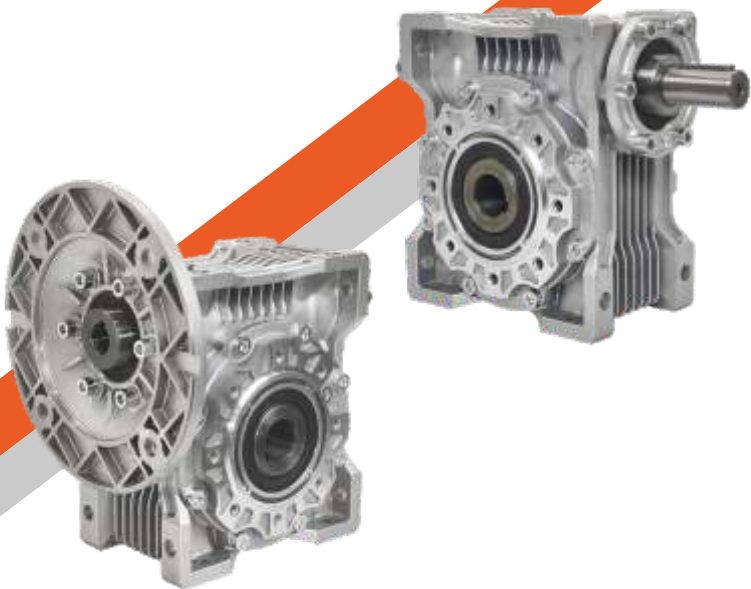




UNLEASHING
POWER



UNLOCKING
VALUE



Series PBWR
Worm Gear Reducers



GEARED MOTORS · GEARBOXES · GEAR ASSEMBLIES · DRIVE SOLUTIONS

AN AERIAL VIEW OF THE RADICON POWERBUILD

Leaders in Power Transmission Solutions and packed with intensive research, Power Build's geared motors have strongly positioned itself amongst the best products available in the country today.

The flag ship company considered to be the pioneer in manufacturing of geared motors in India, was established in the year 1972, at Vallabh Vidyanagar, Gujarat. Committed workforce supported by ultra modern facilities and backed up by the latest generation technological developments, has set the company on the track of rapid growth path. As a result the company has today made its presence felt at all the major core sectors.

The Company got certified for successfully implementing ISO 9001:2000 quality standard in the year 2006 from TUV Rheinland and subsequently got certified for implementing ISO 9001:2015, ISO 14001:2018, ISO 45001:2018 standards in April, 2019. With this certification PBPL became the first hard core engineering company in western India to get this honour. The company also awarded the most precious TPM Excellence Award, Japan in 2018.

Initially PBPL started building the geared motors using the German technology and later on also incorporated technology from Europe for extending the product range. Quick adaptation to innovative technology has been the key to success for the company. The products of the company are built with the most modern methodology called "Kit Concept" and are dimensionally interchangeable with other major brands.



GEARED MOTORS • GEARBOXES • GEAR ASSEMBLIES • DRIVE SOLUTIONS

POWER BUILD PRIVATE LIMITED
Leaders in Power Transmission Solutions



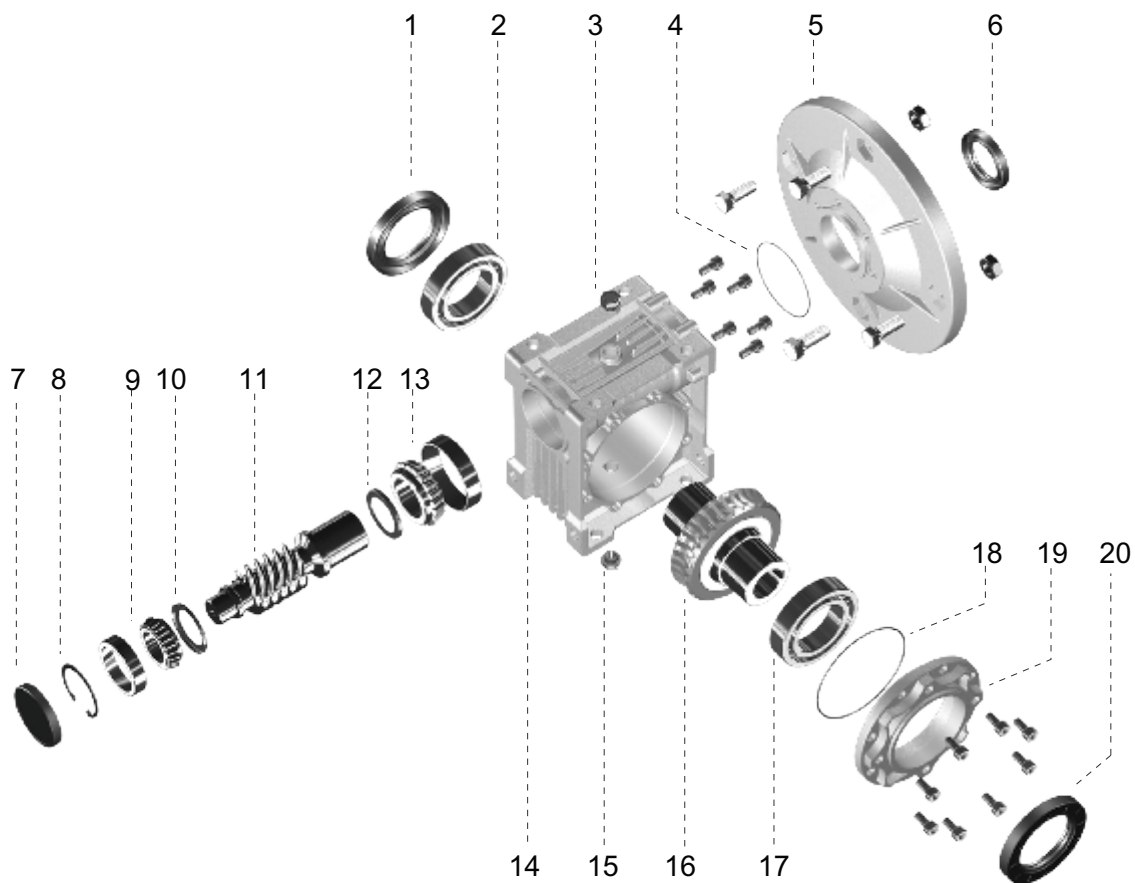
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The advantages of worm reducer

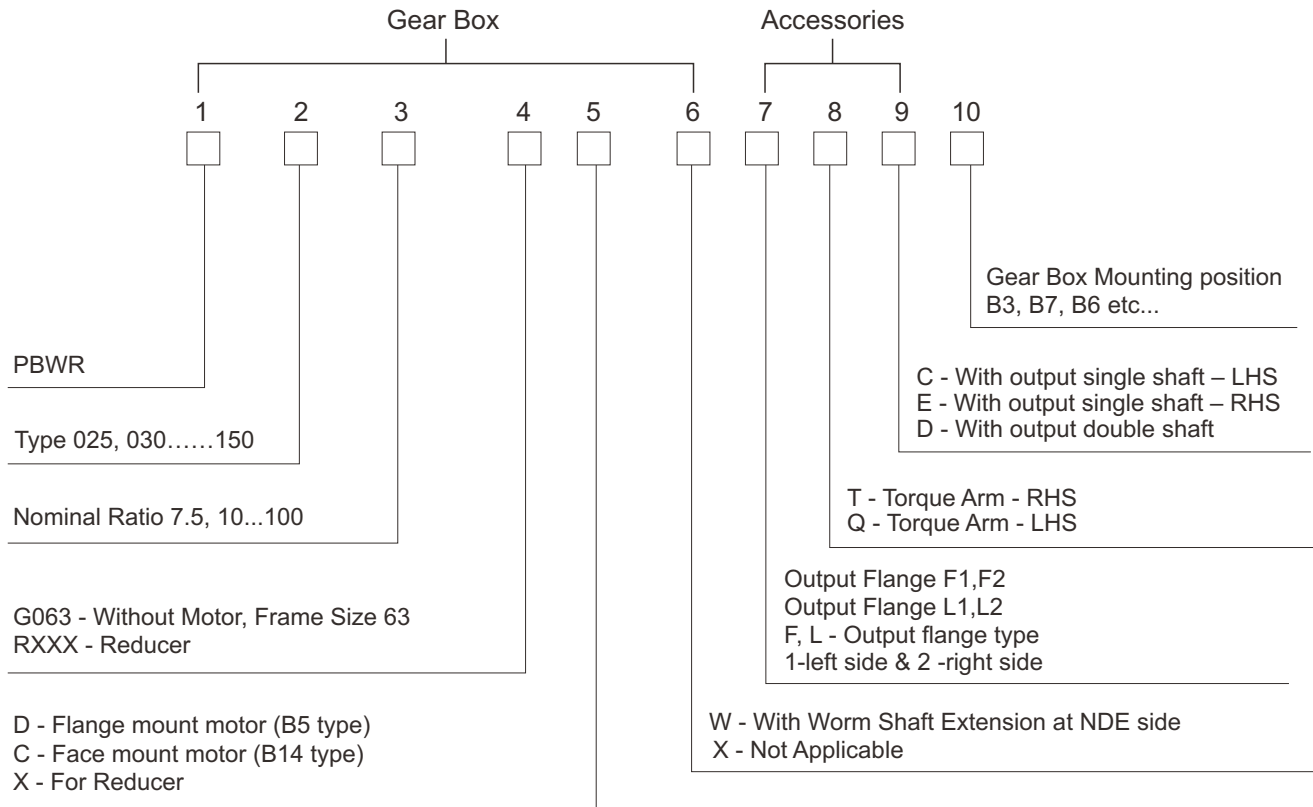
1. High quality Aluminum alloy, appearance elegant, efficient thermally, high load carrying capacity.
2. Installed in multi-surfaces, hollow output shaft, various type of input and output end accessories.
3. We can mount other transmission machinery easily.
4. Small size, compact construction, light weight, robust design and save place for mounting.
5. Run steadily and low noise.
6. High reliability and high efficiency.

Basic structure



- | | | | |
|-----------------|---------------------|---------------------|-----------------------|
| 1. Oil seal | 6. Oil seal | 11. Worm Shaft | 16. Worm Wheel |
| 2. Bearing | 7. Oil Seal Cover | 12. Oil baffle disc | 17. Bearing |
| 3. Air Vent | 8. Circlip | 13. Bearing | 18. O-Ring |
| 4. O-Ring | 9. Bearing | 14. Housing | 19. Bearing and cover |
| 5. Input flange | 10. Oil baffle disc | 15. Drain Plug | 20. Oil seal |

UNIT DESCRIPTION SINGLE STAGE WORM REDUCER



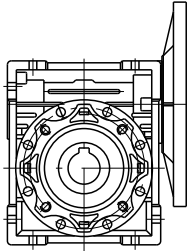
Kindly Note that digits 7 to 9 are omitted when not required.

Explanation of the Gearbox Nomenclature :

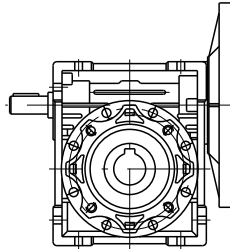
PBWR	Gear Box type (Motor Mount Reducer/ Reducer / Geared Motor)
25-30-40-50-63-75-90-110-130-150	Gear Box size
7.5-10-15-20-25-30-40-50-60-80-100	Nominal ratio
G063	Without Motor, Frame Size 63
RXXX	Reducer
F1,F2	Output Flange Type, 1 - Left Side, 2 - Right Side
T	T - Torque Arm - RHS,Q - Torque Arm - LHS
W	With Worm Shaft Extn at NDE side
C,E	With output single shaft – LHS,With output single shaft – RHS
D	With output double shaft
1 TO 6	Mounting Position - 1(B3), 2(B7), 3(B6), 4(B8), 5(V5), 6(V6).

GEARBOX WITH ACCESSORIES OPTIONS

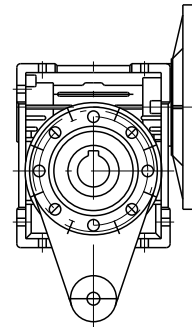
PBWR.....



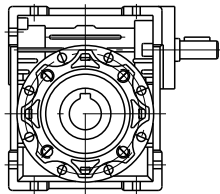
PBWR.....W



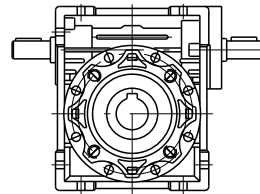
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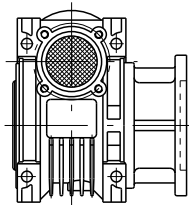
PBWR...R....



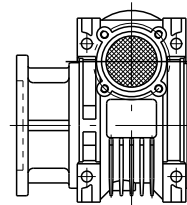
PBWR...R...W..



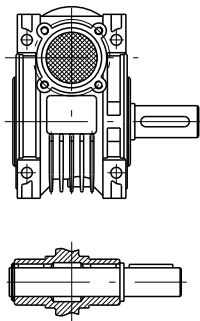
.....F1,L1



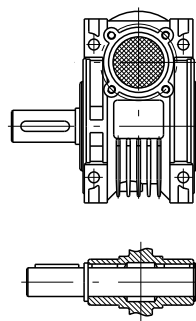
.....F2,L2



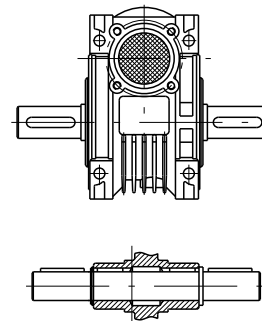
.....E



.....C



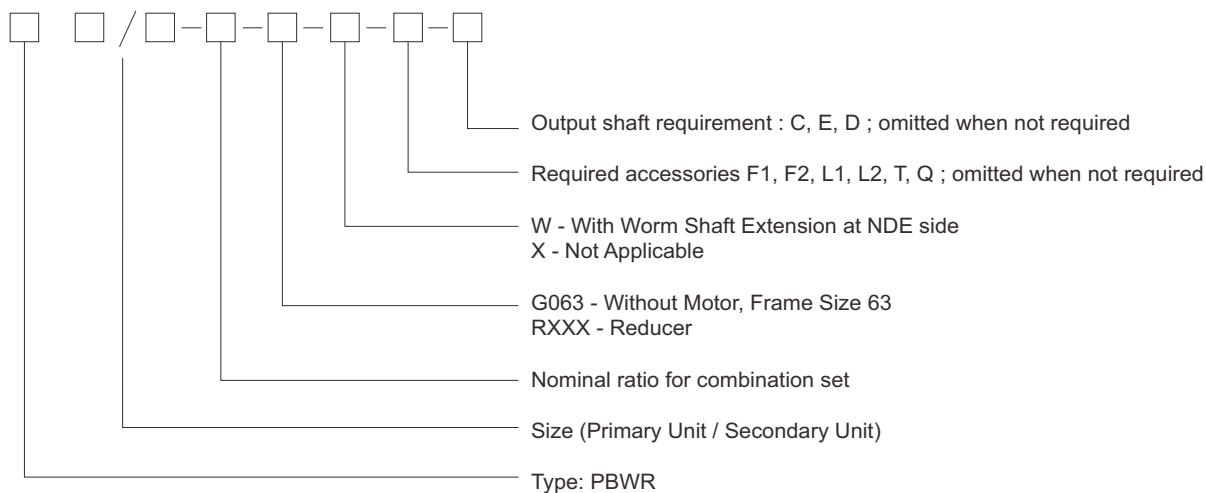
.....D



"Kindly note that the orientation of the accessories shown in the pictures is from the backside of the gearbox."

UNIT DESCRIPTION DOUBLE STAGE WORM REDUCER

Combination of double stage worm reducer



Different type of Mounting Position - Double stage worm reducer

AS1 	AS2 	BS1 	BS2 
VS2 	VS1 	PS1 	PS2 

**EXPLANATION OF
THE GEARBOX NOMENCLATURE****Examples :**

1. PBWR-040-030-G063-F1-D

Means:

Gearbox Type : PBWR

Gearbox Size : 40

Nominal Ratio : 30

Without Electric Motor, Frame size 63

Output Flange : Type F

Right Side : 1

Double Output Shaft : D

2. PBWR-110-080-RX55-W-L2-Q

Means:

Gearbox Type : PBWR

Gearbox Size : 110

Nominal Ratio : 80

Reducer, Motor Power, 0.55 Kw : RX55

With Shaft Extension at Non Drive End : W

Output Flange : Type L

Left Side : 2

Torque Arm Left Side : Q

3. PBWR 40/75-300-G071-W

Means:

Gearbox Type : PBWR

Gearbox Size : 40/75

Nominal Ratio : 300

Without Electric Motor, Frame size 71

With Shaft Extension at Non Drive End : W

MOUNTING POSITION & LUBRICANT DETAILS OF REDUCER

Mounting Position of the Single Stage Worm Reducer and corresponding Oil Filling Amount and Lubricant Types

1. Mounting Position

Note: ○ Oil filling hole and air hole ● Oil level glass ● Oil drain plug

B3

B8

V5

V6

B6

B7

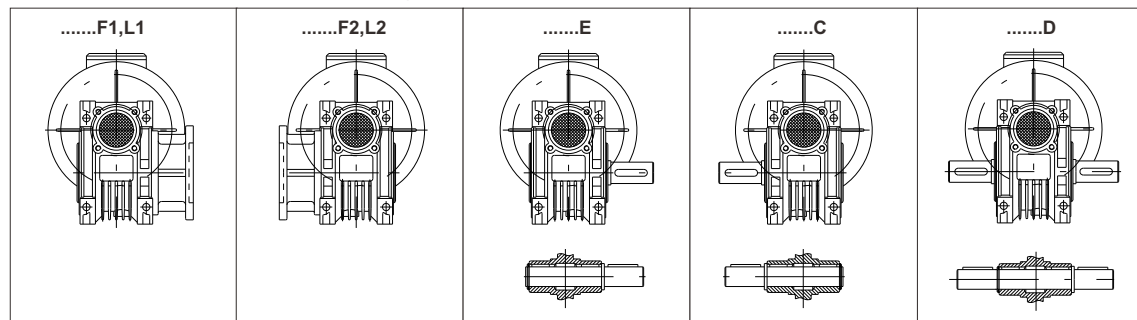
2. Oil quantities against different mounting positions

Gearbox Size		PBWR25	PBWR30	PBWR40	PBWR50	PBWR63	PBWR75	PBWR90	PBWR110	PBWR130	PBWR150
Lubricating oil (Liter)	B3	0.02	0.04	0.08	0.15	0.3	0.55	1.0	3.0	4.5	7.0
	B6,B7								2.5	3.5	5.4
	B8								2.2	3.3	5.1
	V5						0.75	1.25	3.0	4.5	7.0
	V6								2.2	3.3	5.1

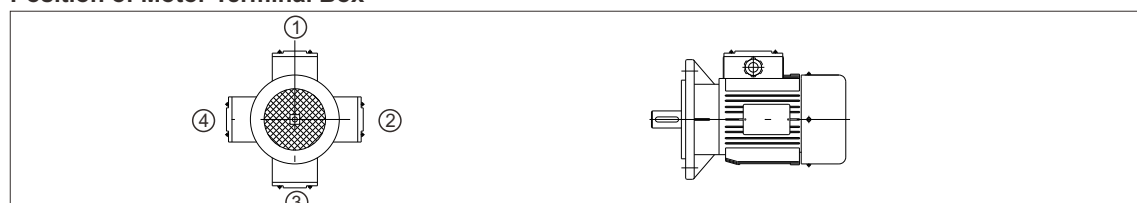
3. Lubricating oil

Gearbox Size		PBWR25, PBWR30, PBWR40 PBWR50, PBWR63, PBWR75			PBWR90, PBWR110, PBWR130, PBWR150		
	Lubricant	Synthetic Oil			Synthetic Oil	Mineral Oil	
	Ambient Temperature	-25°C ~ +50 °C			-25°C ~ +50 °C	-5°C ~ +40 °C	-15°C ~ +40 °C
ISO		VG320			VG320	VG460	VG320
Used in International	AGIP	TELUM VSF320			TELUM VSF320	BLASIA 460	BLASIA 220
	SHELL	TIVELA S320			TIVELA S320	OMALA OIL 460	OMALA OIL 220
	ESSO	S220			S220	SPARTAN EP 460	SPARTAN EP 220
	MOBIL	GLYGOYLE 30			GLYGOYLE 30	MOBIL GEAR 634	MOBIL GEAR 630
	CASTROL	ALPHASYN PG 320			ALPHASYN PG 320	ALPHA MAX 460	ALPHA MAX 220
	BP	ENERGOL SG-XP 320			ENERGOL SG-XP 320	ENETGOL SG-XP 460	ENETGOL SG-XP 220

Installation Position of Output flange, Output Shaft of Gearboxes



Position of Motor Terminal Box



*Kindly note that “○” denoted as a terminal box position

TYPE OF LOAD AND SERVICE FACTOR OF REDUCER

Load carrying capacity of worm gearbox:

Reference circle of worm slide(m/s)	Lubricant Grade
≤ 2.2	ISO VG - 460
$> 2.5-5$	ISO VG - 320
$> 5-12$	ISO VG - 220

Selection criteria to find out service factor of worm gearbox :

(Table 2)

No. of starts per hour <10			
Nature of load generated by driven machine	Duty cycle (Hours per day)		
	< 2	2~8	8~16
Uni form	0.8	1	1.25
Moderate shock	1	1.25	1.5
heavy shock	1.25	1.5	1.75

(Table 3)

No. of starts per hour >10			
Nature of load generates by driven machine	Duty cycle (Hours per day)		
	< 2	2~8	8~24
Uniform	1	1.25	1.75
Moderate shock	1.5	1.75	2
Heavy shock	1.75	2	2.25

RATINGS SINGLE STAGE WORM GEAR REDUCER

Selection Parameter of Single Stage Worm Gear Reducer (Input Speed 1400 rpm, 4 Pole)

Output speed (r/min)	Output torque (N.m)	Service Factor	Ratio (i)	Type	Output speed (r/min)	Output torque (N.m)	Service Factor	Ratio (i)	Type	
0.06kW					0.12kW					
186.7	2.6	4.2	7.5	PBWR25	46.7	17.2	2.6	30	PBWR40	
140	3.4	3.5	10		35	21	1.9	40		
93.3	4.9	2.5	15		28	25	1.5	50		
70	6.1	2.0	20		23.3	28	1.3	60		
46.7	8.2	1.6	30		17.5	34	1.0	80		
35	10	1.3	40		14	38	0.8	100		
28	12	0.9	50							
23.3	14	0.7	60							
186.7	2.6	6.9	7.5	PBWR30	23.3	29	2.3	60	PBWR50	
140	3.4	5.4	10		17.5	35	1.9	80		
93.3	4.7	3.8	15		14	40	1.4	100		
70	6	3.0	20		0.18kW					PBWR30
56	7	3.0	25		186.7	7.8	2.3	7.5		
46.7	8	2.5	30		140	10	1.8	10		
35	9.7	1.9	40		93.3	14	1.3	15		
28	11	1.5	50		70	18	1.0	20		
23.3	13	1.3	60		56	21	1.0	25		
17.5	14	0.9	80		46.7	24	0.8	30		
0.09kW					70	19	2.0	20	PBWR40	
186.7	3.9	2.8	7.5	PBWR25	56	23	1.7	25		
140	5.1	2.4	10		46.7	26	1.7	30		
93.3	7.3	1.6	15		35	32	1.3	40		
70	9.2	1.3	20		28	38	1.0	50		
46.7	12	1.1	30		23.3	43	0.8	60		
35	15	0.9	40							
186.7	3.9	4.6	7.5	PBWR30	35	32	2.3	40	PBWR50	
140	5	3.6	10		28	39	1.9	50		
93.3	7.1	2.5	15		23.3	43	1.6	60		
70	9	2.0	20		17.5	52	1.2	80		
56	10	2.0	25		14	60	0.9	100		
46.7	12	1.7	30		0.25kW					PBWR40
35	14	1.2	40		186.7	11	3.6	7.5		
28	17	1.0	50		140	14	2.8	10		
23.3	19	0.9	60		93.3	21	1.9	15		
				70	27	1.5	20			
28	19	2.0	50	PBWR40	56	32	1.2	25		
23.3	21	1.7	60		46.7	36	1.3	30		
17.5	26	1.3	80		35	44	0.9	40		
14	29	1.0	100		28	47	0.8	50		
0.12kW										
186.7	5.2	3.4	7.5	PBWR30	70	26	2.7	20	PBWR50	
140	6.7	2.7	10		56	32	2.2	25		
93.3	9.5	1.9	15		46.7	37	2.3	30		
70	12	1.5	20		35	46	1.7	40		
56	14	1.5	25		28	54	1.4	50		
46.7	16	1.3	30		23.3	60	1.1	60		
35	19	0.9	40		17.5	72	0.9	80		
28	23	0.8	50							

RATINGS SINGLE STAGE WORM GEAR REDUCER

Selection Parameter of Single Stage Worm Gear Reducer (Input Speed 1400 rpm, 4 Pole)

Output speed (r/min)	Output torque (N. m)	Service Factor	Ratio (i)	Type	Output speed (r/min)	Output torque (N. m)	Service Factor	Ratio (i)	Type
0.25kW					0.75kW				
28	56	2.4	50	PBWR63	93.3	63	1.2	15	PBWR50
23.3	63	2.0	60		70	81	0.9	20	
17.5	78	1.6	80		PBWR63	93.3	63	2.2	15
14	87	1.4	100			70	83	1.6	20
0.37kW						56	100	1.3	25
186.7	16	2.4	7.5	PBWR40		46.7	114	1.4	30
140	21	1.9	10		35	143	1.0	40	
93.3	31	1.3	15		PBWR75	56	102	2.0	25
70	39	1.0	20			46.7	117	2.0	30
56	47	0.8	25	35		147	1.5	40	
46.7	53	0.8	30	28		177	1.2	50	
					23.3	200	1.0	60	PBWR90
140	21	3.3	10	PBWR50	28	184	1.8	50	
93.3	31	2.4	15		23.3	212	1.5	60	
70	40	1.8	20		17.5	258	1.1	80	
56	48	1.5	25		14	302	0.9	100	
46.7	55	1.5	30	PBWR63	1.1kW				
35	68	1.1	40		186.7	49	2.6	7.5	PBWR63
28	80	0.9	50		140	65	2.0	10	
23.3	89	0.8	60		93.3	93	1.5	15	
35	70	2.1	40	70	122	1.1	20		
28	83	1.6	50	PBWR50	56	146	0.9	25	
23.3	94	1.4	60		46.7	167	1.0	30	
17.5	115	1.1	80		35	165	0.9	40	
14	129	0.9	100		93.3	95	2.1	15	
0.55kW					70	123	1.7	20	PBWR75
186.7	25	2.9	7.5	PBWR50	56	150	1.3	25	
140	32	2.2	10		46.7	171	1.3	30	
93.3	46	1.6	15		35	216	1.0	40	
70	59	1.2	20		28	264	0.9	50	
56	71	1.0	25	PBWR63	23.3	223	0.8	60	
46.7	81	1.0	30		35	225	1.6	40	
35	80	0.9	40		28	270	1.3	50	
70	60	2.2	20		23.3	311	1.0	60	
56	73	1.8	25	PBWR75	17.5	328	0.9	80	
46.7	83	1.9	30		28	281	2.3	50	
35	105	1.4	40		23.3	324	1.9	60	
28	124	1.1	50		17.5	402	1.3	80	
23.3	140	0.9	60	PBWR90	14	473	1.0	100	
35	108	2.0	40		1.5kW				
28	129	1.6	50		186.7	67	1.9	7.5	PBWR63
23.3	146	1.4	60		140	89	1.5	10	
17.5	180	1.1	80	93.3	127	1.1	15		
14	206	0.9	100	70	166	0.8	20		
17.5	189	1.5	80	PBWR90					
14	221	1.2	100						

RATINGS SINGLE STAGE WORM GEAR REDUCER

Selection Parameter of Single Stage Worm Gear Reducer (Input Speed 1400 rpm, 4 Pole)

Output speed (r/min)	Output torque (N. m)	Service Factor	Ratio (i)	Type	Output speed (r/min)	Output torque (N. m)	Service Factor	Ratio (i)	Type	
1.5kW					3kW					
140	90	2.2	10	PBWR75	186.7	136	1.4	7.5	PBWR75	
93.3	130	1.5	15		140	180	1.1	10		
70	168	1.3	20		93.3	261	0.8	15		
56	205	1.0	25		186.7	138	2.1	7.5	PBWR90	
46.7	233	1.0	30		140	182	1.7	10		
70	171	2.1	20	93.3	264	1.4	15			
56	210	1.6	25	70	344	1.0	20			
46.7	239	1.7	30	56	420	0.8	25			
35	307	1.2	40	PBWR90	46.7	479	0.9	30		
28	368	0.9	50		93.3	264	2.5	15	PBWR110	
23.3	424	0.8	60		70	348	1.9	20		
35	319	2.2	40		56	430	1.6	25		
28	384	1.7	50		46.7	485	1.5	30		
23.3	442	1.4	60	35	638	1.1	40			
17.5	548	0.9	80	PBWR110	28	767	0.9	50		
2.2kW					56	429	2.2	25	PBWR130	
186.7	100	1.8	7.5		PBWR75	46.7	491	2.1		30
140	132	1.5	10			35	638	1.6		40
93.3	191	1.0	15			28	767	1.3		50
70	240	0.9	20	23.3		884	1.0	60		
46.7	269	0.8	30	17.5		1113	0.8	80		
186.7	101	2.9	7.5	PBWR90	28	777	1.8	50	PBWR150	
140	134	2.3	10		23.3	896	1.4	60		
93.3	194	1.9	15		17.5	1113	1.0	80		
70	252	1.4	20		14	1310	0.8	100		
56	308	1.1	25		3.7kW					
46.7	351	1.2	30	186.7	168	1.1	7.5	PBWR75		
35	433	1.0	40	140	222	0.9	10			
28	393	0.9	50	186.7	170	1.7	7.5	PBWR90		
70	255	2.5	20	PBWR110	140	224	1.4		10	
56	315	2.2	25		93.3	326	1.1		15	
46.7	356	2.0	30		70	424	0.9		20	
35	468	1.5	40		140	224	2.7	10	PBWR110	
28	563	1.2	50		93.3	326	2.1	15		
23.3	648	1.0	60	70	429	1.5	20			
35	468	2.2	40	56	530	1.3	25	PBWR130		
28	563	1.7	50	46.7	598	1.2	30			
23.3	648	1.4	60	56	530	1.7	25			
17.5	816	1.0	80	46.7	606	1.7	30			
14	869	0.8	100	35	787	1.3	40			
28	570	2.5	50	PBWR150	28	946	1.1	50		
23.3	657	1.9	60		23.3	1091	0.9	60		
17.5	816	1.4	80							
14	960	1.0	100							

RATINGS
SINGLE STAGE WORM GEAR REDUCER

Selection Parameter of Single Stage Worm Gear Reducer (Input Speed 1400 rpm, 4 Pole)

Output speed (r/min)	Output torque (Nm)	Service Factor	Ratio (i)	Type	Output speed (r/min)	Output torque (Nm)	Service Factor	Ratio (i)	Type
3.7kW					15kW				
28	958	1.5	50	PBWR150	186.7	698	1.7	7.5	PBWR150
23.3	1105	1.2	60		140	921	1.3	10	
17.5	1373	0.9	80		93.3	1351	0.9	15	
5.5kW					70	1760	0.7	20	
186.7	253	2.2	7.5	PBWR110					
140	334	1.8	10						
93.3	484	1.4	15						
70	638	1.0	20						
56	711	0.9	25						
140	333	2.5	10	PBWR130					
93.3	490	1.9	15						
70	645	1.4	20						
56	788	1.2	25						
46.7	900	1.2	30						
35	1171	0.9	40						
28	1103	0.8	50						
70	645	2.0	20	PBWR150					
56	788	1.5	25						
46.7	934	1.3	30						
35	1171	1.3	40						
28	1426	1.0	50						
23.3	1643	0.8	60						
7.5kW									
186.7	345	1.6	7.5	PBWR110					
140	455	1.3	10						
93.3	660	1.0	15						
186.7	349	2.1	7.5	PBWR130					
140	455	1.8	10						
93.3	668	1.4	15						
70	880	1.0	20						
56	1074	0.9	25						
46.7	1228	0.8	30						
35	1596	0.7	40						
11kW									
186.7	512	2.3	7.5	PBWR150					
140	675	1.8	10						
93.3	990	1.3	15						
70	1291	1.0	20						
56	1576	0.8	25						

Notes: 1) Non-standard ratios and motor frames are available upon request.

2) Unlisted configurations may lead to significantly high or low safety factors and must be subjected to technical evaluation and feasibility confirmation from our end prior to use.

RATINGS
DOUBLE STAGE WORM GEAR REDUCER

Selection Parameter of Double Stage Worm Gear Reducer (Input Speed 1400 rpm, 4 Pole)

Output speed (r/min)	Output torque (Nm)	Service Factor	High speed transmission ratio (1)	Low speed transmission ratio (2)	General transmission ratio (I)	Combination model size	Output speed (r/min)	Output torque (Nm)	Service Factor	High speed transmission ratio (1)	Low speed transmission ratio (2)	General transmission ratio (I)	Combination model size	
0.06kW							0.06kW							
14	25	1.3	10	10	100	PBWR 25/30	0.35	355	0.7	50	80	4000	PBWR 40/75	
9.3	32	0.9	10	15	150		0.28	419	0.5	50	100	5000		
7	41	0.7	10	20	200		PBWR 25/40	0.5	405	1.4	60	50	3000	PBWR 40/90
5.6	44	0.8	10	25	250			0.35	365	1.3	50	80	4000	
4.7	59	1.2	10	30	300	0.28		431	1.0	50	100	5000		
3.5	71	0.9	10	40	400	0.09kW								
2.8	82	0.7	20	25	500	PBWR 30/40	14	37	0.8	10	10	100	PBWR 25/30	
2.3	101	0.6	20	30	600		9.3	49	0.6	10	15	150		
1.9	116	0.5	25	30	750		7	62	0.5	10	20	200		
1.6	143	0.5	30	30	900		5.6	66	0.5	10	25	250		
1.2	171	0.4	30	40	1200	PBWR 30/50	4.7	75	0.4	10	30	300	PBWR 30/50	
0.9	197	0.3	50	30	1500		3.5	107	0.3	10	40	400		
0.78	217	0.3	60	30	1800		2.8	115	0.2	20	25	500		
0.6	268	0.2	60	40	2400		2.3	135	0.2	20	30	600		
0.5	324	0.2	60	50	3000	PBWR 30/63	1.9	151	0.2	25	30	750	PBWR 40/75	
0.4	294	0.1	50	80	4000		1.6	178	0.2	30	30	900		
0.3	356	0.1	50	100	5000		1.2	212	0.1	30	40	1200		
4.7	57	1.3	10	30	300		0.9	247	0.1	50	30	1500		
3.5	70	0.9	10	40	400	PBWR 40/75	0.78	304	0.1	60	30	1800	PBWR 40/90	
2.8	96	0.6	20	25	500		0.58	340	0.1	60	40	2400		
2.3	104	0.7	20	30	600		0.47	405	0.1	60	50	3000		
1.9	121	0.6	25	30	750		4.7	88	0.8	10	30	300		
1.6	139	0.5	30	30	900	PBWR 40/90	3.5	107	1.2	10	40	400	PBWR 30/50	
1.2	166	0.4	30	40	1200		2.8	123	1.0	10	50	500		
0.9	196	0.4	50	30	1500		2.3	159	0.9	20	30	600		
0.78	218	0.3	60	30	1800		1.9	185	0.8	25	30	750		
0.58	261	0.2	60	40	2400	PBWR 40/90	1.6	212	0.7	30	30	900	PBWR 30/63	
0.4	300	0.2	80	40	3200		1.6	200	1.0	15	60	900		
0.4	279	0.1	50	80	4000		1.2	263	0.9	30	40	1200		
0.28	338	0.1	50	100	5000		0.93	305	0.7	30	50	1500		
1.6	141	1.0	30	30	900	PBWR 40/90	0.9	359	1.1	50	30	1500	PBWR 40/75	
1.2	169	0.7	30	40	1200		0.78	404	1.0	60	30	1800		
0.93	199	0.7	50	30	1500		0.58	496	0.7	60	40	2400		
0.78	222	0.7	60	30	1800		0.5	608	0.9	60	50	3000		
0.6	266	0.5	60	40	2400	PBWR 40/90	0.35	548	0.8	50	80	4000	PBWR 30/50	
0.5	307	0.4	60	50	3000		0.12kW							
0.35	288	0.3	50	80	4000		4.7	118	1.2	10	30	300		PBWR 30/50
0.29	311	0.3	60	80	4800		3.5	142	0.9	10	40	400		
0.9	203	1.1	30	50	1500	2.8	164	0.7	10	50	500			
0.78	225	0.9	30	60	1800	PBWR 40/90	2.8	171	1.3	10	50	500	PBWR 30/63	
0.58	276	0.8	60	40	2400		2.3	208	1.1	15	40	600		
0.47	319	0.7	60	50	3000		1.9	241	0.9	15	50	750		
0.35	306	0.6	50	80	4000									
0.28	360	0.4	50	100	5000									
0.6	330	1.1	60	40	2400	PBWR 40/75								
0.47	377	0.8	60	50	3000									

RATINGS DOUBLE STAGE WORM GEAR REDUCER

Selection Parameter of Double Stage Worm Gear Reducer (Input Speed 1400 rpm, 4 Pole)

Output speed (r/min)	Output torque (N. m)	Service Factor	High speed transmission ratio (1)	Low speed transmission ratio (2)	General transmission ratio (I)	Combination model size	Output speed (r/min)	Output torque (N. m)	Service Factor	High speed transmission ratio (1)	Low speed transmission ratio (2)	General transmission ratio (I)	Combination model size
0.12kW							0.25kW						
1.6	324	1.2	30	30	900	PBWR 40/75	1.9	949	1.3	25	30	750	PBWR 50/110
1.2	399	0.9	30	40	1200		1.6	1079	1.2	30	30	900	
							1.2	1396	0.8	30	40	1200	
0.78	546	0.9	30	60	1800	PBWR 40/90	0.9	1674	1.1	50	30	1500	PBWR 63/130
0.58	695	0.9	60	40	2400		0.78	1887	0.9	60	30	1800	
0.5	883	1.2	60	50	3000	PBWR 50/110	0.78	1774	1.2	60	30	1800	PBWR 63/150
0.35	784	1.0	50	80	4000		0.6	2141	1.2	60	40	2400	
0.28	928	0.8	50	100	5000		0.5	2535	0.9	60	50	3000	
0.18kW							0.55kW						
3.5	221	1.0	10	40	400	PBWR 30/63	4.7	639	2.0	10	30	300	PBWR 50/110
2.8	257	0.8	10	50	500		3.5	826	1.4	10	40	400	
2.3	362	1.1	20	30	600	PBWR 40/75	2.8	984	1.1	10	50	500	
1.9	435	0.9	25	30	750		2.3	1181	1.0	15	40	600	
1.6	487	0.8	30	30	900		1.9	1411	0.9	25	30	750	
1.2	629	1.0	30	40	1200	PBWR 40/90	2.8	995	1.6	10	50	500	PBWR 63/130
0.93	735	0.8	30	50	1500		1.9	1470	1.2	25	30	750	
							1.2	2132	0.8	30	40	1200	
0.78	860	1.5	60	30	1800	PBWR 50/110	0.78	2637	0.8	60	30	1800	PBWR 63/150
0.58	1113	1.1	60	40	2400		0.6	3182	0.8	60	40	2400	
0.25kW							0.75kW						
3.5	336	1.1	10	40	400	PBWR 40/75	4.7	871	1.5	10	30	300	PBWR 50/110
2.8	384	0.8	10	50	500		3.5	1126	1.1	10	40	400	
2.3	511	1.2	15	40	600	PBWR 40/90	2.8	1357	1.1	10	50	500	PBWR 63/130
1.9	598	0.9	15	50	750		2.3	1631	1.0	15	40	600	
1.6	667	0.8	15	60	900		1.9	2005	0.9	25	30	750	
1.2	943	1.3	30	40	1200	PBWR 50/110	1.6	2283	0.8	30	30	900	
0.93	1064	1.2	50	30	1500		2.8	1290	1.8	10	50	500	PBWR 63/150
0.78	1195	1.1	60	30	1800		2.3	1529	1.7	15	40	600	
0.6	1624	1.0	60	40	2400	PBWR 63/130	1.9	1783	1.3	25	30	750	
0.47	1935	0.8	60	50	3000		1.6	2215	0.9	30	30	900	
0.35	2046	0.6	50	80	4000		1.2	2680	1.0	30	40	1200	
0.28	2430	0.5	50	100	5000		1.1 kW						
0.78	1199	1.8	60	30	1800	PBWR 63/150	4.7	1312	1.3	10	30	300	PBWR 63/130
0.6	1446	1.8	60	40	2400		3.5	1671	1.0	10	40	400	
0.5	1713	1.4	60	50	3000		2.8	1991	0.8	10	50	500	
0.4	2026	0.9	50	80	4000		9.3	752	3.1	10	15	150	PBWR 63/150
0.3	2251	0.7	50	100	5000		7	966	2.4	10	20	200	
0.37kW							5.6	1175	1.7	10	25	250	
4.7	405	1.0	10	30	300	PBWR 40/75	4.7	1364	1.7	10	30	300	
3.5	498	0.7	10	40	400		3.5	1619	1.6	10	40	400	
4.7	401	1.5	7.5	40	300	PBWR 40/90	2.8	1893	1.2	10	50	500	
3.5	523	1.2	10	40	400		2.3	2242	1.2	15	40	600	
2.8	611	0.9	10	50	500		1.9	2616	0.9	25	30	750	
2.3	757	0.8	15	40	600								

RATINGS
DOUBLE STAGE WORM GEAR REDUCER

Selection Parameter of Double Stage Worm Gear Reducer (Input Speed 1400 rpm, 4 Pole)

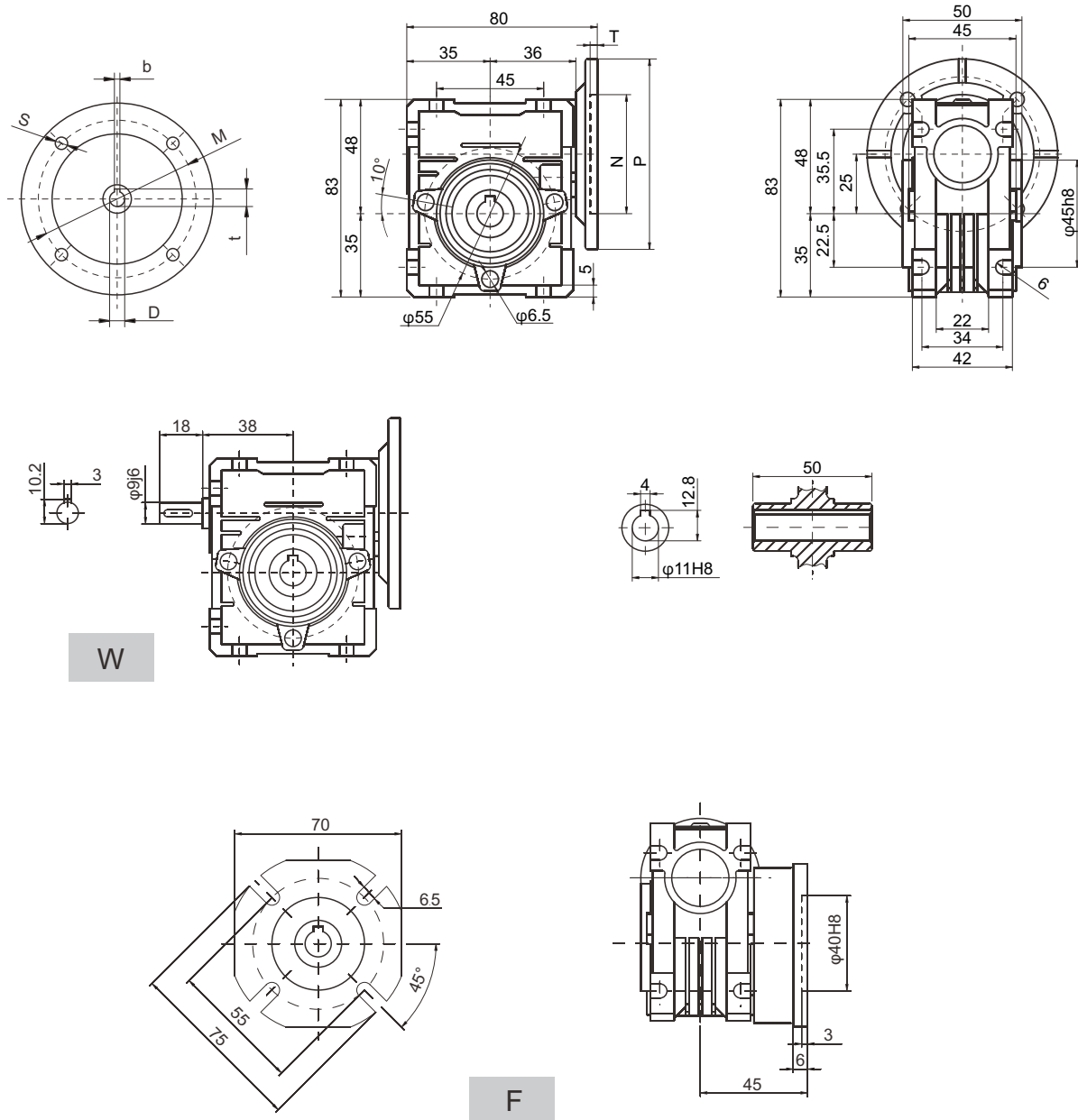
Output speed (r/min)	Output torque (Nm)	Service Factor	High speed transmission ratio (1)	Low speed transmission ratio (2)	General transmission ratio ()	Combination model size
1.5kW						
4.7	1789	1.0	10	30	300	PBWR 63/130
3.5	2279	0.7	10	40	400	
9.3	1026	2.3	10	15	150	PBWR 63/150
7	1317	1.8	10	20	200	
5.6	1602	1.3	10	25	250	
4.7	1860	1.3	10	30	300	
3.5	2208	1.2	10	40	400	
2.8	2582	0.9	10	50	500	
2.3	3057	0.9	15	40	600	

Notes: 1) Non-standard ratios and motor frames are available upon request.

2) Unlisted configurations may lead to significantly high or low safety factors and must be subjected to technical evaluation and feasibility confirmation from our end prior to use.

GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR25



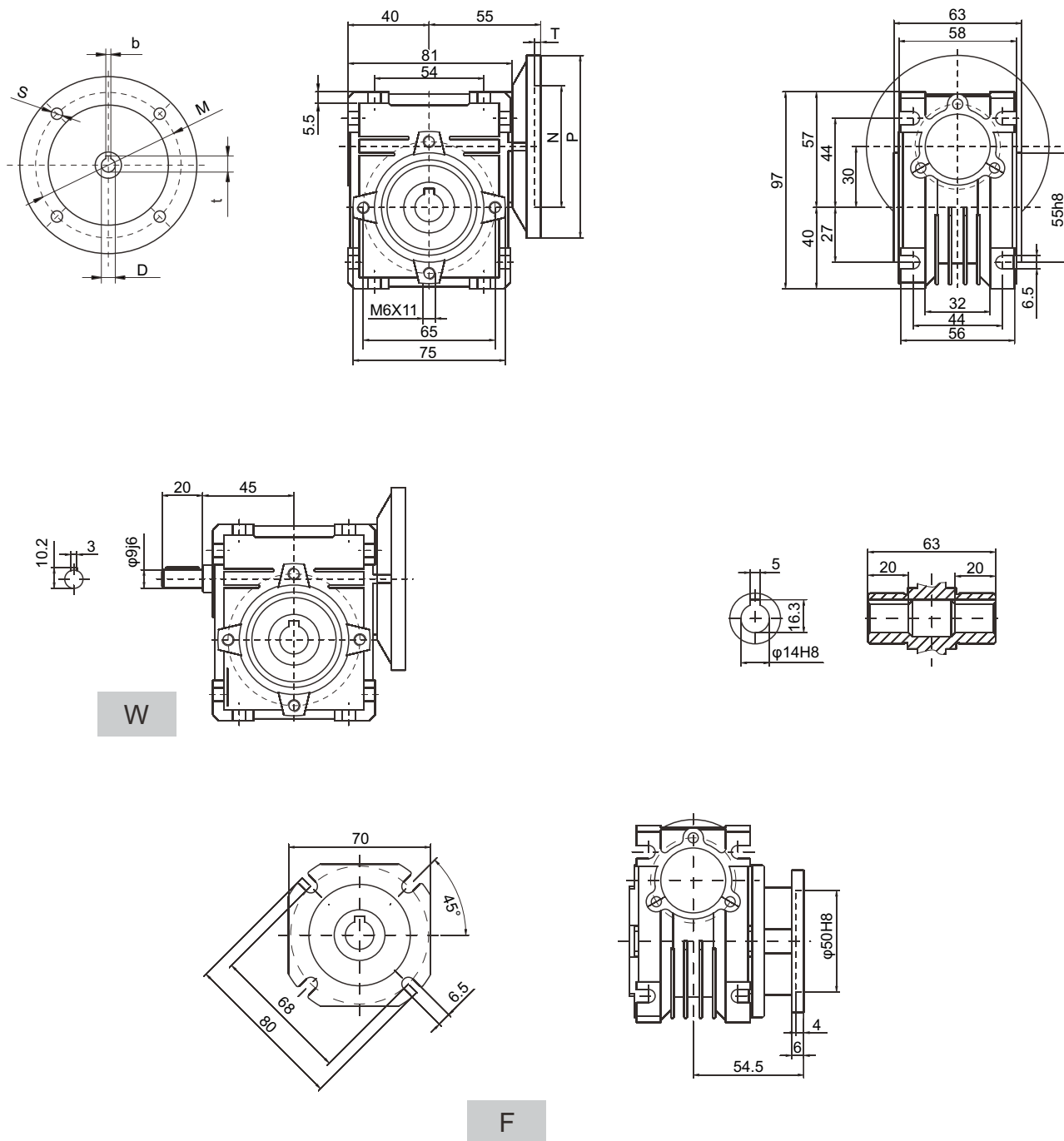
IEC	DE8	b	t	P	M	N	S	T
56B14	9	3	10.4	80	65	50	5.5	3

* Size 25 is available only upon specific request

Weight without motor ≈ 1kg

GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR30

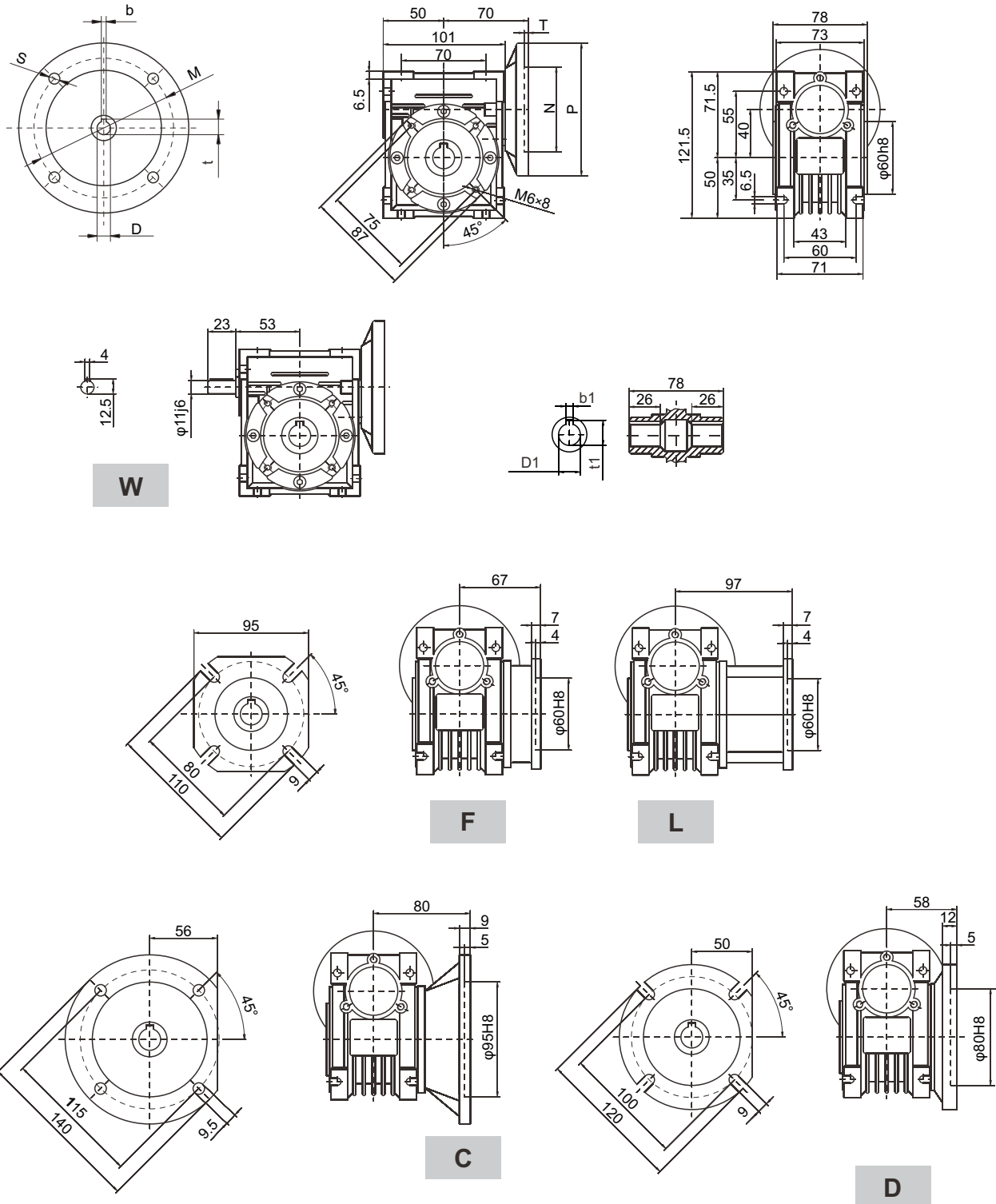


IEC	DE8	b	t	P	M	N	S	T
56B5	9	3	10.4	120	100	80	7	3.5
56B14	9	3	10.4	80	65	50	5.5	3
63B14	11	4	12.8	90	75	60	5.5	3
63B5	11	4	12.8	140	115	95	9	3.5

Weight without motor ≈ 1.2kg

GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR40

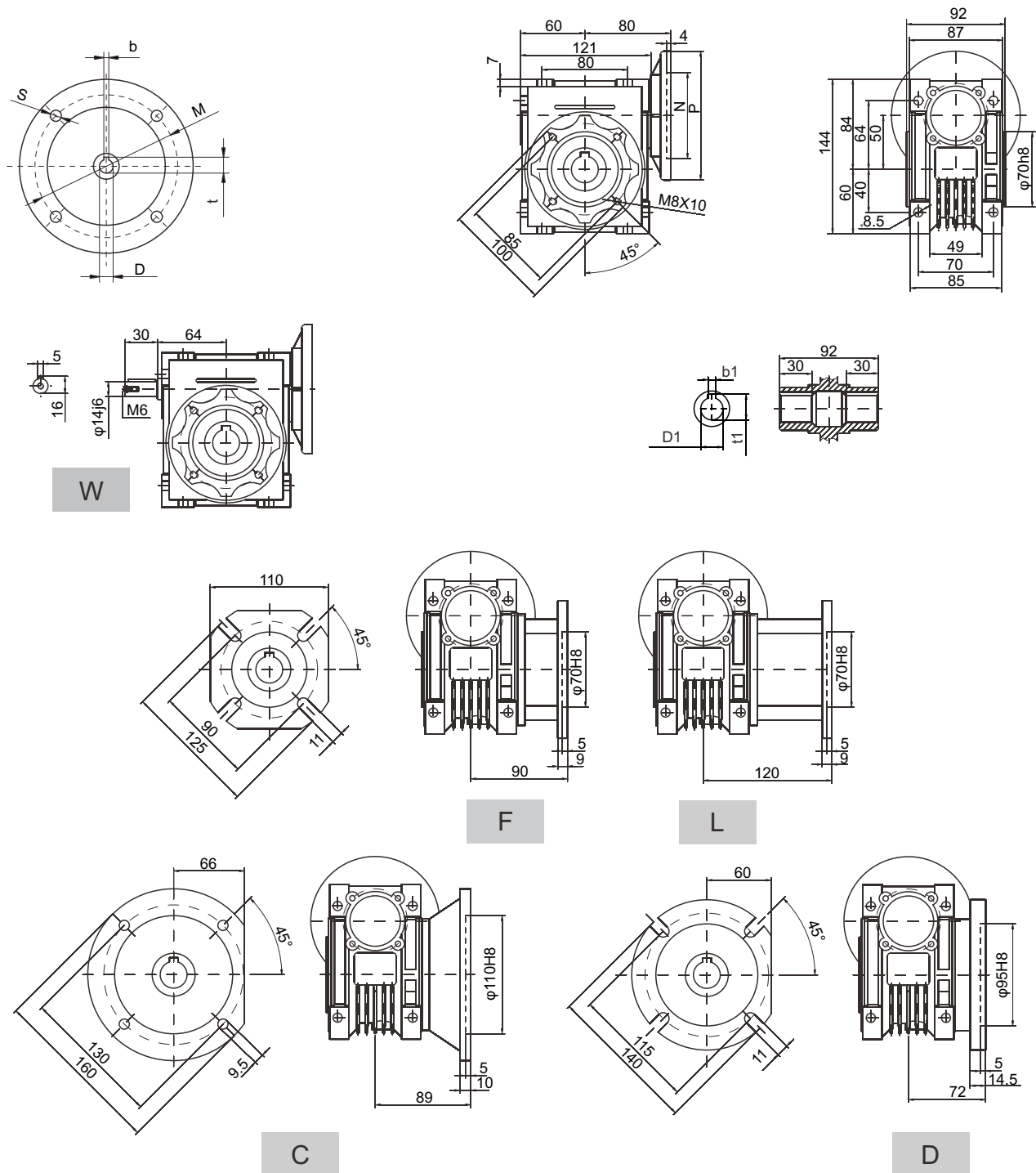


IEC	DE8	b	t	P	M	N	S	T	D1 H8	b1	t1
56B14	9	3	10.4	80	65	50	5.5	3	18	6	20.8
63B5	11	4	12.8	140	115	95	9	3.5	19*	6	21.8
63B14	11	4	12.8	90	75	60	5.5	3	* Only on request		
71B5	14	5	16.3	160	130	110	9	4			
71B14	14	5	16.3	105	85	70	7	3			

Weight without motor ≈2.2kg

GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR50

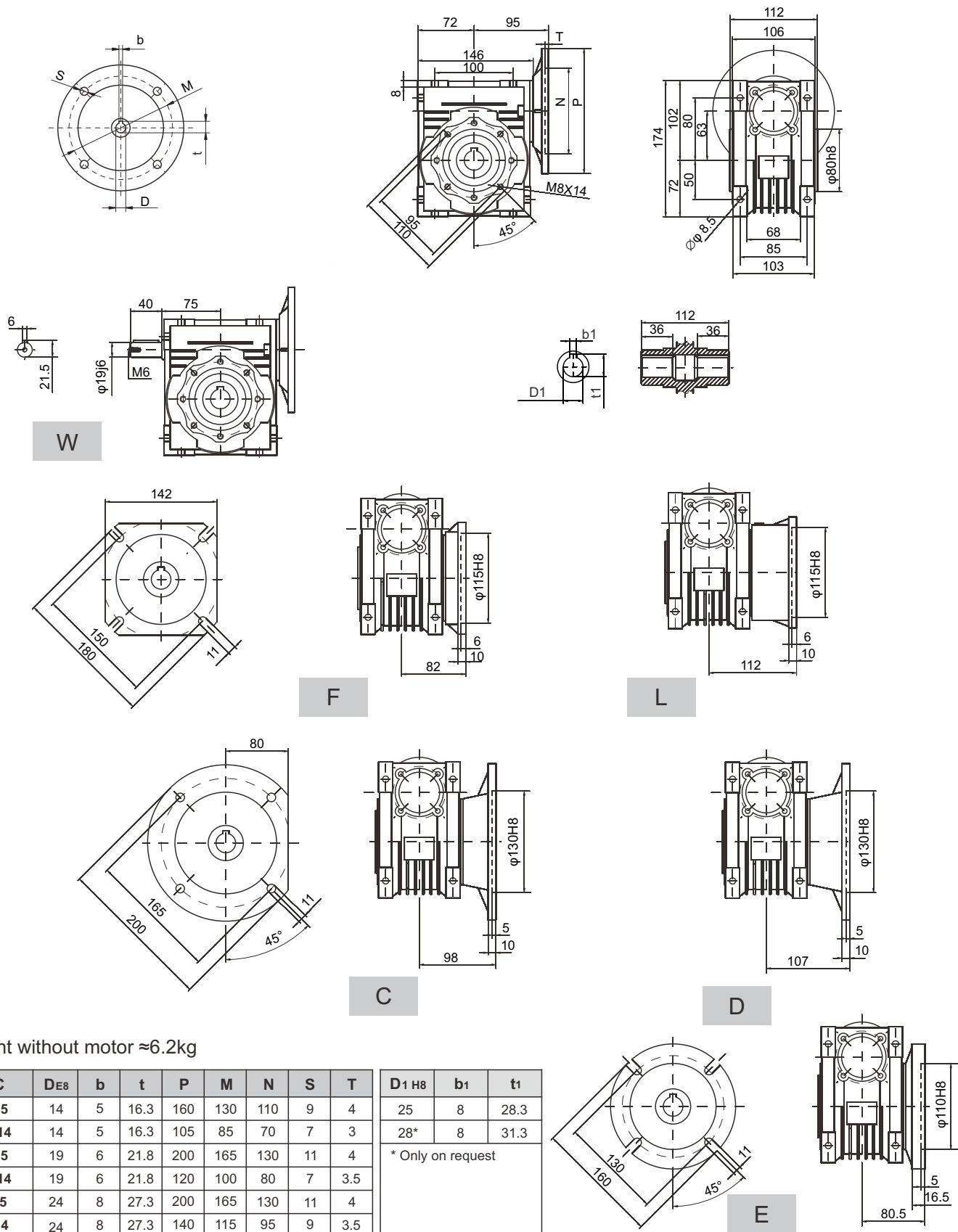


IEC	D _{E8}	b	t	P	M	N	S	T	D _{1 H8}	b ₁	t ₁
63B14	11	4	12.8	90	75	60	5.5	3	25	8	28.3
63B5	11	4	12.8	140	115	95	9	3.5	24*	8	27.3
71B5	14	5	16.3	160	130	110	9	4	* Only on request		
71B14	14	5	16.3	105	85	70	7	3			
80B5	19	6	21.8	200	165	130	11	4			
80B14	19	6	21.8	120	100	80	7	3.5			

Weight without motor $\approx 3.8\text{kg}$

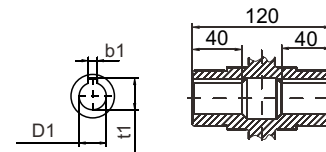
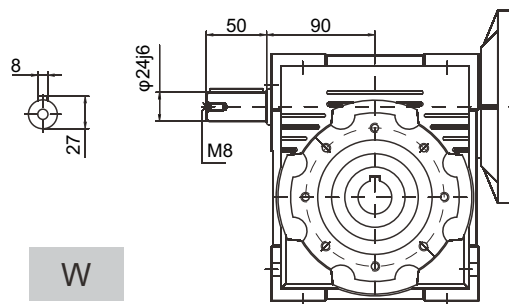
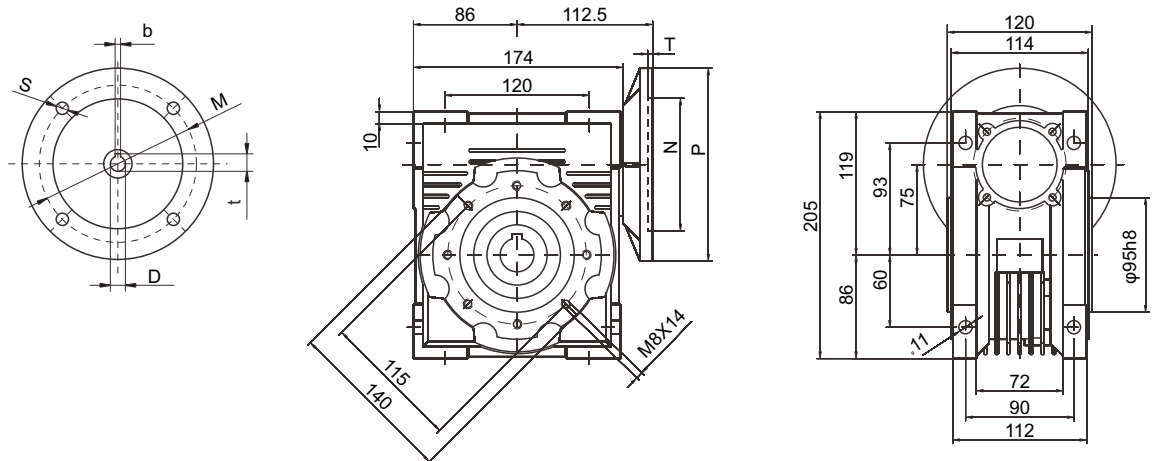
GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR63



GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

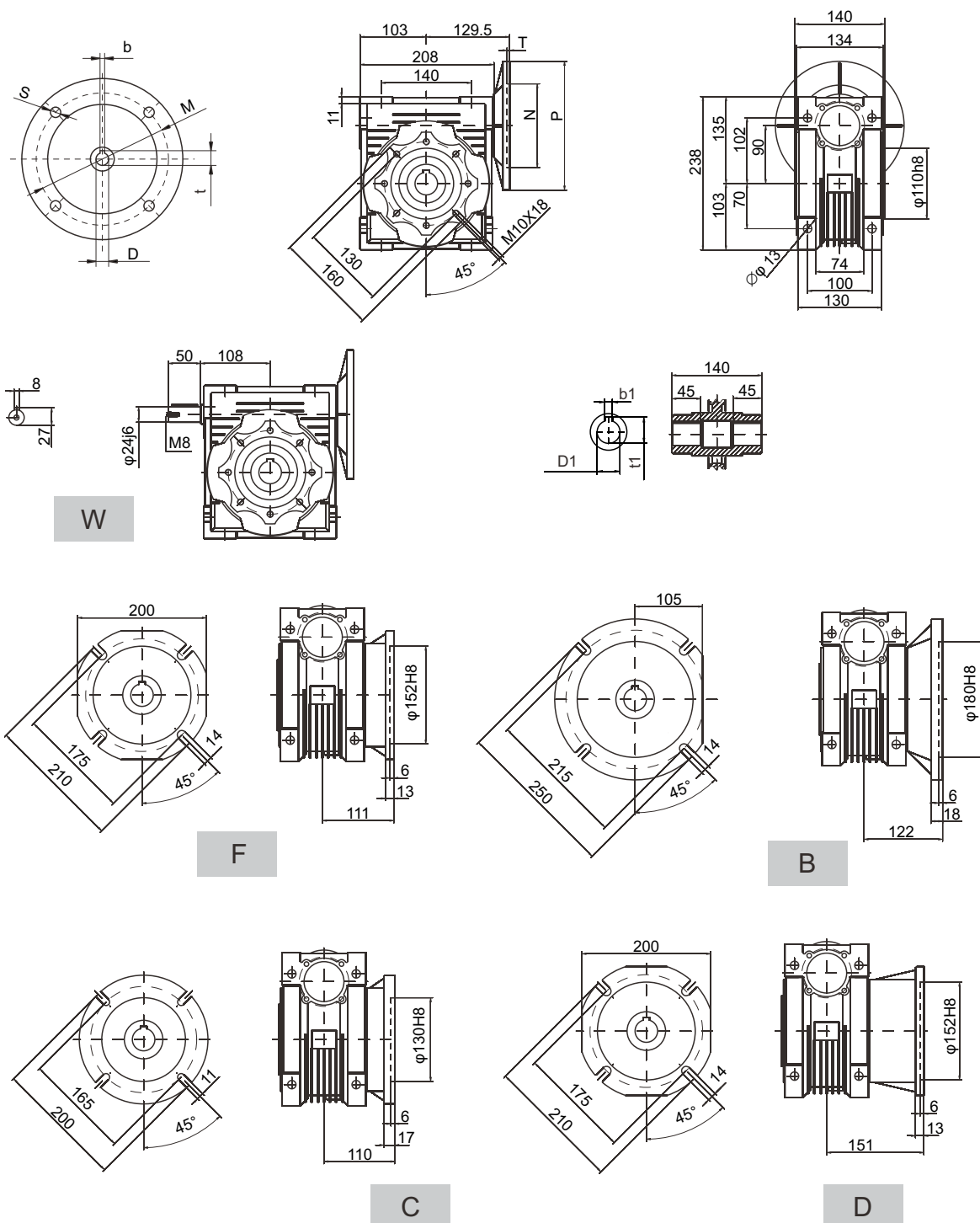
PBWR75



GENERAL ARRANGEMENT DRAWING

SINGLE STAGE WORM GEAR REDUCER

PBWR90

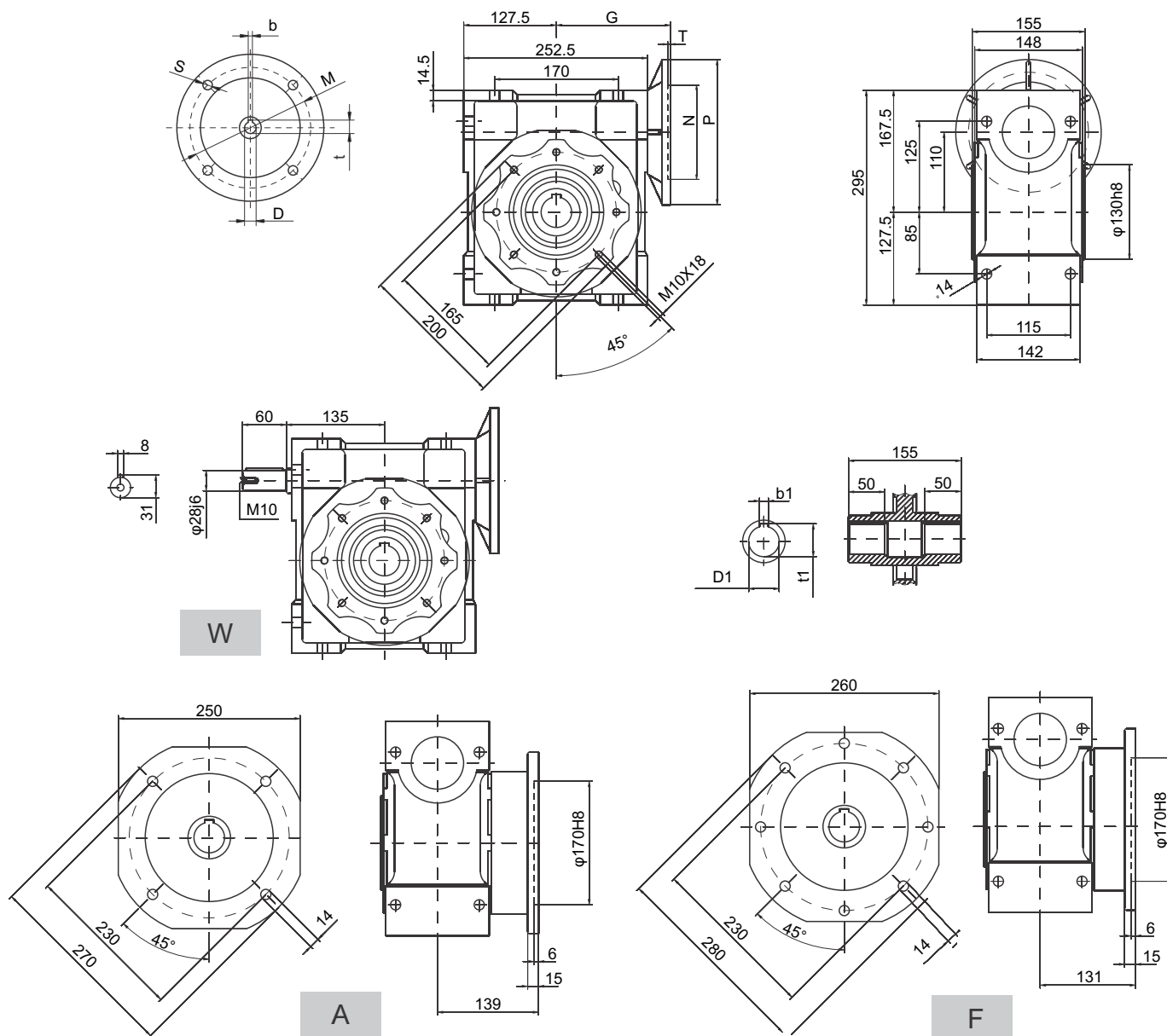


IEC	D _{E8}	b	t	P	M	N	S	T	D _{1 H8}	b ₁	t ₁
80B5	19	6	21.8	200	165	130	11	4	35	10	38.3
80B14	19	6	21.8	120	100	80	6.5	3.5	38*	10	41.3
90B5	24	8	27.3	200	165	130	11	4	40*	12	43.3
90B14	24	8	27.3	140	115	95	9	3.5	* Only on request		
100/112B5	28	8	31.3	250	215	180	13.5	4			
100/112B14	28	8	31.3	160	130	110	9	4.5			

Weight without motor $\approx 12\text{kg}$

GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR110



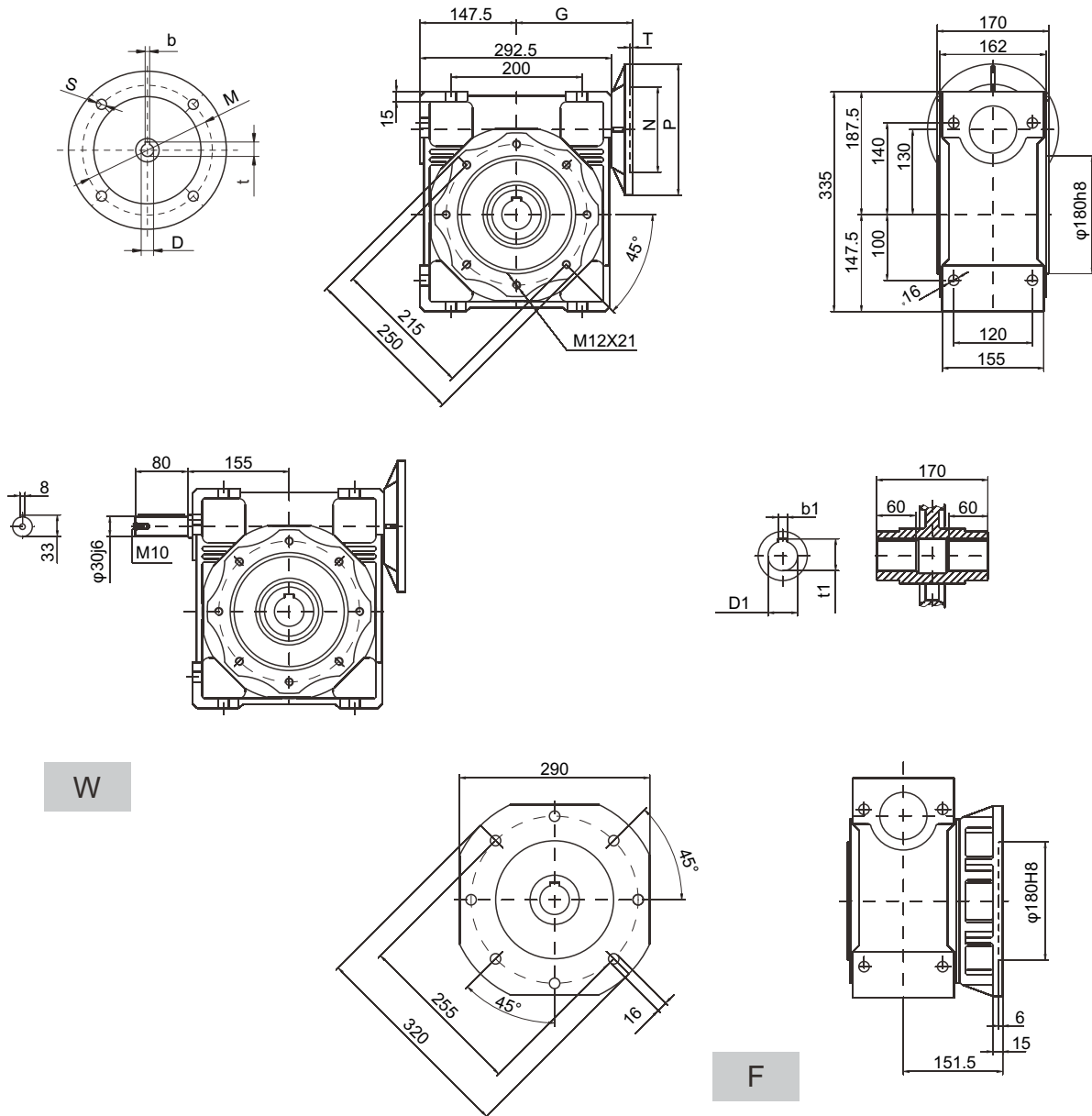
IEC	DE8	b	t	P	M	N	S	T	G	D1 H8	b1	t1
* 80B5	19	6	21.8	200	165	130	11	4	157	38*	10	41.3
90B5	24	8	27.3	200	165	130	11	4	157	42	12	45.3
90B14	24	8	27.3	140	115	95	9	3.5	157	* Only on request		
100/112B5	28	8	31.3	250	215	180	13.5	4	155			
100/112B14	28	8	31.3	160	130	110	9	4.5	155			
132B5	38	10	41.3	300	265	230	13.5	4.5	159			

* Only on request

Weight without motor ≈38kg

GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR130

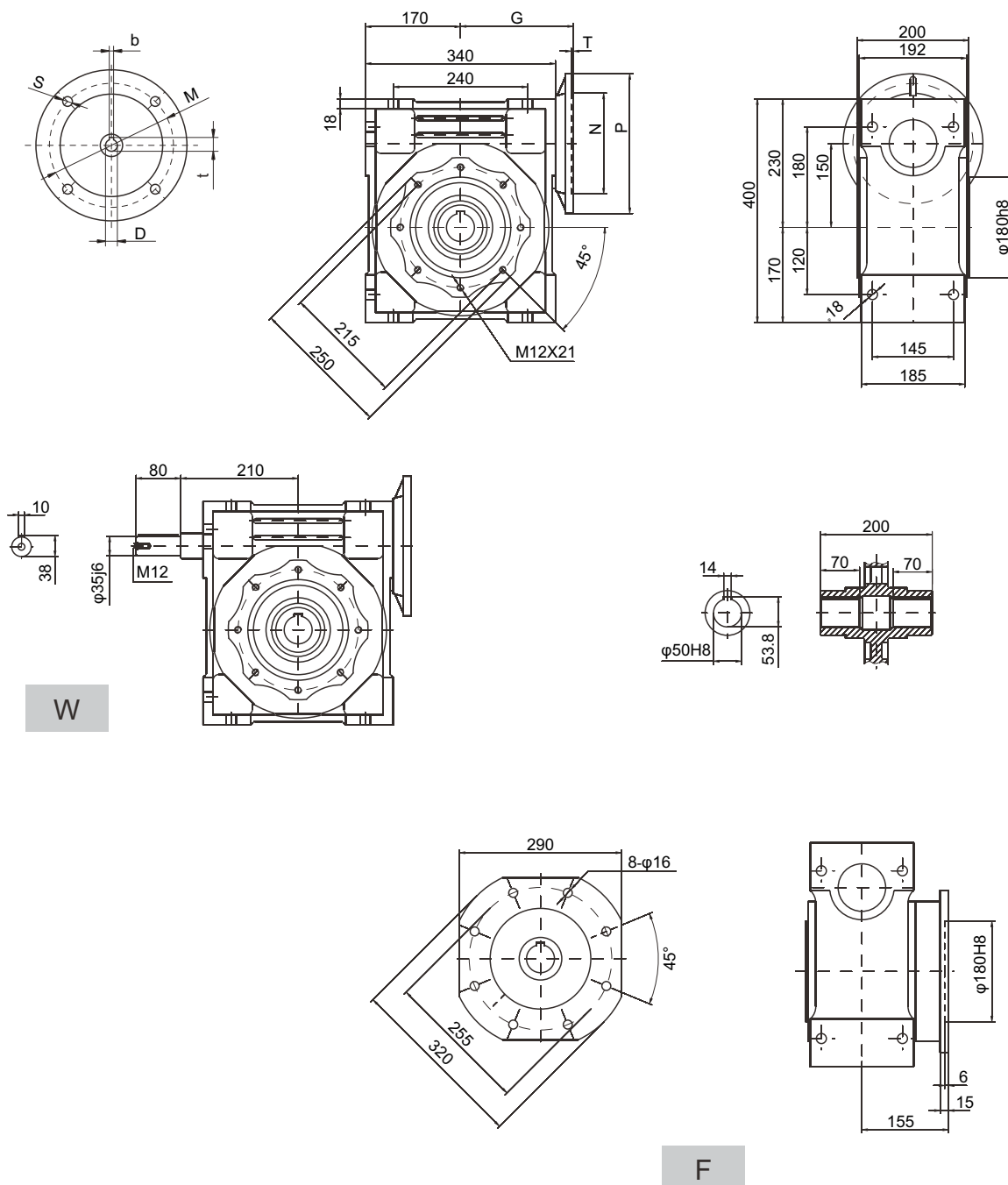


IEC	DE8	b	t	P	M	N	S	T	G	D1 H8	b1	t1
90B5	24	8	27.3	200	165	130	11	4	177	38*	10	41.3
90B14	24	8	27.3	140	115	95	9	3.5	177	42*	12	45.3
100/112B5	28	8	31.3	250	215	180	13.5	4	175	45	14	48.8
100/112B14	28	8	31.3	160	130	110	9	4.5	175	* Only on request		
132B5	38	10	41.3	300	265	230	13.5	4.5	179			

Weight without motor ≈55kg

GENERAL ARRANGEMENT DRAWING SINGLE STAGE WORM GEAR REDUCER

PBWR150



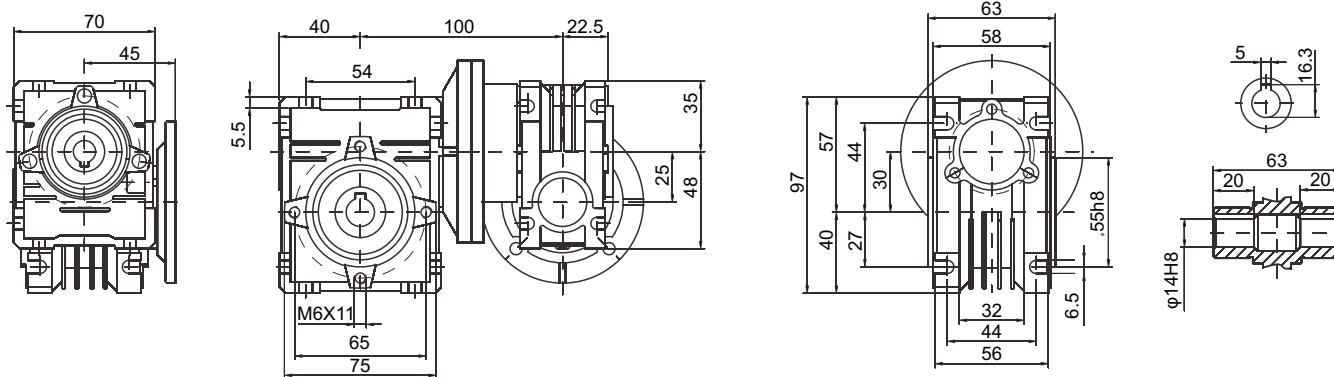
Weight without motor ≈105kg

IEC	DE8	b	t	P	M	N	S	T	G
100/112B5	28	8	31.3	250	215	180	13.5	4	202
132B5	38	10	41.3	300	265	230	13.5	4.5	202
160B5	42	12	45.3	350	300	250	18	6	212

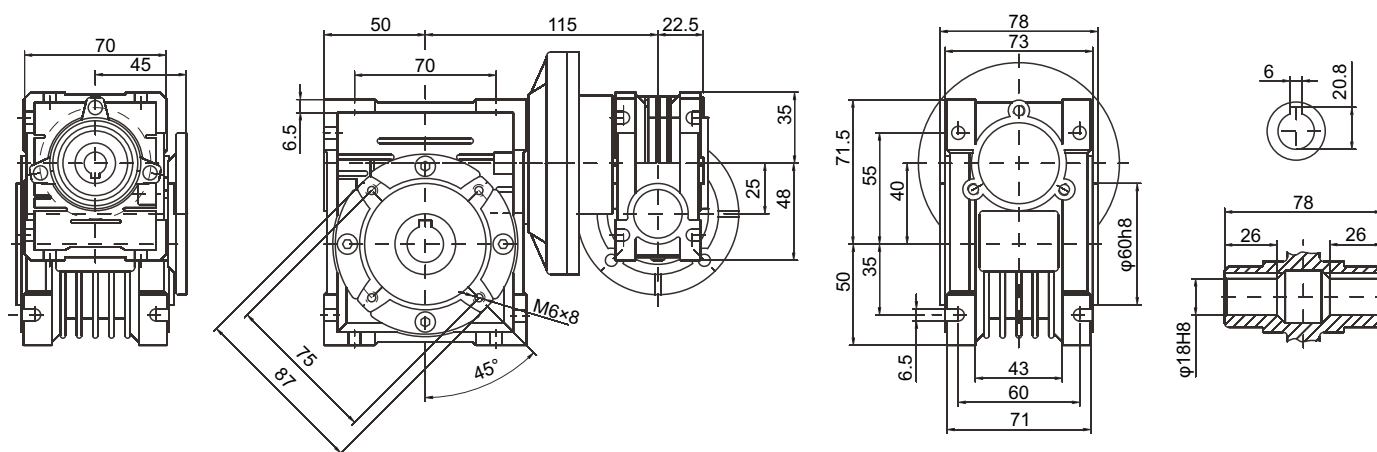
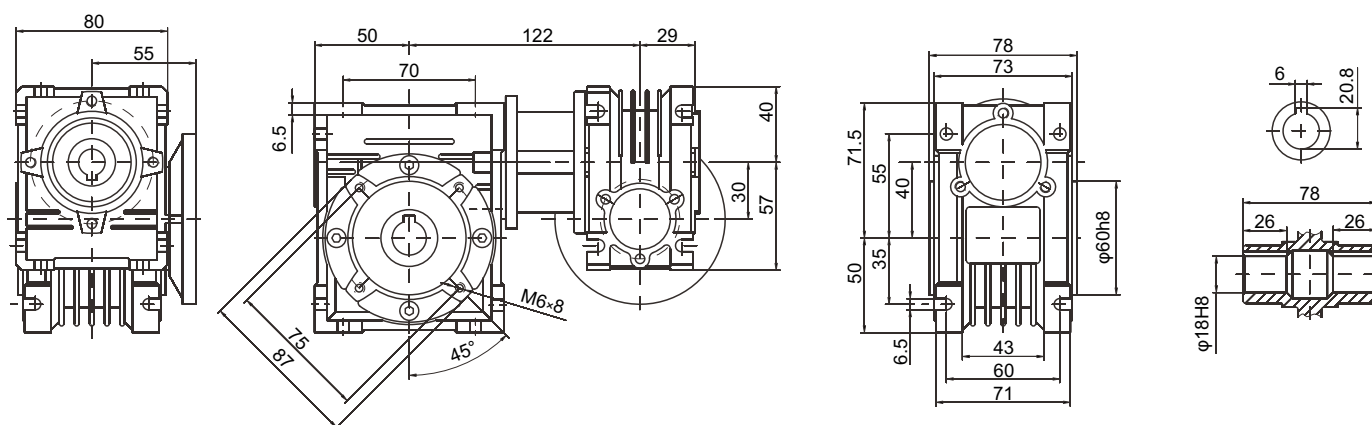
SERIES PBWR

GENERAL ARRANGEMENT DRAWING DOUBLE STAGE WORM GEAR REDUCER

PBWR 25/30 * Only on request



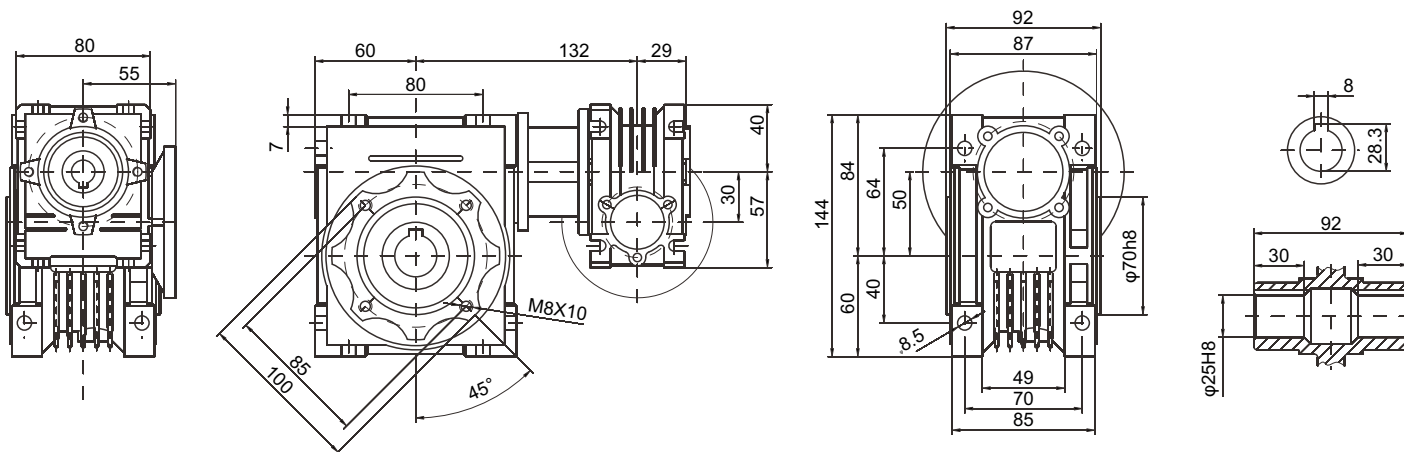
PBWR 25/40 * Only on request

**PBWR 30/40**

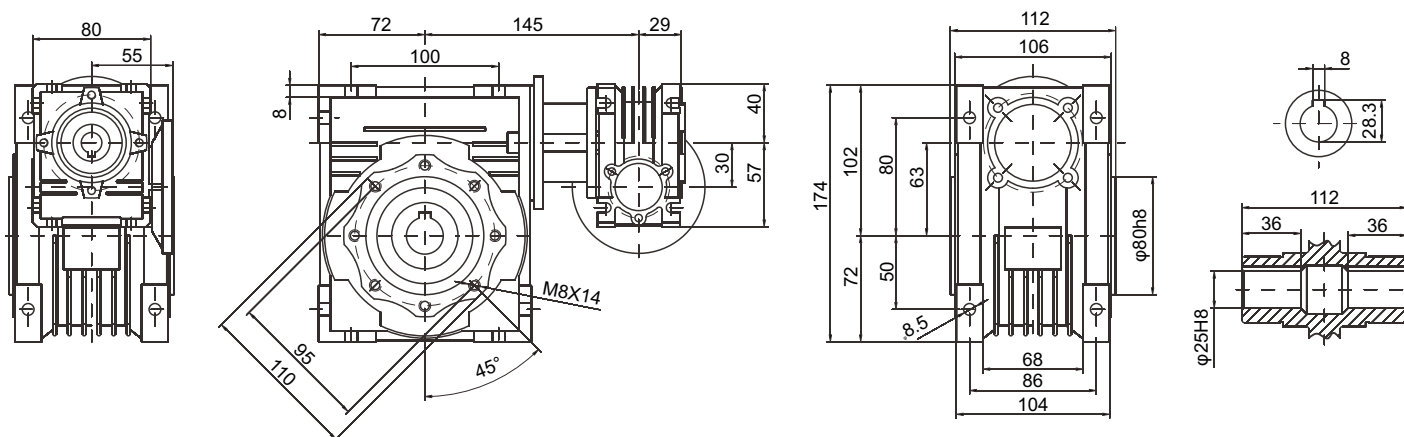
SERIES PBWR

GENERAL ARRANGEMENT DRAWING DOUBLE STAGE WORM GEAR REDUCER

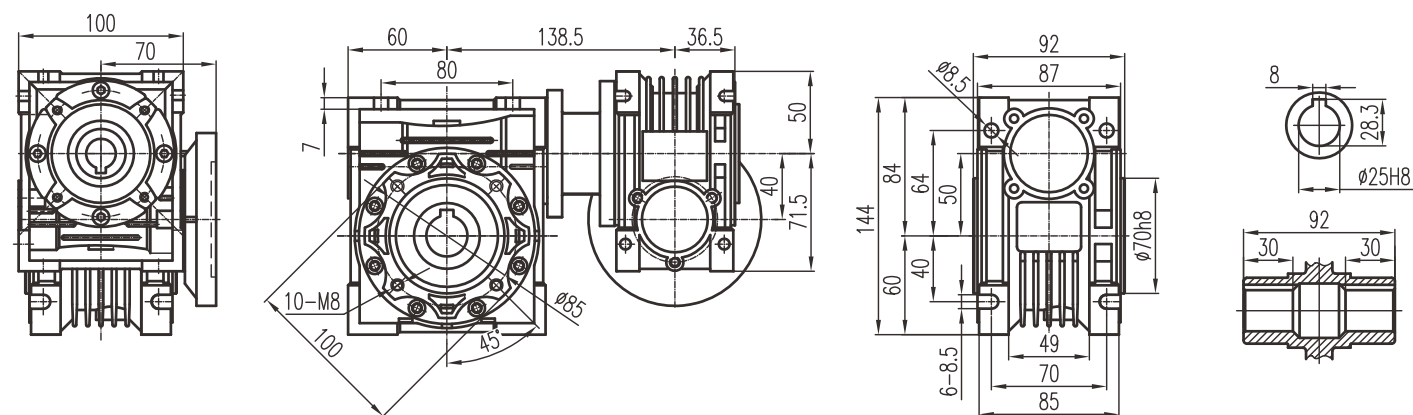
PBWR 30/50



PBWR 30/63

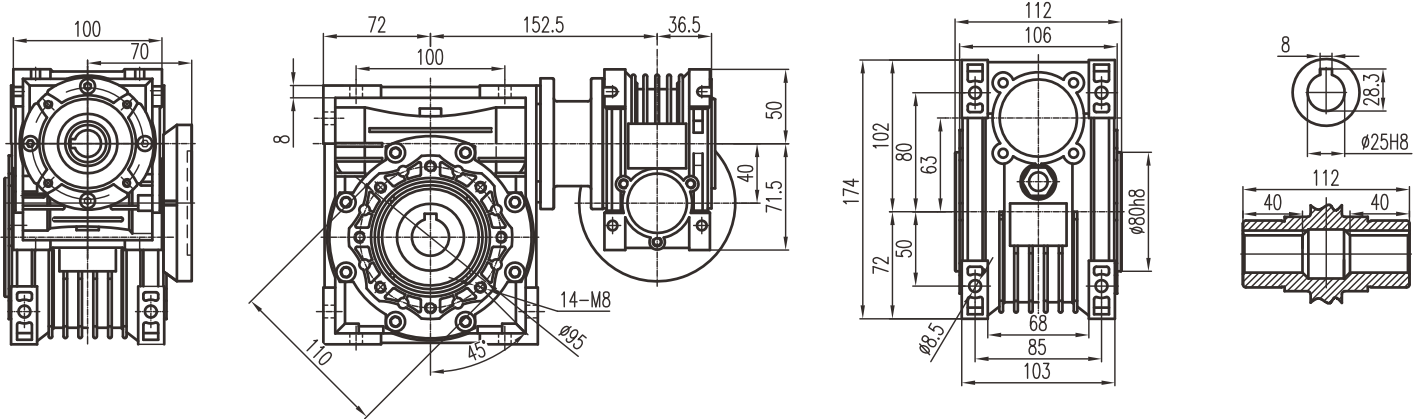


PBWR 40/50 * Only on request

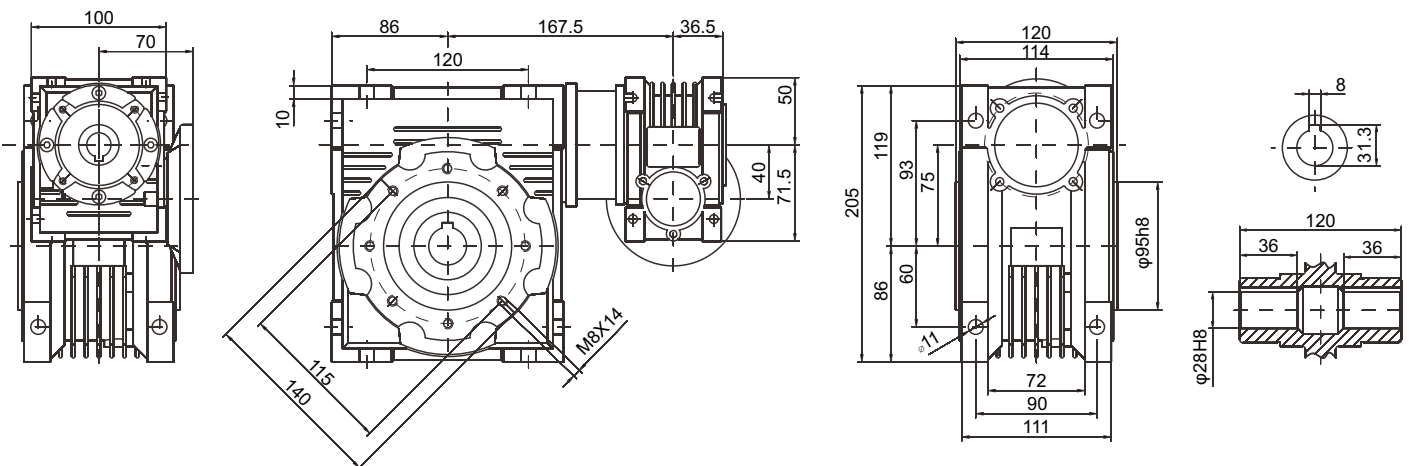


GENERAL ARRANGEMENT DRAWING DOUBLE STAGE WORM GEAR REDUCER

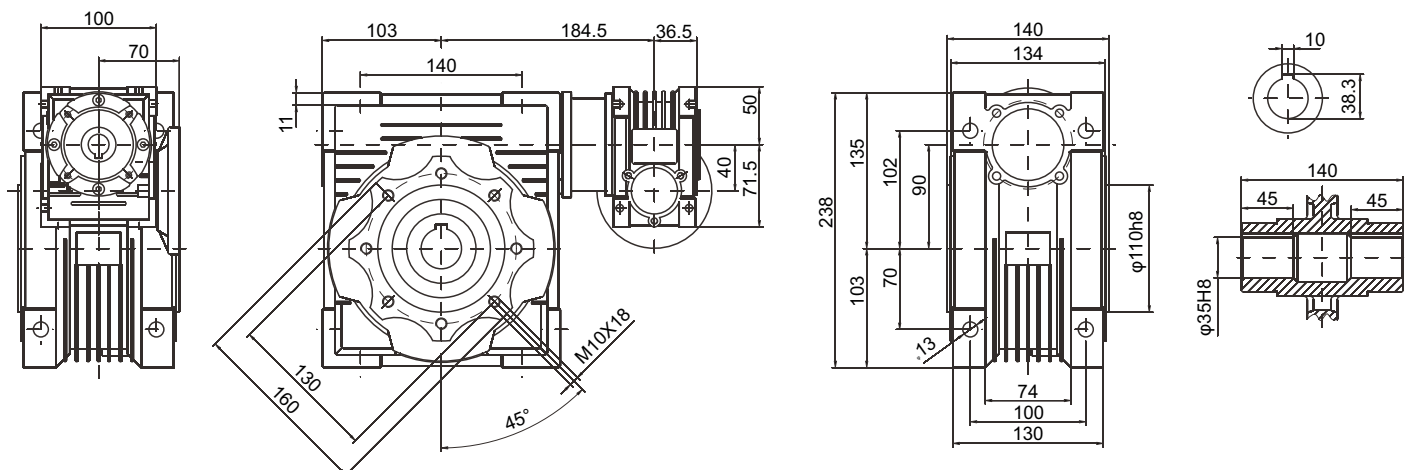
PBWR 40/63 * Only on request



PBWR 40/75



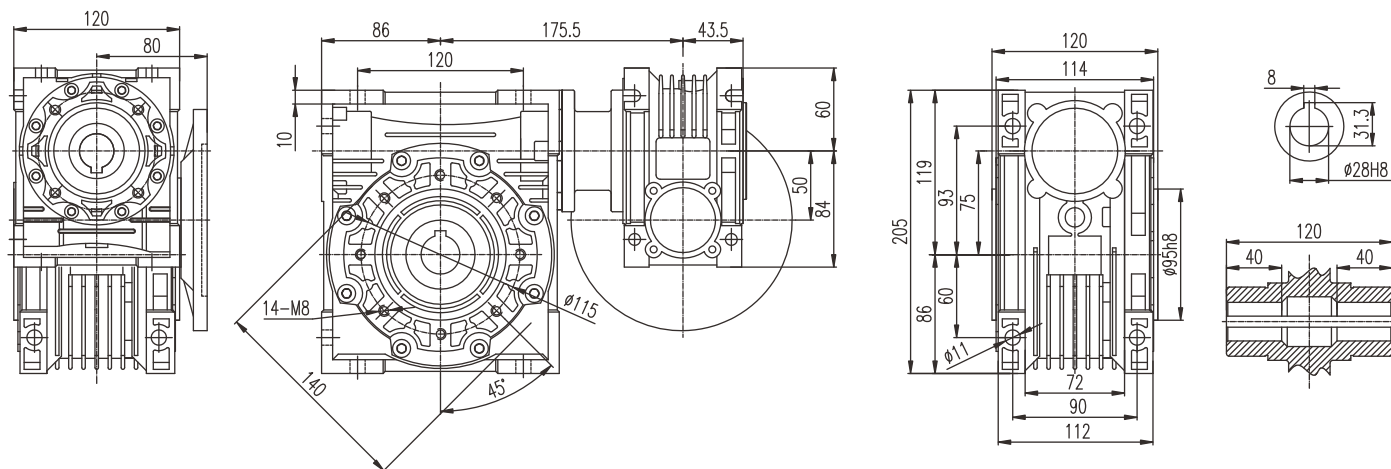
PBWR 40/90



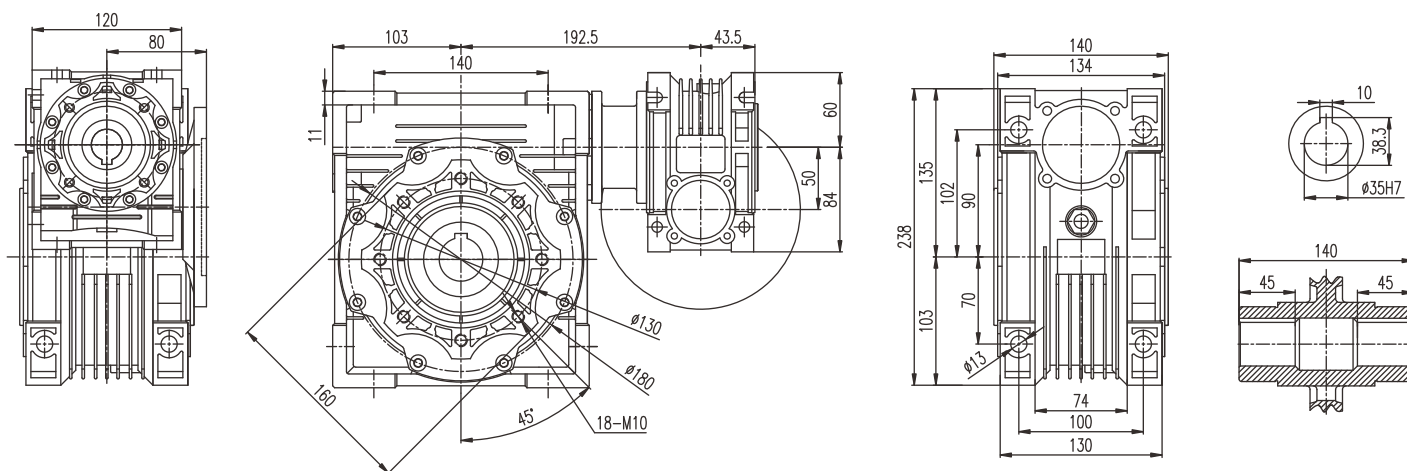
SERIES PBWR

GENERAL ARRANGEMENT DRAWING DOUBLE STAGE WORM GEAR REDUCER

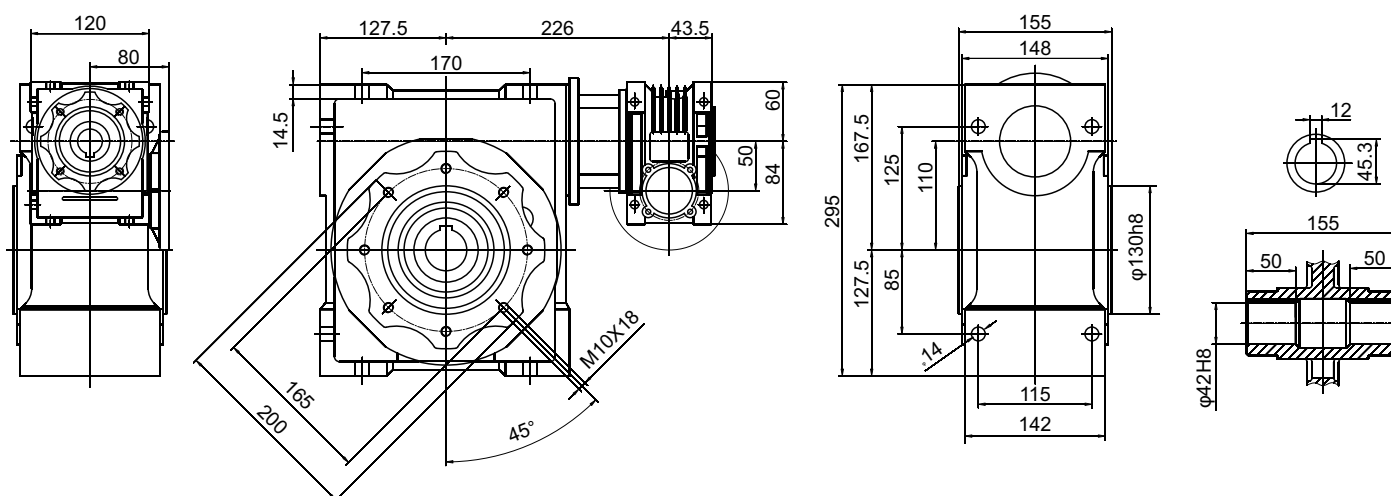
PBWR 50/75 * Only on request



PBWR 50/90 * Only on request

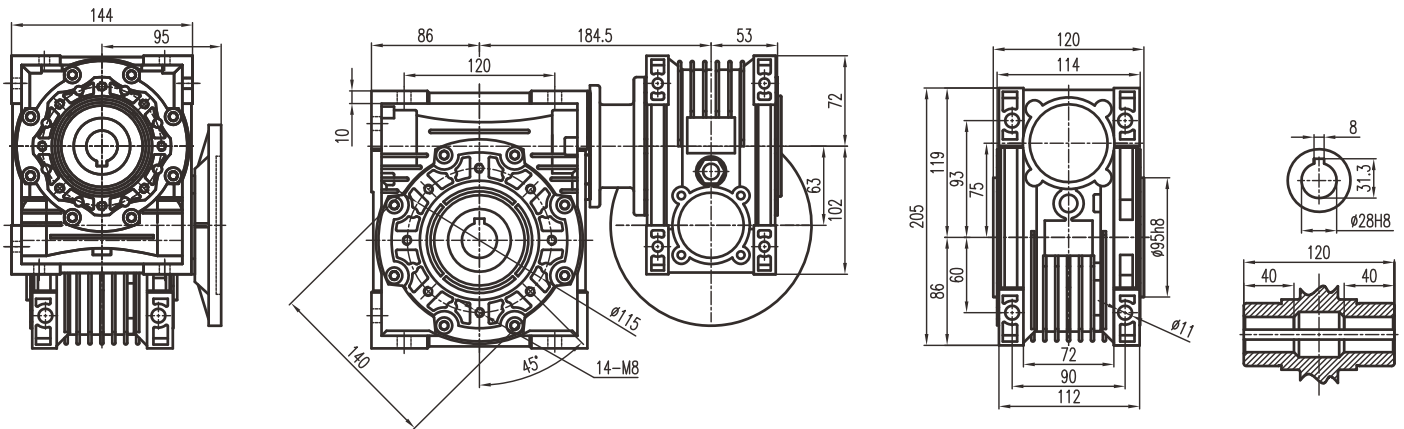


PBWR 50/110

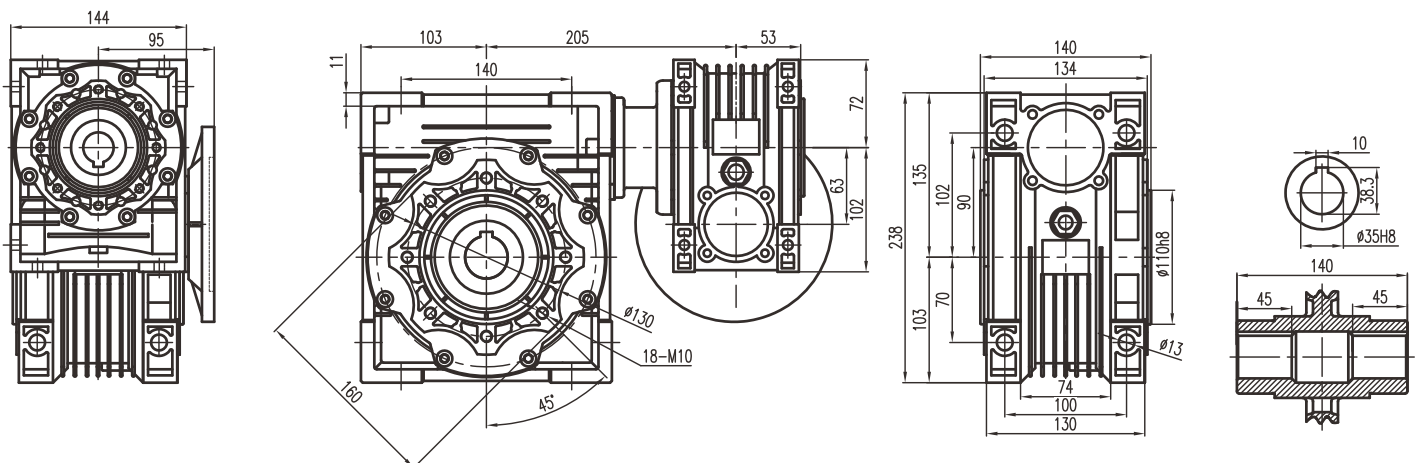


GENERAL ARRANGEMENT DRAWING DOUBLE STAGE WORM GEAR REDUCER

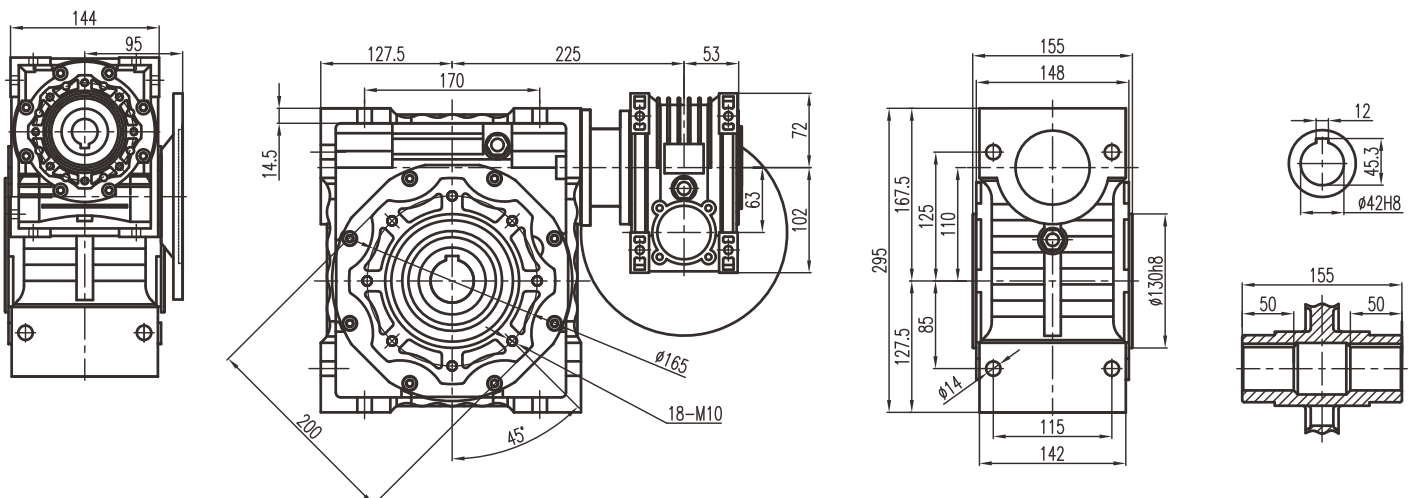
PBWR 63/75 * Only on request



PBWR 63/90 * Only on request

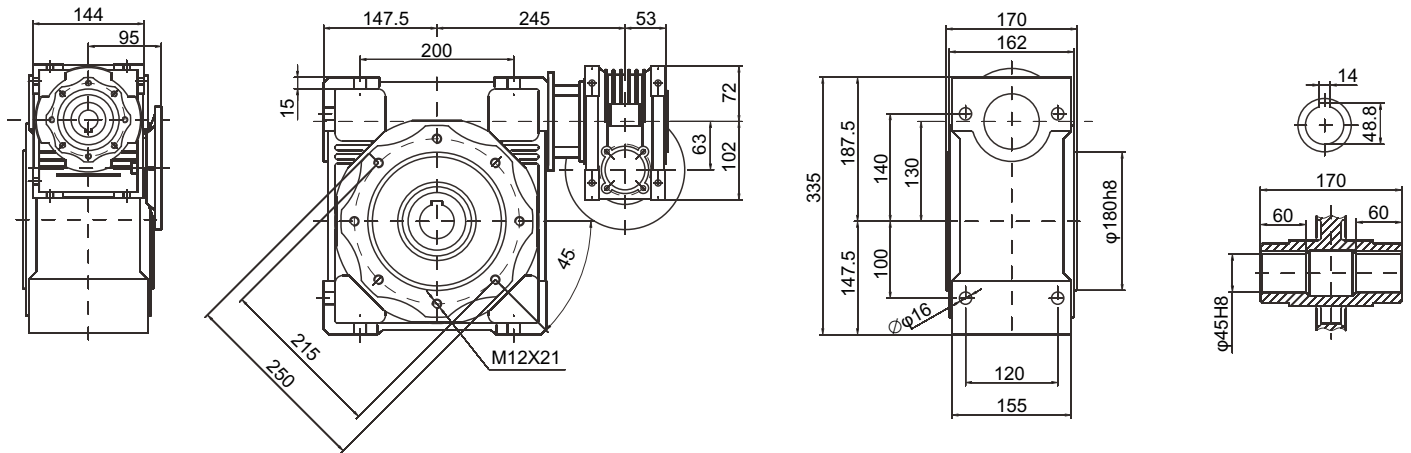


PBWR 63/110 * Only on request

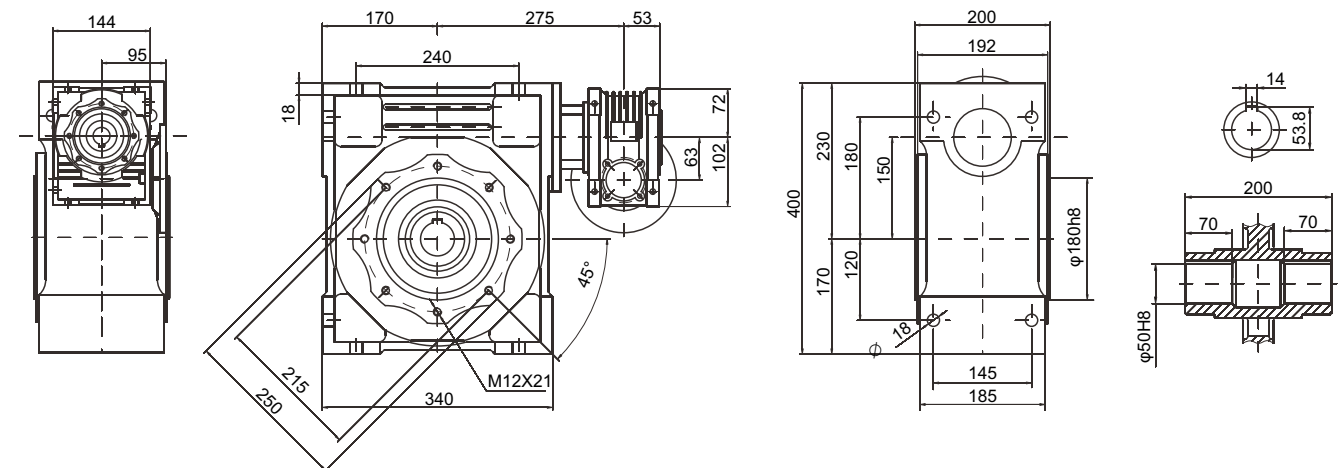


GENERAL ARRANGEMENT DRAWING DOUBLE STAGE WORM GEAR REDUCER

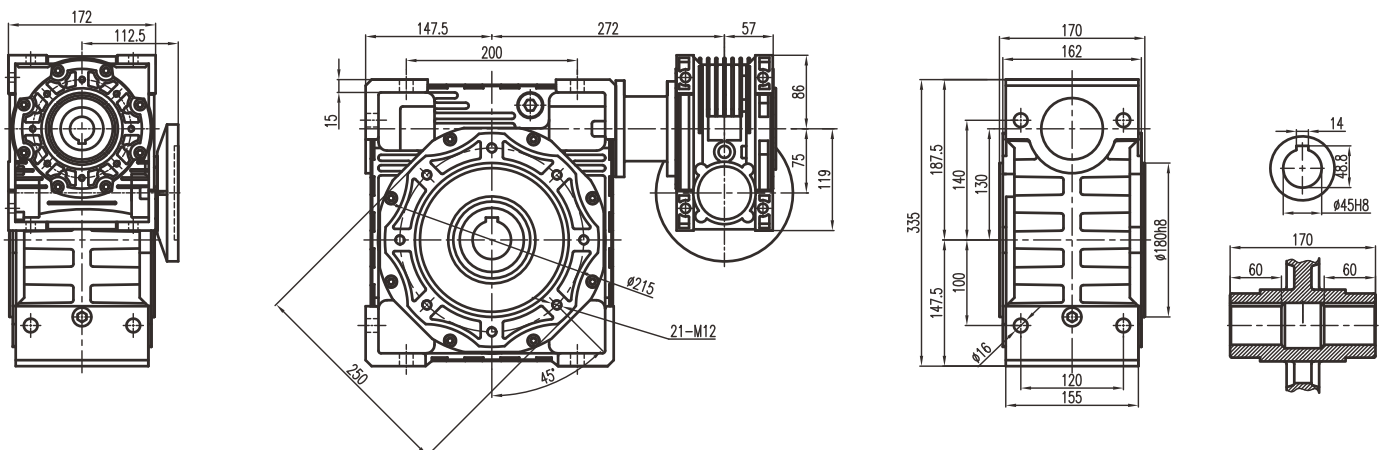
PBWR 63/130



PBWR 63/150

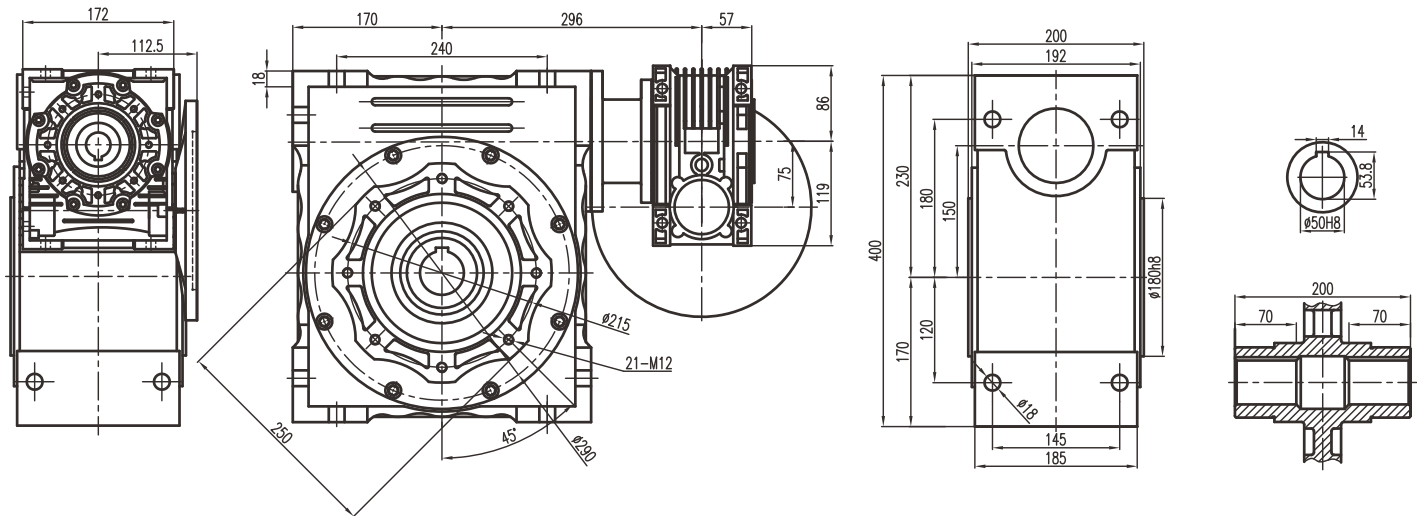


PBWR 75/130 * Only on request

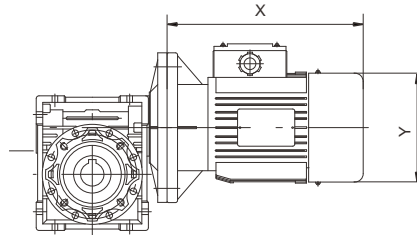


GENERAL ARRANGEMENT DRAWING DOUBLE STAGE WORM GEAR REDUCER

PBWR 75/150 * Only on request



DETAILS OF MOTOR AND GEARBOX ACCESSORIES

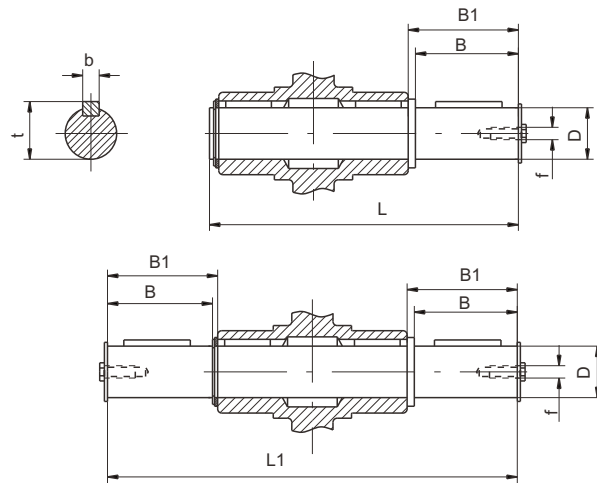


Overall dimensions for electric motor

	56		63		71		80		90		100		112	132		160	
(kw)	0.06	0.09	0.12	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15
X	167		183		210		262		294	325	314		338	373	409	479	523
Y	110		124		140		158		180		198		222	262		314	

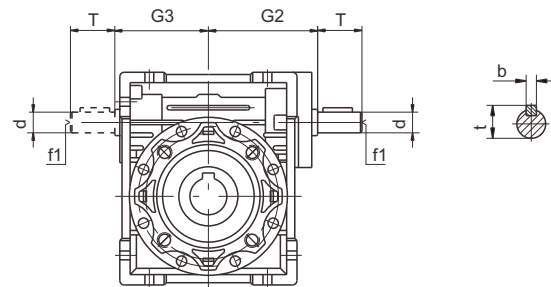
Dimensions of single/double output shaft

Type	D(h6)	B	B1	L	L1	f	b	t
25	11	23	25.5	81	101	-	4	12.5
30	14	30	32.5	102	128	M6	5	16
40	18	40	43	128	164	M6	6	20.5
50	25	50	53.5	153	199	M10	8	28
63	25	50	53.5	173	219	M10	8	28
75	28	60	63.5	192	247	M10	8	31
90	35	80	84.5	234	309	M12	10	38
110	42	80	84.5	249	324	M16	12	45
130	45	80	85	265	340	M16	14	48.5
150	50	82	87	297	374	M16	14	53.5



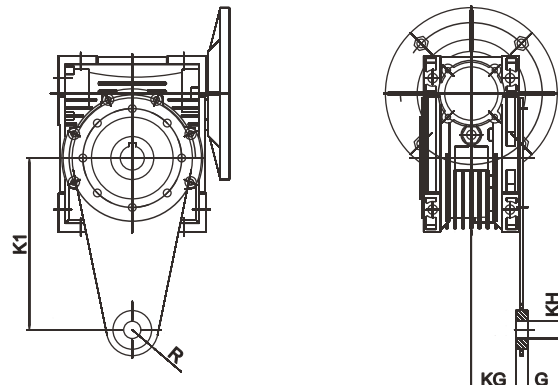
Dimensions of extension worm shafts

Type	G3	G2	T	d(j6)	b	t	f1
25	38	42	18	9	3	10.2	-
30	45	51	20	9	3	10.2	-
40	53	60	23	11	4	12.5	M5
50	64	74	30	14	5	16	M6
63	75	90	40	19	6	21.5	M6
75	90	105	50	24	8	27	M8
90	108	125	50	24	8	27	M8
110	135	142	60	28	8	31	M10
130	155	162	80	30	8	33	M10
150	175	195	80	35	10	38	M12



Dimensions of torque arms

Type	K1	R	KH	G	KG
25	70	15	8	14	17.5
30	85	15	8	14	24
40	100	18	10	14	31.5
50	100	18	10	14	38.5
63	150	18	10	14	49
75	200	30	20	25	47.5
90	200	30	20	25	57.5
110	250	35	25	30	62
130	250	35	25	30	69
150	250	35	25	30	84



SERIES PC

PERFORMANCE OF THE PC SERIES GEAR REDUCER

PC Series Gear Reducer Features

The PC Series gear reducer is a single-stage gear drive that adopts a modularized structural design. i.e.

PC063 is a single-stage gear drive reducer with a transmission ratio of 3.0.

PC071 is a single-stage gear drive reducer with a transmission ratio of 3.0.

PC080 is a single-stage gear drive reducer with a transmission ratio of 3.0.

PC090 single-stage gear driving reducer, its transmission ratio $i = 2.42$

The detailed data is shown in the following technical data table:

The following provides more information on the PC+PBWR combination form:

show title "The Combination Form of PC+PBWR Reducer", Refer Page No. 39.

The connection method for PC series gear reducer and PBWR Series worm reducers is comparatively simple and similar to the connection of the B14 mount.

The materials and manufacturing details for the main parts of the PC Kit Gear Reducer

1. Die-casting aluminum alloy (ZL106) case
2. 20CrMnMo gear alloy steel, surface treatment (cementing and hardening), involute tooth shape grinding (grinding gear teeth)
3. The output shaft of the reducer is made of 40Cr and adopts heat treatment for medium carbon steel (seasoning and surface hardening treatment).

The installation of the motor on the PC Series gear speed reducer

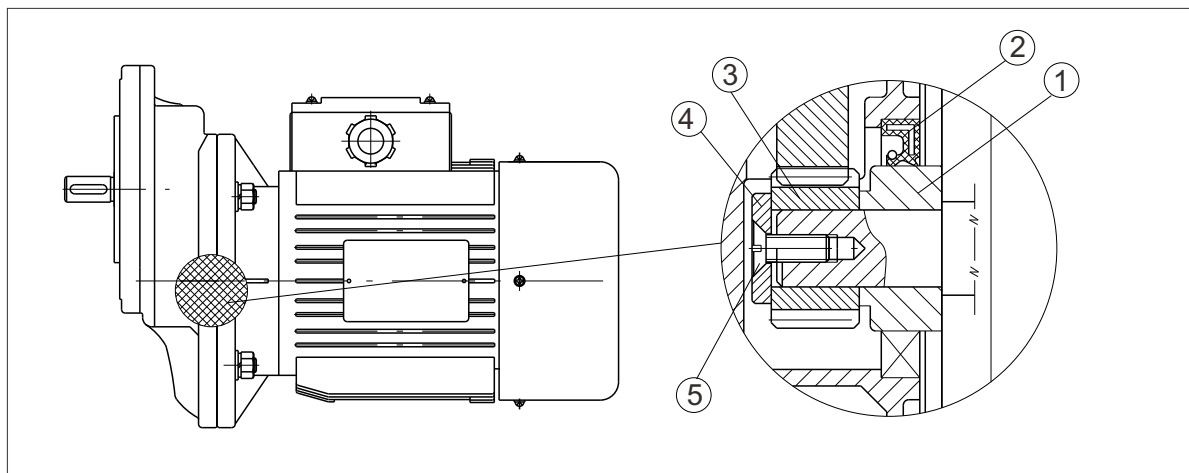
The installation of the motor on the PC Series gear reducer :

In order to fix the pinion correctly on the motor shaft, please follow the procedures below:

1. Completely clean the output shaft of the motor.
2. Remove the flat key on the output shaft.
3. Heat the sleeve (1) up to 100°C~120°C and fix the sleeve (1) on the output shaft based on the diagram.
4. Fix the pinion (3), referring to the method of fixing the sleeve (1).
5. Fix the washer (4) and fasten countersunk head screws (5)
(countersunk head screws shall be coated with screw fixing glue) in order to prevent looseness.
6. Because the PC Series gear reducer has been filled with lubricant, carefully remove the sealing end cover at (2) in the diagram; this procedure does not exist because a PC Series gear reducer has been provided with a motor when leaving the factory.
7. Replace the oil seal and motor at (2) in the diagram, being careful not to damage the oil seal.

Note: The PC Series speed reducer adopts a standard motor with high quality, and the motor may run with no vibration and low noise.

The installation of the motor on the PC Series gear reducer :



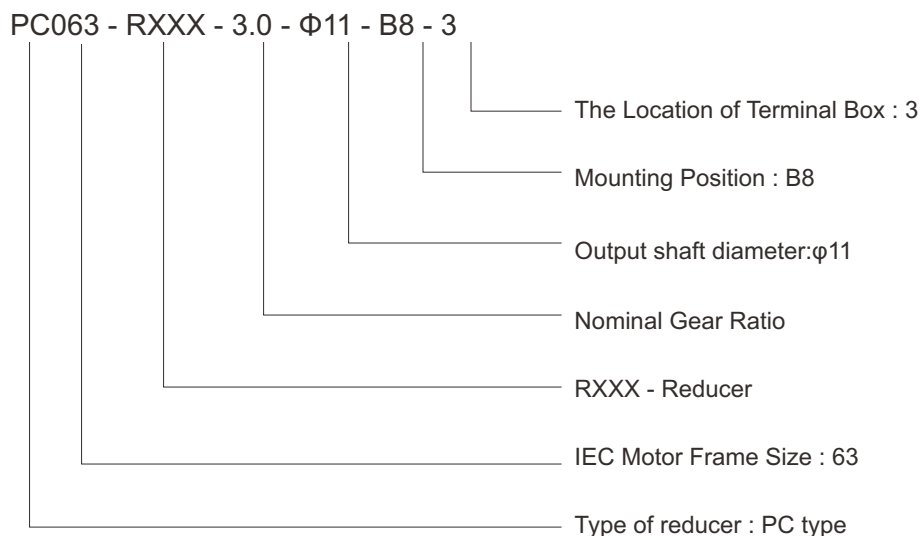
Lubricating oil details of the PC Series Gear Reducer

- PC Series reducer adopt No.2 extreme pressure lithium lubricating grease (long-term) for lubrication, and The reducer may be fixed according to the position indicated in the specification.
- No.2 extreme pressure lithium lubricating grease adopted on the PC Series reducer has the working range from -20°C~+50°C

Type	PC 063	PC 071	PC 080	PC 090
B3, B8 B6, B7 V5, V6	0.05L	0.07L	0.15L	0.15L

Note: The unit of lubricant oil is liter (L).

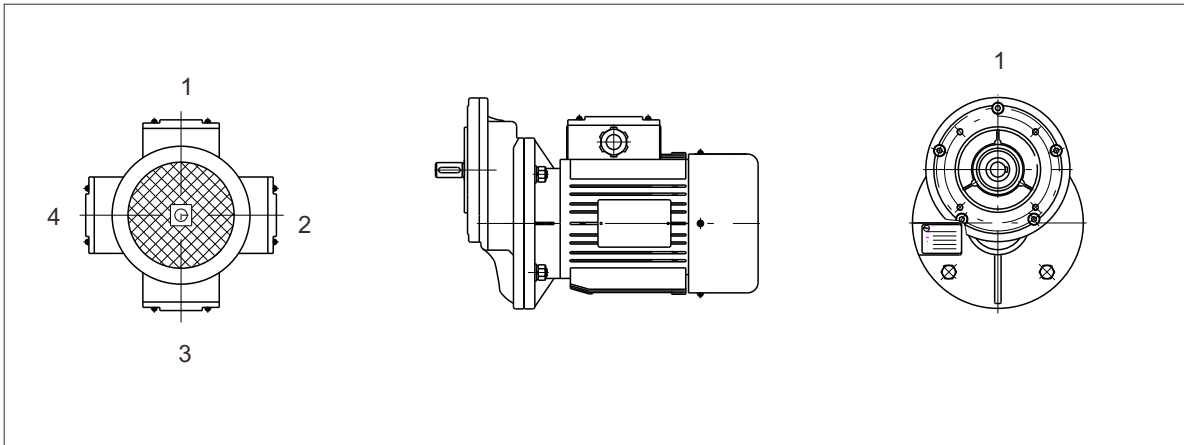
Explanation of the PC Series Gear Reducer Nomenclature



PC	Type
063,071,080,090	IEC Motor Frame Size
G063, RXXX	G063 - Without Motor, Frame Size 63 RXXX - Reducer
3.00 , 2.42	Nominal gear ratio
Φ 11, Φ 14, Φ 19, Φ 24, Φ 28	Output shaft diameter
B3,B8,B6,B7,V5,V6	Mounting Position, Refer Page No. 34
1,2,3,4	Location of Terminal Box, Refer Page No. 34, omitted when not required

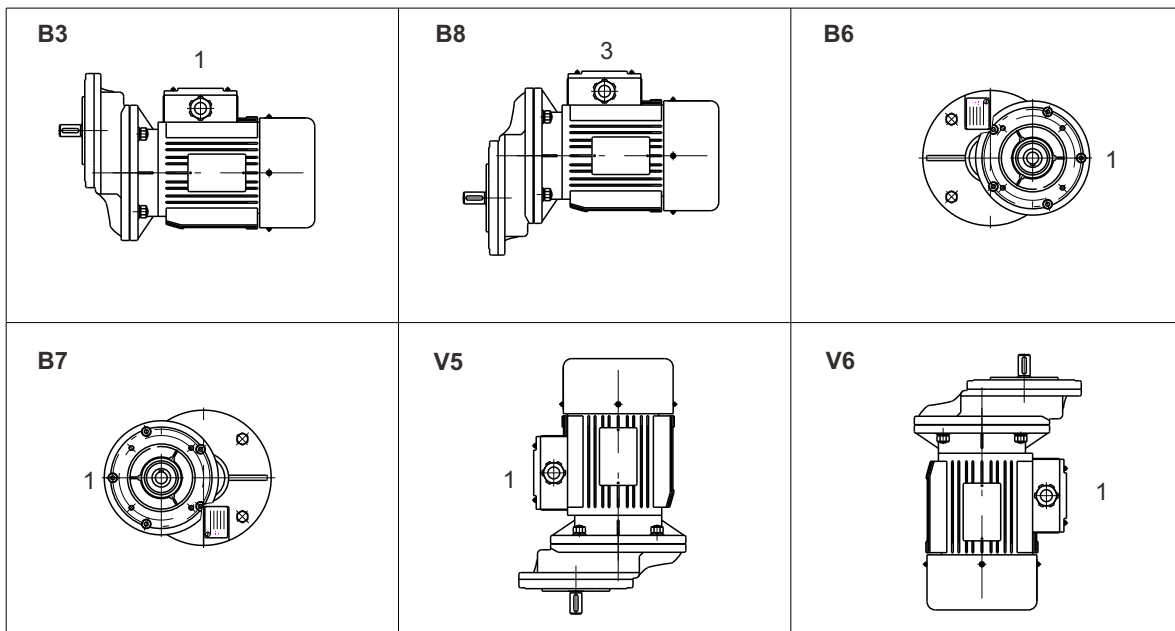
MOUNTING POSITION OF THE PC SERIES GEAR REDUCER

Location of terminal box



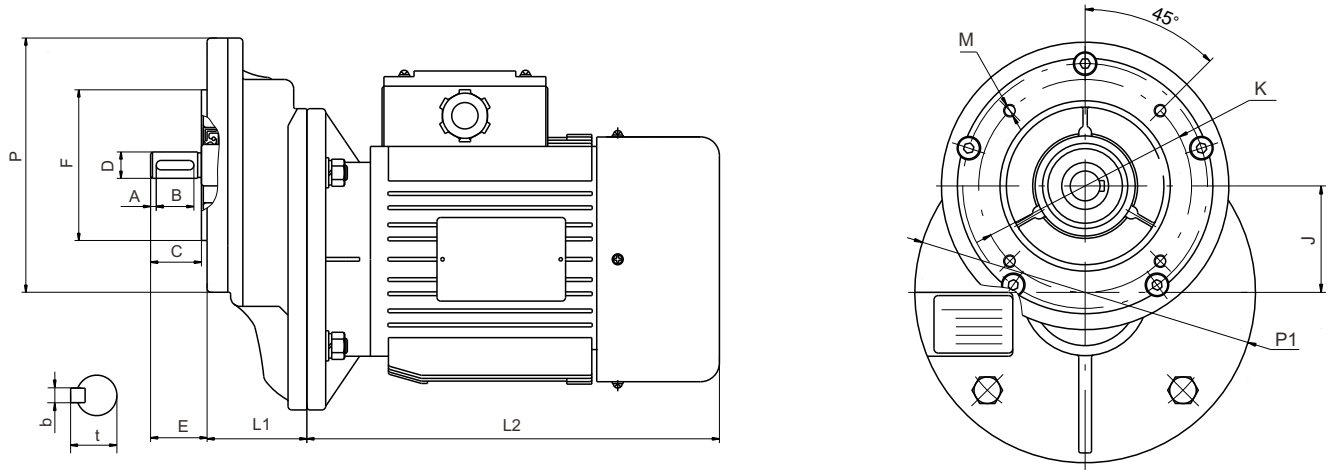
Notice : For specific requirements, indicate the position of the terminal box based on the diagram shown.

Mounting Position of the PC Series Gear Reducer



Note : If there is no specific description, B3 is regarded as the standard mounting position.

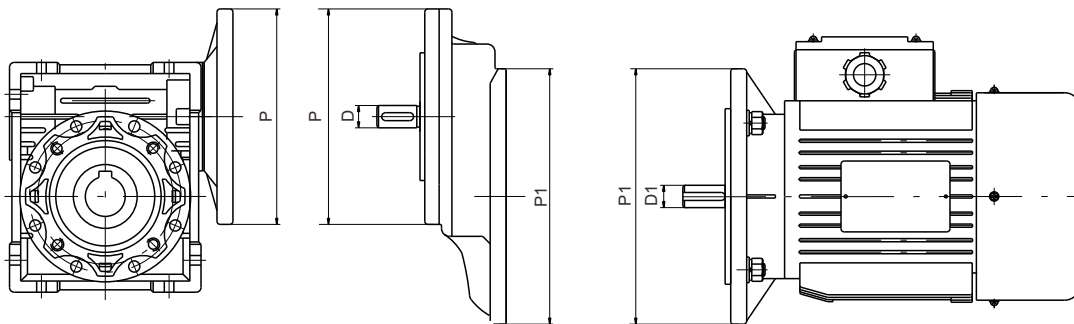
GENERAL ARRANGEMENT DRAWING PC SERIES GEAR REDUCER



Type	A	B	C	D(js6)	b	t	E	F(H8)	P	P1	J	K	M	L1	L2	Mount type
PC063	1.5	18	21	11	4	12.5	23	70	105	140	43	85	4-M6×10	47	183	63B5/Dia.11
	2	20	28	*14	5	16	30									
PC071	3	20	27	14	5	16	30	80	120	160	54	100	4-M6×10	57	210	71B5/Dia.14
	3	32	37	*19	6	21.5	40									
PC080	3	32	40	19	6	21.5	40	110	160	200	66	130	4-M8×11	74	262	80B5/Dia.19
	4	40	50	*24	8	27	50									
	4	50	60	*28	8	31	60									
PC090	3	32	40	*19	6	21.5	40	110	160	200	66	130	4-M8×11	74	294 325	90B5/Dia.24
	3	40	50	24	8	27	50									
	3	50	60	*28	8	31	60									

Note: The output shaft's diameter D(js6) with “*” provided in the table is a non-standard specification, while the diameter without “*” is standard. The user may choose between both of them according to their needs.

The Combination Form of PC+PBWR Reducer :



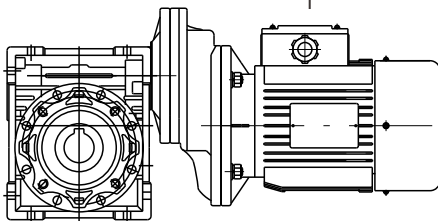
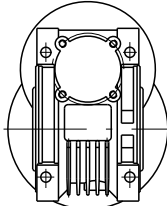
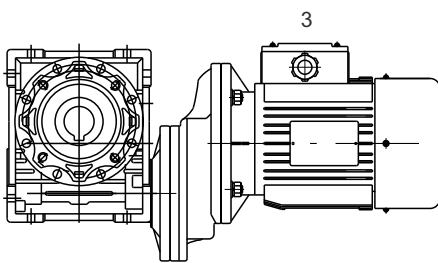
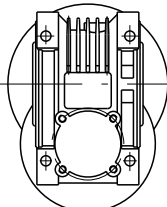
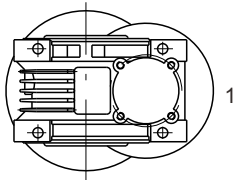
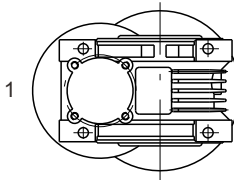
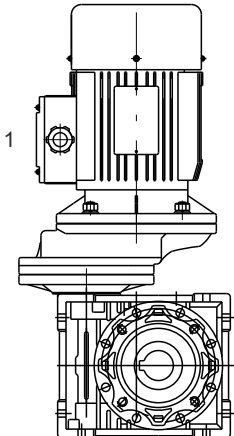
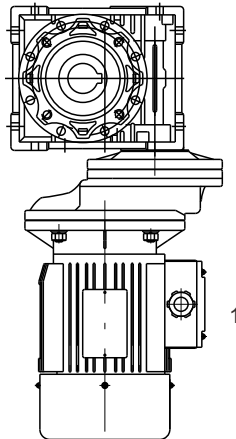
PC+PBWR		P/D - PC Kit (Solid Shaft End)	P/D - PC Kit (Only on request)	P1/D1 - Motor end	Remarks
PC063 +	PBWR 40	Φ105/Φ11	(Φ105/Φ14)	63B5-Φ140/Φ11	Worm reducer is provided with 71B14 type input flange
	PBWR 50				
	PBWR 63				
PC071 +	PBWR 50	Φ120/Φ14	(Φ120/Φ19)	71B5-Φ160/Φ14	Worm reducer is provided with 80B14 type input flange
	PBWR 63				
	PBWR 75				
PC080 +	PBWR 90	Φ160/Φ19	(Φ160/Φ24) (Φ160/Φ28)	80B5-Φ200/Φ19	Worm reducer is provided with 100/112B14 type input flange
	PBWR 75				
	PBWR 110				
PC090 +	PBWR 130	Φ160/Φ24	(Φ160/Φ19) (Φ160/Φ28)	90B5-Φ200/Φ24	Worm reducer is provided with 100/112B14 type input flange
	PBWR 110				

SERIES PC + PBWR

VARIOUS OPTIONS FOR FRAME SIZES AND RATIOS

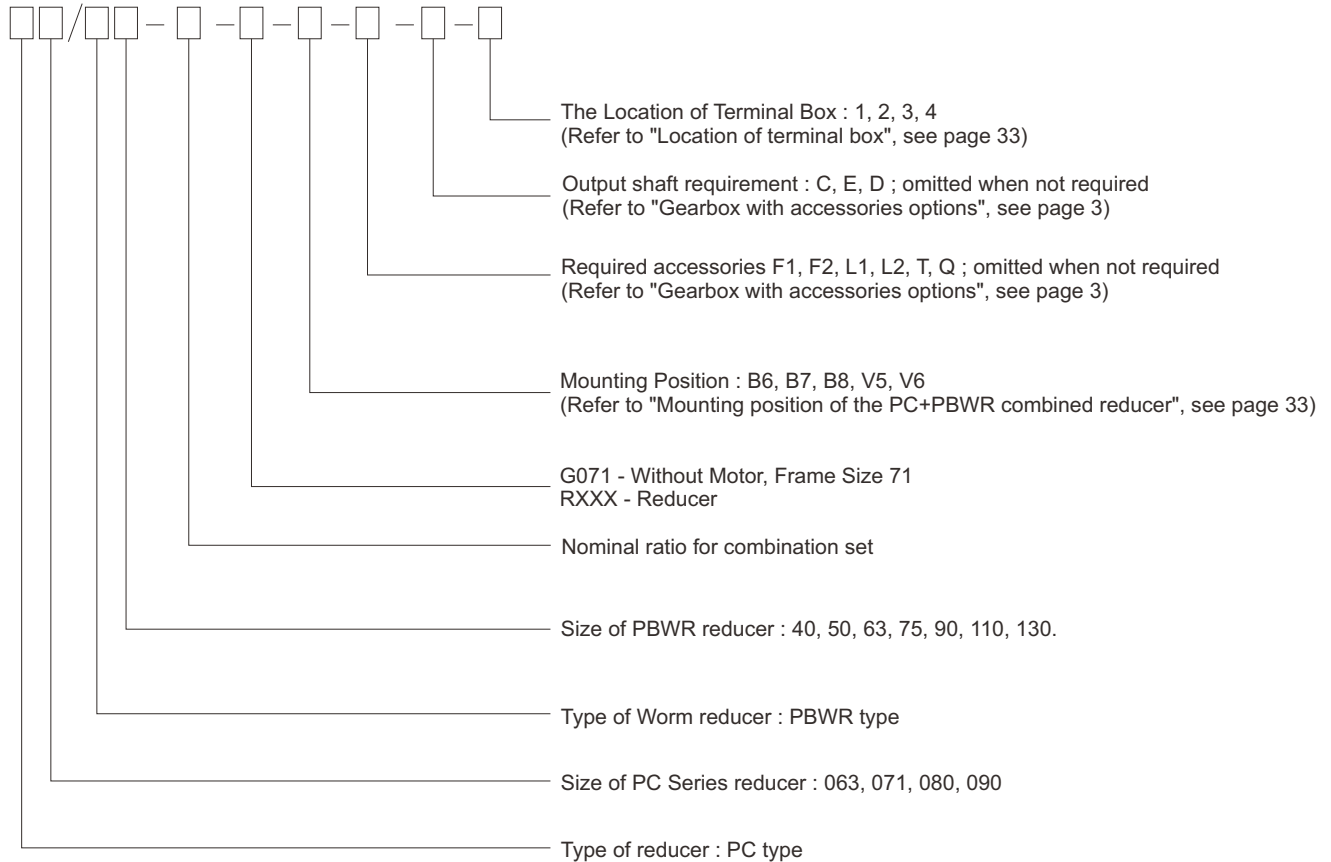
Type	(l)	PC063		PC071		PC080			PC090		
		$\Phi 105/\Phi 11$ i=3	$\Phi 105/\Phi 14$ i=3	$\Phi 120/\Phi 14$ i=3	$\Phi 120/\Phi 19$ i=3	$\Phi 160/\Phi 24$ i=3	$\Phi 160/\Phi 24$ i=3	$\Phi 160/\Phi 28$ i=3	$\Phi 160/\Phi 19$ i=2.42	$\Phi 160/\Phi 24$ i=2.42	$\Phi 160/\Phi 28$ i=2.42
PBWR40	25										
	30										
	40										
	50										
	60										
	80										
	100										
PBWR50	25										
	30										
	40										
	50										
	60										
	80										
	100										
PBWR63	25										
	30										
	40										
	50										
	60										
	80										
	100										
PBWR75	25										
	30										
	40										
	50										
	60										
	80										
	100										
PBWR90	25										
	30										
	40										
	50										
	60										
	80										
	100										
PBWR110	25										
	30										
	40										
	50										
	60										
	80										
	100										
PBWR130	25										
	30										
	40										
	50										
	60										
	80										
	100										

MOUNTING POSITION OF PCSERIES + PBWR REDUCER

B3				
B8				
B6		B7		
V5			V6	

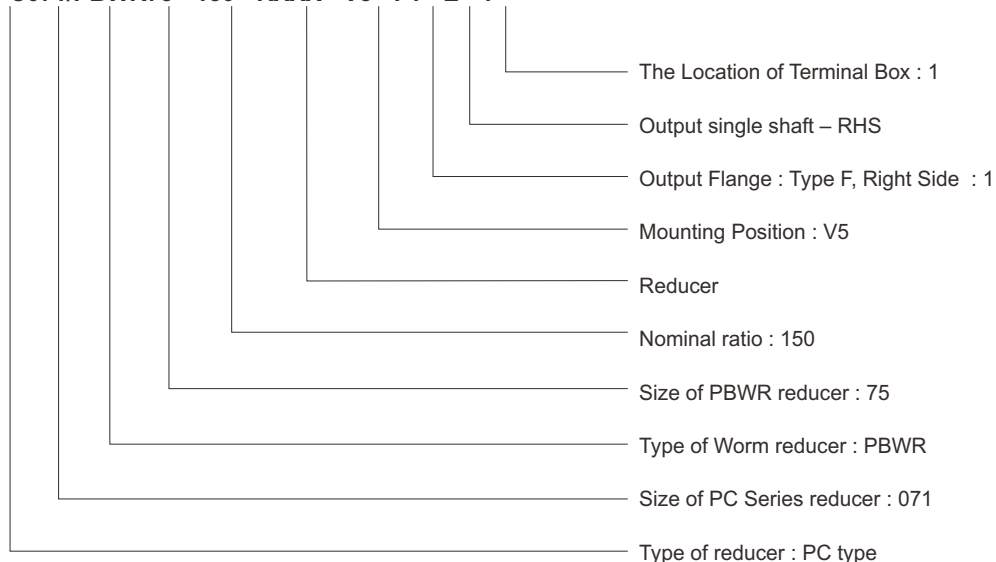
Note : If there is no specific description, B3 is regarded as the standard mounting position.

UNIT DESCRIPTION PC SERIES + PBWR REDUCER



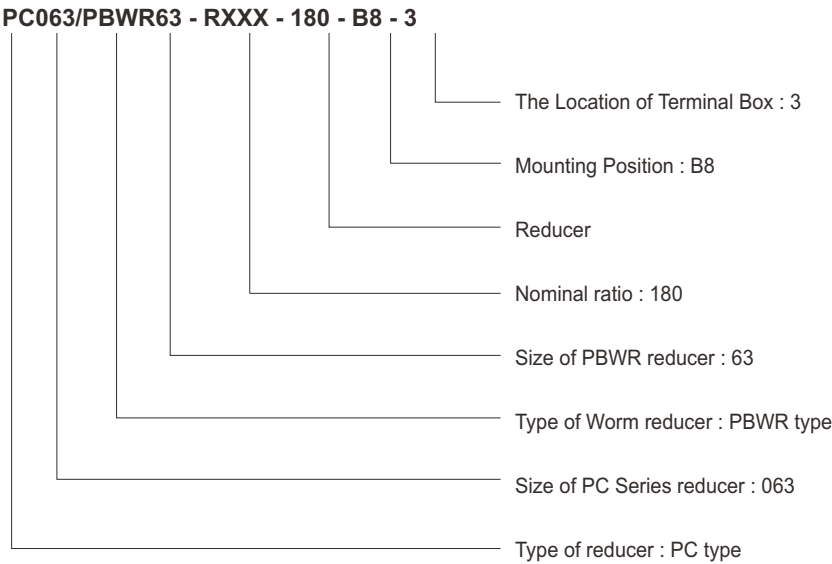
Explanation of the PC Series + PBWR Gear Reducer Nomenclature

PC071/PBWR75 - 150 - RXXX - V5 - F1 - E - 1

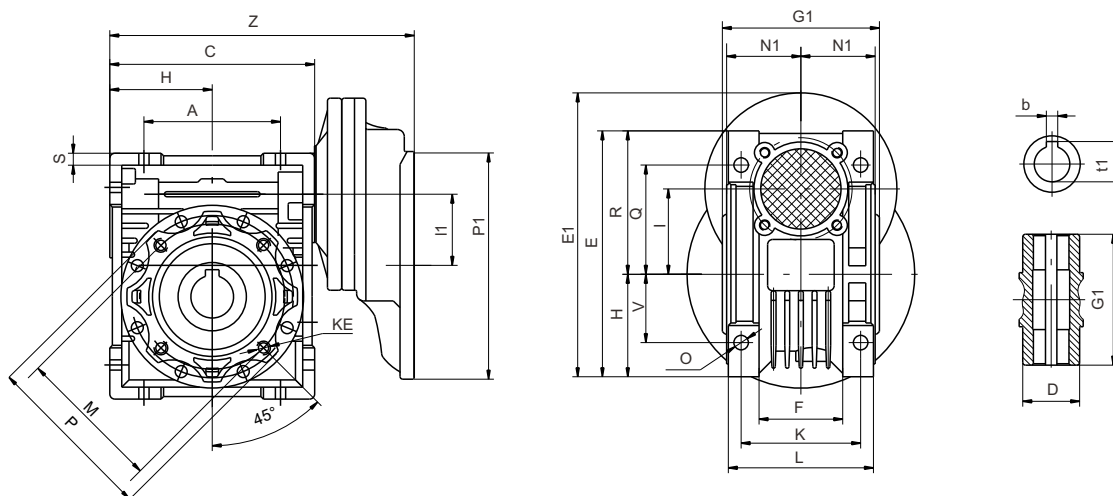




Explanation of the PC Series + PBWR Gear Reducer Nomenclature



GENERAL ARRANGEMENT DRAWING PC SERIES + PBWR REDUCER



PC+PBWR		A	C	D(H7)	t1	b	E	E1	F	G1	H	I	I1	K
PC 063 +	PBWR40	70	100	18	20.8	6	121.5	147	43	78	50	40	40	60
	PBWR50	80	120	25	28.3	8	145	167	49	92	60	50	40	70
	PBWR63	100	144	25	28.3	8	174	192	67	112	72	63	40	85
PC 071 +	PBWR50	80	120	25	28.3	8	145	177.5	48	92	60	50	50	70
	PBWR63	100	144	25	28.3	8	174	202.5	67	112	72	63	50	85
	PBWR75	120	172	28	31.3	8	205	228.5	72	120	86	75	50	90
PC 080 +	PBWR90	140	206	35	38.3	10	238	260.5	72	140	103	90	50	100
	PBWR75	120	172	28	31.3	8	205	241	72	120	86	75	63	90
	PBWR90	140	206	35	38.3	10	238	273	72	140	103	90	63	100
PC 090 +	PBWR110	170	252.5	42	45.3	12	295	317.5		155	127.5	110	63	115
	PBWR130	200	292.5	45	48.8	14	335	357.5		170	147.5	130	63	120
	PBWR110	170	252.5	42	45.3	12	295	317.5		155	127.5	110	63	115
	PBWR130	200	292.5	45	48.8	14	335	357.5		170	147.5	130	63	120

PC+PBWR		KE	L	M	N(h8)	N1	O	P	P1	Q	R	V	S	Z
PC 063 +	PBWR40	4-M8×8	71	75	60	36.5	6.5	87	140	55	71.5	35	6.5	167
	PBWR50	4-M8×10	85	85	70	43.5	8.5	100	140	64	85	40	7	187
	PBWR63	8-M8×14	103	95	80	53	8.5	110	140	80	102	50	8	214
PC 071 +	PBWR50	4-M8×10	85	85	70	43.5	8.5	100	160	64	85	40	7	197
	PBWR63	8-M8×14	103	95	80	53	8.5	110	160	80	102	50	8	224
	PBWR75	8-M8×14	113	115	95	57	11	140	160	93	119	60	10	255.5
PC 080 +	PBWR90	8-M10×18	130	130	110	67	13	160	160	102	135	70	11	289.5
	PBWR75	8-M8×14	113	115	95	57	11	140	200	93	119	60	10	272.5
	PBWR90	8-M10×18	130	130	110	67	13	160	200	102	135	70	11	306.5
PC 090 +	PBWR110	8-M10×18	142	165	130	74	14	200	200	125	167.5	85	15	357.5
	PBWR130	8-M12×21	155	215	180	81	16	250	200	140	187.5	10	15	397.5
	PBWR110	8-M10×18	142	165	130	74	14	200	200	125	167.5	85	15	357.5
	PBWR130	8-M12×21	155	215	180	81	16	250	200	140	187.5	100	15	397.5

Selection Parameter of Series PC + PBWR Reducer (Input Speed 1400 rpm, 4 Pole & 900 rpm, 6 pole)

P1 (KW)	n2 (r/min)	M2 (N.M)	Service Factor	i	Type	Motor type
0.12	466.7	2.4	2.08	3	PC063	0.12KW-4P-63B5
	18.7	42.4	1.20	75	PC063+PBWR40	0.12KW-4P-63B5
	156.6	46.0	1.20	90		
	11.7	57.0	0.90	120		
	9.3	66.0	0.70	150		
	7.8	74.0	0.60	180		
	9.3	67.5	1.30	150	PC063+PBWR50	0.12KW-4P-63B5
	7.8	75.0	1.10	180		
	5.8	88.0	0.80	240		
	4.7	98.0	0.70	300		
	5.8	92.3	1.50	240	PC063+PBWR63	0.12KW-4P-63B5
	4.7	103.0	1.20	300		
0.18	466.7	3.6	1.42	3	PC063	0.18KW-4P-63B5
	18.7	63.5	0.80	75	PC063+PBWR40	0.18KW-4P-63B5
	15.6	70.0	0.80	90		
	11.7	85.0	0.60	120		
	18.7	63.5	1.40	75	PC063+PBWR50	0.18KW-4P-63B5
	15.6	71.0	1.50	90		
	11.7	87.0	1.10	120		
	9.3	101.0	0.90	150		
	7.8	113	0.70	180		
	5.8	133.0	0.60	240		
	9.3	103.1	1.70	150	PC063+PBWR63	0.18KW-4P-63B5
	7.8	117.0	1.40	180		
	5.8	139.0	1.00	240		
	4.7	155.0	0.80	300		
	300.0	5.6	1.97	3	PC071	0.18KW-6P-71B5
	12.0	94.5	1.20	75	PC071+PBWR50	0.18KW-6P-71B5
	10.0	105.0	1.40	90		
	7.5	126.0	1.00	120		
	12.0	97.4	2.20	75	PC071+PBWR63	0.18KW-6P-71B5
	10.0	107.0	2.40	90		
	7.5	131.0	1.80	120		
	6.0	152.0	1.40	150		
	5.0	168.0	1.20	180		
	3.8	197.0	0.90	240		
	3.0	218.0	0.70	300		
	5.0	178.8	1.70	180	PC071+PBWR75	0.18KW-6P-71B5
	3.8	211.0	1.20	240		
	3.0	235.0	1.00	300		
0.25	466.7	5.0	2.20	3	PC071	0.25KW-4P-71B5
	18.7	88.3	1.00	75	PC071+PBWR50	0.25KW-4P-71B5
	15.6	98.0	1.10	90		
	11.7	121.0	0.80	120		
	18.7	90.8	1.80	75	PC071+PBWR63	0.25KW-4P-71B5
	15.6	100.0	2.00	90		
	11.7	125.0	1.50	120		
	9.3	143.0	1.20	150		
	7.8	163.0	1.00	180		

Selection Parameter of Series PC + PBWR Reducer (Input Speed 1400 rpm, 4 Pole & 900 rpm, 6 pole)

P1 (KW)	n2 (r/min)	M2 (N.M)	Service Factor	i	Type	Motor type
0.25	5.8	192.0	0.70	240		
	4.7	215.0	0.60	300		
	9.3	150.9	1.70	150	PC071+PBWR75	0.25KW-4P-71B5
	7.8	172.0	1.40	180		
	5.8	201.0	1.10	240		
	4.7	230.0	0.90	300		
	300.0	7.8	1.41	3	PC071	0.25KW-6P-71B5
	12.0	135.3	1.60	75	PC071+PBWR63	0.25KW-6P-71B5
	10.0	148.0	1.80	90		
	7.5	181.0	1.30	120		
	6.0	211.0	1.00	150		
	12.0	139.3	2.40	75	PC071+PBWR75	0.25KW-6P-71B5
	10.0	155.0	2.50	90		
	7.5	191.01	1.90	120		
	6.0	219.0	1.50	150		
	5.0	248.0	1.20	180		
	5.0	262.6	1.90	180	PC071+PBWR90	0.25KW-6P-71B5
	3.8	318.0	1.40	240		
	3.0	358.0	1.10	300		
0.37	466.7	7.4	1.49	3	PC071	0.37KW-4P-71B5
	18.7	134.4	1.2	75	PC071+PBWR63	0.37KW-4P-71B5
	15.6	148.0	1.40	90		
	11.7	185.0	1.00	120		
	9.3	212.0	0.80	150		
	18.7	138.2	1.8	75	PC071+PBWR75	0.37KW-4P-71B5
	15.6	154.0	1.9	90		
	11.7	191.0	1.50	120		
	9.3	223.0	1.10	150		
	7.8	254.0	0.90	180		
	7.8	268.0	1.50	180	PC071+PBWR90	0.37KW-4P-71B5
	5.8	321.0	1.10	240		
	4.7	371.0	0.90	300	PC080+PBWR75	0.37KW-6P-80B5
	300.0	11.5	1.91	3	PC080	0.37KW-6P-80B5
	12.0	206.1	1.60	75		
	10.0	230.0	1.70	90		
	7.5	283.0	1.30	120	PC080+PBWR75	0.37KW-6P-80B5
	6.0	324.0	1.00	150		
	6.0	347.5	1.60	150	PC080+PBWR90	0.37KW-6P-80B5
	5.0	389.0	1.30	180		
	3.8	471.0	1.00	240		
	3.8	508.8	1.60	240	PC080+PBWR110	0.37KW-6P-80B5
	3.0	577.0	1.30	300		

Selection Parameter of Series PC + PBWR Reducer (Input Speed 1400 rpm, 4 Pole & 900 rpm, 6 pole)

P1 (KW)	n2 (r/min)	M2 (N.M)	Service Factor	i	Type	Motor type
0.55	466.7	11.0	2.03	3	PC080	0.55KW-4P-80B5
	18.7	205.4	1.20	75	PC080+PBWR75	0.55KW-4P-80B5
	15.6	230.0	1.30	90		
	11.7	284.0	1.00	120		
	9.3	332.0	0.80	150		
	15.6	239.7	2.30	90	PC080+PBWR90	0.55KW-4P-80B5
	11.7	297.0	1.60	120		
	9.3	355.0	1.30	150		
	7.8	398	1	180		
	5.8	477	0.8	240		
	7.8	425.5	1.80	180	PC080+PBWR110	0.55KW-4P-80B5
	5.8	513.0	1.30	240		
	4.7	597.0	1.00	300		
	300.0	17.2	1.29	3	PC080	0.55KW-6P-80B5
	12.0	306.4	1.10	75	PC080+PBWR75	0.55KW-6P-80B5
	10.0	341.0	1.10	90		
	10.0	357.2	2.00	90	PC080+PBWR90	0.55KW-6P-80B5
	7.5	441.0	1.40	120		
	6.0	516.0	1.10	150		
	5.0	578.0	0.90	180		
	7.5	462.2	2.60	120	PC080+PBWR110	0.55KW-6P-80B5
	6.0	552.0	2.00	150		
	5.0	620.0	1.60	180		
	3.8	756.0	1.10	240		
	3.8	756.4	1.60	240	PC080+PBWR130	0.55KW-6P-80B5
	3.0	858.0	1.30	300		
0.75	466.0	15.0	1.47	3	PC080	0.75KW-4P-80B5
	18.7	280.1	0.90	75	PC080+PBWR75	0.75KW-4P-80B5
	15.6	313.0	1.00	90		
	15.6	336.9	1.70	90	PC080+PBWR110	0.75KW-4P-80B5
	11.7	405.0	1.20	12		
	9.3	483.0	0.90	150		
	7.8	543.0	0.70	180		
	11.7	429.8	2.20	120		
	9.3	506.0	1.70	150	PC080+PBWR130	0.75KW-4P-80B5
	7.8	580.0	1.30	180		
	5.8	700.0	0.90	240	PC090+PBWR110	0.75KW-6P-90B5
	5.8	712.2	1.40	240		
	4.7	813.0	1.10	300		
	376	18.7	1.91	2.42	PC090	0.75KW-6P-90B5
	12.4	392.9	3.20	72.6		
	9.3	508.0	2.30	96.8		
	7.4	607.0	1.80	121		
	6.2	682.0	1.50	145.2		
	4.6	832.0	1.00	193.6		

Selection Parameter of Series PC + PBWR Reducer (Input Speed 1400 rpm, 4 Pole & 900 rpm, 6 pole)

P1 (KW)	n2 (r/min)	M2 (N.M)	Service Factor	i	Type	Motor type
0.75	12.4	398.7	4.40	72.6	PC090+PBWR130	0.75KW-6P-90B5
	9.3	508	3.2	96.8		
	7.4	607	2.6	121		
	6.2	682.0	2.10	145.2		
	4.6	832.0	1.50	193.6		
	3.7	944.0	1.20	242		
1.1	578.5	17.8	2.00	2.42	PC090	1.1KW-4P-90B5
	19.3	392.2	2.50	72.6	PC090+PBWR110	1.1KW-4P-90B5
	14.5	508.0	1.80	96.8	PC090+PBWR130	1.1KW-4P-90B5
	11.6	599.0	1.50	121		
	9.6	686.0	1.10	145.2		
	7.2	828.0	0.80	193.6		
	19.3	397.7	3.50	72.6		
	14.5	508.0	2.60	96.8		
	11.6	608.0	2.00	121		
	9.6	686.0	1.60	145.0		
	7.2	843.0	1.20	193.6		
	5.8	962.0	0.90	242		
	376.0	27.4	1.30	2.42	PC090	1.1KW-6P-90B5
	12.4	576.2	2.20	72.6	PC090+PBWR110	1.1KW-6P-90B5
	9.3	746.0	1.60	96.8	PC090+PBWR130	1.1KW-6P-90B5
	7.4	890.0	1.20	121		
	6.2	1000.0	1.00	145.2		
	12.4	584.7	3.00	72.6		
	9.3	746.0	2.20	96.8		
	7.4	890.0	1.70	121		
	6.2	1000.0	1.40	145.2		
	4.6	1220.0	1.00	193.6		
	578.5	24.3	1.47	2.42	PC090	1.5KW-4P-90B5
	19.3	534.9	1.90	72.6	PC090+PBWR110	1.5KW-4P-90B5
	14.5	693.0	1.30	96.8	PC090+PBWR130	1.5KW-4P-90B5
	11.6	817.0	1.10	121		
	9.6	936.0	0.80	145.2		
	19.3	542.3	2.60	72.6		
	14.5	693.0	1.90	96.8		
	11.6	830.0	1.50	121		
	9.6	936.0	1.10	145.2		
	7.2	1148.9	0.80	193.6		
2.2	1157.0	17.9	2.00	2.42	PC090	1.5KW-2P-90B5
	38.6	397.7	2.10	72.6	PC090+PBWR110	1.5KW-2P-90B5
	28.9	516.7	1.50	96.8	PC090+PBWR130	1.5KW-2P-90B5
	23.1	617.0	1.20	121		
	38.6	408.6	2.90	72.6		
	28.9	545.0	2.00	96.8		
	23.1	654.0	1.60	121		
	19.3	752.0	1.30	145.2		

Gearbox Ratio <i>i</i>	Rated Power P_m Rated Torque M_2	Output Speed n_2	Gearbox Size								
			30	40	50	63	75	90	110	130	150
7.5	$\frac{P_m}{M_2}$	187	0.41	0.90	1.58	2.84	4.06	6.3	10.4	16.1	25.8
			18	40	71	128	185	290	480	750	1200
10	$\frac{P_m}{M_2}$	140	0.32	0.69	1.23	2.19	3.25	5.11	8.57	13.5	20.2
			18	40	72	130	195	310	520	820	1240
15	$\frac{P_m}{M_2}$	9	23	0.48	0.88	165	2.30	4.09	6.48	10.3	13.9
			18	40	74	140	200	360	570	920	1250
20	$\frac{P_m}{M_2}$	70	0.18	0.37	0.68	1.22	1.88	3.10	4.83	7.76	11
			18	39	73	135	210	355	560	910	1300
25	$\frac{P_m}{M_2}$	56	0.18	0.30	0.54	0.98	1.47	2.43	4.12	6.49	8.4
			21	38	70	130	200	340	590	930	1200
30	$\frac{P_m}{M_2}$	47	0.15	0.31	0.57	1.06	1.48	2.57	3.90	6.35	7
			20	45	84	160	230	410	630	1040	1200
40	$\frac{P_m}{M_2}$	35	0.11	0.23	0.42	0.76	1.12	1.76	2.87	4.93	7.3
			18	41	76	145	220	360	610	1050	1550
50	$\frac{P_m}{M_2}$	28	0.09	0.18	0.34	0.60	0.89	1.38	2.35	3.83	5.4
			17	39	73	135	210	340	600	980	1400
60	$\frac{P_m}{M_2}$	23	0.08	0.15	0.28	0.51	0.75	1.13	1.9	3.05	4.2
			16	36	68	130	200	320	560	900	1260
80	$\frac{P_m}{M_2}$	18	0.05	0.12	0.22	0.39	0.58	0.83	1.34	2.26	3.1
			13	33	65	122	190	285	490	840	1150
100	$\frac{P_m}{M_2}$	14	-	0.09	0.16	0.34	0.48	0.67	1.07	1.70	2.29
			-	29	55	118	180	270	460	740	1000

P_m = Rated Power (kW) M_2 = Output Torque (Nm) i = Exact Ratio n_2 = Output Speed (rpm)