



VF W series worm gearmotors

Torque range 13 ... 7,100 Nm
Mechanical rating 0.04 ... 75kW
Gear ratios 7 ... 10000



C series in-line helical gearmotors

Torque range 45 ... 12,000 Nm
Mechanical rating 0.08 ... 213kW
Gear ratios 2,6 ... 1481



A series helical bevel gearmotors

Torque range 100 ... 14,000 Nm
Mechanical rating 0.22 ... 150kW
Gear ratios 5,4 ... 1715



300 series planetary gearmotors

Torque range 1,000 ... 1,100,00 Nm
Mechanical rating up to 450 kW
Gear ratios 3,4 ... 5000



S series single reduction helical gearmotors

Torque range 21 ... 200 Nm
Mechanical rating 0.12 ... 11,6 kW
Gear ratios 1,4 ... 13,1



TA series shaft mounted speed reducers

Torque range 150 ... 16,000 Nm
Mechanical rating 1,1 ... 156 kW
Gear ratios 5 ... 31,5





 **Bonfiglioli**
Forever Forward

Our philosophy has always been to keep things simple. Why over complicate things looking for a magic formula. In today's market stocking complete geared motors is no longer the solution. To ensure a fast reliable service and short lead times local assembly is the way forward, achieved by investing in build centres across the world.

Our formula for success is simple...

Local assembly = fast reliable delivery = less downtime





RAN series bevel gearboxes

Torque range 3 ... 3,000 Nm
Mechanical rating 0.15 ... 91 kW
Gear ratios 1 ... 7,4



F series shaft mounted gearmotors

Torque range 140 ... 14,000 Nm
Mechanical rating 0.17 ... 125 kW
Gear ratios 6,4 ... 2099



HDO series bevel helical gear units (Heavy Duty)

Torque range 25,650 ... 194,050 Nm
Gear ratios 5,6 ... 400



HDP series parallel shaft gear units (Heavy Duty)

Torque range 5,000 ... 194,050 Nm
Gear ratios 7,1 ... 500



BN series AC motors & brake motors

kW rating 0.06 ... 30 kW
Frame sizes 56A ... 200L
Compliance 2006/95/EC (LVD) &
2004/108/EC (EMC)



BE series IE3 premium efficiency AC motors

kW rating 0.75 ... 22 kW
Frame sizes 80B ... 180L
Compliance IEC 60034-30:2008(IE), 640/2009/EC
2006/95/EC (LVD) &
2004/108/EC (EMC)





HDO Series The new generation

 **Bonfiglioli**
Forever Forward

Historically Bonfiglioli has always been well known in the market for high quality worm gearboxes and small to medium power geared motors. Much has changed since 1956 with significant investment in the heavy duty gearbox range putting us firmly on the map for this sector.

The range now offers output torque ratings up to 1.25 million Nm with higher ratings being developed.

Demanding applications? Don't compromise on quality.





BS series single phase induction motors

kW rating 0.06 ... 1,5 kW
Frame sizes 56A ... 90L
Compliance 2006/95/EC (LVD) &
2004/108/EC (EMC)



MAK series hazardous area motors

Exd & Exde groups IIB & IIC, II2G and II2GD
Temperature classes T3 to T6
Single and three phase, double speed and brake
motors
0,09kW to 55kW frame sizes 63 to 250



AT series fanless & bespoke electric motors

Special applications such as carwash machines.
Other bespoke designs for special applications.
Special voltages and configurations even for small
quantity on short lead times.



V series mechanical speed variators

Speed range 5,2 times or infinitely variable through
differential unit
Transmissible power 0.18 ... 9,2 kW



BC series permanent magnet DC motors

Torque range 0.3 ... 4.5 Nm
Speed 1500, 2000, 3000
Supply 12,24,36,48,65,110V,
180 Vdc



Agile frequency inverters

Power range 0,25 - 11kW
3-phase
Agile inverters are Sensorless
vector inverters. Innovative,
eco-friendly and user friendly.



Synthesis frequency inverters

Power range 0,2 - 2,2kW single
phase input. IP20 and IP65.
Synthesis inverters are simple,
integrated EMC filter yet
compact design.



 **Bonfiglioli**
Forever Forward

Aggregates, Bottling & Packaging, Food, Water treatment...

Many industries rely on geared motors and drives to keep important processes running around the clock. Bonfiglioli is one of the leading manufacturers with a commanding global presence thanks to an extensive and reliable product range.

Specify Bonfiglioli and have peace of mind.



TEC MOTORS | PRODUCT OVERVIEW



3 PHASE MOTORS

IE1, IE2, IE3 and IE4 all Ex Stock
Multi-mount design in Cast Iron and Aluminium
Thermistors fitted as standard, Increased output motors.
Brake motors and 2 speed motors. Sizes ranging from 0.06kW - 1000kW.

1 PHASE MOTORS

TPC permanent capacitor range for general pump and fan applications.
TCC range for applications where higher starting torque is required.
230v and 110v available.
sizes ranging from 0.09kW - 3.7kW



GEARBOX RANGE

TEC FCNDK RANGE - Sizes 25/150, Ratios 5/1 to 100/1 from stock.
TEC WK-TKM RANGE - 20-90mm output bores, 100-8000Nm from stock.
TEC & VARVEL HELICAL INLINE - 17-70mm output bores, 100-8000Nm from stock.

INVERTERS

TECDrive IP66 and IP20 UK Manufactured inverters.
0.25kW to 22kW stocked with internal EMC filter included.
Lenze SMD, SMV and I500 ranges stocked.
IP20, IP31 and IP65 available.

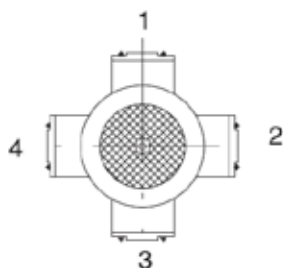


OTHER SERVICES

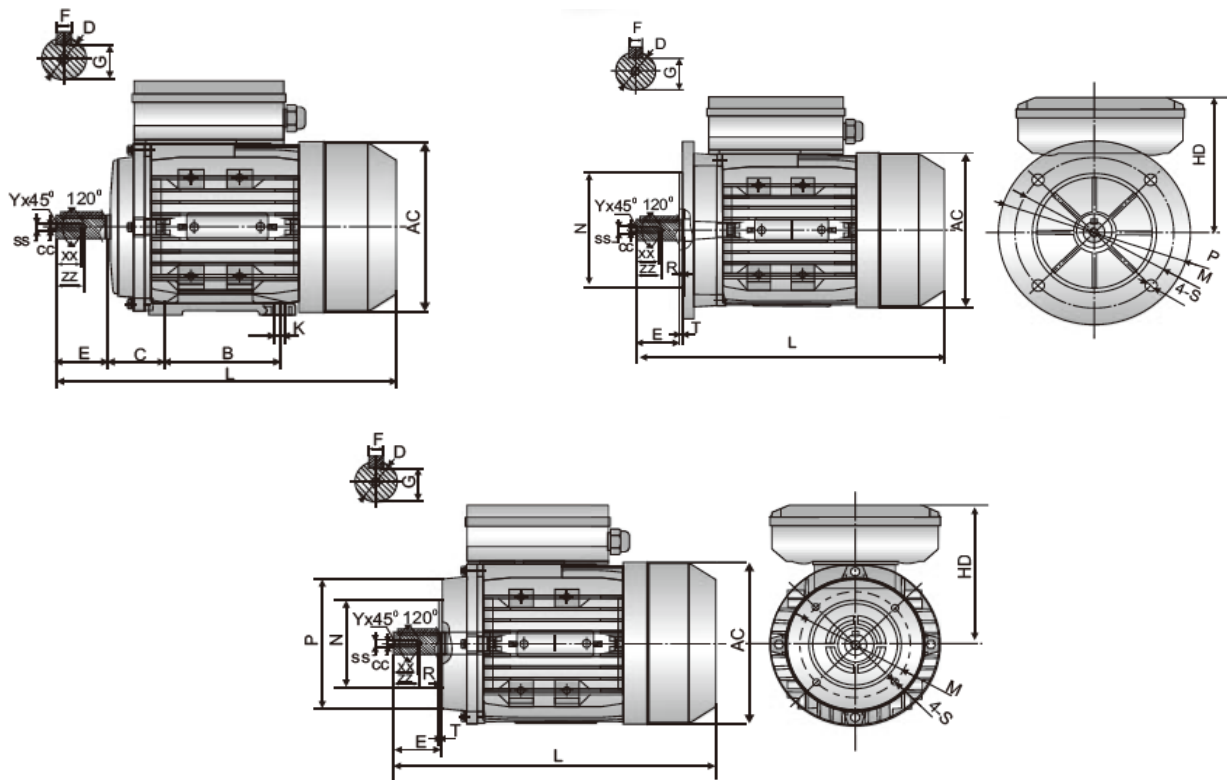
WIMES spec motors, flying leads, marine motors,
full inspection and testing facilities.
Anti-condensation heater fitting, retro fitted brakes, shaft extensions.
IP upgrades, winding tropicalisation. and much, much more!!

 Aluminium  Cast iron

Terminal box position (relates to all types of units shown in mounting position B3/M1)



TEC MOTORS | 1PH MOTOR DIMENSIONS



Frame	Mounting Dimensions																		Overall Dimensions					Shaft End Screw Dimensions					
	A	B	C	D	E	F	G	H	K	IM B14						IM B5													
										M	N	P	R	S	T	M	N	P	R	S	T	AA	AC	AD	HD	L	SS	XX	ZZ
63	100	80	40	11	23	4	8.5	63	7X10	75	60	90	0	M5	2.5	115	95	140	0	10	3.0	120	130	179	116	212	M4	10	15
71	112	90	45	14	30	5	11	71	7x10	85	70	105	0	M6	2.5	130	110	160	0	10	3.5	132	145	194	123	255	M5	12	18
80	125	100	50	19	40	6	15.5	80	10x13	100	80	120	0	M6	3.0	165	130	200	0	12	3.5	157	165	223	143	290	M6	16	22
90S	140	100	56	24	50	8	20	90	10x13	115	95	140	0	M8	3.0	165	130	200	0	12	3.5	172	185	240	150	335	M8	20	25
90L	140	125	56	24	50	8	20	90	10x13	115	95	140	0	M8	3.0	165	130	200	0	12	3.5	172	185	240	150	365	M8	20	25
100L	160	140	63	28	60	8	24	100	12x15	130	110	160	0	M8	3.5	215	180	250	0	15	4.0	196	205	260	160	398/416	M10	22	28
112M	190	140	70	28	60	8	24	112	12x15	130	110	160	0	M8	3.5	215	180	250	0	15	4.0	222	230	295	183	416	M10	22	28
56	90	71	36	9	20	3	7.2	56	5.8x8.8	65	50	80	0	M5	2.5	100	80	120	0	7	3.0	110	117	144	88	196	M3	9	12
63	100	80	40	11	23	4	8.5	63	7x10	75	60	90	0	M5	2.5	115	95	140	0	10	3.0	120	130	181	118	220	M4	10	14
71	112	90	45	14	30	5	11	71	7x10	85	70	105	0	M6	2.5	130	110	160	0	10	3.5	132	147	196	125	241/255	M5	12	17
80	125	100	50	19	40	6	15.5	80	10x13	100	80	120	0	M6	3.0	165	130	200	0	12	3.5	160	163	226	146	290	M6	16	21
90S	140	100	56	24	50	8	20	90	10x13	115	95	140	0	M8	3.0	165	130	200	0	12	3.5	175	183	243	153	312	M8	19	25
90L	140	125	56	24	50	8	20	90	10x13	115	95.0	140	0	M8	3.0	165	130	200	0	12	3.5	175	183	243	153	337/367	M8	19	25
100L	160	140	63	28	60	8	24	100	12x15	130	110.0	160	0	M8	3.5	215	180	250	0	15	4.0	198	205	265	165	369/387	M10	22	30

Cap/Cap Motors Perm/Cap Motors

Please note - Single Phase motors are only designed to be stop/start a maximum of 15 times in 1 hour to allow the safe discharge of the capacitors.



TEC MOTORS | ODP IP23 LARGE FRAME MOTORS



FRAME SIZE	2 Pole	4 Pole	6 Pole
	kW	kW	kW
TEC1C-IE2 315X	220	220	200
TEC1C-IE2 315X	250	250	220
TEC1C-IE2 315X	280	280	250
TEC1C-IE2 315X	315	315	280
TEC1C-IE2 315X		355	
TEC1C-IE2 315X		400	
TEC1C-IE2 355XA	355	355	280
TEC1C-IE2 315XB	400	400	315
TEC1C-IE2 315XC	450	450	355
TEC1C-IE2 315XD	500	500	400
TEC1C-IE2 315XE		560	
TEC1C-IE2 400		400	315
TEC1C-IE2 400		450	355
TEC1C-IE2 400		500	400
TEC1C-IE2 400XA	560	560	450
TEC1C-IE2 400XB	630	630	500
TEC1C-IE2 400XC	710	710	560
TEC1C-IE2 450XA			630
TEC1C-IE2 450XB		800	710
TEC1C-IE2 450XC		900	800
TEC1C-IE2 450XD		1000	900
TEC1C-IE2 500XA		1120	1000
TEC1C-IE2 500XB		1250	1120

TEC are now offering a full range of IP23 ODP series motors up to and including 710kW.

Standard specification as follows:

- IE2 and IE3 efficiency.
- Poles 2, 4 and 6.
- Cast iron construction.
- Squirrel cage induction motors (according to EN60034-30 IEC).
- Class F Insulation with a class B temperature and are specifically designed to provide maximum ventilation and heat dispersion.
- 230-400/3/50 - 276-480/3/60.
- 400-690/3/50 - 480-828/3/60.
- 3 x 150° PTC thermistors & 3 x 130° PTC thermistors.
- Mounting IM B3, B5, B35 (V1 available upon request).
- Painted RAL 7031.
- TEFC IC01.
- 315 Frame and above with insulated NDE Bearing and anti-con heaters.

For further information on lead times and prices please give us a call on 01299 252990.

TEC MOTORS | MOTOR TECHNICAL INFORMATION

Motor Modifications

TEC can supply motors with a range of optional extra's and upgrades whether it's a one off order or an urgent requirement where factory lead times are not feasible.

The following modifications can be achieved at our machine shop:

- Reduced shaft motors.
- Extended shaft motors.
- Special flanges.
- Externally switched motors.
- Increased output bore gearboxes.
- Double ended motors.
- Vector motors (Encoders and forcevent).
- Retro fit brake motors.
- TENV "Air over" motors.
- IP upgrades (IP65/IP56/IP66).
- Special voltage rewinds.
- Anti-condensation heater fitting.
- Forced ventilation motors.
- Extra drain holes.
- PTC thermistors (different temperatures).
- Flying lead motors.
- Epoxy paint finishes.
- Open ended keyways.
- Thermal cut outs.



WIMES Motors

As standard:

- Must be cast iron where possible
- Thermistors
- 2 sets of heaters fitted (110v rear, 240v front)
- Stainless plate
- External earth point

Optional extras:

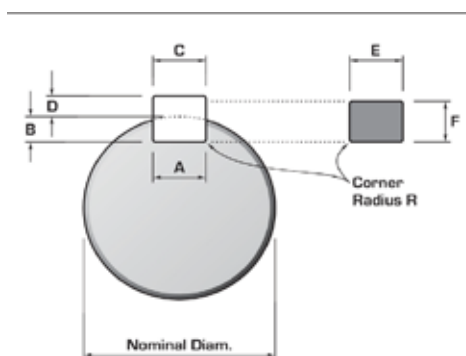
- Auxiliary terminal box
- Tropicalised windings
- IP upgrades (IP56/65)
- ATEX
- Located bearings for pump application
- Epoxy Paint Finish

TEC MOTORS | IEC SHAFT AND KEYWAY DIMENSIONS



Please note - TEC can offer a modification service for custom keyway sizes to suit most applications.

Imperial - Rectangular



Metric - Rectangular

Nominal Shaft Diam		Key Size	Dimensions (mm)						
Over	To (incl.)		A	B	C	D	E	F	R
10	12	4 x 4	3.970 4.000	2.5 2.6	3.985 4.015	1.8 1.9	4.030 3.970		0.16
12	17	5x5	4.970 5.000	3.0 3.1	4.985 5.015	2.3 2.4	5.030 4.970		0.25
17	22	6x6	5.970 6.000	3.5 3.6	5.985 6.015	2.8 2.9	6.030 5.970		0.25
22	30	8x7	7.964 8.000	4.0 4.2	7.982 8.018	3.3 3.5	8.000 7.964	7.000 6.910	0.25
30	38	10x8	9.964 10.000	5.0 5.2	9.982 10.018	3.3 3.5	10.000 9.964	8.000 7.910	0.40
38	44	12x8	11.957 12.000	5.0 5.2	11.979 12.021	3.3 3.5	12.000 11.957	8.000 7.910	0.40
44	50	14x9	13.957 14.000	5.5 5.7	13.979 14.021	3.8 4	14.000 13.957	9.000 8.910	0.40
50	58	16x10	15.957 16.000	6.0 6.2	15.979 16.021	4.3 4.5	16.000 15.957	10.000 9.910	0.40
58	65	18x11	17.957 18.000	7.0 7.2	17.979 18.021	4.4 4.6	18.000 17.957	11.000 10.890	0.40
65	75	20x12	19.948 20.000	7.5 7.7	19.974 20.026	4.9 5.1	20.000 19.948	12.000 11.890	0.60
75	85	22x14	21.948 22.000	9.0 9.2	21.974 22.026	5.4 5.6	22.000 21.948	14.000 13.890	0.60
85	95	25x14	24.948 25.000	9.0 9.2	24.974 25.026	5.4 5.6	25.000 24.948	14.000 13.890	0.60
95	110	28x16	27.948 28.000	10.0 10.2	27.974 28.026	6.4 6.6	28.000 27.948	16.000 15.890	0.60
110	130	32x18	31.938 32.000	11.0 11.2	31.969 32.031	7.4 7.6	32.000 31.938	18.000 17.890	0.60
130	150	36x20	35.938 36.000	12.0 12.3	35.969 36.031	8.4 8.7	36.000 35.938	20.000 19.870	1.00
150	170	40x22	39.938 40.000	13.0 13.3	39.969 40.031	9.4 9.7	40.000 39.938	22.000 21.870	1.00
170	200	45x25	44.938 45.000	15.0 15.3	44.969 45.031	10.4 10.7	45.000 44.938	25.000 24.870	1.00
200	230	50x28	49.938 50.000	17.0 17.3	49.969 50.031	11.4 11.7	50.000 49.938	28.000 27.870	1.00

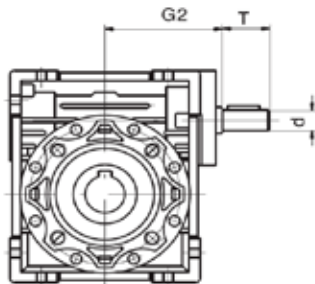
Nominal Shaft Diam		Key Size	Dimensions (Inches)						
Over	To (incl.)		A	B	C	D	E	F	R
1	1 1/4	5/16 x 1/4	0.311 0.312	0.146 0.152	0.312 0.313	0.112 0.118	0.314 0.312	0.253 0.250	0.010
1 1/4	1 1/2	3/8 x 1/4	0.374 0.375	0.150 0.156	0.375 0.376	0.108 0.114	0.377 0.375	0.253 0.250	0.010
1 1/2	1 3/4	7/16 x 5/16	0.437 0.438	0.186 0.192	0.438 0.439	0.135 0.141	0.440 0.438	0.315 0.312	0.020
1 3/4	2	1/2 x 5/16	0.499 0.500	0.190 0.196	0.500 0.501	0.131 0.137	0.502 0.500	0.315 0.120	0.020
2	2 1/2	5/8 x 7/16	0.624 0.625	0.260 0.266	0.625 0.626	0.185 0.191	0.627 0.625	0.441 0.438	0.020
2 1/2	3	3/4 x 1/2	0.749 0.750	0.299 0.305	0.750 0.751	0.209 0.215	0.752 0.750	0.503 0.500	0.020
3	3 1/2	7/8 x 5/8	0.874 0.875	0.370 0.376	0.875 0.876	0.264 0.270	0.877 0.875	0.629 0.625	0.062
3 1/2	4	1 x 3/4	0.999 1.000	0.441 0.447	1.000 1.001	0.318 0.324	1.003 1.000	0.754 0.750	0.062
4	5	1 1/4 x 7/8	1.248 1.250	0.518 0.524	1.250 1.252	0.366 0.372	1.253 1.250	0.879 0.875	0.062
5	6	1 1/2 x 1	0.599 0.605	0.599 0.605	1.500 1.502	0.412 0.418	1.504 1.500	1.006 1.000	0.062

Imperial - Square

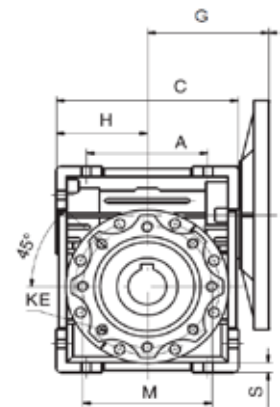
Nominal Shaft Diam		Key Size	Dimensions (Inches)						
Over	To (incl.)		A	B	C	D	E	F	R
1/4	1/2	1/8 x 1/8	0.124 0.125	0.072 0.078	0.125 0.126	0.060 0.066	0.127 0.125		0.010
1/2	3/4	3/16 x 3/16	0.187 0.188	0.107 0.113	0.188 0.189	0.088 0.094	0.190 0.188		0.010
3/4	1	1/4 x 1/4	0.249 0.250	0.142 0.148	0.250 0.251	0.115 0.121	0.252 0.250		0.010
1	1 1/4	5/16 x 5/16	0.311 0.312	0.177 0.183	0.312 0.313	0.142 0.148	0.314 0.312		0.010
1 1/4	1 1/2	3/8 x 3/8	0.374 0.375	0.213 0.219	0.375 0.376	0.169 0.175	0.377 0.375		0.010
1 1/2	1 3/4	7/16 x 7/16	0.437 0.438	0.248 0.254	0.438 0.439	0.197 0.203	0.440 0.438		0.020
1 3/4	2	1/2 x 1/2	0.499 0.500	0.283 0.289	0.500 0.501	0.224 0.230	0.502 0.500		0.020
2	2 1/2	5/8 x 5/8	0.624 0.625	0.354 0.360	0.625 0.626	0.278 0.284	0.627 0.625		0.020
2 1/2	3	3/4 x 3/4	0.749 0.750	0.424 0.430	0.750 0.751	0.333 0.339	0.752 0.750		0.020
3	3 1/2	7/8 x 7/8	0.874 0.875	0.495 0.501	0.875 0.876	0.387 0.393	0.877 0.875		0.062
3 1/2	4	1 x 1	0.999 1.000	0.566 0.572	1.000 1.001	0.442 0.448	1.003 1.000		0.062
4	5	1 1/4 x 1 1/4	1.248 1.250	0.707 0.713	1.250 1.252	0.551 0.557	1.253 1.250		0.062
5	6	1 1/2 x 1 1/2	1.498 1.500	0.848 0.854	1.500 1.502	0.661 0.667	1.504 1.500		0.062

TEC MOTORS | TEC WORM GEARBOX DIMENSIONS

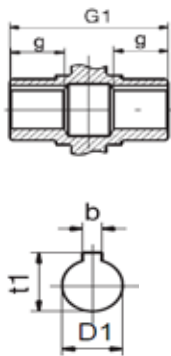
FCNK



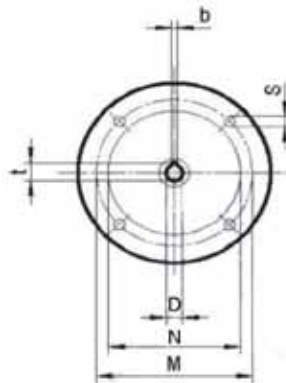
FCNDK



Output Hub



Input Flange



Input Motor Flange Dimensions

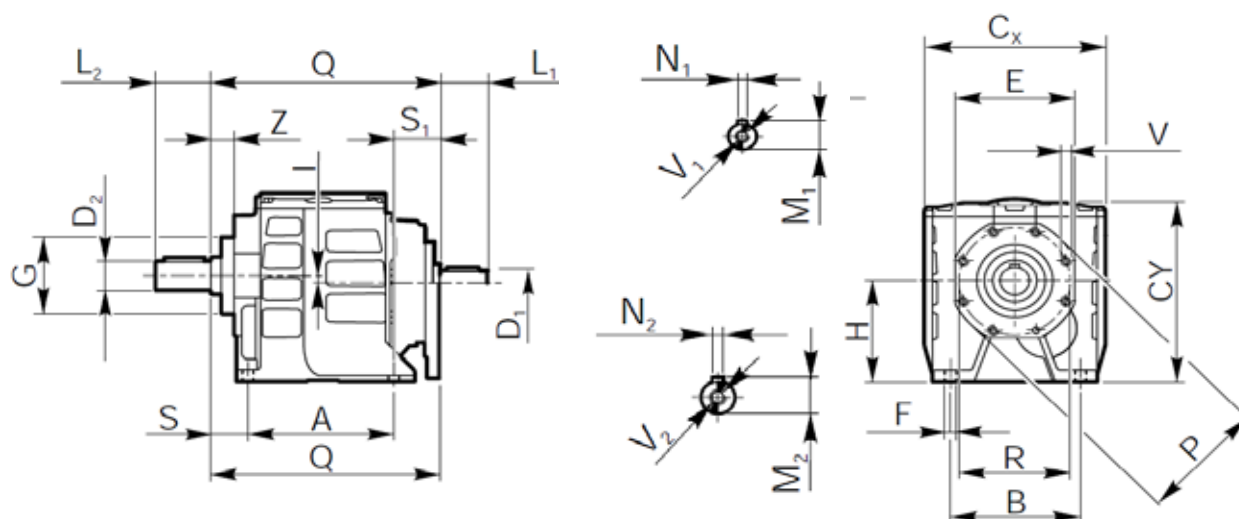
Ref	D	P	M	N	b	s	t
56B14	9	80	65	50	3	5	10.4
56B5	9	120	100	80	3	7	10.4
63B14	11	90	75	60	4	9	12.8
63B5	11	140	115	95	4	9	12.8
71B14	14	105	85	70	5	7	16.3
71B5	14	160	130	110	5	9	16.3
80B14	19	120	100	80	6	7	21.8
80B5	19	200	165	130	6	11	21.8
90B14	24	140	115	95	8	9	27.3
90B5	24	200	165	130	8	11	27.3
100-112B14	28	160	130	110	8	9	31.3
100-112B5	28	250	215	180	8	13.5	31.3
132B14	38	200	165	130	10	11	41.3
132B5	38	300	265	230	10	13.5	41.3
160B5	42	350	300	250	12	17	45.3

Size	Dimensions																			
	A	C	D1 *	E	F	G _{max}	H	I	L	M	N(h8)	O	Q	R	S	T	V	K	G1	G2
25	45	70	11	83	22	45	35	25	45	55.0	45	6.0	35.5	48	5		22.5	34.0	50	
30	54	80	14	97	32	55	40	30	56	65	55	6.5	44	57	5.5	20	27	44	63	51
40	70	101	18	122	43	69	50	40	71	75	60	6.5	55	72	6.5	23	35	60	78	60
50	80	122	25	144	49	90	60	50	85	85	70	8.5	64	85	7	30	40	70	92	74
63	100	148	25	174	67	106	72	63	103	95	80	8.5	80	102	8	40	50	85	112	90
75	120	174	28	205	72	121	86	75	113	115	95	11	93	119	10	50	60	90	120	105
90	140	208	35	238	72	138	103	90	130	130	110	13	102	135	11	50	70	100	140	125
110	170	253	42	295		159	128	110	142	165	130	14	125	167	15	60	85	115	155	142
130	200	293	45	335		179	148	130	155	215	180	16	140	188	15	80	100	120	170	162
150	240	340	50	400		212	170	150	185	215	180	18	180	230	18	80	120	145	200	210

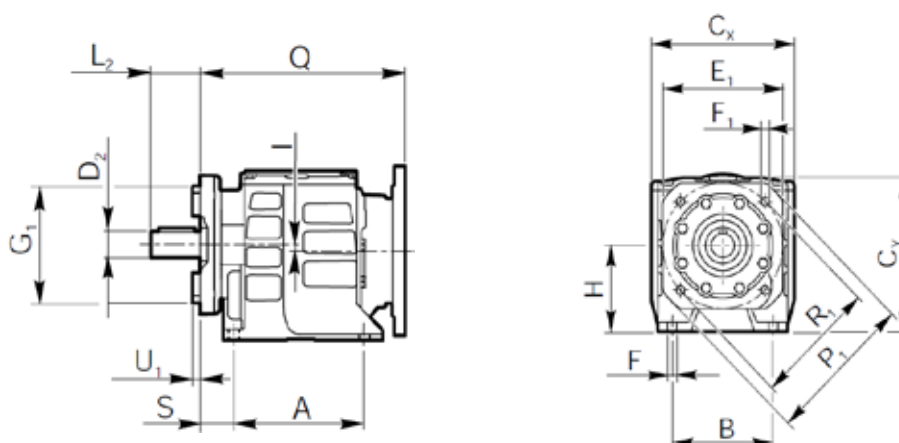
Size	g	N1	KE	d (j6)	b	t1	weight (kg)
25		22.5	6.5				0.7
30	20	29	M6x11(n4)	9	5	16.3	1.2
40	23	36.5	M6x8 (n4)	11	6	20.8	2.3
50	30	43.5	M8x10(n4)	14	8	28.3	3.5
63	40	53	M8x14(n8)	19	8	28.3	6.2
75	40	57	M8x14(n8)	24	8	31.3	9.0
90	45	67	M10x18(n8)	24	10	38.3	13.0
110	50	74	M10x18(n8)	28	12	45.3	35.0
130	60	81	M12x20(n8)	30	14	48.8	48.0
150	70	96	M12x21(n8)	35	14	53.8	84.0

Size	D1 Bore options (H7)					
	D1	b	t1	D1	b	t1
40	19	6	21.8			
50	24	8	28.3			
63	28	8	31.3	30	8	33.3
75	30	8	33.3	35	10.0	38.3
90	38	10	41.2	40	12.0	43.3

TEC MOTORS | VARVEL INLINE GEARBOX DIMENSIONS



Size	Flange Dimensions					
	E1	F1	G1/h7	P1	R	S
RD02/3	100	7	80	120	100	3
RD02/3	115	9	95	140	115	3
RD02/3	130	9	110	160	130	3
RD12/3	100	7	80	120	100	3
RD12/3	115	9	95	140	115	3
RD12/3	130	9	110	160	130	3
RD22/3	115	9	95	140	115	3
RD22/3	130	9	110	160	130	3
RD22/3	165	11	130	200	165	3
RD32/3	130	9	110	160	130	3.5
RD32/3	165	11	130	200	165	3.5
RD32/3	215	13	180	250	215	3.5
RD42/3	165	11	130	200	165	4
RD42/3	215	13.5	180	250	215	4
RD42/3	265	17	230	300	265	4
RD52/3	215	13.5	180	250	215	4
RD52/3	265	17.5	230	300	265	4
RD52/3	300	17.5	250	350	300	4
RD62/3	215	13.5	180	250	215	4
RD62/3	265	17.5	230	300	265	4
RD62/3	300	17.5	250	350	300	4



Size	Dimensions																											
	A	B	Cx	Cv	D1/h6	D2/h6	E	F	G/g6	H	I	L1	L2	M1	M2	N1	N2	P	P1	Q	R	R1	S1	U1	V	V1	V2	
RD02	95	80	100	111	11	17 - 20	82	9	60	60	4	23	35 (40)	12.5	19 - 22.5	4	5-6	84	140	75	20	28	M6X14	M5X12	M6X16	13	3	
RD03	95	80	100	111	11	17 - 20	82	9	60	60	4	23	35 (40)	12.5	19 - 22.5	4	5-6	84	143	75	20	28	M6X14	M5X12	M6X16	13	3.2	
RD12	110	110	140	131	14	20-25	82	9	60	75	5	30	40(50)	16	22.5-28	5	6-8	84	151	75	18	23	M6X14	M5X12	M6X16	10	4.8	
RD13	110	110	140	131	14	20-25	82	9	60	75	5	30	40(50)	16	22.5-28	5	6-8	84	161	75	18	33	M6X14	M5X12	M6X16	10	4.8	
RD22	130	110	155	158	19	25-30	102	9	65	90	6	40	50(60)	21.5	28-33	6	8-8	108	190	95	25	35	M6X10	M6X16	M6X16	13	7.9	
RD23	130	110	155	158	19	25-30	102	9	65	90	6	40	50(60)	21.5	28-33	6	8-8	108	208	95	25	53	M6X10	M6X16	M6X16	13	8.5	
RD32	165	135	190	198	24	30-35	125	11.5	85	115	8.5	50	60(70)	27	33-38	8	8-10	130	220	115	30	25	M8X18	M8X19	M10X22	13	13.5	
RD33	165	135	190	198	24	30-35	125	11.5	85	115	8.5	50	60(70)	27	33-38	8	8-10	130	253	115	30	58	M8X18	M8X19	M10X22	13	14.5	
RD42	195	150	215	222	28	35-40	142	13.5	95	130	13.5	60	70(80)	31	38-43	8	10-12	145	265	130	30	40	M8X18	M10X22	M10X22	15	20	
RD43	195	150	215	222	28	35-40	142	13.5	95	130	13.5	60	70(80)	31	38-43	8	10-12	145	305	130	30	80	M8X18	M10X22	M10X22	15	21.5	
RD52	205	170	284	255	38	40-50	180	18	130	140	0	80	80(100)	41	43-53.50	10	12-14	190	353[367]	165	35[49]	82	M10X25	M12X28	M12X28	18	49	
RD53	205	170	284	255	38	40-50	180	18	130	140	0	80	80(100)	41	43-53.50	10	12-14	190	353[367]	165	35[49]	82	M10X25	M12X28	M12X28	18	52	
RD62	260	215	340	302	48	50-60	180	18	130	180	0	100	100(120)	51.5	53.5-64	14	14-18	190	410[424]	165	40[54]	79	M10X25	M16X36	M16X36	18	62	
RD63	260	215	340	302	48	50-60	180	18	130	180	0	100	100(120)	51.5	53.5-64	14	14-18	190	410[424]	165	40[54]	79	M10X25	M16X36	M16X36	18	70	

TEC MOTORS | GEARBOX TECHNICAL INFORMATION



Useful Formulas

When making a selection for gearboxes or trying to work out the speed of an existing unit there are a number of calculations you may need to make.

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

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

$$\text{Output Speed} = \frac{\text{Input Speed}}{\text{Gear Ratio}}$$

$$\text{Gear Ratio} = \frac{\text{No. Output Gear Teeth}}{\text{No. Input Gear Teeth}}$$

Service Factors Explained

All the performance figures in the TEC catalogue are based on the following information.
Service factor (fs) 1.0 equates to 8 hours per day operation, uniform load, mass acceleration factor $fa \leq 0.2$, start/stops less than 300 per hour and ambient temperature between 15 and 35° Celsius.

Duration of service - hours per day	Load classification of driven machine		
	Uniform	Moderate	Heavy Shock
Under 3	0.8	1	1.5
3 to 10	1	1.25	1.75
Over 10	1.25	1.5	2

The above must also take into account the number of stops/starts per hour shown in the table below.

Start/Stops per hour	1	5	10	40	60	> 200
Factor Fs	1	1.03	1.06	1.1	1.15	1.2

Example: Page 5, FCNDK63 ratio 20:1. Service factor 1 = 1.2 KW, so if fitting a 1.1KW motor
 $SF = 1.2/1.1 = 1.09$. If fitting a 1.5KW motor $SF = 1.2/1.5 = 0.8$.

Load Classification

- (A) Uniform, permitted mass acceleration $fa \leq 0.2$
- (B) Moderate shock load, permitted mass acceleration $fa \leq 3$
- (C) Heavy shock load, permitted mass acceleration $fa \leq 10$

$fa = Je/Jm$

fa , factor of inertia

Je , (kgm^2) all external mass moment of inertia. Jm , (kgm^2) moment of inertia of motor

A - Screw feeders for light materials, fans, assembly lines, conveyor belts for light materials, small mixers, lifts, cleaning machines, fillers, control machines.

B - Winding devices, woodworking machine feeders, goods lifts, balancers, threading machines, medium mixers, conveyor belts for heavy materials, winches, sliding doors, fertilizer scrapers, packing machines, concrete mixers, crane mechanisms, milling cutters, folding machines, gear pumps.

C - Mixers for heavy materials, shears, presses, centrifuges, rotating supports, winches and lifts for heavy materials, grinding lathes, bucket elevators, drilling machines, hammer mills, turntables, tumbling barrels, vibrators, cam presses, stone mills, folding machines, shredders.

TEC MOTORS | TECDrive Inverters



TEC are proud to announce our new line of inverter drives, we will be stocking a full range of the following specifications:

IP66, 1ph-3ph
IP66, 3ph-3ph
IP20, 1ph-3ph
IP20, 3ph-3ph

All TECDrive inverters have an in-built C1 EMC filter, brake chopper CAN Open and Modbus RTU as standard, Bluetooth options are also available upon request.

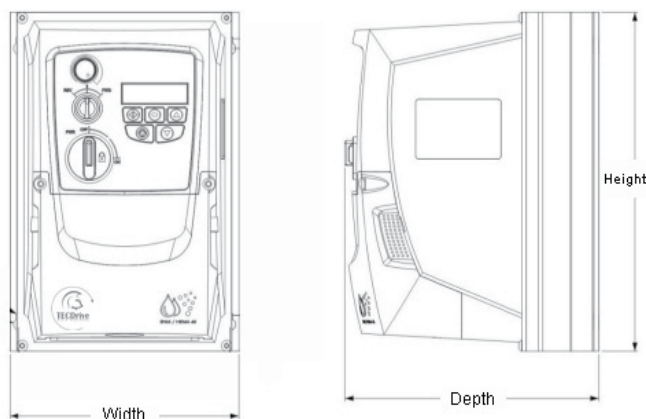
The TECDrive E3 Inverter is easy to use, compact and robust.

Application Macros means that the inverter can be switched between Fan, Pump and industrial mode with great ease

The TECDrive E3 IP66 inverter is wash-down ready with a sealed ABS enclosure and corrosion resistant heat sync. The design is also dust tight which gives it the IP66/NEMA 4X status.

All TECDrive inverters have a simple power up status; they are ready to be used out of the box. There are 14 basic parameters that can be changed to suit the application requirements, with another 36 settings for fine tuning should it be necessary.

Single Phase Data



1ph-3ph	kW	HP	Amps	Frame
200-240v +/- 10% Input. 230/3/50 Output.	0.37	0.5	2.3	1
	0.75	1	4.3	1
	1.5	2	7	1
	2.2	3	10.5	2
	4	5	15.3	3
	5.5	7.5	24	3
	7.5	10	30	4
	11	15	46	4

Three Phase Data

3ph-3ph	kW	HP	Amps	Frame
400v +/- 10% Input. 400/3/50 Output.	0.75	1	2.2	1
	1.5	2	4.1	1
	2.2	3	5.8	2
	4	5	9.5	2
	5.5	7.5	14	3
	7.5	10	18	3
	11	15	24	3
	15	20	30	4
	18.5	25	39	4
	22	30	46	4

TECDrive Dimensions

Frame size	1	2	3	4
Height	173	221	261	420
Width	83	110	131	171
Depth	123	150	175	212
Weight	1.0	1.7	3.2	9.1
Fixings	4 x M5	4 x M5	4 x M5	4 x M8

PUMP SOLUTIONS FOR INDUSTRY

Huge ranges of stock
supported by pump experts



Centrifugal Pumps

Manufactured as standard with cast iron or stainless steel pump body. Suitable for pumping hot and cold, moderately aggressive liquids.



Single Stage Pumps

Manufactured as standard with cast iron or stainless steel pump body. Suitable for pumping hot and cold, moderately aggressive liquids.

Available: Close-coupled with special motor shaft extension, stub shaft and standard motor or with flexible coupling, adapter, base and standard motor in compliance with EN 733 – DIN 24255.



Multistage Pumps

Using multiple impellers on a common shaft to delivery high pressure, their corrosion resistant liquid-ends and heavy-duty drive-ends are essential features in continuous duty applications.

Available: In vertical and horizontal for boiler feed, carwash, washdown, pressure cleaning, reverse osmosis, chemical and oil processing.



Circulator Pumps

The most common heating pumps are these small (generally under 2kw), single phase, high efficiency circulators.

Available: In single or twin head versions.



Inline Pumps

For larger heating and cooling application as well as process pumps, these inline designs can be single or three phase powered, fixed speed or inverter driven.

Available: In single or twin pump versions.



Self-Priming Pumps

Ideal for transporting liquids containing solids in suspension. Suited for applications where the main feature is the difficulty in priming and are used across industry, construction and emergency.

Available: In cast iron, marine bronze or stainless steel.



Submersible Pumps

For use in markets ranging from water and wastewater treatment, raw water supply, abrasive or contaminated industrial processes, mining and irrigation.

Available: As a stand-alone pump, with or without integral level control, or as an easy install packaged pumping station ensuring minimal on-site work.



Positive Displacement Pumps

Self-priming by design. Suitable for handling viscous products which may also contain solids.



Air Operated Pumps

Air Operated Diaphragm Pumps are easy to use and maintain, have infinitely variable flow control, can suction lift up to 8m, run dry and operate against closed valve without damage.

Available: In a variety of both metal and plastic constructions.



Progressive Cavity

Ideal for handling slurries, viscous and shear sensitive products. Multi-stage pumps are available for high pressure applications or where accurate dosing is required.

Available: In a variety of metals with a huge array of stator materials to suit any application.



Gear Pumps

Used in industrial plants for pumping liquids of any viscosity without solids in suspension: Chemicals and petroleum products, soaps and detergents, adhesives, paint and ink, high temperature liquids and chocolate.

Available: In external and internal gear options.



Screw Pumps

They can handle virtually any non-homogenous fluid, regardless of viscosity, lubricity or abrasiveness e.g. seawater, bitumen, molasses, lime, acid, caustic solution or hydrocarbon.

Available: In high pressure, high capacity, compact and hygienic versions.



Flexible Impeller Pumps

Reversible pump offers smooth, low pulsating, low shear flow. Stainless steel and bronze casings are available for hygienic and marine applications.

Available: Impellers are produced in a variety of materials, (e.g. Natural Rubber, Neoprene, Nitrile and EPDM) making them compatible with a range of fluids.



Peristaltic Pumps

Hose pumps are seal-less, can dry run without damage and self-prime up to 9.8m. Used widely for pumping minerals, ceramics, chemicals and inks/dyes at pressures up to 15 bar.

Available: As a close-coupled unit, constructed in Aluminium or Cast Iron and with a wide variety of hose materials suitable for any application.

Specialist Pumps

Available in a variety of configurations, materials and finishes appropriate for a huge range of specialist applications.



Dosing Pumps

These are used for precise dosing of fluids with highly varied viscosities, most of which are chemically aggressive and toxic, and some of which are actually abrasive or emit gasses.

Available: In solenoid, motor and stepper motor driven, diaphragm and piston construction.



Drum Pumps

Drum and container pumps are constructed to assure safety and economy when transferring neutral, aggressive and flammable liquids from different-sized containers. Used for pumping aqueous and light viscous liquids.

Available: In a variety of standard materials and stem lengths.



Hygienic Pumps

Designed to reduce the build-up of bacteria by minimising crevices and dead areas. Consideration is paid to the ease with which the pump can be disassembled for manual cleaning.

- Centrifugal,
- Self-priming
- Cleaning-in-place



Rotary Lobe Pumps

Hygienic – approved to relevant standards, offering gentle pumping action to suit viscous, delicate and particle-laden liquids. Easy to clean, easy to maintain.

Available: In AISI316 stainless steel construction.



ATEX Pumps

For hazardous areas, we can provide ATEX pumps and safety devices.

If you have specific flammable gasses or dust present in the atmosphere and temperature limit requirements within the pump installation envelope, we can provide you with a solution.



Packages

Off the shelf or bespoke, automatic packaged sets, designed and built to the highest standards.

Available: In fixed or trolley mounted configuration, fixed or variable speed, complete with pipework, valves, control panel and flow / pressure / temperature sensors.



OUR SERVICES

Pumps, Spare Parts and Accessories in Stock

EXTENSIVE STOCK of both pumps and spare parts are available for immediate despatch to cover emergency situations. Whilst a next day carrier service is available as standard, same day deliveries can be expedited to overcome critical process failure. Of course, any items we do not have in stock can be ordered and shipped direct to site.



Design & Systems

We can provide a fully detailed specification for pumps and controls consistent with the quality, reliability and efficiency that the customer expects.

Examples of our design capabilities include pressure boosting, pressurisation, oil transfer, sewage pumping, rainwater harvesting and boiler feed.

Pumps can be assembled on bespoke skid mounted systems. These can be either fixed or trolley mounted and come complete with pipework, valves and safety devices.



Commissioning, Service & Repair

We have fully trained, experienced engineers based across the UK who are able to commission all of your pumping equipment and will ensure that they are operating correctly with minimal disruption to site. Our engineers can also provide support in the form of routine maintenance as well as the unforeseen breakdown.

Trained in preventing unpredictable breakdowns, our service teams can provide a tailor made preventative maintenance program to suit your particular requirements.



Installation

We can provide a fully integrated, readily available, engineered solution to ensure that a cost effective installation is carried out with the minimum of delay. The work is undertaken by our specialist installation engineers and covers both mechanical and electrical work



Our pump brands we supply:

