



# BTC-PD WORM REDUCER

## Catalogue

**B-BBEE 2**  
EMPOWERING SUPPLIER

ISO 9001	Certified
ISO 14001	Certified
ISO 45001	Certified

# ABOUT US

Established in 1974 as a single bearing shop in Durban, South Africa; BMG's aggressive growth strategy has included acquisitions, supplemented by a steady organic growth discipline. BMG attracts best-of-breed talent resulting in technical expertise that differentiates BMG in the industry. Staff are truly part of the BMG family and its success.

BMG boasts an accredited in-house technical and commercial training academy which fosters a culture of staff development and career advancement; it's all about sustainability.

The net result, is a company that reliably supplies and supports 70 000 customers in 15 countries with the widest range of industrial engineered products and expert services in Africa via 105 branches.

BMG is positioned to deliver bespoke 360 degree solutions to its customers, and subsequently return on investment to its investors and shareholders. BMG plays a pivotal role in supporting the productivity and production targets of all Industrial, Manufacturing, Mining and Agricultural sectors of the economies in the countries it serves. With an enviable reputation as Africa's largest distributor, manufacturer and service provider of the highest quality engineering consumables and components; including:

- Bearings & Seals
- Power Transmission Components
- Drives, Motors and Controllers
- Hydraulics, Pneumatics and Filtration
- Heavy and Light Duty Materials Handling
- Valves and Lubrication
- Fasteners, Gaskets and Tools

BMG is a level 4 BEE contributor with ISO 9001 Quality Assurance certification. Health and safety of its employees and customers is a paramount focus and the company adheres to ISO 45001. BMG is also committed to environmental care and sustainability and strictly follows the ISO 14001 charter.

As a key contributor to the Invicta Holdings stable, BMG has played a major part in Invicta's unique achievement of being rated in South Africa's Top 100 Companies for 21 consecutive years.



# TABLE OF CONTENTS

## INDEX

<b>SECTION 1</b>	<b>PD SERIES REDUCER</b>	<b>1-2</b>
1.1	Summary	1
1.2	Designation	1
1.3	Parts List	2
<b>SECTION 2</b>	<b>GENERAL INFORMATION</b>	<b>2-3</b>
2.1	Symbols	2
2.2	Radial loads	3
2.3	Service factor	3
<b>SECTION 3</b>	<b>MOUNTING POSITIONS</b>	<b>4-7</b>
3.1	Mounting positions for the worm reducer	4
3.2	Mounting positions for the worm reducer with PC	5
3.3	Mounting positions for double stage worm reducer	6
3.4	Mounting positions for flanges	6
3.5	Mounting positions for output shafts	6
3.6	Mounting positions for the torque arm	7
<b>SECTION 4</b>	<b>REDUCER OVERALL DIMENSIONS</b>	<b>8-16</b>
4.1	PD DIMENSIONS	8-15
4.2	IEC DIMENSIONS	16
<b>SECTION 5</b>	<b>PERFORMANCE</b>	<b>17-47</b>
<b>SECTION 6</b>	<b>ACCESSORY DIMENSIONS</b>	<b>48-52</b>
6.1	Pre-stage helical module dimensions	48
6.2	Torque arm dimensions	49
6.3	Output flange dimensions	50
6.4	Output shaft dimensions	51
6.5	Double stage coupling flange dimensions	51
6.6	Double stage coupling shaft dimensions	52
<b>SECTION 7</b>	<b>LUBRICATION &amp; USAGE SPECIFICATIONS</b>	<b>53</b>



# PD SERIES REDUCER

## 1.1 Summary

PD series reducer is a new-generation of products with main features such as:

- | High quality aluminium alloy, light weight and non-rusting
- | Large output torque
- | Smooth running and low noise
- | High radiating efficiency
- | Good looking appearance, durable service life and small volume
- | Suitable for omni bearing installation

## 1.2 Designation

PD      050      071      30:1      D25

Kerridge Part no Lookup:

REDUCER:	PD050-071-025-D25
SHAFT:	PD050-OPS D25
TQ ARM	PD050-TQARM
OUTPUT FLANGE:	Pd050 OUTPUT FLANGE FC

**Shaft**  
14/18/25/28/30/35

**Motor mounting facility**  
56B5(B14)/63B5(B14)/71B5(B14)/80B5(B14)/90B5(B14)/  
100B5(B14)/112B5(B14)/132B5(B14)/160B5

**Ratio**  
5/7.5/10/15/20/25/30/35/40/50/60/70/80/100

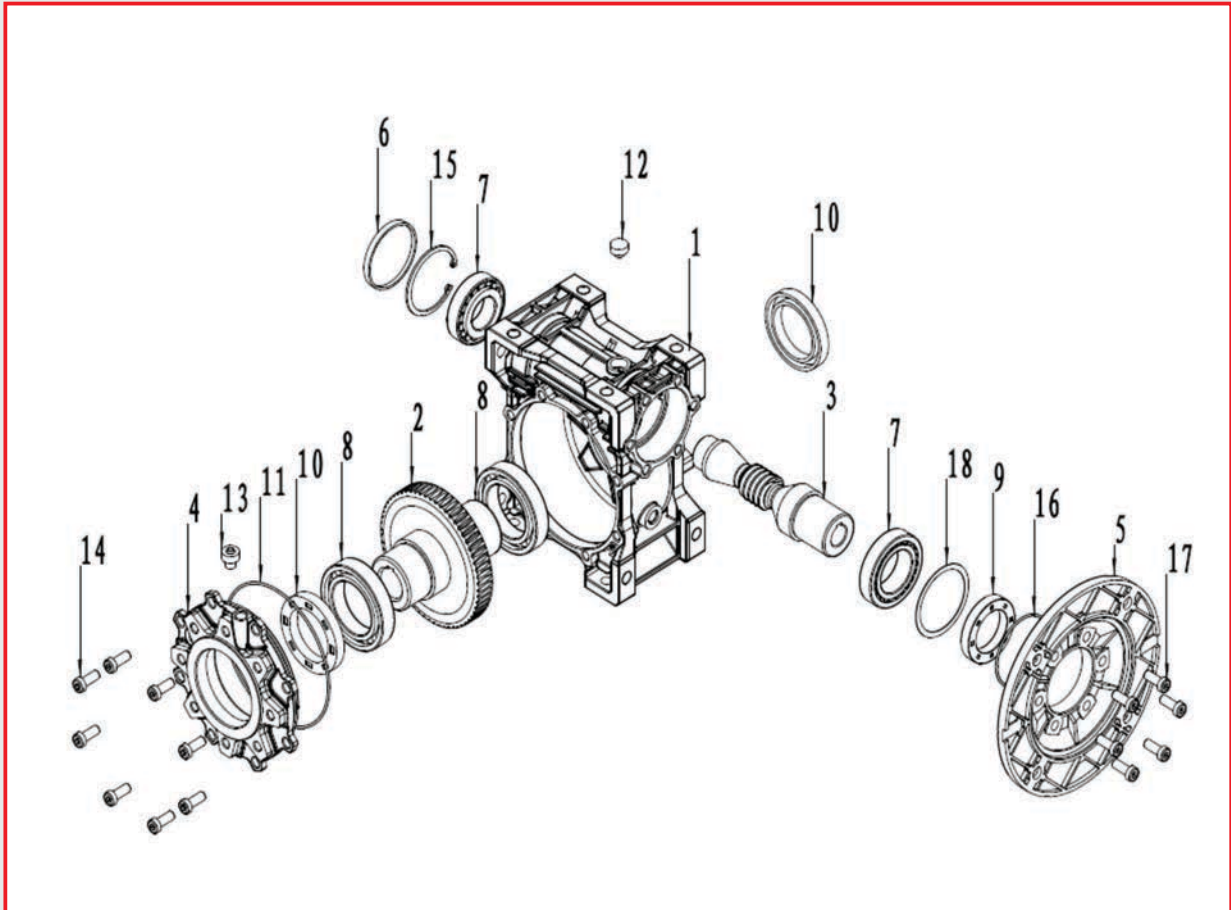
Double extension worm shaft, no mark means single extension worm shaft

**Specification**  
025,030,040,050,063,075,090,110,130,150  
025/030,025/040,030/040,030/050,030/063,040/075,  
040/090,050/110,063/130,063/150

**Worm reducer series**

## 1.3 Parts List

1	Frame	7	Bearing	13	Vented plug
2	Worm wheel	8	Bearing	14	Internal hex screw
3	Worm shaft	9	Oil seal	15	Snap ring
4	Output shaft cover	10	Oil seal	16	O-ring
5	Flange	11	O-ring	17	Internal hex screw
6	Seal cover	12	Oil plug	18	Shim



## GENERAL INFORMATION

### 2.1 Symbols

- IEC	= Fitted for motor coupling	
- P1	= Power of input shaft	(kW)
- M2	= Torque of output shaft	(Nm)
- n1	= Speed of input shaft	(1/min)
- n2	= Speed of output shaft	(1/min)
- i	= Reduction ratio	
- f.s	= Service factor	
- Fr1	= The maximum admitted radial load of input shaft	(N)
- Fr2	= The maximum admitted radial load of output shaft	(N)
- $\eta$	= Efficiency	

# GENERAL INFORMATION

## 2.2 Radial Loads

The radial load on the shaft is calculated using the following formula:

$$F_{re} = \frac{2000 M f_z}{D} \leq Fr1 \text{ or } Fr2$$

$F_{re}$  (N)

Resulting radial load

$M$  (Nm)

Torque on the shaft

$D$  (mm)

Diameter of the transmission member mounted on the shaft

$f_z = 1.1$  Gear pinion

1.4 Chain wheel

1.7 V-pulley

2.5 Flat pulley

## 2.3 Service Factor

The service factor (f.s) depends on the operating conditions the reduction unit is subjected to. The parameters that need to be taken into consideration to select the most adequate service factor correctly comprise of:

☺ Type of load of the operated machine: A-B-C

☺ Length of daily operating times: hourly/daily ( $\triangle$ )

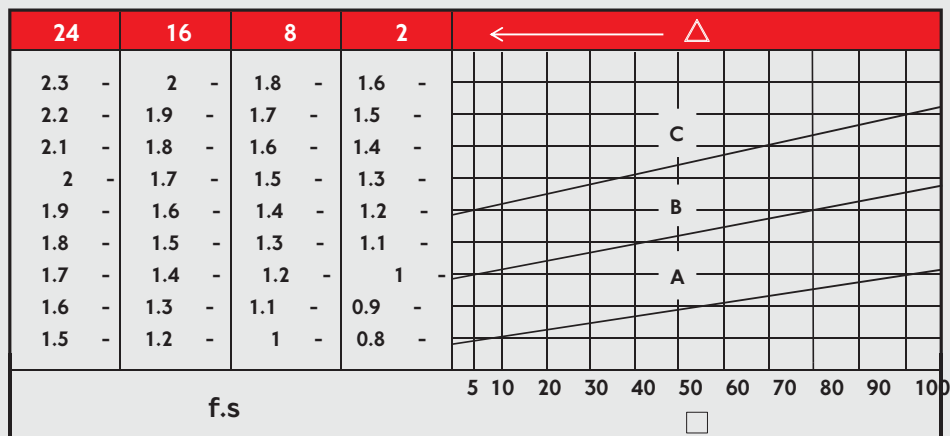
☺ Start-up frequency: starts/hour ( $\blacksquare$ )

Type of load

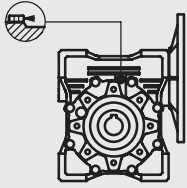
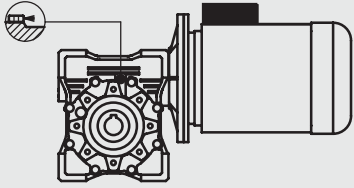
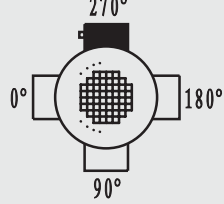
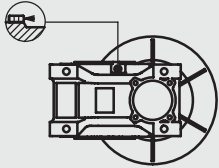
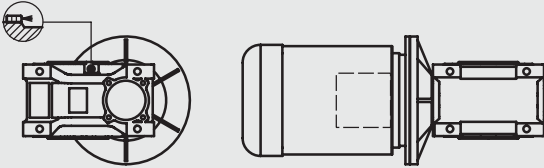
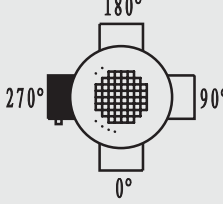
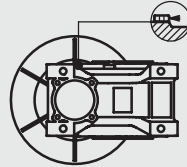
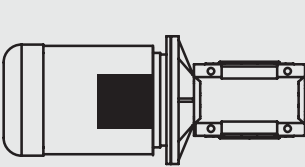
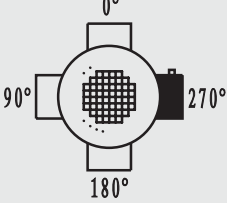
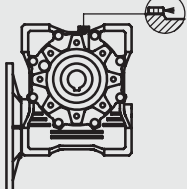
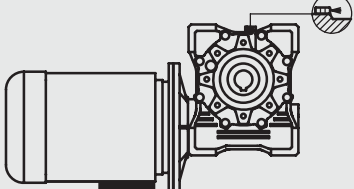
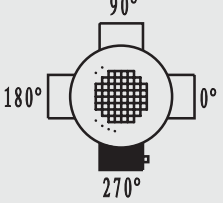
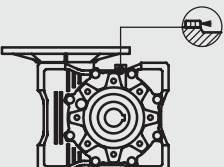
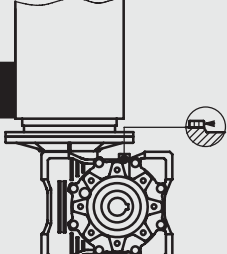
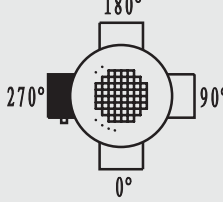
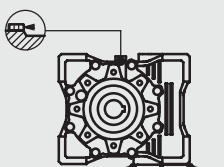
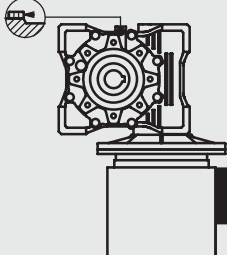
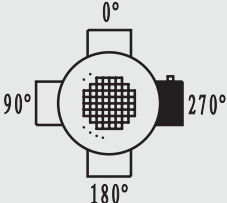
A - Uniform

B - Moderate shocks

C - Heavy shocks

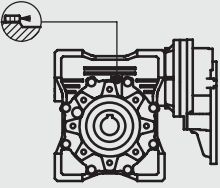
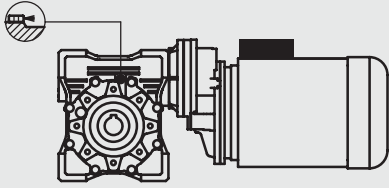
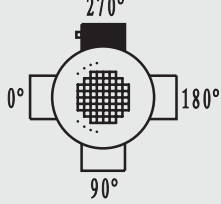
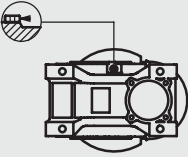
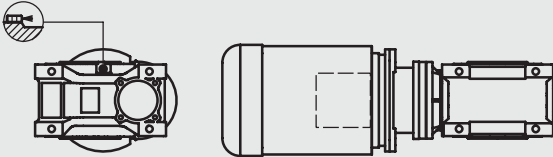
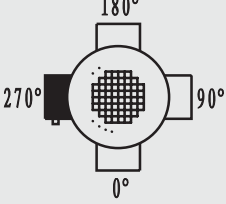
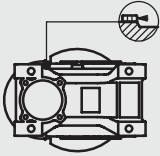
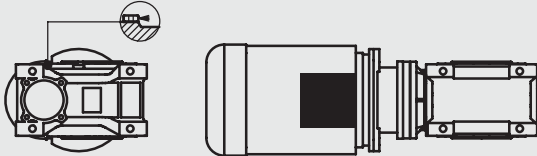
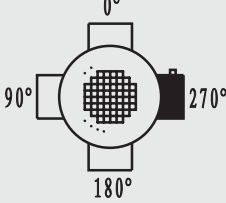
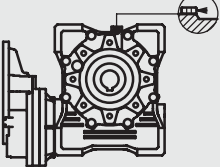
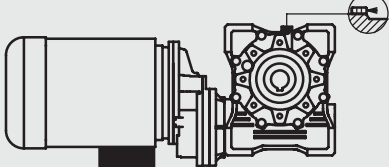
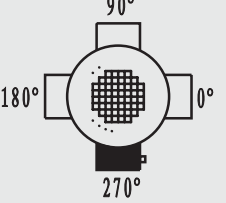
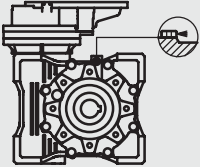
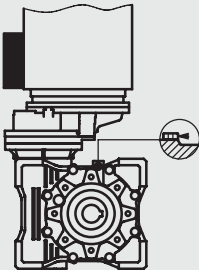
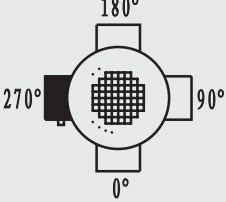
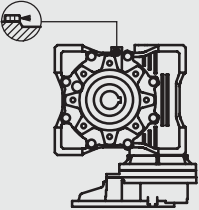
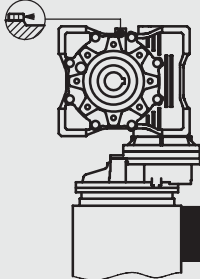
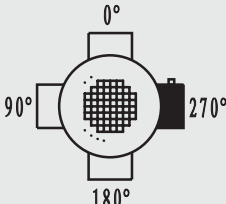


## 3.1 Mounting positions for the Worm Reducer

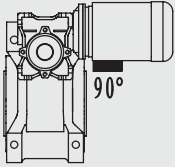
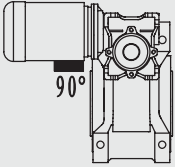
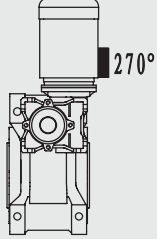
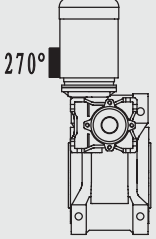
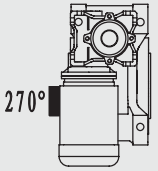
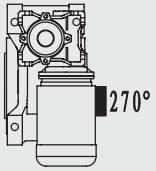
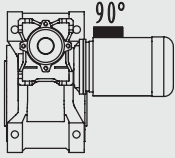
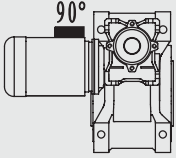
<p><b>B3</b></p>			
<p><b>B6</b></p>			
<p><b>B7</b></p>			
<p><b>B8</b></p>			
<p><b>V5</b></p>			
<p><b>V6</b></p>			

# MOUNTING POSITIONS

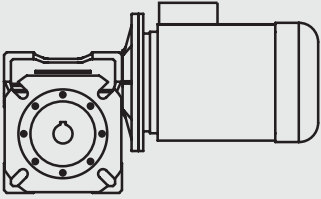
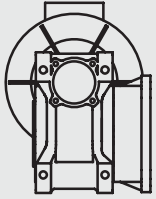
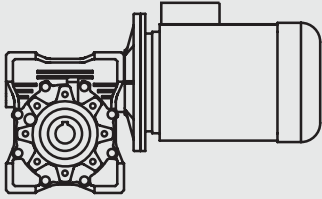
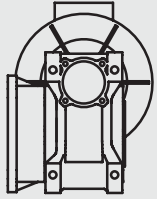
## 3.2 Mounting positions for the Worm Reducer with PC

<p><b>B3</b></p>			
<p><b>B6</b></p>			
<p><b>B7</b></p>			
<p><b>B8</b></p>			
<p><b>V5</b></p>			
<p><b>V6</b></p>			

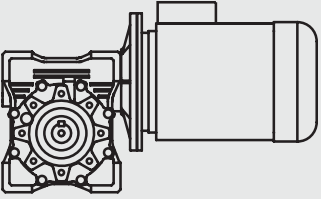
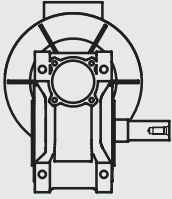
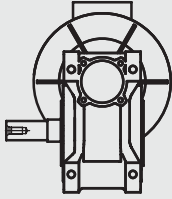
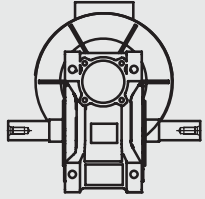
## 3.3 Mounting positions for double stage Worm Reducer

AS1	AS2	VS1	VS2
			
PS1	PS2	BS1 (Standard)	BS2
			

## 3.4 Mounting positions for flanges

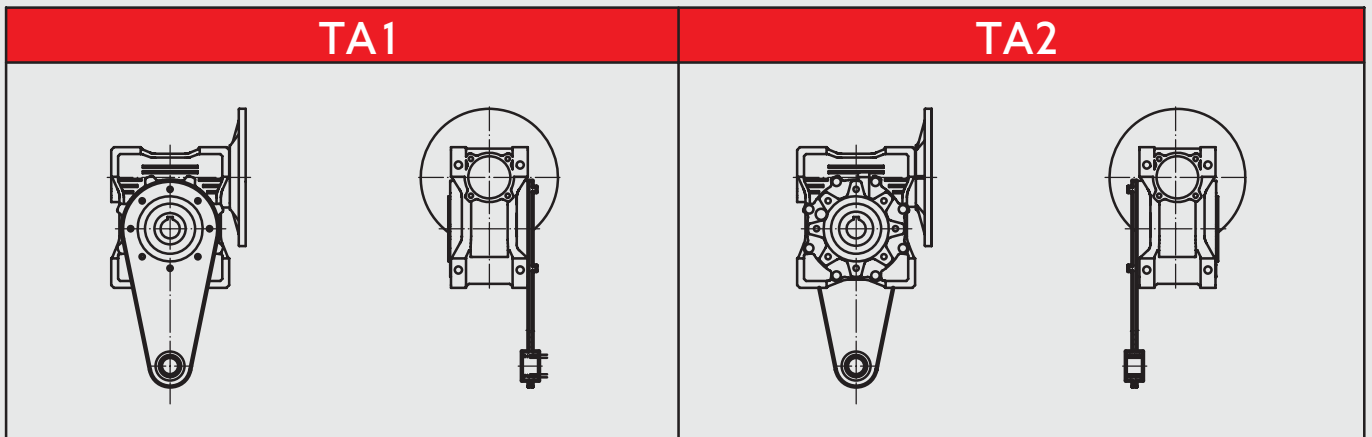
FA1, FB1, FC1, FD1	FA2, FB2, FC2, FD2
 	 

## 3.5 Mounting positions for output shafts

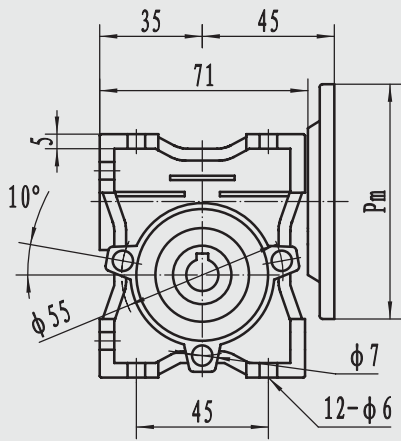
	DZ1	DZ2	SZ
			

# MOUNTING POSITIONS

## 3.6 Mounting positions for the torque arm

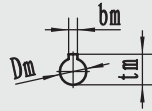


## 4.1 PD Dimensions - 025

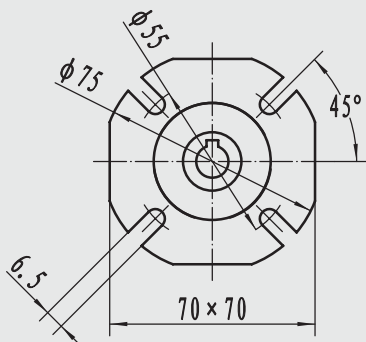
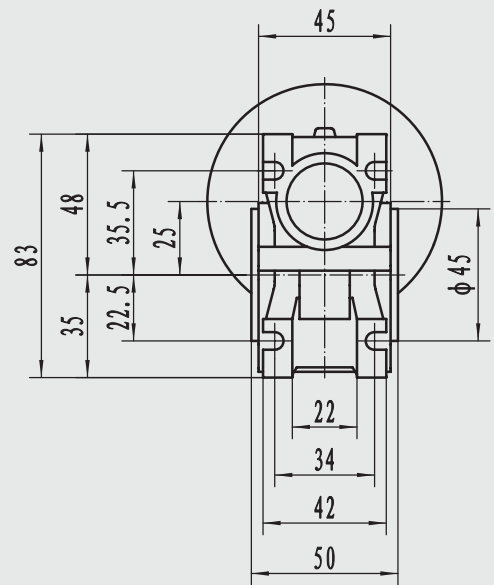
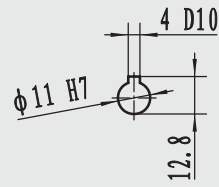


PD

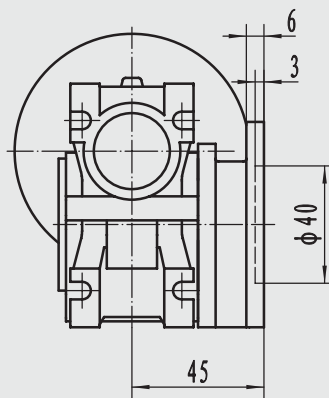
Input shaft hole



Output shaft hole



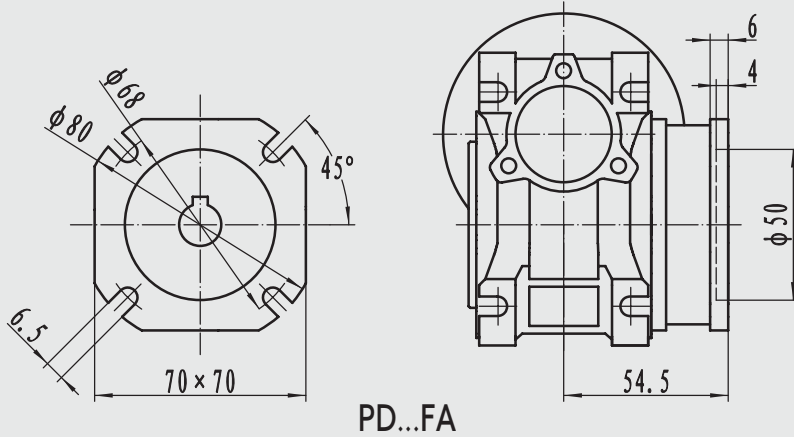
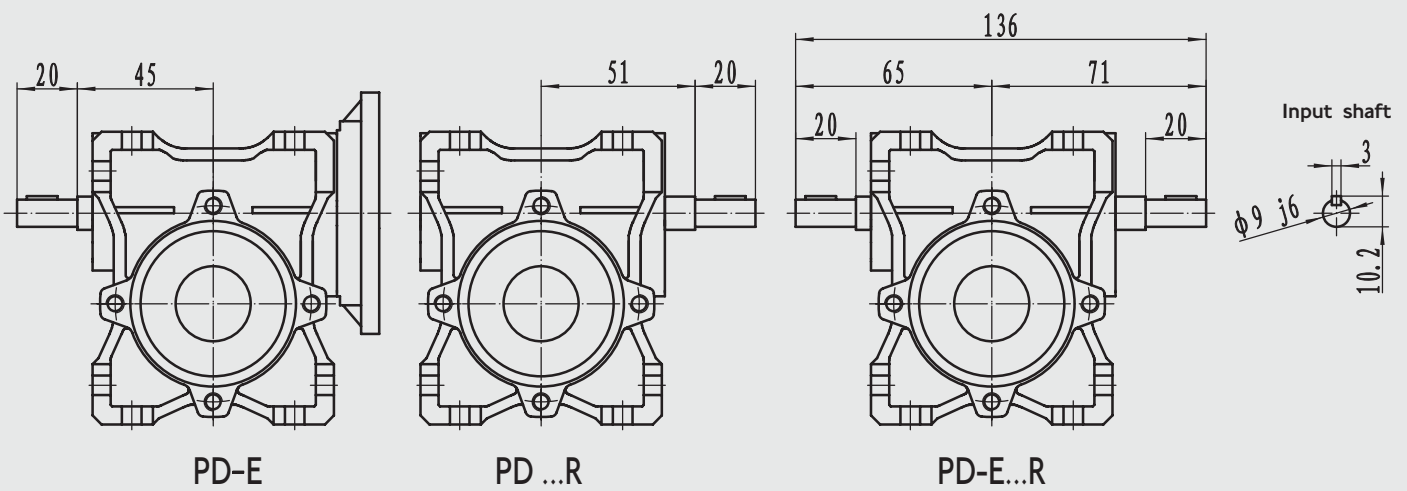
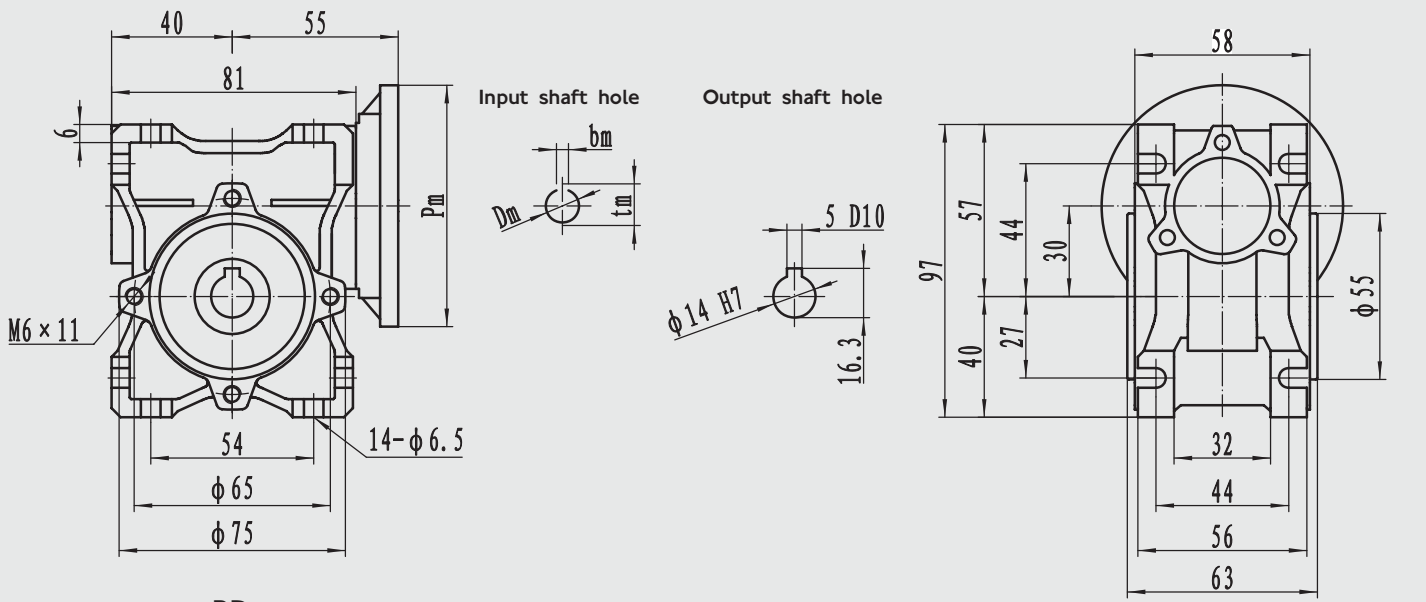
PD...FA



	Pm	Dm	bm	tm
56B14	80	9	3	10.4

# REDUCER OVERALL DIMENSIONS

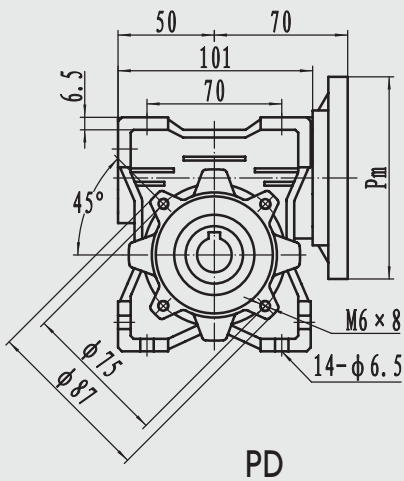
## Dimensions - 030



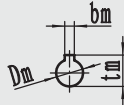
	Pm	Dm	bm	tm
56B5	120	9	3	10.4
56B14	80			
63B5	140	11	4	12.8
63B14	90			

# REDUCER OVERALL DIMENSIONS

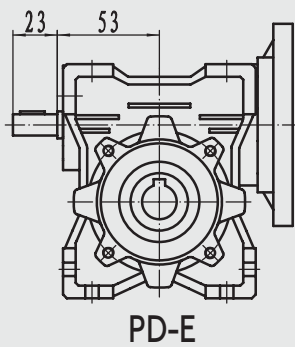
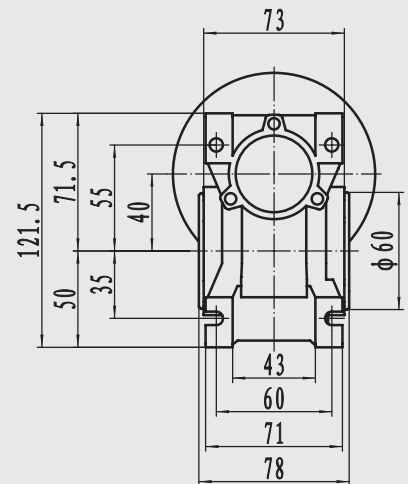
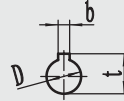
## PD Dimensions - 040



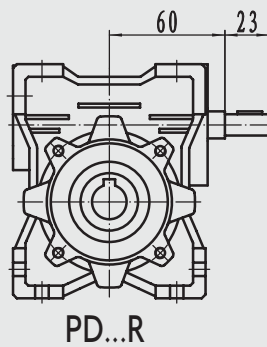
Input shaft hole



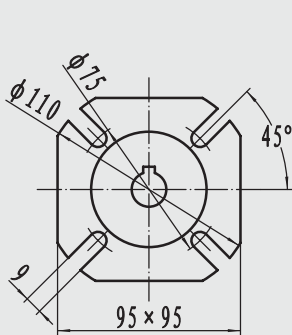
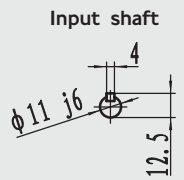
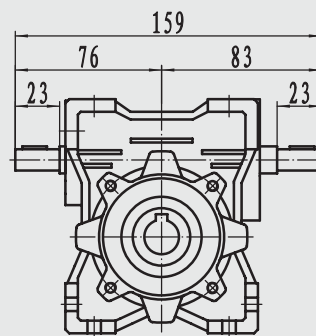
Output shaft hole



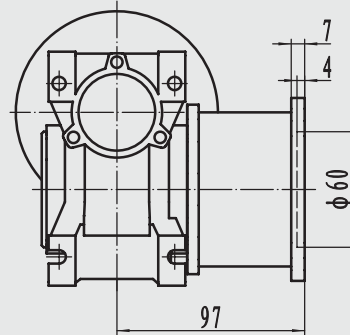
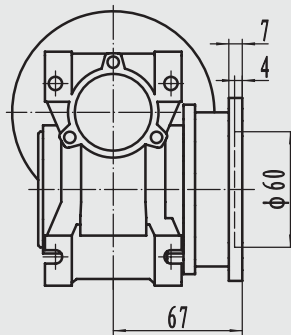
PD-E



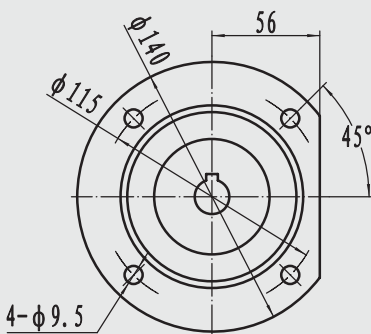
PD...R



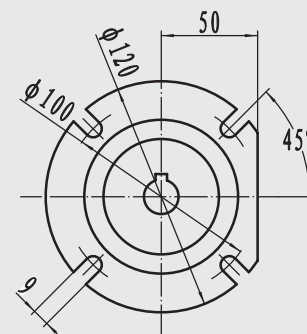
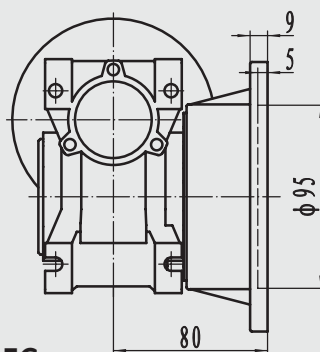
PD...FA



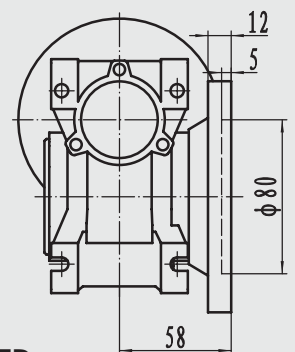
PD...FB



PD...FC



PD...FD

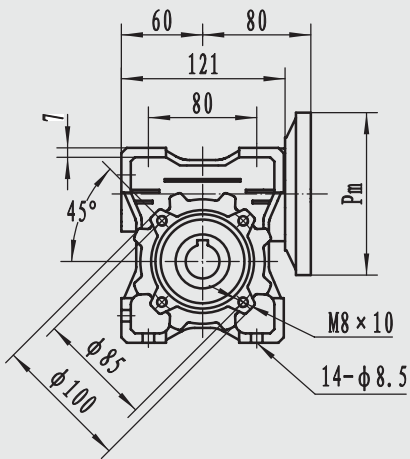


Dimensions of output shaft		
D H7	b D10	t
18	6	20.8
(19)	(6)	(21.8)

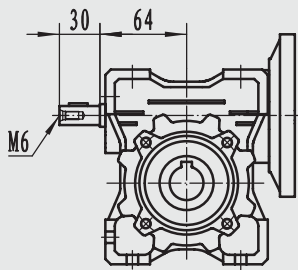
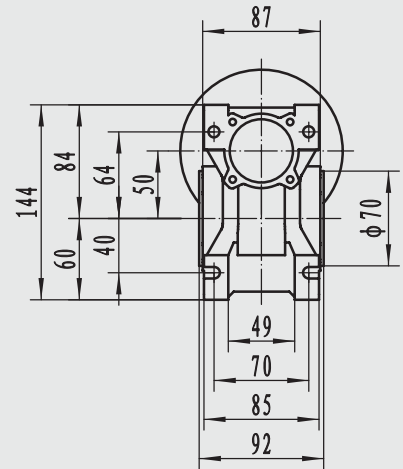
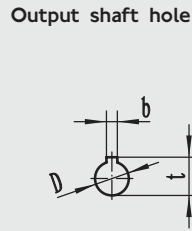
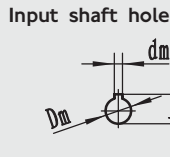
	Pm	Dm	bm	tm
56B5	120	9	3	10.4
63B5	140	11	4	12.8
63B14	90	11	4	12.8
71B5	160	14	5	16.3
71B14	105	14	5	16.3

# REDUCER OVERALL DIMENSIONS

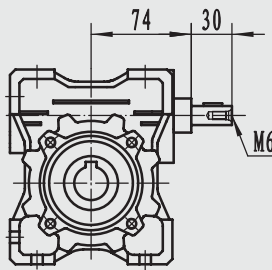
## DC Dimensions - 050



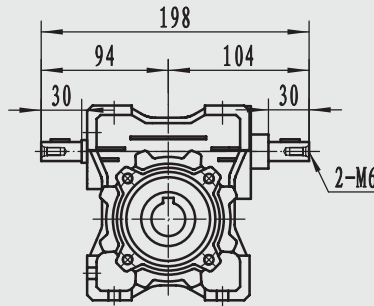
PD



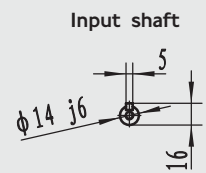
PD-E



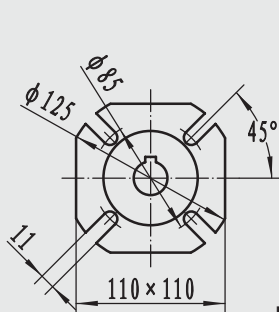
PD...R



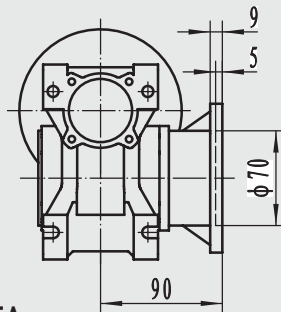
PD-E...R



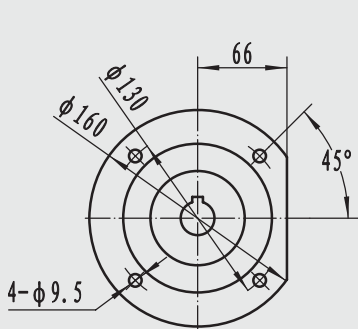
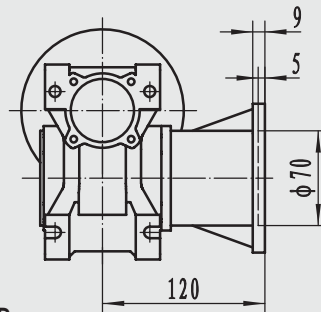
Input shaft



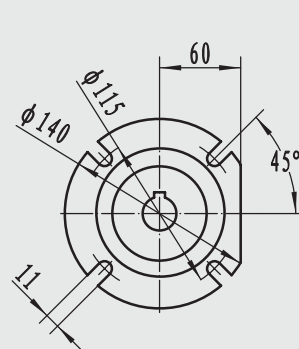
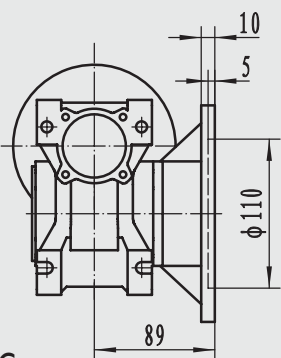
PD...FA



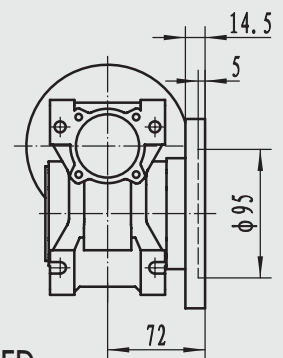
PD...FB



PD...FC



PD...FD



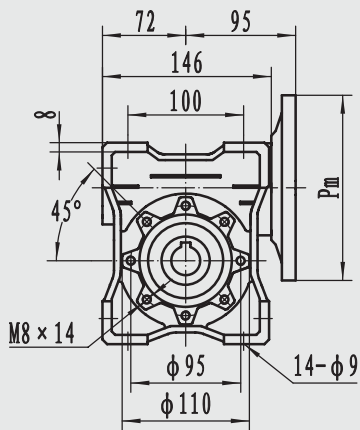
Dimensions of output shaft

D H7	b D10	t
25	8	28.3
(24)	(8)	(27.3)

	Pm	Dm	bm	tm
63B5	140	11	4	12.8
63B14	90			
71B5	160	14	5	16.3
71B14	105			
80B5	200	19	6	21.8
80B14	120			

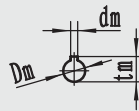
# REDUCER OVERALL DIMENSIONS

## PD Dimensions - 063

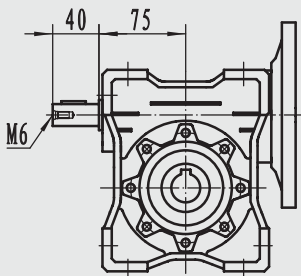
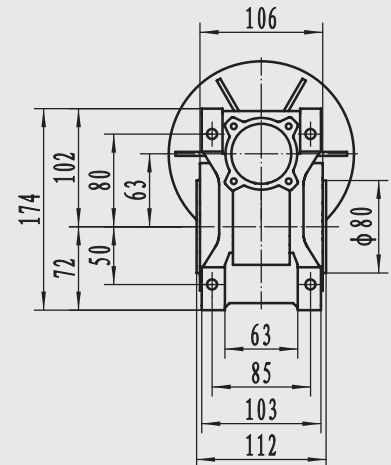
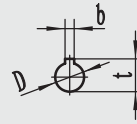


PD

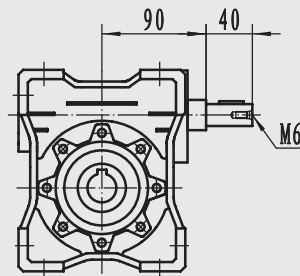
Input shaft hole



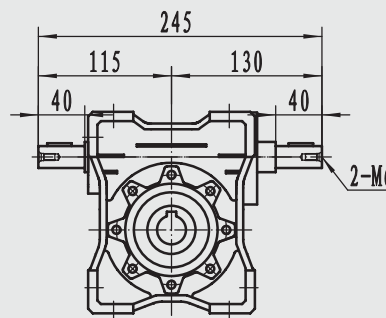
Output shaft hole



PD-E

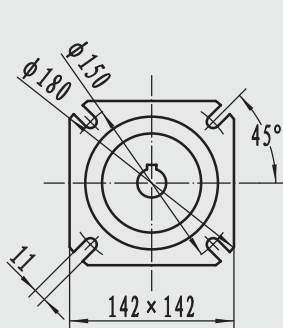
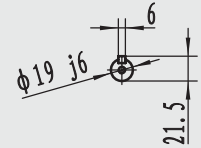


PD...R

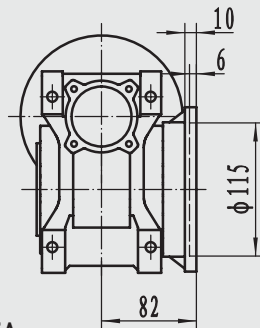


PD-E...R

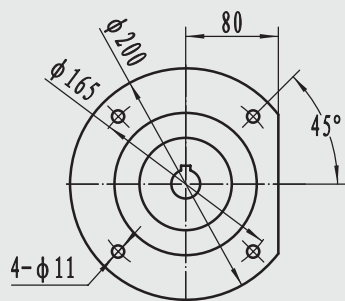
Input shaft



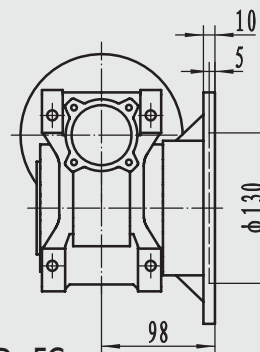
PD...FA



PD...FB



PD...FC



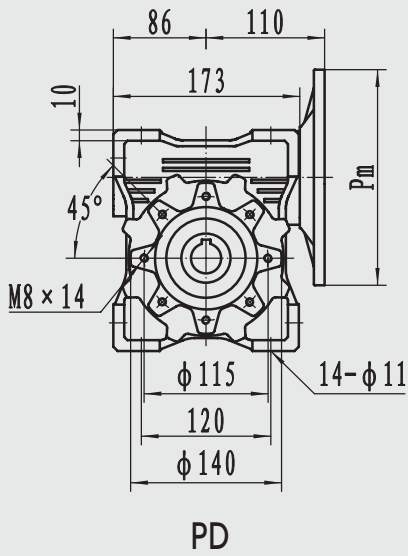
PD...FD

Dimensions of output shaft		
D H7	b D10	t
25	8	28.3
(28)	(8)	(31.3)

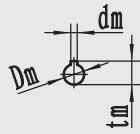
	Pm	Dm	bm	tm
63B5	140	11	4	12.8
71B5	160	14	5	16.3
71B14	105		6	21.8
80B5	200	19	8	27.3
80B14	120		24	8
90B5	200	24	8	27.3
90B14	140		8	27.3

# REDUCER OVERALL DIMENSIONS

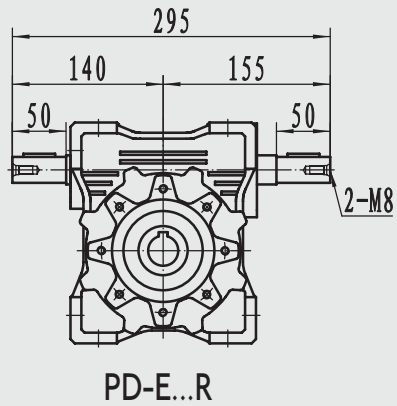
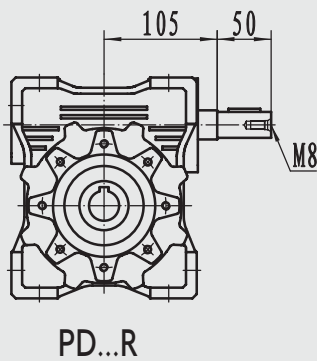
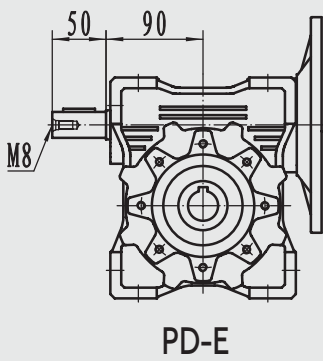
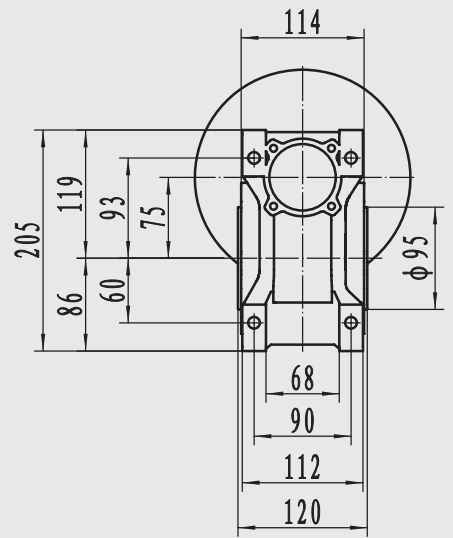
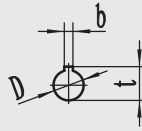
## PD Dimensions - 075



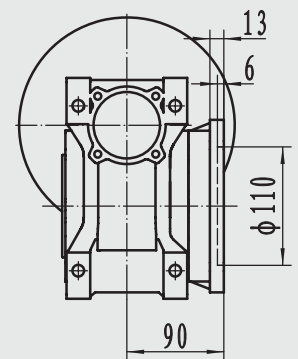
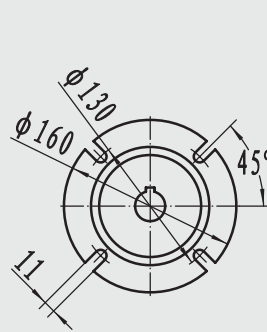
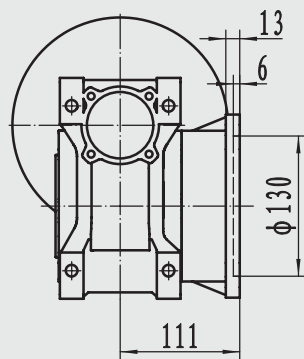
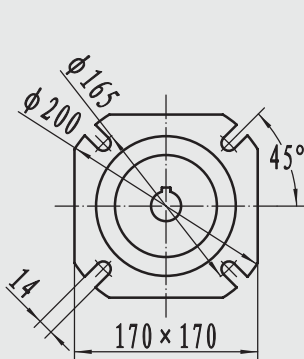
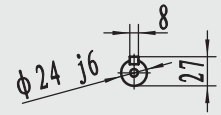
Input shaft hole



Output shaft hole



Input shaft

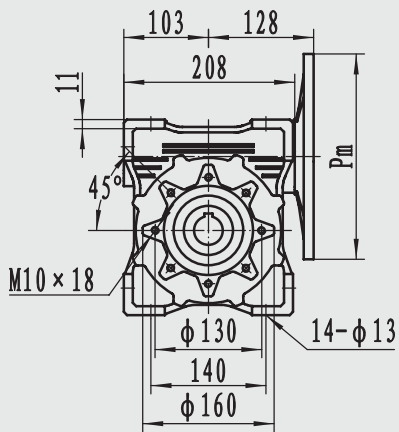


Dimensions of output shaft		
D H7	b D10	t
28	8	31.3
(35)	(10)	(38.3)

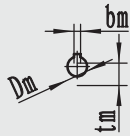
	Pm	Dm	bm	tm
71B5	160	14	5	16.3
80B5	200	19	6	21.8
80B14	120			
90B5	200	24	8	27.3
90B14	140			
100/112B5	250	28	8	31.3
100/112B14	160			

# REDUCER OVERALL DIMENSIONS

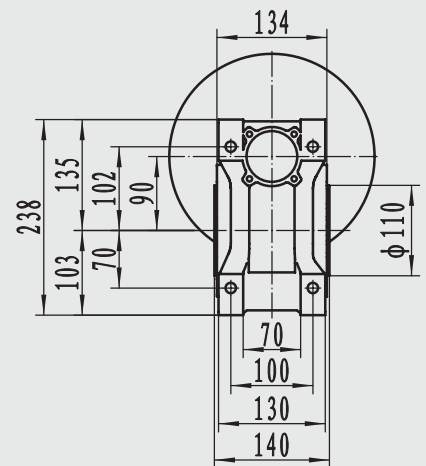
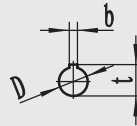
## PD Dimensions - 090



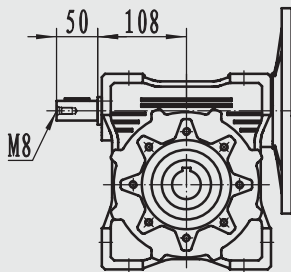
Input shaft hole



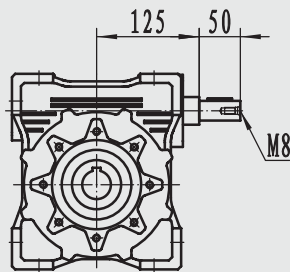
Output shaft hole



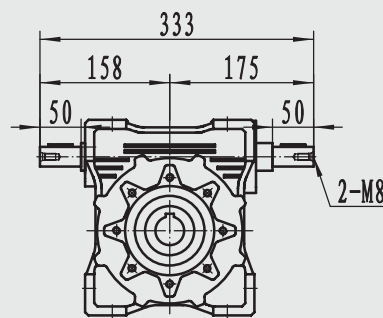
PD



PD-E

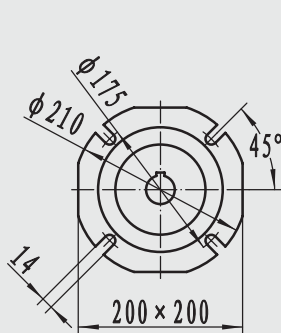
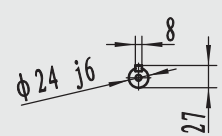


PD...R

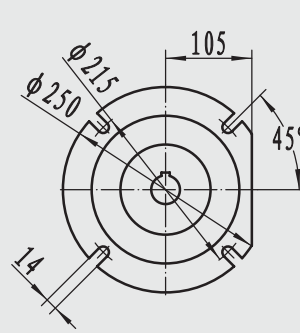
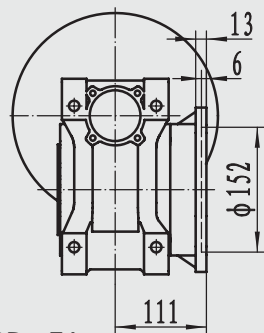


PD-E...R

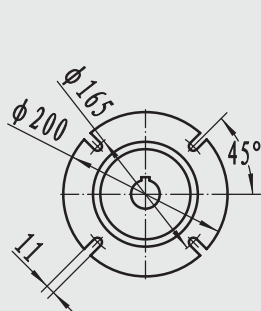
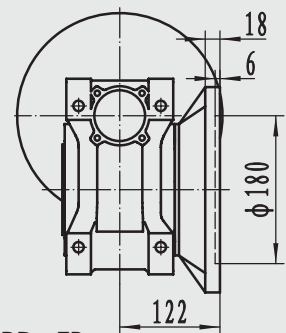
Input shaft



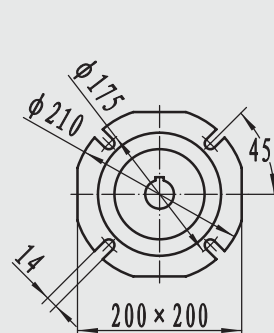
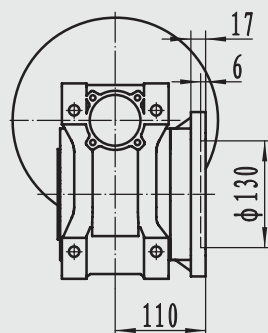
PD...FA



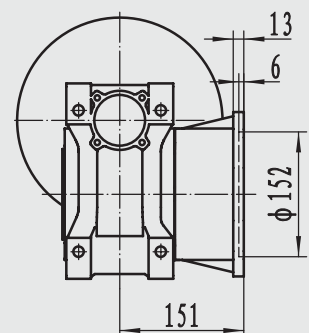
PD...FB



PD...FC



PD...FD

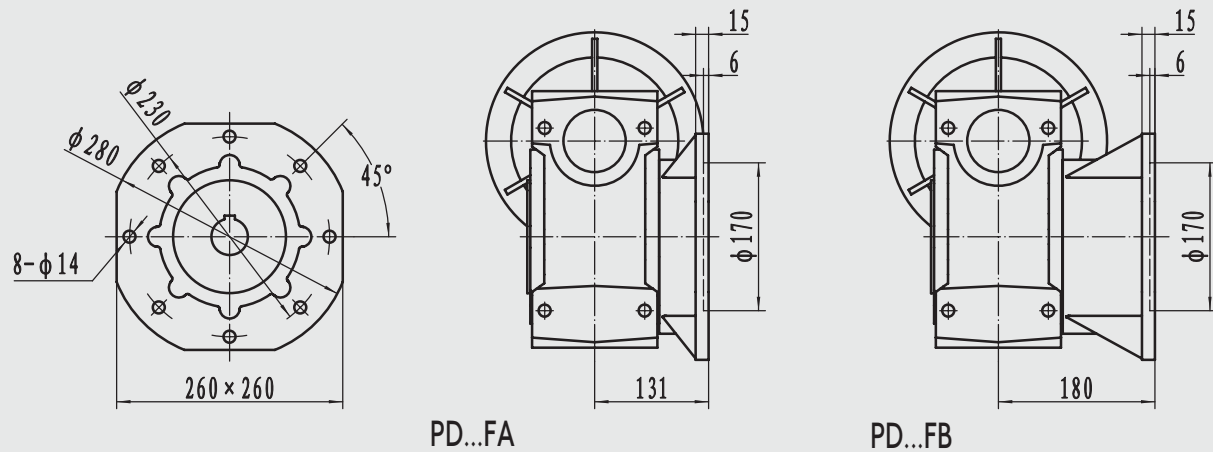
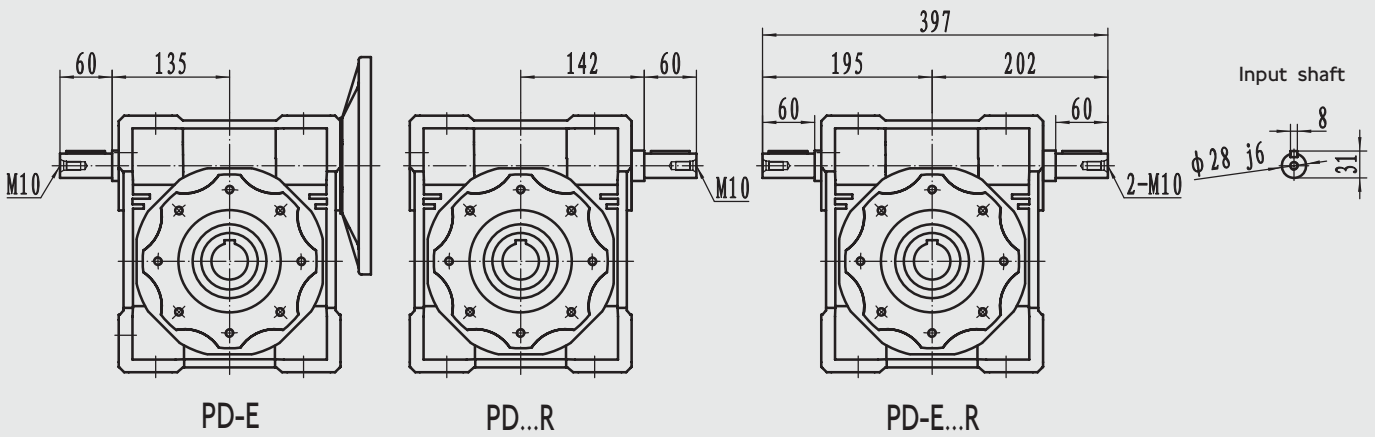
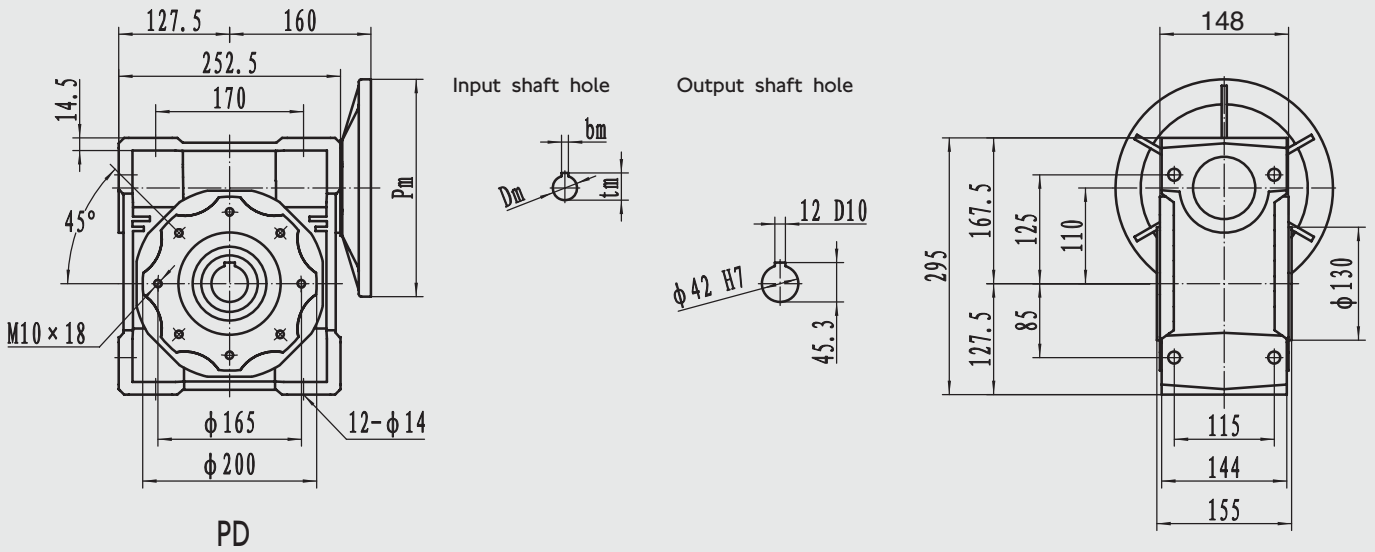


Dimensions of output shaft		
D H7	b D10	t
35	10	38.3
(38)	(10)	(41.3)

	Pm	Dm	b <sub>m</sub>	t <sub>m</sub>
80B5	200	19	6	21.8
80B24	120			
90B5	200	24	8	27.3
90B14	140			
100/112B5	250	28	8	31.3
100/112B14	160			

# REDUCER OVERALL DIMENSIONS

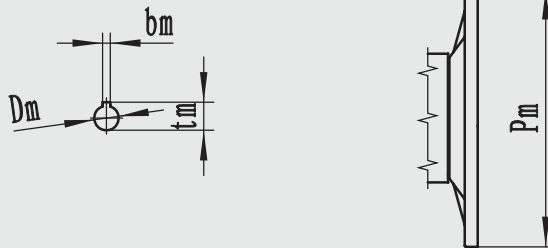
## PD Dimensions - 110



	Pm	Dm	bm	tm
80B5	200	19	6	21.8
90B5	200	24	8	27.3
90B14	140			
100/112B5	250	28	8	31.3
100/112B14	160			
132B5	300	38	10	41.3
132B14	200			

# REDUCER OVERALL DIMENSIONS

## 4.2 IEC Dimensions - IEC B5



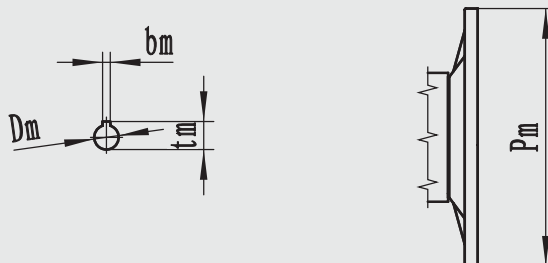
B5	IEC							
	056	063	071	080	090	100/112	132	160
$P_m$	120	140	160	200	200	250	300	350
$D_m$	9	11	14	19	24	28	38	42
$b_m$	3	4	5	6	8	8	10	12
$t_m$	10.4	12.8	16.3	21.8	27.3	31.3	41.3	45.3

## IEC Dimensions - IEC B14




B14	IEC						
	056	063	071	080	090	100/112	132
$P_m$	80	90	105	120	140	160	200
$D_m$	9	11	14	19	24	28	38
$b_m$	3	4	5	6	8	8	10
$t_m$	10.4	12.8	16.3	21.8	27.3	31.3	41.3


## IEC Dimensions - IEC TFFC C Face




C TC	IEC		
	56C (Inch)	140T (Inch)	180TC (Inch)
$P_m$	6.496	6.496	9
$D_m$	0.625	0.875	1.125
$b_m$	0.1875	0.1875	0.25
$t_m$	0.709	0.946	0.241


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.06</b>	280.0	1.8	6.2	5	PD 025	56A4	439	0.88
	140.0	3.4	3.5	10			553	0.83
	70.0	6.1	2.0	20			697	0.75
	35.0	10	1.3	40			878	0.61
	23.3	14	0.7	60			1006	0.57
	180.0	2.7	4.8	5	PD 025	56B6	509	0.85
	90.0	5.2	2.7	10			641	0.82
	45.0	9.3	1.4	20			808	0.73
	22.5	15	0.9	40			1018	0.59
	280.0	1.8	10.1	5	PD 030	56A4	597	0.88
	140.0	3.4	5.4	10			752	0.83
	70.0	6.0	3.0	20			948	0.73
	46.7	8.0	2.5	30			1085	0.65
	28.0	11	1.5	50			1286	0.54
	17.5	14	0.9	80			1504	0.43
	15.0	18	0.9	60	PD 030	56B6	1583	0.47
	14.0	25	1.3	100	PD 025/030	56A4	1620	0.61
	7.0	41	0.7	200			1830	0.50
	18.0	18	2.3	50	PD 040	56B6	2868	0.57
	11.3	24	1.4	80			3354	0.47
	4.7	59	1.2	300	PD 025/040	56A4	3490	0.48
	2.8	82	0.7	500			3490	0.40
	1.9	116	0.5	750			3490	0.38
	1.2	171	0.4	1200			3490	0.36
0.8	217	0.3	1800			3490	0.30	
0.5	324	0.2	3000			3490	0.28	
0.3	356	0.1	5000			3490	0.19	
4.7	57	1.3	300	PD 030/040	56A4	3490	0.47	
2.8	96	0.6	500			3490	0.47	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	η
<b>0.06</b>	1.9	121	0.6	750	PD 030/040	56A4	3490	0.40
	1.6	139	0.5	900			3490	0.39
	1.2	166	0.4	1200			3490	0.35
	0.9	196	0.4	1500			3490	0.31
	0.8	218	0.3	1800			3490	0.30
	0.58	261	0.2	2400			3490	0.26
	0.4	300	0.2	3200			3490	0.21
	0.4	279	0.1	4000			3490	0.19
	0.28	338	0.1	5000	3490	0.17		
	1.6	141	1.0	900	PD 030/050	56A4	4840	0.39
	1.2	169	0.7	1200			4840	0.35
	0.93	199	0.7	1500			4840	0.32
	0.78	222	0.7	1800			4840	0.30
	0.6	266	0.5	2400			4840	0.28
	0.5	307	0.4	3000			4840	0.27
	0.35	288	0.3	4000			4840	0.18
	0.29	311	0.3	4800			4840	0.16
	0.9	204	1.1	1500	PD 030/063	56A4	6270	0.32
	0.78	225	0.9	1800			6270	0.31
	0.58	276	0.8	2400			6270	0.28
	0.47	319	0.7	3000			6270	0.26
	<del>0.35</del>	<del>306</del>	<del>0.66</del>	<del>4000</del>			6270	<del>0.199</del>
	0.28	360	0.4	5000			6270	0.18
	0.6	330	1.1	2400	PD 040/075	56A4	7380	0.35
0.47	377	0.8	3000	7380			0.31	
0.35	355	0.7	4000	7380			0.22	
0.28	419	0.5	5000	7380			0.20	
0.5	406	1.4	3000	PD 040/090	56A4	8180	0.35	
0.35	365	1.3	4000			8180	0.22	
0.28	431	1.0	5000			8180	0.21	
<b>0.09</b>	560.0	1.4	5.9	5	PD 025	56A2	349	0.91
	373.3	2.0	3.9	7.5			399	0.87
	280.0	2.6	3.4	10			439	0.85
	186.7	3.8	2.4	15			503	0.83
	140.0	4.9	1.9	20			553	0.80
	93.3	6.7	1.3	30			633	0.73
	70.0	8.3	1.1	40			697	0.68
	56.0	10	0.9	50			751	0.65
	280.0	2.7	4.1	5	PD 025	56B4	439	0.88
	186.7	3.9	2.8	7.5			503	0.85
	140.0	5.1	2.4	10			553	0.83
	93.3	7.3	1.6	15			633	0.79
	70.0	9.2	1.3	20			697	0.75
	46.7	12	1.1	30			798	0.65
	35.0	15	0.9	40			878	0.61
	560.0	1.4	8.8	5			PD 030	56A2
	373.3	2.0	6.5	7.5	542	0.87		
	280.0	2.6	5.0	10	597	0.85		
	186.7	3.7	3.5	15	683	0.80		
	140.0	4.8	2.5	20	752	0.78		
	112.0	5.7	2.8	25	810	0.74		
	93.3	6.5	2.3	30	861	0.71		
	70.0	8.1	1.7	40	948	0.66		
	56.0	10	1.4	50	1021	0.65		


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.09</b>	46.7	11	1.1	60	PD 030	56A2	1085	0.60
	35.0	13	0.9	80			1194	0.53
	280.0	2.7	6.7	5	PD 030	56B4	597	0.88
	186.7	3.9	4.6	7.5			683	0.85
	140.0	5.0	3.6	10			752	0.81
	93.3	7.1	2.5	15			861	0.77
	70.0	9.0	2.0	20			948	0.73
	56.0	10	2.0	25			1021	0.65
	46.7	12	1.7	30			1085	0.65
	35.0	14	1.2	40			1194	0.57
28.0	17	1.0	50			1286	0.55	
23.3	19	0.9	60			1367	0.52	
180.0	4.1	4.9	5	PD 030	63A6	692	0.86	
120.0	5.9	3.4	7.5			792	0.82	
90.0	7.6	2.6	10			871	0.80	
60.0	11	1.9	15			997	0.77	
45.0	13	1.5	20			1098	0.68	
36.0	15	1.5	25			1183	0.63	
30.0	17	1.2	30			1257	0.59	
22.5	21	1.0	40			1383	0.55	
18.0	24	0.7	50			1490	0.50	
28.0	20	1.6	100	PD 025/030	56A2	1286	0.65	
18.7	25	1.1	150			1472	0.54	
14.0	33	0.9	200			1620	0.54	
14.0	38	0.8	100	PD 025/030	56B4	1620	0.62	
9.3	49	0.6	150			1830	0.53	
7.0	62	0.5	200			1830	0.50	
5.6	66	0.5	250			1830	0.43	
4.7	75	0.4	300			1830	0.41	
3.5	107	0.3	400			1830	0.44	
2.8	115	0.3	500			1830	0.37	
2.3	135	0.2	600			1830	0.36	
1.9	151	0.2	750			1830	0.33	
1.6	178	0.2	900			1830	0.33	
1.2	212	0.1	1200			1830	0.30	
0.9	247	0.1	1500			1830	0.26	
0.78	304	0.1	1800			1830	0.28	
0.58	340	0.1	2400			1830	0.23	
0.47	405	0.1	3000			1830	0.22	
28.0	19	2.0	50	PD 040	56B4	2475	0.62	
23.3	21	1.7	60			2630	0.57	
17.5	26	1.3	80			2895	0.53	
14.0	29	1.0	100			3118	0.47	
30.0	19	2.6	30	PD 040	63A6	2419	0.66	
22.5	24	1.9	40			2662	0.63	
18.0	27	1.5	50			2868	0.57	
15.0	31	1.3	60			3047	0.54	
11.3	37	1.0	80			3354	0.49	
9.0	41	0.8	100			3490	0.43	
12.0	47	1.3	73.5	PC63-PD 040	63A6	3283	0.66	
10.0	51	1.4	88.2			3488	0.59	
7.5	62	1.1	117.6			3490	0.54	
6.0	72	0.8	147			3490	0.50	
5.0	79	0.7	176.4			3490	0.46	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.09</b>	9.3	45	1.6	300	PD 025/040	56A2	3490	0.49
	7.0	54	1.2	400			3490	0.44
	5.6	77	0.8	500			3490	0.50
	4.7	88	0.8	300	PD 030/04	56B4	3490	0.48
	15.0	32	2.3	60	PD 050	63A6	4183	0.56
	11.3	37	1.8	80			4604	0.49
	9.0	42	1.3	100			4840	
	6.0	73	1.6	147	PC63-PD 050	63A6	4840	0.51
	5.0	81	1.3	176.4			4840	0.47
	3.8	94	0.9	235.2			4840	0.42
	3.0	106	0.7	294			4840	0.37
	3.5	107	1.2	400	PD 030/050	56B4	4840	0.44
	2.8	123	1.0	500			4840	0.40
	2.3	159	0.9	600			4840	0.43
	1.9	185	0.8	750			4840	0.41
	1.6	212	0.7	900			4840	0.39
	3.8	99	1.7	235.2	PC63-PD 063	63A6	6270	0.44
	3.0	109	1.4	294			6270	0.38
	1.6	200	1.0	900	PD 030/063	56B4	6270	0.37
	1.2	263	0.9	1200			6270	0.37
0.93	305	0.7	1500			6270	0.33	
0.9	360	1.1	1500	PD 040/075	56B4	7380	0.38	
0.78	404	1.0	1800			7380	0.37	
0.58	496	0.7	2400			7380	0.33	
0.5	609	0.9	3000	PD 040/090	56B4	8180	0.35	
0.35	548	0.8	4000			8180	0.22	
<b>0.12</b>	560.0	1.8	4.4	5	PD 025	56B2	349	0.88
	373.3	2.7	3.0	7.5			399	0.88
	280.0	3.5	2.6	10			439	0.86
	186.7	5.0	1.8	15			503	0.81
	140.0	6.5	1.4	20			553	0.79
	93.3	9.0	1.0	30			633	0.73
	70.0	11	0.8	40			697	0.67
	280.0	3.6	5.1	5	PD 030	63A4	597	0.88
	186.7	5.2	3.4	7.5			683	0.85
	140.0	6.7	2.7	10			752	0.82
	93.3	9.5	1.9	15			861	0.77
	70.0	12	1.5	20			984	0.73
	56.0	14	1.5	25			1021	0.68
	46.7	16	1.3	30			1085	0.65
	35.0	19	0.9	40			1194	0.58
	28.0	23	0.8	50			1286	0.56
	180.0	5.4	3.7	5	PD 030	63B6	692	0.85
	120.0	7.9	2.5	7.5			792	0.83
	90.0	10	2.0	10			871	0.79
	60.0	14	1.4	15			997	0.73
	45.0	18	1.1	20			1098	0.71
	36.0	20	1.1	25			1183	0.63
	30.0	23	0.9	30			1257	0.60


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	
<b>0.12</b>	46.7	17	2.6	30	PD 040	63A4	2087	0.69
	35.0	21	1.9	40			2298	0.64
	28.0	25	1.5	50			2475	0.61
	23.3	28	1.3	60			2630	0.57
	17.5	34	1.0	80			2895	0.52
	14.0	38	0.8	100			3118	0.46
	30.0	25	1.9	30	PD 040	63B6	2419	0.65
	22.5	32	1.4	40			2662	0.63
	18.0	36	1.2	50			2868	0.57
	15.0	41	0.9	60			3047	0.54
18.7	42	1.2	73.5	PC63-PD 040	63A4	2833	0.69	
15.6	46	1.2	88.2			3011	0.63	
11.7	57	0.9	117.6			3314	0.58	
9.3	66	0.7	147			3490	0.54	
7.8	74	0.6	176.4			3490	0.50	
12.0	62	1.0	73.5	PC63-PD 040	63B6	3283	0.65	
10.0	68	1.1	88.2			3488	0.59	
7.5	83	0.8	117.6			3490	0.54	
23.3	29	2.3	60	PD 050	63A4	3610	0.59	
17.5	35	1.9	80			3973	0.53	
14.0	40	1.4	100			4280	0.49	
22.5	32	2.6	40	PD 050	63B6	3654	0.63	
18.0	38	2.0	50			3936	0.60	
15.0	42	1.7	60			4183	0.55	
11.3	50	1.4	80			4604	0.49	
9.0	56	1.0	100			4840	0.44	
9.3	68	1.3	147	PC63-PD 050	63A4	4840	0.55	
7.8	75	1.1	176.4			4840	0.51	
5.5	88	0.8	235.2			4840	0.42	
4.7	98	0.7	294			4840	0.40	
12.0	63	1.7	73.5	PC63-PD 050	63B6	4506	0.66	
10.0	70	2.1	88.2			4788	0.61	
7.5	84	1.5	117.6			4840	0.55	
6.0	97	1.2	147			4840	0.51	
5.0	108	1.0	176.4			4840	0.47	
3.8	125	0.7	235.2			4840	0.41	
4.7	119	1.2	300	PD 030/050	63A4	4840	0.49	
3.5	142	0.9	400			4840	0.43	
2.8	164	0.7	500			4840	0.40	
5.8	92	1.5	235.2	PC63-PD 063	63A4	6270	0.47	
4.7	103	1.2	294			6270	0.42	
6.0	101	2.1	147	PC63-PD 063	63B6	6270	0.53	
5.0	112	1.8	176.4			6270	0.49	
3.8	131	1.3	235.2			6270	0.43	
3.0	145	1.0	294			6270	0.38	
2.8	171	1.3	500	PD 030/063	63A4	6270	0.42	
2.3	208	1.1	600			6270	0.42	
1.9	241	0.9	750			6270	0.40	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$	
<b>0.12</b>	1.6	325	1.2	900	PD 040/075	63A4	7380	0.45	
	1.2	399	0.9	1200			7380	0.42	
	0.8	547	0.9	1800	PD 040/090	63A4	8180	0.38	
	0.58	695	0.9	2400			8180	0.35	
	0.5	884	1.2	3000	PD 050/110	63A4	10320	0.39	
	0.35	784	1.0	4000			10320	0.24	
	0.28	928	0.8	5000			10320	0.23	
<b>0.15</b>	180.0	7.0	3.0	5	PD 030	63C6	692	0.88	
	120.0	10	2.0	7.5			792	0.84	
	90.0	13	1.6	10			871	0.82	
	60.0	18	1.1	15			997	0.75	
	45.0	22	0.9	20			1098	0.69	
	60.0	19	2.4	15	PD 040	63C6	1920	0.80	
	45.0	24	1.8	20			2113	0.75	
	36.0	29	1.5	25			2276	0.73	
	30.0	32	1.6	30			2419	0.67	
	22.5	39	1.1	40			2662	0.61	
	18.0	45	0.9	50			2868	0.57	
	18.0	47	1.6	50	PD 050	63C6	3936	0.59	
	15.0	53	1.4	60			4183	0.55	
	11.3	62	1.1	80			4604	0.49	
	10.0	87	1.7	88.2	PC63-PD 050	63C6	4788	0.61	
	7.5	105	1.2	117.6			4840	0.55	
	6.0	127	1.7	147	PC63-PD 063	63C6	6270	0.53	
	5.0	140	1.4	176.4			6270	0.49	
	<b>0.18</b>	560.0	2.7	4.4	5	PD 030	63A2	474	0.88
		373.3	4.0	3.2	7.5			542	0.87
		280.0	5.2	2.5	10			597	0.85
		186.7	7.5	1.7	15			683	0.81
		140.0	10	1.3	20			752	0.81
		112.0	11	1.4	25			810	0.72
93.3		13	1.1	30			861	0.71	
70.0		16	0.9	40			948	0.65	
280.0		5.3	3.4	5	PD 030	63B4	597	0.86	
186.7		7.8	2.3	7.5			683	0.85	
140.0		10	1.8	10			752	0.81	
93.3		14	1.3	15			861	0.76	
70.0		18	1.0	20			948	0.73	
56.0		21	1.0	25			1021	0.68	
46.7		24	0.8	30			1085	0.65	
93.3		14	2.4	30	PD 040	63A2	1657	0.76	
70.0		18	1.8	40			1824	0.73	
56.0		21	1.4	50			1964	0.68	
70.0		19	2.0	20	PD 040	63B4	1824	0.77	
56.0		23	1.7	25			1964	0.75	
46.7		26	1.7	30			2087	0.71	
35.0		32	1.3	40			2298	0.65	
28.0		38	1.0	50			2475	0.62	
23.3		43	0.8	60			2630	0.58	


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	l	Size		Fr2 (N)	η
<b>0.18</b>	45.0	29	1.5	20	PD 040	71A6	2113	0.76
	36.0	34	1.3	25			2276	0.71
	30.0	38	1.3	30			2419	0.66
	22.5	47	1.0	40			2662	0.62
	18.7	64	0.8	73.5	PC63-PD 040	63B4	2833	0.70
	15.6	70	0.8	88.2			3011	0.64
	11.7	85	0.6	117.6			3314	0.58
	46.7	24	2.1	60	PD 050	63A2	2865	0.65
	35.0	30	1.5	80			3153	0.61
	28.0	34	1.2	100			3397	0.55
	35.0	33	2.3	40	PD 050	63B4	3153	0.67
	28.0	39	1.9	50			3397	0.64
	23.3	43	1.6	60			3610	0.58
	17.5	52	1.2	80			3973	0.53
	14.0	60	0.9	100			4280	0.49
	18.0	56	1.4	50	PD 050	71A6	3936	0.59
	15.0	63	1.1	60			4183	0.55
	11.3	75	0.9	80			4604	0.49
	18.7	64	1.4	73.5	PC63 - Pd050	63B4	3889	0.70
	15.6	71	1.5	88.2			4132	0.64
	11.7	87	1.1	117.6			4548	0.59
	9.3	101	0.9	147			4840	0.55
	7.8	113	0.7	176.4			4840	0.51
	5.8	133	0.6	235.2			4840	0.45
	12.0	95	1.2	73.5	PC71-PD 050	71A6	4506	0.66
	10.0	105	1.4	88.2			4788	0.61
	7.5	126	1.0	117.6			4840	0.55
	15.0	66	2.1	60	PD 063	71A6	5467	0.58
	11.3	79	1.6	80			6018	0.52
	9.0	90	1.4	100			6270	0.47
	9.3	103	1.7	147	PC63-PD 063	63B4	6270	0.56
	7.8	117	1.4	176.4			6270	0.53
	5.8	139	1.0	235.2			6270	0.47
	4.7	155	0.8	294			6270	0.42
	12.0	97	2.2	73.5	PC71-PD 063	71A6	5889	0.68
	10.0	107	2.4	88.2			6259	0.62
	7.5	131	1.8	117.6			6270	0.57
	6.0	152	1.4	147			6270	0.53
	5.0	168	1.2	176.4			6270	0.49
	3.8	197	0.9	235.2			6270	0.44
	3.0	218	0.7	294			6270	0.38
	3.5	222	1.0	400	PD 030/063	63B4	6270	0.45
	2.8	257	0.8	500			6270	0.42
	5.0	179	1.7	176.4	PC71-PD 075	71A6	7380	0.52
	3.8	211	1.2	235.2			7380	0.47
	3.0	235	1.0	294			7380	0.41
	2.3	362	1.1	600	PD 040/075	63B4	7380	0.48
	1.9	435	0.9	750			7380	0.48
1.6	487	0.8	900			7380	0.45	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	η	
<b>0.18</b>	1.2	629	1.0	1200	PD 040/090	63B4	8180	0.44	
	0.93	735	0.8	1500			8180	0.40	
	0.8	861	1.5	1800	PD 050/110	63B4	10320	0.40	
	0.58	1113	1.1	2400			10320	0.38	
<b>0.22</b>	280.0	6.6	2.6	5	PD 030	63C4	597	0.88	
	186.7	9.5	1.8	7.5			683	0.84	
	140.0	12	1.4	10			752	0.82	
	93.3	17	1.0	15			861	0.75	
	70.0	22	0.8	20			948	0.73	
	93.3	18	2.2	15	PD 040	63C4	1657	0.80	
	70.0	23	1.7	20			1824	0.77	
	56.0	28	1.4	25			1964	0.75	
	46.7	32	1.4	30			2087	0.71	
	35.0	39	1.1	40			2298	0.65	
	28.0	47	0.8	50			2475	0.63	
	28.0	47	1.5	50	PD 050	63C4	3397	0.63	
	23.3	53	1.3	60			3610	0.59	
	17.5	64	1.0	80			3937	0.53	
	18.7	78	1.2	73.5	Pc63 - PD 050	63C4	3889	0.69	
	15.6	86	1.2	88.2			4132	0.64	
	11.7	106	0.9	117.6			4548	0.59	
	9.3	126	1.4	147	PC63-PD 063	63C4	6270	0.56	
	7.8	143	1.1	176.4			6270	0.53	
	4.7	210	1.1	300	PD 030/063	63C4	6270	0.47	
	3.5	271	0.8	400			6270	0.45	
	<b>0.25</b>	560.0	3.8	3.2	5	PD 030	63B2	474	0.89
		373.3	5.6	2.3	7.5			542	0.88
		280.0	7.2	1.8	10			597	0.84
		186.7	10	1.3	15			683	0.78
		140.0	13	0.9	20			752	0.76
		112.0	16	1.0	25			810	0.75
		93.3	18	0.8	30			861	0.70
280.0		7.8	4.4	5	PD 040	71A4	1149	0.91	
186.7		11	3.6	7.5			1315	0.86	
140.0		14	2.8	10			1447	0.82	
93.3		21	1.9	15			1657	0.82	
70.0		27	1.5	20			1824	0.79	
56.0		32	1.2	25			1964	0.75	
46.7		36	1.3	30			2087	0.70	
35.0		44	0.9	40			2298	0.65	
180.0		12	3.5	5	PD 040	71B6	1331	0.90	
120.0		17	2.6	7.5			1524	0.85	
90.0		22	2.0	10			1677	0.83	
60.0		31	1.4	15			190	0.78	
45.0		40	1.1	20			2113	0.75	
36.0		48	0.9	25			2276	0.72	
30.0		53	0.9	30			2419	0.67	
35.0		42	1.1	80	PD 050	63B2	3153	0.62	
28.0		48	0.8	100			3397	0.56	


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.25</b>	70.0	27	2.7	20	PD 050	71A4	2503	0.79
	56.0	32	2.2	25			2696	0.75
	46.7	37	2.3	30			2865	0.72
	35.0	46	1.7	40			3153	0.67
	28.0	54	1.4	50			3397	0.63
	23.3	60	1.1	60			3610	0.59
	17.5	72	0.9	80			3973	0.53
	45.0	40	1.9	20	PD 050	71B6	2900	0.75
	36.0	48	1.5	25			3124	0.72
	30.0	54	1.7	30			3320	0.68
	22.5	67	1.2	40			3654	0.63
	18.0	78	1.0	50			3936	0.59
	15.0	88	0.8	60			4183	0.55
	18.7	88	1.0	73.5	PC71-PD 050	71A4	3889	0.69
	15.6	98	1.1	88.2			4132	0.64
	11.7	121	0.8	117.6			4548	0.59
	28.0	56	2.4	50	PD 063	71A4	4440	0.66
	23.3	63	2.0	60			4719	0.61
	17.5	78	1.6	80			5193	0.57
	14.0	87	1.4	100			5595	0.51
	18.0	81	1.8	50	PD 063	71B6	5145	0.61
	15.0	92	1.5	60			5467	0.58
	11.3	110	1.2	80			6018	0.52
	9.0	125	1.0	100			6270	0.47
	18.7	91	1.8	73.5	PC71-PD 063	71A4	5083	0.71
	15.6	100	2.0	88.2			5401	0.65
	11.7	125	1.5	117.6			5945	0.61
	9.3	143	1.2	147			6270	0.56
7.8	163	1.0	176.4			6270	0.53	
5.8	192	0.7	235.2			6270	0.47	
4.7	215	0.6	294			6270	0.42	
12.0	135	1.6	73.5	PC71-PD 063	71B6	5889	0.68	
10.0	148	1.8	88.2			6259	0.62	
7.5	181	1.3	117.6			6270	0.57	
6.0	211	1.0	147			6270	0.53	
7.0	159	1.4	400	PD 030/063	63B2	6270	0.47	
5.6	185	1.2	500			6270	0.43	
17.5	82	2.3	80	PD 075	71A4	6130	0.60	
14.0	94	1.9	100			6603	0.55	
11.3	117	1.7	80	PD 075	71B6	7103	0.55	
9.0	133	1.4	100			7380	0.50	
9.3	151	1.7	147	PC071-PD 075	71A4	7380	0.59	
7.8	172	1.4	176.4			7380	0.56	
5.8	201	1.1	235.2			7380	0.49	
4.7	230	0.9	294			7380	0.45	
12.0	139	2.4	73.5	PC071-PD 075	71B6	6952	0.70	
10.0	155	2.5	88.2			7380	0.65	
7.5	191	1.9	117.6			7380	0.60	
6.0	219	1.5	147			7380	0.55	
5.0	248	1.2	176.4			7380	0.52	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	η
<b>0.25</b>	3.5	336	1.1	400	PD 040/075	71A4	7380	0.49
	2.8	384	0.8	500			7380	0.45
	5.0	263	1.9	176.4	PC71-PD 090	71B6	8180	0.55
	3.8	318	1.4	235.2			8180	0.51
	3.0	358	1.1	294			8180	0.45
	2.3	512	1.2	600	PD 040/090	71A4	8180	0.49
	1.9	598	0.9	750			8180	0.48
	1.6	667	0.8	900			8180	0.45
	1.2	943	1.3	1200	PD 050/110	71A4	10320	0.47
	0.93	1064	1.2	1500			10320	0.41
	0.78	1195	1.1	1800			10320	0.39
	0.6	1624	1.0	2400	PD 063/130	71A4	13500	0.41
	0.47	1935	0.8	3000			13500	0.38
	0.35	2046	0.6	4000			13500	0.30
	0.28	2430	0.5	5000			13500	0.28
	0.8	1199	1.8	1800	PD 063/150	71A4	18000	0.40
	0.6	1446	1.8	2400			18000	0.36
	0.5	1713	1.4	3000			18000	0.36
0.4	<del>2026</del>	<del>0.99</del>	<del>4000</del>			18000	<del>0.34</del>	
0.3	2251	0.7	5000			18000	0.28	
<b>0.37</b>	560.0	5.6	2.1	5	PD 030	63C2	474	0.89
	373.3	8.2	1.6	7.5			542	0.87
	280.0	11	1.2	10			597	0.87
	186.7	15	0.8	15			683	0.79
	560.0	5.7	4.2	5	PD 040	71A2	912	0.90
	373.3	8.4	3.3	7.5			1044	0.89
	280.0	11	2.6	10			1149	0.87
	186.7	16	1.9	15			1315	0.85
	140.0	21	1.4	20			1447	0.83
	112.0	25	1.1	25			1559	0.79
	280.0	11	3.0	5	PD 040	71B4	1149	0.87
	186.7	16	2.4	7.5			1315	0.85
	140.0	21	1.9	10			1447	0.83
	93.3	31	1.3	15			1657	0.82
	70.0	39	1.0	20			1824	0.77
	56.0	47	0.8	25			1964	0.74
	46.7	53	0.8	30			2087	0.70
	112.0	25	2.0	25	PD 050	71A2	2140	0.79
	93.3	29	2.2	30			2274	0.77
	70.0	37	1.6	40			2503	0.73
	56.0	44	1.2	50			2696	0.70
	46.7	50	1.0	60			2865	0.66
	35.0	62	0.7	80			3153	0.61
	140.0	22	3.3	10	PD 050	71B4	1987	0.87
	93.3	31	2.4	15			2274	0.82
	70.0	40	1.8	20			2503	0.79
	56.0	48	1.5	25			2696	0.76
	46.7	55	1.5	30			2865	0.73
	35.0	68	1.1	40			3153	0.67
	28.0	80	0.9	50			3397	0.63
23.3	89	0.8	60			3610	0.59	


# PERFORMANCE


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.37</b>	180.0	17	4.3	5	PD 050	80A6	1827	0.87
	120.0	25	3.3	7.5			2091	0.85
	90.0	33	2.5	10			2302	0.84
	60.0	47	1.8	15			2635	0.80
	45.0	60	1.3	20			2900	0.76
	36.0	72	1.0	25			3124	0.73
	30.0	80	1.1	30			3320	0.68
	35.0	71	2.1	40	PD 063	71B4	4122	0.70
	28.0	83	1.6	50			4440	0.66
	23.3	94	1.4	60			4719	0.62
	17.5	115	1.1	80			5193	0.57
	14.0	129	0.9	100			5595	0.51
	45.0	60	2.4	20	PD 063	80A6	3791	0.76
	36.0	74	1.9	25			4084	0.75
	30.0	82	2.1	30			4339	0.70
22.5	102	1.6	40			4776	0.65	
18.0	120	1.2	50			5145	0.61	
15.0	137	1.0	60			5467	0.58	
18.7	134	1.2	73.5	PC71-PD 063	71B4	5083	0.71	
15.6	148	1.4	88.2			5401	0.65	
11.7	<del>185</del>	1100	117.6			5945	0.61	
9.3	212	0.8	147			6270	0.56	
9.3	181	1.3	300	PD 030/063	71A2	6270	0.48	
7.0	236	1.0	400			6270	0.47	
23.3	98	2.0	60	PD 75	71B4	5569	0.65	
17.5	121	1.6	80			6130	0.60	
14.0	139	1.3	100			6603	0.55	
18.0	126	1.8	50	PD 75	80A6	6073	0.64	
15.0	144	1.5	60			6453	0.61	
11.3	173	1.2	80			7103	0.55	
9.0	196	1.0	100			7380	0.50	
18.7	138	1.8	73.5	PC71-PD 075	71B4	6000	0.73	
15.6	154	1.9	88.2			6375	0.68	
11.7	191	1.5	117.6			7017	0.63	
9.3	223	1.1	147			7380	0.59	
7.8	254	0.9	176.4			7380	0.56	
12.0	206	1.6	75	PC80-PD 075	80A6	6952	0.70	
10.0	230	1.7	90			7380	0.65	
7.5	283	1.3	120			7380	0.60	
6.0	324	1.0	150			7380	0.55	
4.7	405	1.0	300	PD 040/075	71B4	7380	0.54	
3.5	498	0.7	400			7380	0.49	
11.3	185	1.7	80	PD 090	80A6	7859	0.59	
9.0	212	1.3	100			8180	0.54	
7.8	268	1.5	176.4	PC71-PD 090	71B4	8180	0.59	
5.8	321	1.1	235.2			8180	0.53	
4.7	371	0.9	294			8180	0.49	

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$	
<b>0.37</b>	6.0	347	1.6	150	PC80-PD 090	80A6	8180	0.59	
	3.8	471	1.0	240			8180	0.51	
	4.7	402	1.5	300	PD 040/090	80A6	8180	0.53	
	2.8	611	0.9	500			8180	0.48	
	3.8	509	1.6	240	PC80-PD 110	80A6	10320	0.55	
	1.9	950	1.3	750	PD 050/110	71B4	10320	0.51	
	1.2	1396	0.8	1200			10320	0.47	
	0.9	1674	1.1	1500	PD 063/130	71B4	13500	0.43	
	0.8	1775	1.2	1800	PD 063/150	71B4	18000	0.40	
	0.5	2535	0.9	3000			18000	0.36	
	<b>0.55</b>	560.0	8.4	2.8	5	PD 040	71B2	912	0.90
		280.0	16	1.8	10			1149	0.87
140.0		31	0.9	20			1447	0.83	
280.0		17	2.0	5	PD 040	71C4	1149	0.91	
140.0		32	1.3	10			1447	0.85	
140.0		31	1.7	20	PD 050	71B2	1987	0.83	
93.3		43	1.5	30			2274	0.76	
56.0		65	0.8	50			2696	0.69	
280.0		17	3.7	5	PD 050	80A4	1577	0.91	
140.0		32	2.2	10			1987	0.85	
70.0		59	1.2	20			2503	0.79	
46.7		81	1.0	30			2865	0.72	
120.0		38	2.2	7.5	PD 050	80B6	2091	0.87	
60.0		69	1.2	15			2635	0.79	
70.0		56	1.9	40	PD 063	71B2	3272	0.75	
46.7		77	1.2	60			3745	0.68	
35.0		95	0.9	80			4122	0.63	
28.0		109	0.7	100			4440	0.58	


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	
<b>0.55</b>	70.0	61	2.2	20	PD 063	80A4	3272	0.81
	56.0	73	1.8	25			3524	0.78
	46.7	83	1.9	30			3745	0.74
	35.0	105	1.4	40			4122	0.70
	28.0	124	1.1	50			4440	0.66
	23.3	140	0.9	60			4719	0.62
	60.0	71	2.2	15	PD 063	80B6	3444	0.81
	45.0	90	1.6	20			3791	0.77
	36.0	109	1.3	25			4084	0.75
	30.0	123	1.4	30			4339	0.70
22.5	152	1.1	40			4776	0.65	
18.7	200	0.8	73.5	PC71-PD 063	71C4	5083	0.71	
15.6	219	0.9	88.2			5401	0.65	
35.0	99	1.3	80	PD 075	71B2	4865	0.66	
28.0	114	1.0	100			5241	0.61	
35.0	108	2.0	40	PD 075	80A4	4865	0.72	
28.0	129	1.6	50			5241	0.69	
23.3	146	1.4	60			5569	0.65	
17.5	180	1.1	80			6130	0.60	
14.0	206	0.9	100			6603	0.55	
30.0	128	2.0	30	PD 075	80B6	5122	0.73	
22.5	159	1.5	40			5637	0.68	
18.0	187	1.2	50			6073	0.64	
15.0	214	1.0	60			6453	0.61	
18.7	205	1.2	73.5	PC71-PD 075	71C4	6000	0.73	
15.6	230	1.3	88.2			6375	0.68	
11.7	284	1.0	117.6			7017	0.63	
18.7	205	1.2	75	PC80-PD 075	80A4	6000	0.73	
15.6	230	1.3	90			6375	0.68	
11.7	284	1.0	120			7017	0.63	
9.3	332	0.8	150			7380	0.59	
12.0	306	1.1	75	PC80-PD 075	80B6	6952	0.70	
10.0	341	1.1	90			7380	0.65	
17.5	189	1.5	80	PD 090	80A4	6783	0.63	
14.0	221	1.2	100			7306	0.59	
18.0	198	2.0	50	PD 090	80B6	6719	0.68	
15.0	224	1.6	60			7140	0.64	
11.3	275	1.1	80			7859	0.59	
9.0	315	0.9	100			8180	0.54	
15.6	240	2.3	90	PC80-PD 090	80A4	7054	0.71	
11.7	297	1.6	120			7764	0.66	
9.3	355	1.3	150			8180	0.63	
7.8	398	1.0	180			8180	0.59	
10.0	357	2.0	90	PC80-PD 090	80B6	8174	0.68	
7.5	441	1.4	120			8180	0.63	
6.0	516	1.1	150			8180	0.59	
5.0	578	0.9	180			8180	0.55	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.55</b>	9.3	306	2.0	300	PD 040/090	71B2	8180	0.54
	7.0	403	1.5	400			8180	0.54
	5.6	470	1.2	500			8180	0.50
	17.5	201	2.6	80	PD 110	80A4	8571	0.67
	14.0	236	2.0	100			9232	0.63
	11.3	294	1.9	80	PD 110	80B6	9931	0.63
	9.0	338	1.5	100			10320	0.58
	7.8	425	1.8	180	PC80-PD 110	80A4	10320	0.63
	5.8	513	1.3	240			10320	0.57
	4.7	597	1.0	300			10320	0.53
	7.5	462	2.6	120	PC80-PD 110	80B6	10320	0.66
	6.0	552	2.0	150			10320	0.63
	5.0	620	1.6	180			10320	0.59
	3.8	756	1.1	240			10320	0.55
	4.7	639	2.0	300	PD 050/110	80A4	10320	0.57
	3.5	826	1.4	400			10320	0.55
	2.8	984	1.1	500			10320	0.52
	2.3	1181	1.0	600			10320	0.52
1.9	1411	0.9	750			10320	0.51	
3.8	756	1.6	240	PC80-PD 130	80B6	13500	0.55	
3.0	858	1.3	300			13500	0.49	
2.8	996	1.6	500	PD 063/130	80A4	13500	0.53	
1.9	1471	1.2	750			13500	0.53	
1.2	2132	0.8	1200			13500	0.49	
0.8	2638	0.8	1800	PD 063/150	80A4	18000	0.40	
0.6	3182	0.8	2400			18000	0.36	
<b>0.75</b>	560.0	12	2.1	5	PD 040	71C2	912	0.94
	373.3	17	1.6	7.5			1044	0.89
	280.0	23	1.3	10			1149	0.88
	186.7	32	1.0	15			1315	0.83
	560.0	12	3.9	5	PD 050	80A2	1251	0.94
	373.3	17	3.0	7.5			1433	0.89
	280.0	23	2.4	10			1577	0.90
	186.7	33	1.7	15			1805	0.86
	140.0	42	1.3	20			1987	0.82
	112.0	51	1.0	25			2140	0.80
	93.3	58	1.1	30			2274	0.76
	280.0	23	2.7	5	PD 050	80B4	1577	0.90
	186.7	34	2.1	7.5			1805	0.89
	140.0	44	1.6	10			1987	0.86
	93.3	63	1.2	15			2274	0.82
	70.0	81	0.9	20			2503	0.79
	140.0	43	2.3	20	PD 063	80A2	2597	0.84
	112.0	52	1.8	25			2797	0.81
	93.3	60	2.0	30			2973	0.78
	70.0	77	1.4	40			3272	0.75
	56.0	91	1.1	50			3524	0.71
	46.7	104	0.9	60			3745	0.68


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.75</b>	11.7	430	2.2	120	PC80-PD 110	80B4	9811	0.70
	7.8	580	1.3	180			10320	0.63
	12.4	393	3.2	73	PC90-PD 110	90S6	9614	0.68
	7.4	607	1.8	121			10320	0.63
	4.6	832	1.0	193.6			10320	0.53
	9.3	446	2.8	300	PD 050/110	80A2	10320	0.58
	5.6	687	1.6	500			10320	0.54
	4.7	871	1.5	300	PD 050/110	80B4	10320	0.57
	11.3	407	2.1	80	PD 130	90S6	12989	0.64
	5.8	712	1.4	240	PC80-PD 130	80B4	13500	0.58
	12.4	399	4.4	73	PC90-PD 130	90S6	12757	0.69
	9.3	508	3.2	96.8			13500	0.66
	7.4	607	2.6	121			13500	0.63
	6.2	682	2.1	145.2			13500	0.59
	4.6	832	1.5	193.6			13500	0.53
3.7	944	1.2	242			13500	0.49	
2.8	1358	1.1	500	PD 063/130	80B4	13500	0.53	
2.3	1631	1.0	600			13500	0.52	
1.9	2005	0.9	750			13500	0.53	
1.6	2283	0.8	900			13500	0.51	
2.8	1291	1.8	500	PD 063/150	80B4	18000	0.50	
2.3	1529	1.7	600			18000	0.49	
1.9	1783	1.3	750			18000	0.47	
1.6	2215	0.9	900			18000	0.49	
1.2	2680	1.0	1200			18000	0.45	
<b>1.1</b>	560.0	17	2.6	5	PD 050	80B2	1251	0.91
	373.3	25	2.1	7.5			1433	0.89
	280.0	33	1.6	10			1577	0.88
	186.7	48	1.2	15			1805	0.85
	140.0	62	0.9	20			1987	0.83
	186.7	48	2.1	15	PD 063	80B2	2359	0.85
	140.0	63	1.6	20			2597	0.84
	112.0	77	1.2	25			2797	0.82
	93.3	88	1.4	30			2973	0.78
	70.0	113	1.0	40			3272	0.75
	120.0	76	2.0	7.5	PD 063	90L6	2734	0.87
	90.0	99	1.5	10			3009	0.85
	60.0	142	1.1	15			3444	0.81
	45.0	180	0.8	20			3791	0.77

# PERFORMANCE


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>0.75</b>	93.3	64	2.2	15	PD 063	80B4	2973	0.83
	56.0	100	1.3	25			3524	0.78
	35.0	143	1.0	40			4122	0.70
	120.0	52	2.9	7.5	PD 063	90S6	2734	0.87
	60.0	97	1.6	15			3444	0.81
	36.0	149	0.9	25			4084	0.75
	46.7	109	1.3	60	PD 075	80A2	4421	0.71
	56.0	102	2.0	25	PD 075	80B4	4160	0.80
	35.0	147	1.5	40			4865	0.72
	23.3	200	1.0	60			5569	0.65
	60.0	98	2.4	15	PD 075	90S6	4065	0.82
	45.0	126	1.9	20			4474	0.79
	36.0	153	1.4	25			4820	0.77
	30.0	174	1.5	30			5122	0.73
	22.5	216	1.1	40			5637	0.68
	18.7	280	0.9	75	PC80-PD 075	80B4	6000	0.73
	15.6	313	1.0	90			6375	0.68
	35.0	141	1.6	80	PD 090	80A2	5383	0.69
28.0	166	1.2	100			5799	0.65	
28.0	184	1.8	50	PD 090	80B4	5799	0.72	
23.3	212	1.5	60			6163	0.69	
17.5	258	1.1	80			6783	0.63	
14.0	302	0.9	100			7306	0.59	
30.0	179	2.6	30	PD 090	90S6	5667	0.75	
22.5	226	1.8	40			6238	0.71	
18.0	271	1.4	50			6719	0.68	
15.0	306	1.1	60			7140	0.64	
15.6	327	1.7	90	PC80-PD 090	80B4	7054	0.71	
11.7	405	1.2	120			7764	0.66	
9.3	483	0.9	150			8180	0.63	
7.8	543	0.7	180			8180	0.59	
7.0	549	1.1	400	PD 040/090	80A2	8180	0.54	
5.6	642	0.9	500			8180	0.50	
17.5	274	1.9	80	PD 110	80B4	8571	0.67	
14.0	322	1.5	100			9232	0.63	
15.0	325	2.1	60	PD 110	90S6	9023	0.68	
11.3	401	1.4	80			9931	0.63	
9.0	462	1.1	100			10320	0.58	


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>1.1</b>	186.7	50	2.6	7.5	PD 063	90S4	2359	0.89
	93.3	93	1.5	15			2973	0.83
	56.0	146	0.9	25			3524	0.78
	112.0	78	1.9	25	PD 075	80B2	3302	0.83
	70.0	116	1.4	40			3862	0.77
	46.7	160	0.9	60			4421	0.71
	90.0	100	2.3	10	PD 075	90L6	3551	0.86
	45.0	184	1.3	20			4474	0.79
	30.0	256	1.0	30			5122	0.73
	93.3	96	2.1	15	PD 075	90S4	3509	0.85
	56.0	150	1.3	25			4160	0.80
	35.0	216	1.0	40			4865	0.72
	35.0	207	1.1	80	PD 090	80B2	5383	0.69
	28.0	244	0.8	100			5799	0.65
	36.0	231	1.6	25	PD 090	90L6	5333	0.79
	30.0	263	1.8	30			5667	0.75
	22.5	331	1.2	40			6238	0.71
	18.0	397	1.0	50			6719	0.68
	15.0	448	0.8	60			7140	0.64
	35.0	225	1.6	40	PD 090	90S4	5383	0.75
28.0	270	1.3	50			5799	0.72	
23.3	311	1.0	60			6163	0.69	
22.5	345	2.3	40	PD 110	90L6	7882	0.74	
18.0	414	1.8	50			8491	0.71	
15.0	476	1.4	60			9023	0.68	
11.3	588	1.0	80			9931	0.63	
28.0	281	2.3	50	PD 110	90S4	7328	0.75	
23.3	324	1.9	60			7787	0.72	
17.5	402	1.3	80			8571	0.67	
14.0	473	1.0	100			9232	0.63	
12.4	576	2.2	73	PC90-PD 110	90L6	9614	0.68	
9.3	746	1.6	96.8			10320	0.66	
7.4	890	1.2	121			10320	0.63	
6.2	1000	1.0	145.2			10320	0.59	
19.3	392	2.5	73	PC90-PD 110	90S4	8298	0.72	
14.5	508	1.8	96.8			9133	0.70	
11.6	599	1.5	121			9838	0.66	
9.6	686	1.1	145.2			10320	0.63	
7.2	828	0.8	193.6			10320	0.57	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>1.1</b>	9.3	654	1.9	300	PD 050/110	80B2	10320	0.58
	7.0	845	1.4	400			10320	0.56
	5.6	1007	1.1	500			10320	0.54
	11.3	598	1.4	80	PD 130	90L6	12989	0.64
	9.0	689	1.1	100			13500	0.59
	17.5	408	2.1	80	PD 130	90S4	11210	0.68
	14.0	480	1.5	100			12076	0.64
	12.4	585	3.0	73	PC90-PD 130	90L6	12575	0.69
	9.3	746	2.2	96.8			13500	0.66
	7.4	890	1.7	121			13500	0.63
	6.2	1000	1.4	145.2			13500	0.59
	4.6	1220	1.0	193.6			13500	0.53
	19.3	398	3.5	73	PC90-PD 130	90S4	10853	0.73
	14.5	508	2.6	96.8			11945	0.70
	11.6	608	2.0	121			12868	0.67
	9.6	686	1.6	145.2			13500	0.63
	7.2	843	1.2	193.6			13500	0.58
	5.8	962	0.9	242			13500	0.53
4.77	1131/122	1133	3800	PD 63/130	90S4	13500	0.59	
3.5	1671	1.0	400			13500	0.56	
2.8	1991	0.8	500			13500	0.53	
9.3	753	3.1	150	PD 63/150	90S4	18000	0.67	
7.0	966	2.4	200			18000	0.64	
5.6	1175	1.7	250			18000	0.63	
4.7	1364	1.7	300			18000	0.61	
3.5	1619	1.6	400			18000	0.54	
2.8	1893	1.2	500			18000	0.50	
2.3	2242	1.2	600			18000	0.49	
1.9	2616	0.9	750			18000	0.47	
<b>1.5</b>	560.0	23	1.9	5	PD 050	80C2	1251	0.90
	373.3	34	1.5	7.5			1433	0.89
	280.0	45	1.2	10			1577	0.88
	186.7	65	0.9	15			1805	0.85
	186.7	68	1.9	7.5	PD 063	90L4	2359	0.89
	140.0	89	1.5	10			2597	0.87
	93.3	127	1.1	15			2973	0.83
	70.0	166	0.8	20			3272	0.81
	373.3	35	2.7	7.5	PD 063	90S2	1873	0.91
	280.0	46	2.1	10			2061	0.90
	186.7	66	1.6	15			2359	0.86
	140.0	86	1.2	20			2597	0.84
	112.0	105	0.9	25			2797	0.82
	93.3	120	1.0	30			2973	0.78
	120.0	105	2.0	7.5	PD 075	100LA6	3227	0.88
	90.0	137	1.7	10			3551	0.86
	60.0	196	1.2	15			4065	0.82
	140.0	90	2.2	10	PD 075	90L4	3065	0.88
	93.3	130	1.5	15			3509	0.85


# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>1.5</b>	70.0	168	1.3	20	PD 075	90L4	3862	0.82
	56.0	205	1.0	25			4160	0.80
	46.7	233	1.0	30			4421	0.76
	280.0	46	3.1	10	PD 075	90S2	2433	0.90
	186.7	67	2.2	15			2785	0.87
	140.0	87	1.8	20			3065	0.85
	112.0	106	1.4	25			3302	0.83
	93.3	123	1.4	30			3509	0.80
	70.0	158	1.0	40			3862	0.77
	56.0	189	0.8	50			4160	0.74
	46.7	218	0.7	60			4421	0.71
	90.0	138	2.7	10	PD 090	100LA6	3929	0.87
60.0	201	2.1	15			4498	0.84	
45.0	258	1.5	20			4951	0.81	
36.0	314	1.2	25			5333	0.79	
30.0	358	1.3	30			5667	0.75	
70.0	172	2.1	20	PD 090	90L4	4273	0.84	
56.0	210	1.6	25			4603	0.82	
46.7	239	1.7	30			4891	0.78	
35.0	307	1.2	40			5383	0.75	
28.0	368	0.9	50			5799	0.72	
23.3	424	0.8	60			6163	0.69	
56.0	194	1.4	50	PD 090	90S2	4603	0.76	
46.7	227	1.1	60			4891	0.74	
45.0	264	2.7	20	PD 110	100LA6	6256	0.83	
36.0	322	2.4	25			6739	0.81	
30.0	363	2.3	30			7161	0.76	
22.5	471	1.7	40			7882	0.74	
18.0	565	1.3	50			8491	0.71	
15.0	649	1.1	60			9023	0.68	
35.0	319	2.2	40	PD 110	90L4	6803	0.78	
28.0	384	1.7	50			7328	0.75	
23.3	442	1.4	60			7787	0.72	
17.5	548	0.9	80			8571	0.67	
46.7	236	2.0	60	PD 110	90S2	6181	0.77	
35.0	299	1.3	80			6803	0.73	
28.0	353	1.0	100			7328	0.69	
19.3	535	1.9	73	PC90-PD 110	90L4	8298	0.72	
14.5	693	1.3	96.8			9133	0.70	
11.6	817	1.1	121			9838	0.66	
9.6	936	0.8	145.2			10320	0.63	
9.3	891	1.4	300	PD 050/110	90S2	10320	0.58	
7.0	1153	1.0	400			10320	0.56	
5.6	1373	0.8	500			10320	0.54	
22.5	478	2.3	40	PD 130	100LA6	10309	0.75	
18.0	573	1.8	50			11105	0.72	
15.0	659	1.4	60			11801	0.69	
11.3	815	1.1	80			12989	0.64	
17.5	557	1.5	80	PD 130	90L4	11210	0.68	
14.0	655	1.1	100			12076	0.64	


P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$		
<b>1.5</b>	19.3	542	2.6	73	PC90-PD 130	90L4	10853	0.73		
	14.5	693	1.9	96.8			11945	0.70		
	11.6	830	1.5	121			12868	0.67		
	9.6	936	1.1	145.2			13500	0.63		
	7.2	1149	0.8	194			13500	0.58		
	9.3	915	1.9	300			PD 063/130	90S2	13500	0.59
	7.0	1166	1.4	400	13500	0.57				
	5.6	1389	1.1	500	13500	0.54				
	4.7	1789	1.0	300	PD 063/130	90L4	13500	0.59		
	3.5	2279	0.7	400			13500	0.56		
	9.3	1026	2.3	150	PD 063/150	90L4	18000	0.67		
	7.0	1317	1.8	200			18000	0.64		
	5.6	1602	1.3	250			18000	0.63		
	4.7	1860	1.3	300			18000	0.61		
	3.5	2208	1.2	400			18000	0.54		
	2.8	2582	0.9	500			18000	0.50		
	2.3	3057	0.9	600			18000	0.49		
	<b>2.2</b>	373.3	51	1.8			7.5	PD 063	90L2	1873
280.0		67	1.5	10			2061			0.89
186.7		97	1.1	15	2359	0.86				
186.7		100	1.8	7.5	PD 075	100LA4	2785	0.89		
140.0		132	1.5	10			3065	0.88		
93.3		191	1.0	15			3509	0.85		
373.3		51	2.5	7.5	PD 075	90L2	2210	0.91		
280.0		68	2.1	10			2433	0.91		
186.7		98	1.5	15			2785	0.87		
140.0		128	1.3	20			3065	0.85		
112.0		156	1.0	25			3302	0.83		
93.3		180	0.9	30			3509	0.80		
186.7		101	2.9	7.5	PD 090	100LA4	3081	0.90		
140.0		134	2.3	10			3391	0.89		
93.3		194	1.9	15			3882	0.86		
70.0		252	1.4	20			4273	0.84		
56.0		308	1.1	25			4603	0.82		
46.7		351	1.2	30			4891	0.78		
120.0		156	2.2	7.5			PD 090	112M6	3570	0.89
90.0		203	1.8	10	3929	0.87				
60.0		294	1.4	15	4498	0.84				
45.0		378	1.0	20	4951	0.81				
140.0		131	2.0	20	PD 090	90L2	3391	0.87		
112.0		159	1.6	25			3653	0.85		
93.3		185	1.7	30			3882	0.82		
70.0		237	1.2	40			4273	0.79		
56.0		285	0.9	50			4603	0.76		
70.0		255	2.5	20			PD 110	100LA4	5399	0.85
56.0		315	2.2	25	5816	0.84				
46.7		356	2.0	30	6181	0.79				
35.0	468	1.5	40	6803	0.78					
28.0	563	1.2	50	7328	0.75					
23.3	648	1.0	60	7787	0.72					

# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$
<b>2.2</b>	90.0	205	3.5	10	PD 110	112M6	4965	0.88
	45.0	388	1.9	20			6256	0.83
	30.0	532	1.6	30			7161	0.76
	112.0	163	3.1	25	PD 110	90L2	4616	0.87
	70.0	246	2.1	40			5399	0.82
	46.7	347	1.4	60			6181	0.77
	38.6	398	2.1	73	PC90-PD 110	90L2	6586	0.73
	23.1	617	1.2	121			7809	0.68
	35.0	468	2.2	40	PD 130	100LA4	8897	0.78
	23.3	648	1.4	60			10185	0.72
	36.0	479	2.2	25	PD 130	112M6	8814	0.82
	<del>22.5</del>	<del>7000</del>	1166	<del>400</del>			<del>10309</del>	<del>0.75</del>
	15.0	966	1.0	60			11801	0.69
	35.0	438	1.3	80	PD 130	90L2	8897	0.73
	38.6	409	2.9	73	PC90-PD 130	90L2	8614	0.75
	23.1	654	1.6	121			10312	0.72
	28.0	570	2.5	50	PD 150	100LA4	13103	0.76
	17.5	816	1.4	80			15325	0.68
<b>3</b>	373.3	70	1.9	7.5	PD 075	100LA2	2210	0.91
	186.7	137	1.4	7.5	PD 075	100LB4	2785	0.89
	93.3	261	0.8	15			3509	0.85
	373.3	71	3.0	7.5	PD 090	100LA2	2446	0.93
	186.7	138	2.1	7.5	PD 090	100LB4	3081	0.90
	93.3	264	1.4	15			3882	0.86
	56.0	420	0.8	25			4603	0.82
	93.3	264	2.5	15	PD 110	100LB4	4905	0.86
	70.0	348	1.9	20			5399	0.85
	56.0	430	1.6	25			5816	0.84

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$	
<b>3</b>	46.7	485	1.5	30	PD 110	100LB4	6181	0.79	
	35.0	638	1.1	40			6803	0.78	
	28.0	767	0.9	50			7328	0.75	
	120.0	212	3.1	7.5	PD 110	132S6	4511	0.89	
	90.0	280	2.5	10			4965	0.88	
	60.0	406	1.9	15			5684	0.85	
	45.0	528	1.4	20			6256	0.83	
	<b>4</b>	373.3	93	1.4	7.5	PD 075	112M2	2210	0.91
		280.0	123	1.2	10			2433	0.90
186.7		182	1.0	7.5	PD 075	112M4	2785	0.89	
140.0		240	0.8	10			3065	0.88	
373.3		94	2.2	7.5	PD 090	112M2	2446	0.92	
280.0		123	1.9	10			2692	0.90	
186.7		184	1.6	7.5	PD 090	112M4	3081	0.90	
140.0		243	1.3	10			3391	0.89	
93.3		352	1.0	15			3882	0.86	
70.0		458	0.8	20			4273	0.84	
140.0		243	2.5	10	PD 110	112M4	4285	0.89	
93.3		352	1.9	15			4905	0.86	
70.0		464	1.4	20			5399	0.85	
56.0		573	1.2	25			5816	0.84	
46.7		647	1.1	30			6181	0.79	
120.0		283	2.3	7.5	PD 110	132M6	4511	0.89	
90.0		374	1.9	10			4965	0.88	
60.0		541	1.4	15			5684	0.85	

# PERFORMANCE

P1 (kW)	n2 (1/min)	M2 (Nm)	f.s	i	Size		Fr2 (N)	$\eta$	
<b>4</b>	60.0	541	2.0	15	PD 130	132M6	7434	0.85	
	45.0	713	1.5	20			8182	0.84	
	36.0	870	1.2	25			8814	0.82	
	28.0	1037	1.4	50	PD 150	112M4	13103	0.76	
	23.3	1195	1.1	60			13924	0.73	
	17.5	1484	0.8	80			15325	0.68	
<b>4.8</b>	186.7	221	1.3	7.5	PD 090	112MS4	3081	0.90	
	140.0	291	1.1	10			3391	0.89	
	93.3	422	0.9	15			3882	0.86	
	186.7	221	2.5	7.5	PD 110	112MS4	3893	0.90	
	140.0	291	2.1	10			4285	0.89	
	93.3	422	1.6	15			4905	0.86	
	70.0	557	1.2	20	PD 130	112MS4	5399	0.85	
	56.0	688	1.0	25			5816	0.84	
	56.0	688	1.4	25			7607	0.84	
	46.7	786	1.3	30	8084	0.80			
	35.0	1022	1.0	40	8897	0.78			
	28.0	1228	0.8	50	9584	0.75			
	23.3	1434	0.9	60	13103	0.73			
	<b>5.5</b>	186.7	253	2.2	7.5	PD 110	132S4	3893	0.90
		140.0	334	1.8	10			4285	0.89
93.3		484	1.4	15	4905			0.86	
70.0		638	1.0	20	PD 130	132S4	5399	0.85	
140.0		334	2.5	10			5605	0.89	
93.3		490	1.9	15			6416	0.87	
70.0		645	1.4	20	7062	0.86			
56.0		788	1.2	25	7607	0.84			
46.7		900	1.2	30	8084	0.80			
35.0		1171	0.9	40	8897	0.78			
70.0		645	2.0	20	PD 150	132S4	9654	0.86	
56.0		788	1.5	25			10400	0.84	
46.7		934	1.3	30			11051	0.83	
35.0		1171	1.3	40	12163	0.78			
28.0		1426	1.0	50	13103	0.76			
23.3		1643	0.8	60	13924	0.73			
<b>7.5</b>		186.7	345	1.6	7.5	PD 110	132L4	3893	0.90
		140.0	455	1.3	10			4285	0.89
	93.3	660	1.0	15	4905				
	186.7	349	2.1	7.5	PD 130	132L4	5092	0.91	
	140.0	455	1.8	10			5605	0.89	
	93.3	668	1.4	15			6416	0.87	
	70.0	880	1.0	20	7062	0.86			
	56.0	1074	0.9	25	7607	0.84			
	46.7	1228	0.8	30	8084	0.80			
	35.0	1596	0.7	40	8897	0.78			
	70.0	880	1.5	20	PD 150	132L4	9654	0.86	
	56.0	1074	1.1	25			10400	0.84	
	46.7	1274	0.9	30			11051	0.83	
	35.0	1596	1.0	40	12163	0.78			
	<b>9.2</b>	186.7	424	1.3	7.5	PD 110	132M4	3893	0.90

# PERFORMANCE

(n1=2800)

M2 (Nm)	l	P1 (kW)	n2 (1/min)		Fr2 (N)	Fr1 (N)	$\eta$
12	5	0.79	560.0	PD 030	474	115	0.89
13	7.5	0.58	373.3		542	125	0.88
13	10	0.45	280.0		597	140	0.85
13	15	0.31	186.7		683	140	0.82
12	20	0.23	140.0		752	146	0.76
16	25	0.25	112.0		810	210	0.75
15	30	0.21	93.3		861	210	0.70
14	40	0.16	70.0		948	127	0.64
13	50	0.12	56.0		1021	128	0.64
12	60	0.10	46.7		1085	126	0.59
11	80	0.08	35.0		1194	130	0.50
24	5	1.6	560.0	PD 040	912	200	0.88
27	7.5	1.2	373.3		1044	233	0.88
29	10	1.0	280.0		1149	272	0.85
31	15	0.72	186.7		1315	291	0.84
29	20	0.52	140.0		1447	204	0.82
28	25	0.42	112.0		1559	236	0.78
34	30	0.44	93.3		1657	350	0.76
31	40	0.32	70.0		1824	350	0.71
30	50	0.26	56.0		1964	350	0.68
28	60	0.21	46.7		2087	350	0.65
25	80	0.16	35.0		2298	350	0.57
23	100	0.12	28.0		2475	350	0.56
45	5	2.9	560.0	PD 050	1251	280	0.91
52	7.5	2.3	373.3		1433	324	0.88
54	10	1.8	280.0		1577	378	0.88
57	15	1.3	186.7		1805	399	0.86
53	20	0.95	140.0		1987	417	0.82
51	25	0.75	112.0		2140	482	0.80
64	30	0.82	93.3		2274	490	0.76
59	40	0.59	70.0		2503	490	0.73
53	50	0.45	56.0		2696	490	0.69
50	60	0.37	46.7		2865	490	0.66
45	80	0.27	35.0		3153	490	0.61
40	100	0.21	28.0		3397	490	0.56
93	7.5	4.0	373.3	PD 063	1873	395	0.91
97	10	3.2	280.0		2061	463	0.89
103	15	2.3	186.7		2359	492	0.88
100	20	1.7	140.0		2597	538	0.86
92	25	1.3	112.0		2797	593	0.83
120	30	1.5	93.3		2973	700	0.78
108	40	1.1	70.0		3272	700	0.72
100	50	0.83	56.0		3524	700	0.71
95	60	0.68	46.7		3745	700	0.68
85	80	0.49	35.0		4122	700	0.64
74	100	0.37	28.0		4440	700	0.59
130	7.5	5.6	373.3	PD 075	2210	560	0.91
145	10	4.7	280.0		2433	703	0.90
150	15	3.4	186.7		2785	727	0.86
160	20	2.8	140.0		3065	872	0.84
150	25	2.1	112.0		3302	980	0.84
170	30	2.1	93.3		3509	980	0.79
165	40	1.6	70.0		3862	980	0.76
150	50	1.2	56.0		4160	980	0.73

(n1=2800)

M2 (Nm)	l	P1 (kW)	n2 (1/min)	Size	Fr2 (N)	Fr1 (N)	$\eta$
145	60	1.0	46.7	PD 075	4421	980	0.71
130	80	0.72	35.0		4865	980	0.66
120	100	0.58	28.0		5241	980	0.61
210	7.5	8.9	373.3	PD 090	2446	715	0.92
235	10	7.7	280.0		2692	900	0.89
270	15	6.0	186.7		3081	1034	0.88
260	20	4.4	140.0		3391	1120	0.87
250	25	3.4	112.0		3653	1270	0.86
310	30	3.7	93.3		3882	1270	0.82
275	40	2.6	70.0		4273	1270	0.78
265	50	2.0	56.0		4603	1270	0.78
245	60	1.6	46.7		4891	1270	0.75
225	80	1.2	35.0		5383	1270	0.69
200	100	0.9	28.0		5799	1270	0.65
391	7.5	16.6	373.3	PD 110	3090	950	0.92
437	10	14.1	280.0		3401	1194	0.91
489	15	10.7	186.7		3893	1337	0.89
483	20	8.0	140.0		4285	1485	0.89
506	25	6.8	112.0		4616	1700	0.87
552	30	6.5	93.3		4905	1700	0.83
529	40	4.7	70.0		5399	1700	0.82
495	50	3.7	56.0		5816	1700	0.78
473	60	3.0	46.7		6181	1700	0.77
399	80	2.0	35.0		6803	1700	0.73
368	100	1.6	28.0		7328	1700	0.67

# PERFORMANCE

(n1=1400)

M2 (Nm)	l	P1 (kW)	n2 (1/min)	Size	Fr2 (N)	Fr1 (N)	$\eta$
18	5	0.61	280.0	PD 030	597	150	0.87
18	7.5	0.41	186.7		683	150	0.86
18	10	0.32	140.0		752	169	0.82
18	15	0.23	93.3		861	169	0.76
18	20	0.18	70.0		948	190	0.73
21	25	0.18	56.0		1021	210	0.68
20	30	0.15	46.7		1085	210	0.65
18	40	0.11	35.0		1194	210	0.60
17	50	0.09	28.0		1286	210	0.55
16	60	0.08	23.3		1367	210	0.49
13	80	0.05	17.5		1504	210	0.48
34	5	1.1	280.0	PD 040	1149	250	0.91
40	7.5	0.90	186.7		1315	294	0.87
40	10	0.69	140.0		1447	331	0.85
40	15	0.48	93.3		1657	331	0.81
39	20	0.37	70.0		1824	350	0.77
38	25	0.30	56.0		1964	350	0.74
45	30	0.31	46.7		2087	350	0.71
41	40	0.23	35.0		2298	350	0.65
39	50	0.18	28.0		2475	350	0.64
36	60	0.15	23.3		2630	350	0.59
33	80	0.12	17.5		2895	350	0.50
29	100	0.09	14.0		3118	350	0.47
62	5	2.0	280.0	PD 050	1577	350	0.91
71	7.5	1.6	186.7		1805	401	0.87
72	10	1.2	140.0		1987	490	0.88
74	15	0.88	93.3		2274	490	0.82
73	20	0.68	70.0		2503	490	0.79
70	25	0.54	56.0		2696	490	0.76
84	30	0.57	46.7		2865	490	0.72
76	40	0.42	35.0		3153	490	0.66
73	50	0.34	28.0		3397	490	0.63
68	60	0.28	23.3		3610	490	0.59
65	80	0.22	17.5		3973	490	0.54
55	100	0.16	14.0		4280	490	0.50
128	7.5	2.8	186.7	PD 063	2359	500	0.89
130	10	2.2	140.0		2597	571	0.87
140	15	1.6	93.3		2973	615	0.86
135	20	1.2	70.0		3272	667	0.82
130	25	1.0	56.0		3524	700	0.76
160	30	1.1	46.7		3745	700	0.71
145	40	0.76	35.0		4122	700	0.70
135	50	0.60	28.0		4440	700	0.66
130	60	0.51	23.3		4719	700	0.62
122	80	0.39	17.5		5193	700	0.57
118	100	0.34	14.0		5595	700	0.51
185	7.5	4.1	186.7	PD 075	2785	700	0.88
195	10	3.2	140.0		3065	830	0.89
200	15	2.3	93.3		3509	851	0.85
210	20	1.9	70.0		3862	980	0.81
200	25	1.5	56.0		4160	980	0.78
230	30	1.5	46.7		4421	980	0.75
220	40	1.1	35.0		4865	980	0.73
210	50	0.89	28.0		5241	980	0.69

# PERFORMANCE

(n1=900)

M2 (Nm)	i	P1 (kW)	n2 (1/min)	Size	Fr2 (N)	Fr1 (N)	
20	5	0.44	180.0	PD 030	692	175	0.86
20	7.5	0.30	120.0		792	175	0.84
20	10	0.24	90.0		871	197	0.79
20	15	0.17	60.0		997	197	0.74
20	20	0.13	45.0		1098	210	0.72
23	25	0.14	36.0		1183	210	0.62
21	30	0.11	30.0		1257	210	0.60
20	40	0.09	22.5		1383	210	0.52
18	50	0.07	18.0		1490	210	0.48
17	60	0.06	15.0		1583	210	0.45
15	80	0.04	11.3		1743	210	0.44
40	5	0.87	180.0	PD 040	1331	290	0.87
44	7.5	0.65	120.0		1524	319	0.85
44	10	0.50	90.0		1677	350	0.83
45	15	0.36	60.0		1920	350	0.79
44	20	0.28	45.0		2113	350	0.74
43	25	0.23	36.0		2276	350	0.70
49	30	0.23	30.0		2419	350	0.67
45	40	0.17	22.5		2662	350	0.62
42	50	0.14	18.0		2868	350	0.57
39	60	0.11	15.0		3047	350	0.56
35	80	0.09	11.3		3354	350	0.46
32	100	0.07	9.0		3490	350	0.43
75	5	1.6	180.0	PD 050	1827	400	0.88
84	7.5	1.2	120.0		2091	448	0.88
84	10	0.94	90.0		2302	490	0.84
84	15	0.67	60.0		2635	490	0.79
77	20	0.48	45.0		2900	490	0.76
75	25	0.39	36.0		3124	490	0.72
90	30	0.42	30.0		3320	490	0.67
82	40	0.31	22.5		3654	490	0.62
77	50	0.25	18.0		3936	490	0.58
72	60	0.21	15.0		4183	490	0.54
68	80	0.16	11.3		4604	490	0.50
56	100	0.12	9.0		4840	490	0.44
151	7.5	2.2	120.0	PD 063	2734	580	0.86
153	10	1.7	90.0		3009	661	0.85
155	15	1.2	60.0		3444	670	0.81
148	20	0.91	45.0		3791	700	0.77
137	25	0.69	36.0		4084	700	0.75
175	30	0.79	30.0		4339	700	0.70
160	40	0.58	22.5		4776	700	0.65
145	50	0.45	18.0		5145	700	0.61
138	60	0.37	15.0		5467	700	0.59
128	80	0.29	11.3		6018	700	0.52
124	100	0.25	9.0		6270	700	0.47
215	7.5	3.1	120.0	PD 075	3227	810	0.87
230	10	2.5	90.0		3551	975	0.87
235	15	1.8	60.0		4065	980	0.82
235	20	1.4	45.0		4474	980	0.79
215	25	1.1	36.0		4820	980	0.74
260	30	1.1	30.0		5122	980	0.74
240	40	0.83	22.5		5637	980	0.68
220	50	0.65	18.0		6073	980	0.64

(n1=1400)

M2 (Nm)	l	P1 (kW)	n2 (1/min)	Size	Fr2 (N)	Fr1 (N)	$\eta$
18	5	0.61	280.0	PD 030	597	150	0.87
18	7.5	0.41	186.7		683	150	0.86
18	10	0.32	140.0		752	169	0.82
18	15	0.23	93.3		861	169	0.76
18	20	0.18	70.0		948	190	0.73
21	25	0.18	56.0		1021	210	0.68
20	30	0.15	46.7		1085	210	0.65
18	40	0.11	35.0		1194	210	0.60
17	50	0.09	28.0		1286	210	0.55
16	60	0.08	23.3		1367	210	0.49
13	80	0.05	17.5		1504	210	0.48
34	5	1.1	280.0	PD 040	1149	250	0.91
40	7.5	0.90	186.7		1315	294	0.87
40	10	0.69	140.0		1447	331	0.85
40	15	0.48	93.3		1657	331	0.81
39	20	0.37	70.0		1824	350	0.77
38	25	0.30	56.0		1964	350	0.74
45	30	0.31	46.7		2087	350	0.71
41	40	0.23	35.0		2298	350	0.65
39	50	0.18	28.0		2475	350	0.64
36	60	0.15	23.3		2630	350	0.59
33	80	0.12	17.5		2895	350	0.50
29	100	0.09	14.0		3118	350	0.47
62	5	2.0	280.0	PD 050	1577	350	0.91
71	7.5	1.6	186.7		1805	401	0.87
72	10	1.2	140.0		1987	490	0.88
74	15	0.88	93.3		2274	490	0.82
73	20	0.68	70.0		2503	490	0.79
70	25	0.54	56.0		2696	490	0.76
84	30	0.57	46.7		2865	490	0.72
76	40	0.42	35.0		3153	490	0.66
73	50	0.34	28.0		3397	490	0.63
68	60	0.28	23.3		3610	490	0.59
65	80	0.22	17.5		3973	490	0.54
55	100	0.16	14.0		4280	490	0.50
128	7.5	2.8	186.7	PD 063	2359	500	0.89
130	10	2.2	140.0		2597	571	0.87
140	15	1.6	93.3		2973	615	0.86
135	20	1.2	70.0		3272	667	0.82
130	25	1.0	56.0		3524	700	0.76
160	30	1.1	46.7		3745	700	0.71
145	40	0.76	35.0		4122	700	0.70
135	50	0.60	28.0		4440	700	0.66
130	60	0.51	23.3		4719	700	0.62
122	80	0.39	17.5		5193	700	0.57
118	100	0.34	14.0		5595	700	0.51
185	7.5	4.1	186.7	PD 075	2785	700	0.88
195	10	3.2	140.0		3065	830	0.89
200	15	2.3	93.3		3509	851	0.85
210	20	1.9	70.0		3862	980	0.81
200	25	1.5	56.0		4160	980	0.78
230	30	1.5	46.7		4421	980	0.75
220	40	1.1	35.0		4865	980	0.73
210	50	0.89	28.0		5241	980	0.69

(n1=900)

M2 (Nm)	l	P1 (kW)	n2 (1/min)	Size	Fr2 (N)	Fr1 (N)	$\eta$	
210	60	0.54	15.0	PD 075	6453	980	0.61	
200	80	0.43	11.3		7103	980	0.55	
190	100	0.36	9.0		7380	980	0.50	
340	7.5	4.8	120.0	PD 090	3570	1040	0.89	
370	10	4.0	90.0		3929	1270	0.87	
420	15	3.1	60.0		4498	1270	0.85	
390	20	2.3	45.0		4951	1270	0.80	
370	25	1.8	36.0		5333	1270	0.77	
460	30	1.9	30.0		5667	1270	0.76	
410	40	1.4	22.5		6238	1270	0.69	
390	50	1.1	18.0		6719	1270	0.67	
350	60	0.86	15.0		7140	1270	0.64	
315	80	0.63	11.3		7859	1270	0.59	
280	100	0.49	9.0		8180	1270	0.54	
650	7.5	9.2	120.0		PD 110	4511	1390	0.89
713	10	7.6	90.0			4965	1700	0.88
759	15	5.6	60.0	5684		1700	0.85	
725	20	4.1	45.0	6256		1700	0.83	
759	25	3.5	36.0	6739		1700	0.82	
840	30	3.5	30.0	7161		1700	0.75	
794	40	2.5	22.5	7882		1700	0.75	
748	50	2.0	18.0	8491		1700	0.70	
682	60	1.6	15.0	9023		1700	0.67	
567	80	1.1	11.3	9931		1700	0.61	
515	100	0.84	9.0	10320		1700	0.58	
880	7.5	12.3	120.0	PD 130		5901	1740	0.90
960	10	10.3	90.0			6494	2100	0.88
1060	15	7.8	60.0		7434	2100	0.85	
1040	20	5.8	45.0		8182	2100	0.84	
1050	25	4.8	36.0		8814	2100	0.82	
1170	30	4.7	30.0		9366	2100	0.78	
1100	40	3.5	22.5		10309	2100	0.74	
1050	50	2.7	18.0		11105	2100	0.73	
940	60	2.1	15.0		11801	2100	0.70	
860	80	1.6	11.3		12989	2100	0.63	
780	100	1.2	9.0		13500	2100	0.61	
1400	7.5	19.5	120.0		PD 150	8067	2270	0.90
1480	10	15.7	90.0			8878	2700	0.89
1450	15	10.5	60.0	10163		2645	0.87	
1500	20	8.4	45.0	11186		2800	0.84	
1380	25	6.3	36.0	12050		2800	0.83	
1400	30	5.4	30.0	12805		2800	0.81	
1800	40	5.7	22.5	14094		2800	0.74	
1600	50	4.1	18.0	15182		2800	0.74	
1440	60	3.2	15.0	16133		2800	0.71	
1300	80	2.4	11.3	17757		2800	0.64	
1150	100	1.8	9.0	18000		2800	0.60	

# PERFORMANCE

(n1=500)

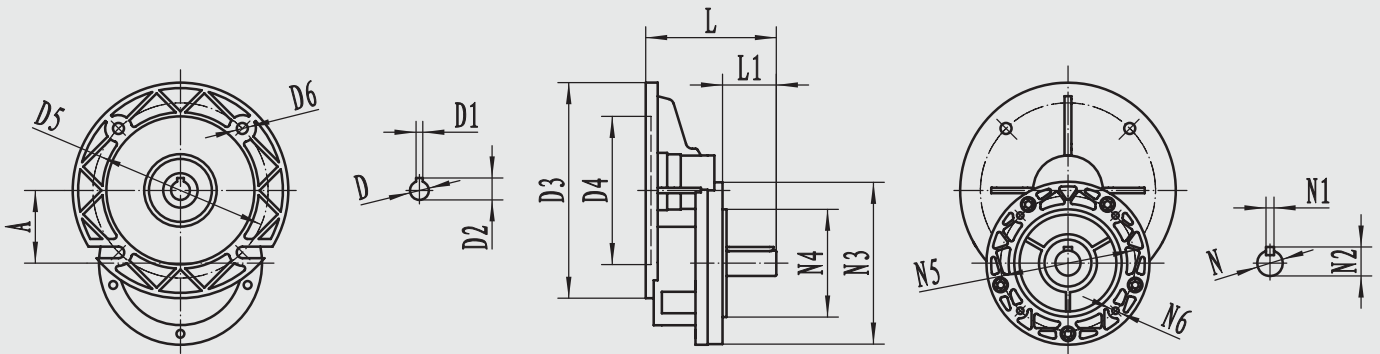
M2 (Nm)	l	P1 (kW)	n2 (1/min)	Size	Fr2 (N)	Fr1 (N)	$\eta$
24	5	0.30	100.0	PD 030	841	210	0.84
24	7.5	0.21	66.7		963	210	0.80
24	10	0.16	50.0		1060	210	0.79
24	15	0.12	33.3		1213	210	0.70
23	20	0.09	25.0		1336	210	0.67
29	25	0.10	20.0		1439	210	0.61
26	30	0.08	16.7		1529	210	0.57
23	40	0.06	12.5		1683	210	0.50
21	50	0.05	10.0		1813	210	0.44
19	60	0.04	8.3		1830	210	0.41
17	80	0.03	6.3		1830	210	0.37
49	5	0.60	100.0	PD 040	1619	350	0.86
54	7.5	0.45	66.7		1853	350	0.84
54	10	0.35	50.0		2040	350	0.81
55	15	0.26	33.3		2335	350	0.74
52	20	0.19	25.0		2570	350	0.72
49	25	0.15	20.0		2769	350	0.68
58	30	0.16	16.7		2942	350	0.63
53	40	0.12	12.5		3238	350	0.58
49	50	0.10	10.0		3488	350	0.51
46	60	0.08	8.3		3490	350	0.50
40	80	0.06	6.3		3490	350	0.44
36	100	0.05	5.0		3490	350	0.38
92	5	1.1	100.0	PD 050	2222	490	0.88
103	7.5	0.86	66.7		2544	490	0.84
103	10	0.67	50.0		2800	490	0.80
103	15	0.47	33.3		3205	490	0.76
93	20	0.33	25.0		3528	490	0.74
91	25	0.28	20.0		3800	490	0.68
108	30	0.29	16.7		4038	490	0.65
98	40	0.22	12.5		4445	490	0.58
91	50	0.17	10.0		4788	490	0.56
83	60	0.14	8.3		4840	490	0.52
75	80	0.11	6.3		4840	490	0.45
65	100	0.09	5.0		4840	490	0.38
184	7.5	1.5	66.7	PD 063	3325	700	0.86
185	10	1.2	50.0		3660	700	0.81
187	15	0.85	33.3		4190	700	0.77
178	20	0.63	25.0		4611	700	0.74
164	25	0.48	20.0		4967	700	0.72
200	30	0.54	16.7		5279	700	0.65
185	40	0.40	12.5		5810	700	0.61
173	50	0.32	10.0		6259	700	0.57
160	60	0.26	8.3		6270	700	0.54
137	80	0.19	6.3		6270	700	0.47
128	100	0.16	5.0		6270	700	0.42
260	7.5	2.1	66.7	PD 075	3925	980	0.86
270	10	1.7	50.0		4320	980	0.83
280	15	1.2	33.3		4945	980	0.81
285	20	0.98	25.0		5443	980	0.76
255	25	0.73	20.0		5863	980	0.73
300	30	0.77	16.7		6231	980	0.68
280	40	0.58	12.5		6858	980	0.63
250	50	0.44	10.0		7380	980	0.59

(n1=500)

M2 (Nm)	l	P1 (kW)	n2 (1/min)	Size	Fr2 (N)	Fr1 (N)	$\eta$
240	60	0.37	8.3	PD 075	7380	980	0.57
215	80	0.29	6.3		7380	980	0.49
210	100	0.24	5.0		7380	980	0.46
410	7.5	3.3	66.7	PD 090	4343	1270	0.87
435	10	2.7	50.0		4780	1270	0.84
490	15	2.1	33.3		5472	1270	0.81
470	20	1.6	25.0		6022	1270	0.77
440	25	1.2	20.0		6487	1270	0.77
550	30	1.4	16.7		6894	1270	0.69
480	40	0.95	12.5		7588	1270	0.66
450	50	0.75	10.0		8174	1270	0.63
400	60	0.59	8.3		8180	1270	0.59
365	80	0.45	6.3		8180	1270	0.53
330	100	0.35	5.0		8180	1270	0.49
794	7.5	6.4	66.7	PD 110	5488	1700	0.87
851	10	5.2	50.0		6040	1700	0.86
909	15	3.9	33.3		6914	1700	0.81
863	20	2.8	25.0		7610	1700	0.81
909	25	2.4	20.0		8198	1700	0.79
1000	30	2.4	16.7		8711	1700	0.73
932	40	1.7	12.5		9588	1700	0.72
880	50	1.4	10.0		10320	1700	0.66
781	60	1.1	8.3		10320	1700	0.62
662	80	0.76	6.3		10320	1700	0.57
599	100	0.59	5.0		10320	1700	0.53
1080	7.5	8.6	66.7	PD 130	7178	2100	0.88
1160	10	7.1	50.0		7900	2100	0.86
1300	15	5.5	33.3		9043	2100	0.83
1230	20	4.0	25.0		9953	2100	0.80
1200	25	3.2	20.0		10722	2100	0.79
1400	30	3.3	16.7		11394	2100	0.74
1300	40	2.4	12.5		12540	2100	0.71
1220	50	1.9	10.0		13500	2100	0.67
1070	60	1.5	8.3		13500	2100	0.62
970	80	1.1	6.3		13500	2100	0.58
860	100	0.85	5.0		13500	2100	0.53
1700	7.5	13.5	66.7	PD 150	9812	2800	0.88
1780	10	10.7	50.0		10800	2800	0.87
1730	15	7.2	33.3		12363	2800	0.84
1820	20	5.9	25.0		13607	2800	0.81
1630	25	4.3	20.0		14658	2800	0.79
1670	30	3.8	16.7		15576	2800	0.77
2120	40	3.9	12.5		17144	2800	0.71
1870	50	2.9	10.0		18000	2800	0.68
1680	60	2.3	8.3		18000	2800	0.64
1530	80	1.7	6.3		18000	2800	0.59
1350	100	1.3	5.0		18000	2800	0.54

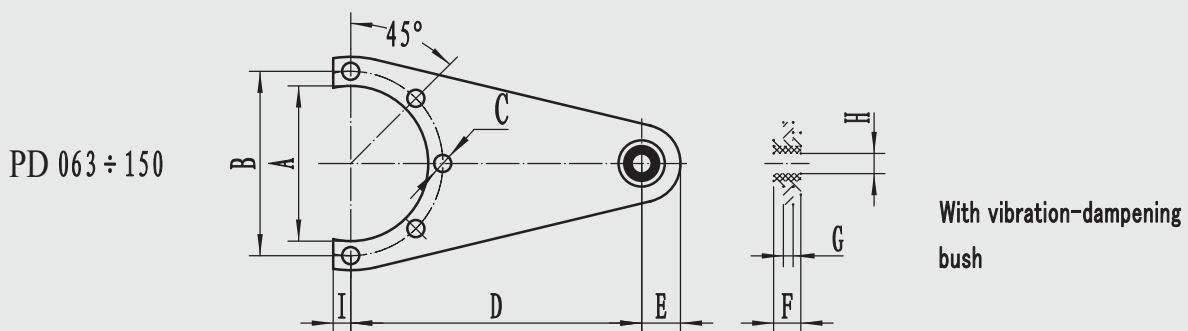
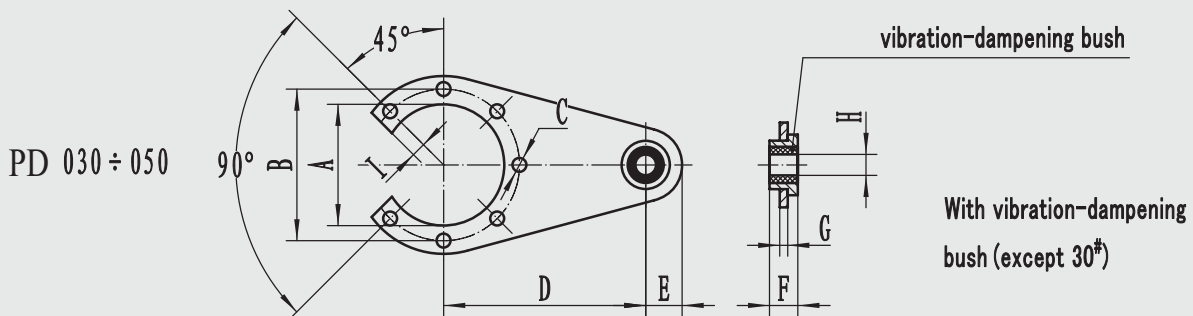
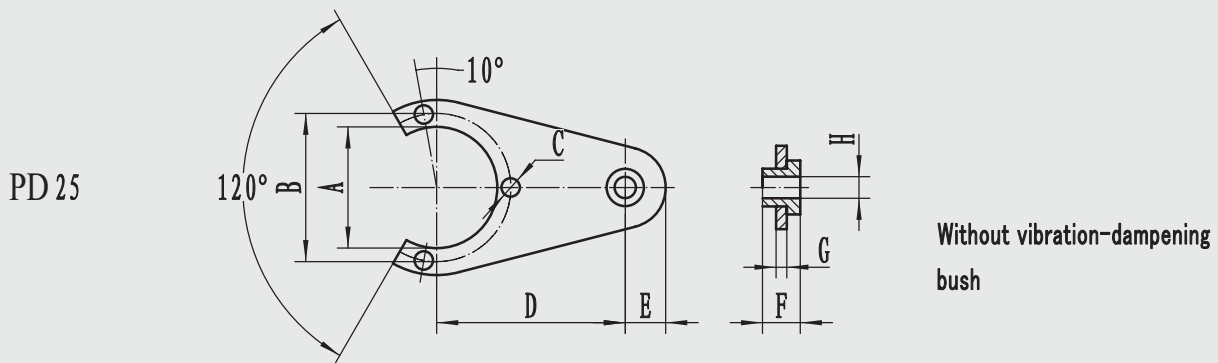
# ACCESSORY DIMENSIONS

## 6.1 Pre-stage helical module dimensions



	PC63	PC71	PC80	PC90	PC56C (Inch)
A	43	54	66	66	2.126
D	11	14	19	24	0.625
D1	4	5	6	8	0.1875
D2	12.8	16.3	21.8	27.3	0.709
D3	140	160	200	200	6.5
D4	95	110	130	130	4.5
D5	115	130	165	165	5.875
D6	8.5	8.5	11	11	0.415
N	14	19	28	28	0.748
N1	5	6	8	8	0.236
N2	16	21.5	31	31	0.846
N3	105	120	160	160	4.724
N4	70	80	110	110	3.150
N5	85	100	130	135	3.937
N6	M6	M6	M8	M8	M6
L	77	80	134	134	5.787
L1	30	40	60	60	1.575

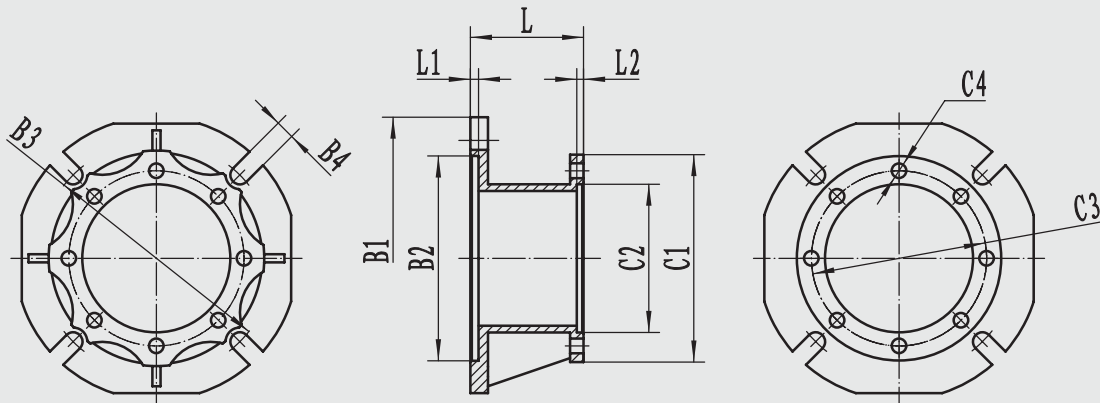
## 6.2 Torque arm dimensions



	A	B	C	D	E	F	G	H	I
025	45	55	7	70	15	14	4	8	-
030	55	65	7	85	15	14	4	8	7
040	60	75	7	100	18	14	4	10	7
050	70	85	9	100	18	14	4	10	9
063	80	95	9	150	20	14	6	10	9
075	95	115	9	200	20	25	6	20	9
090	110	130	11	200	20	25	6	20	11
110	130	165	11	250	35	30	6	25	15
130	180	215	13	250	35	30	6	25	15
150	180	215	13	250	35	30	6	25	15

# ACCESSORY DIMENSIONS

## 6.3 Output flange dimensions



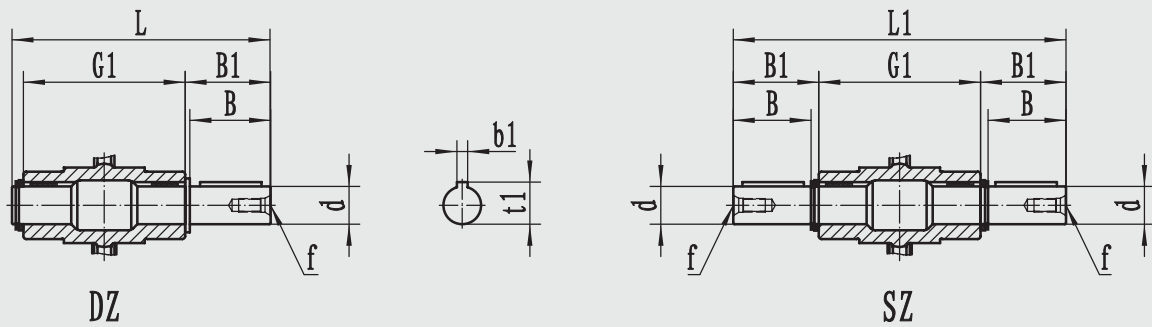
FA												
	B1	B2	B3	B4	L	L1	L2	C1	C2	C3	C4	
025	75	40	55	4-φ6.5	22.5	3	3	70	45	55	4-M6	
030	80	50	68	4-φ6.5	25.5	4	3	75	55	65	4-φ7	
040	110	60	75	4-φ9	30.5	4	3.5	87	60	75	4-φ7	
050	125	70	85	4-φ11	46.5	5	4	100	70	85	4-φ9	
063	180	115	150	4-φ11	29	6	-	110	80	95	8-φ9	
075	200	130	165	4-φ14	54	6	-	140	95	115	8-φ9	
090	210	152	175	4-φ14	44	6	-	160	110	130	8-φ11	
110	280	170	230	8-φ14	57	6	-	200	130	165	8-φ11	
130	320	180	255	8-φ16	59	6	5	250	160	215	8-φ14	
150	320	180	255	8-φ16	59	6	5	250	160	215	8-φ14	

FB												
	B1	B2	B3	B4	L	L1	L2	C1	C2	C3	C4	
040	110	60	75	4-φ9	60.5	4	3.5	87	60	75	4-φ7	
050	125	70	85	4-φ11	76.5	5	4	100	70	85	4-φ9	
063	180	115	150	4-φ11	59	6	-	110	80	95	8-φ9	
075	160	110	130	4-φ11	33	6	-	140	95	115	4-φ9	
090	150	180	215	4-φ14	55	6	-	160	110	130	8-φ11	
110	280	170	230	8-φ14	106	6	-	200	130	165	8-φ11	

FC												
	B1	B2	B3	B4	L	L1	L2	C1	C2	C3	C4	
040	180	95	115	4-φ9.5	43.5	5	-	87	60	75	4-φ7	
050	160	110	130	4-φ11	45.5	5	-	100	70	85	4-φ9	
063	200	130	165	4-φ11	45	5	-	110	80	95	8-φ9	
090	200	130	165	4-φ11	45	5	-	160	110	130	8-φ11	

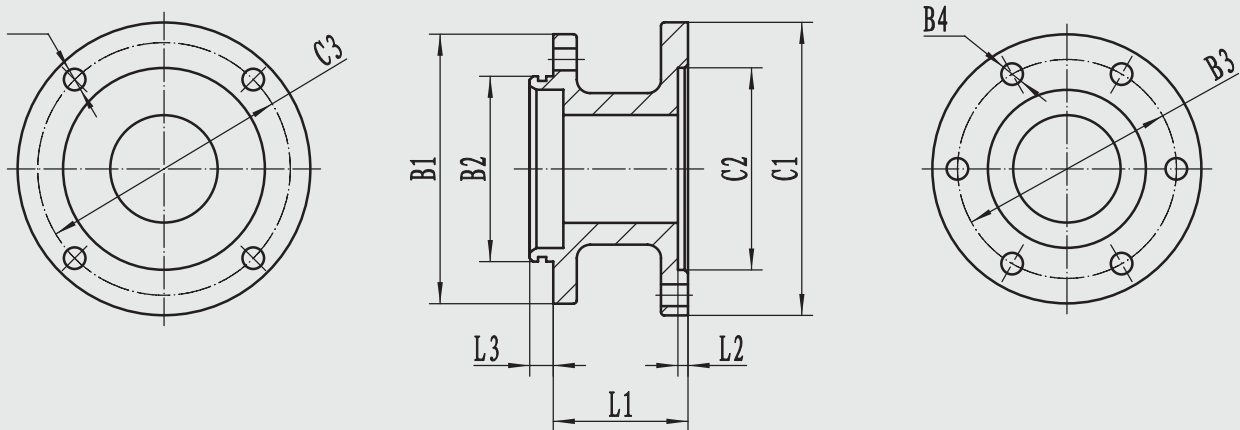
FD												
	B1	B2	B3	B4	L	L1	L2	C1	C2	C3	C4	
040	120	80	100	4-φ9	22	5	-	87	60	75	4-φ7	
050	140	95	115	4-φ11	28.5	5	-	100	70	85	4-φ9	
063	200	130	165	4-φ11	54	5	-	110	80	95	8-φ9	
090	210	152	175	4-φ14	84	6	-	160	110	130	8-φ11	

## 6.4 Output shaft dimensions



	d	B	B1	G1	L	L1	f	b1	t1
025	11	23	25.5	50	81	101	-	4	12.5
030	14	30	32.5	63	102	128	M6	5	16
040	18	40	43	78	128	164	M6	6	20.5
050	25	50	53.5	92	153	199	M10	8	28
063	25	50	53.5	112	173	219	M10	8	28
075	28	60	63.5	120	192	247	M10	8	31
090	35	80	84.5	140	234	309	M12	10	38
110	42	80	84.5	155	249	324	M16	12	45
130	45	80	85	170	170	340	M16	14	48.5
150	50	82	87	200	200	374	M16	14	53.5

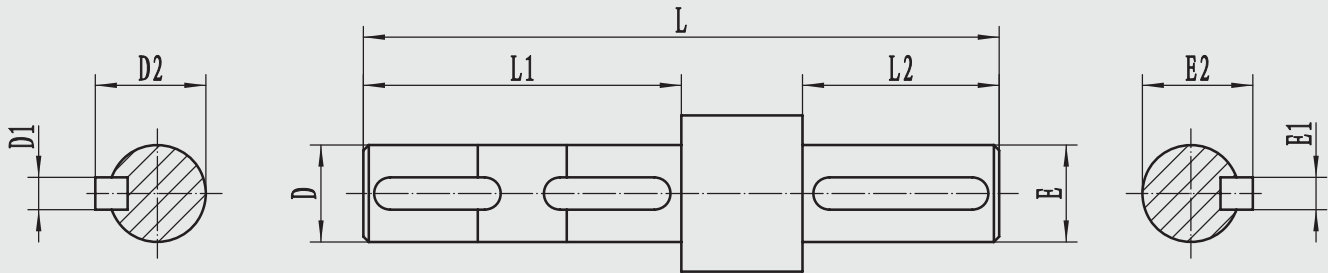
## 6.5 Double stage coupling flange dimensions



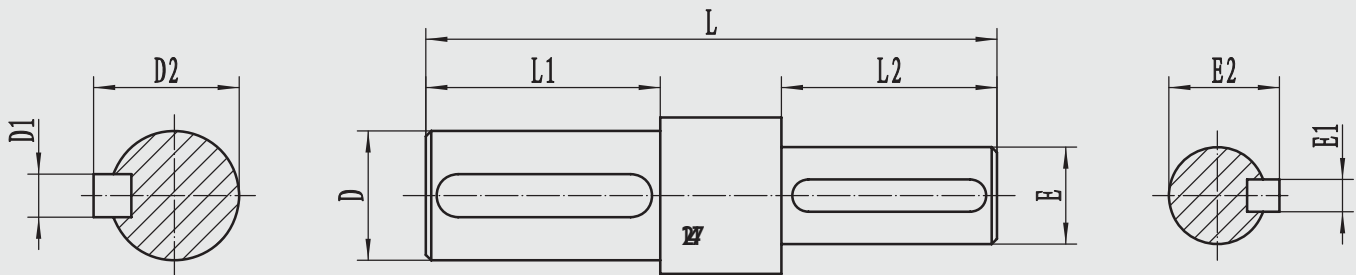
	B1	B2	B3	B4	L1	L2	L3	C1	C2	C3	C4
025/030	58	37	45	4-φ5.5	36.5	3	6	70	45	55	3-φ7
025/040	75	47	57	6-φ6.8	41.5	3	6.8	70	45	55	3-φ7
030/040	75	47	57	6-φ6.8	40	3.5	6.8	75	55	65	4-φ6.8
030/050	80	55	65	6-φ6.8	40	3.5	7	75	55	65	4-φ6.8
030/063	89	62	75	6-φ9	42	3.5	7	75	55	65	4-φ7
040/075	96	68	82	6-φ9	41	3.5	7	87	60	75	4-φ7
040/090	96	68	82	6-φ9	41	3.5	7	87	60	75	4-φ7
050/110	115	80	95	6-φ9	56.5	3.5	7	100	70	85	4-φ9
063/130	115	80	95	6-φ9	47	4	7	110	80	95	8-φ9
063/150	155	110	130	6-φ13	52	4	10	110	80	95	8-φ9

# ACCESSORY DIMENSIONS

## 6.6 Double stage coupling shaft dimensions



	D	D1	D2	L	L1	L2	E	E1	E2
040/075	18	6	20.5	145	70	52.5	28	8	31
040/090	18	6	20.5	145	70	52.5	28	8	31
050/110	25	8	28	182.5	89	63	38	10	41
063/150	25	8	28	193	105	70	38	10	41
				213		90			



	D	D1	D2	L	L1	L2	E	E1	E2			
025/030	11	4	12.5	71.5	32	16	9	3	10.2			
				73.5		18				11	4	12.5
025/040	11	4	12.5	75.5	32	18	11	4	12.5			
				82		25				14	5	16
030/040	14	5	16	84.5	35.5	25	14	5	16			
030/050	14	5	16	76.5	35.5	18	11	4	12.5			
				82.5		24				14	5	16
				92.5		34				19	6	21.5
030/063	14	5	16	86.5	35.5	24	14	5	16			
				96.5		34				19	6	21.5
				98		35.5				24	8	27
040/075	18	6	20.5	96	40	33.5	19	6	21.5			
	18			106		43.5				24	8	27
	19			96		33.5				19	6	21.5
040/090	18	6	20.5	96	40	33.5	19	6	21.5			
	18			106		43.5				24	8	27
	19			96		33.5				19	6	21.5
050/110	25	8	28	124	53.5	40	24	8	27			
				134		50				28	8	31
063/130	25	8	28	117	57.5	38	24	8	27			
				127		48				28	8	31
				147		38				38	10	41
063/150	25	8	28	118	50	28	28	8	31			

## 7. Lubrication recommended by manufacturer

	PD 110 ÷ 150	PD 025 + 090 PC63 ÷ 90
Lubricant	Mineral oil	Synthetic oil
T°C	(-5) ÷ (+40)	(-25) ÷ (+50)
ISO VG...	ISO VG460	ISO VG320
AGIP	BLASIA 460	TELIUM VSF320
SHELL	OMALA OIL460	TIVELA OIL S320
ESSO	SPARTAN EP460	S220
MOBIL	MOBIL SHC634	MOBIL SHC632
CASTROL	ALPHA MAX 460	ALPHASYN PG320
BP	ENERGOL GR-XP460	ENERGOL SG-XP320

## Oil Capacities

PD	025	030	040	050	063	075	090	110	130	150
B3	0.02	0.04	0.08	0.12	0.25	0.4	1	3	4.5	7
B8								2.2	3.3	5.1
B6 B7								2.5	3.5	5.4
V5								3	4.5	7
V6								2.2	3.3	5.1

PC	063	071	080	090
B3 B8	0.05	0.07	0.15	0.16
B6 B7				
V5 V6				

## Usage Specifications

- Make sure that the reducer is placed on a flat, non-flexible surface and is not subject to any vibration. It is advisable to fix the screw head by means of cut washers.
- For outdoor applications, provide suitable protection against the atmosphere and direct precipitation. For applications in humid environments, provide appropriate protections onto the reducer machined surfaces.
- During mounting of pinions, couplings or pulleys onto the output shafts, try avoid any impact by using the appropriate pullers located in the threaded holes at the end of the same shaft.
- When reducer starts to work up to 150 hours, its lubricants should be replaced. There after, the cycle of oil replacement is approximately 4000 hours.
- Adequate lubrication should be kept in the casing and checked at a fixed time.
- Avoid mixing synthetic and mineral lubricants.





# BRINGING THE WORLD'S BEST BRANDS TO YOU

In the bid to procure cutting-edge components at competitive prices, BMG is able to capitalise on long-standing relationships with leading manufacturers dedicated to excellence in design and production.

Products are imported from around the globe and brought to BMG's strategically located distribution facilities and regional service centres via the main distribution hub in Johannesburg - BMG World. A world-class facility boasting 308 000m<sup>3</sup> of fully stocked warehouse space, an accredited training facility and unlimited engineering capabilities.

## Preferred Brands:

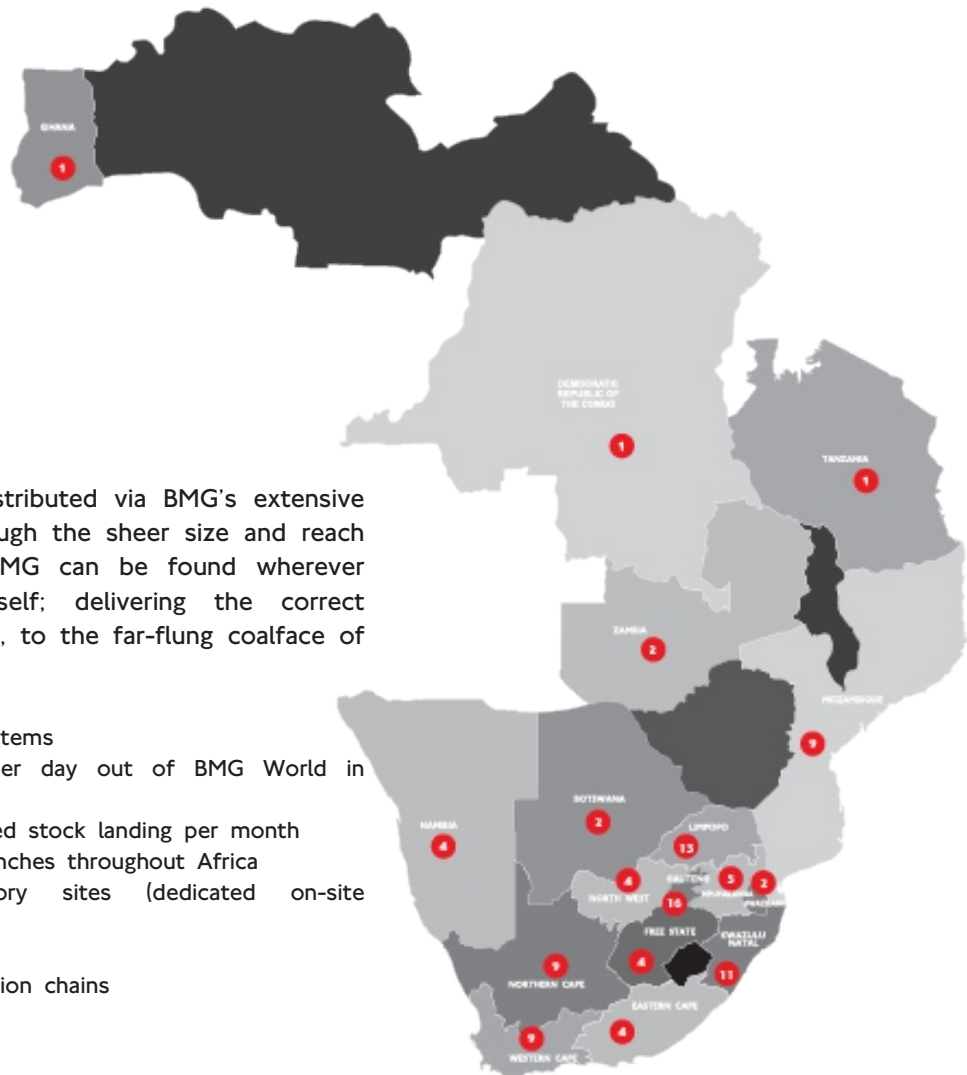


## Our Extensive Coverage Throughout Africa

**98**  
BRANCHES

Products and services are distributed via BMG's extensive distribution network. It's through the sheer size and reach of our infrastructure, that BMG can be found wherever industry has established itself; delivering the correct components at the right time, to the far-flung coalface of our customers' operations.

- Over 300 000 product line items
- Around 4 500 transfers per day out of BMG World in Johannesburg
- Over 1 000 tons of imported stock landing per month
- 92 strategically situated branches throughout Africa
- Vendor Managed Inventory sites (dedicated on-site stockholding)
- International exports
- Locally empowered distribution chains



24 HR TOLL-FREE EMERGENCY  
BRANCH HELPLINE:

**0800 022 224**

WEBSITE:

**[www.bmgworld.net](http://www.bmgworld.net)**



 An Invicta Holdings Group Company

BEARINGS • SEALS • POWER TRANSMISSION • DRIVES & MOTORS  
MATERIALS HANDLING • FASTENERS & TOOLS • HYDRAULICS  
PNEUMATICS • FILTRATION • LUBRICATION • VALVES  
TECHNICAL RESOURCES • FIELD SERVICES

**B-BBEE 2**  
EMPOWERING SUPPLIER

ISO 9001	Certified
ISO 14001	Certified
ISO 45001	Certified