

- SERIE DKM / DKB -

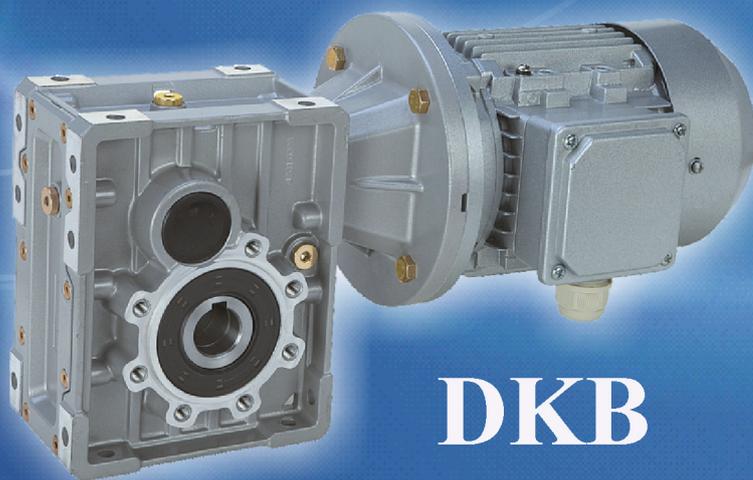
Riduttori ad assi ortogonali
Helical - Hypoid Gear Units

ELLE.GI SRL

*Organi di
Trasmissione*



DKM

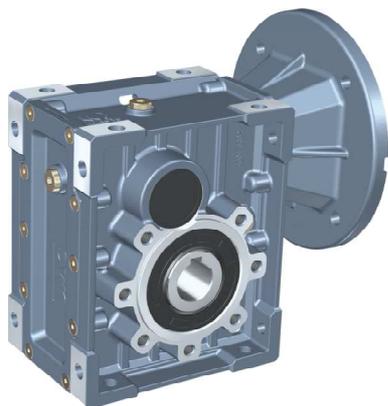


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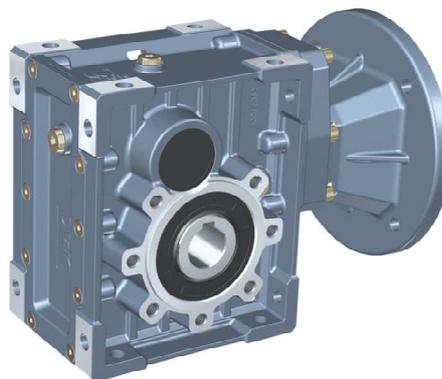
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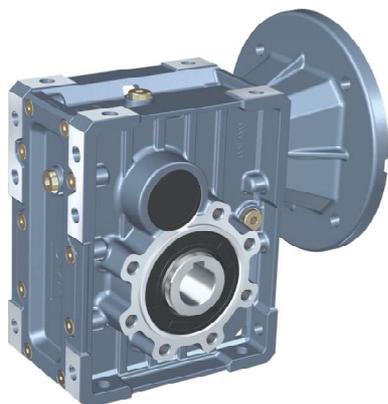
1. IMMAGINI PRODOTTO / PRODUCT PICTURE



DKM28B ~ 58B



DKM28C ~ 58C



DKB38B ~ 58B



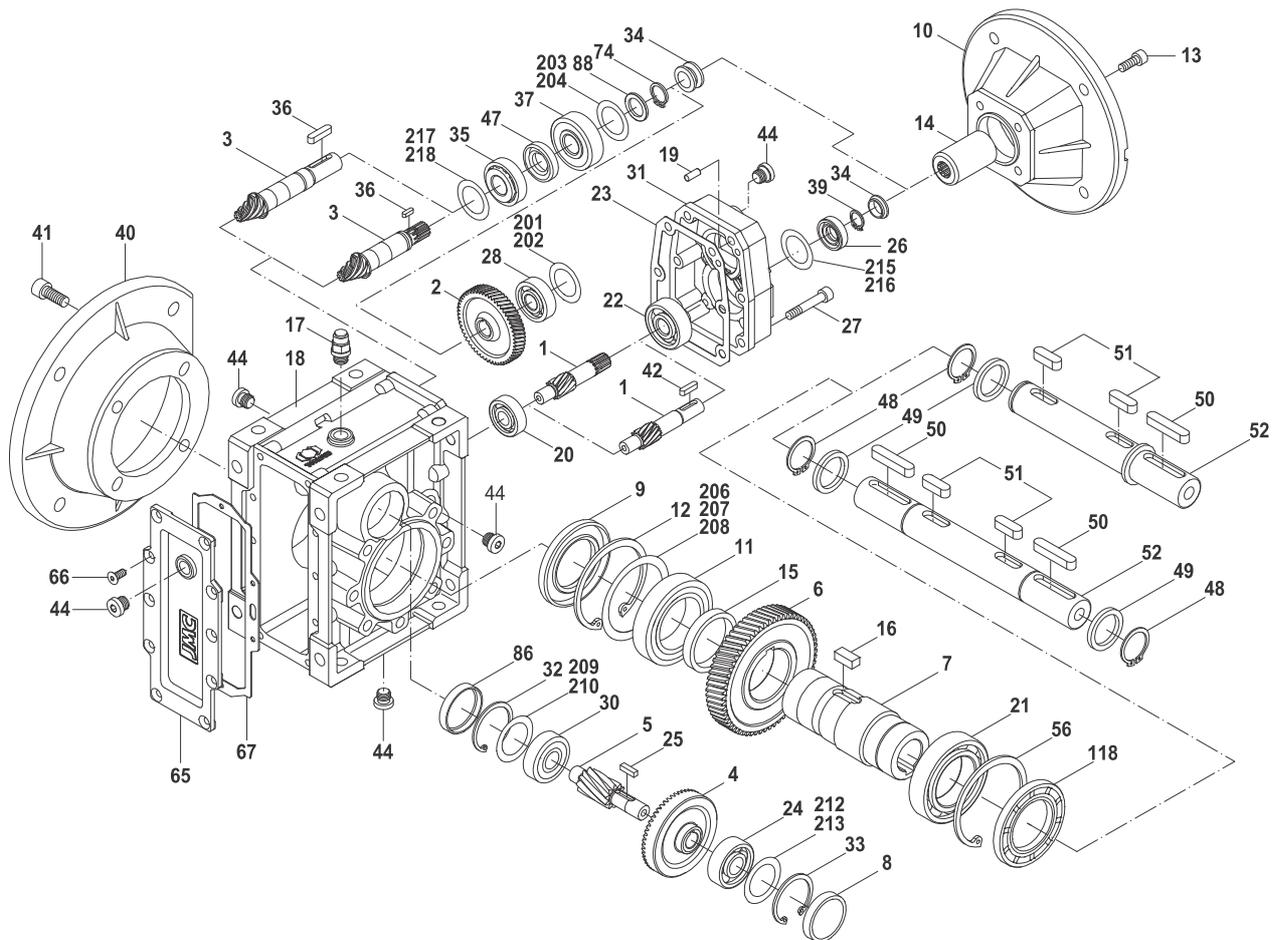
DKB38C ~ 58C

ANNOTATIONS - NOTES

- FOR THE DKM SERIE SIZE 38 - 48 AND 58 THE DELIVERY IS ON REQUEST
- Per la serie DKM taglie 38 - 48 e 58 la consegna è a richiesta

- FOR DKM FOR SIZE 68 THE DELIVERY IS NOT STILL AVAILABLE
- Per la taglia 68 della serie DKM la consegna non è ancora disponibile

1.1 Immagine del prodotto / Basic structure



1 Pignone / Pinion	25 Chiavetta / Key	56 Seeger / Hole-circlip
2 Ruota Dentata / Gear	26 Anello di tenuta / Oil seal	65 Coperchio carcassa / Gearcase cover
3 Albero Pignone / Pinion shaft	27 Viti a brugola / Inner hex screw	66 Vite / Hexagon sunk screw
4 Ruota Dentata / Gear	28 Cuscinetto / Bearing	67 Guarnizione plastica / Rubber gasket
5 Albero Pignone / Pinion shaft	30 Cuscinetto / Bearing	74 Seeger / Shaft-circlip
6 Ruota Dentata / Gear	31 Carcassa 3° stadio / 3 stage gearcase	86 Tappo Chiuso / Closing cap
7 Albero Cavo / Hollow shaft	32 Seeger / Hole-circlip	88 Rondella / Washer
8 Tappo Chiuso / Closing cap	33 Seeger / Hole-circlip	118 Anello di tenuta / Oil seal
9 Anello di tenuta / Oil seal	34 Fondello in plastica / Rubber boot	201 Anello di rasamento / Shim ring
10 Flangia in ingresso / Input flange	35 Cuscinetto / Bearing	202 Anello di rasamento / Shim ring
11 Cuscinetto / Bearing	36 Chiavetta / Key	203 Anello di rasamento / Shim ring
12 Seeger / Hole-circlip	37 Cuscinetto / Bearing	204 Anello di rasamento / Shim ring
13 Viti a brugola / Inner hex screw	38 Chiavetta / Key	206 Anello di rasamento / Shim ring
14 Albero in ingresso / Input shaft	39 Seeger / Shaft-circlip	207 Anello di rasamento / Shim ring
15 Distanziale / Spacer	40 Flangia in uscita / Output flange	208 Anello di rasamento / Shim ring
16 Chiavetta / Key	41 Viti a brugola / Inner hex screw	209 Anello di rasamento / Shim ring
17 Tappo di sfiato / Breather valve	42 Chiavetta / Key	210 Anello di rasamento / Shim ring
18 Carcassa / Gearcase	43 Tappo dell'olio / Oil plug	212 Anello di rasamento / Shim ring
19 Spina / Stifte	44 Tappo dell'olio / Oil plug	213 Anello di rasamento / Shim ring
20 Cuscinetto / Bearing	45 Anello di tenuta / Oil seal	215 Anello di rasamento / Shim ring
21 Cuscinetto / Bearing	46 Seeger / Shaft-circlip	216 Anello di rasamento / Shim ring
22 Cuscinetto / Bearing	47 Anello di tenuta / Oil seal	217 Anello di rasamento / Shim ring
23 Guarnizione / Housing gasket	48 Seeger / Shaft-circlip	218 Anello di rasamento / Shim ring
24 Cuscinetto / Bearing	49 Guarnizione / Gasket	
	50 Chiavetta / Key	
	51 Chiavetta / Key	
	52 Albero doppio in uscita / Double output shaft	
	53 Albero semplice in uscita / Single output shaft	

2. SOMMARIO

2.1 Caratteristiche del prodotto

La serie DKM e DKB sono riduttori di nuova generazione a coppia conica ipoide da noi sviluppati con un compromesso di avanzata tecnologia.

Le caratteristiche principali sono le seguenti:

1. Costruiti con coppie coniche ipoidi con alti rapporti di riduzione;
2. Alta coppia in uscita, alto rendimento e basso consumo energetico;
3. Costruiti in carcasse di alluminio pressofuso di alta qualità;
4. Elevata durata, basso rumore e adatti a lavorare in ambienti difficili;
5. Ottimo aspetto estetico e compatti;
6. Adatti ad ogni installazione e di facile impiego;
7. Il fissaggio del DKM 28 e' identico al nostro tipo a vite senza fine MRDV 50;
8. La loro modularità soddisfa la richiesta di varie applicazioni;

2.2 Principali materiali

1. Carcassa in alluminio pressofuso
2. Ingranaggi in materiale 20 Cr Mn Ti H1 al carbonio trattato con durezza dai 56 ai 62 HRC carbonitrurato con durezza profonda 0,3 3 0,5 mm

2.3 Verniciatura

Carcassa di alluminio:

1. Granigliatura e speciale trattamento antisettico alle superfici d'alluminio;
2. Fosfatizzazione e spruzzata di RAL 9022 in argento,

2. SUMMARIZE

2.1 Products characteristics

DKM,DKB series helical-hypoid gear units is a new-generation of product developed by our company . 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. Large in output torque,high efficiency,energy saving and environmental protection.
3. Made of high-qualtly aluminum alloy, light in weight and nonrusting.
4. Smooth in running and low in noise, can work long time in dreadful conditions.
5. Good-looking in 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 **DKM** series are compatible with **MRDV** series worm gear unit
8. Modulaw and multistructure can meet the demands of various conditions .

2.2 Main materials

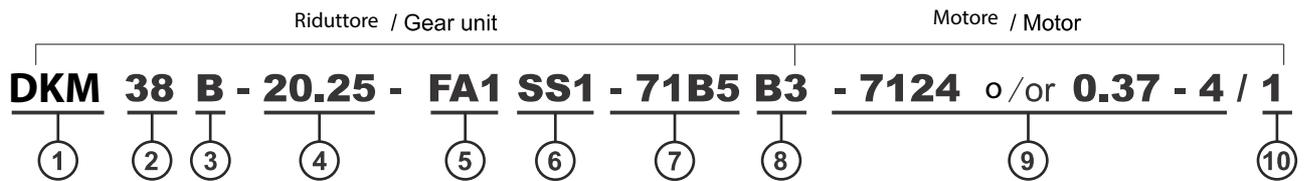
1. Housing: die-cast aluminum alloy (frame size: 28 to 58); .
2. gear wheel: 20CrMnTiH1, carbonize & quencher heat treatment make the hardness of gear's surface up to 56~62 HRC, retain carburization layer's thickness between 0.3 and 0.5mm after precise grinding.

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.

3. SPIEGAZIONE DEI CODICI / **MODEL ILLUMINATE**



No		Comments
1	Codice indicante la serie DKM/DKB	Code for gear units series: DKM/DKB
2	Taglia riduttore 28, 38, 48, 58, 68	Specification code of gear units 28, 38, 48, 58, 68
3	1). B : 2 stadi di riduzione 2). C : 3 stadi di riduzione	1). B : Means 2 stages 2). C : Means 3 stages
4	Rapporto di riduzione: i	Speed ratio of reducer i
5	1). Non indicandolo: senza flangia 2). FA,FB,FC,FD,FE(1/2) : flange in uscita e posizioni	1). No mark means without output flange 2). FA,FB,FC,FD,FE(1/2) : output Flange and position
6	1). Non indicandolo: albero lento cavo in uscita 2). SS(1/2) : albero lento senplice in uscita e posizione 3). DS : doppio albero lento in uscita	1). No mark means hole output 2). SS(1/2) : Single output shaft and position 3). DS : Double output shaft
7	1). cod. flangia in ingresso (63B5, 71B5, 71B14.....) 2). HS : Albero maschio in ingresso	1). Input flange code(63B5, 71B5, 71B14.....) 2). HS : means shaft input
8	Posizione di montaggio	Installation position code
9	1). Non indicandolo: senza motore 2). Tipo di motore	1). No mark means without motor 2). Model motos (poles of power)
10	Diagramma per la posizione della morsettiera del motore	Position diagram for motor terminal box default position 1 not to write out is ok

In fase d'ordine è sempre meglio specificare se il riduttore è equipaggiato di motore

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

Esempio: Example: **DKB68B - 59.22 - FA1 - 90B5**

4. PARAMETRI IMPORTANTI

4.1 Potenza - P

$$P_1 = \frac{P_2}{\eta} \text{ [kW]}$$

$$P_{1n} \geq P_1 \cdot f_s \text{ [kW]}$$

P_1	Potenza in ingresso
P_2	Potenza in uscita
P_{1n}	Potenza del motore consigliata
f_s	Fattore di servizio
η	Rendimento

Il rendimento della serie DKM e DKB dipende dal numero degli stadi. Varia tra il 94 % (2 stadi) e il 92 % (3 stadi).

4.2 Velocità - n

n_1	Velocità in ingresso
n_2	Velocità in uscita

Sono consigliate velocità in ingresso di 1400 giri/min o inferiori in modo da prolungare la vita del riduttore. Lo stesso può funzionare anche con velocità in ingresso sino a 3000 giri ma va ridotta la coppia in uscita che può sopportare il riduttore.

4.3 Rapporto di trasmissione - i

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

Abitualmente il rapporto di riduzione viene indicato considerando 2 numeri decimali dopo la virgola.

4.4 Coppia - M

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

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

M_2	Coppia in uscita
M_{2n}	Coppia in uscita nominale
P_1	Potenza in ingresso
η	Rendimento
f_s	Fattore di servizio

4.5 Fattore di servizio - f_s

Il fattore di servizio quantifica la maggiore o minore gravosità delle condizioni di funzionamento reali ovvero del servizio reale rispetto a quello nominale, determinando così il sovra o sottodimensionamento necessario per il riduttore che si deve scegliere.

4. RELEVANT PARAMETER

4.1 Power P

$$P_1 = \frac{P_2}{\eta} \text{ [kW]}$$

$$P_{1n} \geq P_1 \cdot f_s \text{ [kW]}$$

P_1	Input power
P_2	Output power
P_{1n}	Rated power driving motor
f_s	Service factor
η	Transmission efficiency

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

4.2 Rotation speed n

n_1	Gear units input speed
n_2	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

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

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

M_2	Output torque
M_{2n}	Selected output torque
P_1	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.

Il grafico sotto riportato indica tre tipi di carico diversi che variano in funzione della massa da accelerare e dalla frequenza degli avviamenti. Dalla tabella dei parametri Si dovrà scegliere un riduttore che dia un fattore di servizio sempre superiore a 1.

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.

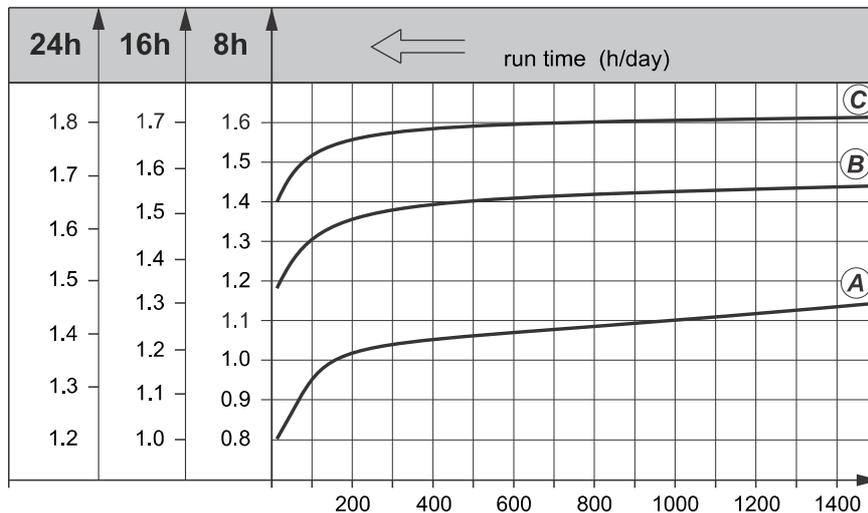


Fig.: Fattore di servizio (fs)
Fig: Service factor (fs)

Frequenza d'avvio Z (1/h) #
start up frequency Z (1/h) #

frequenza d'avvio Z: il ciclo include tutti gli avvii e le fermate in funzione del cambio della velocità.

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

4.5.1 Classifica dei carichi

- (A) Uniforme, con fattore di accelerazione $fa \leq 0.2$
- (B) Carico di spunto moderato con fattore di accelerazione $fa \leq 3$
- (C) Elevato carico di spunto con fattore di accelerazione $fa \leq 10$

4.5.1 load classifications

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

Esempi di applicazioni:

- Nastri trasportatori;
- Ventilatori, linee di assemblaggio, trasportatori a nastro, piccoli mescolatori, macchine per pulizia, macchine a controllo;
- Avvolgitori, Macchine lavorazione legno, ascensori, trasportatori per materiali pesanti, porte scorrevoli, macchine imballaggio, taglierine pompe piegatrici;
- Mescolatori per materiali pesanti, presse, cesoie mulini macinatori piegatrici buratti vibratori trituratori;

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 Fattore di accelerazione

Viene calcolato nel seguente modo:

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

f_a fattore di accelerazione

J_c momento di inerzia del carico (kgm²)

J_m momento di inerzia del motore (kgm²)

Nel caso il fattore di accelerazione risultasse **f_a > 10**, interpellare il nostro ufficio tecnico

Per ottenere una lunga durata del riduttore il fattore di servizio **f_s** selezionato dal catalogo deve essere uguale o meglio più alto di quello necessario, ottenuto tramite il diagramma descritto nella pagina precedente.

ESEMPIO:

Con fattore di accelerazione di 2,5 tipo **(B)** un servizio **f_s = 1.48** e 200 cicli/ora, risulta che serve un fattore di servizio **f_s ≥ 1.48**

4.6 Sovraccarico e carichi assiali

Gli alberi in entrata e in uscita dei riduttori possono essere soggetti a dei carichi radiali esterni, causati dal tipo di trasmissione in uso. Il reale valore dei carichi radiali esterni può essere calcolato utilizzando la formula:

I sovraccarichi esercitati sul motore o sull'albero sono calcolati come segue:

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

F_r Carico Radiale [N]

M Forza sull'albero [Nm]

d₀ diametro degli elementi di trasmissione montati in [mm]

f_z Fattore elementi di trasmissione

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
Ingranaggi - Gears	1.15	< 17 teeth
Pignone catena - Chain sprockets	1.25	< 20 teeth
	1.40	< 13 teeth
∇ Puleggia - Narrow V-belt pulleys	1.75	Influence of the tensile force
Puleggia - Flat belt pulleys	2.50	Influence of the tensile force
Puleggia - 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:

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

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

Il carico radiale effettivo così determinato non dovrà mai superare il carico radiale massimo ammissibile riportato nelle tabelle in modo da non pregiudicare la durata e la resistenza dei cuscinetti.

I carichi radiali ammissibili indicati nelle tabelle si intendono quelli applicati sulla mezzeria dell'albero.

Qualora il carico radiale esterno non sia applicato esattamente nella mezzeria dell'albero di entrata, ma in una sezione diversa, il carico radiale massimo ammissibile potrà essere ricavato applicando la seguente formula :

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

- F_{r1}, F_{r2} = Carico radiale ammissibile in mezzeria ($x = L / 2$) [N]
- x = Distanza del punto di applicazione del carico dallo spallamento dell'albero [mm]
- a, b = Costanti del riduttore generalmente ricavabili dalle tabelle riportate nelle relative sezioni di cataloghi dei riduttori [mm]

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**.

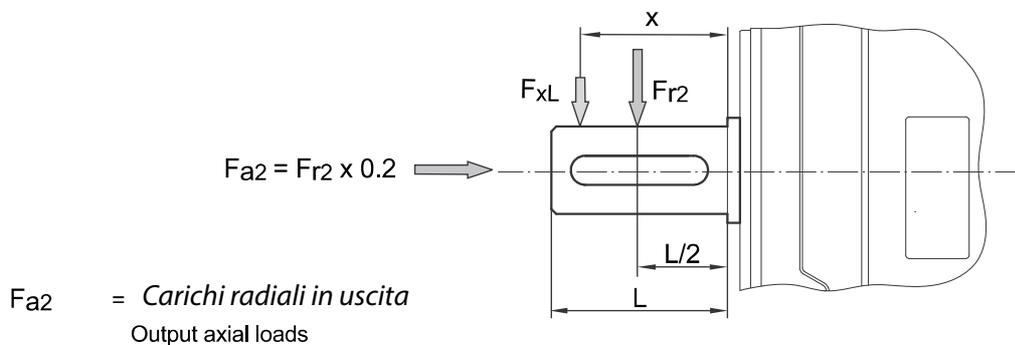
The permitted radial loads given in the selection tables must be calculated using the following formula in the event of force application not in the center of the shaft end. The smaller of the two values **F_{xL}** (according to bearing service life)

F_{xL} according to bearing service life:

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

- 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]

Carichi radiali sull'albero in uscita / Output shafts radial loads



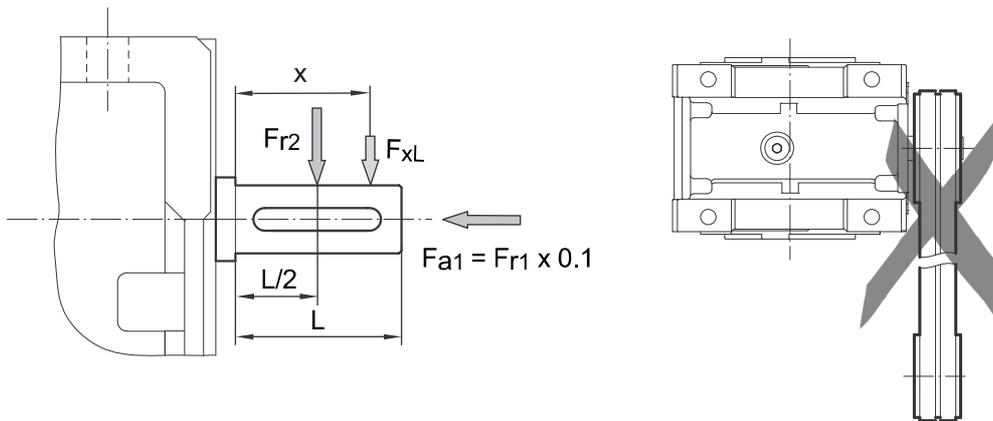
DKM Costanti del riduttore / Gear unit constants for overhung load conversion:

	DKM28B	DKM28C	DKM38B	DKM38C	DKM48B	DKM48C	DKM58B	DKM58C	DKM68B	DKM68C
a	104	104	118	118	131	131	159	159	174	174
b	78	78	93	93	101	101	119	119	134	134

DKB Costanti del riduttore / Gear unit constants for overhung load conversion:

			DKB38B	DKB38C	DKB48B	DKB48C	DKB58B	DKB58C	DKB68B	DKB68C
a			128	128	135	135	148.5	148.5	171	171
b			98	98	105	105	118.5	118.5	134	134

Carichi radiali sull'albero in entrata - Input shafts radial loads



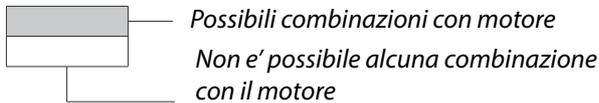
Fa1 = Carichi radiali in ingresso
Input axial loads

E' sconsigliato usare una trasmissione a cinghia sull'albero in entrata, vedi l'esempio della figura riportata a destra
It is forbidden to use the input on the right chart (including 3 stage input).

DKM/DKB Costanti del riduttore / Gear unit constants for overhung load conversion:

	DKM28B	DKM28C	DKM38B DKB38B	DKM38C DKB38C	DKM48B DKB48B	DKM48C DKB48C	DKM58B DKB58B	DKM58C DKB58C	DKM68B DKB68B	DKM68C DKB68C
a	51.5	56	58	56	73	70	81	70	101	87
b	40	44.5	43	44.5	53	55	61	55	76	67

4.7 TABELLE DI SELEZIONE



* rapporto di riduzione finito del riduttore
P_{1n} potenza in ingresso del motore [kW];
n₂ velocità in uscita [r/min];
M_{2n} coppia in uscita [Nm];
M_{2 max} massimo carico radiale in uscita [Nm];
F_{r2} massimo carico radiale in uscita [N];
i rapporto nominale
i_a rapporto di riduzione reale
f_s fattore di servizio



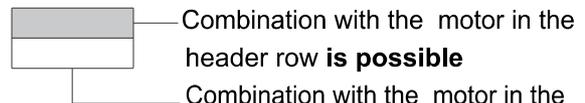
tipo di riduttore



tipo di motore

page Pagina dimensioni

4.7 Selection tables comments



* Finite gear unit reduction ratio;
P_{1n} Rated power driving motor [kW];
n₂ 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;

5 ESEMPIO DI SELEZIONE

5.1 Motoriduttore

Esempio: potenza richiesta necessaria alla macchina, 0,25 kw, con tempo di lavoro giornaliero di 8 ore, carico moderato, 100 avviamenti /ora, n₂ =35/min, controllando in tabella il fattore di servizio risulta essere di 3, quindi:

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

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

La scelta sarà:

DKM28B - 40.09 - 71B5 - 7124 - B3

5.2 Riduttore

Esempio: coppia richiesta di 200 Nm , con lavoro di 8 ore al giorno, carico uniforme, 400 avviamenti ora, flangia FA1 montata, velocità in ingresso di 900 giri / min, n₂ di 2,5, così l'unica soluzione e' un riduttore a 3 stadi e dopo aver controllato le tabelle si sceglie un fattore di servizio di 1,05:

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

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

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

La scelta sarà:

DKM48C-151.20-FA1

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), n₂=35r/min, **B3** mounted, So:

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

Choose type:

DKM28B - 40.09 - 71B5 - 7124 - B3

5.2 Gear units

Example: Reclured torque 200Nrn on driven machine, work 8 h/day, uniform load, start up frequency 400(1/h), **FA1** mounted, n₁=900 r/min, n₂=2.5 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

Choose type:

DKM48C-151.20-FA1

6. TABELLA SELEZIONE RIDUTTORI / GEAR UNIT SELECTION TABLES

6.1 Possibili combinazioni / Possible geometrical combinations

DKM28..

$n_1=1400$ 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 Stadio / Stage										
DKM28C		300	291.79	4.8	130	4100				
DKM28C		250	244.29	5.7	130	4100				
DKM28C		200	200.44	7.0	130	4100				
DKM28C		150	146.67	9.5	130	4000				
DKM28C		125	120.34	11.6	100	3770				
DKM28C		100	101.04	13.9	80	3560				
DKM28C		75	74.62	18.8	130	3220				
DKM28C		60	62.36	22	100	3030				
DKM28C		50	52.36	27	110	2860				
2 Stadio / Stage										
DKM28B		60	58.36	24	130	2960				
DKM28B		50	48.86	29	130	2790				
DKM28B		40	40.09	35	130	2610				
DKM28B		30	29.33	48	130	2350				
DKM28B		25	24.07	58	130	2200				
DKM28B		20	20.21	69	100	2080				
DKM28B		15	14.92	94	80	1880				
DKM28B		12.5	12.47	112	130	1770				
DKM28B		10	10.47	134	100	1670				
DKM28B		7.5	7.73	181	80	1510				

DKM38..; DKM38..

$n_1=1400$ 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 Stadio / Stage										
DKM38C	DKB38C	300	302.50	4.6	200	4800				
DKM38C	DKB38C	250	243.57	5.7	200	4800				
DKM38C	DKB38C	200	196.43	7.1	180	4800				
DKM38C	DKB38C	150	151.56	9.2	200	4650				
DKM38C	DKB38C	125	122.22	11.5	180	4330				
DKM38C	DKB38C	100	101.27	13.8	150	4070				
DKM38C	DKB38C	75	73.33	19.1	110	3650				
DKM38C	DKB38C	60	63.33	22	180	3480				
DKM38C	DKB38C	50	52.48	27	150	3270				
2 Stadio / Stage										
DKM38B	DKB38B	60	60.50	23	200	3430				
DKM38B	DKB38B	50	48.71	29	200	3190				
DKM38B	DKB38B	40	39.29	36	180	2970				
DKM38B	DKB38B	30	30.31	46	200	2720				
DKM38B	DKB38B	25	24.44	57	180	2530				
DKM38B	DKB38B	20	20.25	69	150	2380				
DKM38B	DKB38B	15	14.67	95	110	2130				
DKM38B	DKB38B	12.5	12.67	110	180	2030				
DKM38B	DKB38B	10	10.50	133	150	1910				
DKM38B	DKB38B	7.5	7.60	184	110	1710				

DKM48., DKB48.. $n_1=1400$ 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 Stadio / Stage												
DKM48C	DKB48C	300	297.21	4.7	350	6500						
DKM48C	DKB48C	250	240.89	5.8	350	6500						
DKM48C	DKB48C	200	200.66	7.0	300	6500						
DKM48C	DKB48C	150	151.20	9.3	350	6500						
DKM48C	DKB48C	125	125.95	11.1	300	5980						
DKM48C	DKB48C	100	99.22	14.1	240	5520						
DKM48C	DKB48C	75	75.45	18.6	200	5040						
DKM48C	DKB48C	60	62.43	22	300	4730						
DKM48C	DKB48C	50	49.18	28	240	4370						
2 Stadio / Stage												
DKM48B	DKB48B	60	59.44	24	350	4660						
DKM48B	DKB48B	50	48.18	29	350	4340						
DKM48B	DKB48B	40	40.13	35	300	4080						
DKM48B	DKB48B	30	30.24	46	350	3720						
DKM48B	DKB48B	25	25.19	56	300	3500						
DKM48B	DKB48B	20	19.84	71	240	3230						
DKM48B	DKB48B	15	15.09	93	200	2950						
DKM48B	DKB48B	12.5	12.49	112	300	2770						
DKM48B	DKB48B	10	9.84	142	240	2550						
DKM48B	DKB48B	7.5	7.48	187	200	2330						

DKM58., DKB58.. $n_1=1400$ 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 Stadio / Stage												
DKM58C	DKB58C	300	295.18	4.7	500	8300						
DKM58C	DKB58C	250	240.89	5.8	500	8300						
DKM58C	DKB58C	200	200.66	7.0	480	8300						
DKM58C	DKB58C	150	151.20	9.3	500	8050						
DKM58C	DKB58C	125	125.95	11.1	480	7580						
DKM58C	DKB58C	100	99.22	14.1	380	7000						
DKM58C	DKB58C	75	75.45	18.6	300	6390						
DKM58C	DKB58C	60	62.43	22	480	6000						
DKM58C	DKB58C	50	49.18	28	380	5540						
2 Stadio / Stage												
DKM58B	DKB58B	60	59.04	24	500	5890						
DKM58B	DKB58B	50	48.18	29	500	5500						
DKM58B	DKB58B	40	40.13	35	480	5170						
DKM58B	DKB58B	30	30.24	46	500	4710						
DKM58B	DKB58B	25	25.19	56	480	4430						
DKM58B	DKB58B	20	19.84	71	380	4090						
DKM58B	DKB58B	15	15.09	93	300	3730						
DKM58B	DKB58B	12.5	12.49	112	480	3510						
DKM58B	DKB58B	10	9.84	142	380	3240						
DKM58B	DKB58B	7.5	7.48	187	300	2950						

DKM68.., DKB68..

$n_1=1400$ r/min

750Nm

Gear units		i Nominal	I Actual	n_2 [r/min]	M_{2max} [Nm]	F_{r2} [N]	71B5	80B5	90B5	100B5 100B14	112B5 112B14	132B5
3 Stadio / Stage												
DKM68C	DKB68C	300	296.10	4.7	750	10000						
DKM68C	DKB68C	250	244.29	5.7	750	10000						
DKM68C	DKB68C	200	206.29	6.8	750	9920						
DKM68C	DKB68C	150	153.33	9.1	750	8980						
DKM68C	DKB68C	125	129.48	10.8	750	8490						
DKM68C	DKB68C	100	103.64	13.5	650	7880						
DKM68C	DKB68C	75	75.55	18.5	520	7090						
DKM68C	DKB68C	60	64.18	22	750	6720						
DKM68C	DKB68C	50	51.37	27	650	6240						
2 Stadio / Stage												
DKM68B	DKB68B	60	59.22	24	750	6540						
DKM68B	DKB68B	50	48.86	29	750	6130						
DKM68B	DKB68B	40	41.26	34	750	5800						
DKM68B	DKB68B	30	30.67	46	750	5250						
DKM68B	DKB68B	25	25.90	54	750	4960						
DKM68B	DKB68B	20	20.73	68	650	4610						
DKM68B	DKB68B	15	15.11	93	520	4150						
DKM68B	DKB68B	12.5	12.84	109	750	3930						
DKM68B	DKB68B	10	10.27	136	650	3650						
DKM68B	DKB68B	7.5	7.49	187	520	3280						

6.2 DKM.. / DKB..(IEC).. Prestazioni / Performance parameter

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page								
			Nominal	Actual													
0.12	5.7	184	250	244.29	4100	0.7	DKM28C	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	DKM28B	63B5	6314	36							
	28.7	38	50	48.86	2790	3.5											
	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	DKM38C	63B5	6314	39								
5.7	183	250	243.57	4800	1.1					DKB38C	63B5	6314	47				
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	DKM38B	63B5	6314	38								
28.7	37	50	48.71	3190	5.3									DKB38B	63B5	6314	46
36	30	40	39.29	2970	6.0												
46	23	30	30.31	2720	8.6												
4.7	224	300	297.21	6500	1.6	DKM48C	63B5	6314	41								
5.8	181	250	240.89	6500	1.9												
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	DKM58C	63B5	6314	43								
5.8	181	250	240.89	8300	2.8					DKB58C	63B5	6314	51				
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	DKM28C	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												
48	34	60	58.36	2350	3.9					DKM28B	63B5	6312	36				
57	28	50	48.86	2220	4.6												
70	23	40	40.09	2070	5.6												

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.18	95	16.9	30	29.33	1870	7.7	DKM28B	63B5	6312	36
	116	13.9	25	24.07	1750	9.4				
	11.6	136	125	120.34	3770	1.0	DKM28C	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	DKM28B	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	DKM28C	71B5/B14	7116	37	
17.2	92	50	52.36	3310	1.1					
15.4	105	60	58.36	3430	1.2	DKM28B	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	DKM38C	63B5	6312	39	
11.5	138	250	243.57	4330	1.5	DKB38C	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	DKM38C	63B5	6324	39	
9.2	171	150	151.56	4650	1.2	DKB38C	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	DKM38B	63B5	6324	38	
28.7	56	50	48.71	3190	3.6	DKB38B	63B5	6324	46	
36	45	40	39.29	2970	4.0					
12.3	129	75	73.33	4230	0.9	DKM38C	71B5/B14	7116	39	
14.2	111	60	63.33	4030	1.6	DKB38C	71B5/B14	7116	47	
17.1	92	50	52.48	3790	1.6					
14.9	109	60	60.50	3970	1.8	DKM38B	71B5/B14	7116	38	
18.5	87	50	48.71	3690	2.3	DKB38B	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]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.18	9.4	168	300	297.21	6320	2.1	DKM48C	63B5	6312	41
	11.6	136	250	240.89	5890	2.6	DKB48C	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	DKM48C	63B5	6324	41
	5.8	272	250	240.89	6500	1.3	DKB48C	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	DKM48C	71B5	7116	41
6.0	266	150	151.20	6500	1.3	DKB48C	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	DKM48B	71B5	7116	40	
18.7	87	50	48.18	5030	4.0	DKB48B	71B5	7116	48	
9.5	167	300	295.18	7990	3.0	DKM58C	63B5	6312	43	
11.6	136	250	240.89	7470	3.7	DKB58C	63B5	6312	51	
4.7	333	300	295.18	8300	1.5	DKM58C	63B5	6324	43	
5.8	272	250	240.89	8300	1.8	DKB58C	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	DKM58C	71B5	7116	43	
3.7	423	250	240.89	8300	1.2	DKB58C	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	DKM68C	71B5	7116	45	
3.7	429	250	244.29	10000	1.7	DKB68C	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					
0.25	19.1	115	150	146.67	3200	1.1	DKM28C	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	DKM28B	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	DKM28C	71B5/B14	7114	37
	26.7	82	50	52.36	2860	1.2				
	24.0	94	60	58.36	2960	1.4	DKM28B	71B5/B14	7114	36
	28.7	78	50	48.86	2790	1.7				

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.25	35	64	40	40.09	2610	2.0	DKM28B	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	DKM28B	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	DKM38C	63B5	6322	39	
14.3	154	200	196.43	4030	1.2	DKB38C	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	DKM38C	71B5/B14	7114	39	
13.8	159	100	101.27	4070	0.9	DKB38C	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	DKM38B	71B5/B14	7114	38	
28.7	78	50	48.71	3190	2.6	DKB38B	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	DKM38C	71B5/B14	7126	39	
17.1	128	50	52.48	3790	1.2	DKB38C	71B5/B14	7126	47	
14.9	151	60	60.50	3970	1.3	DKM38B	71B5/B14	7126	38	
18.5	121	50	48.71	3690	1.6	DKB38B	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	DKM48C	63B5	6322	41	
11.6	189	250	240.89	5890	1.9	DKB48C	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	DKM48C	71B5	7114	41	
7.0	315	200	200.66	6500	1.0	DKB48C	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	DKM48C	71B5	7126	41	
7.1	307	125	125.95	6500	1.0	DKB48C	71B5	7126	49	

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.25	9.1	242	100	99.22	6400	1.0	DKM48C	71B5	7126	41
	11.9	184	75	75.45	5840	1.1	DKB48C	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	DKM48B	71B5	7126	40
	18.7	120	50	48.18	5030	2.9	DKB48B	71B5	7126	48
	22.4	100	40	40.13	4730	3.0				
	9.5	232	300	295.18	7990	2.2	DKM58C	63B5	6322	43
	11.6	189	250	240.89	7470	2.6	DKB58C	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	DKM58C	71B5	7114	43
	5.8	378	250	240.89	8300	1.3	DKB58C	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	DKM58C	71B5	7126	43
	4.5	490	200	200.66	8300	1.0	DKB58C	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	DKM58B	71B5	7126	42
	18.7	120	50	48.18	6370	4.2	DKB58B	71B5	7126	50
	4.7	465	300	296.10	10000	1.6	DKM68C	71B5	7114	45
	5.7	383	250	244.29	10000	2.0	DKB68C	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	DKM68C	71B5	7126	45
	3.7	596	250	244.29	10000	1.3	DKB68C	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	DKB28C	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	DKB28B	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				

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.37	94	35	15	14.92	1880	2.3	DKM28C	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	DKM28C	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	DKM38C	71B5/B14	7112	39	
22.9	142	125	122.22	3440	1.3	DKB38C	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	DKM38B	71B5/B14	7112	38	
57	58	50	48.71	2530	3.5	DKB38B	71B5/B14	7112	46	
71	47	40	39.29	2350	3.9					
22.1	147	60	63.33	3480	1.2	DKM38C	71B5/B14	7124	39	
26.7	122	50	52.48	3270	1.2	DKB38C	71B5/B14	7124	47	
23.1	144	60	60.50	3430	1.4	DKM38B	71B5/B14	7124	38	
28.7	116	50	48.71	3190	1.7	DKB38B	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	DKM38B	80B5/B14	8016	38	
18.5	180	50	48.71	3690	1.1	DKB38B	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	DKM48C	71B5	7112	41	
11.6	280	250	240.89	5890	1.3	DKB48C	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	DKM48C	71B5	7124	41	
11.1	292	125	125.95	5980	1.0	DKB48C	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	DKM48B	71B5	7124	40	
29.1	114	50	48.18	4340	3.1	DKB48B	71B5	7124	48	
35	95	40	40.13	4080	3.2					

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	f _s			Page	
			Nominal	Actual						
0.37	14.4	225	60	62.43	5480	1.3	DKM48C	80B5/B14	8016	41
	18.3	178	50	49.18	5060	1.4	DKB48C	80B5/B14	8016	49
	15.1	219	60	59.44	5390	1.6	DKM48B	80B5/B14	8016	40
	18.7	178	50	48.18	5030	2.0	DKB48B	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	DKM58C	71B5	7112	43
11.6	280	250	240.89	7470	1.8	DKB58C	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	DKM58C	71B5	7124	43	
7.0	466	200	200.66	8300	1.0	DKB58C	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	DKM58B	71B5	7124	42	
29.1	114	50	48.18	5500	4.4	DKB58B	71B5	7124	50	
6.0	546	150	151.20	8300	0.9	DKM58C	80B5/B14	8016	43	
7.1	455	125	125.95	8300	1.1	DKB58C	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	DKM58B	80B5/B14	8016	42	
18.7	178	50	48.18	6370	2.8	DKB58B	80B5/B14	8016	50	
22.4	148	40	40.13	6000	3.2					
9.5	344	300	296.10	8880	2.2	DKM68C	71B5	7112	45	
11.5	284	250	244.29	8330	2.6	DKB68C	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	DKM68C	71B5	7124	45	
5.7	567	250	244.29	10000	1.3	DKB68C	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	DKM68C	80B5	8016	45	
5.9	554	150	153.33	10000	1.4	DKB68C	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	DKM68B	80B5	8016	44	
18.4	180	50	48.86	7110	4.2	DKB68B	80B5	8016	52	

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.55	45	108	60	62.36	2400	1.2	DKM28C	71B5/B14	7122	37
	53	90	50	52.36	2270	1.1				
	48	103	60	58.36	2350	1.3	DKM28B	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	DKM28B	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	DKM28B	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	211	125	122.22	3440	0.9	DKM38C	71B5/B14	7122	39	
27.6	175	100	101.27	3230	0.9	DKB38C	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	DKM38B	71B5/B14	7122	38	
57	86	50	48.71	2530	2.3	DKB38B	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	DKM38B	80B5/B14	8014	38	
28.7	172	50	48.71	3190	1.2	DKB38B	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	DKM38B	80B5/B14	8026	38	
29.7	166	30	30.31	3150	1.2	DKB38B	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	DKM48C	71B5	7122	41	
18.5	261	150	151.20	5040	1.3	DKB48C	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]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.55	47	105	60	59.44	3690	3.3	DKM48B	71B5	7122	40
	58	85	50	48.18	3440	4.1	DKB48B	71B5	7122	48
	70	71	40	40.13	3240	4.2				
	18.6	260	75	75.45	5040	0.8	DKM48C	80B5/B14	8014	41
	22.4	215	60	62.43	4730	1.4	DKB48C	80B5/B14	8014	49
	28.5	170	50	49.18	4370	1.4				
	23.6	210	60	59.44	4660	1.7	DKM48B	80B5/B14	8014	40
	29.1	170	50	48.18	4340	2.1	DKB48B	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	DKM48C	80B5/B14	8026	41
	18.3	264	50	49.18	5060	0.9	DKB48C	80B5/B14	8026	49
	15.1	326	60	59.44	5390	1.1	DKM48B	80B5/B14	8026	40
	18.7	264	50	48.18	5030	1.3	DKB48B	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	DKM58C	71B5	7122	43
	11.6	416	250	240.89	7470	1.2	DKB58C	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	DKM58C	80B5/B14	8014	43
	11.1	435	125	125.95	7580	1.1	DKB58C	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	DKM58B	80B5/B14	8014	42
	29.1	170	50	48.18	5500	2.9	DKB58B	80B5/B14	8014	50
	35	142	40	40.13	5170	3.4				
	14.4	335	60	62.43	6950	1.4	DKM58C	80B5/B14	8026	43
	18.3	264	50	49.18	6420	1.4	DKB58C	80B5/B14	8026	51
	15.2	324	60	59.04	6820	1.5	DKM58B	80B5/B14	8026	42
	18.7	264	50	48.18	6370	1.9	DKB58B	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	DKM68C	71B5	7122	45	
11.5	422	250	244.29	8330	1.8	DKB68C	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					

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.55	5.7	843	250	244.29	10000	0.9	DKM68C	80B5	8014	45
	6.8	712	200	206.29	9920	1.1	DKB68C	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	DKM68B	80B5	8014	44
	28.7	172	50	48.86	6130	4.4	DKB68B	80B5	8014	52
	5.9	823	150	153.33	10000	0.9	DKM68C	80B5	8026	45
	7.0	695	125	129.48	9840	1.1	DKB68C	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	DKM68B	80B5	8026	44
	18.4	268	50	48.86	7110	2.8	DKB68B	80B5	8026	52
	21.8	226	40	41.26	6720	3.3				
	0.75	48	140	60	58.36	2350	0.9	DKM28B	80B5/B14	8012
57		117	50	48.86	2220	1.1	DKB28B	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	DKM28B	80B5/B14	8024	36
58		116	25	24.07	2200	1.1	DKB28B	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	DKM28B	90B5/B14	90S6	36
86		78	10	10.47	1930	1.3				
116		58	7.5	7.73	1750	1.4				
44		149	60	63.33	2760	1.2	DKM38C	80B5/B14	8012	39
53		124	50	52.48	2590	1.2	DKB38C	80B5/B14	8012	47
46		145	60	60.50	2720	1.4	DKM38B	80B5/B14	8012	38
57		117	50	48.71	2530	1.7	DKB38B	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	DKM38B	80B5/B14	8024	38
36		189	40	39.29	2970	1.0	DKB38B	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]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
0.75	29.7	227	30	30.31	3150	0.9	DKM38B	90B5/B14	90S6	38
	37	183	25	24.44	2930	1.0	DKB38B	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	DKM48C	80B5/B14	8012	41
	22.2	296	125	125.95	4750	1.0	DKB48C	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	DKM48B	80B5/B14	8012	40	
58	116	50	48.18	3440	3.0	DKB48B	80B5/B14	8012	48	
70	96	40	40.13	3240	3.1					
22.4	294	60	62.43	4730	1.0	DKM48C	80B5/B14	8024	41	
28.5	231	50	49.18	4370	1.0	DKB48C	80B5/B14	8024	49	
23.6	286	60	59.44	4660	1.2	DKM48B	80B5/B14	8024	40	
29.1	232	50	48.18	4340	1.5	DKB48B	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					
18.7	360	50	48.18	5030	1.0	DKM48B	90B5/B14	90S6	40	
22.4	300	40	40.13	4730	1.0	DKB48B	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	DKM58C	80B5/B14	8012	43	
14.0	472	200	200.66	7030	1.0	DKB58C	80B5/B14	8012	51	
18.5	356	150	151.20	6390	1.4					
22.2	296	125	125.95	6010	1.6					
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	DKM58B	80B5/B14	8012	42	
58	116	50	48.18	4360	4.3	DKB58B	80B5/B14	8012	50	
22.4	294	60	62.43	6000	1.6	DKM58C	80B5/B14	8024	43	
28.5	231	50	49.18	5540	1.6	DKB58C	80B5/B14	8024	51	
23.7	284	60	59.04	5890	1.8	DKM58B	80B5/B14	8024	42	
29.1	232	50	48.18	5500	2.2	DKB58B	80B5/B14	8024	50	
35	193	40	40.13	5170	2.5					
46	145	30	30.24	4710	3.4					
56	121	25	25.19	4430	4.0					
71	95	20	19.84	4090	4.0					
93	73	15	15.09	3730	4.1					
14.4	457	60	62.43	6950	1.1	DKM58C	90B5/B14	90S6	43	
18.3	360	50	49.18	6420	1.1	DKB58C	90B5/B14	90S6	51	

P_{1n} [kW]	n_2 [r/min]	M_{2n} [Nm]	i		F_{r2} [N]	f_s			Page	
			Nominal	Actual						
0.75	15.2	442	60	59.04	6820	1.1	DKM58B	90B5/B14	90S6	42
	18.7	360	50	48.18	6370	1.4	DKB58B	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	DKM68C	80B5	8012	45
	11.5	575	250	244.29	8330	1.3	DKB68C	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	DKM68C	80B5	8024	45
	10.8	609	125	129.48	8490	1.2	DKB68C	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				
	23.6	285	60	59.22	6540	2.6	DKM68B	80B5	8024	44
	28.7	235	50	48.86	6130	3.2	DKB68B	80B5	8024	52
	34	198	40	41.26	5800	3.8				
	8.7	759	100	103.64	9130	0.9	DKM68C	90B5	90S6	45
	11.9	553	75	75.55	8220	0.9	DKB68C	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	DKM68B	90B5	90S6	44
	18.4	366	50	48.86	7110	2.1	DKB68B	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					
1.1	70	141	40	40.09	2070	0.9	DKM28B	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	DKM28B	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	DKM28B	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	DKM38B	80B5/B14	8022	38
	57	172	50	48.71	2530	1.2	DKB38B	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]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
1.1	46	214	30	30.31	2720	0.9	DKM38B	90B5/B14	90S4	38
	57	172	25	24.44	2530	1.0	DKB38B	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	DKM38B	90B5/B14	90L6	38
	86	115	10	10.50	2210	1.3	DKB38B	90B5/B14	90L6	46
	118	83	7.5	7.60	1990	1.3				
45	215	60	62.43	3750	1.4	DKM48C	80B5/B14	8022	41	
57	170	50	49.18	3470	1.4	DKB48C	80B5/B14	8022	49	
47	210	60	59.44	3690	1.7	DKM48B	80B5/B14	8022	40	
58	170	50	48.18	3440	2.1	DKB48B	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	DKM48B	90B5/B14	90S4	40	
35	283	40	40.13	4080	1.1	DKB48B	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	DKM48B	90B5/B14	90L6	40	
36	276	25	25.19	4050	1.1	DKB48B	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	DKM58C	80B5/B14	8022	43	
22.2	435	125	125.95	6010	1.1	DKM48C	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	DKM58B	80B5/B14	8022	42	
58	170	50	48.18	4360	2.9	DKM48B	80B5/B14	8022	50	
70	142	40	40.13	4110	3.4					
22.4	431	60	62.43	6000	1.1	DKM58C	90B5/B14	90S4	43	
28.5	340	50	49.18	5540	1.1	DKM48C	90B5/B14	90S4	51	
23.7	416	60	59.04	5890	1.2	DKM58B	90B5/B14	90S4	42	
29.1	340	50	48.18	5500	1.5	DKM48B	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	DKM58B	90B5/B14	90L6	42	
22.4	440	40	40.13	6000	1.1	DKM48B	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					

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
1.1	72	137	12.5	12.49	4060	3.5	DKM58B	90B5/B14	90L6	42
	91	108	10	9.84	3750	3.5	DKM48B	90B5/B14	90L6	50
	120	82	7.5	7.48	3420	3.7				
	11.5	843	250	244.29	8330	0.9	DKM68C	80B5	8022	45
	13.6	712	200	206.29	7870	1.1	DKM68C	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	DKM68B	80B5	8022	44
	57	172	50	48.86	4870	4.4	DKM68B	80B5	8022	52
	13.5	715	100	103.64	7880	0.9	DKM68C	90B5	90S4	45
	18.5	522	75	75.55	7090	1.0	DKM68C	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	DKM68B	90B5	90S4	44
	28.7	345	50	48.86	6130	2.2	DKM68B	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	DKM68C	90B5	90L6	45
	17.5	552	50	51.37	7230	1.2	DKM68C	90B5	90L6	53
	15.2	650	60	59.22	7580	1.2	DKM68B	90B5	90L6	44
	18.4	536	50	48.86	7110	1.4	DKM68B	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	DKM28B	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	DKM28B	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	DKM38B	90B5/B14	90S2	38
	71	189	40	39.29	2350	1.0	DKM38B	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	DKM38B	90B5/B14	90L4	38
	69	195	20	20.25	2380	0.8	DKM38B	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	DKM48C	90B5/B14	90S2	41
	57	231	50	49.18	3470	1.0	DKM48C	90B5/B14	90S2	49

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
1.5	47	286	60	59.44	3690	1.2	DKM48B	90B5/B14	90S2	40
	58	232	50	48.18	3440	1.5	DKM48B	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	DKM48B	90B5/B14	90L4	40
	46	291	30	30.24	3720	1.2	DKM48B	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	DKM48B	100B5/B14	100L6	40
	60	226	15	15.09	3410	0.9	DKM48B	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	DKM58C	90B5/B14	90S2	43	
57	231	50	49.18	4390	1.6	DKM58C	90B5/B14	90S2	51	
47	284	60	59.04	4670	1.8	DKM58B	90B5/B14	90S2	42	
58	232	50	48.18	4360	2.2	DKM58B	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	DKM58B	90B5/B14	90L4	42	
29.1	463	50	48.18	5500	1.1	DKM58B	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					
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	DKM58B	100B5/B14	100L6	42	
36	377	25	25.19	5130	1.3	DKM58B	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					
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	DKM68C	90B5	90S2	45	
21.6	609	125	129.48	6740	1.2	DKM68C	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					
55	242	50	51.37	4950	2.7					
47	285	60	59.22	5190	2.6	DKM68B	90B5	90S2	44	
57	235	50	48.86	4870	3.2	DKM68B	90B5	90S2	52	
68	198	40	41.26	4600	3.8					
21.8	604	60	64.18	6720	1.2	DKM68C	90B5	90L4	45	
27.3	484	50	51.37	6240	1.3	DKM68C	90B5	90L4	53	

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
1.5	23.6	570	60	59.22	6540	1.3	DKM68B	90B5	90L4	44
	28.7	470	50	48.86	6130	1.6	DKM68B	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	DKM68B	100B5/B14	100L6	44
	18.4	731	50	48.86	7110	1.0	DKM68B	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	DKM28B	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	DKM38B	90B5/B14	90L2	38
	115	172	25	24.44	2010	1.0	DKM38B	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	DKM48B	90B5/B14	90L2	40
	70	283	40	40.13	3240	1.1	DKM48B	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				
	56	355	25	25.19	3500	0.8	DKM48B	100B5/B14	100LA4	40
	71	280	20	19.84	3230	0.9	DKM48B	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	DKM48B	112B5/B14	112M6	40
	91	216	10	9.84	2960	1.1	DKM48B	112B5/B14	112M6	48
	120	164	7.5	7.48	2700	1.2				
	45	431	60	62.43	4760	1.1	DKM58C	90B5/B14	90L2	43
	57	340	50	49.18	4390	1.1	DKM58C	90B5/B14	90L2	51
	47	416	60	59.04	4670	1.2	DKM58B	90B5/B14	90L2	42
	58	340	50	48.18	4360	1.5	DKM58B	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	566	40	40.13	5170	0.8	DKM58B	100B5/B14	100LA4	42	
46	427	30	30.24	4710	1.2	DKM58B	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		F _{r2} [N]	fs			Page		
			Nominal	Actual							
2.2	93	213	15	15.09	3730	1.4	DKM58B	100B5/B14	100LA4	42	
	112	176	12.5	12.49	3510	2.7	DKM58B	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	DKM58B	112B5/B14	112M6	42	
	45	435	20	19.84	4740	0.9	DKM58B	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	DKM68C	90B5	90L2	45	
	37	522	75	75.55	5630	1.0	DKM68C	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	DKM68B	90B5	90L2	44	
	57	345	50	48.86	4870	2.2	DKM68B	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					
	23.6	835	60	59.22	6540	0.9	DKM68B	100B5/B14	100LA4	44	
	28.7	689	50	48.86	6130	1.1	DKM68B	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	DKM68B	112B5/B14	112M6	44	
	35	568	25	25.90	5750	1.3	DKM68B	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					
	3.0	70	386	40	40.13	3240	0.8	DKM48B	100B5/B14	100L2	40
		93	291	30	30.24	2950	1.2	DKM48B	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	DKM48B	100B5/B14	100LB4	40
		142	189	10	9.84	2550	1.3	DKM48B	100B5/B14	100LB4	48
		187	144	7.5	7.48	2330	1.4				
		47	568	60	59.04	4670	0.9	DKM58B	100B5/B14	100L2	42
		58	463	50	48.18	4360	1.1	DKM58B	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					
46		582	30	30.24	4710	0.9	DKM58B	100B5/B14	100LB4	42	
56		485	25	25.19	4430	1.0	DKM58B	100B5/B14	100LB4	50	
71		382	20	19.84	4090	1.0					
93		290	15	15.09	3730	1.0					

P _{1n} [kW]	n ₂ [r/min]	M _{2n} [Nm]	i		F _{r2} [N]	fs			Page	
			Nominal	Actual						
3.0	112	240	12.5	12.49	3510	2.0	DKM58B	100B5/B14	100LB4	42
	142	189	10	9.84	3240	2.0	DKM58B	100B5/B14	100LB4	50
	187	144	7.5	7.48	2950	2.1				
	44	604	60	64.18	5330	1.2	DKM68C	100B5/B14	100L2	45
	55	484	50	51.37	4950	1.3	DKM68C	100B5/B14	100L2	53
	47	570	60	59.22	5190	1.3	DKM68B	100B5/B14	100L2	44
	57	470	50	48.86	4870	1.6	DKM68B	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	DKM68B	100B5/B14	100LB4	44
	46	590	30	30.67	5250	1.3	DKM68B	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				
	35	775	25	25.90	5750	1.0	DKM68B	132B5	132S6	44
	43	620	20	20.73	5340	1.0	DKM68B	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					
4.0	93	388	30	30.24	2950	0.9	DKM48B	112B5/B14	112M2	40
	111	323	25	25.19	2770	0.9	DKM48B	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	DKM48B	112B5/B14	112M4	40
	142	252	10	9.84	2550	1.0	DKM48B	112B5/B14	112M4	48
	187	192	7.5	7.48	2330	1.0				
	70	515	40	40.13	4110	0.9	DKM58B	112B5/B14	112M2	42
	93	388	30	30.24	3740	1.3	DKM58B	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	DKM58B	112B5/B14	112M4	42
	142	252	10	9.84	3240	1.5	DKM58B	112B5/B14	112M4	50
	187	192	7.5	7.48	2950	1.6				
	44	806	60	64.18	5330	0.9	DKM68C	112B5/B14	112M2	45
	55	645	50	51.37	4950	1.0	DKM68C	112B5/B14	112M2	53
	47	759	60	59.22	5190	1.0	DKM68B	112B5/B14	112M2	44
	57	627	50	48.86	4870	1.2	DKM68B	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	DKM68B	112B5/B14	112M4	44
	54	664	25	25.90	4960	1.1	DKM68B	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]	n_2 [r/min]	M_{2n} [Nm]	i		F_{r2} [N]	fs			Page	
			Nominal	Actual						
5.5	57	862	50	48.86	4870	0.9	DKM68B	132B5	132S12	44
	68	728	40	41.26	4600	1.0	DKM68B	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	DKM68B	132B5	132S4	44
	93	533	15	15.11	4150	1.0	DKM68B	132B5	132S4	52
	109	453	12.5	12.84	3930	1.7				
	136	362	10	10.27	3650	1.8				
	187	264	7.5	7.49	3280	2.0				
7.5	91	737	30	30.67	4170	1.0	DKM68B	132B5	132S22	44
	108	623	25	25.90	3940	1.2	DKM68B	132B5	132S22	52
	135	498	20	20.73	3660	1.3				
	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	DKM68B	132B5	132M4	44
	136	494	10	10.27	3650	1.3	DKM68B	132B5	132M4	52
187	360	7.5	7.49	3280	1.4					

6.3 DKM/DKB..HS Prestazioni / Performance parameter

$n_1=1400\text{r/min}$

$M_{2\max}$ [Nm]	n_2 [r/min]	i Nominal	i Actual	P_{1n} [kW]	Fr_2 [N]	Fr_1 [N]		Page 
130	4.8	300	291.79	0.07	4100	400	DKM28C...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	DKM28B...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	DKM38C...HS DKB38C...HS	54
200	5.7	250	243.57	0.13	4800	400		
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	DKM38B...HS DKB38B...HS	54
200	29	50	48.71	0.64	3190	530		
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	DKM48C...HS DKB48C...HS	54
350	5.8	250	240.89	0.23	6500	560		
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	DKM48B...HS DKB48B...HS	54
350	29	50	48.18	1.1	4340	860		
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		

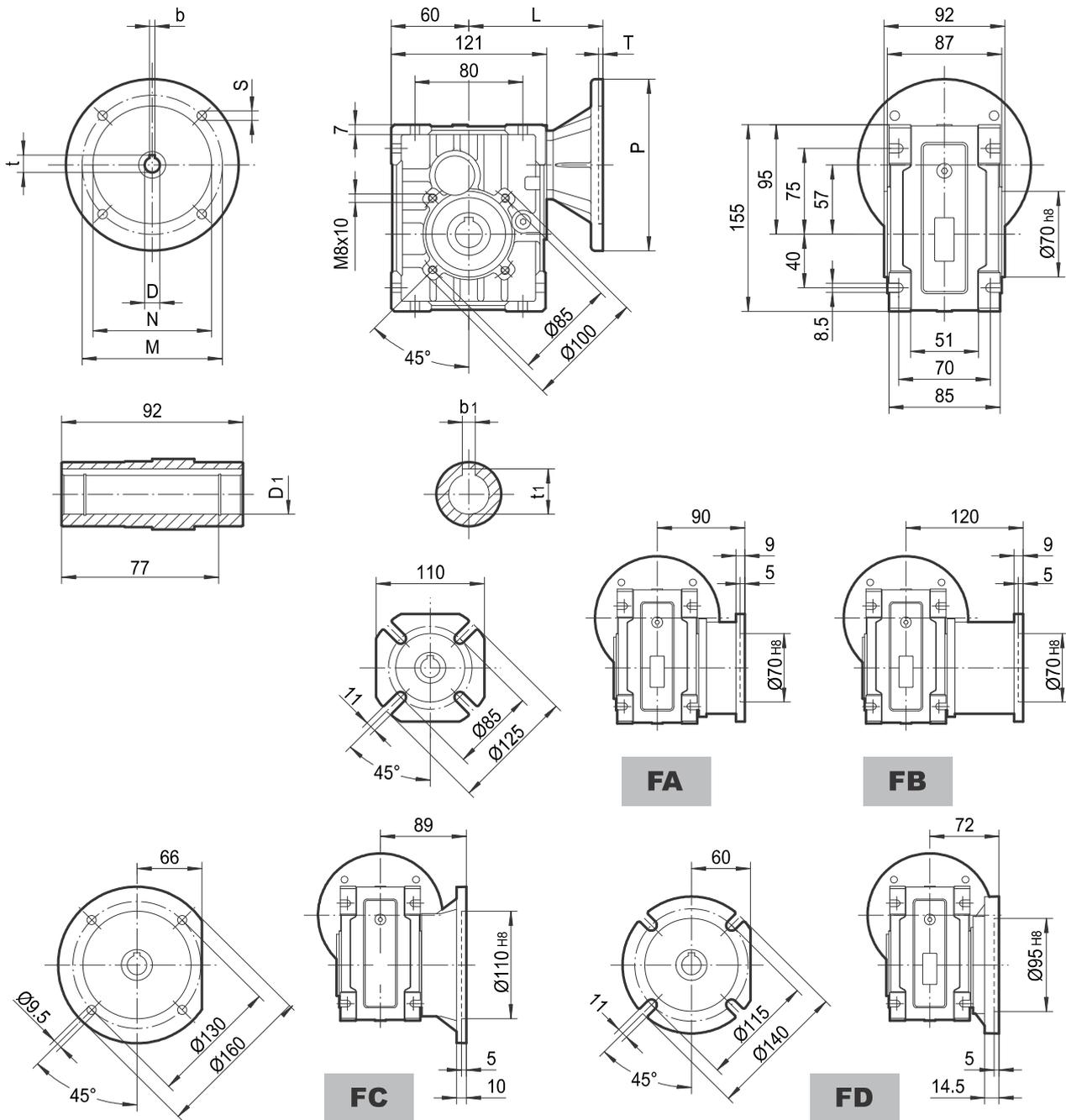
$n_1=1400\text{r/min}$

$M_{2\text{ max}}$ [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	DKM48B...HS DKB48B...HS	54
200	93	15	15.09	2.1	2950	860		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	DKM58C...HS DKB58C...HS	54
500	5.8	250	240.89	0.33	8300	560		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	DKM58B...HS DKB58B...HS	54
500	29	50	48.18	1.6	5500	1260		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	DKM68C...HS DKB68C...HS	54
750	5.7	250	244.29	0.49	10000	740		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	DKM68B...HS DKB68B...HS	54
750	29	50	48.86	2.4	6130	1490		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. DIMENSIONI / OUTLINE DIMENSION SHEET

7.1 DKM... Dimensioni / Outline Dimension

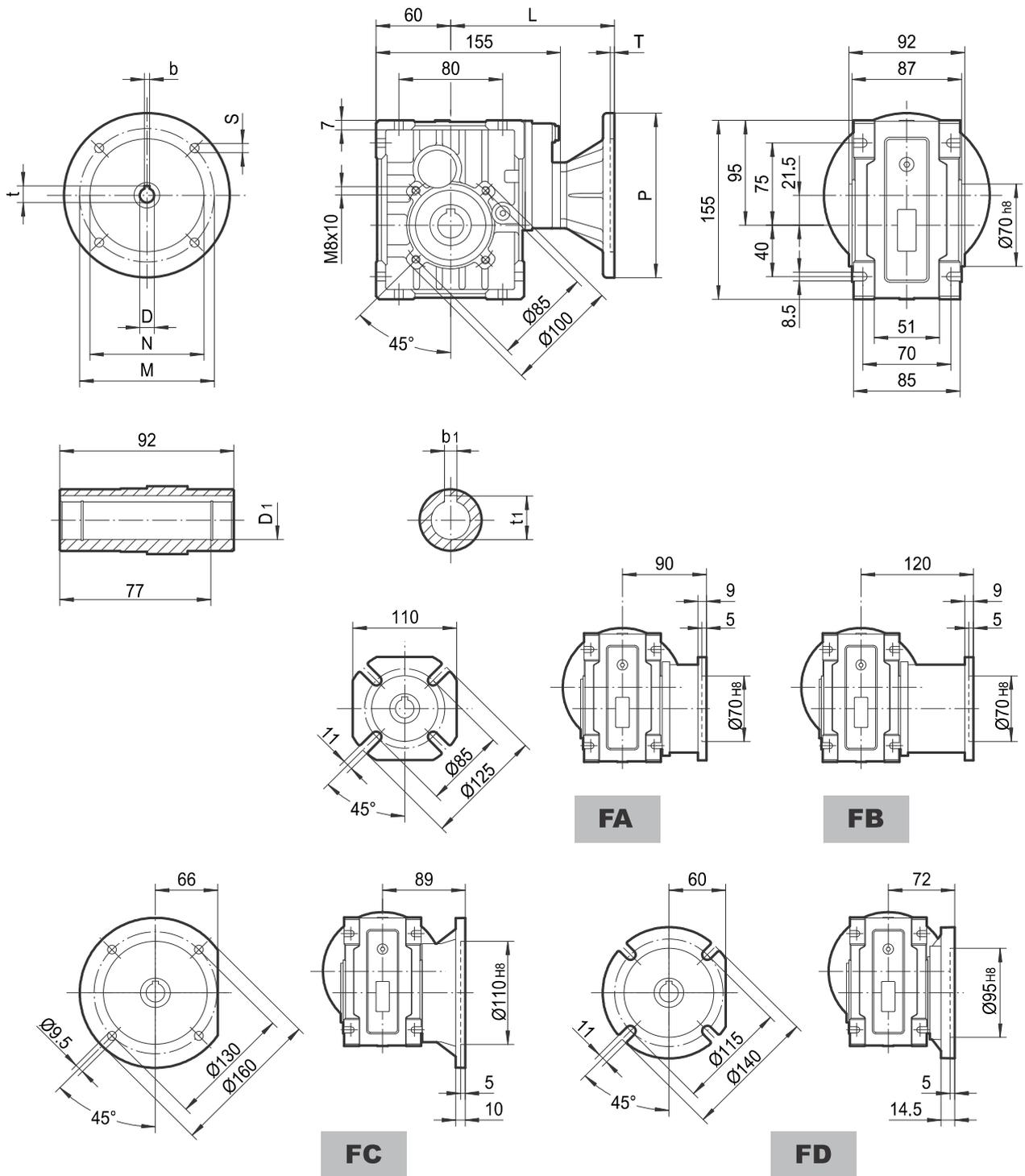
DKM28B..



IEC	DE8	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	* Solo Su richiesta * Only on request		
80B14	19	6	21.8	120	100	80	7	4	133			
90B5	24	8	27.3	200	165	130	11	4	133			
90B14	24	8	27.3	140	115	95	9	4	133			

Peso senza motore
≈ 4.2kg
Weight without motor
≈ 4.2 kg

DKM28C..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H ₈	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
										* Solo su richiesta * Only on request		

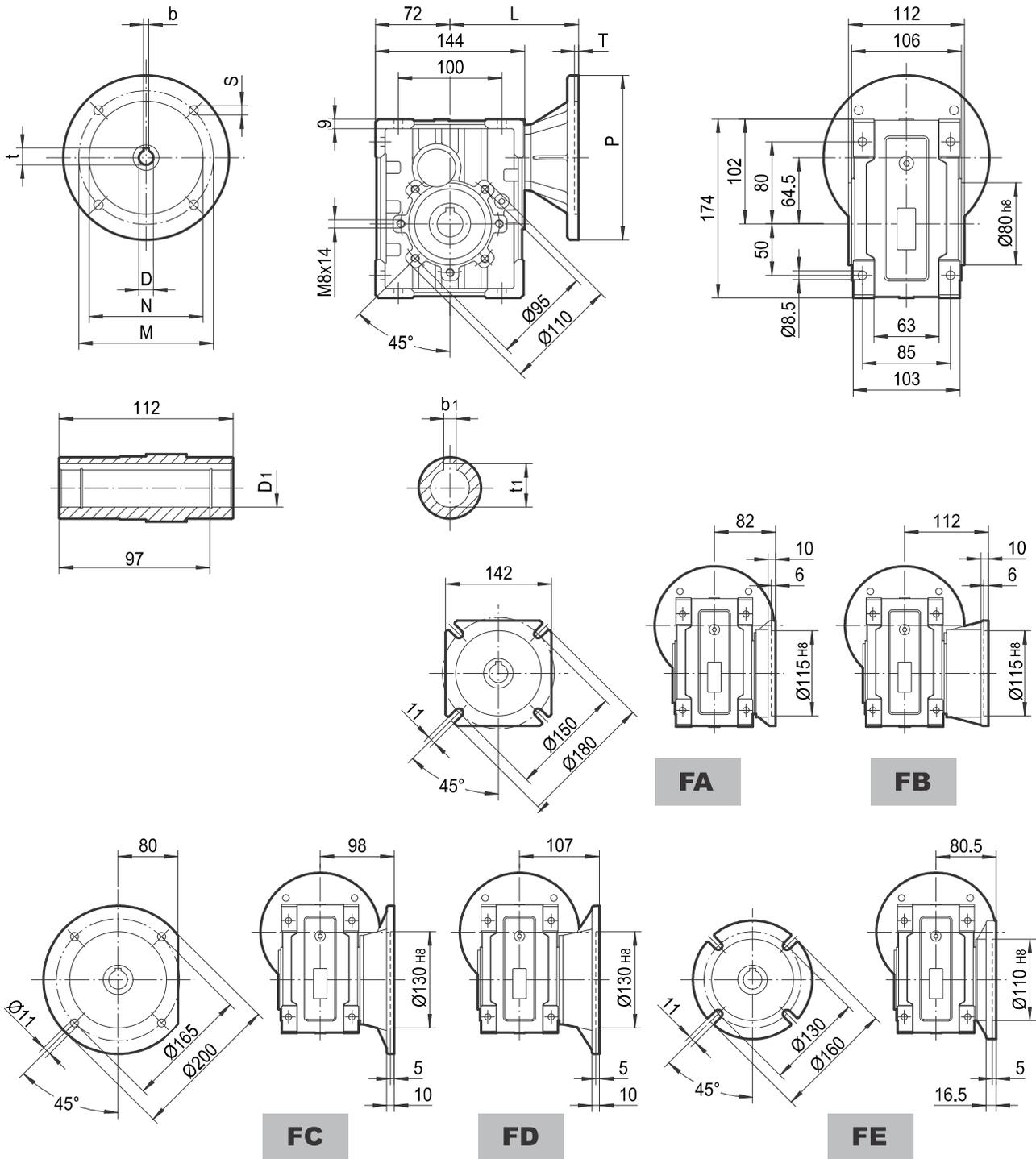
Peso senza motore

≈ 5 kg

Weight without motor

≈ 5 kg

DKM38B..



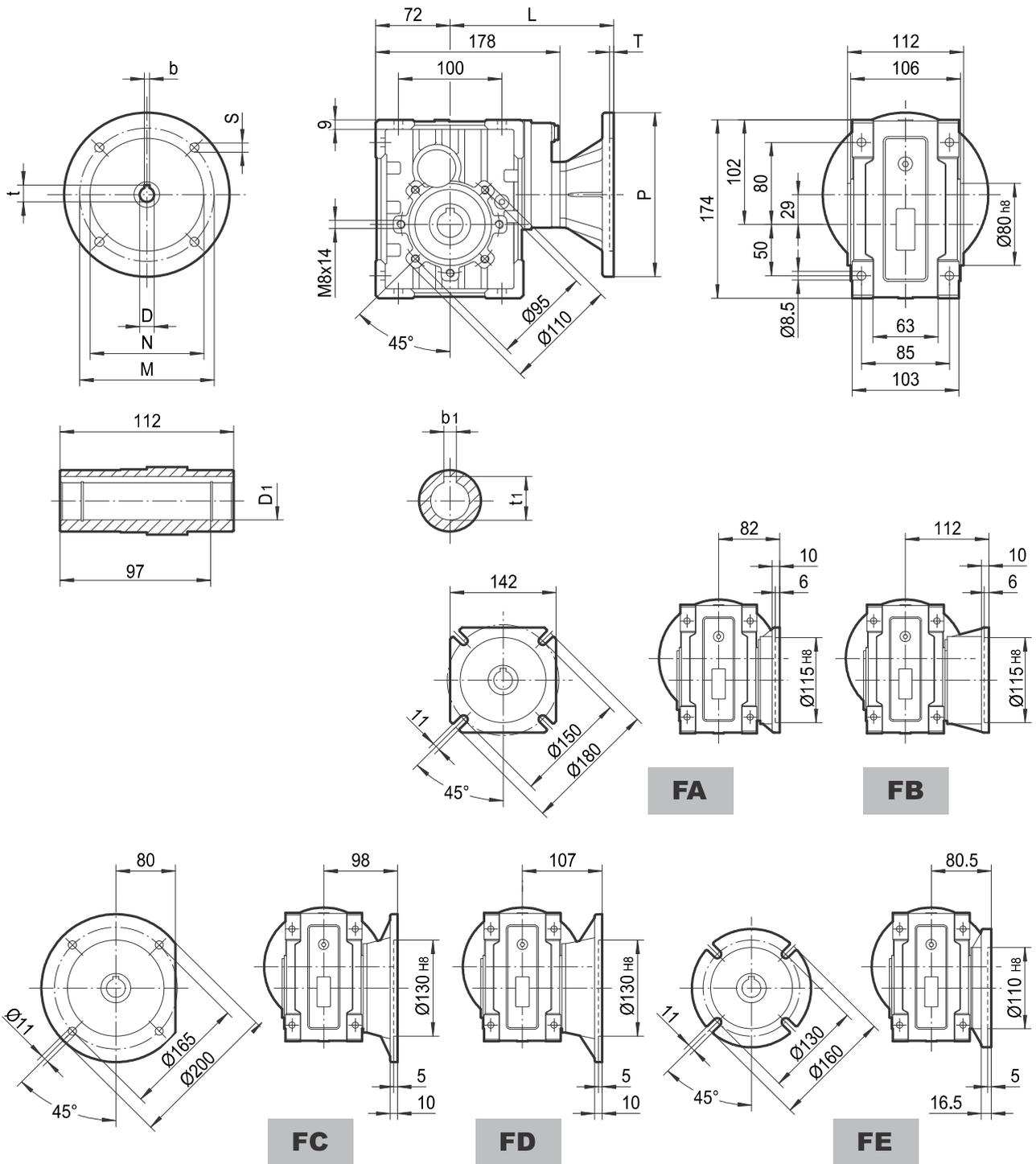
IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H ₈	b ₁	t ₁
63B5	11	4	12.8	140	115	95	9	4	117	25	8	28.3
71B5	14	5	16.3	160	130	110	9	4	124	28*	8	31.3
71B14	14	5	16.3	105	85	70	7	4	124	30*	8	33.3
80B5	19	6	21.8	200	165	130	11	4	144	* Solo su richiesta * Only on request		
80B14	19	6	21.8	120	100	80	7	4	144			
90B5	24	8	27.3	200	165	130	11	4	144			
90B14	24	8	27.3	140	115	95	9	4	144			

Peso senza motore

≈ 6.0 kg

Weight without motor

≈ 6.0 kg



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	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	* Solo su richiesta		
80B14	19	6	21.8	120	100	80	7	4	178	* Only on request		

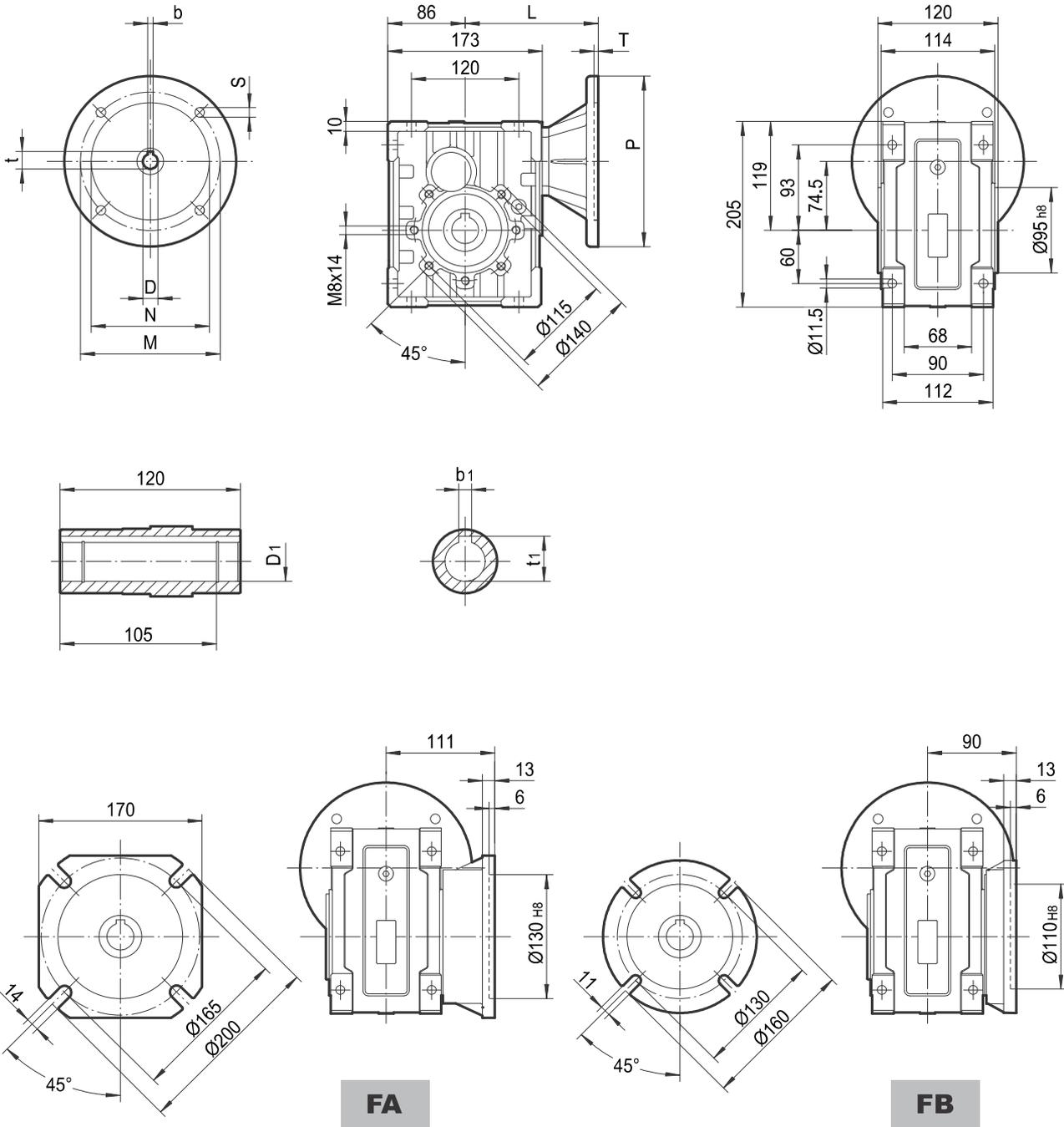
Peso senza motore

≈ 6.8 kg

Weight without motor

≈ 6.8 kg

DKM48B..



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	* Solo Su richiesta		
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			
100/112B14	28	8	31.3	160	130	110	9	4.5	176			

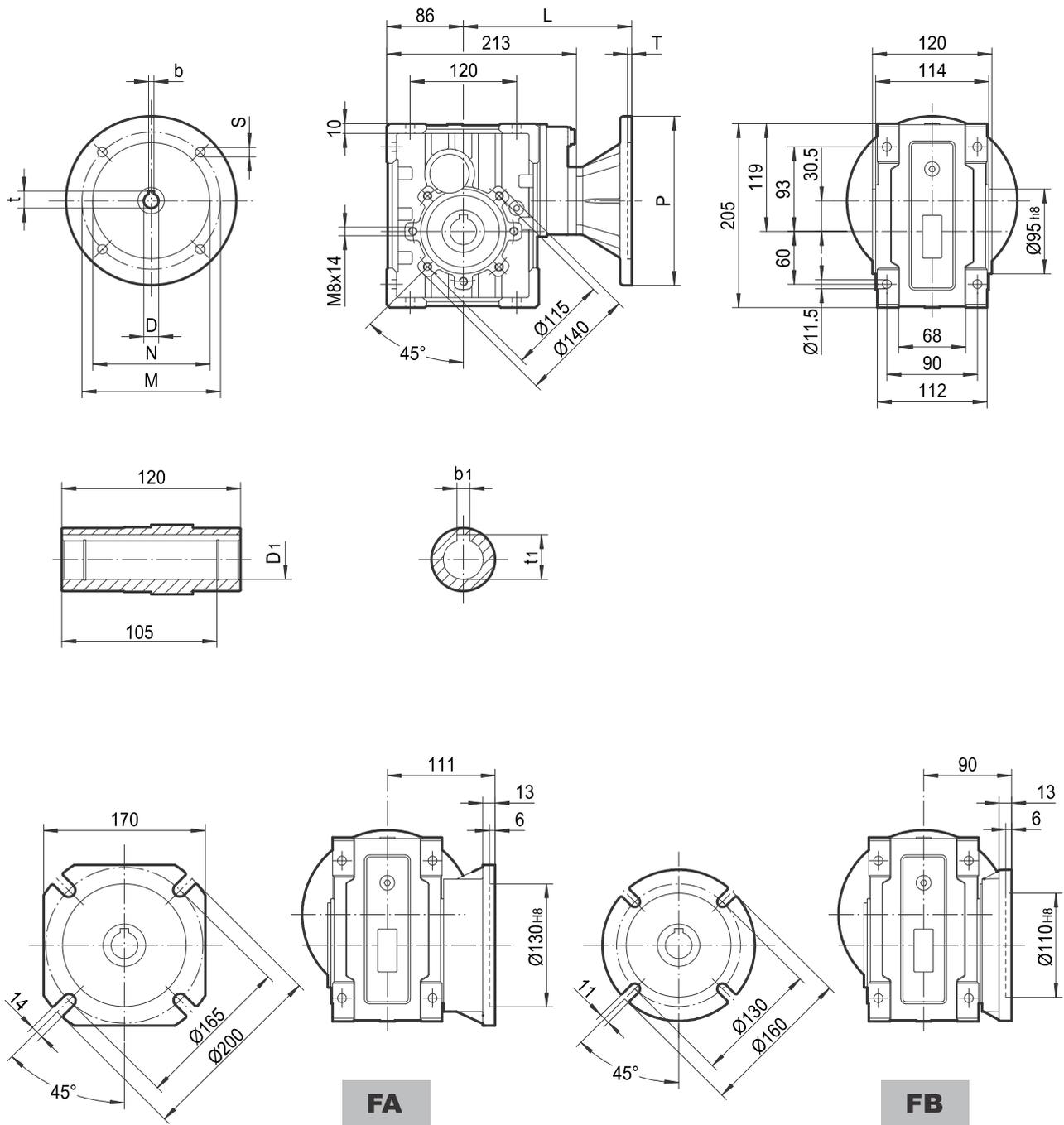
Peso senza motore

≈ 9.2 kg

Weight without motor

≈ 9.2 kg

DKM48C..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H ₈	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	* Solo su richiesta		
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			

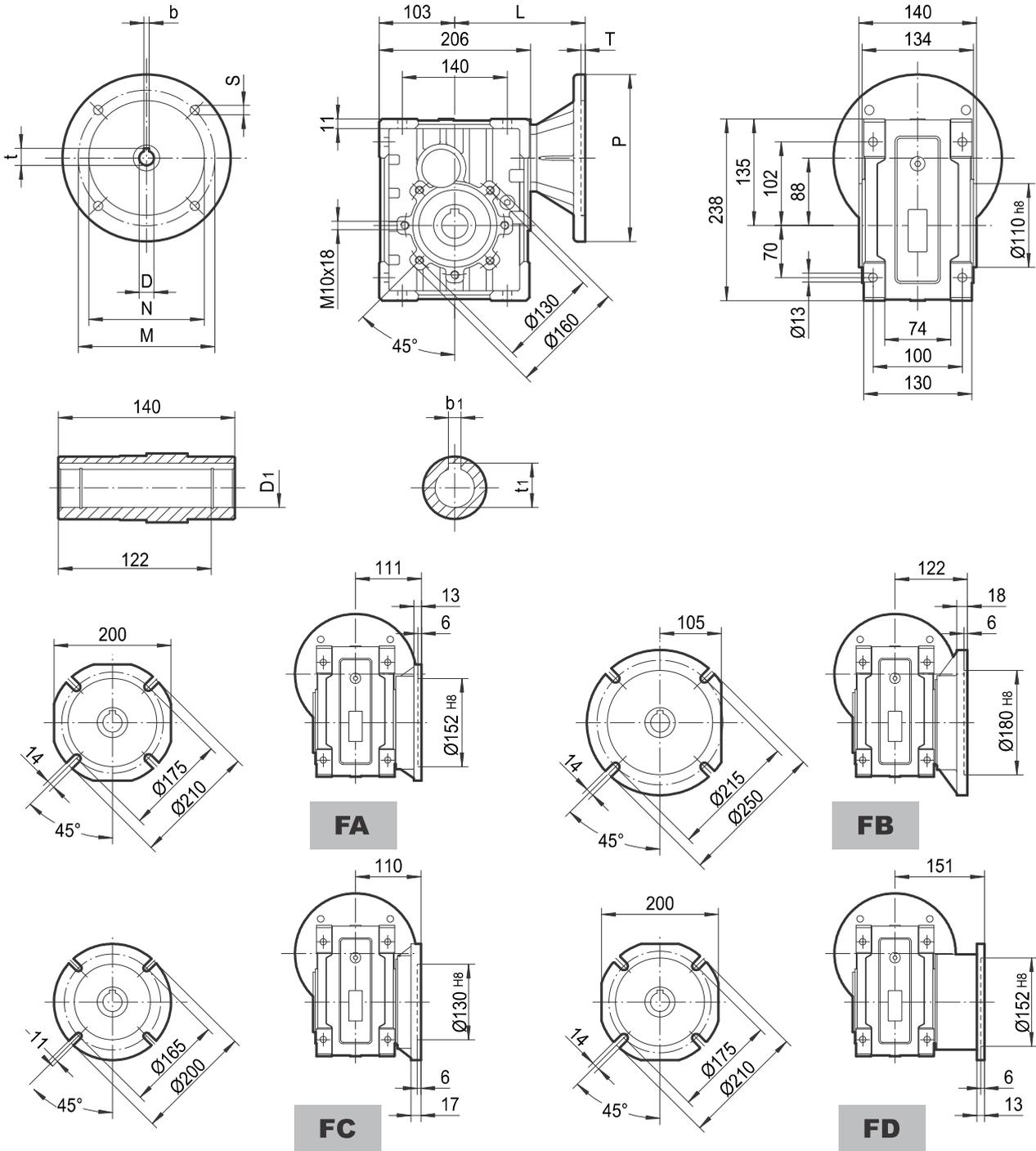
Peso senza motore

≈ 10.8 kg

Weight without motor

≈ 10.8 kg

DKM58B..



IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H ₈	b ₁	t ₁
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	* Solo su richiesta * Only on request		
90B14	24	8	27.3	140	115	95	9	4	182			
100/112B5	28	8	31.3	250	215	180	13.5	4.5	192			
100/112B14	28	8	31.3	160	130	110	9	4.5	192			

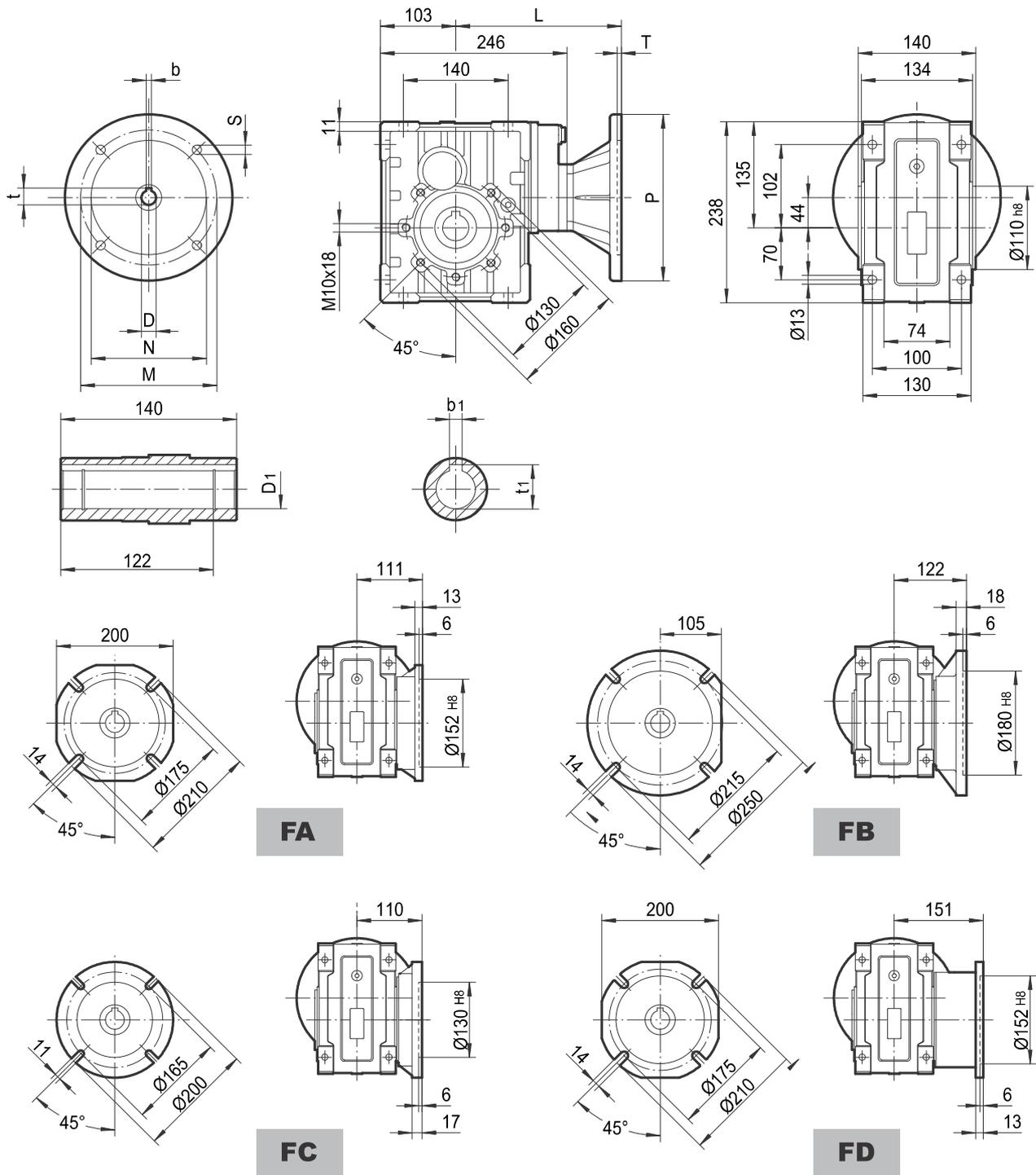
Peso senza motore

≈ 13.3 kg

Weight without motor

≈ 13.3 kg

DKM58C..



FA

FB

FC

FD

IEC	D _{E8}	b	t	P	M	N	S	T	L	D ₁ H ₈	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	* Solo su richiesta		
90B5	24	8	27.3	200	165	130	11	4	222	* Only on request		
90B14	24	8	27.3	140	115	95	9	4	222			

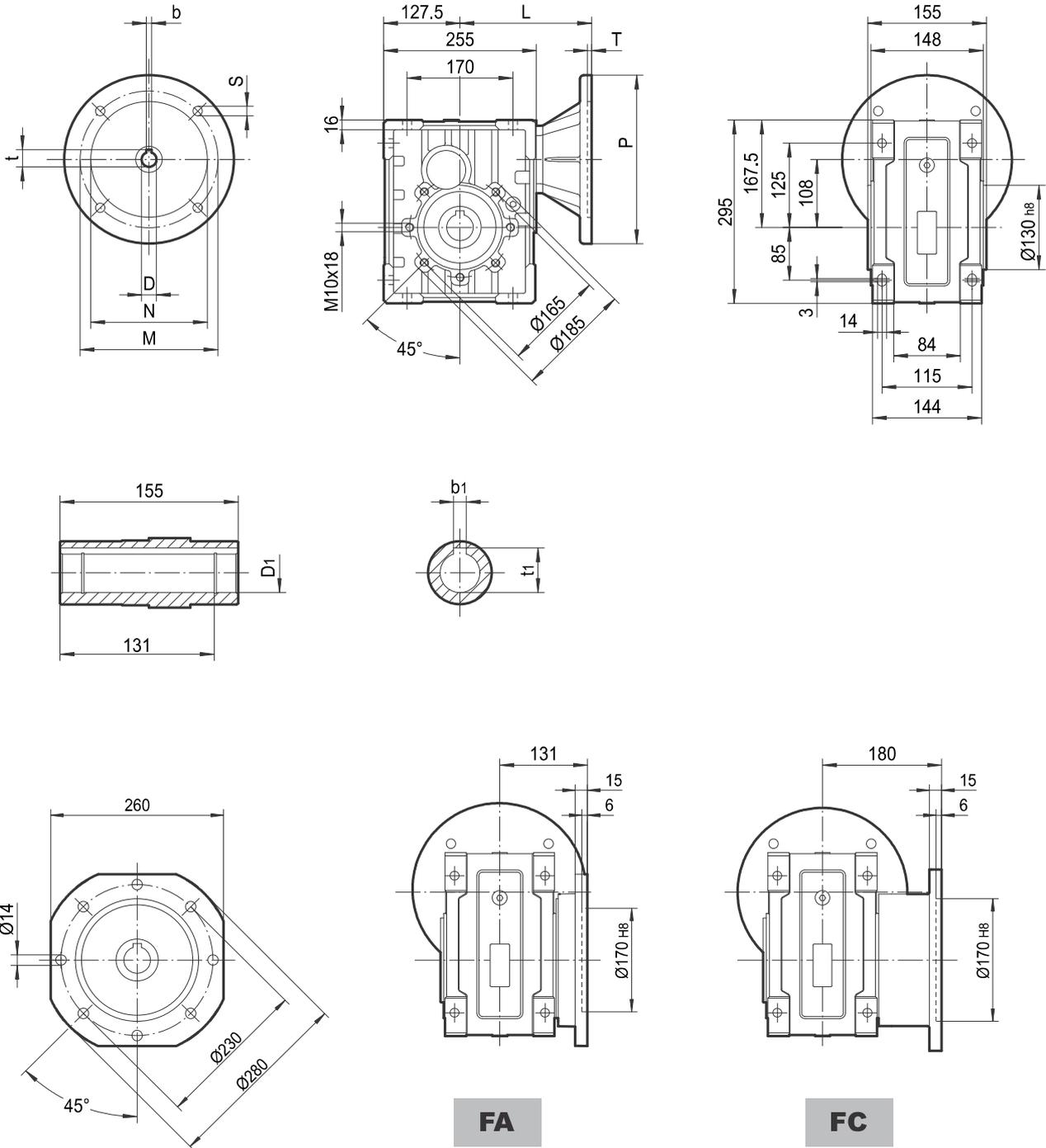
Peso senza motore

≈ 14.8 kg

Weight without motor

≈ 14.8 kg

DKM68B..



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	* Solo su richiesta * Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	221.5			
132B5	38	10	41.3	300	265	230	14	4.5	241.5			

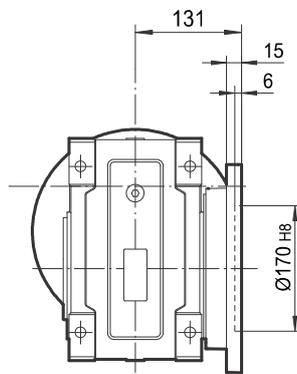
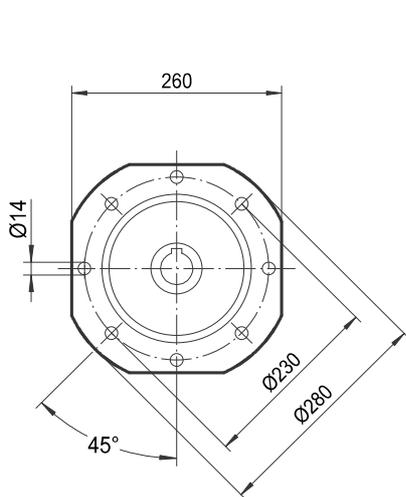
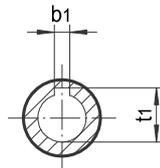
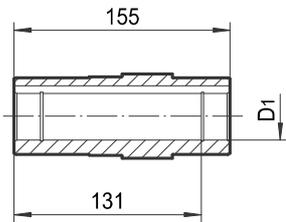
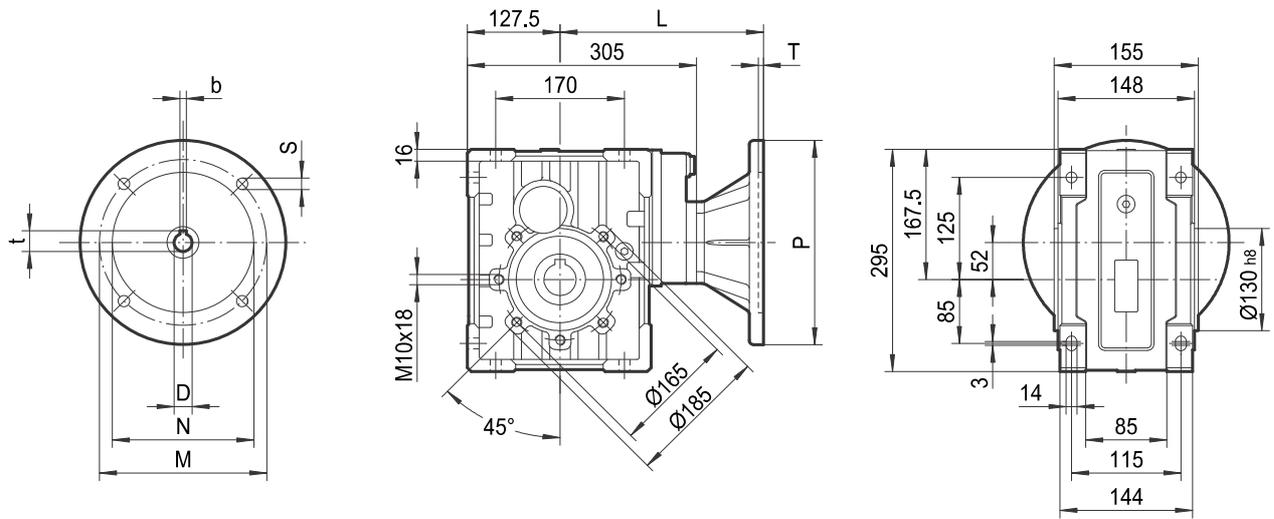
Peso senza motore

≈ 21.5 kg

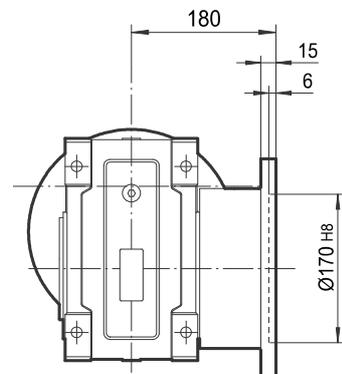
Weight without motor

≈ 21.5 kg

DKM68C..



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	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	* Solo su richiesta		
100/112B14	28	8	31.3	160	130	110	9	4.5	271.5	* Only on request		

Peso senza motore

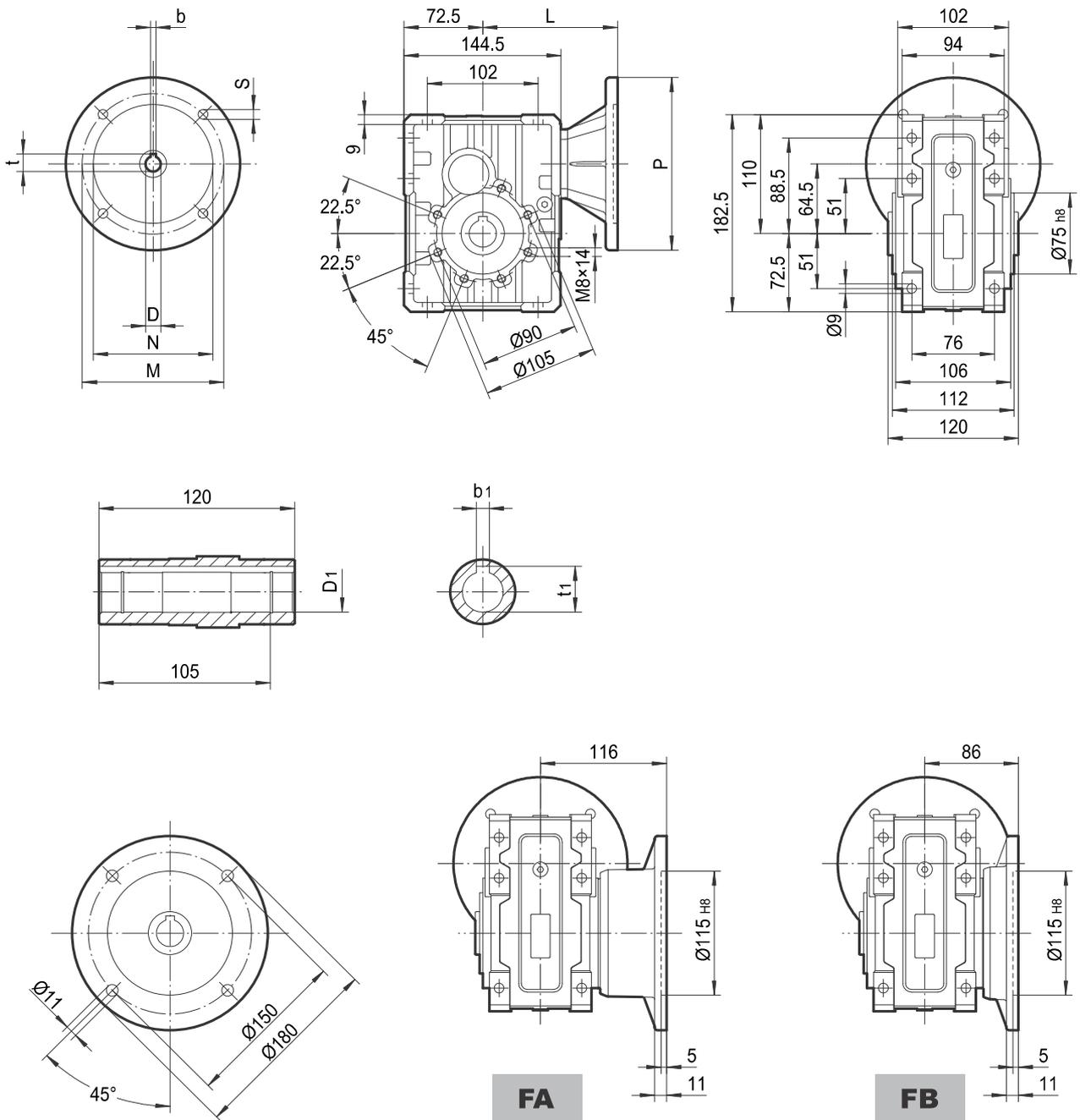
≈ 23.5 kg

Weight without motor

≈ 23.5 kg

7.2 DKB... Dimensioni / Outline Dimension

DKB38B..



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	* Solo su richiesta * Only on request		
80B14	19	6	21.8	120	100	80	7	4	144			
90B5	24	8	27.3	200	165	130	11	4	144			
90B14	24	8	27.3	140	115	95	9	4	144			

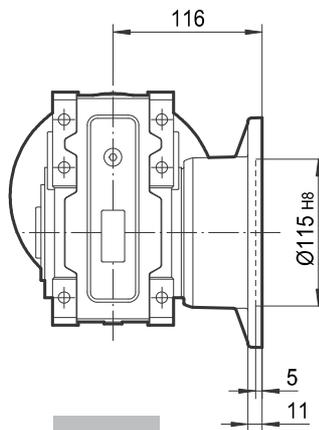
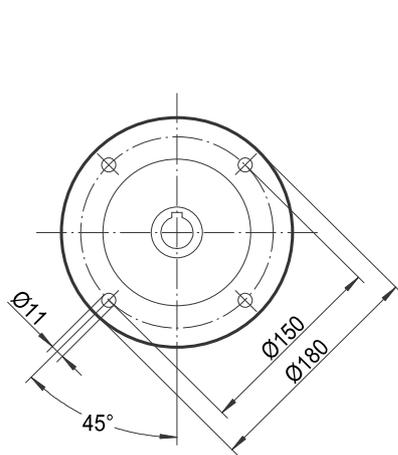
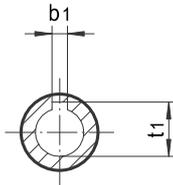
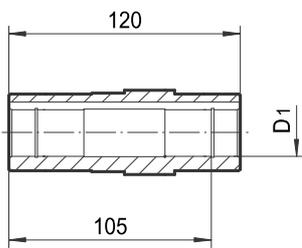
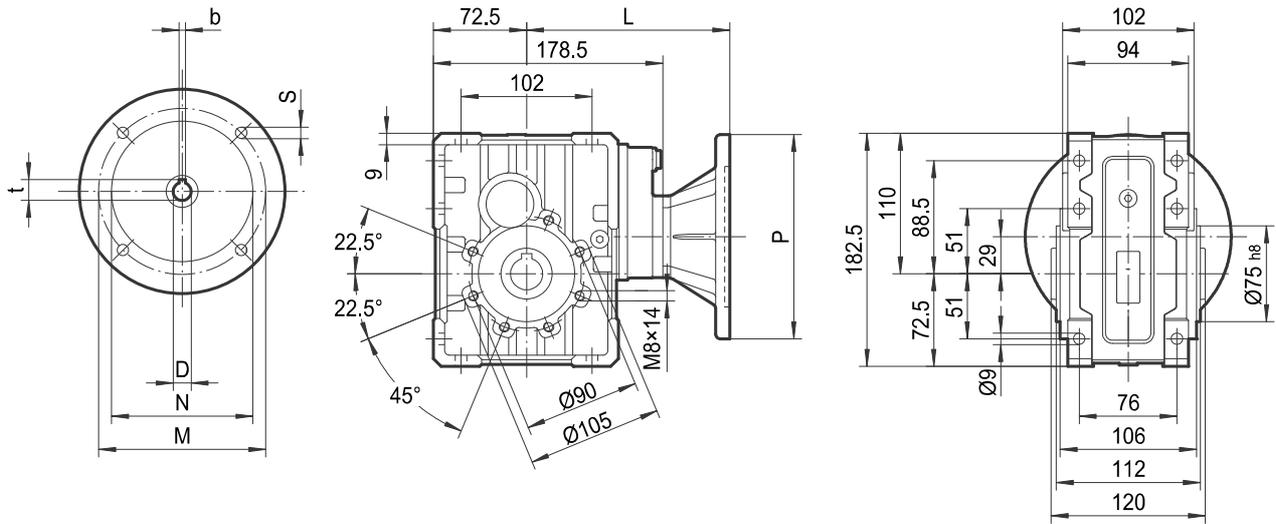
Peso senza motore

≈ 6.0 kg

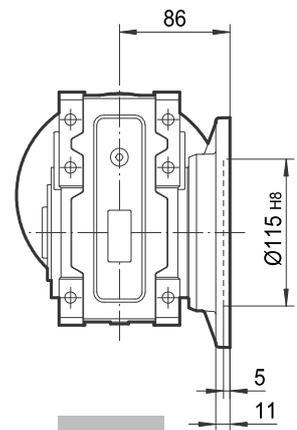
Weight without motor

≈ 6.0 kg

DKB38C..



FA



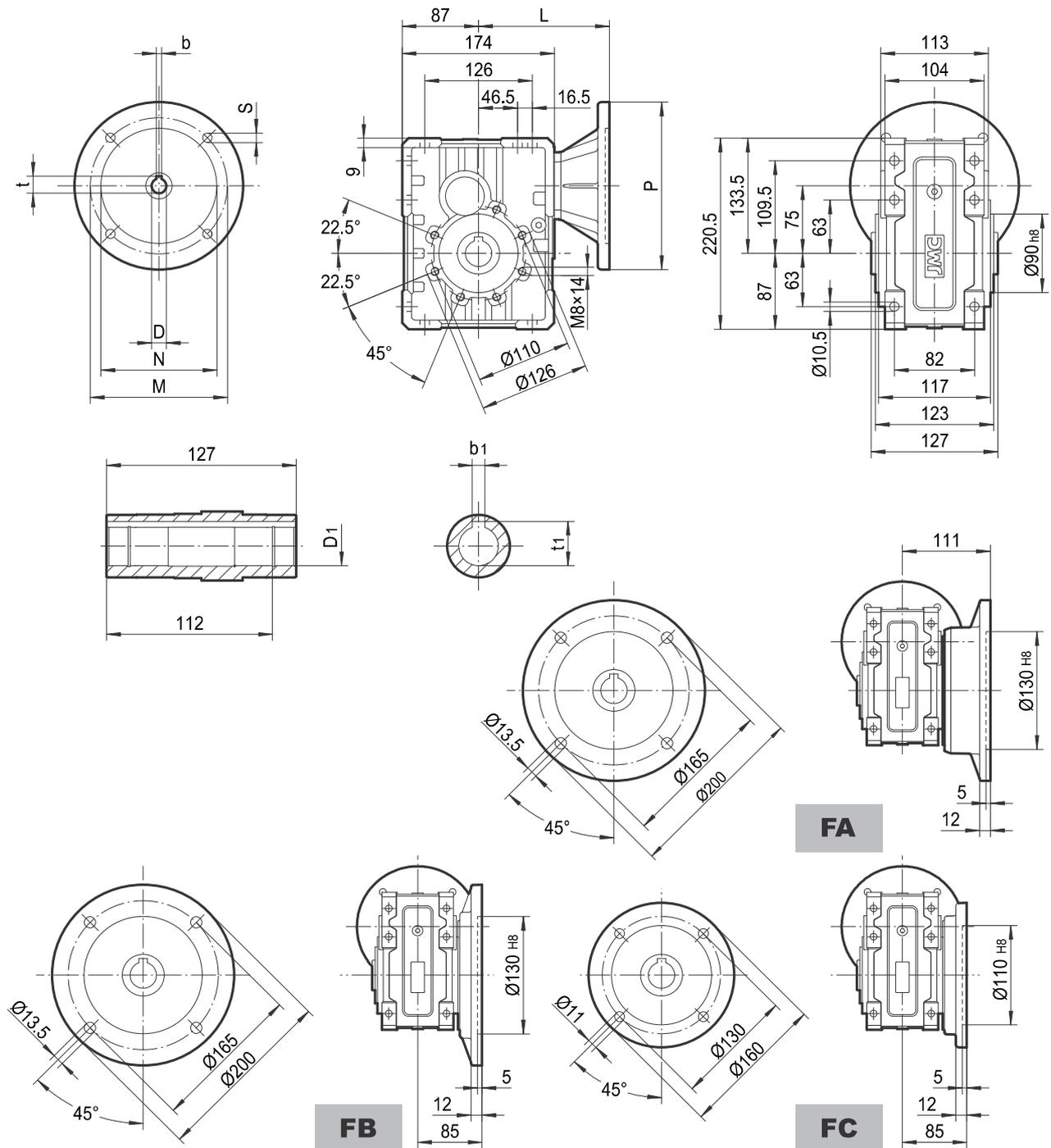
FB

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	* Solo su richiesta * Only on request		
80B14	19	6	21.8	120	100	80	7	4	178			

Peso senza motore
≈ 6.8 kg

Weight without motor
≈ 6.8 kg

DKB48B..



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	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	* Solo su richiesta * Only on request		
90B14	24	8	27.3	140	115	95	9	4	166			
100/112B5	28	8	31.3	250	215	180	13.5	4.5	176			
100/112B14	28	8	31.3	160	130	110	9	4.5	176			

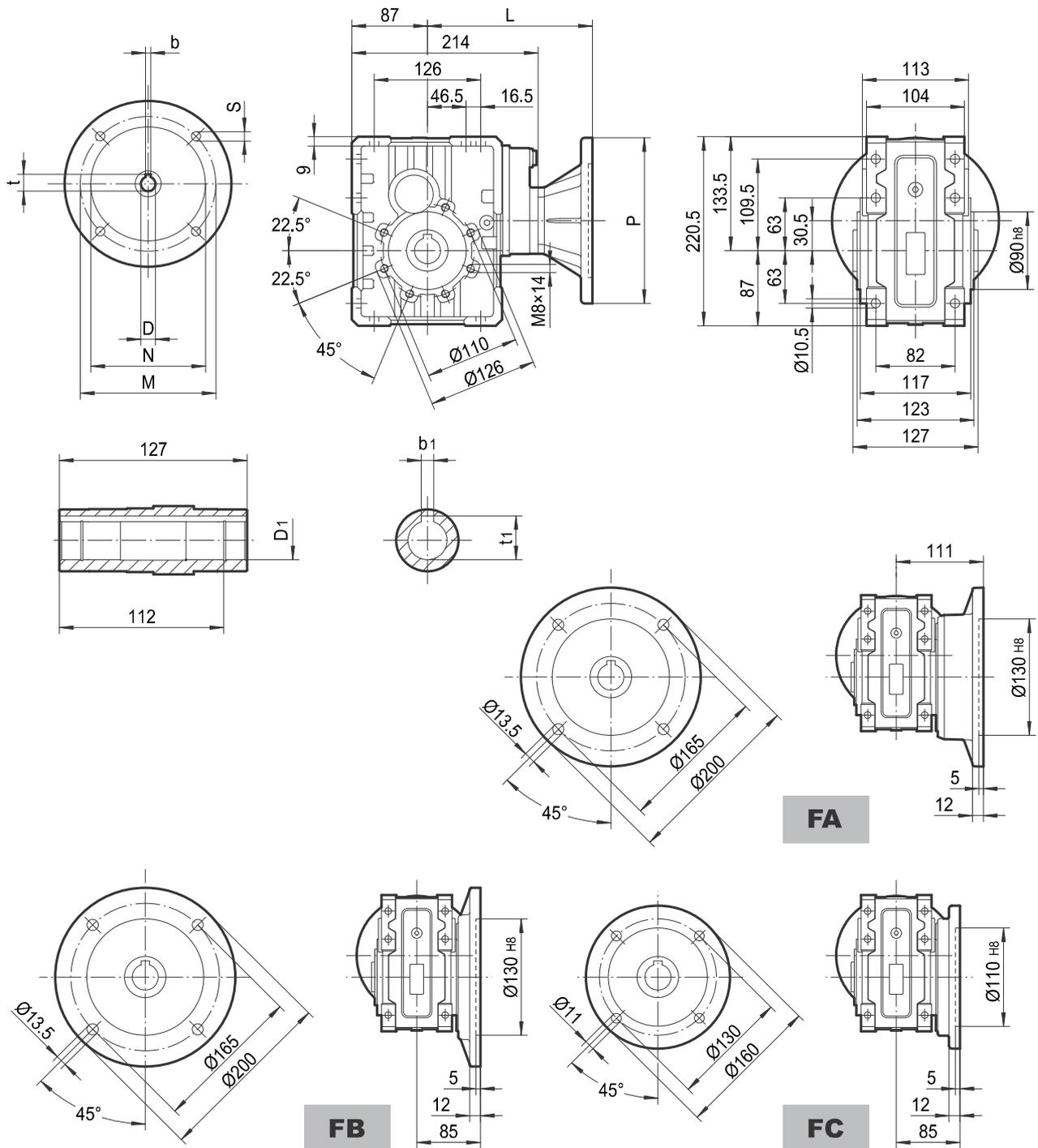
Peso senza motore

≈ 9.5 kg

Weight without motor

≈ 9.5 kg

DKB48C..

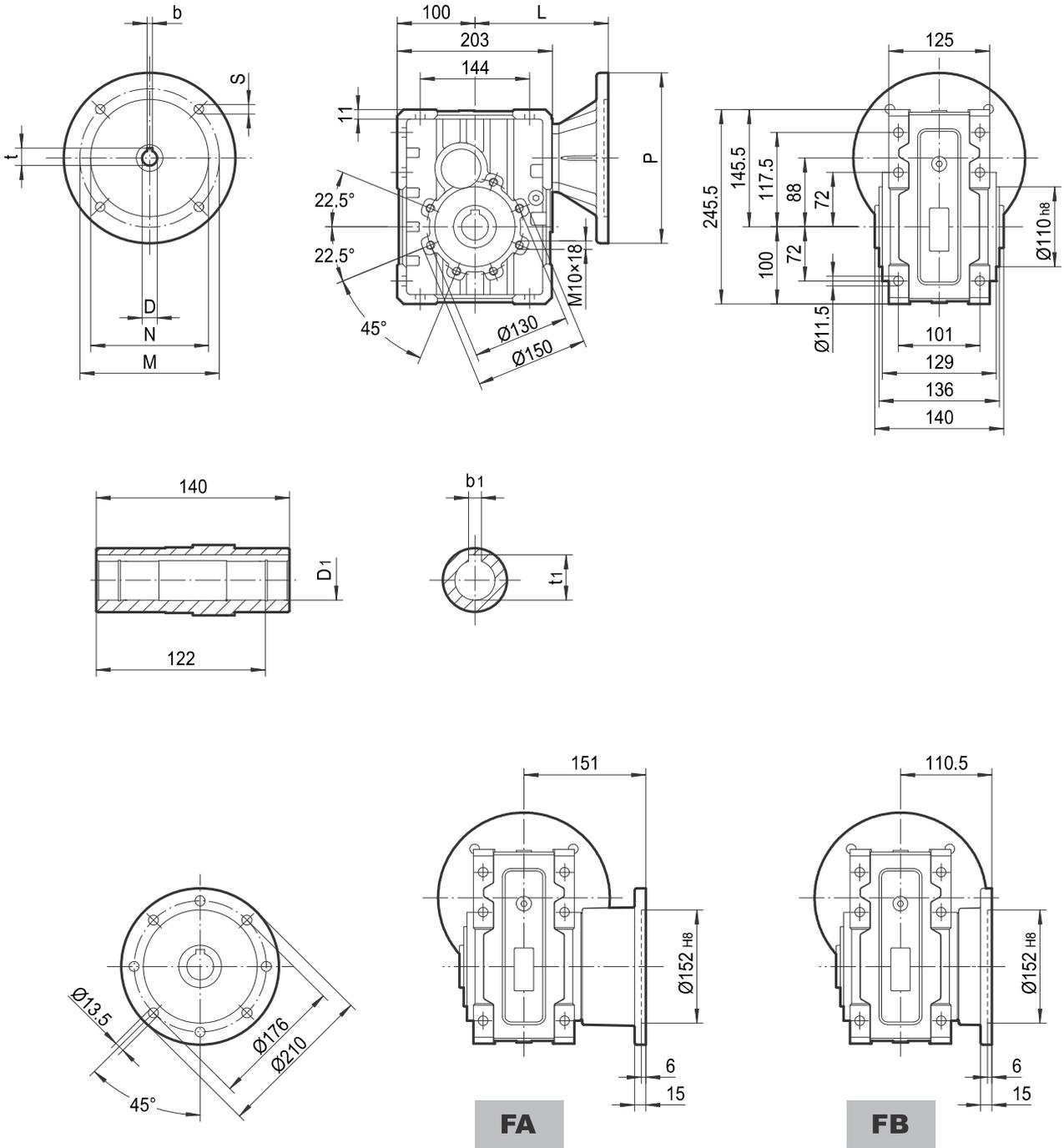


IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 _{H8}	b1	t1
63B5	11	4	12.8	140	115	95	9	4	179	28*	8*	31.3*
71B5	14	5	16.3	160	130	110	9	4	186	30	8	33.3
80B5	19	6	21.8	200	165	130	11	4	206	35*	10*	38.3*
80B14	19	6	21.8	120	100	80	7	4	206	* Solo su richiesta * Only on request		
90B5	24	8	27.3	200	165	130	11	4	206			
90B14	24	8	27.3	140	115	95	9	4	206			

Peso senza motore
≈ 10.8 kg

Weight without motor
≈ 10.8 kg

DKB58C..



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	* Solo su richiesta * Only on request		
90B14	24	8	27.3	140	115	95	9	4	182			
100/112B5	28	8	31.3	250	215	180	13.5	4.5	192			
100/112B14	28	8	31.3	160	130	110	9	4.5	192			

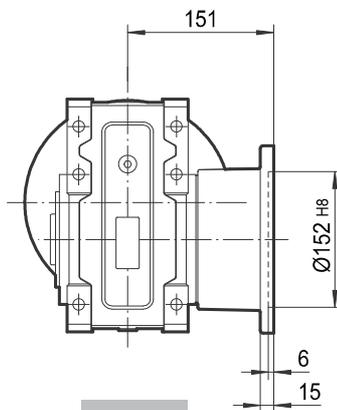
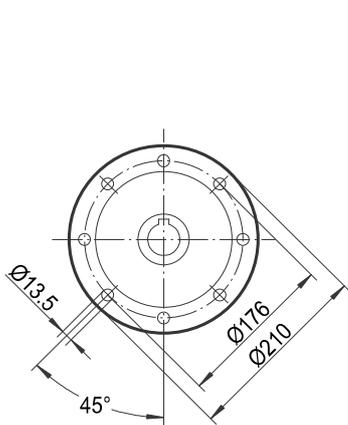
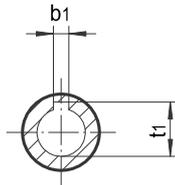
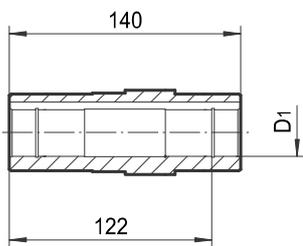
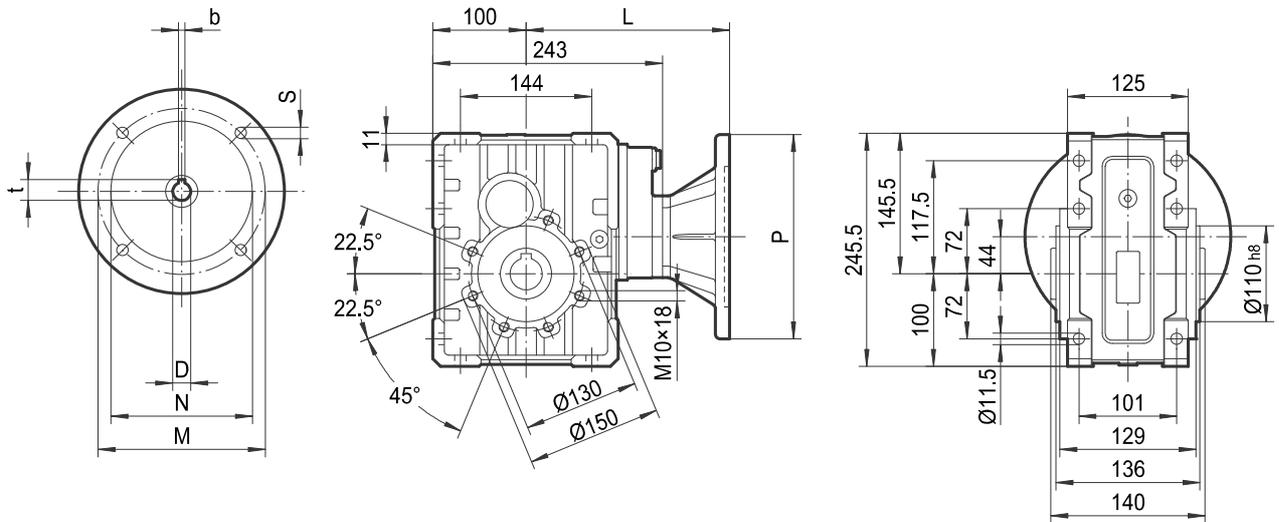
Peso senza motore

≈ 13.5 kg

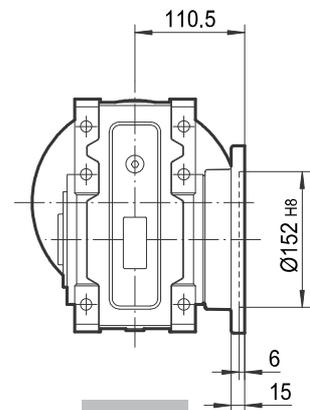
Weight without motor

≈ 13.5 kg

DKB58C..



FA



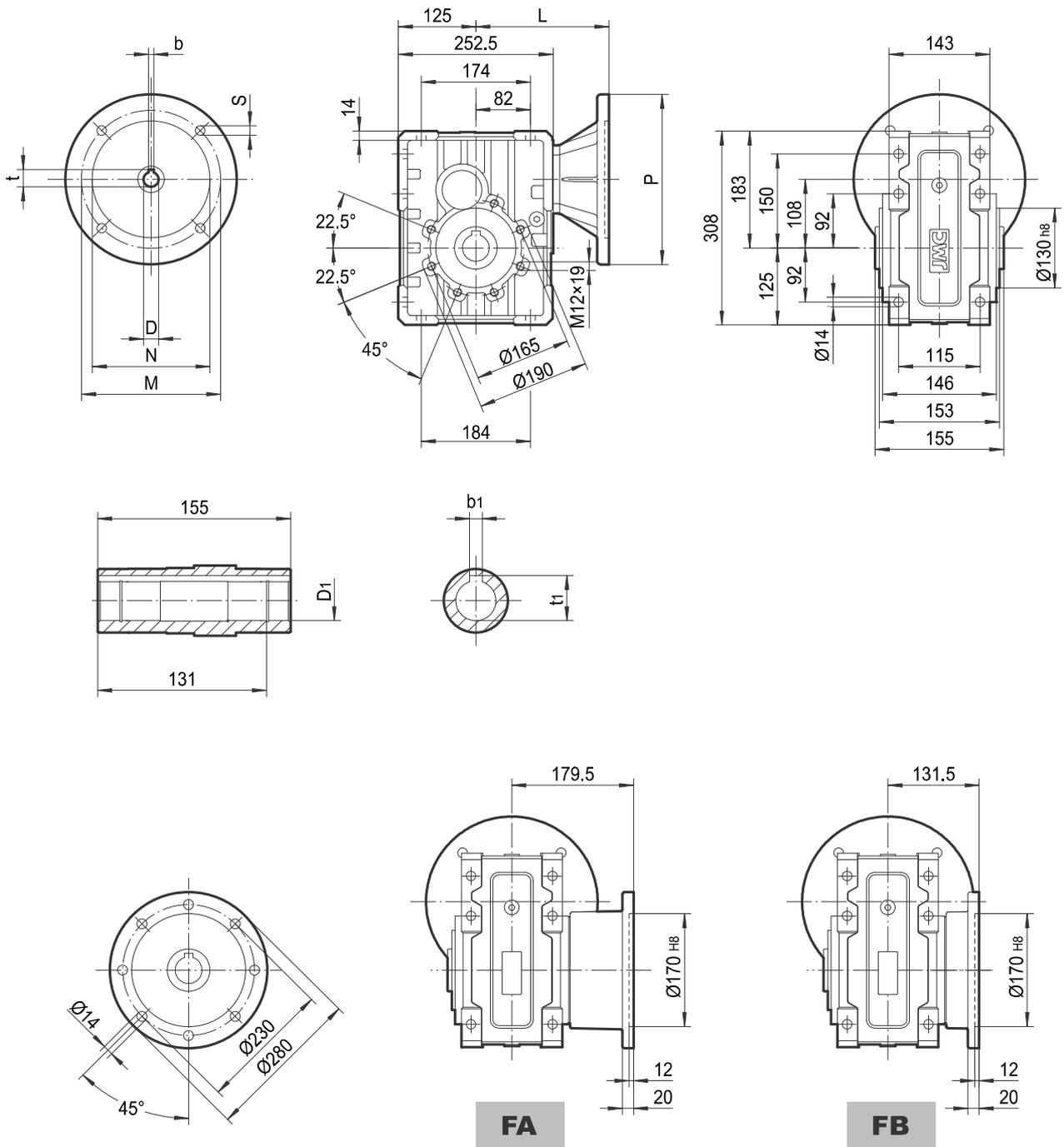
FB

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	* Solo su richiesta * 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			

Peso senza motore
≈ 14.8 kg

Weight without motor
≈ 14.8 kg

DKB68B..



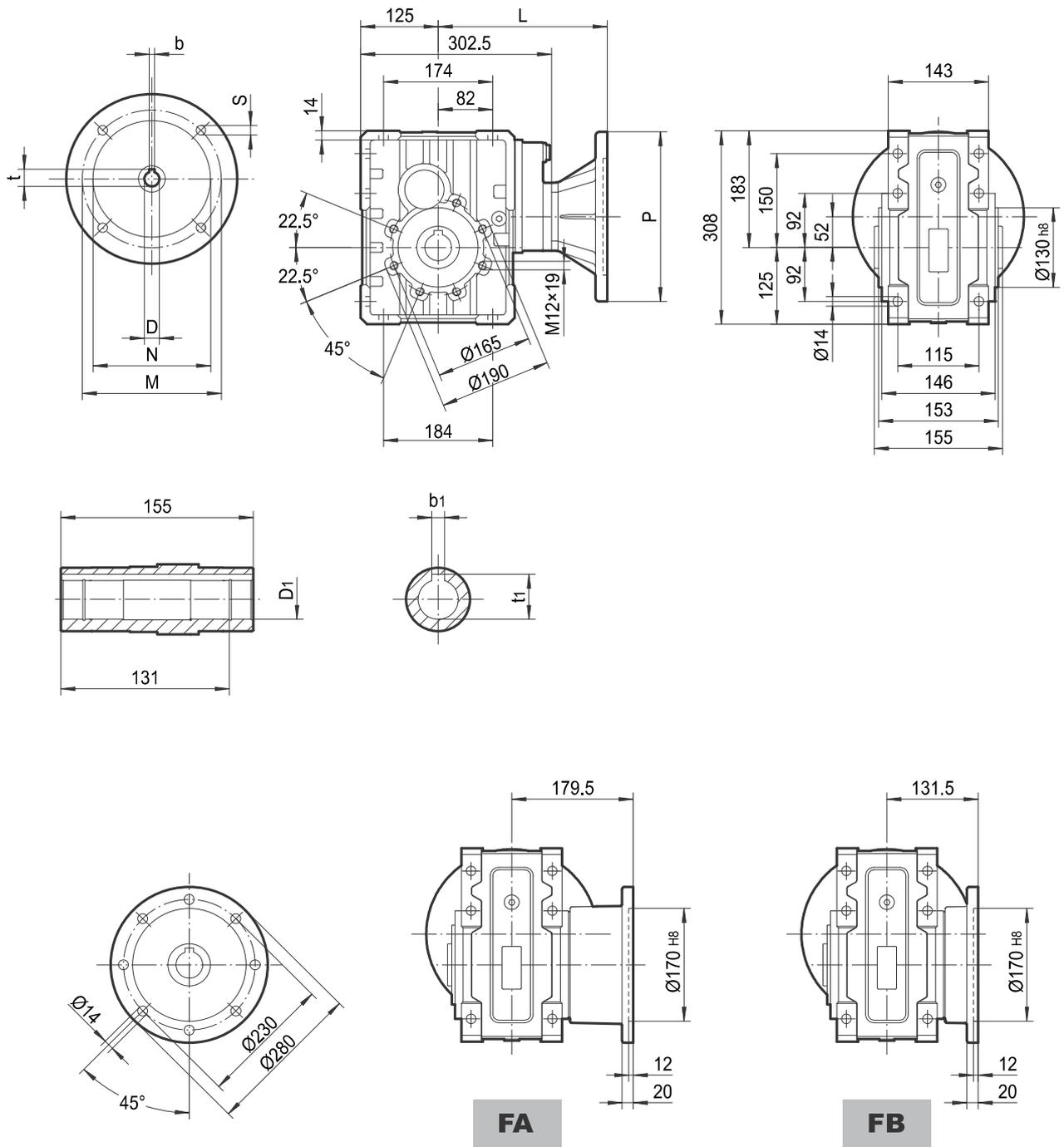
IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 _{H8}	b1	t1
80B5	19	6	21.8	200	165	130	11	4	211.5	40*	12	43.3
90B5	24	8	27.3	200	165	130	11	4	211.5	42	12	45.3
100/112B5	28	8	31.3	250	215	180	13.5	4.5	221.5	45*	14	48.8
100/112B14	28	8	31.3	160	130	110	9	4.5	221.5	* Solo su richiesta * Only on request		
132B5	38	10	41.3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

Peso senza motore
≈ 21.5 kg

Weight without motor
≈ 21.5 kg

DKM/DKB 2014

DKB68C..

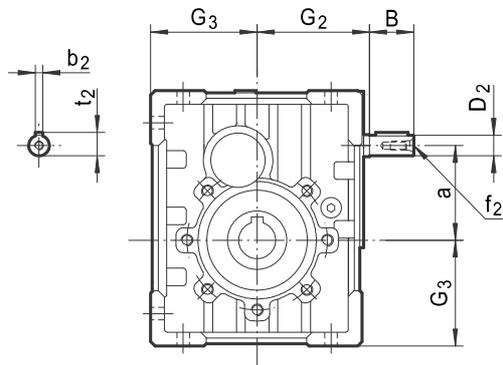


IEC	D _{E8}	b	t	P	M	N	S	T	L	D1 _{H8}	b1	t1
71B5	14	5	16.3	160	130	110	9	4	241.5	40*	12	43.3
80B5	19	6	21.8	200	165	130	11	4	261.5	42	12	45.3
90B5	24	8	27.3	200	165	130	11	4	261.5	45*	14	48.8
100/112B5	28	8	31.3	250	215	180	13.5	4.5	271.5	* Solo su richiesta * Only on request		
100/112B14	28	8	31.3	160	130	110	9	4.5	271.5			

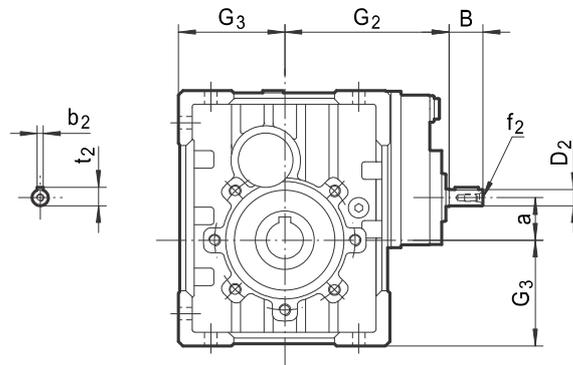
Peso senza motore
≈ 23.5 kg
Weight without motor
≈ 23.5 kg

7.3 DKM..HS Dimensioni / Outline Dimension

DKM..B..HS



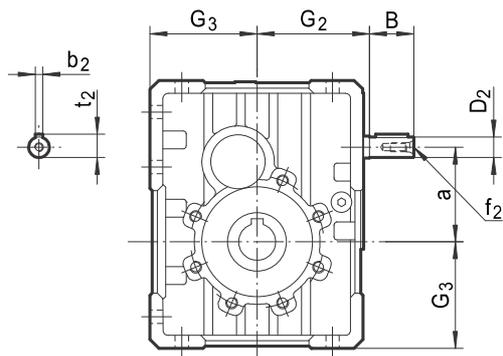
DKM..C..HS



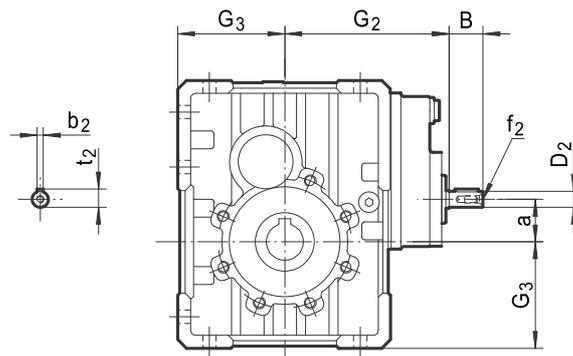
	B	D _{2 j6}	G ₂	G ₃	a	b ₂	f ₂	t ₂
DKM28B	23	11	65	60	57	4	-	12.5
DKM28C	23	11	100	60	21.5	4	-	12.5
DKM38B	30	14	76	72	64.5	5	M6	16
DKM38C	23	11	111	72	29	4	-	12.5
DKM48B	40	16	91	86	74.5	5	M6	18
DKM48C	30	14	132	86	30.5	5	M6	16
DKM58B	40	19	107	103	88	6	M6	21.5
DKM58C	30	14	148	103	44	5	M6	16
DKM68B	50	24	132	127.5	108	8	M8	27
DKM68C	40	19	181	127.5	52	6	M6	21.5

7.4 DKB..HS Dimensioni / Outline Dimension

DKB..B..HS



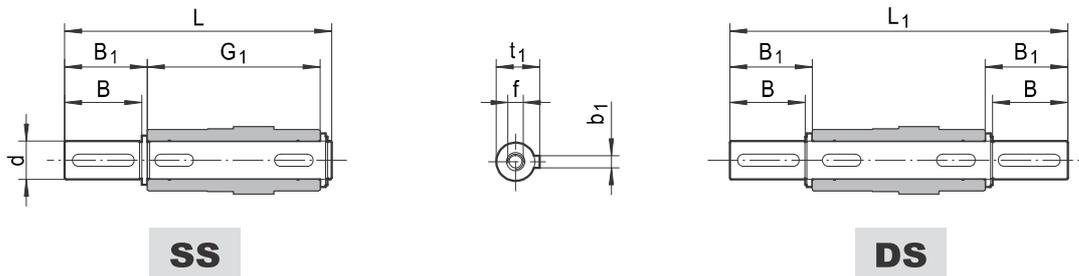
DKB..C..HS



	B	D _{2 j6}	G ₂	G ₃	a	b ₂	f ₂	t ₂
DKB38B	30	14	76	72.5	64.5	5	M6	16
DKB38C	23	11	111	72.5	29	4	-	12.5
DKB48B	40	16	91	87	74.5	5	M6	18
DKB48C	30	14	132	87	30.5	5	M6	16
DKB58B	40	19	107	100	88	6	M6	21.5
DKB58C	30	14	148	100	44	5	M6	16
DKB68B	50	24	132	125	108	8	M8	27
DKB68C	40	19	181	125	52	6	M6	21.5

8. DIMENSIONI ACCESSORI / ACCESSORIES OUTLINE DIMENSION SHEET

8.1 Albero in uscita / Output Shafts

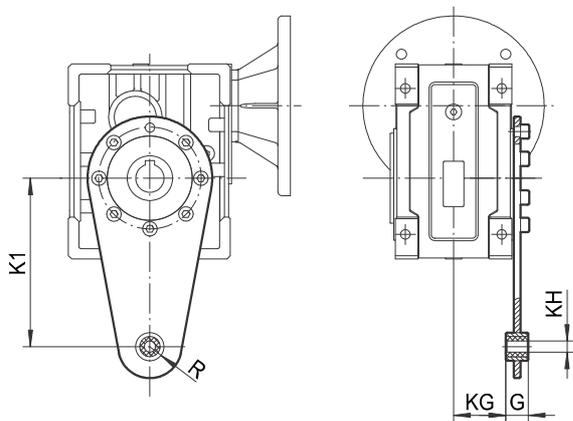


	d h6	B	B ₁	G ₁	L	L ₁	f	b ₁	t ₁
DKM28	25	50	53.5	92	153	199	M10x22	8	28
DKM38	25	50	53.5	112	173	219	M10x22	8	28
DKM48	28	60	63.5	120	192	247	M10x22	8	31
DKM58	35	80	84.5	140	234	309	M12x28	10	38
DKM68	42	80	84.5	155	249	324	M16x36	12	45
DKB38	25	60	65	120	192	246.4	M8x19	8	28
DKB48_d 28	28	60	65	127	199	255	M8x20	8	31
DKB48_d 30	30	60	65	127	199	255	M10x22	8	33
DKB58	35	60	65	140	214	268	M12x22	10	38
DKB68	42	75	80	155	244	313.5	M12x28	12	45

* Solo su richiesta
* Only on request

8.2 Braccio di reazione / Torque Arm

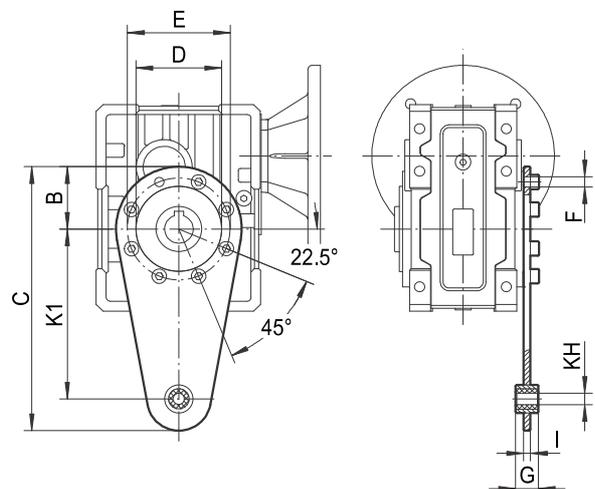
8.2.1 DKM.. Braccio di reazione / Torque Arm



	K1	G	KG	KH	R
DKM28	100	14	38.5	10	18
DKM38	150	14	49	10	18
DKM48	200	25	47.5	20	30
DKM58	200	25	57.5	20	30
DKM68	250	30	62	25	35

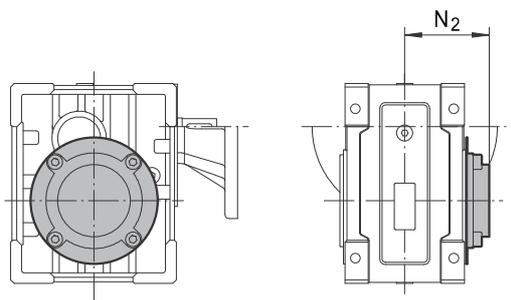
8.2.2 DKB.. Braccio di reazione / Torque Arm

	K1	B	C	D	E	F	G	KH	I
DKB38	150	55	233	75	90	9	20	10	6
DKB48	200	60	300	90	110	9	25	20	6
DKB58	200	80	318	110	130	11	25	20	6
DKB68	250	100	388	130	165	13	25	20	6



8.3 Coprimozzo / Cover

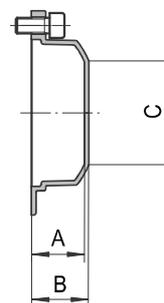
8.3.1 DKM.. Coprimozzo / Cover



	N ₂
DKM28	63
DKM38	73
DKM48	79
DKM58	94
DKM68	102

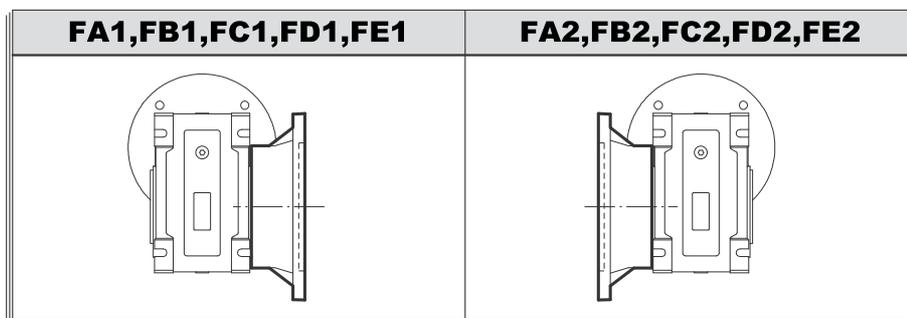
8.3.2 DKB.. Coprimozzo / Cover

	A	B	C
DKB38	26.5	29	Φ35
DKB48	24.5	27	Φ54
DKB58	26.5	29	Φ71
DKB68	27.5	30	Φ89



9. POSIZIONI DI MONTAGGIO / INSTALLATION POSITIONS DIAGRAM

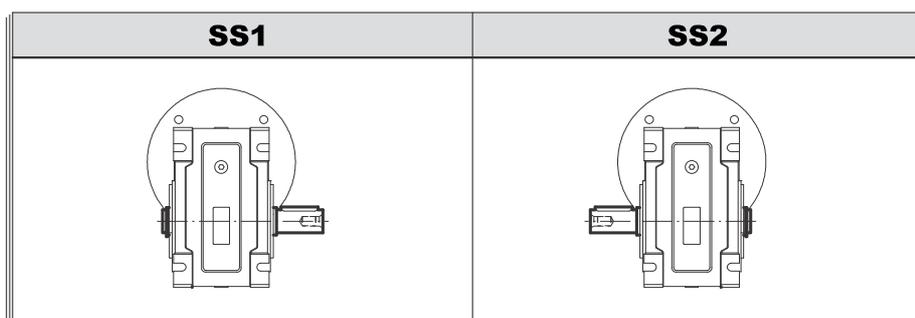
9.1 Posizioni di montaggio flangia uscita / Position diagram for output flange



Senza indicazione specifica, il riduttore verrà fornito con la flangia in uscita posizione F1 riferimento posizione B3.

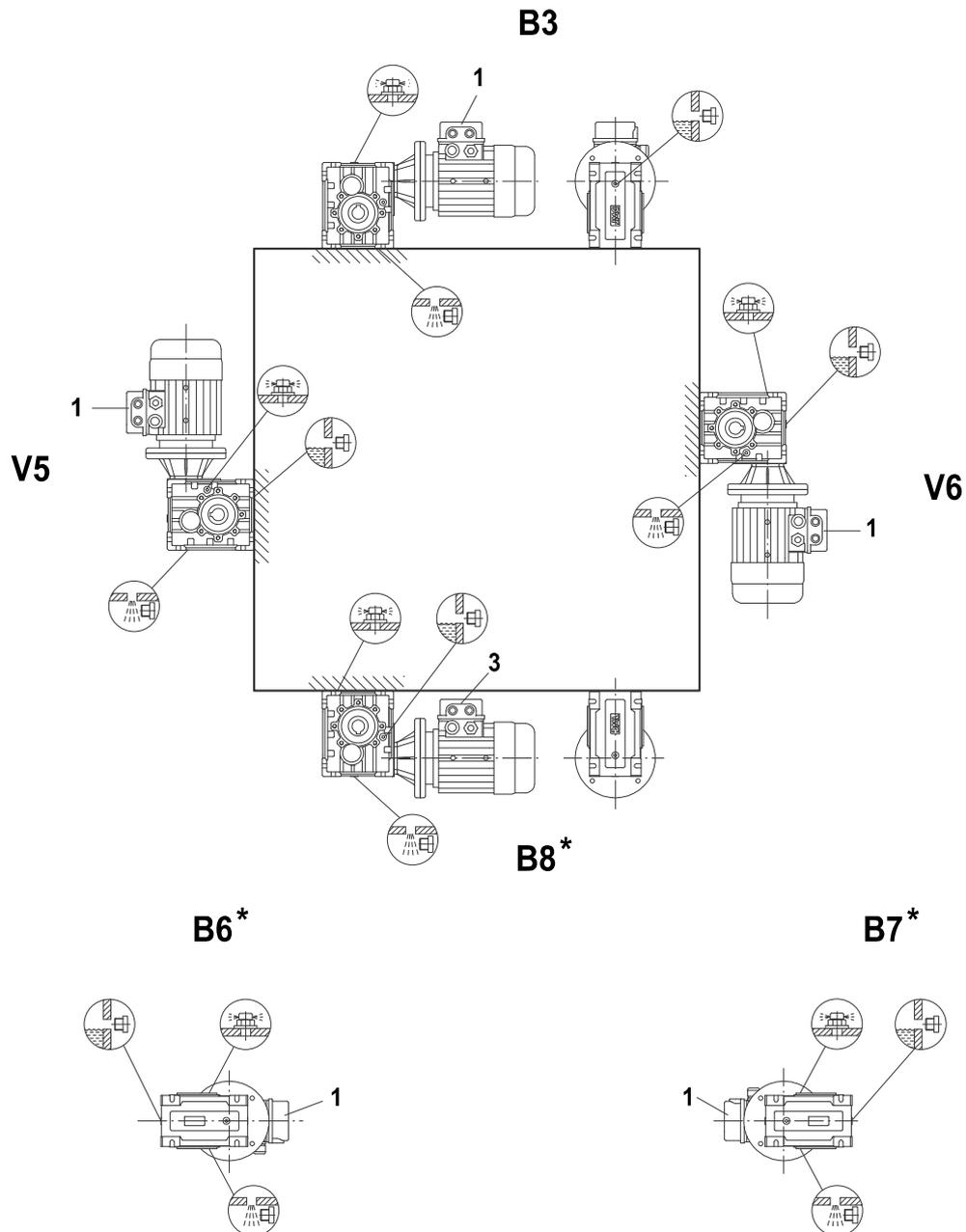
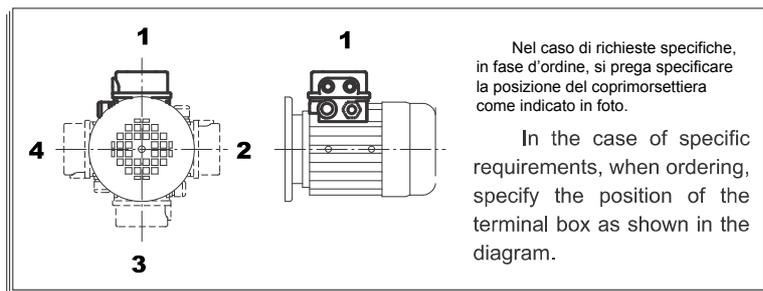
Unless specified otherwise, the gear units is supplied with the flange in pos. F.1 referred to position B3.

9.2 Posizioni albero in uscita / Position diagram for single output shaft



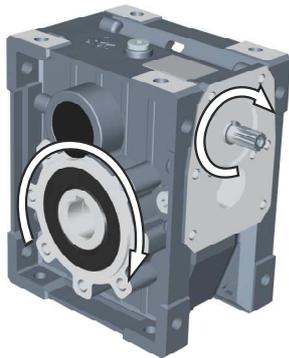
9.3 DKM.. / OR DKB.. Posizioni di montaggio / *Mounting Positions*

Symbol	Meaning
	Breather valve
	Oil level plug
	Oil drain plug

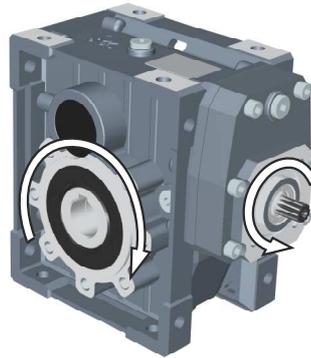


*: Significalca che il lubrificante non può essere aggiunto come indicato dal livello dell'olio, ma può essere inserito olio come indicato in tabella.
 *: It means the lubricant can't be added according to the oil level line plug, but also higher the plug the fill quantity sa shown in the table

9.4 Direzione di rotazione / *Direction of rotation*



DKM..B / DKB..B



DKM..C / DKB..C

Il motore può girare in ambo i sensi di rotazione. Si consiglia di far ruotare l'albero in senso orario.

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

10. INSTALLAZIONE / *INSTALLATION*

10.1 Note e raccomandazioni

Prima di installare il riduttore è necessario seguire le seguenti raccomandazioni:

1. *Controllare il corretto senso di rotazione dell'albero di uscita del riduttore prima di fissare l'unità nella macchina*
2. *Prima del montaggio controllare che le dimensioni dell'albero lento e la sua chiavetta siano in tolleranza con l'albero maschio che deve essere alloggiato in modo che non vengano influenzate le performance del riduttore*
3. *Il montaggio della macchina deve essere stabile ed esente da vibrazioni*
4. *Dove possibile proteggere il riduttore contro le radiazioni solari ed il cattivo tempo*
5. *Nel caso di immagazzinamento per lungo tempo (4/6 mesi) se l'anello di tenuta del riduttore non risulta essere a bagno d'olio si consiglia di sostituirlo prima del suo impiego*
6. *Non devono essere verniciate le parti in plastica ed il canotto dell'albero lento*
7. *Prima del montaggio dell'albero nell'albero lento cavo del riduttore, usare grasso per evitarne l'ossidazione*

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.

10.1 Note e raccomandazioni

8. Controllare il corretto livello di lubrificante se installato
9. Alla partenza si deve applicare il massimo carico gradatamente
10. Occorre usare un supporto che sostenga il riduttore quando è combinato con altro organo di elevato peso
11. Assicurare che il motore collegato al riduttore sia attraversato da un buon flusso di aria
12. In caso di temperatura ambiente minori di 5° e maggiori di 40° contattare il nostro ufficio tecnico

10.2 Applicazioni Critiche

Le prestazioni indicate in catalogo corrispondono alla posizione di montaggio in b3, quando il primo stadio non è immerso completamente nell'olio.

Per altre posizioni di montaggio o particolari velocità in ingresso riferirsi alle tabelle per differenti situazioni critiche per ogni taglia di riduttore.

Contattare il nostro ufficio tecnico per le seguenti applicazioni:

1. Alta velocità in ingresso
2. Alta inerzia
3. Utilizzo in condizioni che potrebbero essere pericolose per il personale che gestisce il riduttore;
4. Alti carichi dinamici;
5. Ambienti sotto i 5 gradi e sopra i 40;
6. Utilizzo in presenza di agenti chimici e aggressivi;
7. Utilizzo in ambienti salini;
8. Utilizzo in ambienti radioattivi;
9. Utilizzo in ambienti ad alta pressione
10. Montaggio in posizioni diverse da catalogo

Il massimo carico che il riduttore può sopportare non deve eccedere 2 volte la coppia nominale dichiarata dalle prestazioni in catalogo.

Si intende per sovraccarico momentaneo quello dato alla partenza a pieno carico e alla frenata

10.1 Note recommendations

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 (fs =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. LUBRIFICAZIONE / LUBRICATION

11.1 Tipi di lubrificanti / Types of lubrication

						tipi di lubrificante lubrication type
DKM.. DKB..		VG 220	Shell Omala 220	Mobilgear 630	BP Energol GR-XP 220	Olio Minerale Mineral oil
		VG 150 VG 100	Shell Omala 100	Mobilgear 627	BP Energol GR-XP 100	
		VG 68-46 VG 32	Shell Tellus T 32	Mobil D.T.E. 13M		
		VG 22 VG 15	Shell Tellus T 15	Mobil D.T.E. 11M	BP Energol HLP-HM 15	
		VG 220	Shell Omala HD 220	Mobil SHC 630		Olio sintetico Synthetic oil
		VG 150		Mobil SHC 629		
		VG 32		Mobil SHC 624		

11.2 Quantità di lubrificante

La quantità di lubrificante specificata è raccomandata. La quantità precisa varia a seconda degli stadi e del rapporto di riduzione. Quando procedete alla lubrificazione, è necessario che raggiungete il livello di olio indicato dalla valvola.

La seguente tabella mostra la quantità di lubrificante in relazione alle posizioni di montaggio (B3, B6, B7)

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.....)

DKM.. Quantità di lubrificante / Lubricant fill quantity

Gear units	Quantità di lubrificante in litri - Fill quantity in liters (L)					
	B3	B6	B7	B8	V5	V6
DKM28B	0.22	0.20*	0.13*	0.15	0.25	0.14
DKM28C*	0.07	0.04	0.04	0.05	0.08	0.09
DKM38B	0.42	0.35*	0.24*	0.22	0.46	0.25
DKM38C*	0.07	0.04	0.04	0.05	0.08	0.09
DKM48B	0.70	0.58*	0.42*	0.42	0.75	0.45
DKM48C*	0.13	0.09	0.09	0.09	0.15	0.17
DKM58B	1.21	0.95*	0.72*	0.67	1.30	0.74
DKM58C*	0.13	0.09	0.09	0.09	0.15	0.17
DKM68B	2.15	1.70*	1.10*	1.25	2.20	1.20
DKM68C*	0.25	0.17	0.17	0.20	0.32	0.36

DKM..Quantità di lubrificante / Lubricant fill quantity

Gear units	Fill quantity in liters (L)					
	B3	B6	B7	B8	V5	V6
DKB38B	0.38	0.35*	0.25*	0.26*	0.44	0.25
DKB38C*	0.07	0.04	0.04	0.05	0.08	0.09
DKB48B	0.66	0.60*	0.45*	0.48	0.78	0.48
DKB48C*	0.13	0.09	0.09	0.09	0.15	0.17
DKB58B	1.15	0.95*	0.70*	0.75*	1.25	0.75
DKB58C*	0.13	0.09	0.09	0.09	0.15	0.17
DKB68B	2.00	1.70*	1.10*	1.40*	2.20	1.20
DKB68C*	0.25	0.17	0.17	0.20	0.32	0.36

Il terzo stadio (precoppia) del riduttore ha una fusione separata dal riduttore, quindi deve essere soggetta ad un proprio riempimento di lubrificante

#: 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.

***:** il riduttore deve essere riempito della quantità di lubrificante come indicato in tabella di cui sopra

***:** 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

12. MANUTENZIONE

1). Il primo cambio dell'olio deve essere fatto dopo circa 3000 ore di funzionamento. Mai mischiare olio sintetico con olio minerale.

2). Ogni 3000 ore di funzionamento si deve controllare il livello dell'olio ed i suo stato. Eseguire anche un controllo visivo dello stato di conservazione degli anelli di tenuta

3). Indipendentemente dalle ore di lavoro effettuate, ogni 3 anni occorre sostituire l'olio e ingrassare tutti i cuscinetti

4). Sostituire periodicamente gli anelli di tenuta dell'albero lento del riduttore

5). In caso di malfunzionamento fermare il sistema e contattare il nostro ufficio tecnico (fornire informazioni sulle specifiche del riduttore ed il suo numero di serie)

12. MAINTENANCE

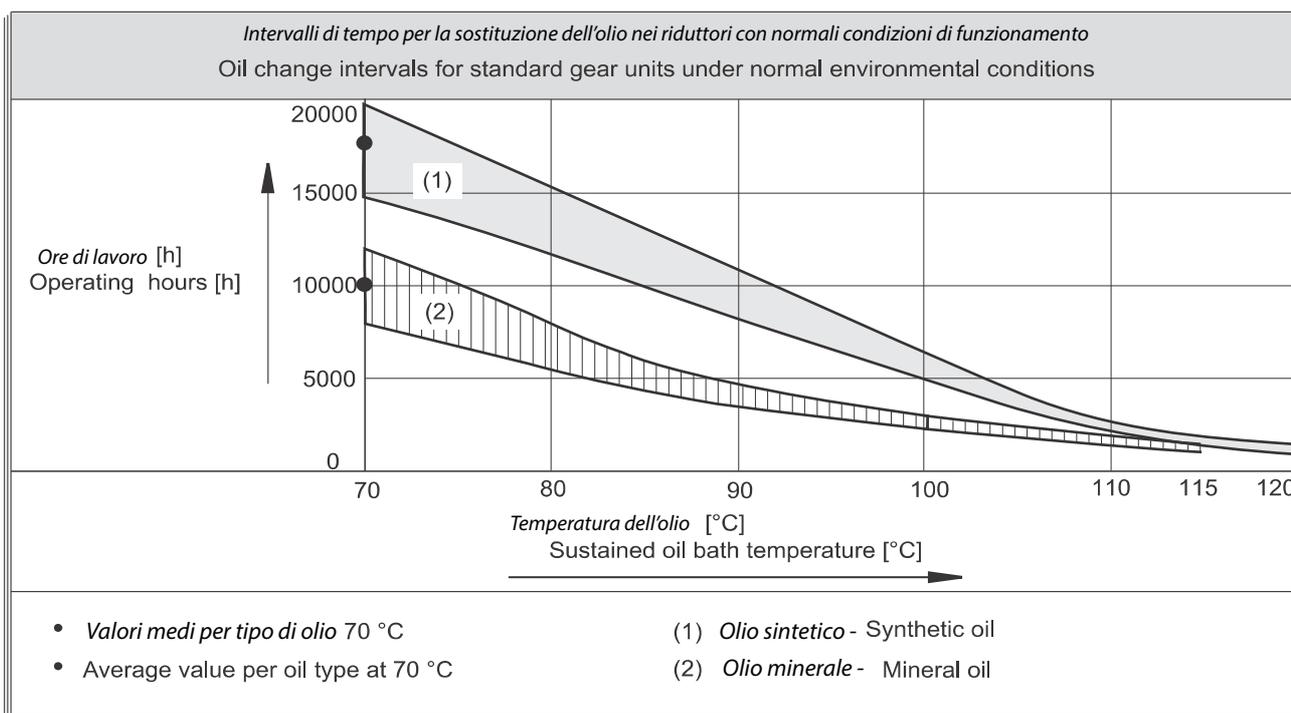
1). For gear units, first oil change should be after about 3000 hours (run-in period). The right lotion is required to clean the gear units with care. Never mix the synthetic oil and mineral oil together.

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.



13. CONSERVAZIONE

- 1). *Proteggere i riduttori dalla pioggia, dalla neve e dagli urti;*
- 2). *Interporre un appoggio tra il riduttore ed il suolo;*
- 3). *Se il riduttore non dovesse essere impiegato in tempi brevi, deve essere ricoperto di olio protettivo;*
- 4). *Ogni 2 anni effettuare un controllo visivo e lo stato della protezione alla corrosione*

14. INFORMAZIONI PER L'ORDINE

Si prega di fornire le seguenti informazioni per effettuare l'ordine dei riduttori:

- 1). *Indicare il modello di riduttore, rapporto e posizione di montaggio;*
- 2). *Generalmente la verniciatura del riduttore è colore alluminio;*
- 3). *Quantità;*
- 4). *Eventuali richieste speciali;*
- 5). *Ragione sociale dell'azienda che effettua l'ordine.*

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. PROBLEMI DI FUNZIONAMENTO / GEAR UNIT MALFUNCTIONS

PROBLEMI	POSSIBILI CAUSE	SOLUZIONI
Rotazione irregolare - Rumore	A. cuscinetti danneggiati B. ingranaggi danneggiati	A. controllare l'olio e sostituire i cuscinetti B. contattare il ns. servizio tecnico
Rotazione irregolare - Rumore	Presenza di impurità nell'olio	<ul style="list-style-type: none"> controllare l'olio; fermare il riduttore e contattare il ns. servizio tecnico
Perdite d'olio 1) <ul style="list-style-type: none"> dal coperchio di protezione dalla flangia del motore dalla tenuta lato attacco motore dalla flangia del riduttore dalla tenuta in uscita 	A. perdita della tenuta del coperchio B. tenuta difettosa C. riduttore da riparare	A. stringere i bulloni del coperchio; B. contattare il ns. servizio clienti C. controllare la posizione di montaggio.
Perdite dal tappo di sfiato	A. troppo olio B. posizione di montaggio non corretta C. frequenti partenze e arresti	A. correggere il livello dell'olio B. montare il tappo di sfiato nella corretta posizione
L'albero lento non ruota	connessione interrotta tra motore e riduttore	mandare il riduttore presso la ns. sede per il suo controllo

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 leaking1) <ul style="list-style-type: none"> 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 breather valve	A. Too much oil B. Drive operated in incorrect mounting position C. Frequent cold starts (oil foams) and/or high oil level	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

