	323.9	412.8	529.8	1551.3	727.1	1004.2
	53.5	*361*	*495*	*714*	*910*	*1168*	*3420*	*1603*	*2214*
210	23.8	161	219.1	312.5	405.9	519.8	1524.1	713	979.7
	52.5	*355*	*483*	*689*	*895*	*1146*	*3360*	*1572*	*2160*
230	23.6	157.8	214.1	303	399.2	510.3	1499.1	698.5	957.1
	52	*348*	*472*	*668*	*880*	*1125*	*3305*	*1540*	*2110*
254	23.1	154.7	207.7	292.1	391.9	499.9	1470.1	682.2	930.8
	51	*341*	*458*	*644*	*864*	*1102*	*3241*	*1504*	*2052*
278	22.9	151	201.8	283.5	384.2	489.4	1442.4	665.9	905.8
	50.5	*333*	*445*	*625*	*847*	*1079*	*3180*	*1468*	*1997*
303	22.4	147.4	195.9	275.8	376	479.4	1416.1	651.8	882.7
	49.5	*325*	*432*	*608*	*829*	*1057*	*3122*	*1437*	*1946*
348	22	140.6	184.2	267.6	362.9	462.7	1373	625	834.6
	48.5	*310*	*406*	*590*	*800*	*1020*	*3027*	*1378*	*1840*
385	21.3	135.2	174.6	250.8	351.5	454.9	1341.7	604.6	801.9
	47	*298*	*385*	*553*	*775*	*1003*	*2958*	*1333*	*1768*
417	21.1	130.6	166.5	240.4	342	448.1	1317.2	-	-
	46.5	*288*	*367*	*530*	*754*	*988*	*2904*	-	-
455	20.6	124.7	156.9	227.7	331.1	440	1291.8	577	753
	45.5	*275*	*346*	*502*	*730*	*970*	*2848*	*1272*	*1660*
501	20.4	117.9	145.1	213.2	317.5	430.9	1270	567	725.7
	45	*260*	*320*	*470*	*700*	*950*	*2800*	*1250*	*1600*
559	20	109.8	130.6	193.7	300.3	418.7	1246.9	553.4	699.9
	44	*242*	*288*	*427*	*662*	*923*	*2749*	*1220*	*1543*
613	19.7	101.6	117	176.4	284.4	407.8	1230.1	544.3	683.1
	43.5	*224*	*258*	*389*	*627*	*899*	*2712*	*1200*	*1506*

Selection Table - Motorised Type

RPM	MOTOR KW	0.045	0.09	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	5.5	7.5	11	
0.1	Gearbox size	ESR24	ESR3425	ESR3545	ESR3545											
	Output torque Nm	*3645*	*7290*	*14580*	*20250*											
	Service Factor (SF)	1.05	1	1	0.75											
0.2	Gearbox size	ESR235	ESR24	ESR3425	ESR3545	ESR3545										
	Output torque Nm	*1823*	*3645*	*7290*	*10125*	*14580*										
	Service Factor (SF)	1	1	1	1.5	0.95										
0.3	Gearbox size	ESR13	ESR235	ESR24SS	ESR3425	ESR3425	ESR3545									
	Output torque Nm	*1215*	*2430*	*4860*	*6750*	*9720*	*14850*									
	Service Factor (SF)	1	1	1	1.15	0.85	0.9									
0.4	Gearbox size	ESR13	ESR2354	ESR24	ESR24SS	ESR3425	ESR3454	ESR3545								
	Output torque Nm	*911*	*1822*	*3645*	*5063*	*7290*	*11138*	*14580*								
	Service Factor (SF)	1.1	1.1	1	0.9	1	1.2	0.9								
0.5	Gearbox size	ESR502	ESR13	ESR24	ESR24SS	ESR3425	ESR3425	ESR3545								
	Output torque Nm	*729*	*1458*	*2916*	*4050*	*5832*	*8910*	*11664*								
	Service Factor (SF)	0.8	0.85	1.1	1	1.1	0.85	1								
0.6	Gearbox size	ESR502	ESR13	ESR235	ESR24	ESR24SS	ESR3425	ESR3545	3545							
	Output torque Nm	*608*	*1215*	*2430*	*3375*	*4860*	*7425*	*9720*	*14850*							
	Service Factor (SF)	0.9	1	1	1	0.9	1	1.25	0.9							
0.7	Gearbox size	ESR502	ESR13	ESR235	ESR24	ESR24SS	ESR3425	ESR3425	ESR3545							
	Output torque Nm	521	1041	2083	2893	4166	6364	8331	12728							
	Service Factor (SF)	1	1.1	1.1	1.1	1	1.1	0.85	1							
0.8	Gearbox size	ESR502	ESR13	ESR235	ESR235	ESR24	ESR24SS	ESR3425	ESR3545							
	Output torque Nm	*455*	*911*	*1822*	*2531*	*3645*	*5569*	*7290*	*11137*							
	Service Factor (SF)	1.1	1.2	1.2	0.9	0.95	1	0.95	1.1							
0.9	Gearbox size	ESR502	ESR13	ESR235	ESR24	ESR24SS	ESR3425	ESR3545	ESR3545							
	Output torque Nm	*405*	*810*	*1620*	*2250*	*3240*	*4950*	*6480*	*9900*	*12500*						
	Service Factor (SF)	1.2	1.3	1.25	1	1	1.05	1	1.25	0.95						
1	Gearbox size	ESR502	ESR13	ESR13	ESR235	ESR24	ESR24SS	ESR3425	ESR3545	ESR3545						
	Output torque Nm	*365*	*729*	*1458*	*2025*	*2916*	*4455*	*5832*	*8910*	*11664*						
	Service Factor (SF)	1.4	1.5	0.9	1.15	1.15	1.15	1.1	1.35	1.15						
1.5	Gearbox size	ESR501	ESR502	ESR13	ESR235	ESR235	ESR24	ESR24SS	ESR3425	ESR3545	ESR3545					
	Output torque Nm	*243*	*486*	*972*	*1350*	*1944*	*2970*	*3888*	*5940*	*7776*	*11880*					
	Service Factor (SF)	1	1	1.1	1.5	1.05	1	1	1	1.4	1					
2	Gearbox size	ESR501	ESR502	ESR13	ESR13	ESR235	ESR235	ESR24	ESR24SS	ESR3425	ESR3545	ESR3545				
	Output torque Nm	*182*	*365*	*729*	*1012*	*1458*	*2227*	*2916*	*4455*	*5832*	*8910*	*11664*				
	Service Factor (SF)	1.15	1.25	1.35	1.05	1.3	0.95	1	0.9	1	1.25	0.95				
2.5	Gearbox size	ESR501	ESR502	ESR502	ESR13	ESR13	ESR235	ESR24	ESR24	ESR24SS	ESR3425	ESR3545	ESR3545			
	Output torque Nm	*146*	*292*	*583*	*810*	*1166*	*1782*	*2333*	*3564*	*4666*	*7128*	*9331*	*12960*			
	Service Factor (SF)	1.35	1.5	0.95	1.35	1	1.1	1.3	0.9	1	0.9	1.2	0.9			
3	Gearbox size	ESR61	ESR61	ESR62	ESR73	ESR73	ESR735	ESR735	ESR74	ESR24SS	ESR8425	ESR845	ESR845			
	Output torque Nm	*129*	*258*	*516*	*717*	*1032*	*1577*	*2064*	*3153*	*4050*	*6307*	*8256*	*11467*			
	Service Factor (SF)	1.7	0.9	0.95	1.5	1.05	1.25	0.9	1	1	1.1	1.35	1.05			
3.5	Gearbox size	ESR61	ESR61	ESR62	ESR73	ESR73	ESR735	ESR735	ESR74	ESR84SS	ESR8425	ESR845	ESR845			
	Output torque Nm	*111*	*211*	*442*	*614*	*885*	*1351*	*1769*	*2703*	*3538*	*5406*	*7077*	*9828*	*13514*		
	Service Factor (SF)	2	1	1	1.7	1.15	1.4	1.05	1.1	1.1	1.25	0.9	1.2	0.9		
4	Gearbox size	ESR61	ESR61	ESR62	ES623	ESR73	ESR73	ESR735	ESR74	ESR84SS	ESR8425	ESR8425	ESR845	ESR845		
	Output torque Nm	*97*	*193*	*387*	*537*	*774*	*1182*	*1548*	*2365*	*3096*	*4730*	*6192*	*8600*	*11825*		
	Service Factor (SF)	2.2	1.1	1.15	0.85	1.35	0.9	1.2	1.3	1.25	1.35	1	1.35	1		
4.5	Gearbox size	ESR61	ESR61	ESR62	ESR62	ESR73	ESR73	ESR735	ESR735	ESR74	ESR84SS	ESR8425	ESR8425	ESR845		
	Output torque Nm	*86*	*172*	*344*	*478*	*688*	*1051*	*1376*	*2102*	*2752*	*4204*	*5504*	*7644*	*10511*		
	Service Factor (SF)	7.5	1.25	1.35	1	1.5	1	1.35	0.9	1	1	1.1	0.85	1.1		
5	Gearbox size	ESR61	ESR61	ESR62	ESR62	ESR73	ESR73	ESR73	ESR735	ESR735	ESR74	ESR84SS	ESR8425	ESR845	ESR845	
	Output torque Nm	*77*	*155*	*309*	*430*	*619*	*946*	*1238*	*1892*	*2477*	*3784*	*4954*	*6880*	*9460*	*12900*	
	Service Factor (SF)	2.8	1.4	1.5	1.1	1.65	1.1	0.8	1	1.1	1.35	1	1	1.2	0.85	
6	Gearbox size	ESR61	ESR61	ESR61	ESR62	ESR62	ESR73	ESR73	ESR735	ESR735	ESR74	ESR84SS	ESR8425	ESR845	ESR845	
	Output torque Nm	*64*	*129*	*258*	*358*	*516*	*788*	*1032*	*1577*	*2064*	*3153*	*4128*	*5733*	*7883*	*10750*	
	Service Factor (SF)	3.25	1.65	0.85	1.2	0.8	1.35	1	1.15	0.85	0.9	1.1	1.1	1.35	1	
7	Gearbox size	ESR61	ESR61	ESR61	ESR62	ESR62	ESR73	ESR73	ESR735	ESR735	ESR74	ESR84SS	ESR84SS	ESR8425	ESR845	
	Output torque Nm	*55*	*111*	*221*	*307*	*442*	*676*	*884*	*1351*	*1769*	*2703*	*3538*	*4914*	*6757*	*9214*	
	Service Factor (SF)	4	2	1	1.35	1	1.5	1.1	1.35	1	1	1.25	1	0.9	1.15	
8	Gearbox size	ESR61	ESR61	ESR61	ESR61	ESR62	ESR73	ESR73	ESR73	ESR735	ESR74	ESR8483	ESR84SS	ESR8425	ESR845	ESR845
	Output torque Nm	*48*	*97*	*193*	*269*	*387*	*591*	*774*	*1182*	*1548*	*2365*	*3096*	*4300*	*5913*	*8062*	*11825*
	Service Factor (SF)	4.4	2.2	1.1	0.8	1.1	1.7	1.25	0.85	1.15	1.2	1.25	1	1	1.35	0.9
9.5	Gearbox size	ESR61	ESR61	ESR61	ESR61	ESR62	ESR62	ESR73	ESR73	ESR735	ESR735	ESR74	ESR84SS	ESR8425	ESR8425	ESR845
	Output torque Nm	*41*	*81*	*163*	*226*	*326*	*498*	*652*	*996*	*1303*	*1991*	*2607*	*3621*	*4979*	*6789*	*9958*
	Service Factor (SF)	5.4	2.7	1.35	1	1.25	0.85	1.55	1.05	1.35	0.9	1	1.2	1.15	0.85	1.05
10.5	Gearbox size	ESR61	ESR61	ESR61	ESR61	ESR62	ESR62	ESR73	ESR73	ESR735	ESR735	ESR74	ESR84SS	ESR84SS	ESR8425	ESR8425
	Output torque Nm	*37*	*74*	*147*	*205*	*295*	*450*	*590*	*901*	*1179*	*1802*	*2359*	*3276*	*4505*	*6143*	*9009*
	Service Factor (SF)	6.2	3.1	1.55	1.15	1.5	1.05	1.65	1.15	1.45	1	1	1.3	0.9	0.9	1.1

RPM	MOTOR KW	0.045	0.09	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45
12	Gearbox size	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR4	ESR84SS	ESR84SS	ESR25	ESR45	ESR45					
	Output torque Nm	*34*	*68*	*136*	*189*	*280*	*416*	*567*	*832*	*1134*	*1664*	*2268*	*3025*	*4159*	*5672*	*8319*	*11344*					
	Service Factor (SF)	0.9	3.5	1.7	1.3	0.85	1.25	0.9	1.35	0.95	1	1.05	1.5	1	0.95	1.2	0.85					
14	Gearbox size	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR4	ESR4	ESR84SS	ESR425	ESR45	ESR45					
	Output torque Nm	*29*	*58*	*117*	*162*	*243*	*356*	*486*	*713*	*972*	*1426*	*1945*	*2593*	*3565*	*4862*	*7130*	*9723*					
	Service Factor (SF)	0.9	3.9	1.9	1.5	0.9	1.3	0.95	1.35	0.95	1.05	1.3	0.95	1	1.05	1.35	1					
16	Gearbox size	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR4	ESR84SS	ESR245	ESR45	ESR45					
	Output torque Nm	*26*	*51*	*102*	*142*	*210*	*312*	*425*	*624*	*851*	*1248*	*1702*	*2269*	*3120*	*4254*	*6240*	*8508*					
	Service Factor (SF)	1	4.4	2.2	1.6	1.1	0.8	1.2	0.8	1.4	0.9	0.85	1	1.05	1.15	1.35	1.05					
18	Gearbox size	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR425	ESR45	ESR45				
	Output torque Nm	*23*	*45*	*91*	*126*	*189*	*277*	*378*	*555*	*756*	*1109*	*1512*	*2017*	*2773*	*3781*	*5546*	*7562*	*9327*				
	Service Factor (SF)	1	4.8	2.4	1.8	1.2	0.85	1.3	0.85	1.5	1	0.9	1	1.05	1.45	0.95	1.25	1				
20	Gearbox size	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR4	ESR4	ESR4SS	ESR425	ESR45	ESR45				
	Output torque Nm	*20*	*41*	*82*	*113*	*168*	*250*	*340*	*499*	*681*	*998*	*1361*	*1815*	*2496*	*3403*	*4991*	*6806*	*8394*				
	Service Factor (SF)	1	5.2	2.6	1.9	1.3	0.85	1.35	0.9	1.5	1	0.95	1.25	0.9	0.9	1	1.25	1.05				
22	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR425	ESR45	ESR45			
	Output torque Nm	*19*	*38*	*77*	*103*	*155*	*227*	*309*	*454*	*619*	*907*	*1237*	*1650*	*2269*	*3094*	*4537*	*6187*	*7631*	*9075*			
	Service Factor (SF)	1.6	0.8	2.8	2.1	1.4	0.9	1.5	1	1.9	1.25	0.9	0.85	1	0.95	1.15	0.85	1.2	1			
25	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR4	ESR4	ESR4SS	ESR425	ESR45	ESR45			
	Output torque Nm	*16*	*33*	*65*	*91*	*131*	*200*	*261*	*400*	*523*	*800*	*1045*	*1452*	*1997*	*2723*	*3993*	*5445*	*6716*	*7986*			
	Service Factor (SF)	1.7	0.85	3.1	2.3	1.5	1	0.8	1.1	0.85	1.35	0.95	0.95	1.3	0.95	0.9	0.95	1.2	1.05			
27	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR4	ESR4	ESR4SS	ESR425	ESR45	ESR45	ESR45		
	Output torque Nm	*15*	*30*	*60*	*84*	*120*	*185*	*240*	*370*	*480*	*739*	*960*	*1340*	*1850*	*2521*	*3697*	*5042*	*6218*	*7394*	*10055*		
	Service Factor (SF)	1.75	0.9	3.3	2.5	1.6	1.1	0.85	1.2	0.9	1.4	1	1	1.2	0.9	0.95	1	1.2	1.1	0.8		
30	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR45	ESR45	ESR45		
	Output torque Nm	*14*	*27*	*54*	*76*	*109*	*166*	*218*	*333*	*436*	*665*	*871*	*1210*	*1664*	*2269*	*3327*	*4538*	*5597*	*6655*	*9075*		
	Service Factor (SF)	1.9	0.9	3.4	2.6	1.7	1.2	0.9	1.2	0.9	1.6	1.2	0.85	0.85	0.95	0.95	1	1.5	1.3	0.9		
33	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR4SS	ESR425	ESR45	ESR45		
	Output torque Nm	*12*	*25*	*49*	*68*	*99*	*151*	*197*	*302*	*395*	*603*	*790*	*1097*	*1508*	*2057*	*3017*	*4114*	*5074*	*6033*	*8227*		
	Service Factor (SF)	1.9	1	3.5	2.7	1.8	1.2	0.9	1.3	0.95	1.65	1.25	0.9	0.9	0.95	1.25	0.85	1	1.35	1		
37	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR4SS	ESR425	ESR45	ESR45	ESR45	
	Output torque Nm	*11*	*22*	*44*	*61*	*88*	*135*	*176*	*269*	*352*	*538*	*704*	*978*	*1345*	*1834*	*2690*	*3669*	*4525*	*5381*	*7338*	*9050*	
	Service Factor (SF)	2	1	3.8	2.9	1.9	1.3	1	1.35	1	1.75	1.35	1	1	1	1.2	0.9	1	1.5	1.15	0.9	
43	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR4SS	ESR425	ESR425	ESR45	ESR45	
	Output torque Nm	*9*	*19*	*38*	*53*	*76*	*116*	*151*	*231*	*303*	*463*	*606*	*842*	*1158*	*1578*	*2315*	*3157*	*3894*	*4630*	*6314*	*7787*	
	Service Factor (SF)	2.1	1.05	4.5	3.35	2.2	1.5	1.1	1.5	1.1	1.75	1.35	1	1	1	1.35	1	1.2	1	1.25	1	
47	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4SS	ESR425	ESR425	ESR45	ESR45	ESR45
	Output torque Nm	*8*	*17*	*35*	*48*	*69*	*106*	*139*	*212*	*277*	*424*	*555*	*770*	*1059*	*1444*	*2118*	*2888*	*3562*	*4236*	*5777*	*7124*	*8665*
	Service Factor (SF)	2.35	1.15	4.7	3.5	2.35	1.6	1.2	0.85	1.25	0.85	1.4	1.05	1.15	0.85	0.85	1	1.2	1	1.4	1.15	0.9
51	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR425	ESR45	ESR45	ESR45
	Output torque Nm	*8*	*16*	*32*	*44*	*64*	*97*	*128*	*195*	*255*	*390*	*511*	*710*	*976*	*1331*	*1952*	*2662*	*3283*	*3904*	*5324*	*6566*	*7985*
	Service Factor (SF)	2.5	1.2	5.2	3.9	2.6	1.7	1.3	0.9	1.3	0.9	1.7	1.2	0.9	0.9	0.9	1	1.2	1.05	1.5	1.2	1

RPM	MOTOR KW	0.12	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5
309	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8	ESR8		
	Output torque Nm	*3.8*	*5.5*	*7.7*	*11.1*	*16.9*	*22.2*	*33.9*	*44.5*	*69.2*	*88.9*	*126*		
	Service Factor (SF)	8.3	5.5	4	2.7	1.8	1.3	1.6	1.2	1.85	1.35	1.05		
352	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8	ESR8	
	Output torque Nm	*3.2*	*4.8*	*6.5*	*9.8*	*13.1*	*19.5*	*26.1*	*39*	*52.1*	*78*	*110.5*	*147.7*	
	Service Factor (SF)	9.7	6.5	4.65	3.15	2.1	1.55	1.05	1.35	0.95	1.65	1.25	0.9	
397	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8	ESR8	
	Output torque Nm	*3*	*4.3*	*5.9*	*8.6*	*12.1*	*17.3*	*23.9*	*34.6*	*48.1*	*69.2*	*96*	*130.9*	
	Service Factor (SF)	10.8	7.25	5.2	3.5	2.35	1.75	1.15	1.55	1.05	1.85	1.35	1	
441	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8	ESR8	
	Output torque Nm	*2.7*	*3.9*	*5.5*	*7.8*	*10.8*	*15.5*	*21.6*	*31.1*	*43.2*	*62.3*	*86.5*	*117.9*	
	Service Factor (SF)	12	8	5.8	3.9	2.6	1.9	1.3	1.75	1.2	2.1	1.6	1.15	
497	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8	
	Output torque Nm	*2.4*	*3.4*	*4.7*	*6.9*	*9.6*	*13.8*	*19.1*	*27.6*	*38.4*	*55.3*	*76.8*	*104.6*	
	Service Factor (SF)	14	9.35	6.7	4.55	3.05	2.2	1.5	1.1	1.45	1.05	1.7	1.25	
552	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8	ESR8
	Output torque Nm	*2.1*	*3.1*	*4.3*	*6.2*	*8.6*	*12.4*	*17.3*	*24.9*	*34.6*	*49.8*	*69.2*	*94.2*	*128.4*
	Service Factor (SF)	15.1	10.1	7.25	4.9	3.3	2.4	1.65	1.2	1.6	1.15	1.9	1.4	1
621	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR9	ESR8	ESR8
	Output torque Nm	*1.9*	*2.7*	*3.8*	*5.5*	*7.7*	*11.1*	*15.4*	*22.1*	*30.7*	*44.3*	*61.5*	*83.7*	*114.1*
	Service Factor (SF)	17	11.3	8.15	5.5	3.7	2.7	1.85	1.35	1.65	1.2	2.1	1.55	1.1
675	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8
	Output torque Nm	*1.8*	*2.5*	*3.5*	*5.1*	*7.1*	*10.1*	*14.1*	*21.2*	*28.3*	*42.4*	*56.6*	*77*	*105*
	Service Factor (SF)	18.2	12.1	8.7	5.9	3.95	2.9	2	1.45	1	1.3	0.95	1.6	1.2
752	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8
	Output torque Nm	*1.6*	*2.3*	*3.2*	*4.6*	*6.3*	*9.1*	*12.7*	*18.3*	*25.4*	*36.6*	*50.8*	*69.1*	*94.2*
	Service Factor (SF)	19.1	12.7	9.1	6.2	4.15	3.05	2.05	1.5	1.05	1.35	1	1.75	1.3
814	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8
	Output torque Nm	*1.5*	*2.1*	*2.9*	*4.2*	*5.9*	*8.4*	*11.7*	*16.9*	*23.5*	*33.8*	*46.9*	*63.8*	*87.1*
	Service Factor (SF)	20	13.5	9.7	6.55	4.4	3.2	2.2	1.6	1.1	1.4	1.05	1.85	1.35
901	Gearbox size	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR6	ESR7	ESR7	ESR8	ESR8
	Output torque Nm	*1.3*	*1.9*	*2.6*	*3.8*	*5.3*	*7.6*	*10.6*	*15.3*	*21.2*	*30.5*	*44.1*	*57.7*	*78.8*
	Service Factor (SF)	22	14.6	10.5	7.15	4.8	3.5	2.4	1.75	1.2	1.55	1.15	2	1.45

RPM	MOTOR KW	0.045	0.09	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45
57	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR425	ESR425	ESR45	ESR45
	Output torque Nm	7	14	29	40	57	87	114	175	229	349	457	635	873	1191	1746	2381	2937	3493	4763	5875	7145
	Service Factor (SF)	2	1	5.2	3.9	2.6	1.7	1.3	0.9	1.35	0.95	1.65	1.2	0.9	1	0.95	1	1.5	1.3	0.9	1.3	1.1
65	Gearbox size	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR4SS	ESR425	ESR425	ESR45	ESR45
	Output torque Nm	6	13	25	35	50	77	100	153	200	306	401	557	766	1044	1531	2088	2576	3063	4177	5151	6265
	Service Factor (SF)	2	1	5.85	4.35	2.9	1.95	1.45	1	1.5	1	1.7	1.25	0.95	1	1	1.25	1	1.35	1	1.45	1.2
77	Gearbox size	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR425	ESR425	ESR45
	Output torque Nm	5	11	21	29	42	65	85	129	169	258	338	470	646	881	1293	1763	2174	2586	3526	4349	5289
	Service Factor (SF)	3.4	1.65	0.9	4.35	2.9	1.95	1.45	1	1.55	1.05	1.8	1.3	1	1.1	1.1	0.85	1.2	0.95	1.15	0.9	1.25
84	Gearbox size	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR3	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4SS	ESR4SS	ESR425	ESR425	ESR45
	Output torque Nm	5	10	19	27	39	59	78	119	155	237	310	431	593	808	1185	1616	1993	2370	3232	3986	4848
	Service Factor (SF)	3.5	1.75	0.95	5.1	3.35	2.25	1.7	1.15	0.85	1.1	2	1.5	1.05	1.25	0.85	0.9	1.2	0.95	1.25	1	1.4
94	Gearbox size	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4SS	ESR4SS	ESR425	ESR425	ESR45
	Output torque Nm	4	9	17	24	35	53	69	106	139	212	277	385	530	722	1059	1444	1781	2118	2888	3562	4332
	Service Factor (SF)	3.75	1.9	1	5.3	3.45	2.35	1.75	1.15	0.9	1.3	0.95	1.6	1.15	1.3	0.9	1	1.25	1	1.25	1.05	1.6
103	Gearbox size	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR4SS	ESR425	ESR425	ESR45
	Output torque Nm	4	8	16	22	32	48	63	97	127	193	253	351	483	659	967	1318	1625	1933	2636	3251	3954
	Service Factor (SF)	4	2	1	5.65	3.75	2.5	1.9	1.25	0.95	1.35	1	1.55	1.15	0.85	0.95	1.05	1.25	1.05	1.3	1.15	1.65
113	Gearbox size	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR4SS	ESR4SS	ESR425	ESR425
	Output torque Nm	4	7	14	20	29	44	58	88	115	176	231	320	440	601	881	1201	1485	1762	2403	2963	3604
	Service Factor (SF)	4	2	1	5.8	3.9	2.6	1.95	1.3	1	1.35	1	1.6	1.2	0.9	0	1.1	1.7	1.45	1	1.15	1
127	Gearbox size	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4SS	ESR4SS	ESR4SS	ESR425	ESR425
	Output torque Nm	3	6	13	18	26	39	51	78	103	157	205	285	392	534	784	1069	1318	1568	2138	2637	3207
	Service Factor (SF)	4	2	1	6	4	2.65	2	1.35	1	1.5	1.1	1.65	1.2	0.9	1	1.2	1.85	1.55	1.15	1.2	1.1
138	Gearbox size	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4			ESR425	ESR425
	Output torque Nm	3	6	12	16	24	36	47	72	94	144	189	262	361	492	721	984	1213			2426	2951
	Service Factor (SF)	4.2	2.1	1.05	6.8	4.75	3.2	2.4	1.6	1.1	1.6	1.15	1.7	1.25	0.95	1.1	1.2	0.95			1.2	1.15
152	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR4SS	ESR425
	Output torque Nm	3	5	11	15	21	33	43	65	86	131	171	238	327	447	655	893	1101	1310	1786	2203	2679
	Service Factor (SF)	5	2.5	1.3	0.95	5.05	3.4	2.55	1.7	1.25	1.75	1.25	1.75	1.3	1	1.15	1.25	1	1.8	1.4	1.1	1.2
165	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR3	ESR3	ESR3	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR4SS	ESR425
	Output torque Nm	2	5	10	14	20	30	39	60	79	121	158	219	302	411	603	823	1015	1207	1645	2029	2468
	Service Factor (SF)	5.25	2.65	1.35	1	5.5	3.65	2.75	1.85	1.3	1.85	1.3	1	1.2	1.3	1	1.9	1	1.9	1.5	1.2	1.25
177	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4				ESR425
	Output torque Nm	2	5	9	13	18	28	37	56	74	112	147	204	281	383	562	767	946				2301
	Service Factor (SF)	5.3	2.7	1.35	1	4.9	3.25	2.45	1.6	1.2	1.55	1.15	0.85	1.35	1	1.1	0.8	1.05				1.8
194	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4SS	ESR4SS	ESR4SS	ESR425
	Output torque Nm	2	4	8	12	17	26	34	51	67	103	134	187	256	350	513	700	863	1026	1399	1726	209
	Service Factor (SF)	5.3	2.7	1.35	1.5.5	3.65	2.75	1.85	1.35	1.65	1.65	1.25	0.9	1.45	1.1	1.15	0.85	1.1	2.1	1.6	1.3	2
215	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4SS	ESR4SS	ESR4SS	ESR425
	Output torque Nm	2	4	8	11	15	23	30	46	61	93	121	168	232	316	463	631	779	926	1263	1557	1894
	Service Factor (SF)	5.4	2.75	1.35	1.05	5.85	3.9	2.9	1.95	1.45	1.8	1.35	1	1.6	1.2	1.2	0.9	1.15	2.4	1.7	1.4	2.25
233	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR4SS
	Output torque Nm	2	3	7	10	14	21	28	43	56	85	112	155	214	291	428	583	719	854	1165	1437	1748
	Service Factor (SF)	5.9	2.95	1.5	1.1	6.25	4.1	3.1	2.1	1.5	1.8	1.35	1	1.65	1.25	1.2	0.9	1.2	1	1.9	1.5	1.25
255	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR4SS
	Output torque Nm	2	3	6	9	13	20	26	39	51	78	102	142	195	266	390	532	657	781	1065	1313	1597
	Service Factor (SF)	6.4	3.25	1.55	1.2	6.6	4.4	3.35	2.2	1.6	2	1.5	1.05	1.7	1.3	1.25	0.95	1.2	1	2.1	1.65	1.4
282	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR4SS
	Output torque Nm	1.5	3	6	8	12	18	23	35	46	71	92	128	177	241	353	481	594	706	963	1187	1444
	Service Factor (SF)	6.6	3.35	1.65	1.25	7.1	4.8	3.6	2.4	1.75	2.15	1.6	1.15	1.85	1.4	1.3	1	1.25	1.05	1.65	1.35	1.1
305	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR4SS
	Output torque Nm	1.5	3	5	7	11	16	21	33	43	65	85	119	163	223	326	445	549	653	890	1098	1335
	Service Factor (SF)	7.2	3.6	1.8	1.4	0.9	2.75	2.15	1.35	1	1.1	1	0.75	1.1	0.85	1	0.75	1.35	1.15	1.8	1.45	1.2
348	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4SS	ESR4SS	ESR4SS
	Output torque Nm	1	2	5	6	9	14	19	29	37	57	75	104	143	195	286	390	481	572	780	962	1170
	Service Factor (SF)	7.2	3.6	1.8	1.4	0.9	3.2	2.4	1.6	1.2	1.1	1	0.75	1.3	1	1.05	0.8	1.45	1.2	2.4	1.9	1.6
377	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4			
	Output torque Nm	1	2	4	6	9	13	17	26	35	53	69	96	132	180	264	360	444	582			
	Service Factor (SF)	7.5	3.7	1.85	1.45	0.95	3.25	2.45	1.6	1.2	1.45	1.05	0.8	1.4	1.05	1.1	0.8	1.5	1.25			
399	Gearbox size																			ESR4SS	ESR4SS	ESR4SS
	Output torque Nm																			680	839	1021
	Service Factor (SF)																			2.25	1.8	1.5
421	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4		
	Output torque Nm	1	2	4	5	8	12	15	24	31	47	62	86	118	161	236	322	398	473	645		
	Service Factor (SF)	7.7	3.85	1.95	1.45	0.95	3.65	2.75	1.85	1.35	1.65	1.25	0.9	1.5	1.15	1.15	0.85	1.5	1.25	0.9		
455	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4	ESR4SS	ESR4SS
	Output torque Nm	1	2	4	5	7	11	14	22	29	44	57	80	109	149	219	298	368	438	597	736	895
	Service Factor (SF)	7.8	3.9	1.95	1.45	1	3.9	2.9	1.95	1.45	1.8	1.35	1	1.6	1.2	1.2	0.9	1.5	1.25	0.95	1.85	1.55
506	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4	ESR4SS	ESR4SS
	Output torque Nm	0.8	1.5	3	4	6	10	13	20	26	39	52	72	98	134	197	268	331	393	536	662	805
	Service Factor (SF)	8	4	2	1.5	1	4.1	3.1	2.1	1.5	1.8	1.35	1	1.65	1.25	1.25	0.95	1.5	1.25	0.95	1.85	1.5
560	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4	ESR4SS	ESR4SS
	Output torque Nm	0.7	1.5	3	4	6	9	12	18	23	36	47	65	89	121	178	242	299	356	485	598	727
	Service Factor (SF)	8.75	4.4	2.2	1.6	1.1	4.4	3.35	2.2	1.6	2	1.5	1.05	1.7	1.3	1.35	1	1.6	1.3	1	2.05	1.75
613	Gearbox size	ESR50	ESR50	ESR50	ESR50	ESR50	ESR1	ESR1	ESR1	ESR1	ESR2	ESR2	ESR2	ESR3	ESR3	ESR35	ESR35	ESR4	ESR4	ESR4	ESR4SS	ESR4SS
	Output torque Nm	0.6	1.5	3	4	5	8	11	16	21	33	43	59	81	111	162	221	273	325	443	546	664
	Service Factor (SF)	9.5	4.75	2.4	1.8	1.2	4.8	3.6	2.4	1.75	2.15	1.6	1.15	1.85	1.4	1.35	1	1.6	1.3	1	2.35	1.95

55	75	90	110	132	150	168	185
ESR45							
8732							
0.9							
ESR45							
7658							
0.95							
ESR45							
6464							
1.05							
ESR45	ESR45						
5925	*8080*						
1.15	0.85						
ESR45	ESR45						
5295	*7125*						
1.25	0.95						
ESR45	ESR45						
4833	*6502*						
1.35	1						
ESR45	ESR45						
4405	*5927*						
1.40	1.05						
ESR45	ESR45	ESR45					
3919	*5273*	*6413*					
1.5	1.1	0.9					
ESR45	ESR45	ESR45					
3607	*4918*	*5902*					
1.6	1.2	1					
ESR425	ESR45	ESR45					
3275	*4406*	*5358*					
0.95	1.25	1.1					
ESR425	ESR45	ESR45					
3017	*4059*	*4936*					
1.05	1.35	1.2					
ESR425	ESR425	ESR45	ESR45				
2812	*3784*	*4602*	*5624*				
1.5	1.1	1.65	1.3				
ESR425	ESR425	ESR45	ESR45				
2566	*3452*	*4198*	*5131*				
1.65	1.2	1.8	1.5				
ESR425	ESR425	ESR45	ESR45	ESR45			
2315	*3115*	*3788*	*4630*	*5556*			
1.8	1.3	1.9	1.6	1.25			
ESR425	ESR425	ESR45	ESR45	ESR45			
2136	*2874*	*3496*	*4273*	*5127*			
1.9	1.4	2	1.65	1.35			
ESR425	ESR425	ESR45	ESR45	ESR45			
1952	*2626*	*3194*	*3904*	*4685*			
2	1.5	2.15	1.8	1.4			
ESR425	ESR425	ESR45	ESR45	ESR45			
1765	*2375*	*2888*	*3530*	*4236*			
2.25	1.6	2.3	1.95	1.5			
ESR425	ESR425	ESR425	ESR45	ESR45	ESR45		
1632	*2196*	*2670*	*3264*	*3917*	*4391*		
1.95	1.6	1.2	1.75	1.55	1.2		
ESR4SS	ESR425	ESR425	ESR45	ESR45	ESR45		
1430	*1924*	*2340*	*2861*	*3433*	*3849*		
1.3	1.65	1.3	1.9	1.6	1.35		
ESR4SS	ESR425	ESR425	ESR45	ESR45	ESR45	ESR45	
1247	*1678*	*2041*	*2495*	*2994*	*23357*	*3810*	
1.25	1.85	1.5	2.25	1.9	1.75	1.35	
ESR4SS	ESR425	ESR425	ESR425	ESR45	ESR45	ESR45	ESR45
1094	*1472*	*1790*	*2188*	*2625*	*2944*	*3341*	*3680*
1.25	2.05	1.65	1.3	2.05	1.85	1.55	1.4
ESR4SS	ESR425	ESR425	ESR425	ESR45	ESR45	ESR45	ESR45
984	*1341*	*1610*	*1967*	*2361*	*2683*	*3005*	*3309*
1.2	2.15	1.8	1.4	2.2	1.95	1.7	1.5
ESR4SS	ESR425	ESR425	ESR425	ESR45	ESR45	ESR45	ESR45
889	*1196*	*1454*	*1778*	*2133*	*2395*	*2715*	*2990*
1.3	2.3	1.75	1.55	2.4	2.05	1.75	1.7
ESR4SS	ESR425	ESR425	ESR425	ESR45	ESR45	ESR45	ESR45
812	*1092*	*1329*	*1624*	*1949*	*2185*	*2481*	*2731*
1.55	2.3	1.85	1.55	2.35	2.05	1.8	1.7

SELECTION TABLE - GEAR BOXES WITH INPUT SHAFT

RPM		GEARBOX SIZE	ESR50	ESR1	ESR2	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR45
12	116.8:1	Input power KW	*0.04*	*0.326*	*0.699*	*1.475*	*2.263*	*3.278*		*7.392*	*13.234*
		Output torque Nm	31	238	510	1075	1650	2380		5390	9650
14	102.0:1	Input power KW	*0.043*	*0.350*	*0.744*	*1.480*	*2.397*	*3.936*		*8.240*	*15.520*
		Output torque Nm	27	219	465	925	1498	2460		5150	9700
16	89.7:1	Input power KW	*0.048*	*0.457*	*0.914*	*2.048*	*2.651*	*4.151*		*8.921*	*16.347*
		Output torque Nm	26	250	500	1120	1450	2270		4895	8940
18	79.7:1	Input power KW	*0.049*	*0.485*	*0.971*	*2.263*	*2.808*	*4.155*	*5.989*	*10.820*	*19.172*
		Output torque Nm	24	236	472	110	1365	2020	2910	5260	9320
20	71.25:1	Input power KW	*0.051*	*0.487*	*1.028*	*2.286*	*2.983*	*5.143*	*6.994*	*11.428*	*20.171*
		Output torque Nm	23	213	450	1000	1305	2250	3060	5000	8825
22	64.25:1	Input power KW	*0.065*	*0.515*	*1.131*	*2.765*	*3.520*	*5.720*	*7.392*	*13.200*	*22.817*
		Output torque Nm	26	205	450	1100	1400	2275	2940	5250	9075
25	58.0:1	Input power KW	*0.074*	*0.571*	*1.257*	*2.843*	*3.943*	*7.371*	*10.242*	*14.771*	*23.971*
		Output torque Nm	26	200	440	995	1380	2580	3585	5170	8390
27	52.7:1	Input power KW	*0.077*	*0.617*	*1.342*	*2.978*	*4.166*	*7.020*	*10.831*	*15.567*	*24.840*
		Output torque Nm	25	200	435	965	1350	2275	3510	5045	8050
30	47.9:1	Input power KW	*0.085*	*0.668*	*1.354*	*3.497*	*4.834*	*7.371*	*10.840*	*15.583*	*27.977*
		Output torque Nm	25	195	395	1020	1410	2150	3160	4545	8160
33	43.8:1	Input power KW	*0.094*	*0.679*	*1.418*	*3.734*	*5.148*	*7.392*	*13.162*	*19.121*	*31.001*
		Output torque Nm	25	180	376	990	1365	1960	3490	5070	8220
37	40.0:1	Input power KW	*0.094*	*0.740*	*1.501*	*4.144*	*5.708*	*7.780*	*13.954*	*19.155*	*34.463*
		Output torque Nm	22	175	355	980	1350	1840	3300	4530	8150
43	34.1:1	Input power KW	*0.098*	*0.811*	*1.646*	*4.177*	*5.725*	*7.789*	*15.529*	*22.704*	*38.307*
		Output torque Nm	20	165	335	580	1165	1585	3160	4620	7795
47	31.1:1	Input power KW	*0.107*	*0.940*	*1.933*	*4.378*	*6.553*	*9.615*	*15.530*	*22.801*	*41.843*
		Output torque Nm	20	175	360	815	1220	1790	2890	4245	7790
51	28.2:1	Input power KW	*0.113*	*0.986*	*1.984*	*4.903*	*6.762*	*9.862*	*15.535*	*13.105*	*44.941*
		Output torque Nm	20	175	352	870	1200	1750	2665	4100	7975
57	25.15:1	Input power KW	*0.095*	*1.008*	*2.091*	*5.007*	*7.526*	*10.392*	*15.540*	*26.925*	*49.536*
		Output torque Nm	15	160	332	795	1195	1650	2385	4275	7865
65	21.95:1	Input power KW	*0.108*	*1.113*	*2.212*	*5.279*	*7.541*	*11.060*	*19.091*	*29.950*	*52.251*
		Output torque Nm	15	155	308	735	4050	1540	2570	4170	7275
77	19.3:1	Input power KW	*0.153*	*1.149*	*2.340*	*5.573*	*8.295*	*12.720*	*21.648*	*33.352*	*57.771*
		Output torque Nm	18	135	275	655	975	1495	2460	3920	6790
84	17.15:1	Input power KW	*0.167*	*1.225*	*2.431*	*5.847*	*9.281*	*13.458*	*21.650*	*36.941*	*63.673*
		Output torque Nm	18	132	262	630	1000	1450	2250	3980	6860
94	15.35:1	Input power KW	*0.176*	*1.329*	*2.700*	*6.336*	*9.971*	*15.008*	*22.775*	*38.898*	*70.214*
		Output torque Nm	17	128	260	610	960	1445	2120	3745	6760
103	13.82:1	Input power KW	*0.182*	*1.388*	*2.902*	*6.430*	*10.527*	*15.819*	*23.896*	*42.451*	*74.148*
		Output torque Nm	16	122	255	565	925	1390	2030	3730	6515
113	12.48:1	Input power KW	*0.187*	*1.461*	*2.934*	*6.767*	*11.113*	*16.481*	*29.904*	*45.075*	*77.788*
		Output torque Nm	15	117	235	542	890	1320	2395	3610	6230
127	11.35:1	Input power KW	*0.183*	*1.516*	*3.185*	*6.806*	*11.100*	*17.962*	*34.381*	*49.508*	*81.111*
		Output torque Nm	13	108	227	485	790	1280	2450	3528	5780
138	10.32:1	Input power KW	*0.198*	*1.601*	*3.355*	*7.136*	*12.031*	*17.536*		*51.769*	*89.814*
		Output torque Nm	13	105	220	468	789	1150		3395	5890
152	9.43:1	Input power KW	*0.218*	*1.730*	*3.611*	*7.558*	*13.731*	*18.643*	*40.645*	*52.318*	*98.842*
		Output torque Nm	13	103	215	450	758	1110	2420	3115	5885
165	8.61:1	Input power KW	*0.237*	*1.859*	*3.737*	*7.566*	*13.218*	*18.600*	*44.303*	*57.795*	*108.11*
		Output torque Nm	13	102	205	415	725	1020	2430	3170	5930
177	8.12:1	Input power KW	*0.254*	*1.859*	*3.422*	*7.529*	*12.087*	*19.460*		*81.263*	*142.77*
		Output torque Nm	13	95	175	385	618	995		4155	7300
194	7.33:1	Input power KW	*0.257*	*1.951*	*3.644*	*8.210*	*12.754*	*20.364*	*48.125*	*88.639*	*164.63*
		Output torque Nm	12	91	170	383	595	950	2245	4135	7680
215	6.66:1	Input power KW	*0.285*	*2.091*	*3.991*	*9.004*	*13.589*	*21.381*	*51.908*	*96.215*	*165.11*
		Output torque Nm	12	88	168	379	572	900	2185	4050	6950
233	6.06:1	Input power KW	*0.309*	*2.162*	*4.068*	*9.397*	*13.594*	*22.012*	*56.126*	*103.49*	*178.16*
		Output torque Nm	12	84	158	365	528	855	2180	4020	6920
255	5.54:1	Input power KW	*0.310*	*2.282*	*4.226*	*9.749*	*14.314*	*22.118*	*62.834*	*110.73*	*184.84*
		Output torque Nm	11	81	150	346	508	785	2230	3930	6560
282	5.06:1	Input power KW	*0.343*	*2.461*	*4.580*	*10.532*	*14.957*	*23.370*	*49.700*	*118.40*	*198.18*
		Output torque Nm	11	79	147	338	480	750	1595	3800	6360
305	4.68:1	Input power KW	*0.337*	*1.690*	*3.035*	*6.575*	*11.460*	*25.210*	*54.091*	*108.05*	*177.80*
		Output torque Nm	10	50	90	195	340	748	1605	3205	5275
348	4.19:1	Input power KW	*0.346*	*1.730*	*3.038*	*7.500*	*12.305*	*28.685*	*71.138*	*116.89*	*199.95*
		Output torque Nm	9	45	79	195	320	746	1850	3040	5200
377	3.78:1	Input power KW	*0.375*	*1.750*	*3.207*	*7.915*	*12.164*	*27.702*			
		Output torque Nm	9	42	77	190	292	665			
399	3.57:1	Input power KW							*68.733*	*134.91*	*227.05*
		Output torque Nm							1559	3060	5150
421	3.38:1	Input power KW	*0.372*	*1.954*	*3.585*	*8.606*	*12.793*	*27.213*			
		Output torque Nm	8	42	77	185	275	585			
455	3.08:1	Input power KW	*0.352*	*2.061*	*4.022*	*9.050*	*13.574*	*28.657*	*68.627*	*143.29*	*258.67*
		Output torque Nm	7	41	80	180	270	570	1365	2850	5145
506	2.78:1	Input power KW	*0.391*	*2.181*	*4.081*	*9.393*	*14.425*	*28.626*	*66.255*	*154.31*	*278.16*
		Output torque Nm	7	39	73	168	258	512	1185	2760	4975
560	2.55:1	Input power KW	*0.433*	*2.289*	*4.269*	*9.776*	*15.160*	*30.196*	*71.779*	*170.0*	*300.0*
		Output torque Nm	7	37	69	158	245	488	1160	2754	4860
613	2.33:1	Input power KW	*0.474*	*2.438*	*4.605*	*10.500*	*15.240*	*30.142*	*75.00*	*170.0*	*300.0*
		Output torque Nm	7	36	68	155	225	445	1110	2516	4440

Gearbox Dimensions

TYPE	A	B	C	D	E	Shaft key	Shaft hole	F	G
ESR6	82	42	40	38	19j6	6x6	M6x16	60.96	134
ESR6H		52	50	45	24j6	8x7	M8x19		
ESR7	102	55	55	53	28j6	8x7	M10x22	76.2	165
ESR8	127	100	100	76	38k6	10x8	M12x28	101.6	222

	D71	D80	D90	D100	D112	D132
TYPE	H					
ESR6	82.5	100	100	125	125	
ESR7		100	100	125	125	
ESR8				146	146	150

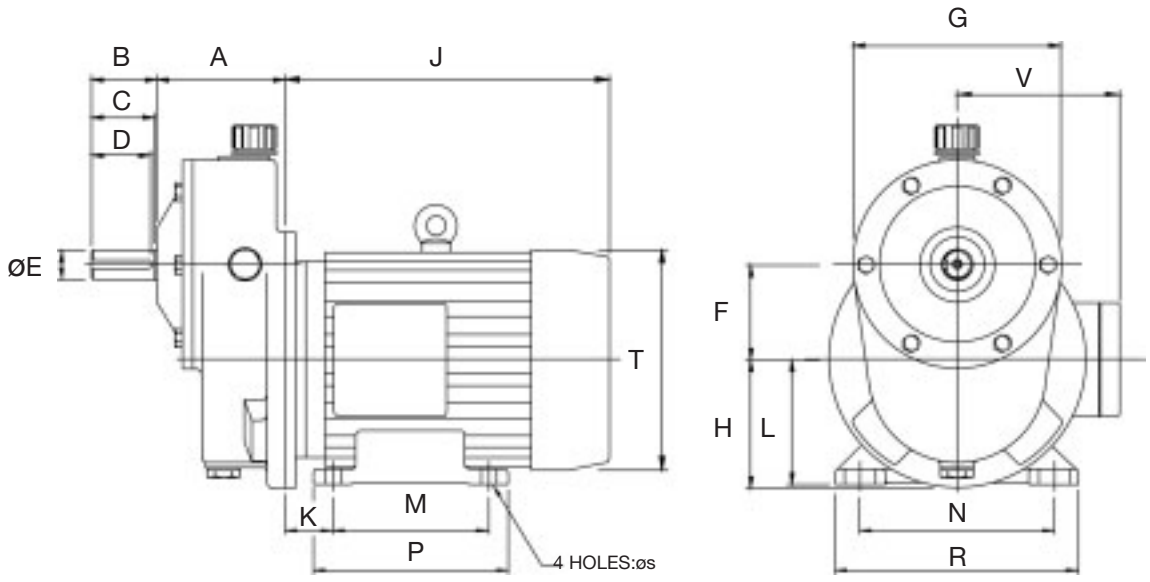
	D71	D80	D90S	D90L	D100	D112	D132S	D132M
TYPE	J							
ESR6	208	267	284	284	322			
ESR7		255	272	272	322	335		
ESR8					319	332	391	391
	K							
ESR6	45	62	68	68	77			
ESR7		50	56	56	77	84		
ESR8					74	81	109	109

Breather shown in standard B3A position. Units are supplied for universal mounting.

Magnetic drain plug can be fitted if required.

Transparent level plug can be fitted if required.

Foot Mounted

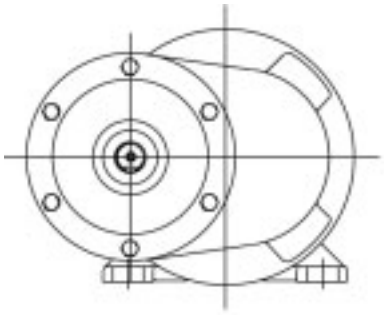


Motor Dimensions

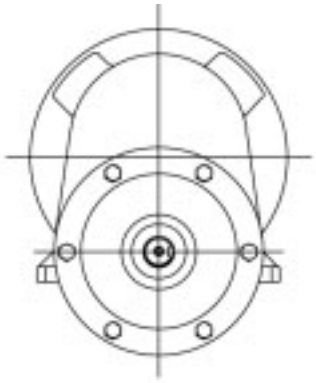
	D71	D80	D90S	D90L	D100	D112	D132S	D132M
L	71	80	90	90	100	112	132	132
M	90	100	100	125	140	140	140	178
N	112	1215	140	140	160	190	216	216
P	110	127	152	152	170	170	208	208
R	131	157	174	174	184	218	242	242
S	7	10	10	10	12	12	12	12
T	140	158	178	178	199	215	255	255
V	105	132	140	140	154	167	188	188

Alternative Mounting Positions

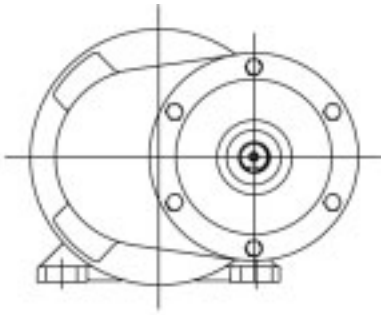
B3C



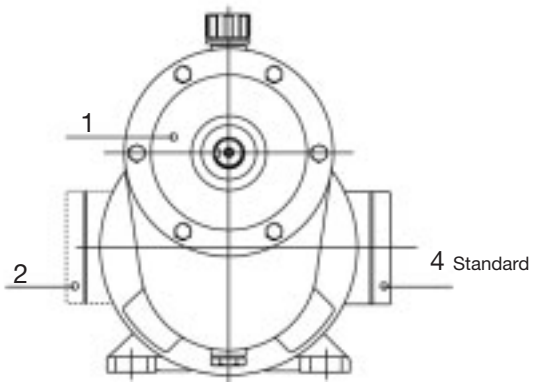
B3B



B3D



Terminal Box Positions



Gearbox Dimensions

TYPE	C	D	E	Shaft Key	G	Shaft Hole	H	J	M	N	O	P	Q	R	S
ESR50	109	38	28	5x5	16k6		9.5	127	92	139	101.6	55.5	38	101.6	10
ESR1	158	71.5	62	8x7	24j6	M8x19	11	197	117.5	184	171.5	83.5	70	127	11
ESR2	189	84	72	8x7	28j6	M10x22	13	238	146	228.5	206	96	80	165	15
ESR3	260	119	102	10x8	38k6	M12X28	17	305	194	305	267	130	110	222	17
ESR35	311	134	115	16x10	55k5	M20X42	19	349	229	368	311	182	134	280	18
ESR4	335	155	134	18x11	65m6	M20X42	21	391	286	445	343	200	140	330	20
ESR4SS	335	155	136	20x11	75m6	M20X42	21	391	286	445	343	200	140	330	20
ESR425	481	198	165	22x14	85m6	M20X42	25	521	356	572	457	255	185	444	24
ESR45	584	221	204	28x16	100m6	M24X50	32	686	419	635	610	260	210	482	27

Lifting Eye as shown, only on ESR3 to ESR4SS. ESR425 and ESR45 have Lifting Lugs cast into gearcase.

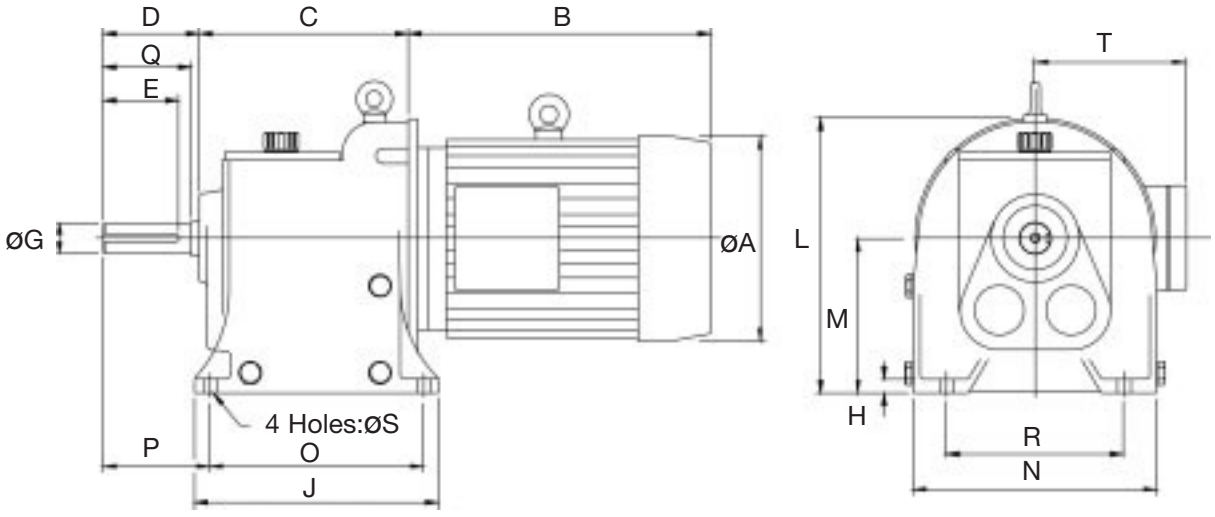
When backstop is fitted the dimensions given are not affected.

Breather shown in standard B3 mounting position. ESR50 to ESR3 are supplied for universal mounting. ESR35 to ESR45 must be ordered for correct mounting position.

Magnet drain plug can be fitted if required.

Transparent level plug can be fitted if required.

Foot Mounting ESR50-45



Motor Dimensions

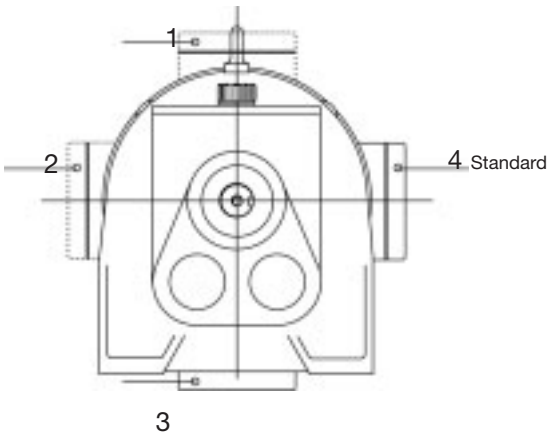
	ESR50			ESR1			ESR2			ESR3			ESR35			ESR4/4SS			ESR425			ESR45		
MOTOR FRAME	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**
D63	126	241	162																					
D71	140	221	172	140	208	200																		
D80				158	267	217	158	255	254															
D90S				178	284	217	178	272	254	178	284	340	178	275	406									
D90L				178	284	217	178	272	254	178	284	340	178	275	406									
D100L							199	322	271	199	308	340	199	318	406	199	315	489						
D112M							215	322	271	215	321	340	215	331	406	215	328	489						
D132S										255	371	344	255	371	406	255	385	489	255	349	610			
D132M										255	371	344	255	371	406	255	385	489	255	349	610			
D160M													314	495	406	314	527	489	314	484	610	314	447	724
D160L													314	495	406	314	527	489	314	484	610	314	447	724
D180M													258	557	406	358	589	489	358	546	610	358	509	724
D180L													358	557	406	358	589	489	358	546	610	358	509	724
D200L																410	732	489	410	695	610	410	652	724
D225S																448	767	511	448	754	610	448	717	724
D225M																448	807	511	448	794	610	448	757	724
D250S																			508	870	631	508	868	724
D250M																			508	915	631	508	913	724
D280S																			563	955	631	563	953	724
D280M																			563	1000	631	563	998	724
D315S																						640	1075	749
D315M																						640	1152	749
D315L																						640	1152	749

MOTOR FRAME	T
D63	106
D71	115
D80	132
D90	140
D100	154
D112	167
D132	188
D160	240
D180	260
D200	280
D225S	325
D225M	345
D250S	345
D250M	375
D280S	375
D280M	530
D315S	530
D315M	560
D315L	560

Motor dimensions given are for standard B5 flange mounted TEFV 3PH induction only.

For dimensions of 1PH, DC, EEx d and other non-standard motors contact sales office.

Terminal Box Positions



Gearbox Dimensions

TYPE	C	D	E	Shaft Key	G	Shaft Hole	H	J	M	N	O	P	Q	R	S	U
ESR61	158	71.5	62	8x7	24j6	M8x19	11	197	117.5	184	171.5	83.5	70	127	11	61
ESR62	189	84	72	8x7	28j6	M10x22	13	238	146	228.5	206	96	80	165	15	61
ESR73	260	119	102	10x8	38k6	M12x28	17	305	194	305	267	130	110	222	17	76
ESR735	311	134	115	16x10	55k5	M20x42	19	349	229	368	311	182	134	280	18	76
ESR74	335	155	134	18x11	65m6	M20x42	21	391	286	445	343	200	140	330	20	76
ESR8SS	335	155	136	20x11	75m6	M20x42	21	391	286	445	343	200	140	330	20	102
ESR8425	481	198	165	22x14	85m6	M20x42	25	521	356	572	457	255	185	444	24	102
ESR845	584	221	204	28x16	100m6	M24x50	32	686	419	635	610	260	210	482	27	102

Lifting Eye as shown, only on ESR3 to ESR4SS. ESR8425 and ESR845 have Lifting Lugs cast into gearcase.

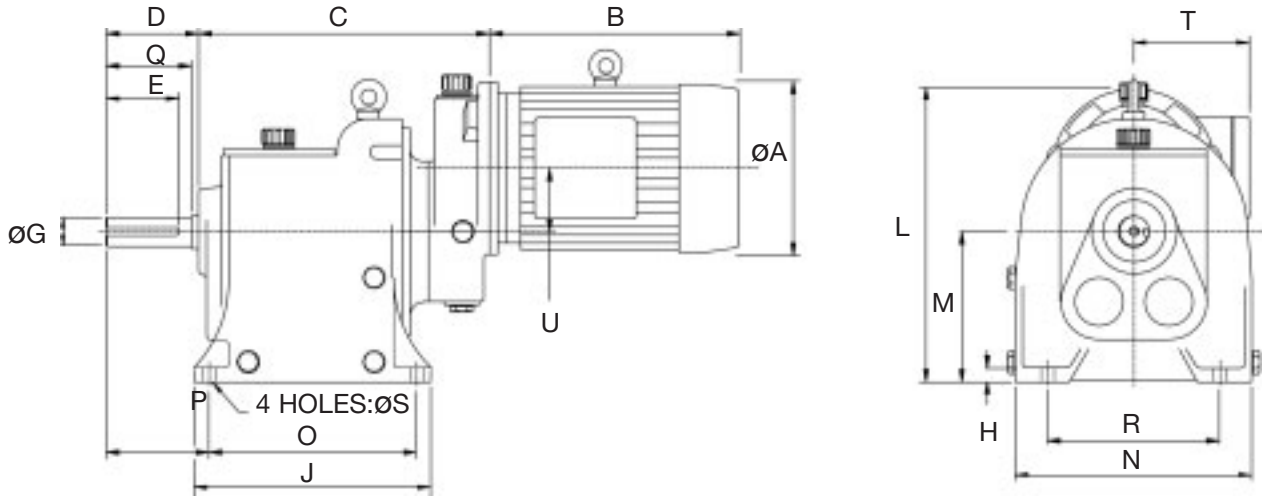
When backstop is fitted the dimensions given are not affected.

Breather shown in standard B3 mounting position. ESR61 to ESR73 are supplied for universal mounting. ESR735 to ESR845 must be ordered for correct mounting position.

Magnet drain plug can be fitted if required.

Transparent level plug can be fitted if required.

Foot Mounting ESR61-845



Motor Dimensions (mm)

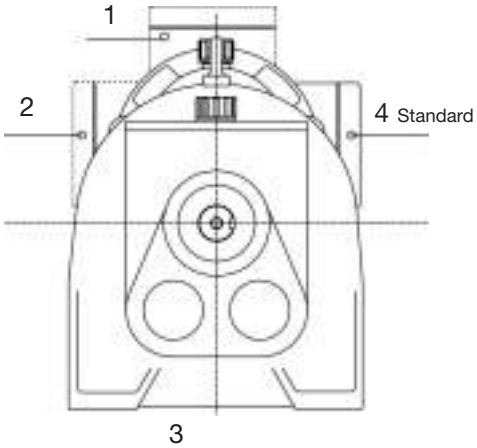
	ESR61			ESR62			ESR73			ESR735			ESR74			ESR84SS			ESR8425			ESR845		
MOTOR FRAME	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**
D71	140	208	261																					
D80	158	267	279	158	255	307	158	255	370	158	255	405												
D90S				178	272	307	178	278	370	178	272	405	178	278	462									
D90L							178	278	370	178	272	405	178	278	462	178	278	534						
D100L										199	322	430	199	319	487	199	319	534	199	319	604			
D112M													215	332	487	215	332	534	215	332	604	215	332	667
D132S																255	391	538	255	391	608	255	391	671
D132M																			255	391	608	255	391	671
D160M																						314	545	696

MOTOR FRAME	T
D71	115
D80	132
D90	140
D100	154
D112	167
D132	188
D160	240

Motor dimensions given are for standard B5 flange mounted TEFV 3PH induction only.

For dimensions of 1PH, DC, EEx d and other non-standard motors contact sales office.

Terminal Box Positions



Gearbox Dimensions

TYPE	C	D	E	Shaft Key	G	Shaft Hole	H	J	M	N	O	P	Q	R	S
ESR501	264	71.5	62	8x7	24j6	M8x19	11	197	117.5	184	171.5	83.5	70	127	11
ESR502	301	84	72	8x7	28j6	M10x22	13	238	146	228.5	206	96	80	165	15
ESR13	424	119	102	10x8	38j6	M12x28	17	305	194	305	267	130	110	222	17
ESR235	518	134	115	16x10	55k5	M20x42	19	349	229	368	311	182	134	280	18
ESR24	530	155	134	18x11	65m6	M20x42	21	391	286	445	343	200	140	330	20
ESR24SS	530	155	136	20x11	75m6	M20x42	21	391	286	445	343	200	140	330	20
ESR3425	731	198	165	22x14	85m6	M20x42	25	521	356	572	457	255	185	444	24
ESR3545	861	221	204	28x16	100m6	M24x50	32	686	419	635	610	260	210	482	27

Lifting Eye as shown, only on ESR13 to ESR24SS. ESR3425 and ESR3545 have Lifting Lugs cast into gearcase.

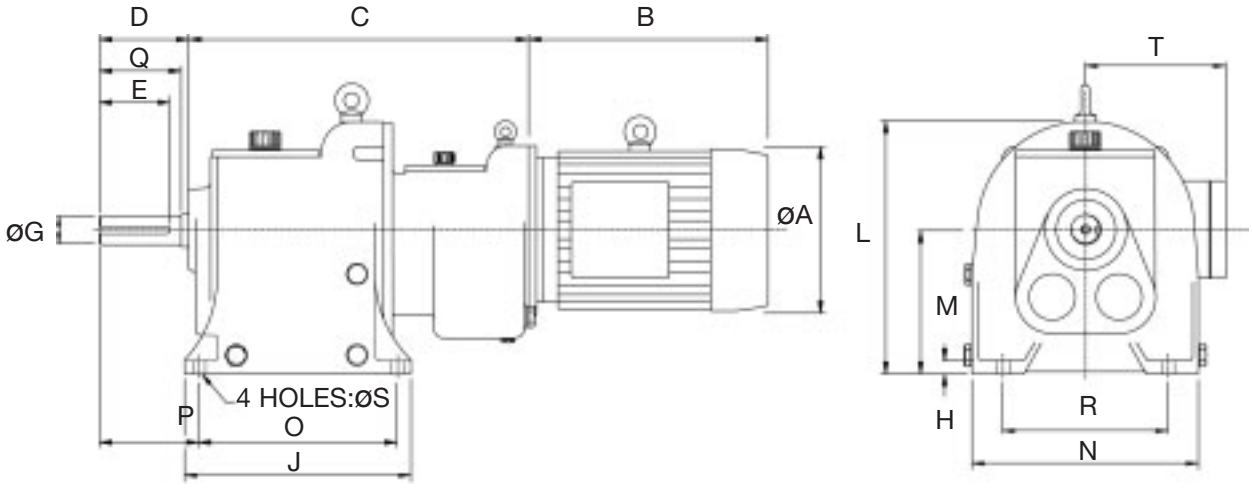
When backstop is fitted the dimensions given are not affected.

Breather shown in standard B3 mounting position. ESR501 to ESR13 are supplied for universal mounting. ESR235 to ESR3545 must be ordered for correct mounting position.

Magnet drain plug can be fitted if required.

Transparent level plug can be fitted if required.

Foot Mounting ESR501-3545



Motor Dimensions

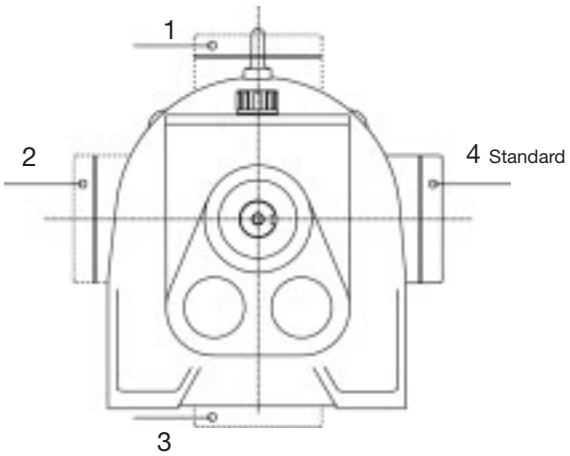
	ESR501			ESR502			ESR13			ESR235			ESR24			ESR24SS			ESR3425			ESR3545		
MOTOR FRAME	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**	**A**	**B**	**L**
D71	126	241	200	126	241	254																		
D80	140	221	200	140	221	254	140	208	340															
D90S							158	267	340	158	255	406	158	255	489									
D90L							178	284	340	178	272	406	178	272	489	178	272	489	178	284	610	178	275	724
D100L							178	284	340	178	272	406	178	272	489	178	272	489	178	284	610	178	275	724
D112M										199	322	406	199	322	489	199	322	489	199	308	610	199	318	724
D132S													215	322	489	215	322	489	215	332	610	215	331	724
D132M																			255	371	610	255	371	724
D160M																			255	371	610	255	371	724

MOTOR FRAME	T
D63	106
D71	115
D80	132
D90	140
D100	154
D112	167
D132	188

Motor dimensions given are for standard B5 flange mounted TEFV 3PH induction only.

For dimensions of 1PH, DC, EEx d and other non-standard motors contact sales office.

Terminal Box Positions



Gearbox Dimensions

TYPE	A	B	C	D	E	Shaft key	Shaft hole	F
ESRV6	82	40	38	8	19j6	6x6	M6x16	60.96
ESRV6H		50	45		24j6	8x7	M8x19	
ESRV7	102	50	53	9	28j6	8x7	M10x22	76.2
ESRV8	127	100	76	13	38k6	10x8	M12x28	101.6

TYPE	FLANGE	G	H	J	K	L	M
ESRV6	A160	160	110h6	3	82.5	10	130
	A200	200	130h6	3		12	165
ESRV7	A200	200	130h6	3.5	100	12	165
ESRV8	A250	250	180h6	5	125	14	215

	D71	D80	D90S	D90L	D100	D112	D132S	D132M
TYPE	**N**							
ESRV6	208	267	284	284	322			
ESRV7		255	272	272	322	335		
ESRV8					319	332	391	391

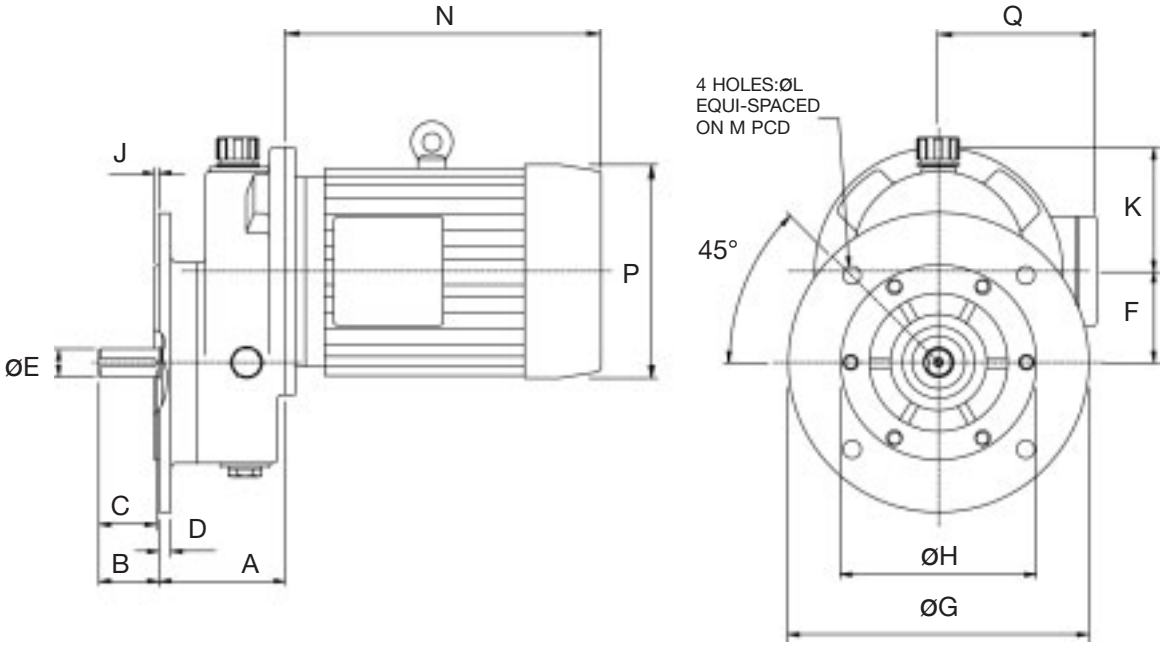
Breather shown in standard B5B position. Units are supplied for universal mounting.

Magnetic drain plug can be fitted if required.

Transparent level plug can be fitted if required.

FLANGE SIZE AND SHAFT DIAMETER MUST BE QUOTED WHEN ORDERING ESRV6.

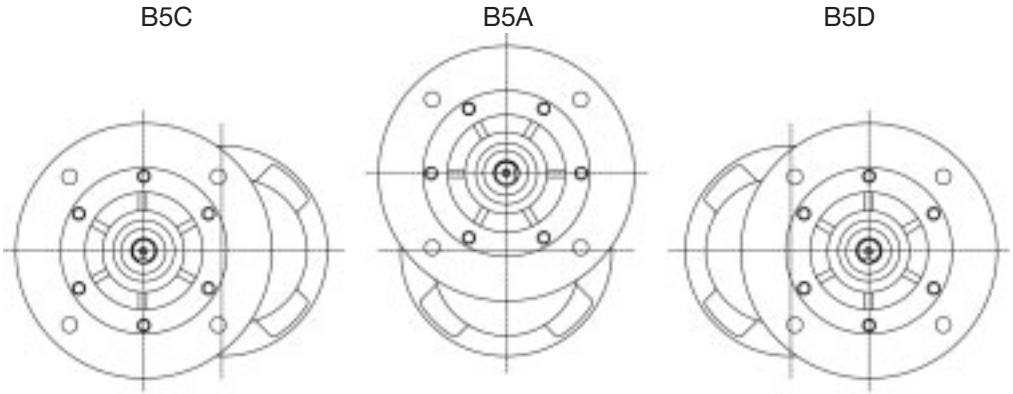
Flange Mounted

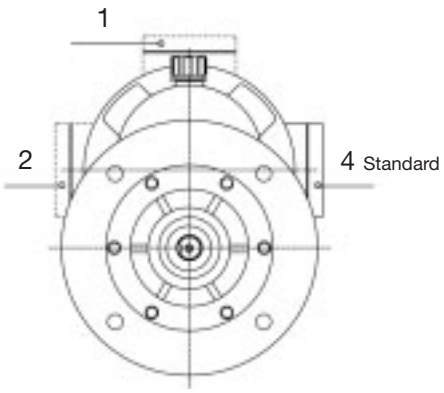


Motor Dimensions

	D71	D80	D90S	D90L	D100	D112	D132S	D132M
P	140	158	178	178	199	215	255	255
Q	105	132	140	140	154	167	188	188

Alternative Mounting Positions





Gearbox Dimensions

TYPE	C	D	E	Shaft Key	G	Shaft Hole	H	J	K	M	N	O	P	Q	R	S
ESRV50	106	50.2	28	5x5	16k6		120.6h8	55	8	8	50.8	165	90	8.7		139.7
ESRV1	155	74	62	8x7	24j6	M8x19	180h8	53	16	16	70	250	116	13	132	215
ESRV2	189	84	72	8x7	28j6	M10x22	230h8	65	20	20	80	300	143	15	140	265
ESRV3	255	124	102	10x8	38k6	M12X28	300h8	87	25	25	110	400	191	19		350
ESRV35	305	140	115	16x10	55k5	M20X42	350h8	105	20	20	140	450	224	19		400
ESRV4	335	155	134	18x11	65m6	M20X42	450h8	135	35	35	140	550	282	19	250	500
ESRV4SS	335	155	136	20x11	75m6	M20X42	450h8	135	35	35	140	550	282	19	250	500
ESRV425	480	200	165	22x14	85m6	M20X42	550h8	190	44	44	185	660	347	24		600
ESRV45	578	227	204	28x16	100m6	M24X50	680h8	196	44	44	210	800	414	24		740

Lifting Eye as shown, only on ESRV3 to ESRV4SS. ESRV425 and ESRV45 have Lifting Lugs cast into gearcase.

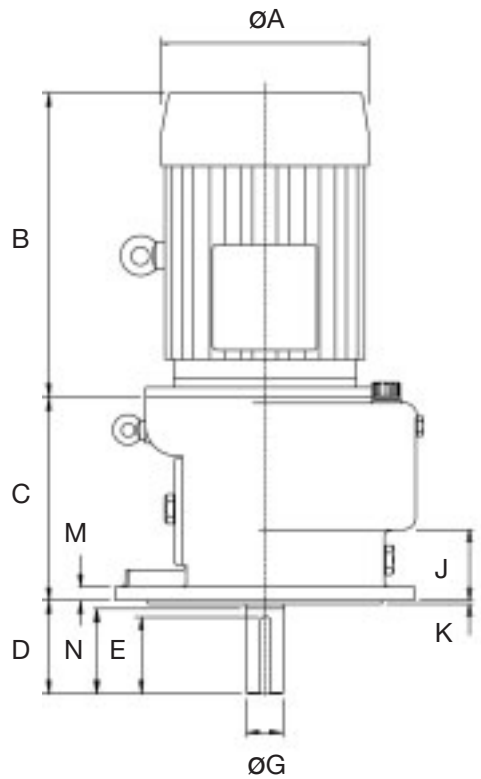
When backstop is fitted the dimensions given are not affected

Breather shown in standard V1 mounting position. ESRV50 to ESRV3 are supplied for universal mounting. ESRV35 to ESRV45 must be ordered for correct mounting position.

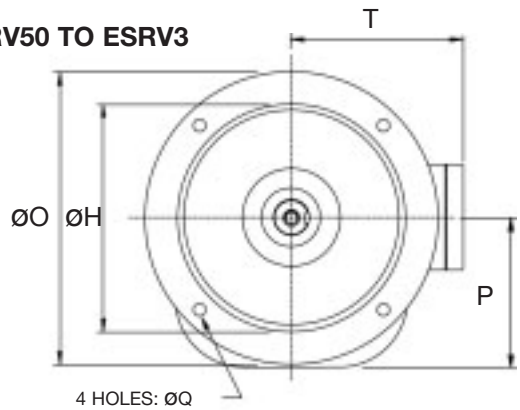
Magnet drain plug can be fitted if required.

Transparent level plug can be fitted if required.

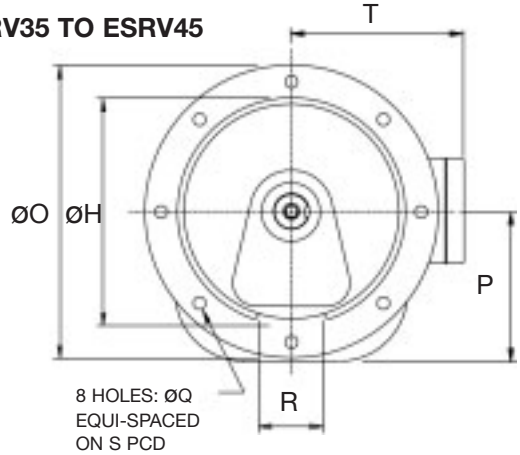
Flange Mounting ESRV50-45



ESRV50 TO ESRV3



ESRV35 TO ESRV45



Motor Dimensions (mm)

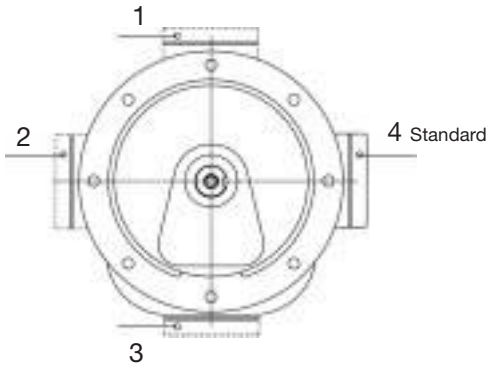
	ESRV50		ESRV1		ESRV2		ESRV3		ESRV35		ESRV4/4SS		ESRV425		ESRV45	
MOTOR FRAME	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
D63	126	241														
D71	140	221	140	208												
D80			158	267	158	255										
D90S			178	284	178	272	178	284	178	275						
D90L			178	284	178	272	178	284	178	275						
D100L					199	322	199	308	199	318	199	315				
D112M					215	322	215	321	215	331	215	328				
D132S							255	371	255	371	255	385	255	349		
D132M							255	371	255	371	255	385	255	349		
D160M									314	495	314	527	314	484	314	447
D160L									314	495	314	527	314	484	314	447
D180M									358	557	358	589	358	546	358	509
D180L									358	557	358	589	358	546	358	509
D200L											410	732	410	695	410	652
D225S											448	767	448	754	448	717
D225M											448	807	448	794	448	757
D250S													508	870	508	868
D250M													508	915	508	913
D280S													563	955	563	953
D280M													563	1000	563	998
D315S															640	1075
D315M															640	1152
D315L															640	1152

MOTOR FRAME	T
D63	106
D71	115
D80	132
D90	140
D100	154
D112	167
D132	188
D160	240
D180	260
D200	280
D225S	325
D225M	345
D250S	345
D250M	375
D280S	375
D280M	530
D315S	530
D315M	560
D315L	560

Motor dimensions given are for standard B5 flange mounted TEFV 3PH induction only.

For dimensions of 1PH, DC, EEx d and other non-standard motors contact sales office.

Terminal Box Positions



Gearbox Dimensions (mm)

TYPE	C	D	E	Shaft Key	G	Shaft Hole	H	J	K	M	N	O	P	Q	R	S	U
ESRV61	238	74	62	8x7	24j6	M8x19	180h8	53	4	16	70	250	116	13	132	215	61
ESRV62	273	84	72	8x7	28j6	M10x22	230h8	65	4	20	80	300	143	15	140	265	61
ESRV73	353	124	102	10x8	38k6	M12x28	300h8	87	5	25	110	400	191	19		350	76
ESRV735	421	140	115	16x10	55k5	M20x42	350h8	105	5	20	140	450	224	19		400	76
ESRV74	451	155	134	18x11	65m6	M20x42	450h8	135	5	35	140	550	282	19	250	500	76
ESRV84SS	486	155	136	20x11	75m6	M20x42	450h8	135	5	35	140	550	282	19	250	500	102
ESRV8425	610	200	165	22x14	85m6	M20x42	550h8	190	6	44	185	660	347	24		600	102
ESRV845	674	227	204	28x16	100m6	M24x50	680h8	196	6	44	210	800	414	24		740	102

Lifting Eye as shown, only on ESRV73 to ESRV8SS. ESRV8425 and ESRV845 have Lifting Lugs cast into gearcase.

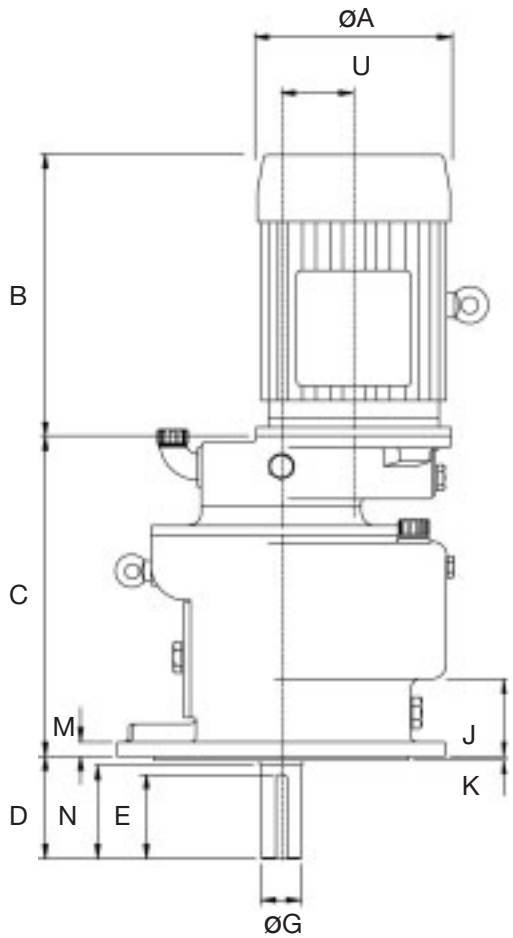
When backstop is fitted the dimensions given are not affected.

Breather shown in standard V1 mounting position. ESRV61 to ESRV73 are supplied for universal mounting. ESRV735 to ESRV845 must be ordered for correct mounting position.

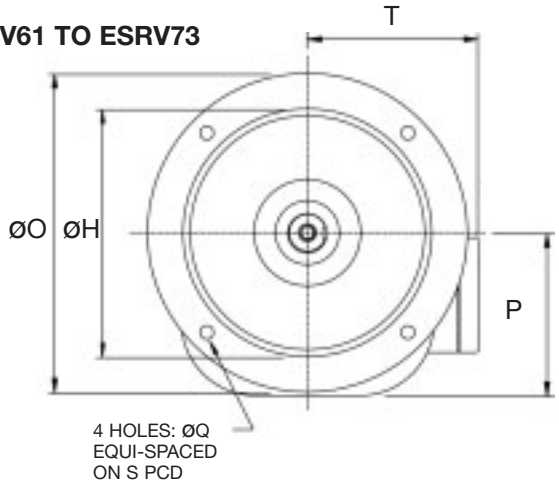
Magnet drain plug can be fitted if required.

Transparent level plug can be fitted if required.

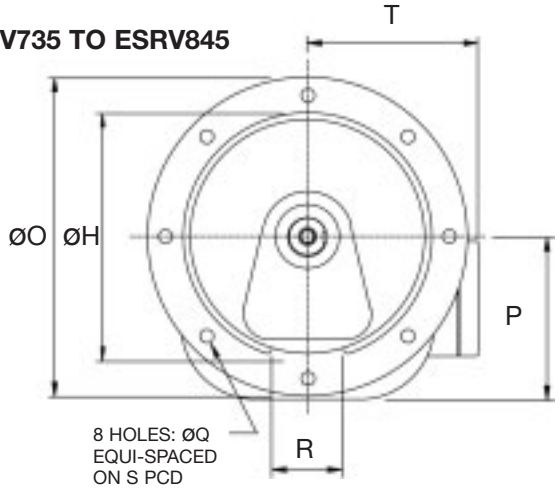
Flange Mounting ESRV50-45



ESRV61 TO ESRV73



ESRV735 TO ESRV845



Motor Dimensions (mm)

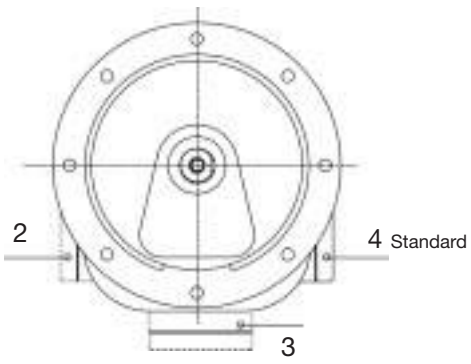
	ESR61		ESR62		ESR73		ESR735		ESR74		ESR84SS		ESR8425		ESR845	
MOTOR FRAME	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
D71	140	208														
D80	158	267	158	255	158	255	158	255								
D90S			178	272	178	278	178	272	178	278						
D90L					178	278	178	272	178	278	178	278				
D100L							199	322	199	319	199	319	199	319		
D112M									215	332	215	332	215	332	215	332
D132S											255	391	255	391	255	391
D132M													255	391	255	391
D160M															314	545

MOTOR FRAME	T
D71	115
D80	132
D90	140
D100	154
D112	167
D132	188
D160	240

Motor dimensions given are for standard B5 flange mounted TEFV 3PH induction only.

For dimensions of 1PH, DC, EEx d and other non-standard motors contact sales office.

Terminal Box Positions



Gearbox Dimensions (mm)

TYPE	C	D	E	Shaft Key	G	Shaft Hole	H	J	K	M	N	O	P	Q	R	S
ESRV501	261	74	62	8x7	24j6	M8x19	180h8	53	4	16	70	250	116	13	132	**215**
ESRV502	305	84	72	8x7	28j6	M10x22	230h8	65	4	20	80	300	143	15	140	**265**
ESRV13	419	124	102	10x8	38j6	M12x28	300h8	87	5	25	110	400	191	19		**350**
ESRV235	512	140	115	16x10	55k5	M20x42	350h8	105	5	20	140	450	224	19		**400**
ESRV24	530	155	134	18x11	65m6	M20x42	450h8	135	5	35	140	550	282	19	250	**500**
ESRV24SS	530	155	136	20x11	75m6	M20x42	450h8	135	5	35	140	550	282	19	250	**500**
ESRV3425	730	200	165	22x14	85m6	M20x42	550h8	190	6	44	185	660	347	24		**600**
ESRV3545	865	227	204	28x16	100m6	M24x50	680h8	196	6	44	210	800	414	24		**740**

Lifting Eye as shown, only on ESRV13 to ESRV24SS. ESRV3425 and ESRV3545 have Lifting Lugs cast into gearcase.

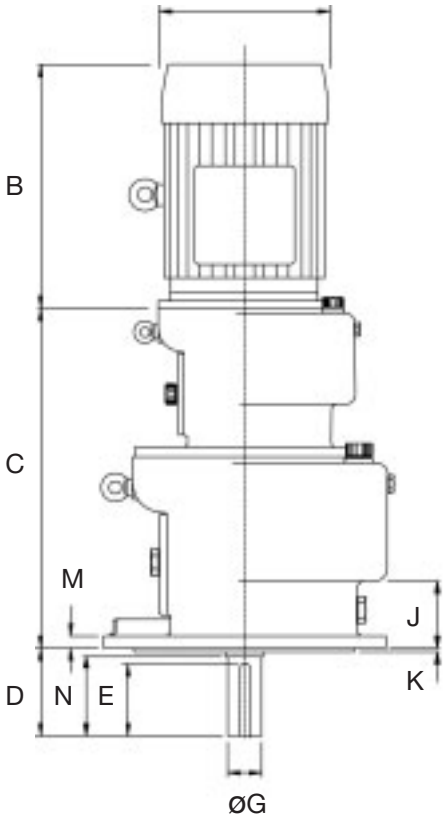
When backstop is fitted the dimensions given are not affected.

Breather shown in standard V1 mounting position. ESRV501 to ESRV13 are supplied for universal mounting. ESRV235 to ESRV3545 must be ordered for correct mounting position.

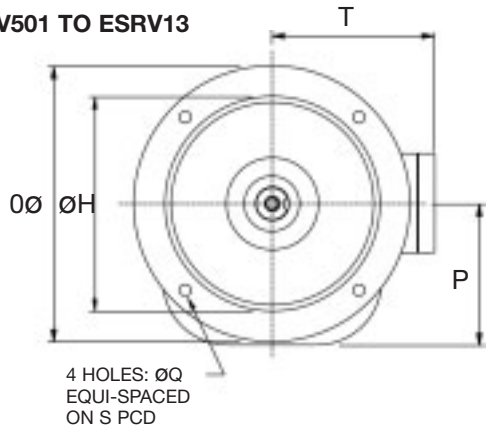
Magnet drain plug can be fitted if required.

Transparent level plug can be fitted if required.

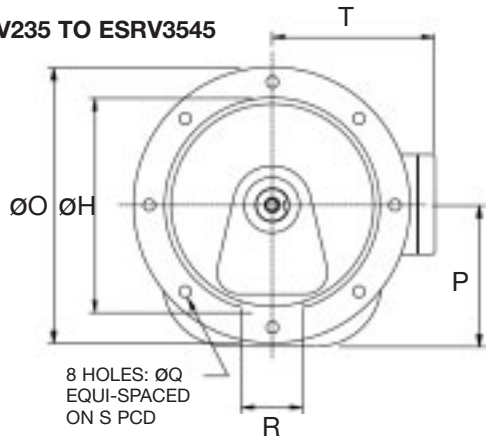
Flange Mounting ESRV501-3545



ESRV501 TO ESRV13



ESRV235 TO ESRV3545



Motor Dimensions (mm)

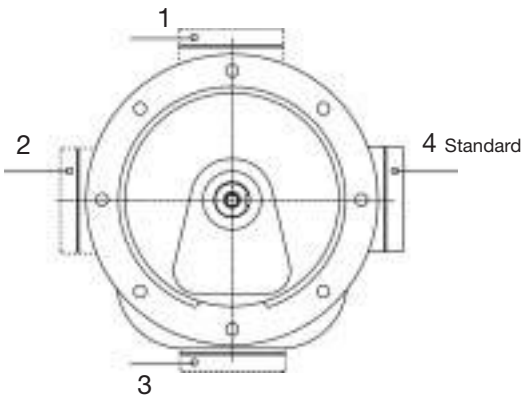
	ESR501 ESR502		ESR13		ESR235 ESR24 ESR24SS		ESR3425		ESR3545	
MOTOR FRAME	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**	**A**	**B**
D63	126	241								
D71	140	221	140	208						
D80			158	267	158	255				
D90S			178	284	178	272	178	284	178	275
D90L			178	284	178	272	178	284	178	275
D100L					199	322	199	308	199	318
D112M					215	322	215	321	215	331
D132S							255	371	255	371
D132M							255	371	255	371

MOTOR FRAME	T
D71	115
D80	132
D90	140
D100	154
D112	167
D132	188

Motor dimensions given are for standard B5 flange mounted TEFV 3PH induction only.

For dimensions of 1PH, DC, EEx d and other non-standard motors contact sales office.

Terminal Box Positions



Weights and Shipping Specifications kg *lb*

Gearmotor size	Motor frame size	kW	Nett Weight of Unit		Shipping Specification						Approximate Data	
					Case dimensions mm *ins*						Gross Weight	
			Foot	Flange							Foot	Flange
		0.045 to 0.18	9.5	10.5	430	x	265	x	265		15.88	16.78
ESR 50	D63		*21*	*23*	*16.93*	*x*	*10.43*	*x*	*10.43*		*35*	*37*
		0.25, 0.37	11	12	530	x	265	x	265		17.5	18.4
ESR 50	D71		*24*	*26*	*20.87*	*x*	*10.43*	*x*	*10.43*		*38.5*	*40.5*
		0.25, 0.37	22	22	640	x	450	x	450		37.65	37.65
ESR 1	D71		*48*	*48*	*25.20*	*x*	*17.72*	*x*	*17.72*		*83*	*83*
		0.55, 0.75	31	31	700	x	450	x	450		47.63	47.63
ESR 1	D80		*68*	*68*	*27.56*	*x*	*17.72*	*x*	*17.72*		*105*	*105*
		1.1	32	32	710	x	450	x	450		49.44	49.44
ESR 1	D90S		*71*	*71*	*27.96*	*x*	*17.72*	*x*	*17.72*		*109*	*109*
		1.5	35	35	740	x	450	x	450		52.16	52.16
ESR 1	D90L		*76*	*76*	*29.14*	*x*	*17.72*	*x*	*17.72*		*115*	*115*
		0.55, 0.75	43	44	740	x	500	x	500		63.05	64.41
ESR 2	D80		*94*	*97*	*29.14*	*x*	*19.69*	*x*	*19.69*		*139*	*142*
		1.1	43	45	740	x	500	x	500		63.05	64.41
ESR 2	D90S		*94*	*99*	*29.14*	*x*	*19.69*	*x*	*19.69*		*139*	*144*
		1.5	46	48	770	x	500	x	500		67.13	68.95
ESR 2	D90L		*101*	*105*	*30.32*	*x*	*19.69*	*x*	*19.69*		*148*	*152*
		2.2, 3	59	60	790	x	500	x	500		8029	81.65
ESR 2	D100L		*130*	*133*	*31.11*	*x*	*19.69*	*x*	*19.69*		*177*	*180*
		4	76	78	810	x	500	x	500		97.5	99.8
ESR 2	D112M		*167*	*172*	*31.89*	*x*	*19.69*	*x*	*19.69*		*215*	*220*
		0.55, 0.75	79	87	810	x	600	x	600		105.7	113.8
ESR 3	D80		*174*	*192*	*31.89*	*x*	*23.62*	*x*	*23.62*		*235*	*253*
		1.1	79	87	830	x	600	x	600		106.6	114.8
ESR 3	D90S		*174*	*192*	*32.68*	*x*	*23.62*	*x*	*23.62*		*242*	*259*
		1.5	82	90	850	x	600	x	600		109.8	117.5
ESR 3	D90L		*181*	*198*	*33.47*	*x*	*23.62*	*x*	*23.62*		*242*	*259*
		2.2, 3	95	103	900	x	600	x	600		123.8	131.5
ESR 3	D100L		*209*	*226*	*35.43*	*x*	*23.62*	*x*	*23.62*		*273*	*290*
		4	112	120	920	x	600	x	600		141.5	149.2
ESR 3	D112M		*247*	*264*	*36.22*	*x*	*23.62*	*x*	*23.62*		*312*	*329*
		5.5	128	135	970	x	600	x	600		158.3	166.0
ESR 3	D132S		*281*	*298*	*38.19*	*x*	*23.62*	*x*	*23.62*		*349*	*366*
		7.5	137	144	1000	x	600	x	600		168.3	176.0
ESR 3	D132M		*301*	*318*	*39.38*	*x*	*23.62*	*x*	*23.62*		*371*	*388*

Weights and Shipping Specifications kg *lb*

Gearmotor size	Motor frame size	kW	Nett Weight of Unit		Shipping Specification					Approximate Data	
					Case dimensions mm *ins*					Gross Weight	
			Foot	Flange						Foot	Flange
		2.2, 3	124	137	940	x	600	x	600	152.4	165.6
ESR 35	D100L		*272*	*301*	*37.01*	*x*	*23.62*	*x*	*23.62*	*336*	*365*
		4	141	154	960	x	600	x	600	171.0	184.2
ESR 35	D112M		*310*	*339*	*37.80*	*x*	*23.62*	*x*	*23.62*	*377*	*406*
		5.5, 7.5	165	178	1070	x	600	x	600	198.2	210.5
ESR 35	D132M		*364*	*393*	*42.13*	*x*	*23.62*	*x*	*23.62*	*437*	*464*
		11	220	233	1180	x	600	x	600	255.4	268.5
ESR 35	D160M		*484*	*513*	*46.46*	*x*	*23.62*	*x*	*23.62*	*563*	*592*
		15	240	253	1220	x	600	x	600	276.2	289.4
ESR 35	D160L		*528*	*557*	*48.04*	*x*	*23.62*	*x*	*23.62*	*609*	*638*
		2.2, 3	160	169	980	x	700	x	700	197.8	210.9
ESR 4	D100L		*353*	*372*	*38.59*	*x*	*27.56*	*x*	*27.56*	*436*	*465*
		4	178	186	1000	x	700	x	700	215.6	224.5
ESR 4	D112M		*390*	*410*	*39.38*	*x*	*27.56*	*x*	*27.56*	*475*	*495*
		5.5, 7.5	202	210	1120	x	700	x	700	243.6	252.2
ESR 4	D132M		*445*	*464*	*44.10*	*x*	*27.56*	*x*	*27.56*	*537*	*556*
		11	257	265	1210	x	700	x	700	301.2	309.4
ESR 4	D160M		*566*	*584*	*47.64*	*x*	*27.56*	*x*	*27.56*	*664*	*682*
		15	277	285	1260	x	700	x	700	323.0	331.6
ESR 4	D160L		*611*	*630*	*49.62*	*x*	*27.56*	*x*	*27.56*	*712*	*731*
		18.5	320	328	1280	x	700	x	700	366.5	374.7
ESR 4	D180M		*706*	*724*	*50.40*	*x*	*27.56*	*x*	*27.56*	*808*	*826*
		22	340	348	1310	x	700	x	700	387.4	395.5
ESR 4	D180L		*750*	*768*	*51.58*	*x*	*27.56*	*x*	*27.56*	*854*	*872*
		30	402	410	1360	x	700	x	700	449.0	457.7
ESR 4	D200L		*883*	*902*	*53.55*	*x*	*27.56*	*x*	*27.56*	*990*	*1009*
		202, 3	169	178	980	x	700	x	700	206.4	215.5
ESR 4SS	D100L		*372*	*392*	*38.59*	*x*	*27.56*	*x*	*27.56*	*455*	*475*
		4	186	195	1000	x	700	x	700	224.5	233.6
ESR 4SS	D112M		*410*	*430*	*39.38*	*x*	*27.56*	*x*	*27.56*	*495*	*515*
		5.5, 7.5	210	219	1120	x	700	x	700	252.2	261.3
ESR 4SS	D132M		*464*	*484*	*44.10*	*x*	*27.56*	*x*	*27.56*	*556*	*576*
		11	265	274	1210	x	700	x	700	308.9	318.0
ESR 4SS	D160M		*584*	*604*	*47.04*	*x*	*27.56*	*x*	*27.56*	*681*	*701*
		15	285	295	1260	x	700	x	700	331.6	340.6
ESR 4SS	D160L		*630*	*650*	*49.62*	*x*	*27.56*	*x*	*27.56*	*731*	*751*
		18.5	328	337	1280	x	700	x	700	374.7	383.7
ESR 4SS	D180M		*724*	*744*	*50.40*	*x*	*27.56*	*x*	*27.56*	*826*	*846*
		22	348	357	1310	x	700	x	700	395.5	404.2
ESR 4SS	D180L		*768*	*787*	*51.58*	*x*	*27.56*	*x*	*27.56*	*872*	*891*
		30	405	414	1360	x	700	x	700	454.0	463.1
ESR 4SS	D200L		*894*	*914*	*53.55*	*x*	*27.56*	*x*	*27.56*	*1001*	*1021*
		37	568	577	1410	x	700	x	700	616.9	625.9
ESR 4SS	D225S		*1352*	*1272*	*55.51*	*x*	*27.56*	*x*	*27.56*	*1360*	*1380*
		45	606	615	1430	x	700	x	700	656.3	665.4
ESR 4SS	D225M		*1336*	*1356*	*56.30*	*x*	*27.56*	*x*	*27.56*	*1447*	*1467*
		5.5, 7.5	412	471	1270	x	860	x	860	471.3	530.2
ESR 425	D132M		*909*	*1039*	*50.00*	*x*	*33.86*	*x*	*33.86*	*1039*	*1169*
		11	467	526	1380	x	860	x	860	528.9	587.8
ESR 425	D160M		*1029*	*1159*	*53.55*	*x*	*33.86*	*x*	*33.86*	*1166*	*1296*
		15	487	546	1400	x	860	x	860	550.2	609.2
ESR 425	D160L		*1073*	*1203*	*55.12*	*x*	*33.86*	*x*	*33.86*	*1213*	*1343*
		18.5	530	589	1420	x	860	x	860	564.2	607.8
ESR 425	D180M		*1169*	*1299*	*55.90*	*x*	*33.86*	*x*	*33.86*	*1310*	*1340*
		22	550	609	1450	x	860	x	860	615.5	629.1
ESR 425	D180L		*1213*	*1343*	*57.07*	*x*	*33.86*	*x*	*33.86*	*1357*	*1387*
		30	607	666	1520	x	860	x	860	674.5	688.1
ESR 425	D200L		*1339*	*1469*	*59.84*	*x*	*33.86*	*x*	*33.86*	*1487*	*1517*
		37	770	829	1590	x	860	x	860	838.7	897.6
ESR 425	D225S		*1697*	*1827*	*62.61*	*x*	*33.86*	*x*	*33.86*	*1849*	*19.79*
		45	808	867	1610	x	860	x	860	878.6	937.6
ESR 425	D225M		*1781*	*1911*	*63.39*	*x*	*33.86*	*x*	*33.86*	*1937*	*2067*
		55	884	943	1670	x	860	x	860	956.6	1016
ESR 425	D250S		*1949*	*2079*	*65.75*	*x*	*33.86*	*x*	*33.86*	*2109*	*2239*
		75	940	998	1700	x	860	x	860	1014	1072
ESR 425	D250M		*2072*	*2200*	*6.92*	*x*	*33.86*	*x*	*33.86*	*2236*	*2364*
		90	1165	1225	1770	x	960	x	860	1246	1309
ESR 425	D280S		*2560*	*2698*	*69.69*	*x*	*37.80*	*x*	*33.86*	*2748*	*2886*
		5.5, 7.5	606	618	1360	x	950	x	950	676.7	688.5
ESR 45	D132M		*1337*	*1363*	*53.55*	*x*	*37.41*	*x*	*37.41*	*1492*	*1518*
		11	661	673	1450	x	950	x	950	734.4	746.2
ESR 45	D160M		*1457*	*1483*	*57.07*	*x*	*37.41*	*x*	*37.41*	*1619*	*1645*
		15	681	693	1490	x	950	x	950	756.1	767.9
ESR 45	D160L		*1501*	*1527*	*58.66*	*x*	*37.41*	*x*	*37.41*	*1667*	*1693*
		18.5	724	736	1510	x	950	x	950	800.1	812.4
ESR 45	D180M		*15.96*	*1623*	*59.46*	*x*	*37.41*	*x*	*37.41*	*1764*	*1791*
		22	744	756	1550	x	950	x	950	816.9	833.7
ESR 45	D180L		*1630*	*1667*	*61.02*	*x*	*37.41*	*x*	*37.41*	*18.1*	*1838*
		30	801	813	1600	x	950	x	950	880.9	892.7
ESR 45	D200L		*1766*	*1792*	*62.99*	*x*	*37.41*	*x*	*37.41*	*1942*	*1968*
		37	964	976	1680	x	950	x	950	1046	1058
ESR 45	D225S		*2125*	*2151*	*66.15*	*x*	*37.41*	*x*	*37.41*	*2307*	*2333*
		45	1002	1014	1700	x	950	x	950	1085	1097
ESR 45	D225M		*2209*	*2235*	*66.92*	*x*	*37.41*	*x*	*37.41*	*2393*	*2419*
		55	1078	1090	1780	x	950	x	950	1165	1177
ESR 45	D250S		*2377*	*2403*	*70.08*	*x*	*37.41*	*x*	*37.41*	*2568*	*2594*
		75	1134	1145	1810	x	950	x	950	1221	1232
ESR 45	D250M		*2500*	*2524*	*71.27*	*x*	*37.41*	*x*	*37.41*	*2693*	*2717*
		90	1345	1357	1900	x	1050	x	950	1446	1458
ESR 45	D280S		*2965*	*2992*	*74.82*	*x*	*41.34*	*x*	*37.41*	*3187*	*3214*
		110	1456	1468	1950	x	1050	x	950	1558	1570
ESR 45	D280M		*3210*	*3236*	*76.78*	*x*	*41.34*	*x*	*37.41*	*3435*	*3461*
		132	1651	1663	200	x	1100	x	950	1761	1773
ESR 45	D315S		*3640*	*3666*	*78.74*	*x*	*43.41*	*x*	*37.41*	*3883*	*3909*
		150, 160	1949	1961	2050	x	1100	x	950	2062	2074
ESR 45	D315L		*4297*	*4323*	*80.72*	*x*	*43.31*	*x*	*37.41*	*4546*	*4572*

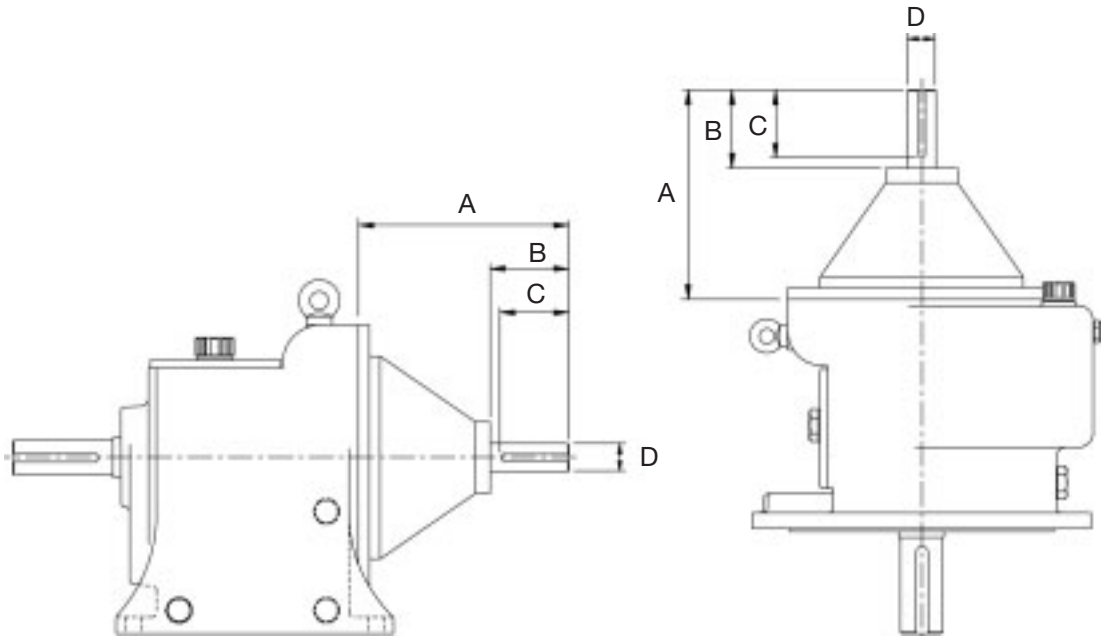
Weights and Shipping Specifications kg *lb*

Gearmotor size	Motor frame size	kW	Nett Weight of Unit		Shipping Specification						Approximate Data	
					Case dimensions mm *ins*						Gross Weight	
			Foot	Flange							Foot	Flange
		0.25, 0.37	33	33	770	x	450	x	450		50.8	50.8
ESR 61	D71		*72*	*72*	*30.32*	*x*	*17.72*	*x*	*17.72*		*112*	*112*
		0.25, 0.37	47	48	800	x	500	x	500		68	69.4
ESR 62	D71		*103*	*106*	*31.50*	*x*	*19.69*	*x*	*19.69*		*150*	*153*
		0.55, 0.75	90	98	930	x	600	x	600		119.7	128.8
ESR 73	D80		*198*	*216*	*36.62*	*x*	*23.62*	*x*	*23.62*		*264*	*284*
		1.1	90	98	930	x	600	x	600		119.7	128.8
ESR 73	D90S		*198*	*216*	*36.62*	*x*	*23.62*	*x*	*23.62*		*264*	*284*
		0.55, 0.75	119	132	1010	x	600	x	600		151.0	164.6
ESR 735	D80		*262*	*292*	*39.77*	*x*	*23.68*	*x*	*23.68*		*333*	*363*
		1.1	119	132	1010	x	600	x	600		151.0	164.6
ESR 735	D90s		*262*	*292*	*39.77*	*x*	*23.68*	*x*	*23.68*		*333*	*363*
		1.5	122	137	1010	x	600	x	600		154.2	169.2
ESR 735	D90L		*269*	*302*	*39.77*	*x*	*23.68*	*x*	*23.68*		*340*	*373*
		2.2, 3	135	148	1060	x	600	x	600		168.3	181.0
ESR 735	D100L		*298*	*326*	*41.74*	*x*	*23.68*	*x*	*23.68*		*371*	*399*
		1.1	156	164	1070	x	700	x	700		196.0	204.1
ESR 74	D90S		*344*	*362*	*42.13*	*x*	*27.56*	*x*	*27.56*		*432*	*450*
		1.5	159	167	1070	x	700	x	700		199.1	206.8
ESR 74	D90L		*351*	*68*	*42.13*	*x*	*27.56*	*x*	*27.56*		*439*	*456*
		2.2, 3	172	780	1100	x	700	x	700		213.2	221.4
ESR 74	D100L		*379*	*397*	*43.31*	*x*	*27.56*	*x*	*27.56*		*470*	*488*
		4	189	197	1120	x	700	x	700		230.9	239.0
ESR 74	D112L		*417*	*435*	*44.10*	*x*	*27.56*	*x*	*27.56*		*509*	*527*
		1.5	172	181	1070	x	700	x	700		211.8	220.9
ESR 84SS	D90L		*379*	*399*	*42.13*	*x*	*27.56*	*x*	*27.56*		*467*	*487*
		2.2, 3	185	194	1070	x	700	x	700		226.3	235.4
ESR 84SS	D100L		*408*	*428*	*43.31*	*x*	*27.56*	*x*	*27.56*		*499*	*519*
		4	202	211	1120	x	800	x	700		243.6	253.1
ESR 84SS	D112M		*445*	*466*	*44.10*	*x*	*27.56*	*x*	*27.56*		*537*	*593*
		5.5	217	226	1170	x	700	x	700		259.9	269.0
ESR 84SS	D132S		*478*	*498*	*16.07*	*x*	*27.56*	*x*	*27.56*		*573*	*593*
		7.5	226	235	1200	x	700	x	700		269.9	279.4
ESR 84SS	D132M		*498*	*519*	*47.25*	*x*	*27.56*	*x*	*27.56*		*595*	*616*
		2.2, 3	387	446	1330	x	810	x	810		443.1	503.0
ESR 8425	D100L		*853*	*989*	*52.37*	*x*	*31.89*	*x*	*31.89*		*977*	*1109*
		4	404	463	1330	x	810	x	810		460.4	529.3
ESR 8425	D112M		*891*	*1043*	*52.37*	*x*	*31.89*	*x*	*31.89*		*1015*	*1167*
		5.5	419	478	1380	x	810	x	810		477.2	536.6
ESR 8425	D132S		*924*	*1055*	*54.34*	*x*	*31.89*	*x*	*31.89*		*1052*	*1183*
		7.5	428	487	1400	x	810	x	810		487.2	546.6
ESR 8425	D132M		*944*	*1075*	*55.12*	*x*	*31.89*	*x*	*31.89*		*1074*	*1205*
		2.2, 3	581	593	1420	x	950	x	950		653.6	670.8
ESR 845	D100L		*1281*	*1309*	*55.90*	*x*	*37.41*	*x*	*37.21*		*1441*	*1479*
		4	598	610	1440	x	950	x	950		671.3	684.0
ESR 845	D112M		*1318*	*1346*	*56.70*	*x*	*37.41*	*x*	*37.41*		*1480*	*1508*
		5.5	613	625	1500	x	950	x	950		688.5	701.7
ESR 845	D132S		*1351*	*1380*	*59.06*	*x*	*37.41*	*x*	*37.41*		*1518*	*1547*
		7.5	622	634	1530	x	950	x	950		698.5	711.7
ESR 845	D132M		*1370*	*1400*	*60.24*	*x*	*37.41*	*x*	*37.41*		*1540*	*1569*
		11	677	689	1650	x	950	x	950		758.4	770.6
ESR 845	D160M		*1490*	*1520*	*64.97*	*x*	*37.41*	*x*	*37.41*		*1672*	*1699*
		0.18	25	25	720	x	400	x	400		39.9	39.9
ESR 501	D63		*55*	*55*	*28.35*	*x*	*15.75*	*x*	*15.75*		*88*	*89*
		0.25	26.5	26.5	820	x	400	x	400		41.4	41.4
ESR 501	D71		*60*	*60*	*32.28*	*x*	*25.75*	*x*	*15.75*		*93*	*93*
		0.18	37	38	760	x	450	x	450		54.4	55.8
ESR 502	D63	*0.25*	*81*	*84*	*29.92*	*x*	*17.72*	*x*	*17.72*		*120*	*123*
		0.25, 0.37	38.5	39.5	860	x	480	x	450		55.9	57.3
ESR 502	D71		*86*	*89*	*33.86*	*x*	*17.72*	*x*	*17.72*		*125*	*128*
		0.25, 0.37	84	92	950	x	550	x	550		109.3	117
ESR 13	D71		*185*	*202*	*37.41*	*x*	*21.66*	*x*	*21.66*		*241*	*258*
		0.55, 0.75	135	148	110	x	600	x	600		169.2	181.9
ESR 235	D80		*298*	*352*	*43.31*	*x*	*23.62*	*x*	*23.62*		*373*	*401*
		0.55, 0.75	172	180	1140	x	700	x	700		208.2	216.4
ESR 24	D80		*379*	*397*	*44.88*	*x*	*27.56*	*x*	*27.56*		*459*	*477*
		1.1	173	181	1140	x	700	x	700		209.1	217.3
ESR 24	D90S		*381*	*399*	*44.88*	*x*	*27.56*	*x*	*27.56*		*461*	*479*
		0.55, 0.75	180	189	1140	x	700	x	700		216.4	225.4
ESR 24SS	D80		*397*	*417*	*44.88*	*x*	*27.56*	*x*	*27.56*		*477*	*497*
		1.1	181	190	1140	x	700	x	700		217.3	226.3
ESR 24SS	D90S		*399*	*419*	*44.88*	*x*	*27.56*	*x*	*27.56*		*479*	*499*
		1.5	184	193	1160	x	700	x	700		222.7	231.3
ESR 24SS	D90L		*406*	*425*	*45.67*	*x*	*27.56*	*x*	*27.56*		*491*	*510*
		1.1	425	484	1380	x	810	x	810		483.5	542.5
ESR 3425	D90S		*937*	*1067*	*54.34*	*x*	*31.89*	*x*	*31.89*		*1066*	*1196*
		1.5	428	487	1400	x	810	x	810		487.6	546.6
ESR 3425	D90L		*944*	*1074*	*55.12*	*x*	*31.89*	*x*	*31.89*		*1075*	*1205*
		2.2, 3	441	500	1440	x	810	x	810		501.7	560.6
ESR 3425	D100L		*972*	*1102*	*56.70*	*x*	*31.89*	*x*	*31.89*		*1106*	*1236*
		1.1	653	665	1540	x	950	x	950		729.8	742
ESR 3545	D90S		*1439*	*1466*	*60.63*	*x*	*37.41*	*x*	*37.41*		*1609*	*1636*
		1.5	656	668	1560	x	950	x	650		733.9	746.2
ESR 3545	D90L		*1446*	*1473*	*61.42*	*x*	*37.41*	*x*	*37.41*		*1618*	*1645*
		2.2, 3	669	681	1580	x	950	x	950		747.5	759.3
ESR 3545	D100L		*1475*	*1501*	*62.22*	*x*	*37.41*	*x*	*37.41*		*1648*	*1674*
		4	686	698	1600	x	950	x	950		765.2	77.4
ESR 3545	D112M		*1512*	*1539*	*62.99*	*x*	*37.41*	*x*	*37.41*		*1687*	*1714*

Gearbox With Input Shaft Dimensions

TYPE	A	B	C	D	Shaft Key	Shaft Hole
ESR50 **ESR501** **ESR502**	83	32	25	14k6	5x5	
ESR1 **ESR6** **ESR61** **ESR62** **ESR13**	121	40	33	19j6	6x6	
ESR2 **ESR7** **ESR73** **ESR735** **ESR74** **ESR235** **ESR24** **ESR24SS**	142	50	38	24j6	8x7	M8x19
ESR3 **ESR8** **ESR84SS** **ESR8425** **ESR845** **ESR3425**	155	60	50	28j6	8x7	M10x22 M12x28
ESR35 **ESR3545**	221	80	70	38k8	10x8	 M16x31
ESR4 **ESR4SS**	278	110	95	55m6	16x10	
ESR425	369	140	125	70m6	20x12	M16x31
ESR45	424	170	150	80m6	22x14	M16x31

All dimensions in mm



Actual Ratio Chart:

Single reduction

ESR6	ESR7	ESR8
1.581:1	1.581:1	1.583:1
1.750:1	1.750:1	1.754:1
1.895:1	1.895:1	1.907:1
2.111:1	2.111:1	2.100:1
2.294:1	2.294:1	2.316:1
2.581:1	2.581:1	2.571:1
2.862:1	2.862:1	2.875:1
3.231:1	3.231:1	3.200:1
3.583:1	3.583:1	3.593:1
4.045:1	4.045:1	4.040:1
4.600:1	4.600:1	4.682:1

Double reduction

ESR50	ESR1 ESR2	ESR3	ESR35 ESR4	ESR4SS	ESR425 ESR45
2.330:1	2.310:1	2.310:1	2.331:1	2.310:1	2.299:1
2.547:1	2.560:1	2.570:1	2.547:1	6.620:1	2.532:1
2.790:1	2.770:1	2.790:1	2.778:1	2.950:1	2.869:1
3.064:1	3.090:1	3.070:1	3.080:1	3.120:1	3.179:1
3.376:1	3.350:1	3.390:1	3.375:1	3.510:1	3.480:1
3.753:1	3.770:1	3.760:1	3.777:1	3.890:1	3.980:1
4.150:1	4.180:1	4.200:1	4.188:1	4.230:1	
4.640:1	4.720:1	4.680:1	4.688:1	4.773:1	4.630:1
5.059:1	5.020:1	5.020:1	5.059:1	5.291:1	5.042:1
5.531:1	5.550:1	5.570:1	5.529:1	5.600:1	5.610:1
6.059:1	6.010:1	6.050:1	6.032:1	6.404:1	6.190:1
6.655:1	6.700:1	6.670:1	6.686:1	6.860:1	6.603:1
7.332:1	7.280:1	7.350:1	7.325:1	7.780:1	7.370:1
8.110:1	8.190:1	8.160:1	8.198:1	8.710:1	7.958:1
8.810:1	8.540:1	8.550:1	8.608:1	9.650:1	8.714:1
9.410:1	9.450:1	9.480:1	9.406:1	10.79:1	9.320:1
10.31:1	10.32:1	10.30:1	10.26:1	12.07:1	10.28:1
11.32:1	11.40:1	11.34:1	11.38:1		10.97:1
12.48:1	12.39:1	12.51:1	12.48:1		12.77:1
13.80:1	13.94:1	13.88:1	13.95:1		13.84:1
15.34:1	15.45:1	15.53:1	15.43:1		15.22:1
17.14:1	17.45:1	17.28:1	17.28:1		17.06:1
19.28:1	19.35:1	19.40:1	19.33:1		18.37:1
21.88:1	21.84:1	21.82:1	21.93:1		21.93:1
25.09:1	24.84:1	25.28:1	25.20:1		25.11:1

Triple reduction

ESR50	ESR1 ESR2	ESR3	ESR35 ESR4	ESR4SS	ESR425 ESR45
				13.75:1	
				15.02:1	
				16.39:1	
				18.17:1	
				19.91:1	
				22.47:1	
				24.56:1	
				26.79:1	
28.16:1	28.06:1	28.24:1	28.15:1	29.71:1	28.03:1
30.92:1	31.26:1	31.10:1	31.20:1	32.54:1	30.88:1
34.07:1	33.97:1	34.30:1	34.10:1	36.42:1	33.96:1
40.01:1	39.85:1	39.89:1	40.17:1	40.36:1	40.02:1
43.73:1	44.09:1	44.23:1	43.89:1		44.17:1
47.91:1	47.74:1	48.05:1	47.88:1	45.46:1	47.11:1
52.60:1	53.19:1	52.91:1	52.69:1	50.46:1	52.54:1
57.97:1	57.80:1	58.35:1	58.16:1	57.23:1	56.78:1
64.13:1	65.00:1	64.79:1	65.09:1	65.78:1	64.40:1
71.27:1	72.10:1	72.44:1	72.31:1	72.68:1	71.08:1
79.64:1	81.40:1	80.63:1	80.63:1	83.55:1	78.89:1
89.62:1	90.29:1	90.52:1	90.20:1		88.35:1
101.7:1	101.9:1	101.8:1	102.3:1		101.4:1
116.6:1	115.9:1	117.9:1	117.6:1		118.2:1

Compound reductions

ESR61 ESR62	ESR73	ESR735 ESR74	ESR84SS	ESR8425
			100.5:1	
			120.2:1	
142.5:1	141.1:1	141.1:1	138.1:1	138.5:1
154.3:1	152:8:1	152.8:1	159.3:1	150.4:1
178.4:1	178.1:1	179.0:1	175.5:1	178.1:1
202.8:1	206.4:1	205:8.1	205.6:1	207.1:1
233.8:1	233.5:1	234.7:1	236.4:1	234.8:1
291.6:1	288.9:1	288.9:1	265.7:1	283.5:1
323.5:1	324.3:1	323.2:1	308.0:1	317.4:1
365.2:1	364.7:1	366.5:1	337:5:1	364.3:1
412.3:1	411.7:1	413.8:1	391.2:1	409.6:1
468.8:1	477.1:1	457.7:1		477.5:1

Compound reductions

ESR501 ESR502	ESR13	ESR235 ESR24	ESR24SS	ESR3425	ESR3545
			489.0:1		
563.0:1	565.1:1	568.0:1	562.0:1	578.0:1	561.0:1
702.0:1	708.0:1	707.0:1	713.0:1	715.0:1	713.0:1
940.0:1	966.1:1	963.0:1	952.0:1	1012:1	1018:1
1406:1	1419:1	1426:1	1403:1	1407:1	1414:1
1563:1	1573:1	1580:1	1588:1	1575:1	1564:1
1746:1	1776:1	1785:1	1785:1	1752:1	1752:1
1986:1	2057:1	2052:1	2043:1	2042:1	2042:1
2312:1	2320:1	2316:1	2348:1	2282:1	2273:1
2863:1	2860:1	2875:1	2831:1	2859:1	2859:1
3475:1	3451:1	3468:1	3468:1	3478:1	3457:1
4836:1	4692:1	4680:1	4826:1	4716:1	4751:1
7265:1	7329:1	7365:1	7408:1	7341:1	7331:1
13514:1	13685:1	13630:1		13935:1	13900:1

Maximum Bore Sizes For Motor Pinion

The following table gives the maximum shaft diameter im mm for any driving unit direct coupled to the gearbox. All sizes in *italic* are supplied **without** keyway and two retaining screw holes.

Single reduction

Nom ratio	ESR6	ESR7	ESR8
1.58	28	38	48
1.75	28	38	48
1.89	24	28	48
2.11	24	28	42
2.29	24	28	38
2.58	*24*	28	38
2.86	19	24	38
3.32	19	24	28
3.58	*19*	19	28
4.04	*14*	19	24
4.6	*14*	*19*	24

Double reduction

Nom ratio	ESR50	ESR1	ESR2	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR45
2.33	14	28	38	48	55	70	70	90	100
2.55	14	28	38	48	55	70	70	90	100
2.78	14	24	28	48	55	70	70	90	100
3.08	14	24	28	42	55	60	70	90	100
3.38	14	24	28	38	55	60	70	80	90
3.78	14	*24*	28	38	48	55	60	80	90
4.19	14	19	24	38	42	55	70		
4.68	14	19	24	28	38	48	55	70	80
5.06	14	28	38	48	55	70	55	90	100
5.54	14	28	38	48	55	70	60	80	90
6.06	14	24	28	48	55	70	70	80	90
6.66	14	24	28	42	55	60	55	80	90
7.33	14	24	28	38	55	60		70	80
8.12	14	*24*	28	38	48	55	60	70	80
8.61	14	28	38	48	55	70	55	90	100
9.43	14	28	38	48	55	70	55	80	90
10.32	14	24	28	48	55	70	48	80	90
11.35	14	24	28	42	55	60	42	80	90
12.48	14	24	28	38	55	60		70	80
13.82	14	*24*	28	38	48	55		60	80
15.35	14	19	24	38	42	55		60	70
17.15	*11*	19	24	28	38	48		55	60
19.3	*11*	*19*	19	28	28	42		55	60
21.95	*11*	*14*	19	24	28	38		42	55
25.15	*11*	*14*	*19*	24	28	28		42	48

Triple reduction

Nom ratio	ESR50	ESR1	ESR2	ESR3	ESR35	ESR4	ESR4SS	ESR425	ESR45
13.75							70		
15.02							70		
16.39							70		
18.17							60		
19.91							60		
22.47							70		
23.4	14	28	38	48	55	55	70	90	100
25.9	14	28	38	48	55	55	70	90	100
28.2	14	24	28	48	55	55	60	90	100
31.1	14	24	28	42	55	55	60	90	100
34.1	14	24	28	38	55	55	55	90	100
40	14	28	38	48	55	55	55	80	90
43.8	14	28	38	48	55	55		80	90
47.9	14	24	28	48	55	55	48	80	90
52.7	14	24	28	42	55	55	42	70	80
58	14	24	28	38	55	55	38	70	80
64.25	14	*24*	28	38	48	48	28	60	70
71.25	14	19	24	38	43	43	38	50	70
79.7	*11*	19	24	28	38	38	28	50	60
89.7	*11*	*19*	19	28	28	28		48	55
102	*11*	*14*	19	24	28	28		42	55
116.8	*11*	*14*	*19*	24	28	28		42	48