



HELICAL - HYPOID GEAR UNITS



TKM



TKB

Euro Drive Systems Limited

Euro Drive Systems Ltd. are sole importers and distributors for a range of power transmission products, frequency inverters and soft starters which are manufactured in China in modern manufacturing facilities to meet high quality standards demanded of the European market. The price structure is very competitive and delivery is normally ex-stock in UK .It is our aim, that by using these quality products that are produced in large volumes, manufacturers will be able to reduce their power transmission cost enabling them to be more competitive , In addition end users will be able to further reduce their routine replacement running costs.

Product Range available direct from the UK:

- * High efficient Aluminium Right Angle Helical-Hypoid TKM and TKB Gearbox replacing most medium size Worm gear reducers that are currently available in the market with similar hollow shaft and footprints. Ratios are available from 7.7 to 295:1 and power ratings up to 7.5kW, efficiency up to 94%. All of the flanges and fittings are compatible with the right angle worm wheel units.
- * Standard Right Angle Worm and Wheel Geared Motors.
- * Mechanical Disc Variators 0.18kW to 2.2kW.
- * In-Line Helical Geared Motor 20mm to 40 mm Shaft sizes with modular detachable feet or flange mounted.
- * DC motor 12 and 24V from 6W to 3kW.
- * Compact AC/DC mini gear speed motors single and 3PH with speed controller, ranging in power from 6W to 150W
- * Competitive range of Inverter Drives and Soft Starts.
- * IE2 Electric Motors at competitive prices.



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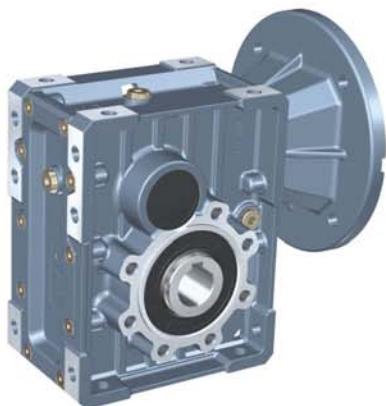
1. PRODUCT PICTURE



TKM28B~ 58B



TKM28C~ 58C



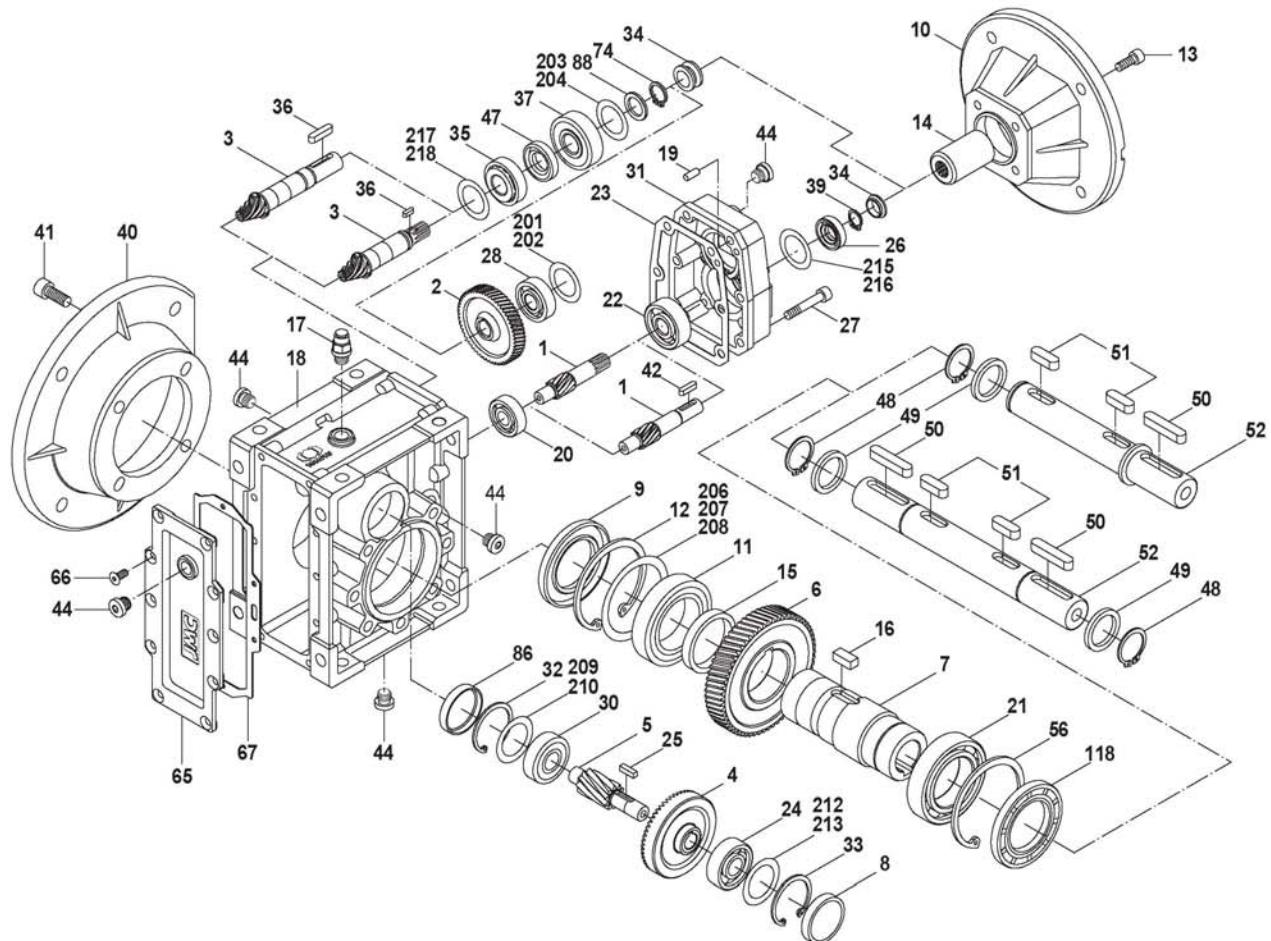
TKB38B~ 58B



TKB38C~ 58C

BASIC STRUCTURE

1.1 Basic structure



1	Pinion	25	Key	56	Hole-circlip
2	Gear	26	Oil seal	65	Gearcase cover
3	Pinion shaft	27	Inner hex screw	66	Hexagon sunk screw
4	Gear	28	Bearing	67	Rubber gasket
5	Pinion shaft	30	Bearing	74	Shaft-circlip
6	Gear	31	3 stage gearcase	86	Closing cap
7	Hollow shaft	32	Hole-circlip	88	Washer
8	Closing cap	33	Hole-circlip	118	Oil seal
9	Oil seal	34	Rubber boot	201	Shim ring
10	Input flange	35	Bearing	202	Shim ring
11	Bearing	36	Key	203	Shim ring
12	Hole-circlip	37	Bearing	204	Shim ring
13	Inner hex screw	39	Shaft-circlip	206	Shim ring
14	Input shaft	40	Output flage	207	Shim ring
15	Spacer	41	Inner hex screw	208	Shim ring
16	Key	42	Key	209	Shim ring
17	Breather valve	44	Oil plug	210	Shim ring
18	Gearcase	47	Oil seal	212	Shim ring
19	Stifte	48	Shaft-circlip	213	Shim ring
20	Bearing	49	Gasket	215	Shim ring
21	Bearing	50	Key	216	Shim ring
22	Bearing	51	Key	217	Shim ring
23	Housing gasket	52	Double output shaft	218	Shim ring
24	Bearing	53	Single output shaft		

2. SUMMARIZE

2.1 Products characteristics

TKM、TKB series helical-hypoid gear units is a new-generation of product developed by TONGYU . with a compromise of advanced technology both at home and abroad, its main features are as follows:

1. Driven by hypoid gear,has big ratios.
2. High output torque,high efficiency,energy saving and environmental protection.
3. Made of high-quqlity aluminum alloy, light in weight and nonrusting.
4. Smooth in running and low in noise, can work long time in dreadful conditions.
5. Good appearance, durable in service life and small in volume.
6. Suitable for all round installation,wide application and easy of use.
7. The mounting dimension of **TKM** series are compatible with **TNRV** series worm gear unit(A part from **TNRV050** dimensions which are different with **TKM28**).
8. The mounting dimension of **TKB** series are compatible with **W** series worm gear unit.
9. Modulaw and multistructure can meet the demands of various conditions .

2.2 Main materials

1. Housing: die-cast aluminum alloy (frame size: 28 to 68); .
2. gear wheel: 20CrMnTiH1, carbonize & quenched heat treatment make the hardness of gear's surface up to 56~62 HRC, retain carburization layer's thickness between 0.3 and 0.5mm after precise grinding.

2.3 Surface painting

Aluminum alloy housing:

1. Shot blasting and special antiseptic treatment on the aluminum alloy surface.
2. After phosphating,spray the paint RAL9022 in silver white.

2. SUMMARIZE

2.1 Products characteristics

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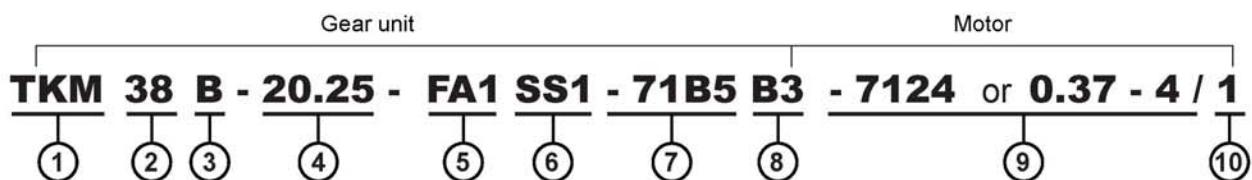
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MODEL ILLUMINATE

3. MODEL ILLUMINATE



No	Comments
1	Code for gear units series: TKM, TKB
2	Specification code of gear units 28、38、48、58、68
3	1). B : Means 2 stages 2). C : Means 3 stages
4	Speed ratio of reducer i
5	1). No mark means without output flange 2). FA,FB,FC,FD,FE(1/2) : output Flange and position
6	1). No mark means hole output 2). SS(1/2) : Single output shaft and position 3). DS : Double output shaft
7	1). Input flange code(63B5、71B5、71B14.....) 2). HS : means shaft input
8	Installation position code
9	1). No mark means without motor 2). Model motos (poles of power)
10	Position diagram for motor terminal box default position 1 not to write out is ok

When ordering, you should show whether the reducers are equipped with motors, otherwise reducers aren't supplied with motors.

Example: **TKM48B - 15.09 - FA1 - 71B5 - 7124**

4. RELEVANT PARAMETER

4.1 Power P

$$\begin{aligned}P_1 &= \frac{P_2}{\eta} \text{ [kW]} \\P_{1n} &\geq P_1 \cdot f_s \text{ [kW]}\end{aligned}$$

- P₁** Input power
P₂ Output power
P_{1n} Rated power driving motor
f_s Service factor
η Transmission efficiency

The efficiency of TKM, TKB gear units varies with the number of gear stages, between 94 % (2-stage), 92 % (3-stage).

4.2 Rotation speed n

- n₁** Gear units input speed
n₂ Gear units output speed

If driven by the external gearing, 1400r/min or lower rotation speed is suggested so as to optimize the working conditions and prolong the service life. Higher input rotation speed is permitted, but in this situation, the rated torque **M₂** will be reduced.

4.3 Transmission ratio i

$$i = \frac{n_1}{n_2}$$

Usually transmission ratio is decimal fraction with 2 radix point tagged in selection tables.

4.4 Torque M

$$M_2 = \frac{9550 \cdot P_1 \cdot \eta}{n_2} \text{ [Nm]}$$

$$M_{2n} \geq M_2 \cdot f_s \text{ [Nm]}$$

- M₂** Output torque
M_{2n} Selected output torque
P₁ Input power
η Transmission efficiency
f_s Service factor

4.5 Service factor f_s

The effect of the driven machine on the gear unit is taken into account to a sufficient level of accuracy using the service factor **f_s**. The service factor is determined according to the daily operating time and the starting frequency **Z**.

RELEVANT PARAMETER

Three load classifications are considered depending on the mass acceleration factor. You can read off the service factor applicable to your application in following Figure. The service factor selected using this diagram must be less than or equal to the service factor as given in the performance parameter table.

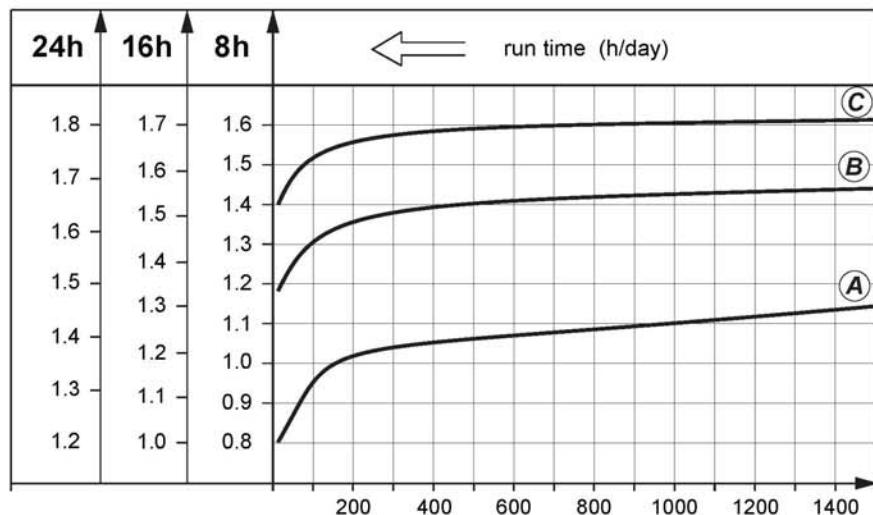


Fig: Service factor (f_s)

start up frequency Z (1/h) #

starting frequency Z : The cycles include all starting and braking procedures as well as change overs from low to high speed.

4.5.1 load classifications

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

oad classifications:

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

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.

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

4.5.2 Mass acceleration factor

The mass acceleration factor is calculated as follows:

$$f_a = \frac{J_c}{J_m}$$

f_a Mass acceleration factor

J_c All external mass moments of inertia (kgm²)

J_m Mass moment of inertia on the motor end (kgm²)

If mass acceleration factors **f_a**>10, please call our Technical Service.

To keep the service-life of gear units, the use factor **f_s** selected from the catalogue must be equal or slightly higher than the calculated use factor **f_s**.

Example:

Mass acceleration factor 2.5 (load classification **(B)**), 14 hours/day operating time (read off at 16 h/d) and 200 cycles/hour result in a service factor **f_s** =1.48.

choose the service factor **f_s** = 1.48 according to the parameter sheet .

4.6 Overhung loads and axial forces

When determining the resulting radial loads, the type of transmission elements, mounted on the shaft end must be considered. Various transmission elements are corresponding with following transmission element factors **f_z**:

Transmission element	Transmission element factor F_z	Comments
Gears	1.15	< 17 teeth
Chain sprockets	1.25	< 20 teeth
	1.40	< 13 teeth
Narrow V-belt pulleys	1.75	Influence of the tensile force
Flat belt pulleys	2.50	Influence of the tensile force
Toothed belt pulleys	2.50	Influence of the tensile force

The overhung loads exerted on the motor or gear shaft is then calculated as follows:

$$F_r = \frac{M \cdot 2000 \cdot f_z}{d_0} [N]$$

F_r Resulting radial load [N]

M Torque on the shaft [Nm]

d₀ Mean diameter of the mounted transmission element in [mm]

f_z Transmission element factor

The basis for determining the permitted radial loads is the computation of the rated service life **L10h** of the bearings (according to ISO281). For special operating conditions, the permitted radial loads can be determined with regard to the modified service life **Lna**.

The permitted radial loads given in the selection tables must be calculated using the following formula in the event of force application not in the center of the shaft end. The smaller of the two values F_{xL} (according to bearing service life)

F_{xL} according to bearing service life:

$$F_{xL} = F_{r(1,2)} \cdot \frac{a}{b+x} [N]$$

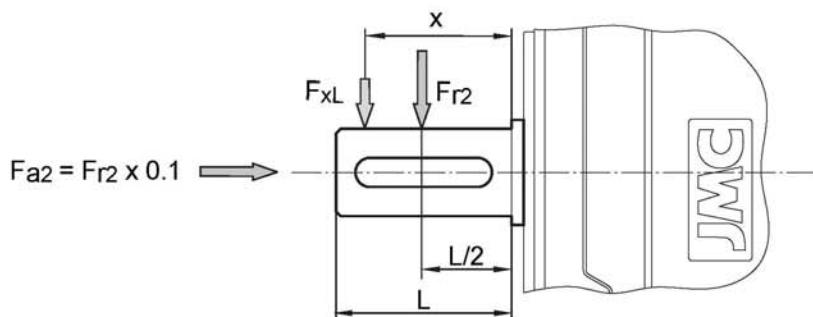
$$F_{xL} = F_{r(1,2)} \cdot \frac{a}{b+x} [N]$$

F_{r1}, F_{r2} = Permitted overhung load ($x = L/2$) for foot-mounted gear units according to the selection tables in [N]

x = Distance from the shaft shoulder to the force application point in [mm]

a, b = Gear unit constant for overhung load conversion [mm]

Output shafts radial loads



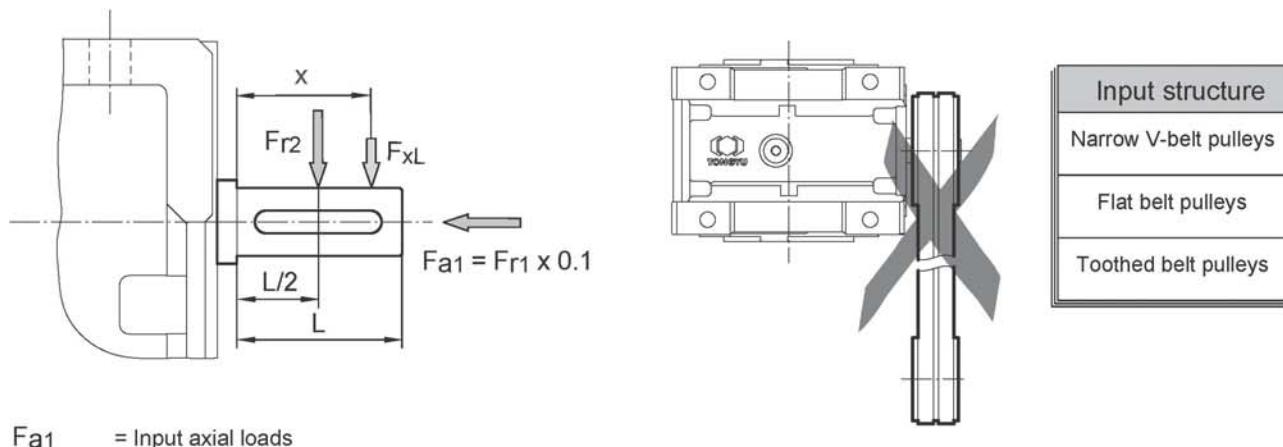
F_{a2} = Output axial loads

TKM Gear unit constants for overhung load conversion:

	TKM28B	TKM28C	TKM38B	TKM38C	TKM48B	TKM48C	TKM58B	TKM58C
a	104	104	118	118	131	131	159	159
b	78	78	93	93	101	101	119	119

TKB Gear unit constants for overhung load conversion:

			TKB38B	TKB38C	TKB48B	TKB48C	TKB58B	TKB58C
a			128	128	135	135	148.5	148.5
b			98	98	105	105	118.5	118.5

Input shafts radial loads

It is forbidden to use the input on the right chart (including 3 stage input).

TKM / TKB Gear unit constants for overhung load conversion:

	TKM28B	TKM28C	TKM38B TKB38B	TKM38C TKB38C	TKM48B TKB48B	TKM48C TKB48C	TKM58B TKB58B	TKM58C TKB58C
a	51.5	56	58	56	73	70	81	70
b	40	44.5	43	44.5	53	55	61	55

4.7 Selection tables comments

Combination with the motor in the header row is possible

Combination with the motor in the header row is not possible

* Finite gear unit reduction ratio;

P_{1n} Rated power driving motor [kW];

n_2 Output speed [r/min];

M_{2n} Output torque [Nm];

$M_{2\max}$ Max. permissible output torque

[Nm]

F_{r2} Permissible overhung load output side [N]

i Gear unit nominal ratio;

i_{a} Gear unit actual ratio;

f_s Service factor;



Gear unit type;



Motor type;

Page

Dimension sheet page no;

RELEVANT PARAMETER

5 SELECTION EXAMPLE

5.1 Gear motor

Example: Required power 0.25kW on driven machine, work for 8 h/day, moderate shock load, start up frequency 100(1/h), $n_2=35\text{r/min}$, **B3** mounted, So:

Check the service factor table at page 7 ,choose $f_s=1.3$

$$i = \frac{n_1}{n_2} = \frac{1400}{35} = 40$$

$$P_{1n} \geq P_1 \cdot f_s = \frac{P_2}{\eta} \cdot f_s = \frac{0.25}{0.94} \times 1.3 = 0.345 \text{ [kW]}$$

Choose type:

TKM28B - 40.09 - 71B5 - 7124 - B3

5.2 Gear units

Example: Required torque 200Nm on driven machine, work 8 h/day, uniform load, start up frequency 400(1/h), **FA1** mounted, $n_1=900\text{ r/min}$,

$n_2=2.5\text{ r/min}$, so the only selection is 3 stage after checked the table:

Check the service factor table at page 7 ,choose $f_s=1.05$

$$i = \frac{n_1}{n_2} = \frac{900}{6} = 150$$

$$M_{2n} \geq M_2 \cdot f_s = 200 \times 1.05 = 210 \text{ [Nm]}$$

$$P_{1n} \geq P_1 \cdot f_s = \frac{M_2 \cdot n_1}{9550 \cdot \eta \cdot i} \cdot f_s = \frac{210 \times 900}{9550 \times 0.92 \times 150} \times 1.05 = 0.151 \text{ [kW]}$$

Choose type:

TKM48C-151.20-FA1

6. GEAR UNIT SELECTION TABLES**6.1 Possible geometrical combinations****TKM28..** $n_1=1400$ r/min**130Nm**

Gear units	i Nominal	i Actual	n_2 [r/min]	$M_{2\max}$ [Nm]	F_{r2} [N]	63B5	71B5 71B14	80B5 80B14	90B5 90B14
3 Stage									
TKM28C	300	291.79	4.8	130	4100				
TKM28C	250	244.29	5.7	130	4100				
TKM28C	200	200.44	7.0	130	4100				
TKM28C	150	146.67	9.5	130	4000				
TKM28C	125	120.34	11.6	100	3770				
TKM28C	100	101.04	13.9	80	3560				
TKM28C	75	74.62	18.8	130	3220				
TKM28C	60	62.36	22	100	3030				
TKM28C	50	52.36	27	110	2860				
2 Stage									
TKM28B	60	58.36	24	130	2960				
TKM28B	50	48.86	29	130	2790				
TKM28B	40	40.09	35	130	2610				
TKM28B	30	29.33	48	130	2350				
TKM28B	25	24.07	58	130	2200				
TKM28B	20	20.21	69	100	2080				
TKM28B	15	14.92	94	80	1880				
TKM28B	12.5	12.47	112	130	1770				
TKM28B	10	10.47	134	100	1670				
TKM28B	7.5	7.73	181	80	1510				

TKM38.., TKB38.. $n_1=1400$ r/min**200Nm**

Gear units	i Nominal	i Actual	n_2 [r/min]	$M_{2\max}$ [Nm]	F_{r2} [N]	63B5	71B5 71B14	80B5 80B14	90B5 90B14
3 Stage									
TKM38C TKB38C	300	302.50	4.6	200	4800				
TKM38C TKB38C	250	243.57	5.7	200	4800				
TKM38C TKB38C	200	196.43	7.1	180	4800				
TKM38C TKB38C	150	151.56	9.2	200	4650				
TKM38C TKB38C	125	122.22	11.5	180	4330				
TKM38C TKB38C	100	101.27	13.8	150	4070				
TKM38C TKB38C	75	73.33	19.1	110	3650				
TKM38C TKB38C	60	63.33	22	180	3480				
TKM38C TKB38C	50	52.48	27	150	3270				
2 Stage									
TKM38B TKB38B	60	60.50	23	200	3430				
TKM38B TKB38B	50	48.71	29	200	3190				
TKM38B TKB38B	40	39.29	36	180	2970				
TKM38B TKB38B	30	30.31	46	200	2720				
TKM38B TKB38B	25	24.44	57	180	2530				
TKM38B TKB38B	20	20.25	69	150	2380				
TKM38B TKB38B	15	14.67	95	110	2130				
TKM38B TKB38B	12.5	12.67	110	180	2030				
TKM38B TKB38B	10	10.50	133	150	1910				
TKM38B TKB38B	7.5	7.60	184	110	1710				

TKM48.., TKB48..n₁=1400 r/min**350Nm**

Gear units	i Nominal	i Actual	n ₂ [r/min]	M ₂ max [Nm]	F _{r2} [N]	63B5	71B5	80B5 80B14	90B5 90B14	100B5 100B14	112B5 112B14
3 Stage											
TKM48C	TKB48C	300	297.21	4.7	350	6500					
TKM48C	TKB48C	250	240.89	5.8	350	6500					
TKM48C	TKB48C	200	200.66	7.0	300	6500					
TKM48C	TKB48C	150	151.20	9.3	350	6500					
TKM48C	TKB48C	125	125.95	11.1	300	5980					
TKM48C	TKB48C	100	99.22	14.1	240	5520					
TKM48C	TKB48C	75	75.45	18.6	200	5040					
TKM48C	TKB48C	60	62.43	22	300	4730					
TKM48C	TKB48C	50	49.18	28	240	4370					
2 Stage											
TKM48B	TKB48B	60	59.44	24	350	4660					
TKM48B	TKB48B	50	48.18	29	350	4340					
TKM48B	TKB48B	40	40.13	35	300	4080					
TKM48B	TKB48B	30	30.24	46	350	3720					
TKM48B	TKB48B	25	25.19	56	300	3500					
TKM48B	TKB48B	20	19.84	71	240	3230					
TKM48B	TKB48B	15	15.09	93	200	2950					
TKM48B	TKB48B	12.5	12.49	112	300	2770					
TKM48B	TKB48B	10	9.84	142	240	2550					
TKM48B	TKB48B	7.5	7.48	187	200	2330					

TKM58.., TKB58..n₁=1400 r/min**500Nm**

Gear units	i Nominal	i Actual	n ₂ [r/min]	M ₂ max [Nm]	F _{r2} [N]	63B5	71B5	80B5 80B14	90B5 90B14	100B5 100B14	112B5 112B14
3 Stage											
TKM58C	TKB58C	300	295.18	4.7	500	8300					
TKM58C	TKB58C	250	240.89	5.8	500	8300					
TKM58C	TKB58C	200	200.66	7.0	480	8300					
TKM58C	TKB58C	150	151.20	9.3	500	8050					
TKM58C	TKB58C	125	125.95	11.1	480	7580					
TKM58C	TKB58C	100	99.22	14.1	380	7000					
TKM58C	TKB58C	75	75.45	18.6	300	6390					
TKM58C	TKB58C	60	62.43	22	480	6000					
TKM58C	TKB58C	50	49.18	28	380	5540					
2 Stage											
TKM58B	TKB58B	60	59.04	24	500	5890					
TKM58B	TKB58B	50	48.18	29	500	5500					
TKM58B	TKB58B	40	40.13	35	480	5170					
TKM58B	TKB58B	30	30.24	46	500	4710					
TKM58B	TKB58B	25	25.19	56	480	4430					
TKM58B	TKB58B	20	19.84	71	380	4090					
TKM58B	TKB58B	15	15.09	93	300	3730					
TKM58B	TKB58B	12.5	12.49	112	480	3510					
TKM58B	TKB58B	10	9.84	142	380	3240					
TKM58B	TKB58B	7.5	7.48	187	300	2950					

POSSIBLE GEOMETRICAL COMBINATIONS

TKM68.., TKB68..

$n_1=1400$ r/min

750Nm

Gear units	i Nominal	i Actual	n_2 [r/min]	$M_{2\max}$ [Nm]	F_{r2} [N]	71B5	80B5	90B5	100B5 100B14	112B5 112B14	132B5
3 Stage											
TKM68C	TKB68C	300	296.10	4.7	750	10000					
TKM68C	TKB68C	250	244.29	5.7	750	10000					
TKM68C	TKB68C	200	206.29	6.8	750	9920					
TKM68C	TKB68C	150	153.33	9.1	750	8980					
TKM68C	TKB68C	125	129.48	10.8	750	8490					
TKM68C	TKB68C	100	103.64	13.5	650	7880					
TKM68C	TKB68C	75	75.55	18.5	520	7090					
TKM68C	TKB68C	60	64.18	22	750	6720					
TKM68C	TKB68C	50	51.37	27	650	6240					
2 Stage											
TKM68B	TKB68B	60	59.22	24	750	6540					
TKM68B	TKB68B	50	48.86	29	750	6130					
TKM68B	TKB68B	40	41.26	34	750	5800					
TKM68B	TKB68B	30	30.67	46	750	5250					
TKM68B	TKB68B	25	25.90	54	750	4960					
TKM68B	TKB68B	20	20.73	68	650	4610					
TKM68B	TKB68B	15	15.11	93	520	4150					
TKM68B	TKB68B	12.5	12.84	109	750	3930					
TKM68B	TKB68B	10	10.27	136	650	3650					
TKM68B	TKB68B	7.5	7.49	187	520	3280					

6.2 TKM.. / TKB..(IEC).. Performance parameter

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	fs			Page	
0.12	5.7	184	250	244.29	4100	0.7	TKM28C	63B5	6314	37
	7.0	151	200	200.44	4100	0.9				
	9.5	110	150	146.67	4000	1.2				
	11.6	91	125	120.34	3770	1.4				
	13.9	76	100	101.04	3560	1.3				
	18.8	56	75	74.62	3220	1.4				
	22.5	47	60	62.36	3030	2.8				
	26.7	39	50	52.36	2860	2.5				
	24.0	45	60	58.36	2960	2.9	TKM28B	63B5	6314	36
	28.7	38	50	48.86	2790	3.5				
0.18	35	31	40	40.09	2610	4.2				
	48	23	30	29.33	2350	5.8				
	58	18.5	25	24.07	2200	7.0				
	69	15.6	20	20.21	2080	6.4				
	94	11.5	15	14.92	1880	7.0				
	112	9.6	12.5	12.47	1770	13.5				
	134	8.1	10	10.47	1670	12.4				
	181	5.9	7.5	7.73	1510	13.5				
	4.6	228	300	302.50	4800	0.9	TKM38C	63B5	6314	39
	5.7	183	250	243.57	4800	1.1	TKB38C	63B5	6314	47
0.22	7.1	148	200	196.43	4800	1.2				
	9.2	114	150	151.56	4650	1.8				
	11.5	92	125	122.22	4330	2.0				
	13.8	76	100	101.27	4070	2.0				
	19.1	55	75	73.33	3650	2.0				
	22.1	48	60	63.33	3480	3.8				
	26.7	40	50	52.48	3270	3.8				
	23.1	47	60	60.50	3430	4.3	TKM38B	63B5	6314	38
	28.7	37	50	48.71	3190	5.3	TKB38B	63B5	6314	46
	36	30	40	39.29	2970	6.0				
0.30	46	23	30	30.31	2720	8.6				
	4.7	224	300	297.21	6500	1.6	TKM48C	63B5	6314	41
	5.8	181	250	240.89	6500	1.9	TKB48C	63B5	6314	49
	7.0	151	200	200.66	6500	2.0				
	9.3	114	150	151.20	6500	3.1				
	11.1	95	125	125.95	5980	3.2				
	14.1	75	100	99.22	5520	3.2				
	18.6	57	75	75.45	5040	3.5				
	4.7	222	300	295.18	8300	2.2	TKM58C	63B5	6314	43
	5.8	181	250	240.89	8300	2.8	TKB58C	63B5	6314	51
0.18	7.0	151	200	200.66	8300	3.2				
	9.3	114	150	151.20	8050	4.4				
	9.6	165	300	291.79	4000	0.8	TKM28C	63B5	6312	37
	11.5	138	250	244.29	3790	0.9				
	14.0	113	200	200.44	3550	1.1				
	19.1	83	150	146.67	3200	1.6				
	23.3	68	125	120.34	2990	1.9				
	27.7	57	100	101.04	2820	1.8				
	38	42	75	74.62	2550	1.9				
	45	35	60	62.36	2400	3.7				
	53	30	50	52.36	2270	3.4				
0.37	48	34	60	58.36	2350	3.9	TKM28B	63B5	6312	36
	57	28	50	48.86	2220	4.6				
	70	23	40	40.09	2070	5.6				

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.18	95	16.9	30	29.33	1870	7.7	TKM28B	63B5	6312	36
	116	13.9	25	24.07	1750	9.4				
	11.6	136	125	120.34	3770	1.0	TKM28C	63B5	6324	37
	13.9	114	100	101.04	3560	0.9				
	18.8	84	75	74.62	3220	0.9				
	22.5	70	60	62.36	3030	1.8				
	26.7	59	50	52.36	2860	1.7				
	24.0	67	60	58.36	2960	1.9	TKM28B	63B5	6324	36
	28.7	56	50	48.86	2790	2.3				
	35	46	40	40.09	2610	2.8				
	48	34	30	29.33	2350	3.8				
	58	28	25	24.07	2200	4.7				
	69	23	20	20.21	2080	4.3				
	94	17.2	15	14.92	1880	4.6				
	112	14.4	12.5	12.47	1770	9.0				
	134	12.1	10	10.47	1670	8.3				
	181	8.9	7.5	7.73	1510	9.0				
	14.4	110	60	62.36	3510	1.2	TKM28C	71B5/B14	7116	37
	17.2	92	50	52.36	3310	1.1				
	15.4	105	60	58.36	3430	1.2	TKM28B	71B5/B14	7116	36
	18.4	88	50	48.86	3240	1.5				
	22.4	72	40	40.09	3030	1.8				
	31	53	30	29.33	2730	2.5				
	37	43	25	24.07	2550	3.0				
	45	36	20	20.21	2410	2.8				
	60	27	15	14.92	2180	3.0				
	72	22	12.5	12.47	2050	5.8				
	86	18.8	10	10.47	1930	5.3				
	116	13.9	7.5	7.73	1750	5.8				
	9.3	171	300	302.50	4650	1.2	TKM38C	63B5	6312	39
	11.5	138	250	243.57	4330	1.5	TKB38C	63B5	6312	47
	14.3	111	200	196.43	4030	1.6				
	18.5	86	150	151.56	3690	2.3				
	22.9	69	125	122.22	3440	2.6				
	27.6	57	100	101.27	3230	2.6				
	38	41	75	73.33	2900	2.7				
	44	36	60	63.33	2760	5.0				
	53	30	50	52.48	2590	5.1				
	7.1	222	200	196.43	4800	0.8	TKM38C	63B5	6324	39
	9.2	171	150	151.56	4650	1.2	TKB38C	63B5	6324	47
	11.5	138	125	122.22	4330	1.3				
	13.8	114	100	101.27	4070	1.3				
	19.1	83	75	73.33	3650	1.3				
	22.1	72	60	63.33	3480	2.5				
	26.7	59	50	52.48	3270	2.5				
	23.1	70	60	60.50	3430	2.9	TKM38B	63B5	6324	38
	28.7	56	50	48.71	3190	3.6	TKB38B	63B5	6324	46
	36	45	40	39.29	2970	4.0				
	12.3	129	75	73.33	4230	0.9	TKM38C	71B5/B14	7116	39
	14.2	111	60	63.33	4030	1.6	TKB38C	71B5/B14	7116	47
	17.1	92	50	52.48	3790	1.6				
	14.9	109	60	60.50	3970	1.8	TKM38B	71B5/B14	7116	38
	18.5	87	50	48.71	3690	2.3	TKB38B	71B5/B14	7116	46
	22.9	71	40	39.29	3440	2.6				
	29.7	54	30	30.31	3150	3.7				
	37	44	25	24.44	2930	4.1				
	44	36	20	20.25	2760	4.1				
	61	26	15	14.67	2470	4.2				

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.18	9.4	168	300	297.21	6320	2.1	TKM48C	63B5	6312	41
	11.6	136	250	240.89	5890	2.6	TKB48C	63B5	6312	49
	14.0	113	200	200.66	5540	2.6				
	18.5	85	150	151.20	5040	4.1				
	4.7	336	300	297.21	6500	1.0	TKM48C	63B5	6324	41
	5.8	272	250	240.89	6500	1.3	TKB48C	63B5	6324	49
	7.0	227	200	200.66	6500	1.3				
	9.3	171	150	151.20	6500	2.0				
	11.1	142	125	125.95	5980	2.1				
	14.1	112	100	99.22	5520	2.1				
	18.6	85	75	75.45	5040	2.3				
	4.5	353	200	200.66	6500	0.9	TKM48C	71B5	7116	41
	6.0	266	150	151.20	6500	1.3	TKB48C	71B5	7116	49
	7.1	221	125	125.95	6500	1.4				
	9.1	174	100	99.22	6400	1.4				
	11.9	133	75	75.45	5840	1.5				
	14.4	110	60	62.43	5480	2.7				
	18.3	86	50	49.18	5060	2.8				
	15.1	107	60	59.44	5390	3.3	TKM48B	71B5	7116	40
	18.7	87	50	48.18	5030	4.0	TKB48B	71B5	7116	48
0.25	9.5	167	300	295.18	7990	3.0	TKM58C	63B5	6312	43
	11.6	136	250	240.89	7470	3.7	TKB58C	63B5	6312	51
	4.7	333	300	295.18	8300	1.5	TKM58C	63B5	6324	43
	5.8	272	250	240.89	8300	1.8	TKB58C	63B5	6324	51
	7.0	227	200	200.66	8300	2.1				
	9.3	171	150	151.20	8050	2.9				
	11.1	142	125	125.95	7580	3.4				
	14.1	112	100	99.22	7000	3.4				
	18.6	85	75	75.45	6390	3.5				
	3.0	519	300	295.18	8300	1.0	TKM58C	71B5	7116	43
	3.7	423	250	240.89	8300	1.2	TKB58C	71B5	7116	51
	4.5	353	200	200.66	8300	1.4				
	6.0	266	150	151.20	8300	1.9				
	7.1	221	125	125.95	8300	2.2				
	9.1	174	100	99.22	8110	2.2				
	11.9	133	75	75.45	7400	2.3				
	14.4	110	60	62.43	6950	4.4				
	18.3	86	50	49.18	6420	4.4				
	3.0	520	300	296.10	10000	1.4	TKM68C	71B5	7116	45
	3.7	429	250	244.29	10000	1.7	TKB68C	71B5	7116	53
	4.4	362	200	206.29	10000	2.1				
	5.9	269	150	153.33	10000	2.8				
	7.0	228	125	129.48	9840	3.3				
	8.7	182	100	103.64	9130	3.6				
	11.9	133	75	75.55	8220	3.9				
	19.1	115	150	146.67	3200	1.1	TKM28C	63B5	6322	37
	23.3	94	125	120.34	2990	1.4				
	27.7	79	100	101.04	2820	1.3				
	38	59	75	74.62	2550	1.4				
	45	49	60	62.36	2400	2.7				
	53	41	50	52.36	2270	2.4				
	48	47	60	58.36	2350	2.8	TKM28B	63B5	6322	36
	57	39	50	48.86	2220	3.3				
	70	32	40	40.09	2070	4.0				
	22.5	98	60	62.36	3030	1.3	TKM28C	71B5/B14	7114	37
	26.7	82	50	52.36	2860	1.2				
	24.0	94	60	58.36	2960	1.4	TKM28B	71B5/B14	7114	36
	28.7	78	50	48.86	2790	1.7				

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.25	35	64	40	40.09	2610	2.0	TKM28B	71B5/B14	7114	36
	48	47	30	29.33	2350	2.8				
	58	39	25	24.07	2200	3.4				
	69	32	20	20.21	2080	3.1				
	94	24	15	14.92	1880	3.3				
	15.4	146	60	58.36	3430	0.9	TKM28B	71B5/B14	7126	36
	18.4	122	50	48.86	3240	1.1				
	22.4	100	40	40.09	3030	1.3				
	31	73	30	29.33	2730	1.8				
	37	60	25	24.07	2550	2.2				
	45	50	20	20.21	2410	2.0				
	60	37	15	14.92	2180	2.2				
	72	31	12.5	12.47	2050	4.2				
	86	26	10	10.47	1930	3.8				
	116	19.3	7.5	7.73	1750	4.2				
	11.5	191	250	243.57	4330	1.0	TKM38C	63B5	6322	39
	14.3	154	200	196.43	4030	1.2	TKB38C	63B5	6322	47
	18.5	119	150	151.56	3690	1.7				
	22.9	96	125	122.22	3440	1.9				
	27.6	79	100	101.27	3230	1.9				
	38	58	75	73.33	2900	1.9				
	44	50	60	63.33	2760	3.6				
	53	41	50	52.48	2590	3.6				
	11.5	192	125	122.22	4330	0.9	TKM38C	71B5/B14	7114	39
	13.8	159	100	101.27	4070	0.9	TKB38C	71B5/B14	7114	47
	19.1	115	75	73.33	3650	1.0				
	22.1	99	60	63.33	3480	1.8				
	26.7	82	50	52.48	3270	1.8				
	23.1	97	60	60.50	3430	2.1	TKM38B	71B5/B14	7114	38
	28.7	78	50	48.71	3190	2.6	TKB38B	71B5/B14	7114	46
	36	63	40	39.29	2970	2.9				
	46	49	30	30.31	2720	4.1				
	14.2	155	60	63.33	4030	1.2	TKM38C	71B5/B14	7126	39
	17.1	128	50	52.48	3790	1.2	TKB38C	71B5/B14	7126	47
	14.9	151	60	60.50	3970	1.3	TKM38B	71B5/B14	7126	38
	18.5	121	50	48.71	3690	1.6	TKB38B	71B5/B14	7126	46
	22.9	98	40	39.29	3440	1.8				
	29.7	76	30	30.31	3150	2.6				
	37	61	25	24.44	2930	3.0				
	44	50	20	20.25	2760	3.0				
	61	37	15	14.67	2470	3.0				
	9.4	233	300	297.21	6320	1.5	TKM48C	63B5	6322	41
	11.6	189	250	240.89	5890	1.9	TKB48C	63B5	6322	49
	14.0	157	200	200.66	5540	1.9				
	18.5	119	150	151.20	5040	3.0				
	22.2	99	125	125.95	4750	3.0				
	28.2	78	100	99.22	4380	3.1				
	37	59	75	75.45	4000	3.4				
	5.8	378	250	240.89	6500	0.9	TKM48C	71B5	7114	41
	7.0	315	200	200.66	6500	1.0	TKB48C	71B5	7114	49
	9.3	237	150	151.20	6500	1.5				
	11.1	198	125	125.95	5980	1.5				
	14.1	156	100	99.22	5520	1.5				
	18.6	118	75	75.45	5040	1.7				
	22.4	98	60	62.43	4730	3.1				
	28.5	77	50	49.18	4370	3.1				
	6.0	369	150	151.20	6500	0.9	TKM48C	71B5	7126	41
	7.1	307	125	125.95	6500	1.0	TKB48C	71B5	7126	49

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.25	9.1	242	100	99.22	6400	1.0	TKM48C	71B5	7126	41
	11.9	184	75	75.45	5840	1.1	TKB48C	71B5	7126	49
	14.4	152	60	62.43	5480	2.0				
	18.3	120	50	49.18	5060	2.0				
	15.1	148	60	59.44	5390	2.4	TKM48B	71B5	7126	40
	18.7	120	50	48.18	5030	2.9	TKB48B	71B5	7126	48
	22.4	100	40	40.13	4730	3.0				
	9.5	232	300	295.18	7990	2.2	TKM58C	63B5	6322	43
	11.6	189	250	240.89	7470	2.6	TKB58C	63B5	6322	51
	14.0	157	200	200.66	7030	3.0				
	18.5	119	150	151.20	6390	4.2				
	4.7	463	300	295.18	8300	1.1	TKM58C	71B5	7114	43
	5.8	378	250	240.89	8300	1.3	TKB58C	71B5	7114	51
	7.0	315	200	200.66	8300	1.5				
	9.3	237	150	151.20	8050	2.1				
	11.1	198	125	125.95	7580	2.4				
	14.1	156	100	99.22	7000	2.4				
	18.6	118	75	75.45	6390	2.5				
	22.4	98	60	62.43	6000	4.9				
	28.5	77	50	49.18	5540	4.9				
	3.7	588	250	240.89	8300	0.9	TKM58C	71B5	7126	43
	4.5	490	200	200.66	8300	1.0	TKB58C	71B5	7126	51
	6.0	369	150	151.20	8300	1.4				
	7.1	307	125	125.95	8300	1.6				
	9.1	242	100	99.22	8110	1.6				
	11.9	184	75	75.45	7400	1.6				
	14.4	152	60	62.43	6950	3.2				
	18.3	120	50	49.18	6420	3.2				
	15.2	147	60	59.04	6820	3.4	TKM58B	71B5	7126	42
	18.7	120	50	48.18	6370	4.2	TKB58B	71B5	7126	50
	4.7	465	300	296.10	10000	1.6	TKM68C	71B5	7114	45
	5.7	383	250	244.29	10000	2.0	TKB68C	71B5	7114	53
	6.8	324	200	206.29	9920	2.3				
	9.1	241	150	153.33	8980	3.1				
	10.8	203	125	129.48	8490	3.7				
	13.5	163	100	103.64	7880	4.0				
	3.0	723	300	296.10	10000	1.0	TKM68C	71B5	7126	45
	3.7	596	250	244.29	10000	1.3	TKB68C	71B5	7126	53
	4.4	503	200	206.29	10000	1.5				
	5.9	374	150	153.33	10000	2.0				
	7.0	316	125	129.48	9840	2.4				
	8.7	253	100	103.64	9130	2.6				
	11.9	184	75	75.55	8220	2.8				
0.37	23.3	140	125	120.34	2990	0.9	TKM28C	71B5/B14	7112	37
	27.7	117	100	101.04	2820	0.9				
	38	87	75	74.62	2550	0.9				
	45	72	60	62.36	2400	1.8				
	53	61	50	52.36	2270	1.6				
	48	69	60	58.36	2350	1.9				
	57	58	50	48.86	2220	2.2				
	70	48	40	40.09	2070	2.7				
	95	35	30	29.33	1870	3.7				
	24.0	138	60	58.36	2960	0.9	TKM28B	71B5/B14	7124	36
	28.7	116	50	48.86	2790	1.1				
	35	95	40	40.09	2610	1.4				
	48	70	30	29.33	2350	1.9				
	58	57	25	24.07	2200	2.3				
	69	48	20	20.21	2080	2.1				

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	fs			Page	
0.37	94	35	15	14.92	1880	2.3	TKM28B	71B5/B14	7124	36
	112	30	12.5	12.47	1770	4.4				
	134	25	10	10.47	1670	4.0				
	181	18.3	7.5	7.73	1510	4.4				
	22.4	148	40	40.09	3030	0.9	TKM28B	80B5/B14	8016	36
	31	108	30	29.33	2730	1.2				
	37	89	25	24.07	2550	1.5				
	45	75	20	20.21	2410	1.3				
	60	55	15	14.92	2180	1.5				
	72	46	12.5	12.47	2050	2.8				
	86	39	10	10.47	1930	2.6				
	116	29	7.5	7.73	1750	2.8				
	18.5	176	150	151.56	3690	1.1	TKM38C	71B5/B14	7112	39
	22.9	142	125	122.22	3440	1.3	TKB38C	71B5/B14	7112	47
	27.6	118	100	101.27	3230	1.3				
	38	85	75	73.33	2900	1.3				
	44	74	60	63.33	2760	2.4				
	53	61	50	52.48	2590	2.5				
	46	72	60	60.50	2720	2.8	TKM38B	71B5/B14	7112	38
	57	58	50	48.71	2530	3.5	TKB38B	71B5/B14	7112	46
	71	47	40	39.29	2350	3.9				
	22.1	147	60	63.33	3480	1.2	TKM38C	71B5/B14	7124	39
	26.7	122	50	52.48	3270	1.2	TKB38C	71B5/B14	7124	47
	23.1	144	60	60.50	3430	1.4	TKM38B	71B5/B14	7124	38
	28.7	116	50	48.71	3190	1.7	TKB38B	71B5/B14	7124	46
	36	93	40	39.29	2970	1.9				
	46	72	30	30.31	2720	2.8				
	57	58	25	24.44	2530	3.1				
	69	48	20	20.25	2380	3.1				
	95	35	15	14.67	2130	3.2				
	14.9	223	60	60.50	3970	0.9	TKM38B	80B5/B14	8016	38
	18.5	180	50	48.71	3690	1.1	TKB38B	80B5/B14	8016	46
	22.9	145	40	39.29	3440	1.2				
	29.7	112	30	30.31	3150	1.8				
	37	90	25	24.44	2930	2.0				
	44	75	20	20.25	2760	2.0				
	61	54	15	14.67	2470	2.0				
	71	47	12.5	12.67	2360	3.8				
	86	39	10	10.50	2210	3.9				
	118	28	7.5	7.60	1990	3.9				
	9.4	345	300	297.21	6320	1.0	TKM48C	71B5	7112	41
	11.6	280	250	240.89	5890	1.3	TKB48C	71B5	7112	49
	14.0	233	200	200.66	5540	1.3				
	18.5	176	150	151.20	5040	2.0				
	22.2	146	125	125.95	4750	2.1				
	28.2	115	100	99.22	4380	2.1				
	37	88	75	75.45	4000	2.3				
	45	72	60	62.43	3750	4.1				
	57	57	50	49.18	3470	4.2				
	9.3	351	150	151.20	6500	1.0	TKM48C	71B5	7124	41
	11.1	292	125	125.95	5980	1.0	TKB48C	71B5	7124	49
	14.1	230	100	99.22	5520	1.0				
	18.6	175	75	75.45	5040	1.1				
	22.4	145	60	62.43	4730	2.1				
	28.5	114	50	49.18	4370	2.1				
	23.6	141	60	59.44	4660	2.5	TKM48B	71B5	7124	40
	29.1	114	50	48.18	4340	3.1	TKB48B	71B5	7124	48
	35	95	40	40.13	4080	3.2				

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.37	14.4	225	60	62.43	5480	1.3	TKM48C	80B5/B14	8016	41
	18.3	178	50	49.18	5060	1.4	TKB48C	80B5/B14	8016	49
	15.1	219	60	59.44	5390	1.6	TKM48B	80B5/B14	8016	40
	18.7	178	50	48.18	5030	2.0	TKB48B	80B5/B14	8016	48
	22.4	148	40	40.13	4730	2.0				
	29.8	112	30	30.24	4310	3.1				
	36	93	25	25.19	4050	3.2				
	45	73	20	19.84	3740	3.3				
	60	56	15	15.09	3410	3.6				
	9.5	343	300	295.18	7990	1.5	TKM58C	71B5	7112	43
	11.6	280	250	240.89	7470	1.8	TKB58C	71B5	7112	51
	14.0	233	200	200.66	7030	2.1				
	18.5	176	150	151.20	6390	2.8				
	22.2	146	125	125.95	6010	3.3				
	28.2	115	100	99.22	5550	3.3				
	37	88	75	75.45	5070	3.4				
	5.8	559	250	240.89	8300	0.9	TKM58C	71B5	7124	43
	7.0	466	200	200.66	8300	1.0	TKB58C	71B5	7124	51
	9.3	351	150	151.20	8050	1.4				
	11.1	292	125	125.95	7580	1.6				
	14.1	230	100	99.22	7000	1.6				
	18.6	175	75	75.45	6390	1.7				
	22.4	145	60	62.43	6000	3.3				
	28.5	114	50	49.18	5540	3.3				
	23.7	140	60	59.04	5890	3.6	TKM58B	71B5	7124	42
	29.1	114	50	48.18	5500	4.4	TKB58B	71B5	7124	50
	6.0	546	150	151.20	8300	0.9	TKM58C	80B5/B14	8016	43
	7.1	455	125	125.95	8300	1.1	TKB58C	80B5/B14	8016	51
	9.1	358	100	99.22	8110	1.1				
	11.9	273	75	75.45	7400	1.1				
	14.4	225	60	62.43	6950	2.1				
	18.3	178	50	49.18	6420	2.1				
	15.2	218	60	59.04	6820	2.3	TKM58B	80B5/B14	8016	42
	18.7	178	50	48.18	6370	2.8	TKB58B	80B5/B14	8016	50
	22.4	148	40	40.13	6000	3.2				
	9.5	344	300	296.10	8880	2.2	TKM68C	71B5	7112	45
	11.5	284	250	244.29	8330	2.6	TKB68C	71B5	7112	53
	13.6	240	200	206.29	7870	3.1				
	18.3	178	150	153.33	7130	4.2				
	4.7	688	300	296.10	10000	1.1	TKM68C	71B5	7124	45
	5.7	567	250	244.29	10000	1.3	TKB68C	71B5	7124	53
	6.8	479	200	206.29	9920	1.6				
	9.1	356	150	153.33	8980	2.1				
	10.8	301	125	129.48	8490	2.5				
	13.5	241	100	103.64	7880	2.7				
	18.5	175	75	75.55	7090	3.0				
	4.4	745	200	206.29	10000	1.0	TKM68C	80B5	8016	45
	5.9	554	150	153.33	10000	1.4	TKB68C	80B5	8016	53
	7.0	468	125	129.48	9840	1.6				
	8.7	374	100	103.64	9130	1.7				
	11.9	273	75	75.55	8220	1.9				
	14.0	232	60	64.18	7780	3.2				
	17.5	186	50	51.37	7230	3.5				
	15.2	219	60	59.22	7580	3.4	TKM68B	80B5	8016	44
	18.4	180	50	48.86	7110	4.2	TKB68B	80B5	8016	52

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.55	45	108	60	62.36	2400	1.2	TKM28C	71B5/B14	7122	37
	53	90	50	52.36	2270	1.1				
	48	103	60	58.36	2350	1.3	TKM28B	71B5/B14	7122	36
	57	86	50	48.86	2220	1.5				
	70	71	40	40.09	2070	1.8				
	95	52	30	29.33	1870	2.5				
	116	42	25	24.07	1750	3.1				
	139	36	20	20.21	1650	2.8				
	188	26	15	14.92	1490	3.0				
	35	141	40	40.09	2610	0.9	TKM28B	80B5/B14	8014	36
	48	103	30	29.33	2350	1.3				
	58	85	25	24.07	2200	1.5				
	69	71	20	20.21	2080	1.4				
	94	53	15	14.92	1880	1.5				
	112	44	12.5	12.47	1770	3.0				
	134	37	10	10.47	1670	2.7				
	181	27	7.5	7.73	1510	2.9				
	37	132	25	24.07	2550	1.0	TKM28B	80B5/B14	8026	36
	45	111	20	20.21	2410	0.9				
	60	82	15	14.92	2180	1.0				
	72	68	12.5	12.47	2050	1.9				
	86	57	10	10.47	1930	1.7				
	116	42	7.5	7.73	1750	1.9				
22.9	22.9	211	125	122.22	3440	0.9	TKM38C	71B5/B14	7122	39
	27.6	175	100	101.27	3230	0.9	TKB38C	71B5/B14	7122	47
	38	127	75	73.33	2900	0.9				
	44	109	60	63.33	2760	1.6				
	53	91	50	52.48	2590	1.7				
	46	107	60	60.50	2720	1.9	TKM38B	71B5/B14	7122	38
	57	86	50	48.71	2530	2.3	TKB38B	71B5/B14	7122	46
	71	69	40	39.29	2350	2.6				
	92	53	30	30.31	2160	3.7				
	23.1	213	60	60.50	3430	0.9	TKM38B	80B5/B14	8014	38
28.7	28.7	172	50	48.71	3190	1.2	TKB38B	80B5/B14	8014	46
	36	139	40	39.29	2970	1.3				
	46	107	30	30.31	2720	1.9				
	57	86	25	24.44	2530	2.1				
	69	71	20	20.25	2380	2.1				
	95	52	15	14.67	2130	2.1				
	110	45	12.5	12.67	2030	4.0				
	133	37	10	10.50	1910	4.1				
	184	27	7.5	7.60	1710	4.1				
	22.9	216	40	39.29	3440	0.8	TKM38B	80B5/B14	8026	38
29.7	29.7	166	30	30.31	3150	1.2	TKB38B	80B5/B14	8026	46
	37	134	25	24.44	2930	1.3				
	44	111	20	20.25	2760	1.4				
	61	80	15	14.67	2470	1.4				
	71	70	12.5	12.67	2360	2.6				
	86	58	10	10.50	2210	2.6				
	118	42	7.5	7.60	1990	2.6				
	14.0	346	200	200.66	5540	0.9	TKM48C	71B5	7122	41
18.5	18.5	261	150	151.20	5040	1.3	TKB48C	71B5	7122	49
	22.2	217	125	125.95	4750	1.4				
	28.2	171	100	99.22	4380	1.4				
	37	130	75	75.45	4000	1.5				
	45	108	60	62.43	3750	2.8				
	57	85	50	49.18	3470	2.8				

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	fs			Page	
0.55	47	105	60	59.44	3690	3.3	TKM48B	71B5	7122	40
	58	85	50	48.18	3440	4.1	TKB48B	71B5	7122	48
	70	71	40	40.13	3240	4.2				
	18.6	260	75	75.45	5040	0.8	TKM48C	80B5/B14	8014	41
	22.4	215	60	62.43	4730	1.4	TKB48C	80B5/B14	8014	49
	28.5	170	50	49.18	4370	1.4				
	23.6	210	60	59.44	4660	1.7	TKM48B	80B5/B14	8014	40
	29.1	170	50	48.18	4340	2.1	TKB48B	80B5/B14	8014	48
	35	142	40	40.13	4080	2.1				
	46	107	30	30.24	3720	3.3				
	56	89	25	25.19	3500	3.4				
	71	70	20	19.84	3230	3.4				
	93	53	15	15.09	2950	3.8				
	14.4	335	60	62.43	5480	0.9	TKM48C	80B5/B14	8026	41
	18.3	264	50	49.18	5060	0.9	TKB48C	80B5/B14	8026	49
	15.1	326	60	59.44	5390	1.1	TKM48B	80B5/B14	8026	40
	18.7	264	50	48.18	5030	1.3	TKB48B	80B5/B14	8026	48
	22.4	220	40	40.13	4730	1.4				
	29.8	166	30	30.24	4310	2.1				
	36	138	25	25.19	4050	2.2				
	45	109	20	19.84	3740	2.2				
	60	83	15	15.09	3410	2.4				
	9.5	509	300	295.18	7990	1.0	TKM58C	71B5	7122	43
	11.6	416	250	240.89	7470	1.2	TKB58C	71B5	7122	51
	14.0	346	200	200.66	7030	1.4				
	18.5	261	150	151.20	6390	1.9				
	22.2	217	125	125.95	6010	2.2				
	28.2	171	100	99.22	5550	2.2				
	37	130	75	75.45	5070	2.3				
	45	108	60	62.43	4760	4.5				
	57	85	50	49.18	4390	4.5				
	9.3	522	150	151.20	8050	1.0	TKM58C	80B5/B14	8014	43
	11.1	435	125	125.95	7580	1.1	TKB58C	80B5/B14	8014	51
	14.1	342	100	99.22	7000	1.1				
	18.6	260	75	75.45	6390	1.2				
	22.4	215	60	62.43	6000	2.2				
	28.5	170	50	49.18	5540	2.2				
	23.7	208	60	59.04	5890	2.4	TKM58B	80B5/B14	8014	42
	29.1	170	50	48.18	5500	2.9	TKB58B	80B5/B14	8014	50
	35	142	40	40.13	5170	3.4				
	14.4	335	60	62.43	6950	1.4	TKM58C	80B5/B14	8026	43
	18.3	264	50	49.18	6420	1.4	TKB58C	80B5/B14	8026	51
	15.2	324	60	59.04	6820	1.5	TKM58B	80B5/B14	8026	42
	18.7	264	50	48.18	6370	1.9	TKB58B	80B5/B14	8026	50
	22.4	220	40	40.13	6000	2.2				
	29.8	166	30	30.24	5460	3.0				
	36	138	25	25.19	5130	3.5				
	45	109	20	19.84	4740	3.5				
	60	83	15	15.09	4330	3.6				
	9.5	511	300	296.10	8880	1.5	TKM68C	71B5	7122	45
	11.5	422	250	244.29	8330	1.8	TKB68C	71B5	7122	53
	13.6	356	200	206.29	7870	2.1				
	18.3	265	150	153.33	7130	2.8				
	21.6	223	125	129.48	6740	3.4				
	27.0	179	100	103.64	6260	3.6				
	37	130	75	75.55	5630	4.0				

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	fs			Page	
0.55	5.7	843	250	244.29	10000	0.9	TKM68C	80B5	8014	45
	6.8	712	200	206.29	9920	1.1	TKB68C	80B5	8014	53
	9.1	529	150	153.33	8980	1.4				
	10.8	447	125	129.48	8490	1.7				
	13.5	358	100	103.64	7880	1.8				
	18.5	261	75	75.55	7090	2.0				
	21.8	222	60	64.18	6720	3.4				
	27.3	177	50	51.37	6240	3.7				
	23.6	209	60	59.22	6540	3.6	TKM68B	80B5	8014	44
	28.7	172	50	48.86	6130	4.4	TKB68B	80B5	8014	52
	5.9	823	150	153.33	10000	0.9	TKM68C	80B5	8026	45
	7.0	695	125	129.48	9840	1.1	TKB68C	80B5	8026	53
	8.7	556	100	103.64	9130	1.2				
	11.9	406	75	75.55	8220	1.3				
	14.0	345	60	64.18	7780	2.2				
	17.5	276	50	51.37	7230	2.4				
	15.2	325	60	59.22	7580	2.3	TKM68B	80B5	8026	44
	18.4	268	50	48.86	7110	2.8	TKB68B	80B5	8026	52
	21.8	226	40	41.26	6720	3.3				
0.75	48	140	60	58.36	2350	0.9	TKM28B	80B5/B14	8012	36
	57	117	50	48.86	2220	1.1	TKM28B	80B5/B14	8012	36
	70	96	40	40.09	2070	1.3				
	95	71	30	29.33	1870	1.8				
	116	58	25	24.07	1750	2.2				
	139	49	20	20.21	1650	2.1				
	188	36	15	14.92	1490	2.2				
	225	30	12.5	12.47	1400	4.3				
	267	25	10	10.47	1320	4.0				
	362	18.6	7.5	7.73	1200	4.3				
	48	141	30	29.33	2350	0.9	TKM28B	80B5/B14	8024	36
	58	116	25	24.07	2200	1.1	TKM28B	80B5/B14	8024	36
	69	97	20	20.21	2080	1.0				
	94	72	15	14.92	1880	1.1				
	112	60	12.5	12.47	1770	2.2				
	134	50	10	10.47	1670	2.0				
	181	37	7.5	7.73	1510	2.2				
	72	93	12.5	12.47	2050	1.4	TKM28B	90B5/B14	90S6	36
	86	78	10	10.47	1930	1.3				
	116	58	7.5	7.73	1750	1.4				
0.44	44	149	60	63.33	2760	1.2	TKM38C	80B5/B14	8012	39
	53	124	50	52.48	2590	1.2	TKB38C	80B5/B14	8012	47
	46	145	60	60.50	2720	1.4	TKM38B	80B5/B14	8012	38
	57	117	50	48.71	2530	1.7	TKB38B	80B5/B14	8012	46
	71	94	40	39.29	2350	1.9				
	92	73	30	30.31	2160	2.7				
	115	59	25	24.44	2010	3.1				
	138	49	20	20.25	1890	3.1				
	191	35	15	14.67	1690	3.1				
	28.7	234	50	48.71	3190	0.9	TKM38B	80B5/B14	8024	38
	36	189	40	39.29	2970	1.0	TKB38B	80B5/B14	8024	46
	46	146	30	30.31	2720	1.4				
	57	118	25	24.44	2530	1.5				
	69	97	20	20.25	2380	1.5				
	95	71	15	14.67	2130	1.6				
	110	61	12.5	12.67	2030	3.0				
	133	50	10	10.50	1910	3.0				
	184	37	7.5	7.60	1710	3.0				

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.75	29.7	227	30	30.31	3150	0.9	TKM38B	90B5/B14	90S6	38
	37	183	25	24.44	2930	1.0	TKB38B	90B5/B14	90S6	46
	44	151	20	20.25	2760	1.0				
	61	110	15	14.67	2470	1.0				
	71	95	12.5	12.67	2360	1.9				
	86	79	10	10.50	2210	1.9				
	118	57	7.5	7.60	1990	1.9				
	18.5	356	150	151.20	5040	1.0	TKM48C	80B5/B14	8012	41
	22.2	296	125	125.95	4750	1.0	TKB48C	80B5/B14	8012	49
	28.2	234	100	99.22	4380	1.0				
	37	178	75	75.45	4000	1.1				
	45	147	60	62.43	3750	2.0				
	57	116	50	49.18	3470	2.1				
	47	143	60	59.44	3690	2.4	TKM48B	80B5/B14	8012	40
	58	116	50	48.18	3440	3.0	TKB48B	80B5/B14	8012	48
	70	96	40	40.13	3240	3.1				
	22.4	294	60	62.43	4730	1.0	TKM48C	80B5/B14	8024	41
	28.5	231	50	49.18	4370	1.0	TKB48C	80B5/B14	8024	49
	23.6	286	60	59.44	4660	1.2	TKM48B	80B5/B14	8024	40
	29.1	232	50	48.18	4340	1.5	TKB48B	80B5/B14	8024	48
	35	193	40	40.13	4080	1.6				
	46	145	30	30.24	3720	2.4				
	56	121	25	25.19	3500	2.5				
	71	95	20	19.84	3230	2.5				
	93	73	15	15.09	2950	2.8				
11.6	18.7	360	50	48.18	5030	1.0	TKM48B	90B5/B14	90S6	40
	22.4	300	40	40.13	4730	1.0	TKB48B	90B5/B14	90S6	48
	29.8	226	30	30.24	4310	1.5				
	36	188	25	25.19	4050	1.6				
	45	148	20	19.84	3740	1.6				
	60	113	15	15.09	3410	1.8				
	72	93	12.5	12.49	3210	3.2				
	91	74	10	9.84	2960	3.3				
	120	56	7.5	7.48	2700	3.6				
	11.6	567	250	240.89	7470	0.9	TKM58C	80B5/B14	8012	43
	14.0	472	200	200.66	7030	1.0	TKB58C	80B5/B14	8012	51
	18.5	356	150	151.20	6390	1.4				
	22.2	296	125	125.95	6010	1.6				
22.4	28.2	234	100	99.22	5550	1.6				
	37	178	75	75.45	5070	1.7				
	45	147	60	62.43	4760	3.3				
	57	116	50	49.18	4390	3.3				
	47	142	60	59.04	4670	3.5	TKM58B	80B5/B14	8012	42
	58	116	50	48.18	4360	4.3	TKB58B	80B5/B14	8012	50
	23.7	284	60	59.04	5890	1.8	TKM58B	80B5/B14	8024	42
	29.1	232	50	48.18	5500	2.2	TKB58B	80B5/B14	8024	50
	35	193	40	40.13	5170	2.5				
	46	145	30	30.24	4710	3.4				
14.4	56	121	25	25.19	4430	4.0				
	71	95	20	19.84	4090	4.0				
	93	73	15	15.09	3730	4.1				
	18.3	457	60	62.43	6950	1.1	TKM58C	90B5/B14	90S6	43
	18.3	360	50	49.18	6420	1.1	TKB58C	90B5/B14	90S6	51

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
0.75	15.2	442	60	59.04	6820	1.1	TKM58B	90B5/B14	90S6	42
	18.7	360	50	48.18	6370	1.4	TKB58B	90B5/B14	90S6	50
	22.4	300	40	40.13	6000	1.6				
	29.8	226	30	30.24	5460	2.2				
	36	188	25	25.19	5130	2.5				
	45	148	20	19.84	4740	2.6				
	60	113	15	15.09	4330	2.7				
	9.5	697	300	296.10	8880	1.1	TKM68C	80B5	8012	45
	11.5	575	250	244.29	8330	1.3	TKB68C	80B5	8012	53
	13.6	485	200	206.29	7870	1.5				
	18.3	361	150	153.33	7130	2.1				
	21.6	305	125	129.48	6740	2.5				
	27.0	244	100	103.64	6260	2.7				
	37	178	75	75.55	5630	2.9				
	9.1	722	150	153.33	8980	1.0	TKM68C	80B5	8024	45
	10.8	609	125	129.48	8490	1.2	TKB68C	80B5	8024	53
	13.5	488	100	103.64	7880	1.3				
	18.5	356	75	75.55	7090	1.5				
	21.8	302	60	64.18	6720	2.5				
	27.3	242	50	51.37	6240	2.7				
1.1	23.6	285	60	59.22	6540	2.6	TKM68B	80B5	8024	44
	28.7	235	50	48.86	6130	3.2	TKB68B	80B5	8024	52
	34	198	40	41.26	5800	3.8				
	8.7	759	100	103.64	9130	0.9	TKM68C	90B5	90S6	45
	11.9	553	75	75.55	8220	0.9	TKB68C	90B5	90S6	53
	14.0	470	60	64.18	7780	1.6				
	17.5	376	50	51.37	7230	1.7				
	15.2	443	60	59.22	7580	1.7	TKM68B	90B5	90S6	44
	18.4	366	50	48.86	7110	2.1	TKB68B	90B5	90S6	52
	21.8	309	40	41.26	6720	2.4				
	29.3	229	30	30.67	6090	3.3				
	35	194	25	25.90	5750	3.9				
	43	155	20	20.73	5340	4.2				
	70	141	40	40.09	2070	0.9	TKM28B	80B5/B14	8022	36
	95	103	30	29.33	1870	1.3				
	116	85	25	24.07	1750	1.5				
	139	71	20	20.21	1650	1.4				
	188	53	15	14.92	1490	1.5				
	225	44	12.5	12.47	1400	3.0				
	267	37	10	10.47	1320	2.7				
	362	27	7.5	7.73	1200	2.9				
	112	88	12.5	12.47	1770	1.5	TKM28B	90B5/B14	90S4	36
	134	74	10	10.47	1670	1.4				
	181	55	7.5	7.73	1510	1.5				
	72	137	12.5	12.47	2050	1.0	TKM28B	90B5/B14	90L6	36
	86	115	10	10.47	1930	0.9				
	116	85	7.5	7.73	1750	0.9				
	46	213	60	60.50	2720	0.9	TKM38B	80B5/B14	8022	38
	57	172	50	48.71	2530	1.2	TKB38B	80B5/B14	8022	46
	71	139	40	39.29	2350	1.3				
	92	107	30	30.31	2160	1.9				
	115	86	25	24.44	2010	2.1				
	138	71	20	20.25	1890	2.1				
	191	52	15	14.67	1690	2.1				
	221	45	12.5	12.67	1610	4.0				
	267	37	10	10.50	1510	4.1				
	368	27	7.5	7.60	1360	4.1				

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
1.1	46	214	30	30.31	2720	0.9	TKM38B	90B5/B14	90S4	38
	57	172	25	24.44	2530	1.0	TKB38B	90B5/B14	90S4	46
	69	143	20	20.25	2380	1.1				
	95	103	15	14.67	2130	1.1				
	110	89	12.5	12.67	2030	2.0				
	133	74	10	10.50	1910	2.0				
	184	54	7.5	7.60	1710	2.1				
	71	139	12.5	12.67	2360	1.3	TKM38B	90B5/B14	90L6	38
	86	115	10	10.50	2210	1.3	TKB38B	90B5/B14	90L6	46
	118	83	7.5	7.60	1990	1.3				
	45	215	60	62.43	3750	1.4	TKM48C	80B5/B14	8022	41
	57	170	50	49.18	3470	1.4	TKB48C	80B5/B14	8022	49
	47	210	60	59.44	3690	1.7	TKM48B	80B5/B14	8022	40
	58	170	50	48.18	3440	2.1	TKB48B	80B5/B14	8022	48
	70	142	40	40.13	3240	2.1				
	93	107	30	30.24	2950	3.3				
	111	89	25	25.19	2770	3.4				
	141	70	20	19.84	2560	3.4				
	186	53	15	15.09	2340	3.8				
	29.1	340	50	48.18	4340	1.0	TKM48B	90B5/B14	90S4	40
	35	283	40	40.13	4080	1.1	TKB48B	90B5/B14	90S4	48
	46	213	30	30.24	3720	1.6				
	56	178	25	25.19	3500	1.7				
	71	140	20	19.84	3230	1.7				
	93	106	15	15.09	2950	1.9				
	112	88	12.5	12.49	2770	3.4				
	142	69	10	9.84	2550	3.5				
	187	53	7.5	7.48	2330	3.8				
	29.8	332	30	30.24	4310	1.1	TKM48B	90B5/B14	90L6	40
	36	276	25	25.19	4050	1.1	TKB48B	90B5/B14	90L6	48
	45	218	20	19.84	3740	1.1				
	60	166	15	15.09	3410	1.2				
	72	137	12.5	12.49	3210	2.2				
	91	108	10	9.84	2960	2.2				
	120	82	7.5	7.48	2700	2.4				
	18.5	522	150	151.20	6390	1.0	TKM58C	80B5/B14	8022	43
	22.2	435	125	125.95	6010	1.1	TKB58C	80B5/B14	8022	51
	28.2	342	100	99.22	5550	1.1				
	37	260	75	75.45	5070	1.2				
	45	215	60	62.43	4760	2.2				
	57	170	50	49.18	4390	2.2				
	47	208	60	59.04	4670	2.4	TKM58B	80B5/B14	8022	42
	58	170	50	48.18	4360	2.9	TKB58B	80B5/B14	8022	50
	70	142	40	40.13	4110	3.4				
	22.4	431	60	62.43	6000	1.1	TKM58C	90B5/B14	90S4	43
	28.5	340	50	49.18	5540	1.1	TKB58C	90B5/B14	90S4	51
	23.7	416	60	59.04	5890	1.2	TKM58B	90B5/B14	90S4	42
	29.1	340	50	48.18	5500	1.5	TKB58B	90B5/B14	90S4	50
	35	283	40	40.13	5170	1.7				
	46	213	30	30.24	4710	2.3				
	56	178	25	25.19	4430	2.7				
	71	140	20	19.84	4090	2.7				
	93	106	15	15.09	3730	2.8				
	18.7	529	50	48.18	6370	0.9	TKM58B	90B5/B14	90L6	42
	22.4	440	40	40.13	6000	1.1	TKB58B	90B5/B14	90L6	50
	29.8	332	30	30.24	5460	1.5				
	36	276	25	25.19	5130	1.7				
	45	218	20	19.84	4740	1.7				
	60	166	15	15.09	4330	1.8				

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	fs			Page	
1.1	72	137	12.5	12.49	4060	3.5	TKM58B	90B5/B14	90L6	42
	91	108	10	9.84	3750	3.5	TKB58B	90B5/B14	90L6	50
	120	82	7.5	7.48	3420	3.7				
	11.5	843	250	244.29	8330	0.9	TKM68C	80B5	8022	45
	13.6	712	200	206.29	7870	1.1	TKB68C	80B5	8022	53
	18.3	529	150	153.33	7130	1.4				
	21.6	447	125	129.48	6740	1.7				
	27.0	358	100	103.64	6260	1.8				
	37	261	75	75.55	5630	2.0				
	44	222	60	64.18	5330	3.4				
	55	177	50	51.37	4950	3.7				
	47.3	209	60	59.22	5190	3.6	TKM68B	80B5	8022	44
	57	172	50	48.86	4870	4.4	TKB68B	80B5	8022	52
	13.5	715	100	103.64	7880	0.9	TKM68C	90B5	90S4	45
	18.5	522	75	75.55	7090	1.0	TKB68C	90B5	90S4	53
	21.8	443	60	64.18	6720	1.7				
	27.3	355	50	51.37	6240	1.8				
	23.6	418	60	59.22	6540	1.8	TKM68B	90B5	90S4	44
	28.7	345	50	48.86	6130	2.2	TKB68B	90B5	90S4	52
	34	291	40	41.26	5800	2.6				
	46	216	30	30.67	5250	3.5				
	54	183	25	25.90	4960	4.1				
	14.0	689	60	64.18	7780	1.1	TKM68C	90B5	90L6	45
	17.5	552	50	51.37	7230	1.2	TKB68C	90B5	90L6	53
	15.2	650	60	59.22	7580	1.2	TKM68B	90B5	90L6	44
	18.4	536	50	48.86	7110	1.4	TKB68B	90B5	90L6	52
	21.8	453	40	41.26	6720	1.7				
	29.3	337	30	30.67	6090	2.2				
	35	284	25	25.90	5750	2.6				
	43	227	20	20.73	5340	2.9				
	60	166	15	15.11	4810	3.1				
1.5	95	141	30	29.33	1870	0.9	TKM28B	90B5/B14	90S2	36
	116	116	25	24.07	1750	1.1				
	139	97	20	20.21	1650	1.0				
	188	72	15	14.92	1490	1.1				
	225	60	12.5	12.47	1400	2.2				
	267	50	10	10.47	1320	2.0				
	362	37	7.5	7.73	1200	2.2				
	112	120	12.5	12.47	1770	1.1	TKM28B	90B5/B14	90L4	36
	134	101	10	10.47	1670	1.0				
	181	74	7.5	7.73	1510	1.1				
	57	234	50	48.71	2530	0.9	TKM38B	90B5/B14	90S2	38
	71	189	40	39.29	2350	1.0	TKB38B	90B5/B14	90S2	46
	92	146	30	30.31	2160	1.4				
	115	118	25	24.44	2010	1.5				
	138	97	20	20.25	1890	1.5				
	191	71	15	14.67	1690	1.6				
	221	61	12.5	12.67	1610	3.0				
	267	50	10	10.50	1510	3.0				
	368	37	7.5	7.60	1360	3.0				
	57	235	25	24.44	2530	0.8	TKM38B	90B5/B14	90L4	38
	69	195	20	20.25	2380	0.8	TKB38B	90B5/B14	90L4	46
	95	141	15	14.67	2130	0.8				
	110	122	12.5	12.67	2030	1.5				
	133	101	10	10.50	1910	1.5				
	184	73	7.5	7.60	1710	1.5				
	45	294	60	62.43	3750	1.0	TKM48C	90B5/B14	90S2	41
	57	231	50	49.18	3470	1.0	TKB48C	90B5/B14	90S2	49

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page		
1.5	47	286	60	59.44	3690	1.2	TKM48B	90B5/B14	90S2	40	
	58	232	50	48.18	3440	1.5	TKB48B	90B5/B14	90S2	48	
	70	193	40	40.13	3240	1.6					
	93	145	30	30.24	2950	2.4					
	111	121	25	25.19	2770	2.5					
	141	95	20	19.84	2560	2.5					
	186	73	15	15.09	2340	2.8					
	35	386	40	40.13	4080	0.8	TKM48B	90B5/B14	90L4	40	
	46	291	30	30.24	3720	1.2	TKB48B	90B5/B14	90L4	48	
	56	242	25	25.19	3500	1.2					
	71	191	20	19.84	3230	1.3					
	93	145	15	15.09	2950	1.4					
	112	120	12.5	12.49	2770	2.5					
	142	95	10	9.84	2550	2.5					
	187	72	7.5	7.48	2330	2.8					
	45	297	20	19.84	3740	0.8	TKM48B	100B5/B14	100L6	40	
	60	226	15	15.09	3410	0.9	TKB48B	100B5/B14	100L6	48	
	72	187	12.5	12.49	3210	1.6					
	91	147	10	9.84	2960	1.6					
	120	112	7.5	7.48	2700	1.8					
45	294	60	62.43	4760	1.6	TKM58C	90B5/B14	90S2	43		
	57	231	50	49.18	4390	1.6	TKB58C	90B5/B14	90S2	51	
	47	284	60	59.04	4670	1.8	TKM58B	90B5/B14	90S2	42	
	58	232	50	48.18	4360	2.2	TKB58B	90B5/B14	90S2	50	
	70	193	40	40.13	4110	2.5					
	93	145	30	30.24	3740	3.4					
	111	121	25	25.19	3520	4.0					
	141	95	20	19.84	3250	4.0					
	186	73	15	15.09	2960	4.1					
	23.7	568	60	59.04	5890	0.9	TKM58B	90B5/B14	90L4	42	
	29.1	463	50	48.18	5500	1.1	TKB58B	90B5/B14	90L4	50	
	35	386	40	40.13	5170	1.2					
	46	291	30	30.24	4710	1.7					
	56	242	25	25.19	4430	2.0					
29.8	71	191	20	19.84	4090	2.0					
	93	145	15	15.09	3730	2.1					
	112	120	12.5	12.49	3510	4.0					
	142	95	10	9.84	3240	4.0					
	187	72	7.5	7.48	2950	4.2					
	29.8	452	30	30.24	5460	1.1	TKM58B	100B5/B14	100L6	42	
	36	377	25	25.19	5130	1.3	TKB58B	100B5/B14	100L6	50	
	45	297	20	19.84	4740	1.3					
	60	226	15	15.09	4330	1.3					
	72	187	12.5	12.49	4060	2.6					
18.3	91	147	10	9.84	3750	2.6					
	120	112	7.5	7.48	3420	2.7					
	18.3	722	150	153.33	7130	1.0	TKM68C	90B5	90S2	45	
	21.6	609	125	129.48	6740	1.2	TKB68C	90B5	90S2	53	
	27.0	488	100	103.64	6260	1.3					
	37	356	75	75.55	5630	1.5					
	44	302	60	64.18	5330	2.5					
47	55	242	50	51.37	4950	2.7					
	285	60	59.22	5190	2.6	TKM68B	90B5	90S2	44		
	235	50	48.86	4870	3.2	TKB68B	90B5	90S2	52		
	198	40	41.26	4600	3.8						
	604	60	64.18	6720	1.2	TKM68C	90B5	90L4	45		
21.8	484	50	51.37	6240	1.3	TKB68C	90B5	90L4	53		
	27.3										

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
1.5	23.6	570	60	59.22	6540	1.3	TKM68B	90B5	90L4	44
	28.7	470	50	48.86	6130	1.6	TKB68B	90B5	90L4	52
	34	397	40	41.26	5800	1.9				
	46	295	30	30.67	5250	2.5				
	54	249	25	25.90	4960	3.0				
	68	199	20	20.73	4610	3.3				
	93	145	15	15.11	4150	3.6				
	15.2	886	60	59.22	7580	0.8	TKM68B	100B5/B14	100L6	44
	18.4	731	50	48.86	7110	1.0	TKB68B	100B5/B14	100L6	52
	21.8	617	40	41.26	6720	1.2				
	29.3	459	30	30.67	6090	1.6				
	35	388	25	25.90	5750	1.9				
	43	310	20	20.73	5340	2.1				
	60	226	15	15.11	4810	2.3				
	70	192	12.5	12.84	4550	3.9				
	88	154	10	10.27	4220	4.2				
	120	112	7.5	7.49	3800	4.6				
2.2	225	88	12.5	12.47	1400	1.5	TKM28B	90B5/B14	90L2	36
	267	74	10	10.47	1320	1.4				
	362	55	7.5	7.73	1200	1.5				
	92	214	30	30.31	2160	0.9	TKM38B	90B5/B14	90L2	38
	115	172	25	24.44	2010	1.0	TKB38B	90B5/B14	90L2	46
	138	143	20	20.25	1890	1.1				
	191	103	15	14.67	1690	1.1				
	221	89	12.5	12.67	1610	2.0				
	267	74	10	10.50	1510	2.0				
	368	54	7.5	7.60	1360	2.1				
	58	340	50	48.18	3440	1.0	TKM48B	90B5/B14	90L2	40
	70	283	40	40.13	3240	1.1	TKB48B	90B5/B14	90L2	48
	93	213	30	30.24	2950	1.6				
	111	178	25	25.19	2770	1.7				
	141	140	20	19.84	2560	1.7				
	186	106	15	15.09	2340	1.9				
	224	88	12.5	12.49	2190	3.4				
	285	69	10	9.84	2030	3.5				
	374	53	7.5	7.48	1850	3.8				
45	56	355	25	25.19	3500	0.8	TKM48B	100B5/B14	100LA4	40
	71	280	20	19.84	3230	0.9	TKB48B	100B5/B14	100LA4	48
	93	213	15	15.09	2950	0.9				
	112	176	12.5	12.49	2770	1.7				
	142	139	10	9.84	2550	1.7				
	187	106	7.5	7.48	2330	1.9				
	72	274	12.5	12.49	3210	1.1	TKM48B	112B5/B14	112M6	40
	91	216	10	9.84	2960	1.1	TKB48B	112B5/B14	112M6	48
	120	164	7.5	7.48	2700	1.2				
	45	431	60	62.43	4760	1.1	TKM58C	90B5/B14	90L2	43
	57	340	50	49.18	4390	1.1	TKB58C	90B5/B14	90L2	51
	47	416	60	59.04	4670	1.2	TKM58B	90B5/B14	90L2	42
	58	340	50	48.18	4360	1.5	TKB58B	90B5/B14	90L2	50
	70	283	40	40.13	4110	1.7				
	93	213	30	30.24	3740	2.3				
	111	178	25	25.19	3520	2.7				
	141	140	20	19.84	3250	2.7				
	186	106	15	15.09	2960	2.8				
35	35	566	40	40.13	5170	0.8	TKM58B	100B5/B14	100LA4	42
	46	427	30	30.24	4710	1.2	TKB58B	100B5/B14	100LA4	50
	56	355	25	25.19	4430	1.4				
	71	280	20	19.84	4090	1.4				

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	fs			Page	
2.2	93	213	15	15.09	3730	1.4	TKM58B	100B5/B14	100LA4	42
	112	176	12.5	12.49	3510	2.7	TKB58B	100B5/B14	100LA4	50
	142	139	10	9.84	3240	2.7				
	187	106	7.5	7.48	2950	2.8				
	36	553	25	25.19	5130	0.9	TKM58B	112B5/B14	112M6	42
	45	435	20	19.84	4740	0.9	TKB58B	112B5/B14	112M6	50
	60	331	15	15.09	4330	0.9				
	72	274	12.5	12.49	4060	1.8				
	91	216	10	9.84	3750	1.8				
	120	164	7.5	7.48	3420	1.8				
	27.0	715	100	103.64	6260	0.9	TKM68C	90B5	90L2	45
	37	522	75	75.55	5630	1.0	TKB68C	90B5	90L2	53
	44	443	60	64.18	5330	1.7				
	55	355	50	51.37	4950	1.8				
	47	418	60	59.22	5190	1.8	TKM68B	90B5	90L2	44
	57	345	50	48.86	4870	2.2	TKB68B	90B5	90L2	52
	68	291	40	41.26	4600	2.6				
	91	216	30	30.67	4170	3.5				
	108	183	25	25.90	3940	4.1				
3.0	23.6	835	60	59.22	6540	0.9	TKM68B	100B5/B14	100LA4	44
	28.7	689	50	48.86	6130	1.1	TKB68B	100B5/B14	100LA4	52
	34	582	40	41.26	5800	1.3				
	46	433	30	30.67	5250	1.7				
	54	365	25	25.90	4960	2.1				
	68	292	20	20.73	4610	2.2				
	93	213	15	15.11	4150	2.4				
	109	181	12.5	12.84	3930	4.1				
	29.3	673	30	30.67	6090	1.1	TKM68B	112B5/B14	112M6	44
	35	568	25	25.90	5750	1.3	TKB68B	112B5/B14	112M6	52
	43	455	20	20.73	5340	1.4				
	60	332	15	15.11	4810	1.6				
	70	282	12.5	12.84	4550	2.7				
	88	225	10	10.27	4220	2.9				
	120	164	7.5	7.49	3800	3.2				
4.0	70	386	40	40.13	3240	0.8	TKM48B	100B5/B14	100L2	40
	93	291	30	30.24	2950	1.2	TKB48B	100B5/B14	100L2	48
	111	242	25	25.19	2770	1.2				
	141	191	20	19.84	2560	1.3				
	186	145	15	15.09	2340	1.4				
	224	120	12.5	12.49	2190	2.5				
	285	95	10	9.84	2030	2.5				
	374	72	7.5	7.48	1850	2.8				
	112	240	12.5	12.49	2770	1.2	TKM48B	100B5/B14	100LB4	40
	142	189	10	9.84	2550	1.3	TKB48B	100B5/B14	100LB4	48
	187	144	7.5	7.48	2330	1.4				
	47	568	60	59.04	4670	0.9	TKM58B	100B5/B14	100L2	42
	58	463	50	48.18	4360	1.1	TKB58B	100B5/B14	100L2	50
	70	386	40	40.13	4110	1.2				
	93	291	30	30.24	3740	1.7				
	111	242	25	25.19	3520	2.0				
	141	191	20	19.84	3250	2.0				
	186	145	15	15.09	2960	2.1				
	224	120	12.5	12.49	2780	4.0				
	285	95	10	9.84	2570	4.0				
	374	72	7.5	7.48	2340	4.2				
5.5	46	582	30	30.24	4710	0.9	TKM58B	100B5/B14	100LB4	42
	56	485	25	25.19	4430	1.0	TKB58B	100B5/B14	100LB4	50
	71	382	20	19.84	4090	1.0				
	93	290	15	15.09	3730	1.0				

PERFORMANCE PARAMETER

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
3.0	112	240	12.5	12.49	3510	2.0	TKM58B	100B5/B14	100LB4	42
	142	189	10	9.84	3240	2.0	TKB58B	100B5/B14	100LB4	50
	187	144	7.5	7.48	2950	2.1				
	44	604	60	64.18	5330	1.2	TKM68C	100B5/B14	100L2	45
	55	484	50	51.37	4950	1.3	TKB68C	100B5/B14	100L2	53
	47	570	60	59.22	5190	1.3	TKM68B	100B5/B14	100L2	44
	57	470	50	48.86	4870	1.6	TKB68B	100B5/B14	100L2	52
	68	397	40	41.26	4600	1.9				
	91	295	30	30.67	4170	2.5				
	108	249	25	25.90	3940	3.0				
	135	199	20	20.73	3660	3.3				
	185	145	15	15.11	3290	3.6				
	34	794	40	41.26	5800	0.9	TKM68B	100B5/B14	100LB4	44
	46	590	30	30.67	5250	1.3	TKB68B	100B5/B14	100LB4	52
	54	498	25	25.90	4960	1.5				
	68	399	20	20.73	4610	1.6				
	93	291	15	15.11	4150	1.8				
	109	247	12.5	12.84	3930	3.0				
	136	198	10	10.27	3650	3.3				
	187	144	7.5	7.49	3280	3.6				
4.0	35	775	25	25.90	5750	1.0	TKM68B	132B5	132S6	44
	43	620	20	20.73	5340	1.0	TKB68B	132B5	132S6	52
	60	452	15	15.11	4810	1.2				
	70	384	12.5	12.84	4550	2.0				
	88	307	10	10.27	4220	2.1				
	120	224	7.5	7.49	3800	2.3				
	93	388	30	30.24	2950	0.9	TKM48B	112B5/B14	112M2	40
	111	323	25	25.19	2770	0.9	TKB48B	112B5/B14	112M2	48
	141	254	20	19.84	2560	0.9				
	186	194	15	15.09	2340	1.0				
	224	160	12.5	12.49	2190	1.9				
	285	126	10	9.84	2030	1.9				
	374	96	7.5	7.48	1850	2.1				
	112	320	12.5	12.49	2770	0.9	TKM48B	112B5/B14	112M4	40
	142	252	10	9.84	2550	1.0	TKB48B	112B5/B14	112M4	48
	187	192	7.5	7.48	2330	1.0				
	70	515	40	40.13	4110	0.9	TKM58B	112B5/B14	112M2	42
	93	388	30	30.24	3740	1.3	TKB58B	112B5/B14	112M2	50
	111	323	25	25.19	3520	1.5				
	141	254	20	19.84	3250	1.5				
	186	194	15	15.09	2960	1.6				
	224	160	12.5	12.49	2780	3.0				
	285	126	10	9.84	2570	3.0				
	374	96	7.5	7.48	2340	3.1				
	112	320	12.5	12.49	3510	1.5	TKM58B	112B5/B14	112M4	42
	142	252	10	9.84	3240	1.5	TKB58B	112B5/B14	112M4	50
	187	192	7.5	7.48	2950	1.6				
4.0	44	806	60	64.18	5330	0.9	TKM68C	112B5/B14	112M2	45
	55	645	50	51.37	4950	1.0	TKB68C	112B5/B14	112M2	53
	47	759	60	59.22	5190	1.0	TKM68B	112B5/B14	112M2	44
	57	627	50	48.86	4870	1.2	TKB68B	112B5/B14	112M2	52
	68	529	40	41.26	4600	1.4				
	91	393	30	30.67	4170	1.9				
	108	332	25	25.90	3940	2.3				
	135	266	20	20.73	3660	2.4				
	185	194	15	15.11	3290	2.7				
	46	787	30	30.67	5250	1.0	TKM68B	112B5/B14	112M4	44
	54	664	25	25.90	4960	1.1	TKB68B	112B5/B14	112M4	52
	68	532	20	20.73	4610	1.2				
	93	388	15	15.11	4150	1.3				
	109	329	12.5	12.84	3930	2.3				
	136	263	10	10.27	3650	2.5				
	187	192	7.5	7.49	3280	2.7				

P_{1n} [kW]	n₂ [r/min]	M_{2n} [Nm]	i Nominal	i Actual	F_{r2} [N]	f_s			Page	
5.5	57	862	50	48.86	4870	0.9	TKM68B	132B5	132S12	44
	68	728	40	41.26	4600	1.0	TKB68B	132B5	132S12	52
	91	541	30	30.67	4170	1.4				
	108	457	25	25.90	3940	1.6				
	135	366	20	20.73	3660	1.8				
	185	266	15	15.11	3290	2.0				
	218	226	12.5	12.84	3120	3.3				
	273	181	10	10.27	2890	3.6				
	374	132	7.5	7.49	2600	3.9				
	68	731	20	20.73	4610	0.9	TKM68B	132B5	132S4	44
7.5	93	533	15	15.11	4150	1.0	TKB68B	132B5	132S4	52
	109	453	12.5	12.84	3930	1.7				
	135	362	10	10.27	3650	1.8				
	187	264	7.5	7.49	3280	2.0				
	91	737	30	30.67	4170	1.0	TKM68B	132B5	132S22	44
	108	623	25	25.90	3940	1.2	TKB68B	132B5	132S22	52
	135	498	20	20.73	3660	1.3				
10	185	363	15	15.11	3290	1.4				
	218	309	12.5	12.84	3120	2.4				
	273	247	10	10.27	2890	2.6				
	374	180	7.5	7.49	2600	2.9				
	109	617	12.5	12.84	3930	1.2	TKM68B	132B5	132M4	44
	136	494	10	10.27	3650	1.3	TKB68B	132B5	132M4	52
	187	360	7.5	7.49	3280	1.4				

6.3 TKM / TKB.. HS Performance parameter

n₁=1400r/min

M ₂ max [Nm]	n ₂ [r/min]	i Nominal	i Actual	P _{1n} [kW]	F _{r2} [N]	F _{r1} [N]		Page
130	4.8	300	291.79	0.07	4100	400	TKM28C..HS	54
130	5.7	250	244.29	0.08	4100	400		
130	7.0	200	200.44	0.10	4100	400		
130	9.5	150	146.67	0.14	4000	400		
130	11.6	125	120.34	0.17	3770	400		
100	13.9	100	101.04	0.16	3560	400		
80	18.8	75	74.62	0.17	3220	400		
130	22.5	60	62.36	0.33	3030	400		
100	27	50	52.36	0.30	2860	400		
130	24	60	58.36	0.35	2960	400	TKM28B..HS	54
130	29	50	48.86	0.41	2790	400		
130	35	40	40.09	0.51	2610	400		
130	48	30	29.33	0.69	2350	400		
130	58	25	24.07	0.84	2200	400		
100	69	20	20.21	0.77	2080	400		
80	94	15	14.92	0.84	1880	400		
130	112	12.5	12.47	1.6	1770	400		
100	134	10	10.47	1.5	1670	400		
80	181	7.5	7.73	1.6	1510	400		
200	4.6	300	302.50	0.11	4800	400	TKM38C..HS	54
200	5.7	250	243.57	0.13	4800	400	TKB38C..HS	54
180	7.1	200	196.43	0.15	4800	400		
200	9.2	150	151.56	0.21	4650	400		
180	11.5	125	122.22	0.23	4330	400		
150	13.8	100	101.27	0.24	4070	400		
110	19.1	75	73.33	0.24	3650	400		
180	22	60	63.33	0.45	3480	400		
150	27	50	52.48	0.46	3270	400		
200	23	60	60.50	0.52	3430	530	TKM38B..HS	54
200	29	50	48.71	0.64	3190	530	TKB38B..HS	54
180	36	40	39.29	0.71	2970	530		
200	46	30	30.31	1.0	2720	530		
180	57	25	24.44	1.1	2530	530		
150	69	20	20.25	1.2	2380	530		
110	95	15	14.67	1.2	2130	530		
180	110	12.5	12.67	2.2	2030	530		
150	133	10	10.50	2.2	1910	530		
110	184	7.5	7.60	2.3	1710	530		
350	4.7	300	297.21	0.19	6500	560	TKM48C..HS	54
350	5.8	250	240.89	0.23	6500	560	TKB48C..HS	54
300	7.0	200	200.66	0.24	6500	560		
350	9.3	150	151.20	0.37	6500	560		
300	11.1	125	125.95	0.38	5980	560		
240	14.1	100	99.22	0.39	5520	560		
200	18.6	75	75.45	0.42	5040	560		
300	22	60	62.43	0.77	4730	560		
240	28	50	49.18	0.78	4370	560		
350	24	60	59.44	0.92	4660	860	TKM48B..HS	54
350	29	50	48.18	1.1	4340	860	TKB48B..HS	54
300	35	40	40.13	1.2	4080	860		
350	46	30	30.24	1.8	3720	860		
300	56	25	25.19	1.9	3500	860		

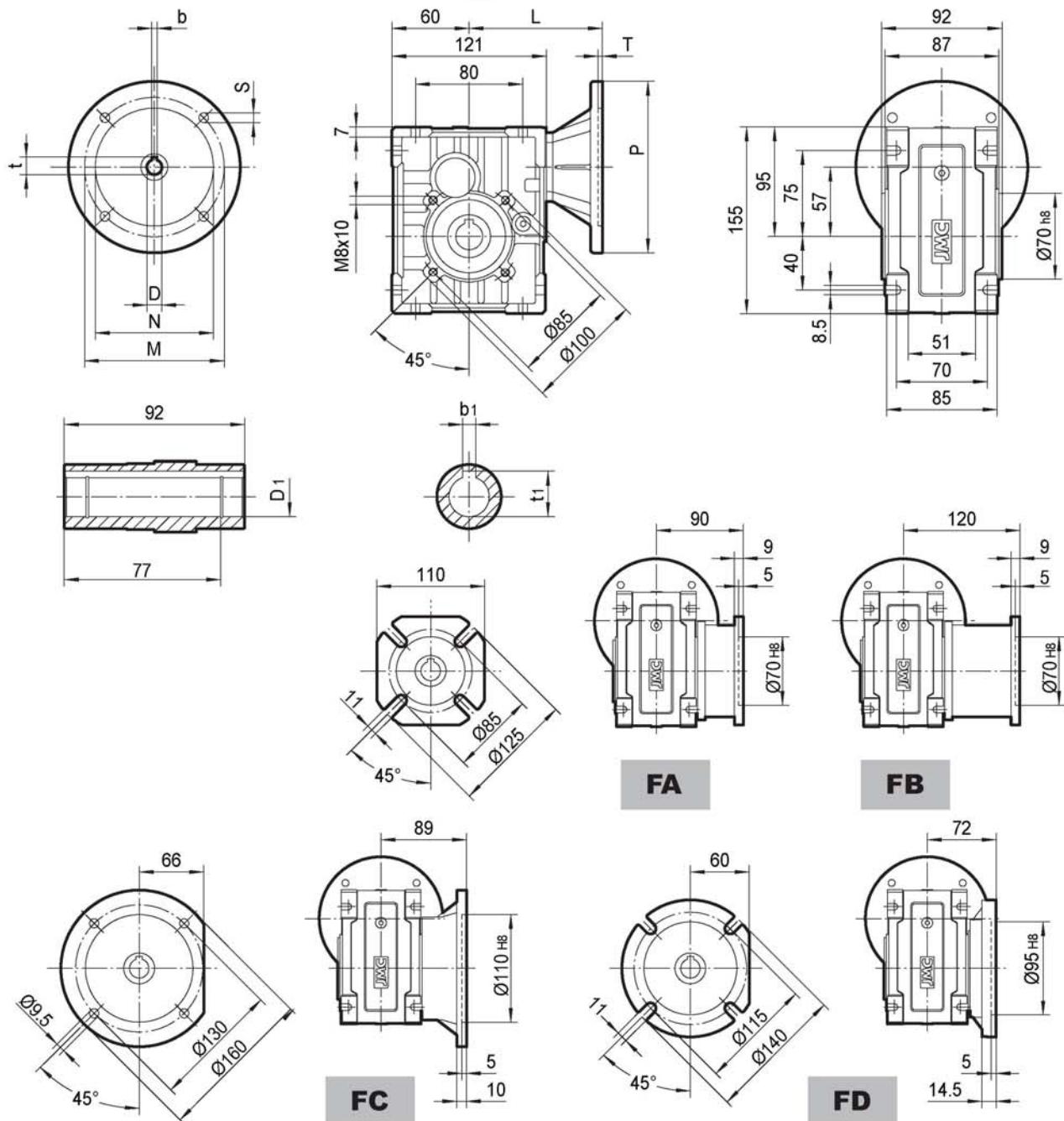
n₁=1400r/min

M _{2 max} [Nm]	n ₂ [r/min]	i Nominal	i Actual	P _{1n} [kW]	Fr ₂ [N]	Fr ₁ [N]		Page
240	71	20	19.84	1.9	3230	860	TKM48B..HS	54
200	93	15	15.09	2.1	2950	860	TKB48B..HS	54
300	112	12.5	12.49	3.7	2770	860		
240	142	10	9.84	3.8	2550	860		
200	187	7.5	7.48	4.2	2330	860		
500	4.7	300	295.18	0.27	8300	560	TKM58C..HS	54
500	5.8	250	240.89	0.33	8300	560	TKB58C..HS	54
480	7.0	200	200.66	0.38	8300	560		
500	9.3	150	151.20	0.53	8050	560		
480	11.1	125	125.95	0.61	7580	560		
380	14.1	100	99.22	0.61	7000	560		
300	18.6	75	75.45	0.63	6390	560		
480	22	60	62.43	1.2	6000	560		
380	28	50	49.18	1.2	5540	560		
500	24	60	59.04	1.3	5890	1260	TKM58B..HS	54
500	29	50	48.18	1.6	5500	1260	TKB58B..HS	54
480	35	40	40.13	1.9	5170	1260		
500	46	30	30.24	2.6	4710	1260		
480	56	25	25.19	3.0	4430	1260		
380	71	20	19.84	3.0	4090	1260		
300	93	15	15.09	3.1	3730	1260		
480	112	12.5	12.49	6.0	3510	1260		
380	142	10	9.84	6.0	3240	1260		
300	187	7.5	7.48	6.3	2950	1260		
750	4.7	300	296.10	0.40	10000	740	TKM68C..HS	54
750	5.7	250	244.29	0.49	10000	740	TKB68C..HS	54
750	6.8	200	206.29	0.58	9920	740		
750	9.1	150	153.33	0.78	8980	740		
750	10.8	125	129.48	0.92	8490	740		
650	13.5	100	103.64	1.0	7880	740		
520	18.5	75	75.55	1.1	7090	740		
750	22	60	64.18	1.9	6720	740		
650	27	50	51.37	2.0	6240	740		
750	24	60	59.22	2.0	6540	1490	TKM68B..HS	54
750	29	50	48.86	2.4	6130	1490	TKB68B..HS	54
750	34	40	41.26	2.8	5800	1490		
750	46	30	30.67	3.8	5250	1490		
750	54	25	25.90	4.5	4960	1490		
650	68	20	20.73	4.9	4610	1490		
520	93	15	15.11	5.4	4150	1490		
750	109	12.5	12.84	9.1	3930	1490		
650	136	10	10.27	9.9	3650	1490		
520	187	7.5	7.49	10.8	3280	1490		

7. OUTLINE DIMENSION SHEET

7.1 TKM.. Outline Dimension

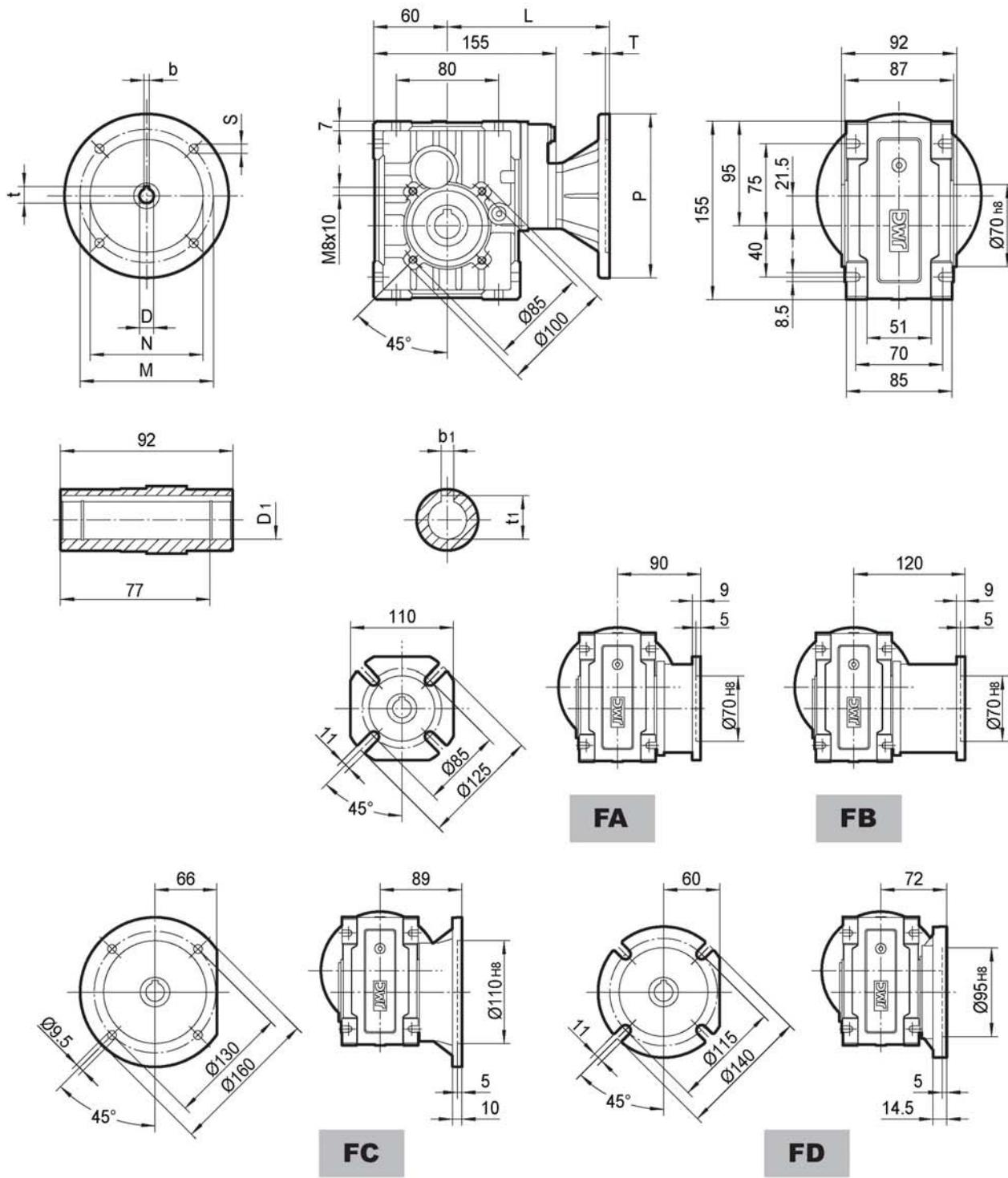
TKM28B..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
63B5	11	4	12.8	140	115	95	9	4	106	20*	6*	22.8*
71B5	14	5	16.3	160	130	110	9	4	113	24*	8*	27.3*
71B14	14	5	16.3	105	85	70	7	4	113	25	8	28.3
80B5	19	6	21.8	200	165	130	11	4	133	* Only on request		
80B14	19	6	21.8	120	100	80	7	4	133	* Only on request		
90B5	24	8	27.3	200	165	130	11	4	133	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	133	* Only on request		

Weight without motor
≈ 4.2 kg

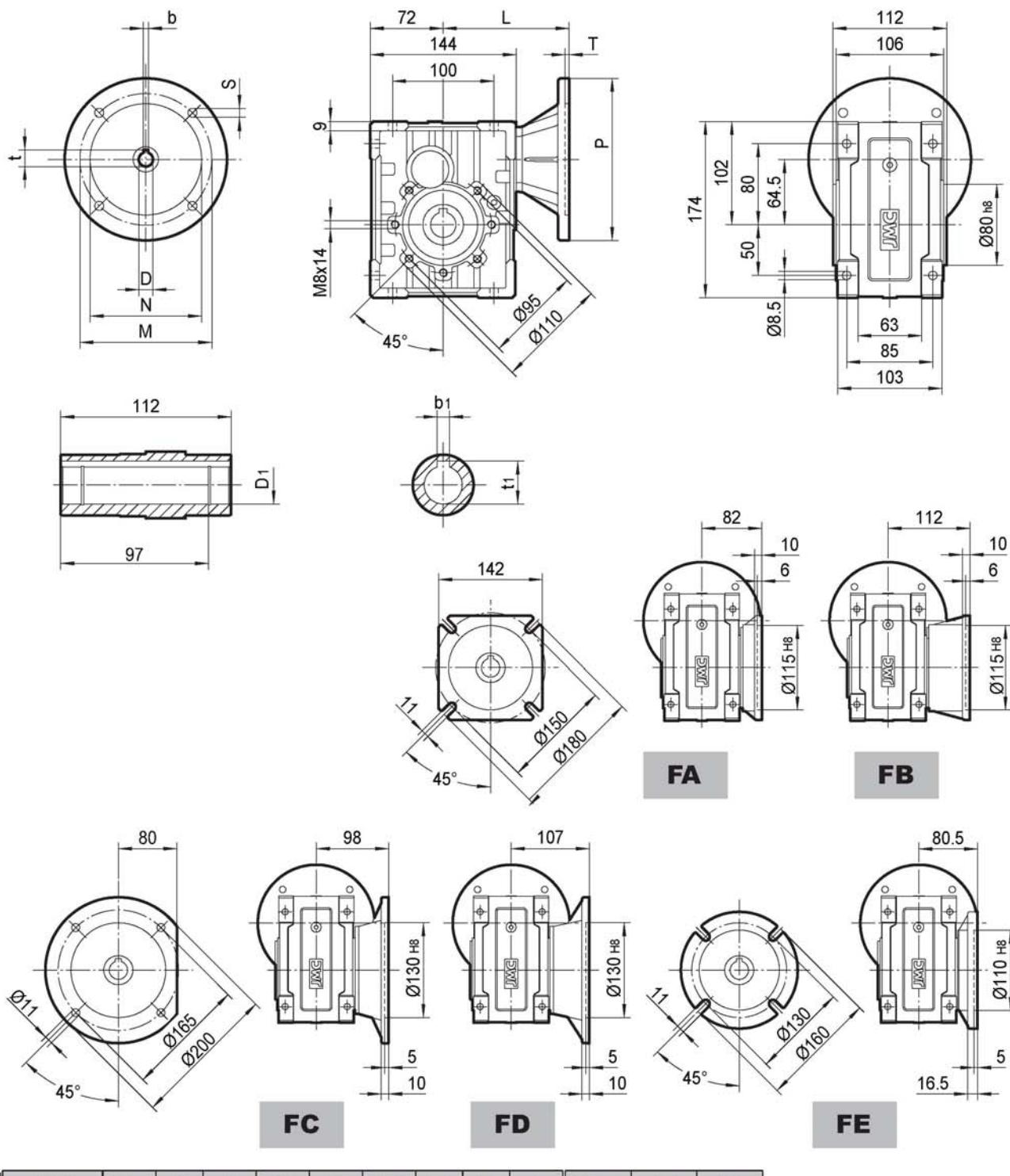
TKM28C..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H8	b ₁	t ₁
63B5	11	4	12.8	140	115	95	9	4	140	20 *	6 *	22.8 *
71B5	14	5	16.3	160	130	110	9	4	147	24 *	8 *	27.3 *
71B14	14	5	16.3	105	85	70	7	4	147	25	8	28.3
										* Only on request		

Weight without motor
≈ 5 kg

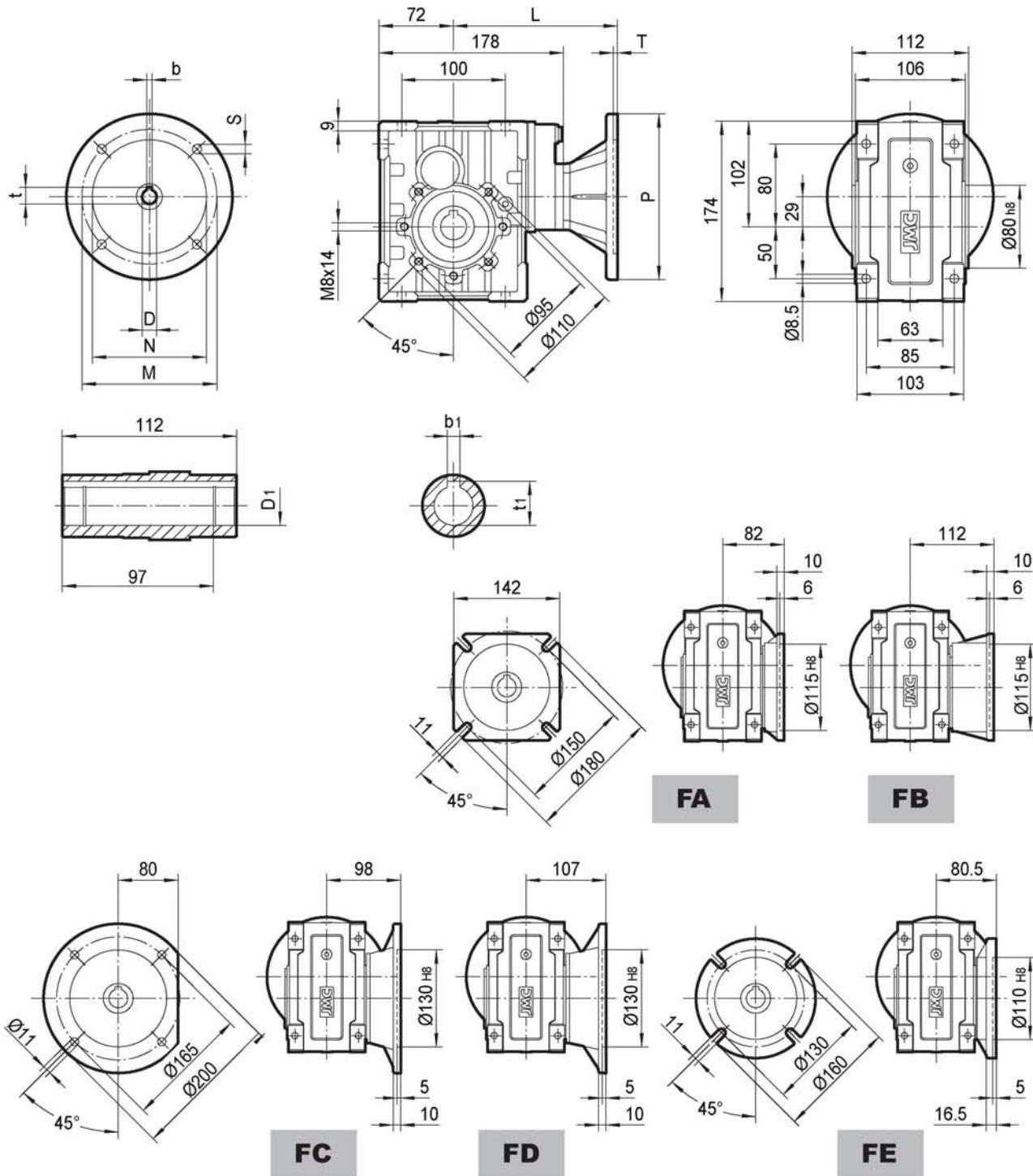
TKM38B..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
63B5	11	4	12.8	140	115	95	9	4	117	25	8	28.3
71B5	14	5	16.3	160	130	110	9	4	124	28*	8	31.3
71B14	14	5	16.3	105	85	70	7	4	124	30*	8	33.3
80B5	19	6	21.8	200	165	130	11	4	144	* Only on request		
80B14	19	6	21.8	120	100	80	7	4	144	* Only on request		
90B5	24	8	27.3	200	165	130	11	4	144	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	144	* Only on request		

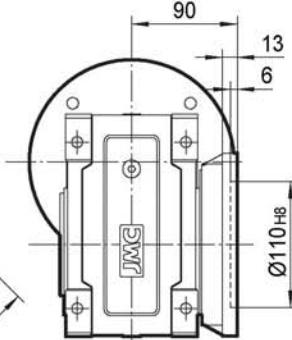
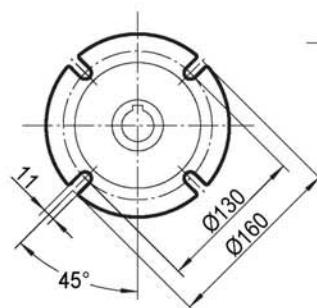
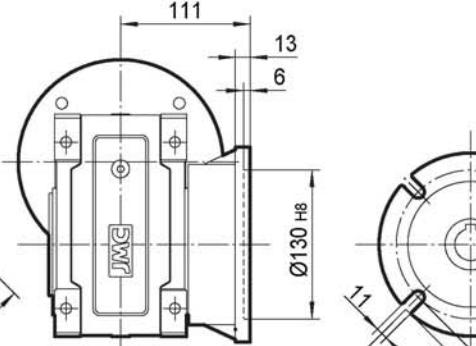
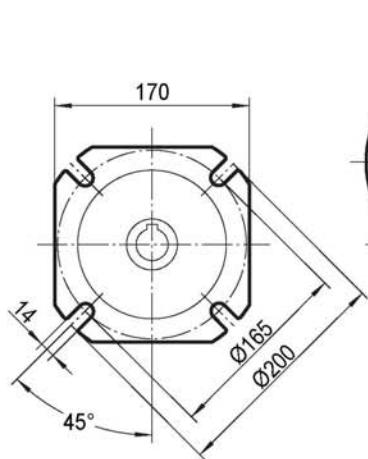
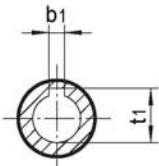
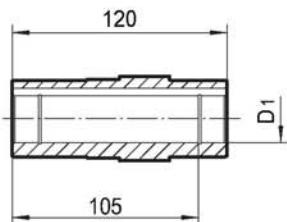
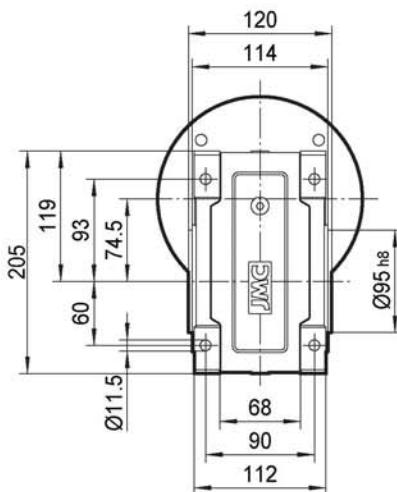
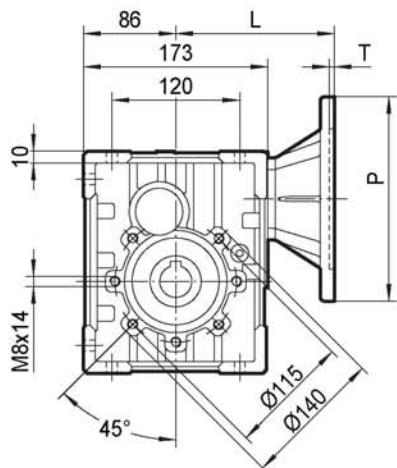
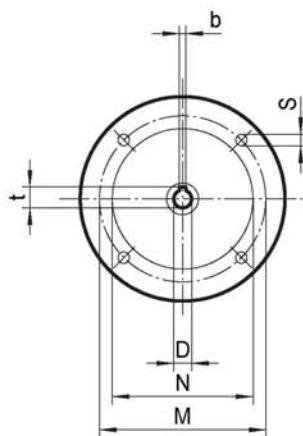
Weight without motor
≈ 6.0 kg

TKM38C..



IEC	D_{E8}	b	t	P	M	N	S	T	L	$D_1\text{ h8}$	b_1	t_1
63B5	11	4	12.8	140	115	95	9	4	151	25	8	28.3
71B5	14	5	16.3	160	130	110	9	4	158	28*	8	31.3
71B14	14	5	16.3	105	85	70	7	4	158	30*	8	33.3
80B5	19	6	21.8	200	165	130	11	4	178	* Only on request		
80B14	19	6	21.8	120	100	80	7	4	178	Weight without motor ≈ 6.8 kg		

TKM48B..



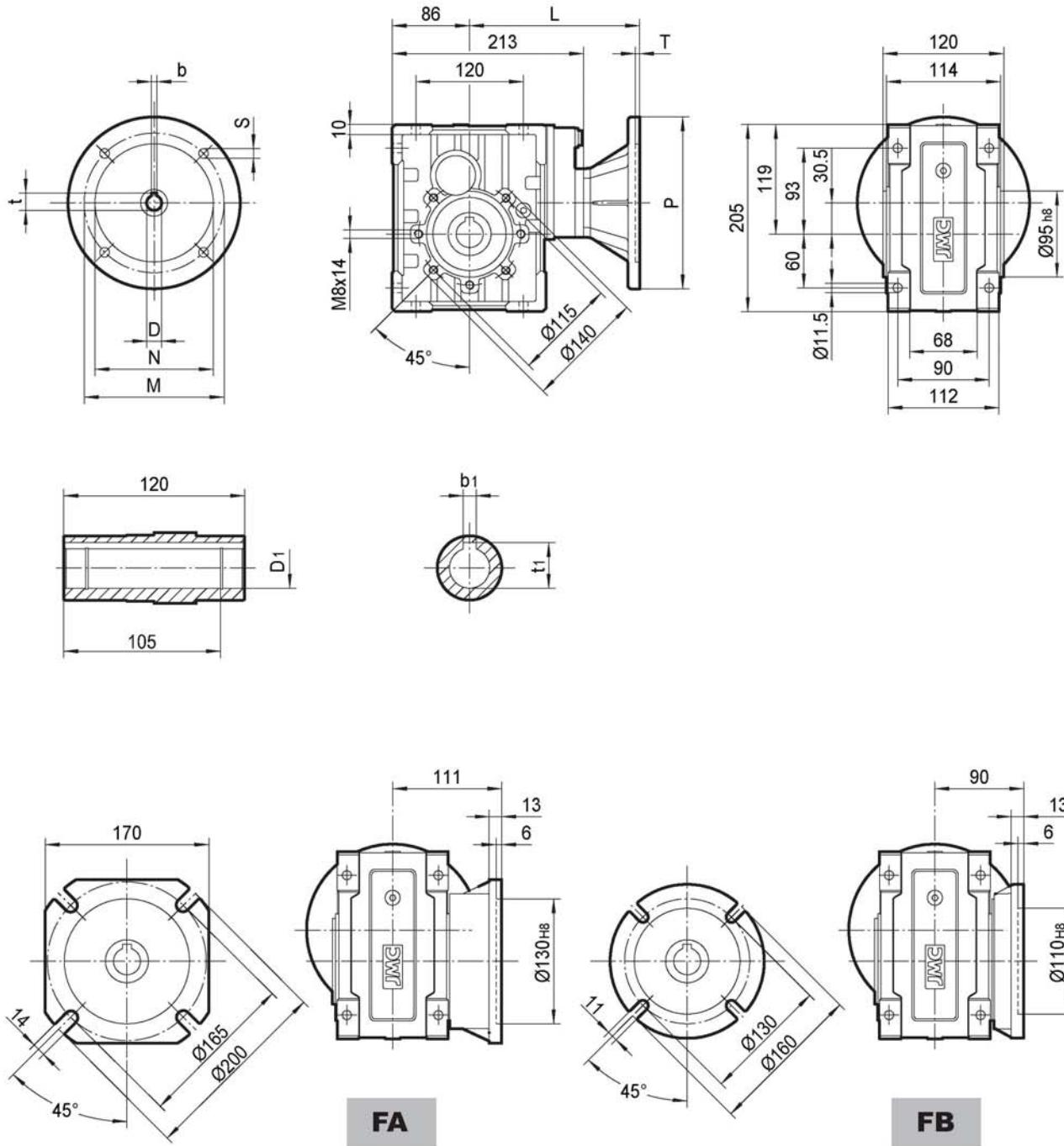
FA

FB

IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
71B5	14	5	16.3	160	130	110	9	4	146	28	8	31.3
80B5	19	6	21.8	200	165	130	11	4	166	30*	8*	33.3*
80B14	19	6	21.8	120	100	80	7	4	166	35*	10*	38.3*
90B5	24	8	27.3	200	165	130	11	4	166	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	166	* Only on request		
100/112B5	28	8	31.3	250	215	180	13.5	4.5	176	* Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	176	* Only on request		

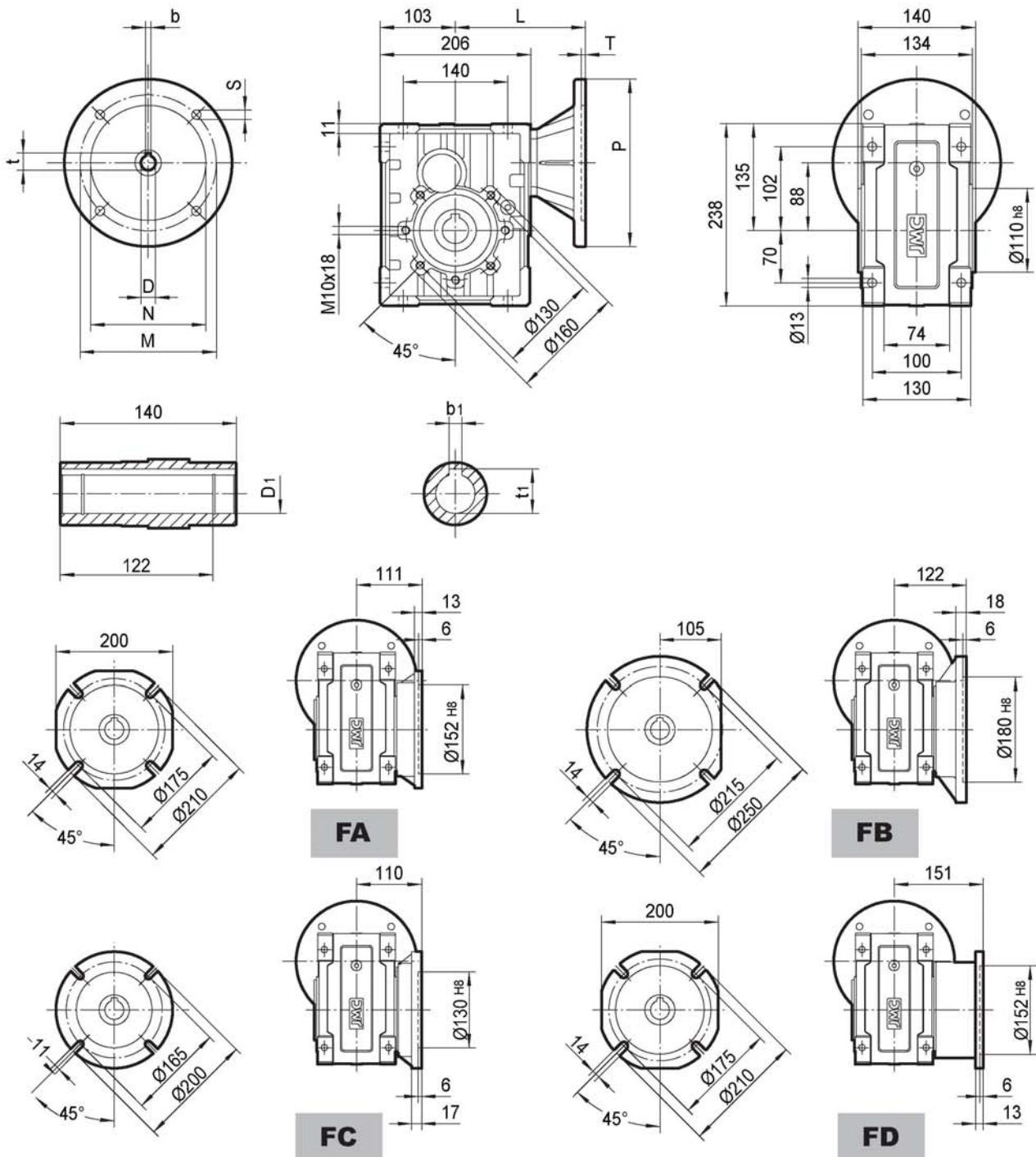
Weight without motor
≈ 9.2 kg

TKM48C..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D _{1 H8}	b ₁	t ₁
63B5	11	4	12.8	140	115	95	9	4	179	28	8	31.3
71B5	14	5	16.3	160	130	110	9	4	186	30*	8*	33.3*
80B5	19	6	21.8	200	165	130	11	4	206	35*	10*	38.3*
80B14	19	6	21.8	120	100	80	7	4	206	* Only on request		
90B5	24	8	27.3	200	165	130	11	4	206	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	206	* Only on request		

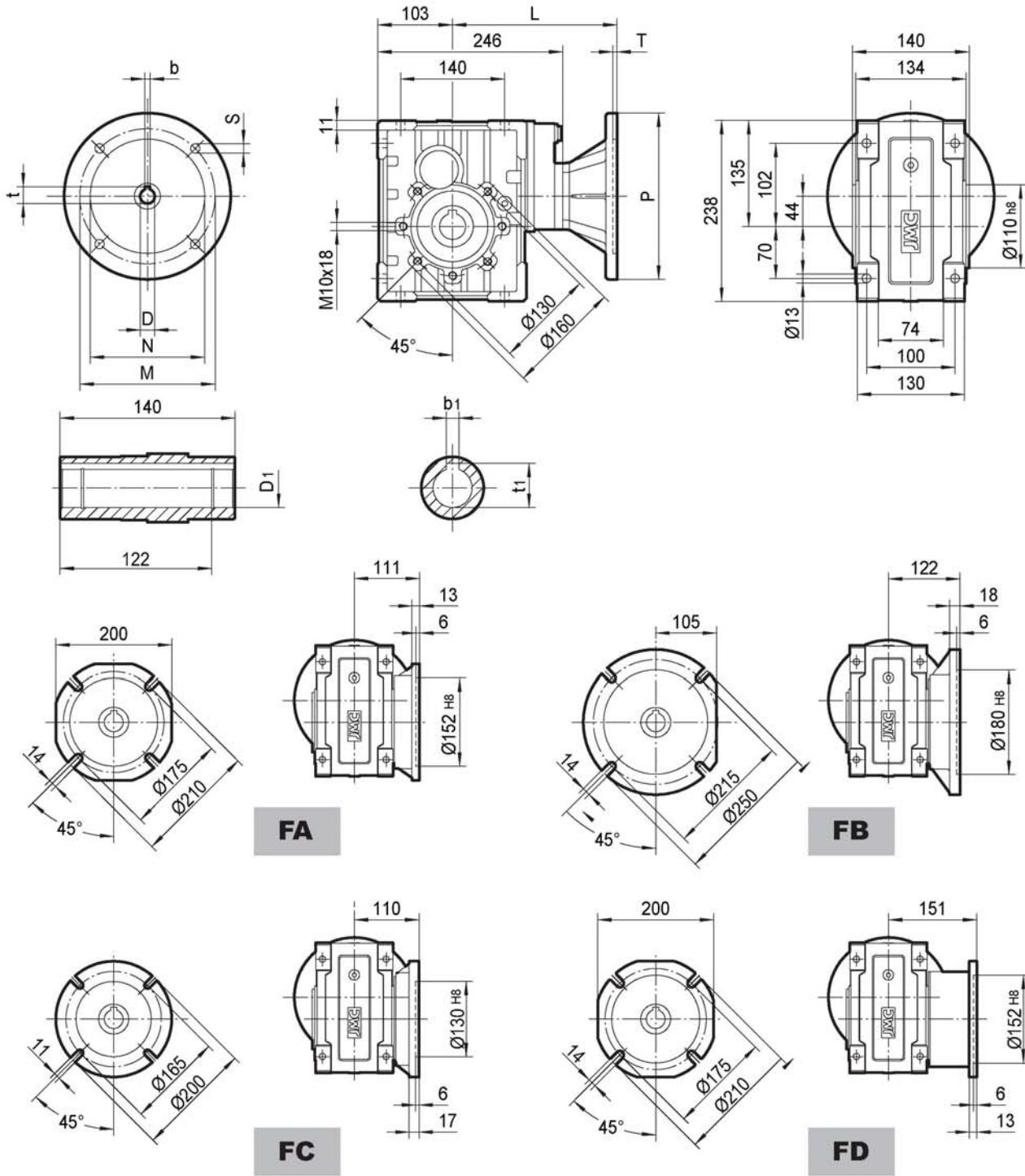
Weight without motor
≈ 10.8 kg

TKM58B..

IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
71B5	14	5	16.3	160	130	110	9	4	162	35	10	38.3
80B5	19	6	21.8	200	165	130	11	4	182	38*	10*	41.3*
80B14	19	6	21.8	120	100	80	7	4	182	40*	10*	43.3*
90B5	24	8	27.3	200	165	130	11	4	182	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	182	* Only on request		
100/112B5	28	8	31.3	250	215	180	13.5	4.5	192	* Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	192	* Only on request		

Weight without motor
≈ 13.3 kg

TKM58C..

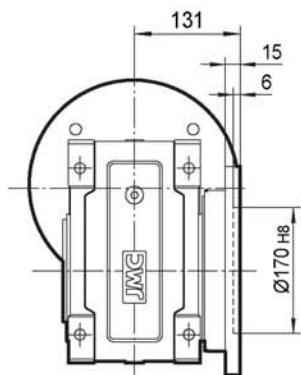
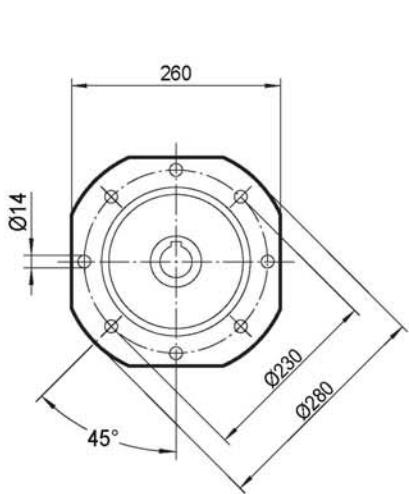
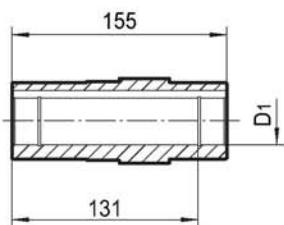
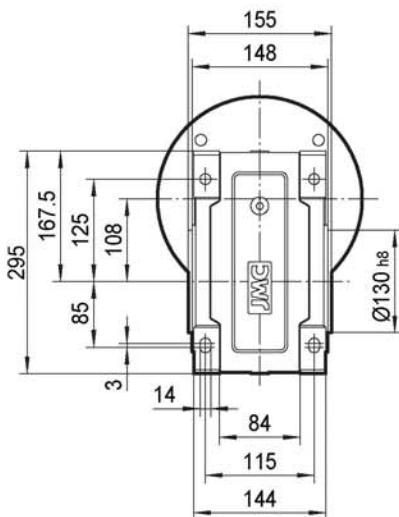
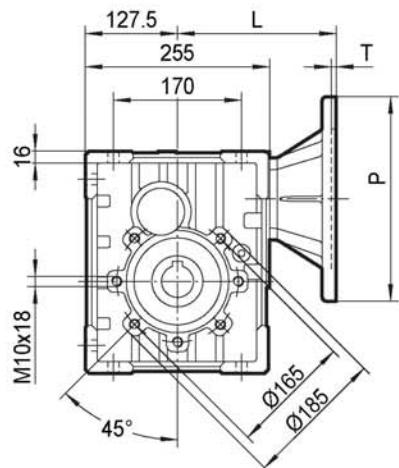
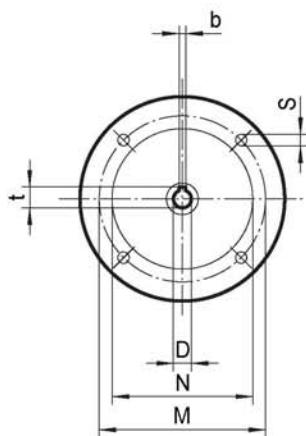


IEC	D_{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
63B5	11	4	12.8	140	115	95	9	4	195	35	10	38.3
71B5	14	5	16.3	160	130	110	9	4	202	38*	10*	41.3*
80B5	19	6	21.8	200	165	130	11	4	222	40*	10*	43.3*
80B14	19	6	21.8	120	100	80	7	4	222	* Only on request		
90B5	24	8	27.3	200	165	130	11	4	222			
90B14	24	8	27.3	140	115	95	9	4	222			

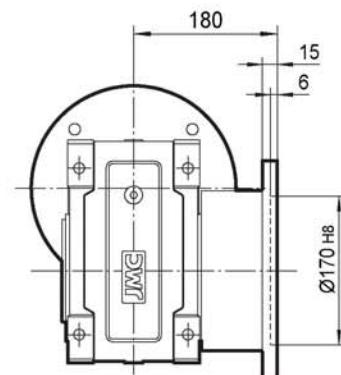
22 * Only on request

Weight without motor
≈ 14.8 kg

TKM68B..



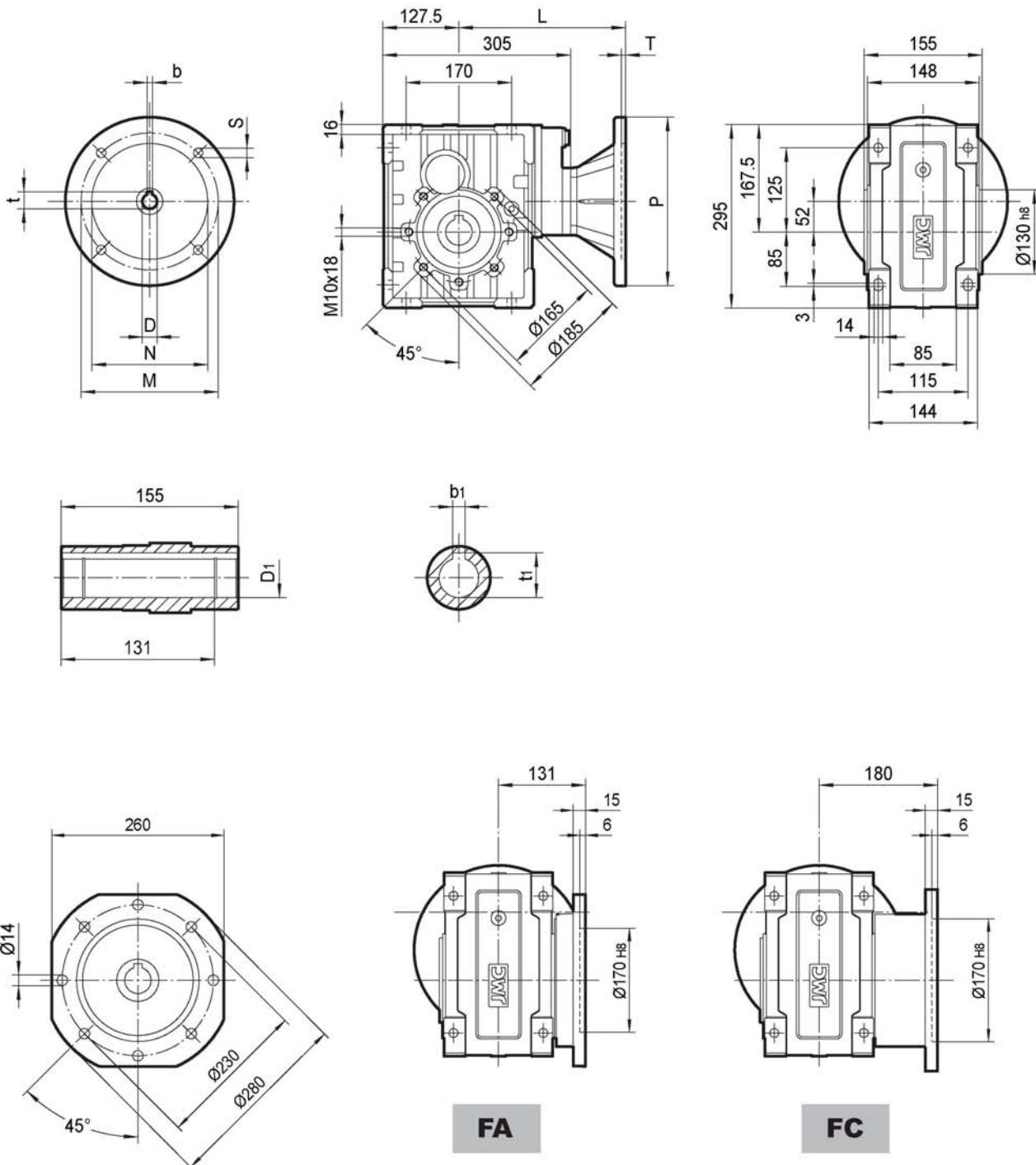
FA



FC

IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
71B5	14	5	16.3	160	130	110	9	4	191.5	40*	12	43.3
80B5	19	6	21.8	200	165	130	11	4	211.5	42	12	45.3
90B5	24	8	27.3	200	165	130	11	4	211.5	45*	14	48.8
100/112B5	28	8	31.3	250	215	180	13.5	4.5	221.5	* Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	221.5	Weight without motor ≈ 21.5 kg		
132B5	38	10	41.3	300	265	230	14	4.5	241.5			

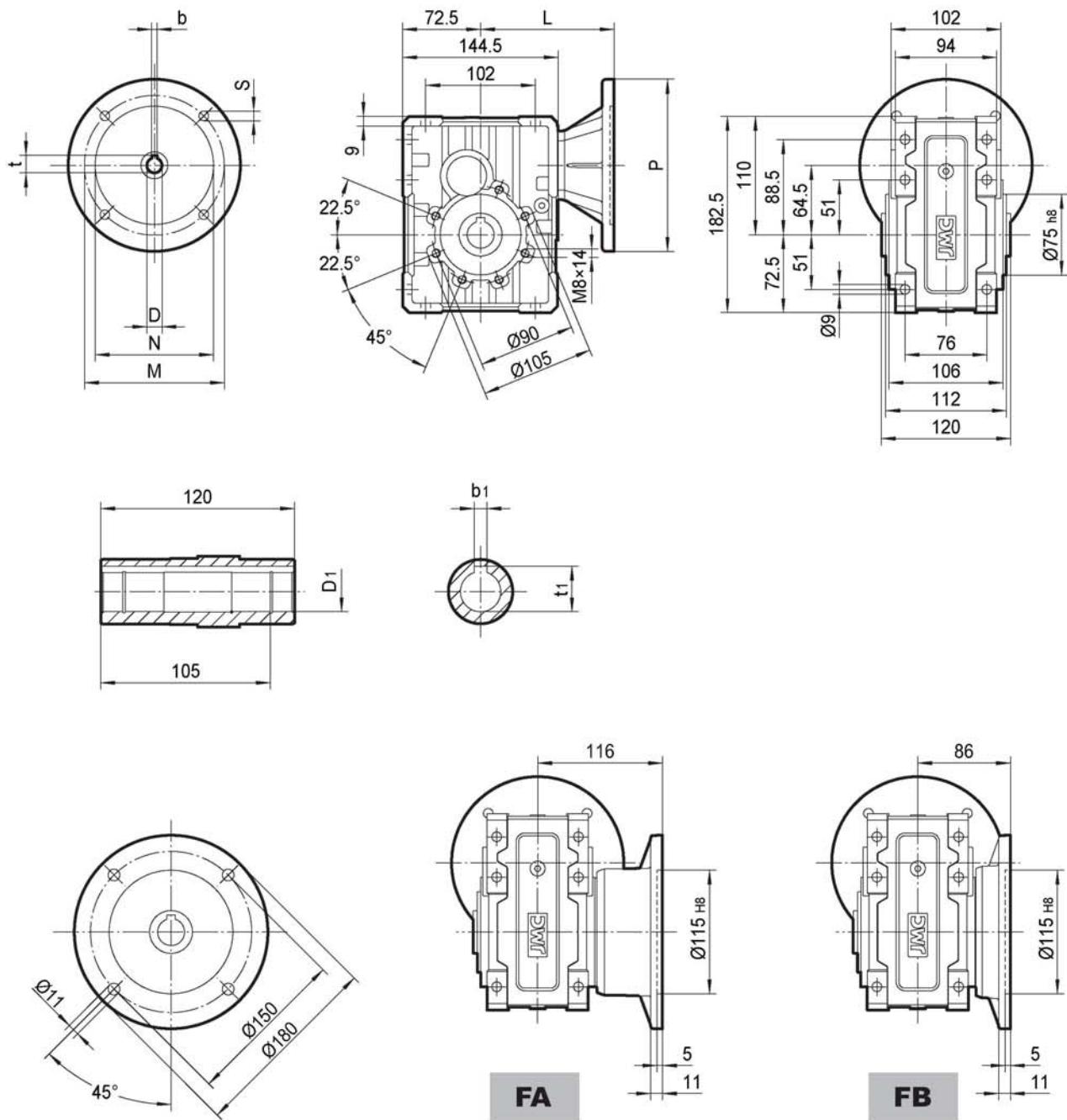
TKM68C..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H8	b1	t1
71B5	14	5	16.3	160	130	110	9	4	241.5	40*	12	43.3
80B5	19	6	21.8	200	165	130	11	4	261.5	42	12	45.3
90B5	24	8	27.3	200	165	130	11	4	261.5	45*	14	48.8
100/112B5	28	8	31.3	250	215	180	13.5	4.5	271.5	* Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	271.5	Weight without motor ≈ 23.5 kg		

7.2 TKB.. Outline Dimension

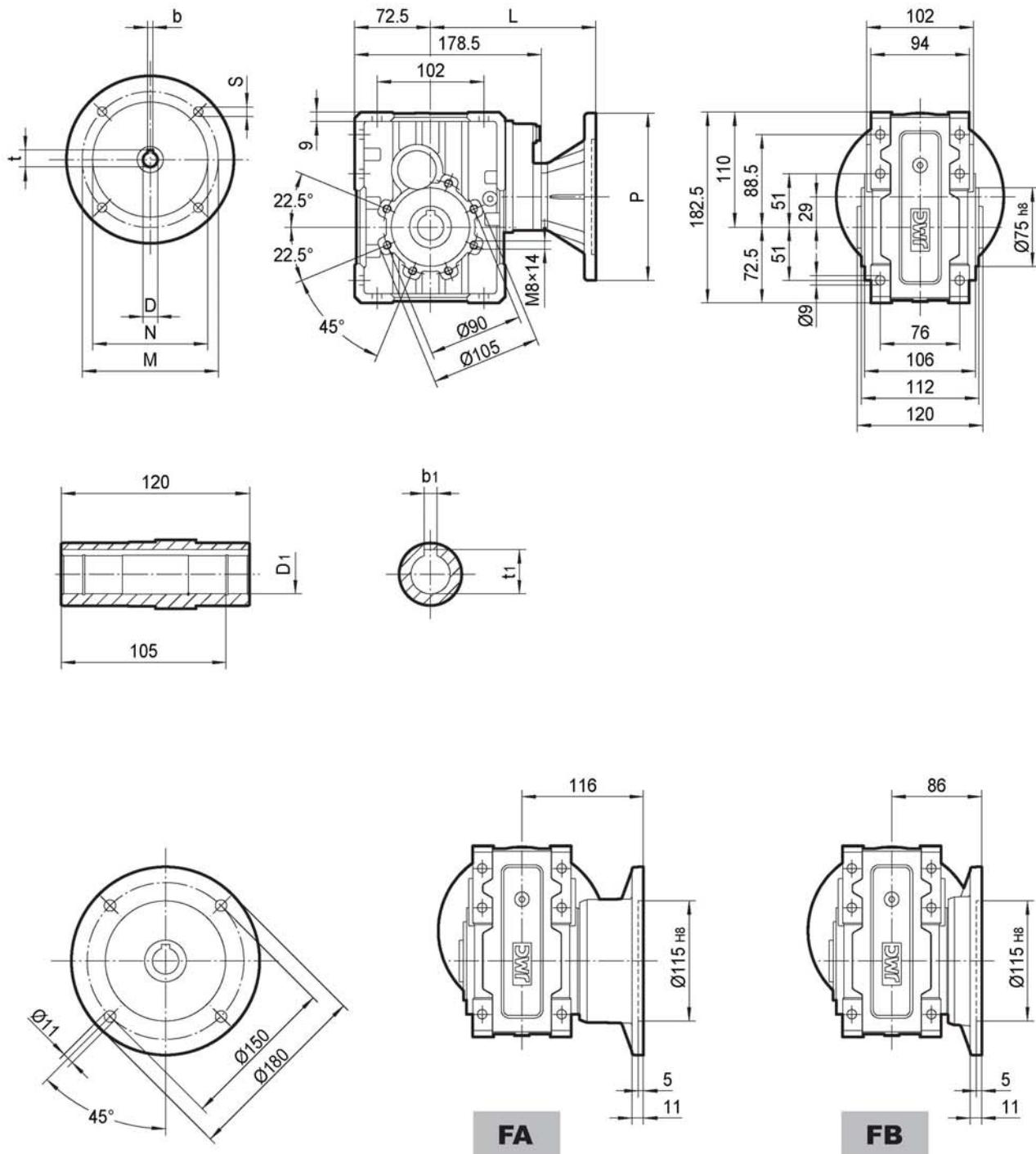
TKB38B..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
63B5	11	4	12.8	140	115	95	9	4	117	25	8	28.3
71B5	14	5	16.3	160	130	110	9	4	124	28*	8	31.3
71B14	14	5	16.3	105	85	70	7	4	124	30*	8	33.3
80B5	19	6	21.8	200	165	130	11	4	144	* Only on request		
80B14	19	6	21.8	120	100	80	7	4	144	* Only on request		
90B5	24	8	27.3	200	165	130	11	4	144	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	144	* Only on request		

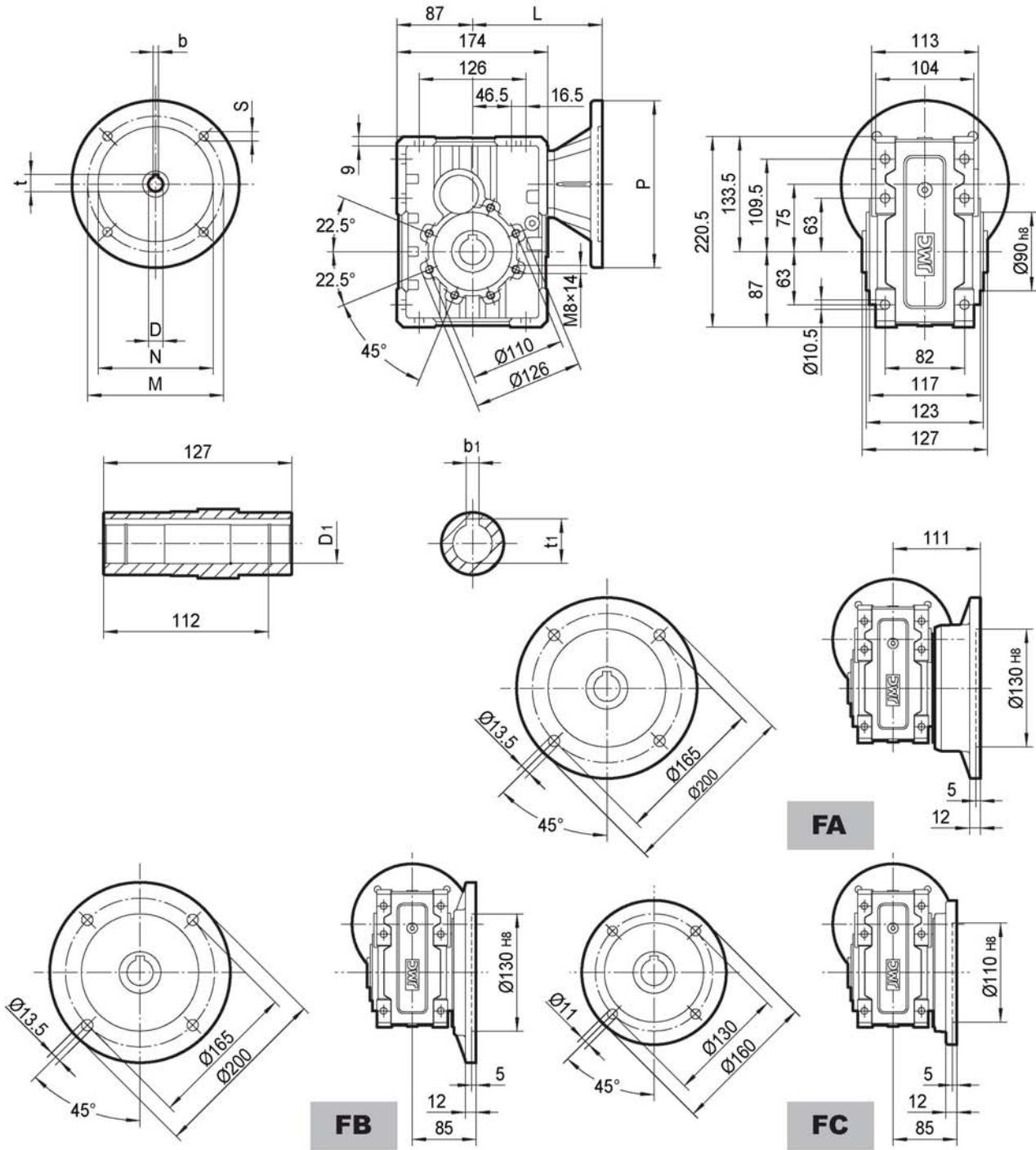
Weight without motor
≈ 6.0 kg

TKB38C..



IEC	D_{E8}	b	t	P	M	N	S	T	L	D_1 H8	b_1	t_1
63B5	11	4	12.8	140	115	95	9	4	151	25	8	28.3
71B5	14	5	16.3	160	130	110	9	4	158	28*	8	31.3
71B14	14	5	16.3	105	85	70	7	4	158	30*	8	33.3
80B5	19	6	21.8	200	165	130	11	4	178	* Only on request		
80B14	19	6	21.8	120	100	80	7	4	178	Weight without motor ≈ 6.8 kg		

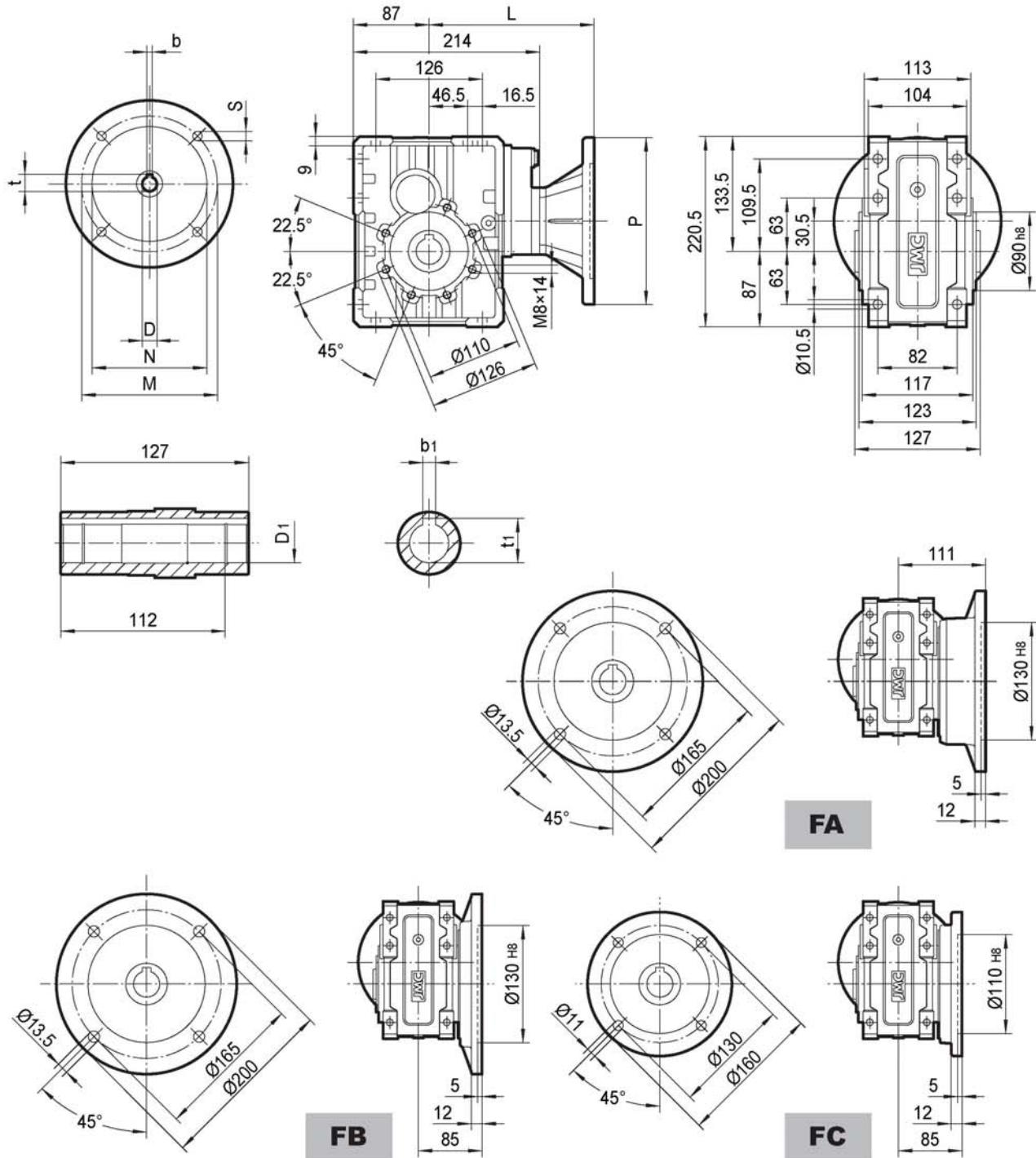
TKB48B..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
71B5	14	5	16.3	160	130	110	9	4	146	28*	8*	31.3*
80B5	19	6	21.8	200	165	130	11	4	166	30	8	33.3
80B14	19	6	21.8	120	100	80	7	4	166	35*	10*	38.3*
90B5	24	8	27.3	200	165	130	11	4	166	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	166	* Only on request		
100/112B5	28	8	31.3	250	215	180	13.5	4.5	176	* Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	176	* Only on request		

Weight without motor
≈ 9.5 kg

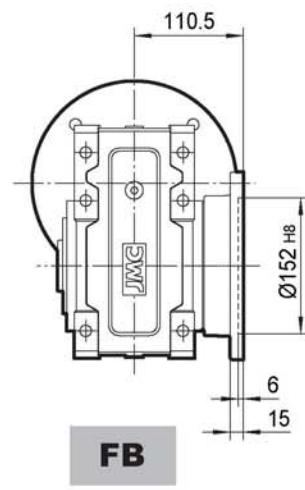
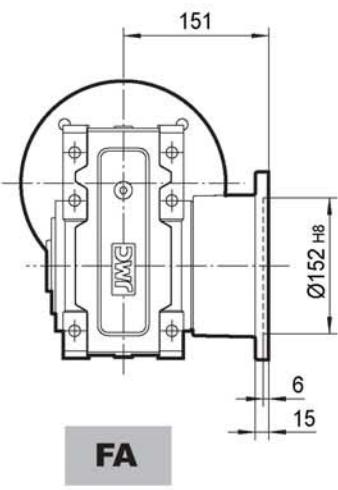
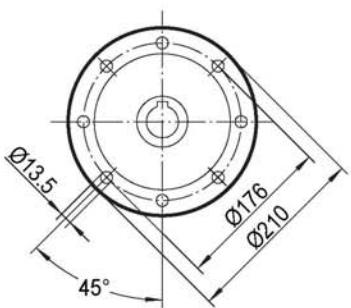
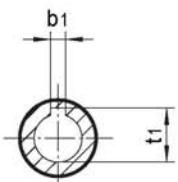
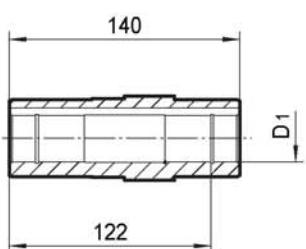
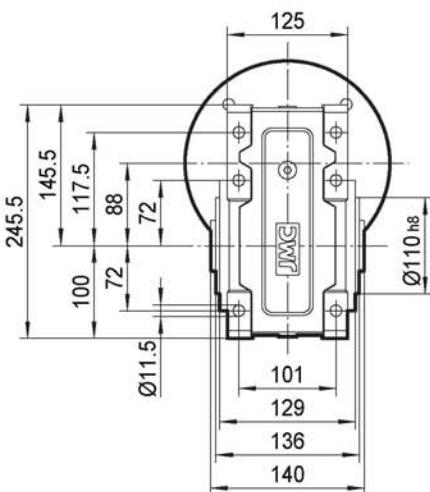
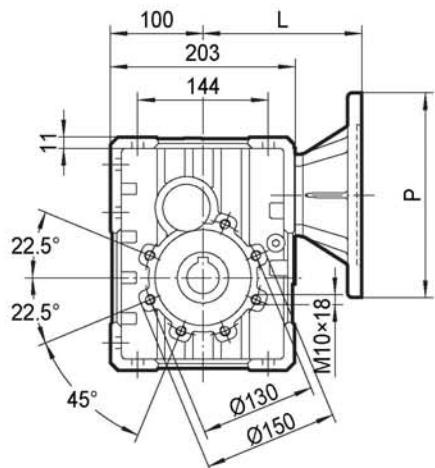
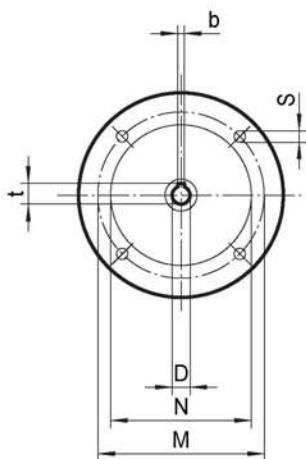
TKB48C..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D _{1 H8}	b ₁	t ₁
63B5	11	4	12.8	140	115	95	9	4	179	28*	8*	31.3*
71B5	14	5	16.3	160	130	110	9	4	186	30	8	33.3
80B5	19	6	21.8	200	165	130	11	4	206	35*	10*	38.3*
80B14	19	6	21.8	120	100	80	7	4	206	* Only on request		
90B5	24	8	27.3	200	165	130	11	4	206	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	206	* Only on request		

* Only on request

Weight without motor
≈ 10.8 kg

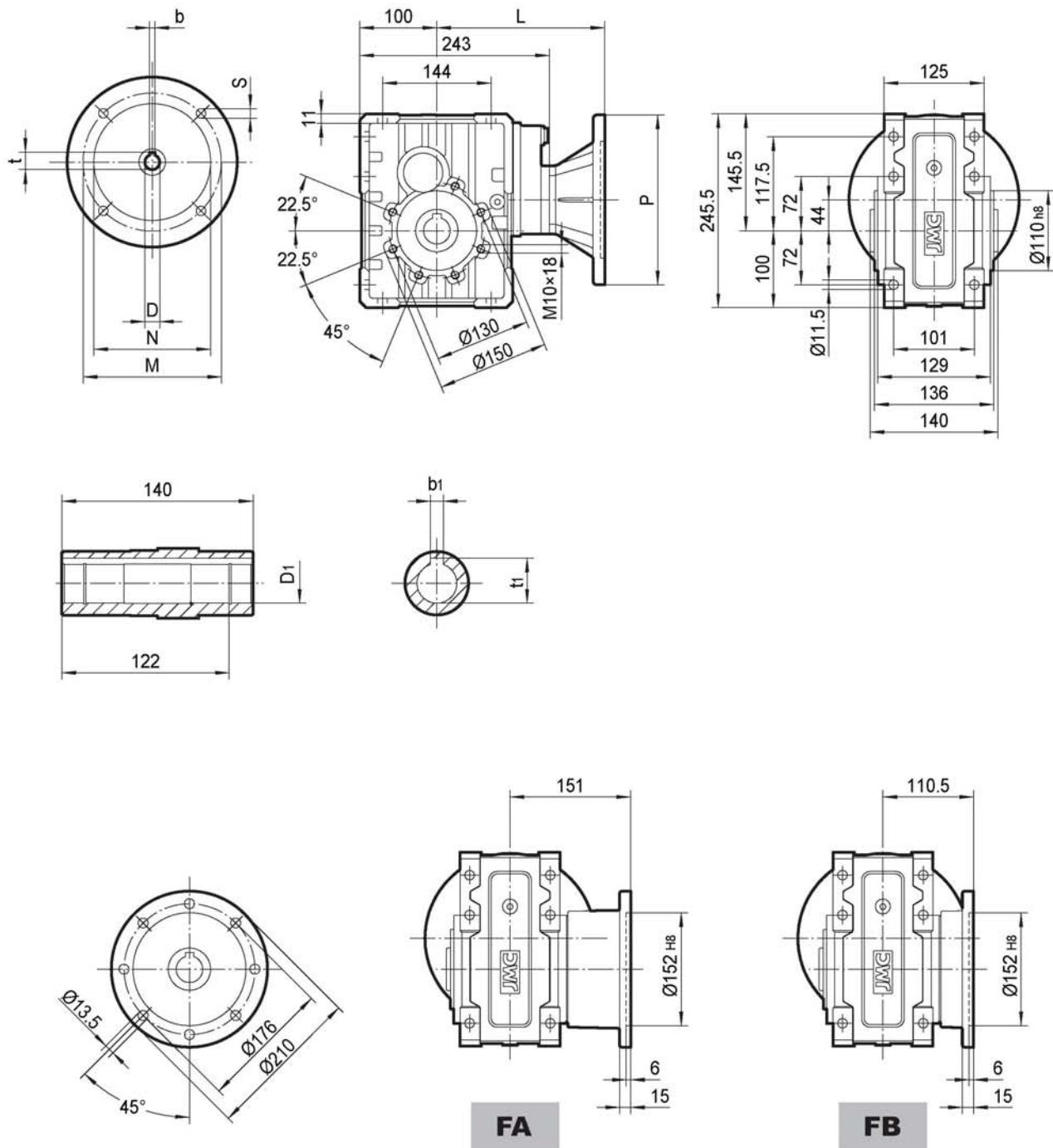
TKB58B..

IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 H8	b1	t1
71B5	14	5	16.3	160	130	110	9	4	162	35	10	38.3
80B5	19	6	21.8	200	165	130	11	4	182	38*	10*	41.3*
80B14	19	6	21.8	120	100	80	7	4	182	40*	10*	43.3*
90B5	24	8	27.3	200	165	130	11	4	182	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	182	* Only on request		
100/112B5	28	8	31.3	250	215	180	13.5	4.5	192	* Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	192	* Only on request		

* Only on request

Weight without motor
≈ 13.5 kg

TKB58C..

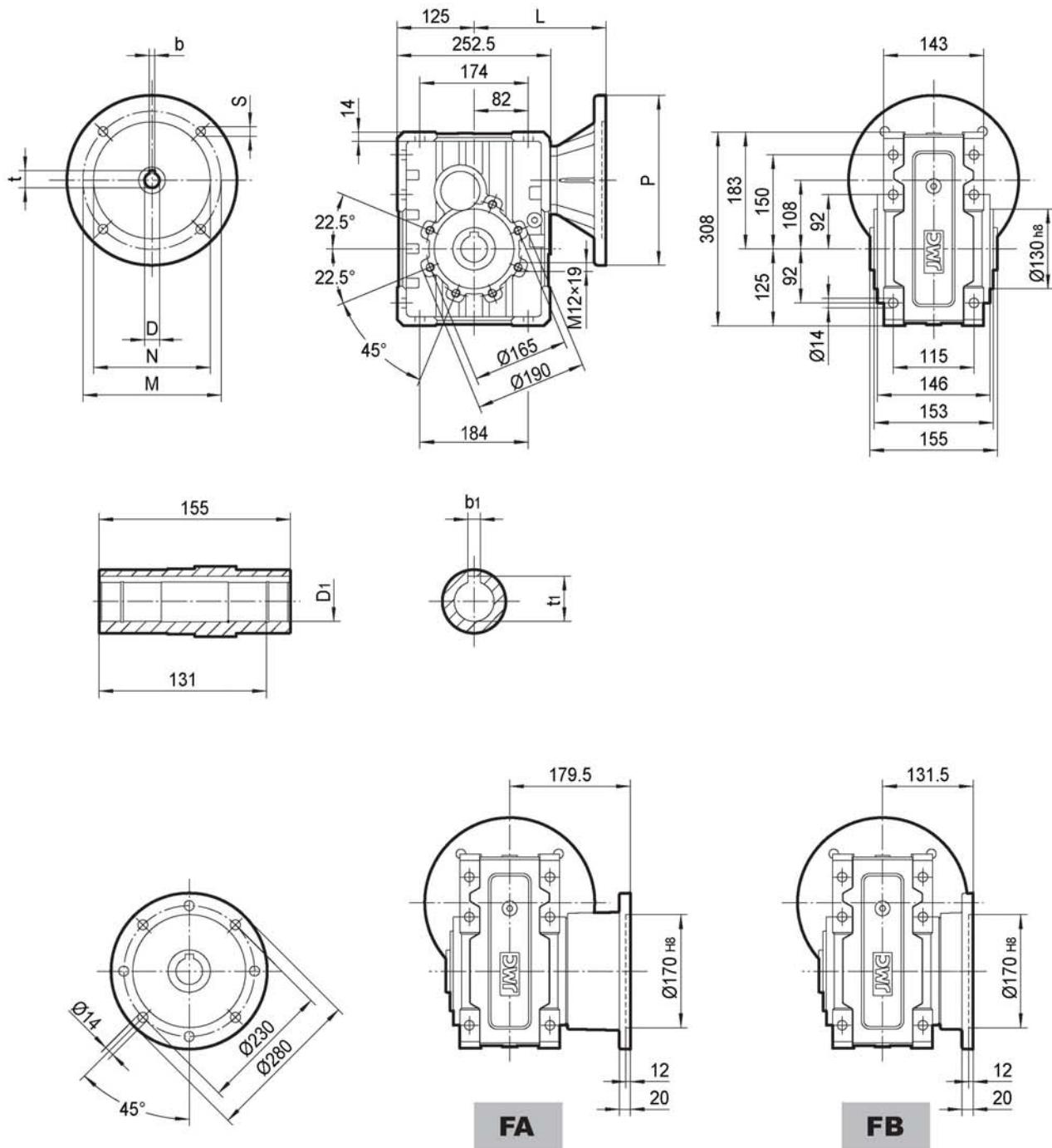


IEC	D _{E8}	b	t	P	M	N	S	T	L	D _{1 H8}	b ₁	t ₁
63B5	11	4	12.8	140	115	95	9	4	195	35	10	38.3
71B5	14	5	16.3	160	130	110	9	4	202	38*	10*	41.3*
80B5	19	6	21.8	200	165	130	11	4	222	40*	10*	43.3*
80B14	19	6	21.8	120	100	80	7	4	222			
90B5	24	8	27.3	200	165	130	11	4	222			
90B14	24	8	27.3	140	115	95	9	4	222			

* Only on request

Weight without motor
≈ 14.8 kg

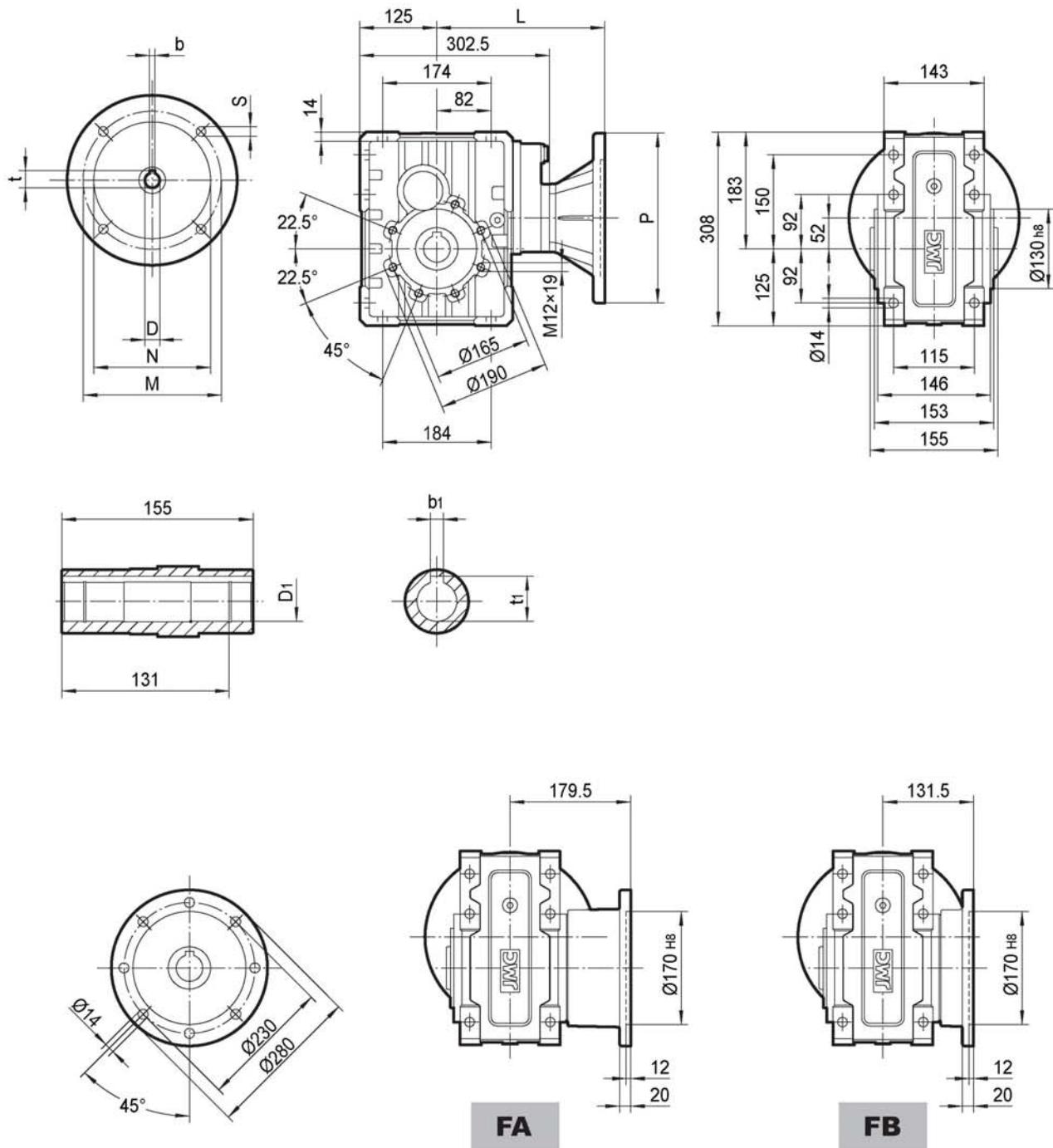
TKB68B..



IEC	D_{E8}	b	t	P	M	N	S	T	L	$D1\text{ H8}$	$b1$	$t1$
80B5	19	6	21.8	200	165	130	11	4	211.5	40*	12	43.3
90B5	24	8	27.3	200	165	130	11	4	211.5	42	12	45.3
100/112B5	28	8	31.3	250	215	180	13.5	4.5	221.5	45*	14	48.8
100/112B14	28	8	31.3	160	130	110	9	4.5	221.5	* Only on request		
132B5	38	10	41.3	300	265	230	14	4.5	241.5	* Only on request		

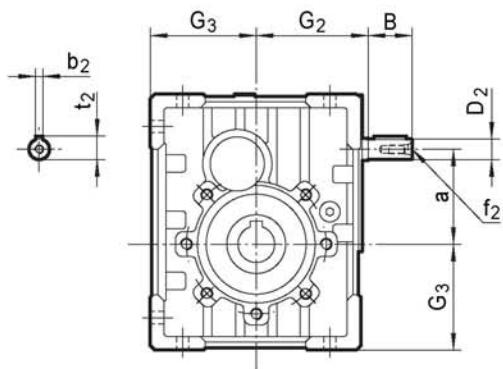
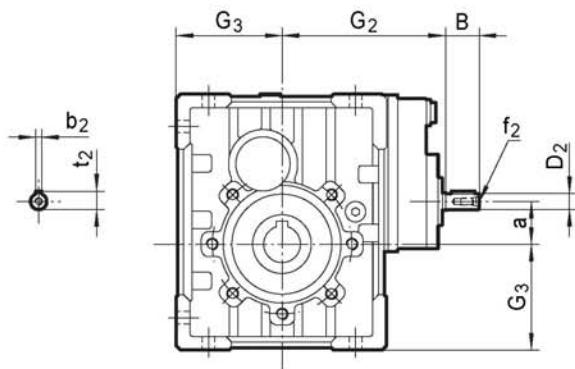
Weight without motor
 $\approx 21.5 \text{ kg}$

TKB68C..



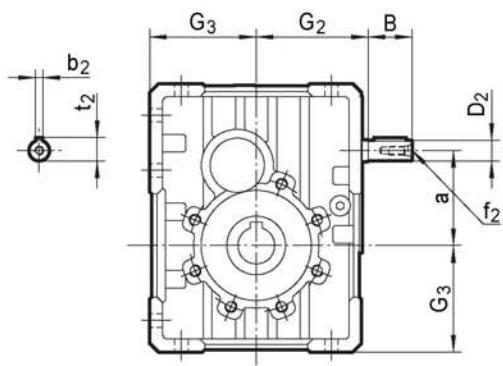
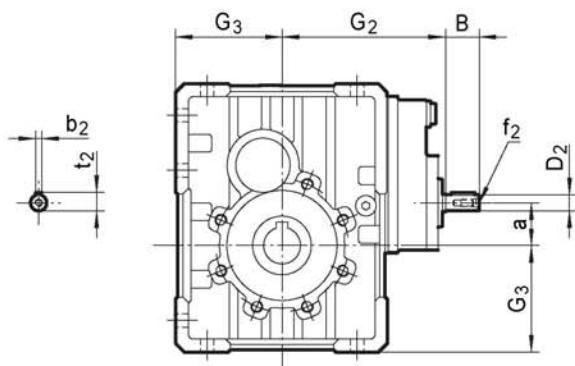
IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H8	b ₁	t ₁
71B5	14	5	16.3	160	130	110	9	4	241.5	40*	12	43.3
80B5	19	6	21.8	200	165	130	11	4	261.5	42	12	45.3
90B5	24	8	27.3	200	165	130	11	4	261.5	45*	14	48.8
100/112B5	28	8	31.3	250	215	180	13.5	4.5	271.5	* Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	271.5	Weight without motor ≈ 23.5 kg		

7.3 TKM..HS Outline Dimension

TKM..B..HS**TKM..C..HS**

	B	D _{2j6}	G ₂	G ₃	a	b ₂	f ₂	t ₂
TKM28B	23	11	65	60	57	4	-	12.5
TKM28C	23	11	100	60	21.5	4	-	12.5
TKM38B	30	14	76	72	64.5	5	M6	16
TKM38C	23	11	111	72	29	4	-	12.5
TKM48B	40	16	91	86	74.5	5	M6	18
TKM48C	30	14	132	86	30.5	5	M6	16
TKM58B	40	19	107	103	88	6	M6	21.5
TKM58C	30	14	148	103	44	5	M6	16
TKM68B	50	24	132	127.5	108	8	M8	27
TKM68C	40	19	181	127.5	52	6	M6	21.5

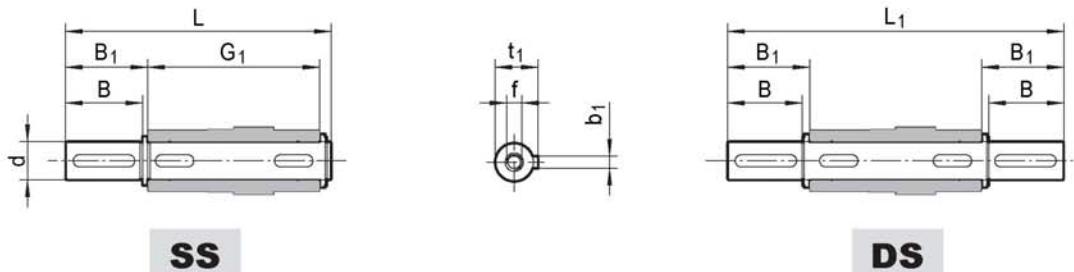
7.4 TKB..HS Outline Dimension

TKB..B..HS**TKB..C..HS**

	B	D _{2j6}	G ₂	G ₃	a	b ₂	f ₂	t ₂
TKB38B	30	14	76	72.5	64.5	5	M6	16
TKB38C	23	11	111	72.5	29	4	-	12.5
TKB48B	40	16	91	87	74.5	5	M6	18
TKB48C	30	14	132	87	30.5	5	M6	16
TKB58B	40	19	107	100	88	6	M6	21.5
TKB58C	30	14	148	100	44	5	M6	16
TKB68B	50	24	132	125	108	8	M8	27
TKB68C	40	19	181	125	52	6	M6	21.5

8. ACCESSORIES OUTLINE DIMENSION SHEET

8.1 Output Shafts

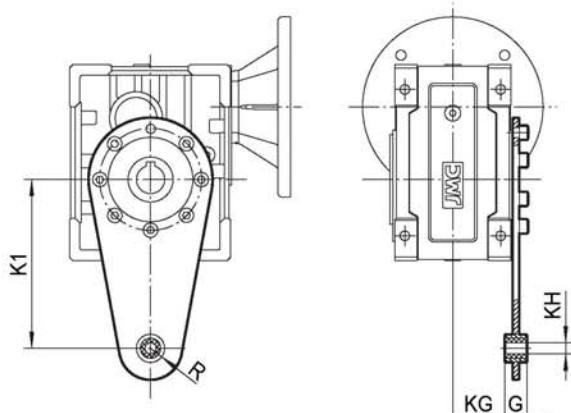


	d h6	B	B ₁	G ₁	L	L ₁	f	b ₁	t ₁
TKM28	25	50	53.5	92	153	199	M10x22	8	28
TKM38	25	50	53.5	112	173	219	M10x22	8	28
TKM48	28	60	63.5	120	192	247	M10x22	8	31
TKM58	35	80	84.5	140	234	309	M12x28	10	38
TKM68	42	80	84.5	155	249	324	M16x36	12	45
TKB38	25	60	65	120	192	246.4	M8x19	8	28
TKB48_d 28	28	60	65	127	199	255	M8x20	8	31
TKB48_d 30	30	60	65	127	199	255	M10x22	8	33
TKB58	35	60	65	140	214	268	M12x22	10	38
TKB68	42	75	80	155	244	313.5	M12x28	12	45

* Only on request

8.2 Torque Arm

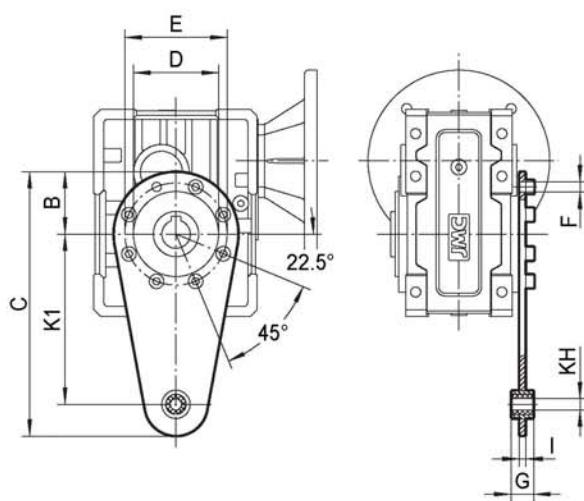
8.2.1 TKM.. Torque Arm



	K ₁	G	KG	KH	R
TKM28	100	14	38.5	10	18
TKM38	150	14	49	10	18
TKM48	200	25	47.5	20	30
TKM58	200	25	57.5	20	30
TKM68	250	30	62	25	35

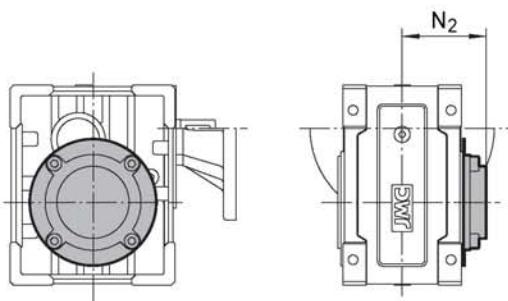
8.2.2 TKB.. Torque Arm

	K ₁	B	C	D	E	F	G	KH	I
TKB38	150	55	233	75	90	9	20	10	6
TKB48	200	60	300	90	110	9	25	20	6
TKB58	200	80	318	110	130	11	25	20	6
TKB68	250	100	388	130	165	13	25	20	6



8.3 Cover

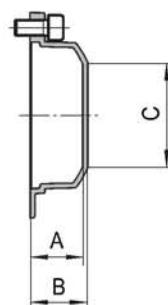
8.3.1 TKM.. Cover



	N ₂
TKM28	63
TKM38	73
TKM48	79
TKM58	94
TKM68	102

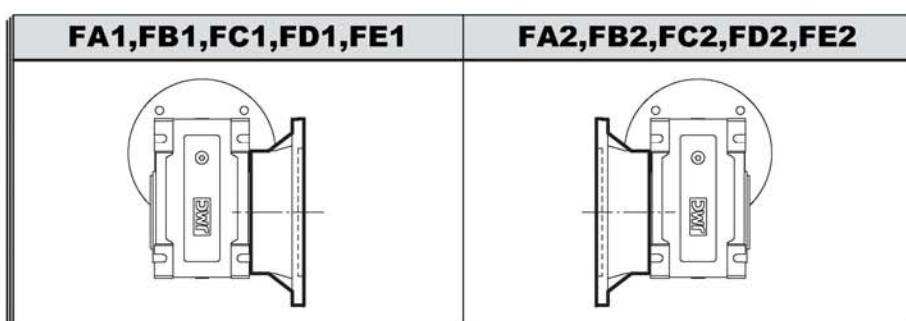
8.3.2 TKB.. Cover

	A	B	C
TKB38	26.5	29	Φ35
TKB48	24.5	27	Φ54
TKB58	26.5	29	Φ71
TKB68	27.5	30	Φ89



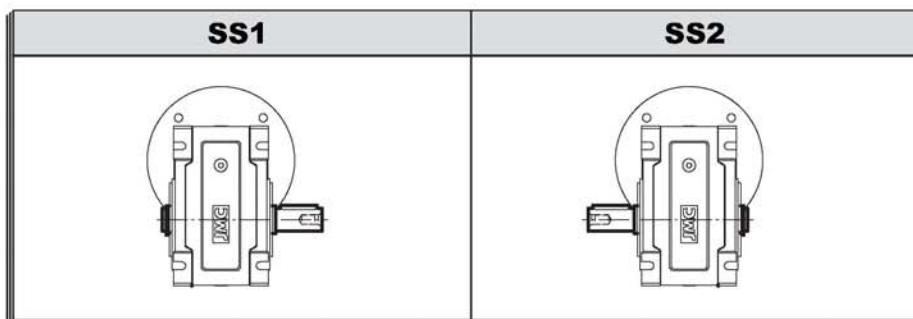
9. INSTALLATION POSITIONS DIAGRAM

9.1 Position diagram for output flange



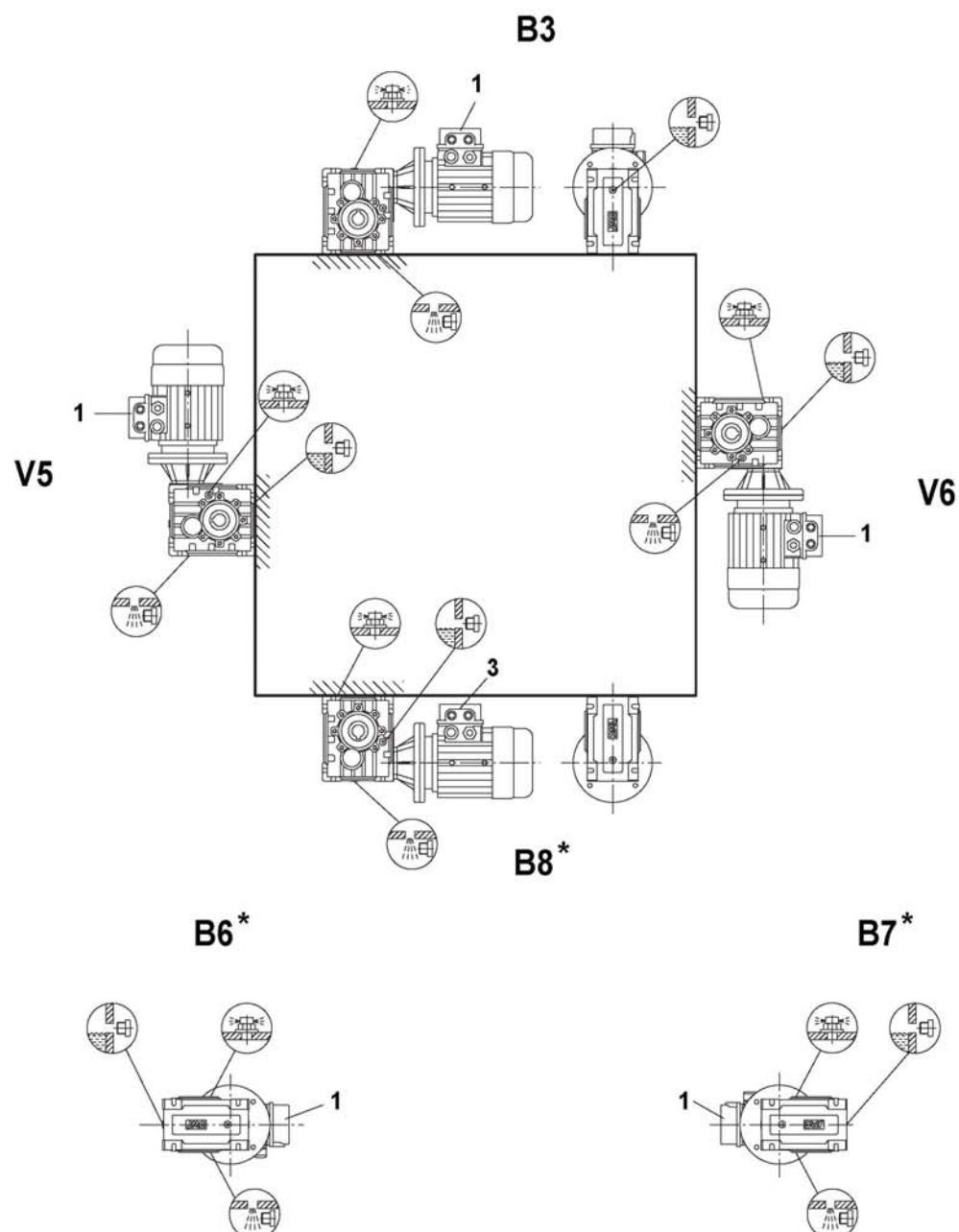
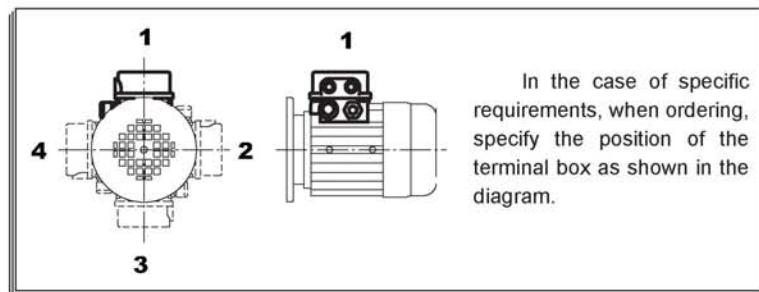
Unless specified otherwise, the gear units is supplied with the flange in pos. F.1 referred to position B3.

9.2 Position diagram for single output shaft



9.3 TKM.. OR TKB.. Mounting Positions

Symbol	Meaning
	Breather valve
	Oil level plug
	Oil drain plug



*: It means the lubricant can't be added according to the oil level line plug, but also higher the plug the fill quantity as shown in the table

9.4 Direction of rotation

**TKM..B / TKB..B****TKM..C / TKB..C**

The motor can be run either CW or CCW while using with gearbox, the left chart is recommended

10. INSTALLATION

10.1 Note recommendations

To install the gear units it is necessary to note the following recommendations:

1. Check the correct direction of rotation of the gear units output shaft before fitting the unit to the machine.
2. Before mount with the prime mover and device, please check the reducer's every axial diameter, aperture, key and key slot, to be sure their dimensions are not deviation, and avoid assembling too tight or too loose, unless it will influence the reducer's performance.
3. The mounting on the machine must be stable to avoid any vibration.
4. Whenever possible, protect the gear units against solar radiation and bad weather.
5. In the case of particularly lengthy periods of storage (4-6 months), if the oil seal is not immersed in the lubricant inside the unit, it is recommended to change it since the rubber could stick to the shaft or may even have lost the elasticity it needs to function properly.
6. Painting must definitely not go over rubber parts and the holes on the breather plugs, if any.
7. When connect with hollow or solid shaft, please grease the joint to avoid lock or oxidation.
8. Check the correct level of the lubricant through the indicator, if there is one.
9. Starting must take place gradually, without immediately applying the maximum load.
10. Supporting unit is required when using various of reducer matched with motor directly and the weight of motor is a little bigger than common.
11. Ensure the motor cools correctly by assuring good passage of air from the fan side.
12. In the case of ambient temperatures < -5°C or > +40°C call the Technical Service.

10.2 Critical applications

The performance given in the catalogue correspond to mounting position B3 or similar, when the first stage is not entirely immersed in oil. For other mounting positions and/or particular input speeds, refer to the tables that highlight different critical situations for each size of gear units. It is also necessary to take due consideration of and carefully assess the following applications by calling our Technical Service:1. As a speed increasing.

2. Applications with especially high inertia.
3. Use in services that could be hazardous for people if the gear units fails.
4. Applications with high dynamic strain on the case of the gear units.
5. In places with T° under -5°C or over 40°C.
6. Use in chemically aggressive environments.
7. Use in a salty environment.
8. Use in radioactive environments.
9. Use in environments pressures other than atmospheric pressure.
10. Mounting positions not envisaged in the catalogue.

Avoid applications where even partial immersion of the gear units is required.

The maximum torque that the gear units can support must not exceed two times the nominal torque ($f_s = 1$) stated in the performance tables. Intended for momentary overloads due to starting at full load, braking, shocks or other causes, particularly those that are dynamic.

11. LUBRICATION

11.1 Types of lubrication

						lubrication type
TKM.. TKB..	Standard -10 +40	VG 220	Shell Omala 220	Mobilgear 630	BP Energol GR-XP 220	Mineral oil
	-20 +25	VG 150 VG 100	Shell Omala 100	Mobilgear 627	BP Energol GR-XP 100	
	-30 +10	VG 68-46 VG 32	Shell Tellus T 32	Mobil D.T.E. 13M		
	-40 -20	VG 22 VG 15	Shell Tellus T 15	Mobil D.T.E. 11M	BP Energol HLP-HM 15	
	-40 +80	VG 220	Shell Omala HD 220	Mobil SHC 630		Synthetic oil
	-40 +40	VG 150		Mobil SHC 629		
	-40 +10	VG 32		Mobil SHC 624		

11.2 Lubricant fill quantity

The specified fill quantities are recommended values. The precise values vary depending on the number of stages and gear ratio. When filling, it is essential to check the oil level plug since it indicates the precise oil capacity. The following tables show guide values for lubricant fill quantities in relation to the mounting position (B3、B6、B7……)

TKM.. Lubricant fill quantity

Gear units	Fill quantity in liters (L)					
	B3	B6	B7	B8	V5	V6
TKM28B	0.22	0.20*	0.13*	0.15	0.25	0.14
TKM28C #	0.07	0.04	0.04	0.05	0.08	0.09
TKM38B	0.42	0.35*	0.24*	0.22	0.46	0.25
TKM38C #	0.07	0.04	0.04	0.05	0.08	0.09
TKM48B	0.70	0.58*	0.42*	0.42	0.75	0.45
TKM48C #	0.13	0.09	0.09	0.09	0.15	0.17
TKM58B	1.21	0.95*	0.72*	0.67	1.30	0.74
TKM58C #	0.13	0.09	0.09	0.09	0.15	0.17
TKM68B	2.15	1.70*	1.10*	1.25	2.20	1.20
TKM68C #	0.25	0.17	0.17	0.20	0.32	0.36

TKB.. Lubricant fill quantity

Gear units	Fill quantity in liters					(L)
	B3	B6	B7	B8	V5	
TKB38B	0.38	0.35*	0.25*	0.26*	0.44	0.25
TKB38C #	0.07	0.04	0.04	0.05	0.08	0.09
TKB48B	0.66	0.60*	0.45*	0.48	0.78	0.48
TKB48C #	0.13	0.09	0.09	0.09	0.15	0.17
TKB58B	1.15	0.95*	0.70*	0.75*	1.25	0.75
TKB58C #	0.13	0.09	0.09	0.09	0.15	0.17
TKB68B	2.00	1.70*	1.10*	1.40*	2.20	1.20
TKB68C #	0.25	0.17	0.17	0.20	0.32	0.36

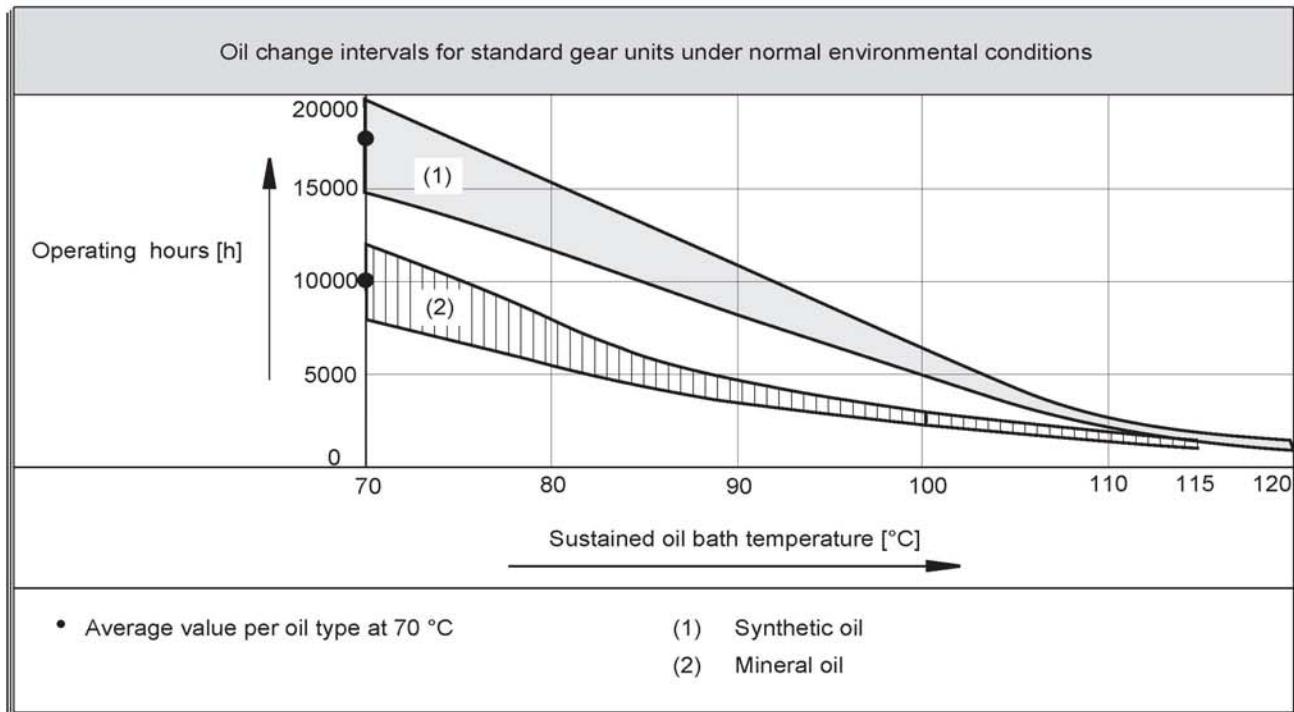
#: Means the oil quantity in the 3rd stage housing, as this one is separated from the 2nd housing, please fill them separately while in 3 stages.

*****: It means the lubricant can't be added according to the oil level line plug, but also higher the plug the fill quantity sa shown in the table

12. MAINTENANCE

- 1). For gear units, first oil change should be after about 300 hours (run-in period). The right lotion is required to clean the gear units with care. Never mix the synthetic oil and mineral oil together.
- 2). Every 3000 working time, at least every 6 months, you have to check the oil and oil level, the seals visually for leakage. For IEC input gear units, the elastomer should be tested or replaced if necessary.
- 3). Depending on the operating conditions (see chart below), every 3 years at the latest for inspection is needed. Then change the mineral oil and replace the bearing grease.
- 4). Depending on the operating conditions, change the oil seals on output shaft.
- 5). Once the malfunctions appear, stop disassembling the parts, and firstly please contact the customer service (the information about specification, delivery date, series number, time used, name of machine, machine manufacturer, malfunction problems is required) , then take the reasonable measures.

STORAGE / NOTICE FOR ORDER



13. STORAGE

- 1). Under roof, protected against rain and snow, no shock loads.
 - 2). Underlay the block and other material between the ground and equipment.
 - 3). The opened but not used gear units should be added with the anti-corrosive oil on its surface, and then return to the packing containers timely.
 - 4). Two years or more given regular inspections. Check for cleanliness and mechanical damage as part of the inspection, Check corrosion protection.

14. NOTICE FOR ORDER

Please offer the following information when place the orders:

- 1). the model mark of the gear units(type, ratio, power and mounting position).
 - 2). generally the gear units paint in silver.
 - 3). quantity ordered.
 - 4). other special requirements.
 - 5). company, contact and telephone.

15. GEAR UNIT MALFUNCTIONS

Problem	Possible cause	Remedy
Unusual, regular running noise	A. Meshing/grinding noise: Bearing damage. B. Knocking noise: Irregularity in the gearing	A. Check the oil, change bearings B. Contact customer service
Unusual, irregular running noise	Foreign bodies in the oil	<ul style="list-style-type: none"> • Check the oil • Stop the drive, contact customer service
Oil leaking ¹⁾ • From the gear cover plate • From the motor flange • From the motor oil seal • From the gear unit flange • From the output end oil seal	A. Rubber seal on the gear cover plate leaking B. Seal defective C. Gear unit not vented	A. Tighten the bolts on the gear cover plate and observe the gear unit. Oil still leaking: Contact customer service B. Contact customer service C. Vent the gear unit (see "Mounting Positions")
Oil leaking from breaking valve	A. Too much oil B. Drive operated in incorrect mounting position C. Frequent cold starts(oil foams) and/or high oillevel	A. Correct the oil level (see Sec. "Inspection and Maintenance") B. Mount the breather valve correctly (see Sec."Mounting Positions")and correct the oil level(see" Lubricants")
Output shaft does not turn although the motor is running or the input shaft is rotated	Connection between shaft and hub in gear unit interrupted	Send in the gear unit/gearmotor for repair

1) Short-term oil/grease leakage at the oil seal is possible in the run-in phase (24 hours running time).

16. Charge Characteristic Chart (for reference)

AIR BLOWERS		Hoist gear assembly	A
Air blower(axial or radial)	A	Derrick gear assembly	B
Fan of cooling tower	B	Steering gear assembly	B
Induced draught fan	B	Moving gear assembly	C
Rotary piston type fan	B	LAND DREDGER	
Turbo-fan	A	Drum-type coveyer	C
CONSTRUCTION MACHINERY		Drum-type rotation wheel	C
Concrete mixer	B	Dredger head	C
Hoist	B	Powered crab	B
Road building machinery	B	Pump	B
Boring mill	B	Pump turning gear assembly	B
CHEMICAL MACHINERY		Moving gear assemly (apron wheel)	C
Mixer (liquid)	A	Moving gear assembly (track)	B
Mixer (half liquid)	B	FOODSTUFF PROCESSING MACHINERY	
Centrifuge (heavy)	B	Placer or box filler	A
Centrifuge(light)	A	Cane crusher	A
** Cooling rolling drum	B	** Cane cutter	B
** Dry rolling drum	B	** Cane crasher	C
Mixer	B	Mixer	B
COMPRESSOR		Paste bucket	B
Piston type compressor	C	Packager	A
Turbo-compressor	B	Beet slicer	B
TRANSMISSION FREIGHTER		Beet washing machine	B
Pan conveyer	B	MOTOR AND CONVERSION EQUIPMENTS	
Balance lifter	B	Frequency converter	C
Trough conveyer	B	Motor	C
Ribbon conveyer (large piece)	C	Welding motor	C
Ribbon coveyer (small piece)	B	WASHING MACHINE	
Drum-type flour conveyer	A	Rolling drum	B
Chain conveyer	B	Washing machine	B
Ring type conveyer	B	METAL ROLLER MACHINE	
Lifter	B	** Steel cutter	C
Hoist	B	** Chain conveyer	B
Crank-connecting conveyer	B	** Cold mill	C
Lifter	B	Continuous casting equipments	B
Worm conveyer	B	** Cold bed	B
Steel-band conveyer	B	** Cropper	C
Chain reed-type conveyer	B	** Cross steering transmitter	B
Crab freighter	B	** Deruster	C
HOIST		** Heavy and medium steel mill	C
Bracket swing gear assembly	B	** Bar mill	C

BAR TRANSMISSION EQUIPMENTS		B	PUMPS	
Bar pusher	B	Centrifugal pump (thin liquid)	A	
Push bed	B	Centrifugal pump (half liquid)	B	
** Shears	C	Displacement pump	C	
** Lumber elevator platform	B	Plunger pump	C	
ROLL ADJUSTING EQUIPMENTS		B	Force pump	
Roller leveling machine	B	PLASTIC EQUIPMENTS		
** Mill rolling way (heavy)	C	** Glazing press	B	
** Mill rolling way (light)	B	** Ejecting press	B	
** Sheet rolling mill	C	** Spiral extruding machine	B	
** Trimming shears	B	** Mixing machine	B	
Pipe welder	C	RUBBER EQUIPMENT		
Soldering machine(belt material and wire rod)	B	** Glazing press	B	
Wire drawbench	B	** Ejecting press	C	
METAL PROCESSING MACHINE TOOLS			** Mixing stir machine	B
Power shaft	A	Kneading machine		
** Forging machine	C	** Roller machine	C	
Drop hammer	C	STONE PORCELAIN CLAY PROCESSING EQUIPMENTS		
Machine tool and necessary	A			
Machine tool and main driving equipment	B	Ball crusher	B	
Metal facing machine	C	** Ejecting press and breaker	C	
Plate-leveling machine tool	C	Breaker	C	
Backing-out punch	C	Brick press	C	
Press machine tool	C	** Beating crusher	C	
Cutting machine	B	** Converter	C	
Sheet bending machine tool	B	** Cylinder mill	C	
PETROLEUM PROCESSING MACHINERY		TEXTILE MACHINERY		
** Pump of oil pipe line	B	Feeding machine	B	
Rotary drilling equipment	C	Loom machine	B	
PAPERING MACHINE			Dyeing machine	B
** Glazing press	C	Purified drum	B	
** Multilayer paper board machine	C	Welon machine	B	
** Drying cylinder	C	WASTER TREATMENT EQUIPMENTS		
** Glazing cylinder	C	** Air blast	B	
** Masher	C	Screw pump	B	
** Mashing and breaking machine	C	WOOD PROCESSING MACHINE TOOL		
** Suction roll	C	Barker	C	
** Wet paper roller machine	C	Facing machine	B	
** Water absorbing roller machine	C	Saw bench	C	
Welon machine	C	Wood processing machine tool	A	

Note: A - Uniform load; B - Moderate shock load; C - Heavy shock load; ** - for 24hour system.

SHOW THE SERIES PRODUCTS

TR Series helical geared motors



TS Series helical-worm geared motors

TK Series helical-bevel geared motors



TF Series parallel shaft helical geared motors

G3 Series mini helical geared motors



TRC Series mini helical gear units



TNRV Series worm gear units

UDL Series stepless speed variator



Head Office & Accounts
Unit 20 McDonald Business Park
Maylands Avenue
Hemel Hempstead
Hertfordshire
HP2 7EB

Tel: 01442 266909
Fax: 01442 263936
Email: amirkhodadoost@aol.com
amir@eurodrivesystems.com
Web: www.eurodrivesystems.com

Midlands Branch
Unit 1
Prospect House
Prospect Road
Burntwood
Staffordshire
WS7 0AL

Tel: 01543 676792
Fax: 01543 682665
Email: sales@eurodrivesystems.com