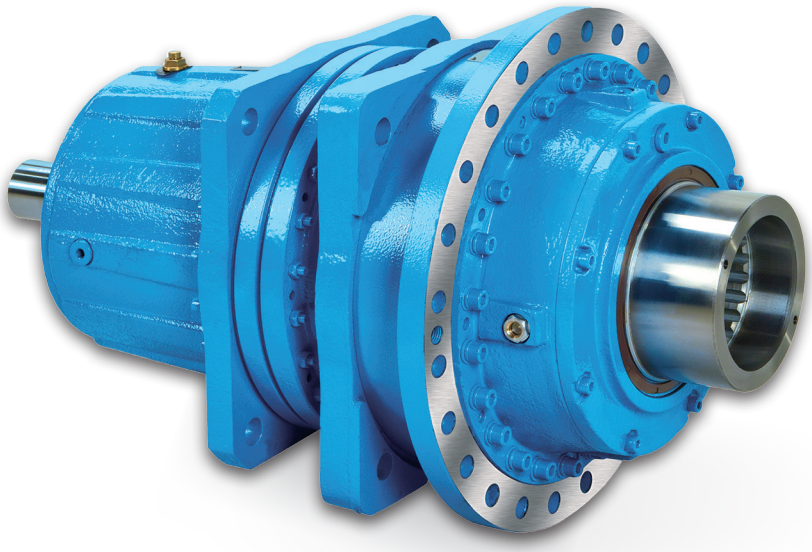
TGE
TRANSMISSION



P series

PLANETARY GEAR UNITS

P Series Planetary Gear Units

Power range: 0.5–14000 kW

Ratio: 25–4000

Torque: 22–2600 kN.m

Features

» Highly modular design.

» Quality material ensures the product reliability.

» Fluctuation structure design house with high load capacity and cooling performance.

» Fluorine rubber sealing with good anti-leakage performance.

» Optional accessories

» Various options to combine with other gear units.

Part characteristics

» Housing materials are high strength grey cast iron and nodular cast iron;

» Gears, pinions and bevel gears are made of high grade alloy with carburize-harden technology. Hardness of teeth surface reaches 58-62 HRC, grinding precision reaching class 5–6 and even 3 if required;

» Shafts are made of alloy via heat treatment;

» Standard accessories such as bearings and oil seals are provided by international a national famous brands;

» Good assembly environment, standardized assembly technology, 100% strict quality assurance inspection and regular type test.

Main application

» Offshore

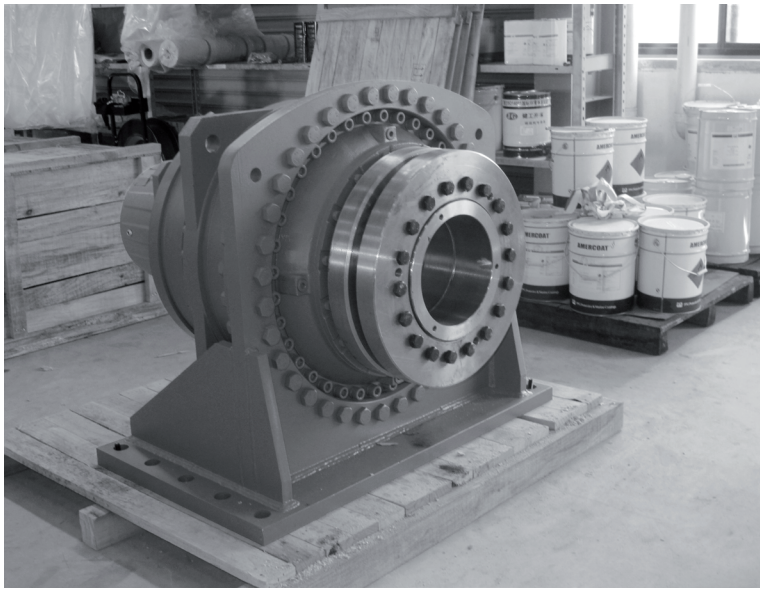
» Hoisting, lifting and transportation

» Electricity and energy

» Coal minerals

» Metal processing

» Chemistry and recycling




SRs 1300 TAKRAF

Note:
you must conform to the following instructions!

- The structure scheme, appearance diagram and other attached diagrams in sample are examples, there is no strict proportion requirement (the unmarked dimension units are mm)
- The marked weight is average value
- To prevent accidents, all the rotation parts are added with protective covers according to the safety regulations of the nation and region
- Before debugging, you should carefully read instruction book
- Gear unit is on running-permission status when delivered, you should add lubrication oil before putting it into running
- The marked oil quantity in sample is only reference value, actual oil filling quantity should be the same with the mark on oil dipstick
- Lubrication oil viscosity should be selected according to working situation and application environment temperature of gear units
- You can only apply lubrication oil of internationally famous brand

Product function mark

 Oil dipstick

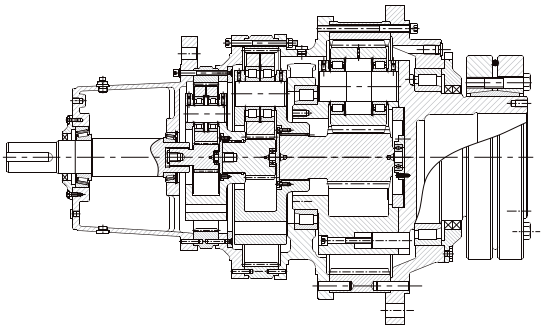
 Breather

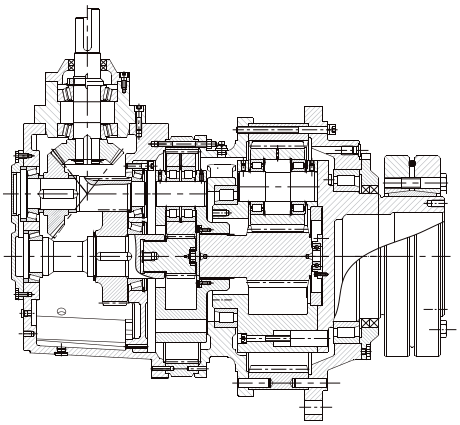
 Oil filler

 Oil drain

Contents

1 Sectional Drawings:





2 Type Designation:

P 3 N A 10 - 140 - Y-11 +B42 -B51 - 90

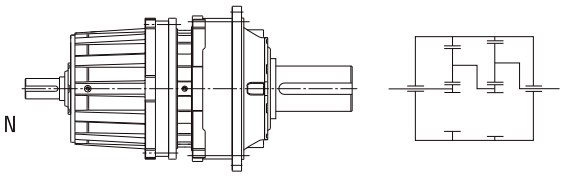
- P Series
- Stages
- Input Modes
  - *N = Standard (coaxial)*
  - *S = Helical gear stage*
  - *L = Bevel gear stage*
  - *K = Bevel-helical gear stage*
- Output Modes
  - *A= Hollow shaft with shrink disk*
  - *B= Solid shaft with parallel key*
  - *C= Hollow shaft with involute splines*
  - *D= Solid shaft with involute splines*
- Size
- Nominal Ratio
- Input Part
  - *Y= Motor*
  - *F= Connection Flange*
  - *No Code for Shaft Input*
- Accessories and Special Requests
- Mounting Positions
- Positions of Motor Terminal Box

3 Input and Output Modes:

Input modes:

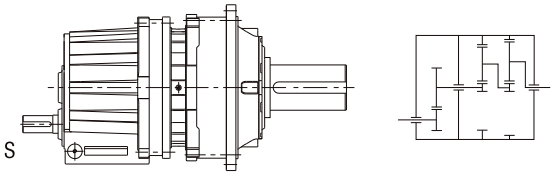
2-stage planetary gear unit

P2N..
(i:25-40)



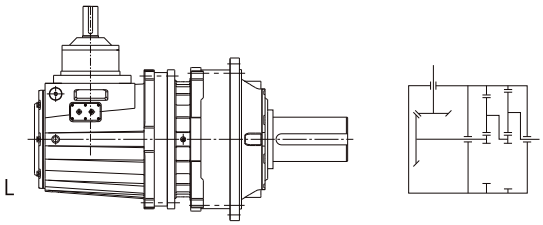
Standard (Coaxial)

P2S..
(i:45-125)



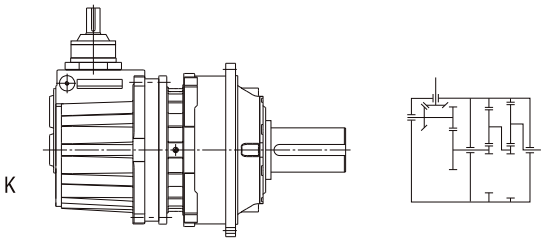
Planetary gear units with primary helical gear stage

P2L..
(i:31.5-100)



Planetary gear units with primary bevel gear stage

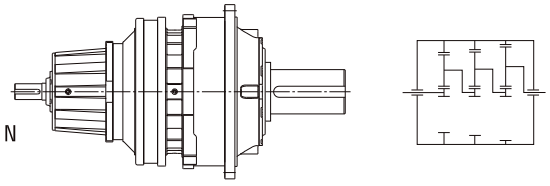
P2K..
(i: 112-500)



Planetary gear units with primary bevel-helical gear stage

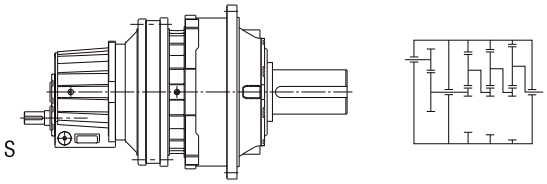
3-stage planetary gear unit

P3N..
(i:140-280)



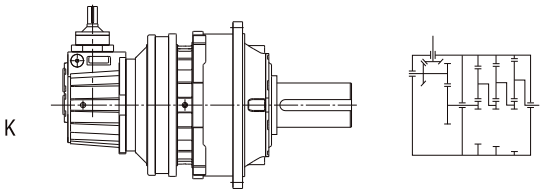
Standard (Coaxial)

P3S..
(i:280-900)



Planetary gear units with primary helical gear stage

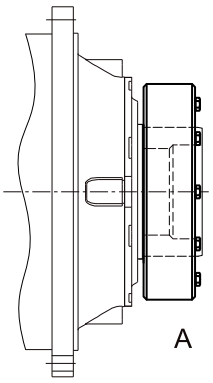
P3K..
(i:560-4000)



Planetary gear units with primary bevel-helical gear stage

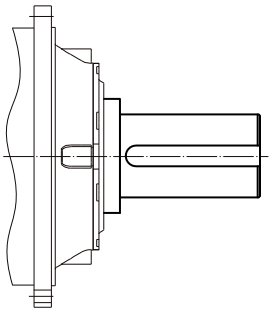
Output modes:

P..A..



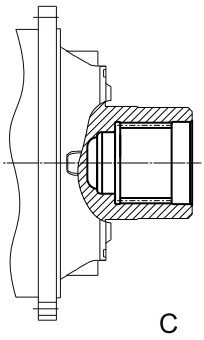
Hollow shaft with shrink disk

P..B..



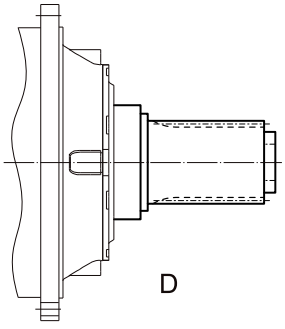
Solid shaft with parallel keys

P..C..



Hollow shaft with internal splines

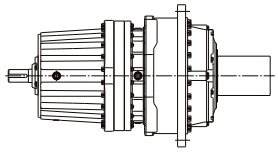
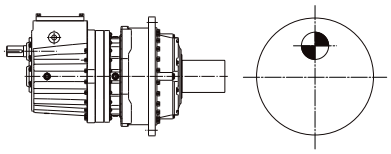
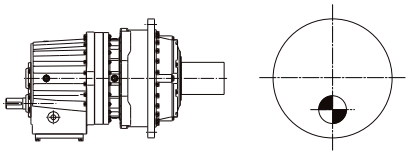
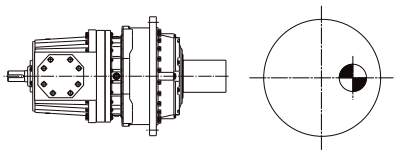
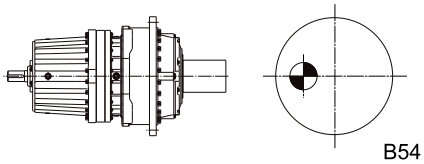
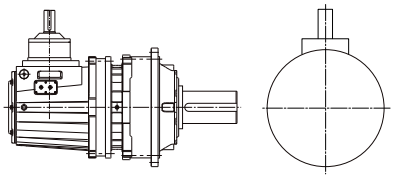
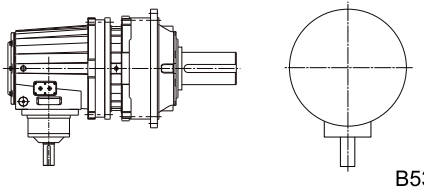
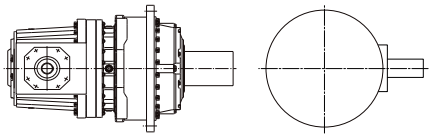
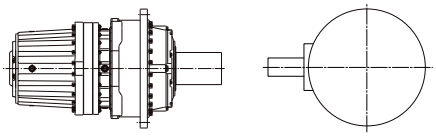
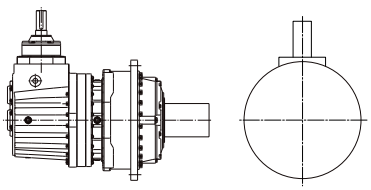
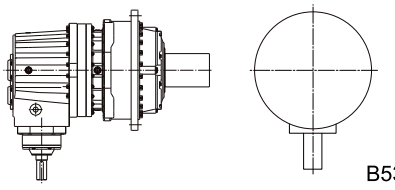
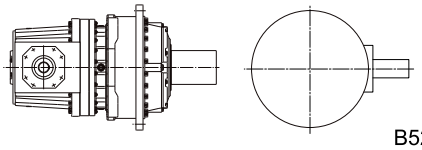
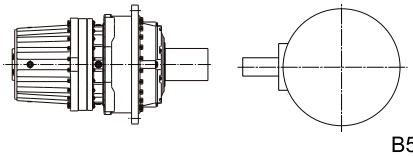
P..D..



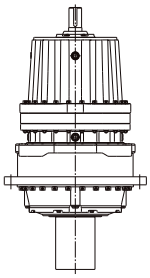
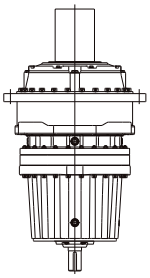
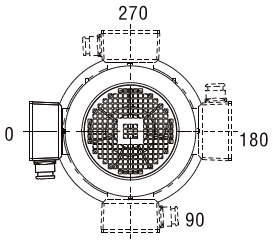
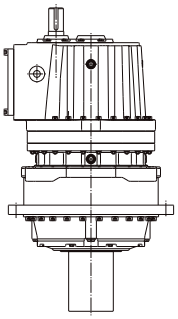
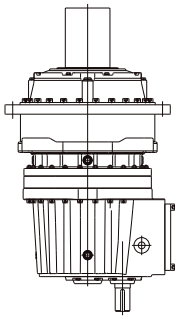
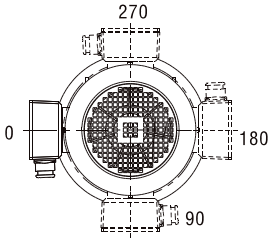
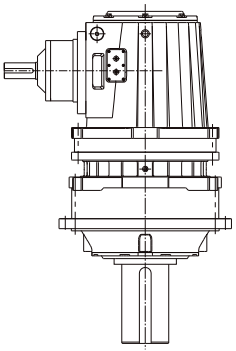
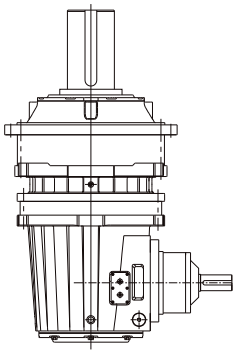
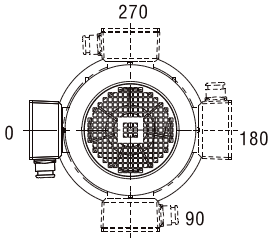
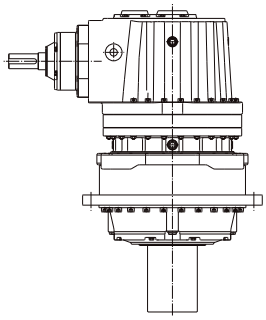
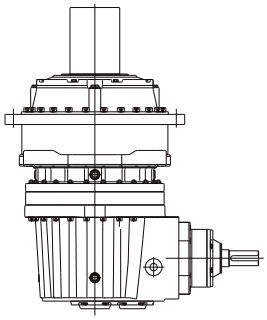
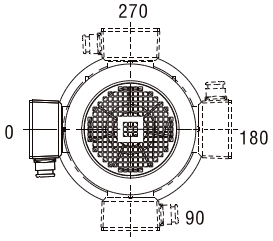
Solid shaft with external splines

P

4 Mounting Position, Position of Motor Terminal Box:

		Horizontal	
Coaxial planetary gear units	P.N.	 B5	
Helical–planetary gear units	P.S.	 B51*	 B53
		 B52	 B54
Bevel–planetary gear units	P.L.	 B51*	 B53
		 B52	 B54
Bevel–helical–planetary gear units	P.K.	 B51*	 B53
		 B52	 B54

* If lubrication required, please consult us.

	Vertical *)		Position of Motor Terminal Box
	 V1	 V3	
	 V11	 V31	
	 V11	 V31	
	 V11	 V31	

P

5 Type Selection and Example:

Steps	Description	Symbols	Parameters Calculation and Guidelines
1	Driven Machine Factor	f_1	Refer to f1 table on P8/P and P8/P.
2	Prime Mover Factor	f_2	Prime Mover Factor: f_2 Electric motor, hydraulic motor, turbine: 1.0 Piston engine with 4-6 cylinders, cyclic variation 1:100 to 1:200: 1.25 Piston engine with 1-3 cylinders, cyclic variation 1:100: 1.5
3	Factor for gear unit reliability	S_F	Refer to SF table on Page 9/P.
4	Input Speed	n_1	≤1800 r/min Consult us if higher speed required.
5	Calculation of the ratio	i	$i=n_1/n_2$
6	Determination of gear unit type and transmission efficiency	η	Type / η / Type / η P2N.. 94% P3N.. 92% P2L.. 93% P3S.. 91% P2S.. 93% P3K.. 89% P2K.. 91%
7	Calculation of the input power of the gear unit on basis of the torque and power required by the driven machine.	P_1	$P_1=T_2 \cdot n_1/(9550 \cdot i \cdot \eta)$ or $P_1=P_2/\eta$
8	Determination of gear unit size referring to the table of Transmission Capacity.	P_{1N} T_{2N}	$T_{2N} \geqslant T_2 \cdot f_1 \cdot f_2 \cdot S_F$ or $P_{1N} \geqslant P_1 \cdot f_1 \cdot f_2 \cdot S_F$ If: $3.33 \cdot P_1 \geqslant P_{1N}$ is not met, Please consult us.
9	Check Peak Torque *	T_A	$P_{1N} \geqslant T_A \cdot n_1 \cdot f_3/9550$ f3 / Load peaks per hour: 1–5 / 6–30 / 31–100 / > 100 Steady direction of load: 0.5 / 0.65 / 0.7 / 0.85 Alternating direction of load: 0.7 / 0.95 / 1.10 / 1.25
10	Check the radial and axial forces on the shafts.	F_{r1}/F_{r2} F_{a1}/F_{a2}	See Fr table on P38/P.
11	Calculation of the utilization	f_{14}	Utilization = $P_1/P_{1N} \cdot 100\%$ f14:factor for utilization Utilization: 30% 40% 50% 60% 70% 80% 90% 100% f14: 0.66 0.77 0.83 0.90 0.90 0.95 1.0 1.0
12	Ambient temperature factor	f_t	Refer to ft table on Page 9/P.
13	Check thermal capacity	P_G	$P_1 \leqslant P_G = P_{G1} \cdot f_t \cdot f_{14}$ no cooling device is required. if $P_1 > P_G$, auxiliary cooling device should be installed. Consult us if required.
14	Determination of lubrication system		For details about lubrication system, see P56/P.
15	Determination of every item included in the Type Designation		For details about Type Designation, see P 2/P.

* Peak torque: max. load torque, which means max. torque due to be caused from starting, braking or max. pulsating load. (Generally, it refers to peak starting or braking torque.)

Example

Prime mover

Motor Power : 90kW

Motor Speed: n1=1000r/min

Max. starting toqrue: 2000N.m

(This value is usually provided by users. If not available, it is routine to calculate by 1.6 times of nominal torque of electric motor.)

Driven machine

Name : bucket converyor

Speed: 12.5r/min

Output torque: 68000N・m

Duty: 12h/d

Starts per hour: > 3 times

Operating cycle per hour: 60%

Ambient temperature: 20℃

Place of installation: in the open

Altitude: below 1000m

Gear Unit

Parallel input shafts, solid output shaft with parallel keys, input shaft facing downwards, mounting position B53

Selection steps:

1. Determination of gear unit type:

1.1 Calculation of the ratio:i=n1/n2=1000/12.5=80

1.2 Selection of gear unit type:

P2SB..-B53 selected(as per the ratio, input and output shafts).

2. Determination of gear unit size:

2.1 Calculation of the nominal power of gear unit:

P1=T2 ・n1/(9550・ i・ η)

In the table of transmission capacity on P2/P, η=0.93

P1=T2・ n1/(9550・ i ・ η)

=68000×1000/(9550× 80×0.93)=95.7kW

P1N≥P1×f1×f2

See P4/P, f1=1.5, and P2/P, f2=1

P1N ≥P1× f1× f2=95.7× 1.5 ×1=143.6kW

Selected from the table of transmission capacity: P2SB14-80-B53, where P1N=153kW iex=78.8

2.2 Check

3.3× 95.7=318.681 ≥P1N, satisfied.

2.3 Check of peak torque

P1N=153kW ≥TA× n1 ×f3/9550

=2000×1000 ×0.5/9550=104.71kW, satisfied.

3. Check of thermal capacity

Nominal power utilization=P1/P1N=95.7/153=0.625=62.5%

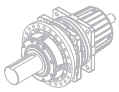
So f14=0.9 ft=1.16

PG1× ft× f14=94× 1.16 ×0.9=100.32kW > P1

So no auxiliary cooling device is needed

Lubrication: Dip

4. The type selected: **P2SB14-80-B53**



Service Factors

Table 1 — Factor for driven machine — f1

Driven machines	Effective daily operating period under load in hours		
	≤ 2	> 2–10	> 10
Waste water treatment			
Thickeners (central drive)	–	–	1.2
Filter presses	1.0	1.3	1.5
Flocculation apparata	0.8	1.0	1.3
Aerators	–	1.8	2.0
Raking equipment	1.0	1.2	1.3
Combined longitudinal and rotary rakes	1.0	1.3	1.5
Pre-thickeners	–	1.1	1.3
Screw pumps	–	1.3	1.5
Water turbines	–	–	2.0
Pumps			
Centrifugal pumps	1.0	1.2	1.3
Positive-displacement pumps			
1 piston	1.3	1.4	1.8
> 1piston	1.2	1.4	1.5
Dredgers			
Bucket conveyors	–	1.6	1.6
Dumping devices	–	1.3	1.5
Carterpillar travelling gears	1.2	1.6	1.8
Bucket wheel excavators			
as pick-up	–	1.7	1.7
for primitive material	–	2.2	2.2
Cutter heads	–	2.2	2.2
Traversing gears *	–	1.4	1.8
Plate bending machines	–	1.0	1.0
Chemical industry			
Extruders	–	–	1.6
Dough mills	–	1.8	1.8
Rubber calenders	–	1.5	1.5
Cooling drums	–	1.3	1.4
Mixers for			
uniform media	1.0	1.3	1.4
non-uniform media	1.4	1.6	1.7
Agitators for media with			
uniform density	1.0	1.3	1.5
non-uniform density	1.2	1.4	1.6
non-uniform gas absorption	1.4	1.6	1.8
Toasters	1.0	1.3	1.5
Centrifuges	1.0	1.2	1.3
Metal working mills			
Plate tilters	1.0	1.0	1.2
Ingot pushers	1.0	1.2	1.2
Winding machines	–	1.6	1.6
Cooling bed transfer frames	–	1.5	1.5
Roller straighteners	–	1.6	1.6
Roller tables			
continuous	–	1.5	1.5
intermittent	–	2.0	2.0
Reversing tube mills	–	1.8	1.8
Shears			
Continuous *	–	1.5	1.5
crank type *	1.0	1.0	1.0
Continuous casting drivers	–	1.4	1.4
Rolls			
Reversing blooming mills	–	2.5	2.5
Reversing slabbing mills	–	2.5	2.5
Reversing wire mills	–	1.8	1.8
Reversing sheet mills	–	2.0	2.0
Reversing plate mills	–	1.8	1.8
Roll adjustment drives	0.9	1.0	–

Driven machines	Effective daily operating period under load in hours		
	≤ 2	> 2–10	> 10
Conveyors			
Bucket conveyors	–	1.4	1.5
Hauling winches	1.4	1.6	1.6
Hoists	–	1.5	1.8
Belt conveyors ⩽ 150 kW	1.0	1.2	1.3
Belt conveyors ⩾ 150 kW	1.1	1.3	1.4
Goods lifts *	–	1.2	1.5
Passenger lifts *	–	1.5	1.8
Apron conveyors	–	1.2	1.5
Escalators	1.0	1.2	1.4
Rail travelling gears	–	1.5	-
Frequency converters	–	1.8	2.0
Reciprocating compressors	–	1.8	1.9
Cranes **			
Slewing Gears *		1.4	1.8
Luffing gears		1.1	1.4
Travelling gears		1.6	2.0
Hoisting gears		1.1	1.4
Derricking jib cranes		1.2	1.6
Cooling towers			
Cooling tower fans	–	–	2.0
Blowers (axial and radial)	–	1.4	1.5
Food industry			
Cane sugar production			
Cane knives *	–	–	1.7
Cane mills	–	–	1.7
Beet sugar production			
Beet cossettes macerators,	–	–	1.2
Extraction plants, Techanical refrigerators, Juice boilers,	–	–	1.4
Sugar beet washing machines, Sugar beet cutters	–	–	1.5
Paper machines			
of all-kind ***	–	1.8	2.0
Pulper drives	On request		
Centrifugal compressors	–	1.4	1.5
Cableways			
Material ropeways	–	1.3	1.4
To- and fro system aerial ropeways	–	1.6	1.8
T-bar lifts	–	1.3	1.4
Continuous ropeways	–	1.4	1.6
Cement industry			
Concrete mixers	–	1.5	1.5
Breakers *	–	1.2	1.4
Rotary kilns	–	–	2.0
Tube mills	–	–	2.0
Separators	–	1.6	1.6
Roll crushers	–	–	2.0

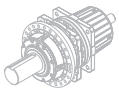
P

Table 1	Factor for driven machine			fl			
Driven machines	Effective daily operating period under load in hours			Driven machines	Effective daily operating period under load in hours		
	≤ 2	> 2–10	> 10		≤ 2	> 2–10	> 10
Wood industry				**Plastic industry**			
Bark peeler				Grinding mill, compound mill			
Feed drive	1.25	1.25	1.50	Coating and film coating Pipe, pull rod, thin plastic manufacture	1.25	1.25	1.25
Main drive	1.75	1.75	1.75				
Transporter				Tube, pile drawer accessories	1.25	1.25	1.50
Burner, band saw, turret lathe, transportation	1.25	1.25	1.50	Continuous mixer, calender Film blower, plasticizer	1.50	1.50	1.50
mainly heavy load	1.50	1.50	1.50	Batch mixer	1.75	1.75	1.75
mainly raw log	1.75	1.75	2.00	**Rubber industry**			
Conveyor chain				Continuous powerful internal stirrer Roller mixer, batch charger Crusher(except double rolls) Refiner, calender	1.50	1.50	1.50
Parquet	1.50	1.50	1.50				
Unprocessed materials	1.50	1.50	1.75				
Cutting chain				Double-roller clamp feeding Mixer grinder	1.25	1.25	1.50
Saw drive and traction	1.50	1.50	1.75				
Barking drum	1.75	1.75	2.00	Batch powerful internal stirrer, Double roll single groove roller grinder, Crusher heater, double rolls,Batch charging grinder	1.75	1.75	1.75
Feed drive							
Edge banding, wood sanding Planer feeding, sorter Automatic inclination and lift	1.25	1.25	1.50				
Multi-spindle feeding Log transport and turning	1.75	1.75	1.75	Wave roll crusher	2.00	2.00	2.00
Transport				**Generator and Exciter**	1.00	1.00	1.25
Delivery plate Plywood lathe drive Conveyor chain, crane type	1.50	1.50	1.75	**Hammer crusher**	1.75	1.75	2.00
				Sand roller	1.25	1.25	1.50

1. Determination of nominal power of driven machine
   *) The normal power usually corresponds to max. torque
   **) The actual service factors should comply with the actually classified loads.
   For more details, please consult us.
   ***) A check for thermal capacity is absolutely necessary.
2. The factors listed above are empirical values only. Prerequisite for their applications is that the machinery and equipment correspond to generally accepted design and load specifications. In case of deviations, please consult us.
3. For driven machines not listed in the table, please consult us.

Table 2	Factor for gear unit reliability	S_F
Ordinary: single machine halts when gear units fail, easy to replace spare parts and minor loss occurred.		1.0≤SF≤1.3
Important: a product line or an entire plant halts when gear units fail, heavy loss.		1.3 < SF≤1.5
Highly reliable: severe production problem happens when gear units fail, enormous loss and life injuries.		1.5 < SF

Table 3	Thermal Factor				ft
Ambient Temperature	Operating cycle per hour (ED) in %				
	100%	80%	60%	40%	20%
10°C	1.14	1.20	1.32	1.54	2.04
20°C	1.00	1.06	1.16	1.35	1.79
30°C	0.87	0.93	1.00	1.18	1.56
40°C	0.71	0.75	0.82	0.96	1.27
50°C	0.55	0.58	0.64	0.74	0.98



6 Transmission Capacity:

6.1 P2..N and P2..S(i=25-80):

n_1 (r/min)	n_{2N} (r/min)	i_N	P2..09			P2..10			P2..11			P2..12			P2..13			P2..14		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	69.6	25	22	25.634	156	31	25.634	221	42	25.875	295	60	24.983	438	83	24.958	606	117	24.958	854
1450	58				130			184			246			365			505			712
1150	46				103			146			195			289			400			564
960	38.4				86			122			163			241			334			471
1740	62.1	28	22	28.058	143	31	28.058	202	42	28.233	271	60	27.26	401	83	27.318	553	117	27.318	780
1450	51.8				119			168			226			334			461			650
1150	41.1				95			133			180			265			365			516
960	34.3				79			111			150			221			305			431
1740	55.2	31.5	22	31.142	128	31	31.142	181	42	31.207	245	60	30.13	362	83	30.321	499	117	30.321	703
1450	46				107			151			204			302			416			586
1150	36.5				85			120			162			240			329			465
960	30.5				71			100			135			200			275			388
1740	49	35.5	22	35.201	114	31	35.201	161	42	35.072	218	60	33.863	323	83	34.272	442	117	34.272	622
1450	40.8				95			134			182			269			368			518
1150	32.4				75			107			144			213			291			411
960	27				63			89			120			178			243			343
1740	43.5	40	22	40.781	98	31	40.781	138	42	40.302	190	60	38.912	281	83	39.706	380	117	39.706	536
1450	36.3				82			115			158			234			317			447
1150	28.8				65			91			126			186			252			355
960	24				54			76			105			155			210			296
1740	38.7	45	22	45.601	88	31	45.601	124	42	43.209	178	60	41.719	262	83	43.797	346	117	43.797	487
1450	32.2				73			103			148			218			288			406
1150	25.6				59			81			117			174			229			322
960	21.3				49			68			98			145			191			269
1740	34.8	50	22	51.544	78	31	51.544	109	42	48.561	157	60	46.887	233	83	49.505	306	117	49.505	431
1450	29				65			91			131			194			255			359
1150	23				52			72			104			155			202			285
960	19.2				43			60			87			129			169			238
1740	31.1	56	22	59.715	67	31	59.715	95	42	55.802	137	60	53.878	203	83	57.353	264	117	57.353	372
1450	25.9				56			79			114			169			220			310
1150	20.5				44			62			91			134			174			246
960	17.1				37			52			76			112			145			205
1740	27.6	63	22	61.953	65	31	61.953	91	42	63.399	121	60	61.213	179	83	59.977	252	117	59.977	355
1450	23				54			76			101			149			210			296
1150	18.3				43			60			80			119			167			235
960	15.2				36			50			67			99			139			196
1740	24.5	71	22	71.775	56	31	71.775	79	42	72.853	106	60	70.34	156	83	69.485	217	117	69.485	307
1450	20.4				47			66			88			130			181			256
1150	16.2				37			52			69			103			144			202
960	13.5				31			43			58			86			120			169
1740	21.8	80	22	78.782	50	31	78.782	72	42	81.303	94	60	78.499	139	83	78.827	192	117	78.827	270
1450	18.1				42			60			78			116			160			225
1150	14.4				34			48			62			92			127			178
960	12				28			40			52			77			106			149

P2N
P2S

P2..16			P2..17			P2..18			P2..19			P2..20			P2..21			P2..22			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
160	24.75	1178	202	24.75	1487	244	24.958	1782	295	26.622	2020	354	26.622	2423	392	26.622	2683	450	26.622	3080	25	69.6	1740
		982			1239			1485			1683			2019			2236			2567		58	1450
		779			983			1178			1334			1602			1773			2035		46	1150
		650			821			983			1114			1337			1480			1699		38.4	960
160	27.09	1076	202	27.09	1358	244	27.318	1627	295	29.139	1844	354	29.139	2214	392	29.139	2452	450	29.139	2814	28	62.1	1740
		897			1132			1356			1537			1845			2043			2345		51.8	1450
		712			898			1076			1219			1463			1620			1860		41.1	1150
		594			750			898			1018			1221			1352			1553		34.3	960
160	30.068	970	202	30.068	1224	244	30.321	1466	295	32.342	1662	354	32.342	1994	392	32.342	2208	450	32.342	2536	31.5	55.2	1740
		808			1020			1222			1385			1662			1840			2113		46	1450
		641			809			969			1098			1318			1460			1676		36.5	1150
		535			675			809			917			1100			1219			1399		30.5	960
160	33.987	858	202	33.987	1084	244	34.272	1297	295	36.557	1470	354	36.557	1764	392	36.557	1954	450	36.557	2243	35.5	49	1740
		715			903			1081			1225			1470			1628			1869		40.8	1450
		567			716			858			972			1167			1291			1483		32.4	1150
		473			598			716			811			974			1078			1238		27	960
160	39.375	740	202	39.375	935	244	39.706	1120	295	42.353	1270	354	42.353	1523	392	42.353	1686	450	42.353	1936	40	43.5	1740
		617			779			933			1058			1269			1405			1613		36.3	1450
		490			618			740			839			1006			1114			1279		28.8	1150
		409			516			618			700			840			930			1068		24	960
160	42.318	689	202	42.318	870	244	42.867	1037	295	45.725	1176	354	45.725	1411	392	46.357	1541	450	46.357	1769	45	38.7	1740
		574			725			864			980			1176			1284			1474		32.2	1450
		455			575			685			777			932			1018			1169		25.6	1150
		380			480			572			649			778			850			976		21.3	960
160	47.833	610	202	47.833	769	244	48.454	918	295	51.684	1040	354	51.684	1248	392	52.399	1363	450	52.399	1565	50	34.8	1740
		508			641			765			867			1040			1136			1304		29	1450
		403			509			606			688			825			901			1034		23	1150
		336			425			506			574			689			752			863		19.2	960
160	55.417	526	202	55.417	665	244	56.136	792	295	59.878	898	354	59.878	1078	392	60.706	1177	450	60.706	1351	56	31.1	1740
		438			554			660			748			898			981			1126		25.9	1450
		347			438			523			593			712			777			892		20.5	1150
		290			366			437			495			594			649			745		17.1	960
160	61.438	474	202	61.438	599	244	60.32	737	295	64.341	835	354	64.341	1002	392	66.084	1081	450	66.084	1241	63	27.6	1740
		395			499			614			696			835			901			1034		23	1450
		314			397			488			552			662			714			821		18.3	1150
		262			331			407			461			553			596			685		15.2	960
160	71.178	409	202	71.178	517	244	69.882	636	295	74.541	721	354	74.541	865	392	76.561	932	450	76.561	1072	71	24.5	1740
		341			431			530			601			721			777			893		20.4	1450
		271			341			420			477			571			617			708		16.2	1150
		226			285			351			398			477			515			591		13.5	960
160	78.788	370	202	78.788	467	244	78.976	563	295	84.841	634	354	84.841	761	392	84.746	842	450	84.746	966	80	21.8	1740
		308			389			469			528			634			702			805		18.1	1450
		244			309			373			419			502			557			638		14.4	1150
		204			258			311			350			419			465			533		12	960

P2N
P2S

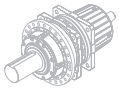
P2N.. and P2S..(i=25-80)(continued):

n_1 (r/min)	n_{2N} (r/min)	i_N	P2..23			P2..24			P2..25			P2..26			P2..27			P2..28			P2..29		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	69.6	25	513	26.872	3479	592	26.872	4014	684	26.872	4638	763	26.872	5174	852	26.622	5832	950	26.622	6503	1060	26.622	7255
1450	58				2899			3345			3865			4312			4860			5419			6046
1150	46				2299			2653			3065			3420			3854			4298			4795
960	38.4				1919			2215			2559			2855			3217			3588			4003
1740	62.1	28	513	29.321	3188	592	29.321	3679	684	29.321	4250	763	29.321	4741	852	29.139	5328	950	29.139	5941	1060	29.139	6629
1450	51.8				2657			3066			3542			3951			4440			4951			5524
1150	41.1				2107			2432			2809			3134			3522			3927			4381
960	34.3				1759			2030			2345			2616			2940			3278			3657
1740	55.2	31.5	513	32.409	2885	592	32.409	3329	684	32.409	3846	763	32.409	4290	852	32.342	4800	950	32.342	5352	1060	32.342	5972
1450	46				2404			2774			3205			3575			4000			4460			4977
1150	36.5				1906			2199			2542			2835			3172			3537			3947
960	30.5				1591			1836			2122			2367			2648			2953			3295
1740	49	35.5	513	36.424	2567	592	36.424	2962	684	36.424	3422	763	36.424	3817	852	36.557	4247	950	36.557	4735	1060	36.557	5284
1450	40.8				2139			2468			2852			3181			3539			3946			4403
1150	32.4				1696			1957			2262			2523			2807			3130			3492
960	27				1416			1634			1888			2106			2343			2613			2915
1740	43.5	40	513	41.855	2233	592	41.855	2578	684	41.855	2978	763	41.855	3322	852	42.353	3666	950	42.353	4087	1060	42.353	4560
1450	36.3				1861			2148			2482			2768			3055			3406			3800
1150	28.8				1476			1703			1968			2196			2422			2701			3014
960	24				1232			1422			1643			1833			2022			2255			2516
1740	38.7	45	513	45.373	2060	592	45.373	2377	684	45.373	2747	763	45.373	3065	852	46.948	3307	950	46.948	3688	1060	46.948	4114
1450	32.2				1717			1981			2289			2554			2756			3073			3428
1150	25.6				1362			1572			1816			2026			2181			2437			2719
960	21.3				1137			1312			1516			1691			1821			2034			2270
1740	34.8	50	513	50.993	1834	592	50.993	2116	684	50.993	2444	763	50.993	2726	852	53.067	2926	950	53.067	3262	1060	53.067	3640
1450	29				1528			1763			2037			2272			2438			2718			3033
1150	23				1211			1398			1616			1802			1933			2156			2405
960	19.2				1011			1167			1349			1504			1614			1800			2008
1740	31.1	56	513	58.597	1595	592	58.597	1841	684	58.597	2128	763	58.597	2372	852	61.48	2525	950	61.48	2815	1060	61.48	3142
1450	25.9				1329			1534			1773			1977			2104			2346			2618
1150	20.5				1054			1217			1406			1568			1669			1860			2076
960	17.1				880			1016			1174			1309			1393			1553			1733
1740	27.6	63	513	64.442	1451	592	64.442	1674	684	64.442	1934	763	64.442	2158	852	66.345	2340	950	66.345	2609	1060	66.345	2911
1450	23				1209			1395			1612			1798			1950			2174			2426
1150	18.3				958			1107			1278			1426			1547			1725			1924
960	15.2				800			924			1067			1190			1291			1440			1606
1740	24.5	71	513	74.051	1262	592	74.051	1457	684	74.051	1684	763	74.051	1878	852	76.863	2020	950	76.863	2252	1060	76.863	2513
1450	20.4				1052			1214			1403			1565			1683			1877			2094
1150	16.2				834			963			1113			1241			1334			1489			1660
960	13.5				696			804			929			1036			1114			1243			1386
1740	21.8	80	513	82.781	1129	592	82.781	1303	684	82.781	1506	763	82.781	1680	852	84.241	1843	950	84.241	2054	1060	84.241	2293
1450	18.1				941			1086			1255			1400			1536			1712			1911
1150	14.4				746			861			995			1110			1218			1358			1515
960	12				623			719			831			927			1017			1134			1265

P2N
P2S

P2..30			P2..31			P2..32			P2..33			P2..34			P2..35			P2..36			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
1200	26.622	8214	1330	26.872	8557	1500	26.872	10171	1680	26.622	11498	1920	26.622	13141	2240	26.872	15190	2600	26.872	17630	25	69.6	1740
		6845			7131			8476			9582			10951			12658			14692		58	1450
		5429			5709			6723			7600			8686			10039			11652		46	1150
		4532			4766			5612			6344			7251			8380			9727		38.4	960
1200	29.139	7504	1330	29.321	8078	1500	29.321	9322	1680	29.139	10506	1920	29.139	12006	2240	29.321	13921	2600	29.321	16158	28	62.1	1740
		6253			6732			7768			8755			10005			11601			13465		51.8	1450
		4959			5391			6161			6943			7935			9200			10679		41.1	1150
		4140			4500			5143			5796			6624			7680			8915		34.3	960
1200	32.342	6761	1330	32.409	7309	1500	32.409	8434	1680	32.342	9466	1920	32.342	10818	2240	32.409	12594	2600	32.409	14618	31.5	55.2	1740
		5634			6091			7028			7888			9015			10495			12182		46	1450
		4468			4877			5574			6256			7149			8324			9661		36.5	1150
		3730			4071			4653			5222			5968			6949			8065		30.5	960
1200	36.557	5981	1330	36.424	6504	1500	36.424	7504	1680	36.557	8369	1920	36.557	9570	2240	36.424	11206	2600	36.424	13007	35.5	49	1740
		4984			5420			6253			6974			7975			9338			10839		40.8	1450
		3953			4339			4959			5532			6325			7407			8596		32.4	1150
		3300			3622			4140			4618			5280			6183			7176		27	960
1200	42.353	5162	1330	41.855	5659	1500	41.855	6530	1680	42.353	7228	1920	42.353	8261	2240	41.855	9752	2600	41.855	11320	40	43.5	1740
		4302			4716			5442			6023			6884			8127			9433		36.3	1450
		3412			3776			4316			4777			5460			6445			7481		28.8	1150
		2848			3152			3603			3988			4558			5380			6245		24	960
1200	46.948	4657	1330	45.575	5197	1500	45.575	5998	1680	45.481	6731	1920	45.481	7692	2240	45.373	8996	2600	45.373	10441	45	38.7	1740
		3881			4331			4998			5609			6410			7497			8701		32.2	1450
		3079			3468			3964			4449			5084			5945			6901		25.6	1150
		2570			2895			3309			3714			4244			4963			5761		21.3	960
1200	53.067	4121	1330	51.221	4625	1500	51.221	5336	1680	51.409	5954	1920	51.409	6805	2240	50.993	8004	2600	50.993	9290	50	34.8	1740
		3434			3854			4447			4962			5671			6670			7742		29	1450
		2723			3086			3527			3935			4498			5290			6141		23	1150
		2273			2576			2944			3285			3755			4416			5126		19.2	960
1200	61.48	3557	1330	58.858	4025	1500	58.858	4644	1680	59.559	5140	1920	59.559	5874	2240	58.597	6966	2600	58.597	8086	56	31.1	1740
		2964			3354			3870			4283			4895			5805			6738		25.9	1450
		2350			2686			3069			3397			3882			4604			5344		20.5	1150
		1962			2242			2562			2836			3241			3843			4461		17.1	960
1200	66.345	3296	1330	66.102	3583	1500	66.102	4135	1680	66.345	4614	1920	66.345	5273	2240	65.562	6226	2600	65.562	7226	63	27.6	1740
		2747			2986			3446			3845			4394			5188			6022		23	1450
		2178			2391			2732			3050			3485			4115			4776		18.3	1150
		1818			1996			2281			2546			2909			3435			3987		15.2	960
1200	76.863	2845	1330	75.958	3119	1500	75.958	3599	1680	76.863	3983	1920	76.863	4552	2240	75.338	5418	2600	75.338	6288	71	24.5	1740
		2371			2599			2999			3319			3793			4515			5240		20.4	1450
		1881			2081			2378			2632			3008			3581			4157		16.2	1150
		1570			1737			1985			2197			2511			2989			3470		13.5	960
1200	84.241	2596	1330	83.932	2822	1500	83.932	3257	1680	84.241	3634	1920	84.241	4153	2240	81.252	5023	2600	81.252	5831	80	21.8	1740
		2163			2352			2714			3028			3461			4186			4859		18.1	1450
		1715			1883			2153			2402			2744			3321			3854		14.4	1150
		1432			1572			1797			2005			2291			2772			3217		12	960

P2N
P2S



n_1 (r/min)	n_{2N} (r/min)	i_N	P3..09			P3..10			P3..11			P3..12			P3..13			P3..14		
			T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)
1740	19.3	90	22	91.272	44	31	91.272	62	42	93.426	82	60	90.205	121	83	91.324	166	117	91.324	234
1450	16.1				37			52			68			101			138			195
1150	12.8				29			41			54			80			109			155
960	10.7				24			34			45			67			91			129
1740	17.4	100	22	99.735	40	31	99.735	56	42	99.678	77	60	96.241	114	83	95.963	157	117	95.963	222
1450	14.5				33			47			64			95			131			185
1150	11.5				26			37			50			75			104			147
960	9.6				22			31			42			63			87			123
1740	15.5	112	22	115.55	35	31	115.55	49	42	114.54	67	60	110.59	98	83	111.18	136	117	111.18	192
1450	12.9				29			41			56			82			113			160
1150	10.3				23			32			44			66			90			127
960	8.6				19			27			37			55			75			106
1740	13.9	125	22	124.74	32	31	124.74	46	42	123.14	62	60	118.9	92	83	119.12	127	117	119.12	179
1450	11.6				27			38			52			77			106			149
1150	9.2				22			30			41			61			84			119
960	7.7				18			25			34			51			70			99
1740	12.4	140	22	146.81	27	31	146.81	39	42	147.12	52	60	142.04	77	83	142.94	106	117	142.94	149
1450	10.4				22.8			32.1			43.3			64.1			88.2			124
1150	8.2				18			25			34			51			70			99
960	6.9				15.1			21.2			28.7			42.5			58.4			82.3
1740	10.9	160	22	165.95	24	31	165.95	34	42	165.34	46	60	159.64	69	83	161.57	94	117	161.57	132
1450	9.1				20.1			28.4			38.6			57.1			78			110
1150	7.2				16			23			31			45			62			87
960	6				13.3			18.8			25.5			37.8			51.6			72.8
1740	9.7	180	22	192.25	21	31	192.25	29	42	189.99	40	60	183.44	60	83	187.19	81	117	187.19	114
1450	8.1				17.4			24.5			33.6			49.7			67.3			94.9
1150	6.4				14			19			27			39			53			75
960	5.3				11.5			16.2			22.2			32.9			44.6			62.8
1740	8.7	200	22	210.43	19	31	210.43	27	42	207.96	37	60	200.79	54	83	204.88	74	117	204.88	104
1450	7.3				15.9			22.4			30.7			45.4			61.5			86.7
1150	5.8				13			18			24			36			49			69
960	4.8				10.5			14.8			20.3			30			40.7			57.4
1740	7.7	225	22	233.57	17	31	233.57	24	42	230.82	33	60	222.86	49	83	227.41	66	117	227.41	94
1450	6.4				14.3			20.2			27.6			40.9			55.4			78.1
1150	5.1				11			16			22			32			44			62
960	4.3				9.5			13.3			18.3			27.1			36.7			51.7
1740	7	250	22	264.01	15	31	264.01	21	42	260.9	29	60	251.9	43	83	257.04	59	117	257.04	83
1450	5.8				12.7			17.8			24.4			36.2			49			69.1
1150	4.6				10			14			19			29			39			55
960	3.8				8.4			11.8			16.2			23.9			32.5			45.8
1740	6.2	280	22	305.86	13	31	305.86	18	42	302.26	25	60	291.84	37	83	297.79	51	117	297.79	72
1450	5.2				10.9			15.4			21.1			31.2			42.3			59.7
1150	4.1				9			12			17			25			34			47
960	3.4				7.2			10.2			14			20.7			28			39.5

P2S
P3N

P3..16			P3..17			P3..18			P3..19			P3..20			P3..21			P3..22			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
160	91.278	319	202	91.278	403	244	91.496	487	295	97.596	547	354	97.596	661	392	98.182	727	450	98.182	835	90	19.3	1740
		266			336			406			456			551			606			696		16.1	1450
		211			266			322			364			437			480			552		12.8	1150
		176			222			269			304			365			401			461		10.7	960
160	96.594	302	202	96.594	382	244	95.963	463	295	102.36	526	354	102.36	630	392	103.9	688	450	103.9	790	100	17.4	1740
		252			318			386			438			525			573			658		14.5	1450
		200			252			307			347			417			454			521		11.5	1150
		167			210			256			290			348			379			435		9.6	960
160	111.91	260	202	111.91	329	244	111.18	400	295	118.59	454	354	118.59	544	392	120.37	594	450	120.37	682	112	15.5	1740
		217			274			333			378			453			495			568		12.9	1450
		173			217			265			299			359			392			450		10.3	1150
		144			181			221			250			300			327			376		8.6	960
160	120.59	241	202	120.59	305	244	119.12	373	295	127.06	424	354	127.06	508	392	129.41	551	450	129.41	634	125	13.9	1740
		201			254			311			353			423			459			528		11.6	1450
		159			201			247			279			335			364			419		9.2	1150
		133			168			206			233			280			304			350		7.7	960
160	143.08	204	202	143.08	257	244	142.94	311	295	152.47	353	354	152.47	424	392	152.47	468	450	152.47	538	140	12.4	1740
		170			214			259			294			353			390			448		10.4	1450
		134			170			206			234			279			309			356		8.2	1150
		112			142			172			195			233			258			297		6.9	960
160	161.73	180	202	161.73	228	244	161.57	275	295	172.34	312	354	172.34	374	392	172.34	414	450	172.34	475	160	10.9	1740
		150			190			229			260			312			345			396		9.1	1450
		119			151			182			206			248			274			315		7.2	1150
		99			126			152			172			207			229			263		6	960
160	187.37	156	202	187.37	197	244	187.19	238	295	199.66	269	354	199.66	323	392	199.66	358	450	199.66	410	180	9.7	1740
		130			164			198			224			269			298			342		8.1	1450
		103			129			157			178			213			236			272		6.4	1150
		86			108			131			149			178			197			227		5.3	960
160	204.45	143	202	204.45	180	244	204.88	217	295	218.54	246	354	218.54	295	392	218.54	326	450	218.54	376	200	8.7	1740
		119			150			181			205			246			272			313		7.3	1450
		95			119			144			163			195			216			248		5.8	1150
		79			99			120			136			163			180			207		4.8	960
160	225.98	130	202	225.98	163	244	227.41	196	295	242.57	222	354	242.57	266	392	242.57	294	450	242.57	338	225	7.7	1740
		108			136			163			185			222			245			282		6.4	1450
		85			108			129			146			176			194			224		5.1	1150
		71			90			108			122			147			162			187		4.3	960
160	253.97	115	202	253.97	145	244	257.04	173	295	274.18	196	354	274.18	235	392	274.18	260	450	274.18	299	250	7	1740
		96			121			144			163			196			217			249		5.8	1450
		75			96			114			129			156			173			198		4.6	1150
		63			80			95			108			130			144			165		3.8	960
160	291.84	100	202	291.84	126	244	297.79	149	295	317.65	169	354	317.65	203	392	317.65	224	450	317.65	258	280	6.2	1740
		83			105			124			141			169			187			215		5.2	1450
		66			84			98			111			134			149			170		4.1	1150
		55			70			82			93			112			124			142		3.4	960

P2S
P3N

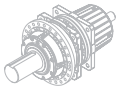
P

n_1 (r/min)	n_{2N} (r/min)	i_N	P3..23			P3..24			P3..25			P3..26			P3..27			P3..28			P3..29		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	19.3				983			1134			1310			1462			1591			1774			1979
1450	16.1	90	513	95.124	819	592	95.124	945	684	95.124	1092	763	95.124	1218	852	97.596	1326	950	97.596	1478	1060	97.596	1649
1150	12.8				649			750			866			966			1052			1173			1308
960	10.7				542			626			723			806			878			979			1092
1740	17.4				920			1062			1226			1368			1517			1691			1886
1450	14.5	100	513	101.6	767	592	101.6	885	684	101.6	1022	763	101.6	1140	852	102.36	1264	950	102.36	1409	1060	102.36	1572
1150	11.5				609			702			811			904			1003			1118			1247
960	9.6				508			586			677			755			837			933			1041
1740	15.5				800			924			1068			1190			1309			1459			1628
1450	12.9	112	513	116.75	667	592	116.75	770	684	116.75	890	763	116.75	992	852	118.59	1091	950	118.59	1216	1060	118.59	1357
1150	10.3				529			611			706			787			865			964			1077
960	8.6				442			510			589			657			722			805			899
1740	13.9				744			859			992			1108			1222			1362			1520
1450	11.6	125	513	125.56	620	592	125.56	716	684	125.56	827	763	125.56	923	852	127.06	1018	950	127.06	1135	1060	127.06	1267
1150	9.2				492			568			656			732			807			901			1005
960	7.7				411			474			548			611			674			752			839
1740	12.4				612			706			816			910			1019			1135			1267
1450	10.4	140	513	152.79	510	592	152.79	588	684	152.79	680	763	152.79	758	852	152.47	849	950	152.47	946	1060	152.47	1056
1150	8.2				405			467			539			601			673			750			837
960	6.9				338			390			450			502			562			626			699
1740	10.9				545			629			726			810			901			1004			1121
1450	9.1	160	513	171.71	454	592	171.71	524	684	171.71	605	763	171.71	675	852	172.34	751	950	172.34	837	1060	172.34	934
1150	7.2				359			416			479			535			595			664			740
960	6				300			347			400			447			497			554			618
1740	9.7				499			576			631			704			778			868			967
1450	8.1	180	513	197.32	416	592	197.32	480	684	197.32	526	763	197.32	587	852	199.66	648	950	199.66	723	1060	199.66	806
1150	6.4				329			381			417			466			514			573			640
960	5.3				275			318			348			389			429			478			534
1740	8.7				433			499			577			643			710			792			884
1450	7.3	200	513	215.97	361	592	215.97	416	684	215.97	481	763	215.97	536	852	218.54	592	950	218.54	660	1060	218.54	737
1150	5.8				286			331			381			425			470			523			585
960	4.8				239			276			318			355			392			437			488
1740	7.7				390			450			520			580			640			714			797
1450	6.4	225	513	239.71	325	592	239.71	375	684	239.71	433	763	239.71	483	852	242.57	533	950	242.57	595	1060	242.57	664
1150	5.1				258			297			344			383			423			472			526
960	4.3				215			248			287			320			353			394			439
1740	7				346			398			460			514			566			631			704
1450	5.8	250	513	270.95	288	592	270.95	332	684	270.95	383	763	270.95	428	852	274.18	472	950	274.18	526	1060	274.18	587
1150	4.6				228			264			304			339			374			417			466
960	3.8				190			220			254			283			312			348			389
1740	6.2				298			343			397			443			488			545			608
1450	5.2	280	513	313.91	248	592	313.91	286	684	313.91	331	763	313.91	369	852	317.65	407	950	317.65	454	1060	317.65	507
1150	4.1				196			228			262			292			323			361			401
960	3.4				164			190			219			244			270			301			335

P2S
P3N

P3..30			P3..31			P3..32			P3..33			P3..34			P3..35			P3..36			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
1200	97.596	2240	1330	96.448	2456	1500	96.448	2834	1680	97.596	3137	1920	97.596	3584	2240	93.368	4372	2600	93.368	5074	90	19.3	1740
		1867			2047			2362			2614			2987			3643			4228		16.1	1450
		1481			1639			1874			2074			2369			2889			3354		12.8	1150
		1236			1368			1564			1731			1978			2412			2800		10.7	960
1200	102.36	2136	1330	104.3	2272	1500	104.3	2621	1680	104.69	2924	1920	104.69	3342	2240	100.53	4060	2600	100.53	4712	100	17.4	1740
		1780			1893			2184			2437			2785			3383			3927		14.5	1450
		1412			1515			1732			1932			2209			2683			3115		11.5	1150
		1179			1265			1446			1613			1844			2240			2600		9.6	960
1200	118.59	1844	1330	119.96	1975	1500	119.96	2279	1680	121.28	2524	1920	121.28	2885	2240	115.52	3533	2600	115.52	4102	112	15.5	1740
		1537			1646			1899			2103			2404			2944			3418		12.9	1450
		1218			1318			1506			1669			1907			2335			2711		10.3	1150
		1017			1100			1257			1393			1592			1949			2263		8.6	960
1200	127.06	1721	1330	127.56	1858	1500	127.56	2143	1680	129.08	2371	1920	129.08	2711	2240	129.2	3160	2600	129.2	3667	125	13.9	1740
		1434			1548			1786			1976			2259			2633			3056		11.6	1450
		1137			1239			1416			1567			1791			2088			2423		9.2	1150
		949			1034			1182			1308			1495			1743			2023		7.7	960
1200	152.47	1434	1330	152.79	1550	1500	152.79	1789	1680	153.9	1990	1920	153.9	2273	2240	154.22	2647	2600	154.22	3072	140	12.4	1740
		1195			1292			1491			1658			1894			2206			2560		10.4	1450
		948			1035			1182			1314			1502			1749			2030		8.2	1150
		791			864			987			1097			1254			1460			1695		6.9	960
1200	172.34	1268	1330	171.71	1380	1500	171.71	1591	1680	173.96	1759	1920	173.96	2011	2240	173.33	2354	2600	173.33	2734	160	10.9	1740
		1057			1150			1326			1466			1676			1962			2278		9.1	1450
		839			920			1052			1163			1330			1556			1806		7.2	1150
		700			768			878			971			1110			1299			1508		6	960
1200	199.66	1096	1330	197.32	1200	1500	197.32	1385	1680	201.54	1519	1920	201.54	1736	2240	199.17	2050	2600	199.17	2378	180	9.7	1740
		913			1000			1154			1266			1447			1708			1982		8.1	1450
		724			801			915			1004			1148			1355			1572		6.4	1150
		604			669			764			838			958			1131			1312		5.3	960
1200	218.54	1001	1330	215.97	1097	1500	215.97	1266	1680	219.91	1392	1920	219.91	1591	2240	217.32	1878	2600	217.32	2180	200	8.7	1740
		834			914			1055			1160			1326			1565			1817		7.3	1450
		661			732			836			920			1052			1241			1441		5.8	1150
		552			611			698			768			878			1036			1203		4.8	960
1200	242.57	901	1330	239.71	989	1500	239.71	1140	1680	243.07	1260	1920	243.07	1439	2240	240.21	1699	2600	240.21	1973	225	7.7	1740
		751			824			950			1050			1199			1416			1644		6.4	1450
		595			659			753			833			951			1122			1303		5.1	1150
		497			550			629			695			794			937			1088		4.3	960
1200	274.18	798	1330	270.95	875	1500	270.95	1009	1680	273.18	1121	1920	273.18	1280	2240	269.96	1512	2600	269.96	1754	250	7	1740
		665			729			841			934			1067			1260			1462		5.8	1450
		527			583			667			740			847			999			1160		4.6	1150
		440			487			557			618			707			834			968		3.8	960
1200	317.65	689	1330	313.91	755	1500	313.91	871	1680	313.91	976	1920	313.91	1115	2240	310.22	1315	2600	310.22	1528	280	6.2	1740
		574			629			726			813			929			1096			1273		5.2	1450
		455			503			575			644			737			870			1010		4.1	1150
		380			420			480			538			615			726			843		3.4	960

P2S
P3N

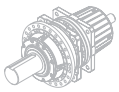


n_1 (r/min)	n_{2N} (r/min)	i_N	P2..09			P2..10			P2..11			P2..12			P2..13			P2..14		
			T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)
1740	6.2	280	22	295.21	14	31	295.21	19	42	295.82	26	60	285.62	38	83	287.42	53	117	287.42	74
1450	5.2				11.3			16			21.6			31.9			43.9			61.8
1150	4.1				9			13			17			25			35			49
960	3.4				7.5			11			14.3			21.1			29			40.9
1740	5.5	315	22	333.68	12	31	333.68	17	42	332.46	23	60	320.99	34	83	324.88	47	117	324.88	66
1450	4.6				10			14.1			19.2			28.4			38.8			54.7
1150	3.7				8			11			15			23			31			43
960	3				6.6			9.3			12.7			18.8			25.7			36.2
1740	4.9	355	22	386.58	10	31	386.58	15	42	382.03	20	60	368.86	30	83	376.39	40	117	376.39	57
1450	4.1				8.6			12.2			16.7			24.7			33.5			47.2
1150	3.2				7			10			13			20			27			37
960	2.7				5.7			8.1			11.1			16.4			22.2			31.3
1740	4.4	400	22	401.07	10	31	401.07	14	42	399.6	19	60	385.82	28	83	390.49	39	117	390.49	55
1450	3.6				8.3			11.7			16			23.6			32.3			45.5
1150	2.9				7			9			13			19			26			36
960	2.4				5.5			7.8			10.6			15.6			21.4			30.1
1740	3.9	450	22	464.65	9	31	464.65	12	42	459.18	17	60	443.35	25	83	452.4	33	117	452.4	47
1450	3.2				7.2			10.1			13.9			20.6			27.9			39.3
1150	2.6				6			8			11			16			22			31
960	2.1				4.8			6.7			9.2			13.6			18.4			26
1740	3.5	500	22	510.01	8	31	510.01	11	42	508.15	15	60	490.62	22	83	496.56	30	117	496.56	43
1450	2.9				6.6			9.2			12.6			18.6			25.4			35.8
1150	2.3				5			7			10			15			20			28
960	1.9				4.3			6.1			8.3			12.3			16.8			23.7
1740	3.1	560	22	590.87	7	31	590.87	10	42	583.92	13	60	563.78	19	83	575.29	26	117	575.29	37
1450	2.6				5.7			8			10.9			16.2			21.9			30.9
1150	2.1				4			6			9			13			17			24
960	1.7				3.7			5.3			7.2			10.7			14.5			20.4
1740	2.8	630	22	645.65	6	31	645.65	9	42	643.29	12	60	621.11	18	83	628.63	24	117	628.63	34
1450	2.3				5.2			7.3			9.9			14.7			20			28.3
1150	1.8				4			6			8			12			16			22
960	1.5				3.4			4.8			6.6			9.7			13.3			18.7
1740	2.5	710	22	748.01	5	31	748.01	8	42	739.21	10	60	713.72	15	83	728.29	21	117	728.29	29
1450	2				4.5			6.3			8.6			12.8			17.3			24.4
1150	1.6				4			5			7			10			14			19
960	1.4				3			4.2			5.7			8.5			11.5			16.2
1740	2.2	800	22	807.55	5	31	807.55	7	42	798.04	10	60	770.53	14	83	786.25	19	117	786.25	27
1450	1.8				4.1			5.8			8			11.8			16			22.6
1150	1.4				3			5			6			9			13			18
960	1.2				2.7			3.9			5.3			7.8			10.6			15
1740	1.9	900	22	935.57	4	31	935.57	6	42	924.56	8	60	892.68	12	83	910.9	17	117	910.9	23
1450	1.6				3.6			5			6.9			10.2			13.8			19.5
1150	1.3				3			4			6			8			11			15
960	1.1				2.4			3.3			4.6			6.8			9.2			12.9

P3S

P3..16			P3..17			P3..18			P3..19			P3..20			P3..21			P3..22			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
160	268.53	108	202	268.53	137	244	283.53	157	295	302.43	178	354	302.43	214	392	302.43	236	450	302.43	271	280	6.2	1740
		90			114			131			148			178			197			226		5.2	1450
		72			91			104			117			141			156			180		4.1	1150
		60			76			87			98			118			130			150		3.4	960
160	303.53	96	202	303.53	121	244	320.48	139	295	341.48	157	354	341.48	188	392	341.48	209	450	341.48	240	315	5.5	1740
		80			101			116			131			157			174			200		4.6	1450
		63			80			92			104			125			138			158		3.7	1150
		53			67			77			87			104			115			132		3	960
160	351.65	83	202	351.65	104	244	371.29	120	295	396.04	136	354	396.04	163	392	396.04	180	450	396.04	208	355	4.9	1740
		69			87			100			113			136			150			173		4.1	1450
		55			69			79			90			108			120			137		3.2	1150
		46			58			66			75			90			100			114		2.7	960
160	396.27	73	202	396.27	92	244	388.27	112	295	414.16	130	354	414.16	156	392	414.16	173	450	414.16	198	400	4.4	1740
		61			77			93			108			130			144			165		3.6	1450
		49			61			74			86			103			114			131		2.9	1150
		41			51			62			72			86			95			109		2.4	960
160	459.1	64	202	459.1	80	244	449.83	97	295	479.82	112	354	479.82	134	392	479.82	149	450	479.82	170	450	3.9	1740
		53			67			81			93			112			124			142		3.2	1450
		42			53			63			74			89			98			113		2.6	1150
		35			44			53			62			74			82			94		2.1	960
160	508.18	58	202	508.18	72	244	510.3	88	295	544.32	98	354	544.32	119	392	544.32	131	450	544.32	151	500	3.5	1740
		48			60			73			82			99			109			126		2.9	1450
		38			48			58			65			78			86			99		2.3	1150
		32			40			48			54			65			72			83		1.9	960
160	588.75	49	202	588.75	62	244	591.2	76	295	630.61	85	354	630.61	102	392	630.61	113	450	630.61	130	560	3.1	1740
		41			52			63			71			85			94			108		2.6	1450
		32			41			50			56			67			74			86		2.1	1150
		27			34			42			47			56			62			72		1.7	960
160	623.03	47	202	623.03	59	244	621.23	71	295	662.65	82	354	662.65	97	392	662.65	108	450	662.65	124	630	2.8	1740
		39			49			59			68			81			90			103		2.3	1450
		31			40			47			54			65			71			81		1.8	1150
		26			33			39			45			54			59			68		1.5	960
160	721.81	41	202	721.81	50	244	719.72	61	295	767.7	70	354	767.7	84	392	767.7	94	450	767.7	107	710	2.5	1740
		34			42			51			58			70			78			89		2	1450
		26			34			41			47			55			61			71		1.6	1150
		22			28			34			39			46			51			59		1.4	960
160	776.02	37	202	776.02	48	244	771.13	58	295	822.54	65	354	822.54	78	392	822.54	86	450	822.54	100	800	2.2	1740
		31			40			48			54			65			72			83		1.8	1450
		25			31			38			43			52			58			66		1.4	1150
		21			26			32			36			43			48			55		1.2	960
160	891.73	32	202	891.73	41	244	893.38	50	295	952.94	56	354	952.94	67	392	952.94	74	450	952.94	86	900	1.9	1740
		27			34			42			47			56			62			72		1.6	1450
		22			28			34			37			44			49			56		1.3	1150
		18			23			28			31			37			41			47		1.1	960

P3S



n_1 (r/min)	n_{2N} (r/min)	i_N	P3..23			P3..24			P3..25			P3..26			P3..27			P3..28			P3..29		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	6.2	280	513	295.28	317	592	295.28	365	684	295.28	422	763	295.28	470	852	296.01	524	950	296.01	584	1060	296.01	653
1450	5.2				264			304			352			392			437			487			544
1150	4.1				210			242			279			311			346			387			431
960	3.4				175			202			233			260			289			323			360
1740	5.5	315	513	331.86	282	592	331.86	325	684	331.86	376	763	331.86	419	852	334.59	464	950	334.59	517	1060	334.59	577
1450	4.6				235			271			313			349			387			431			481
1150	3.7				186			214			248			277			307			341			381
960	3				155			179			207			231			256			285			318
1740	4.9	355	513	381.34	245	592	381.34	283	684	381.34	326	763	381.34	365	852	387.63	401	950	387.63	446	1060	387.63	498
1450	4.1				204			236			272			304			334			372			415
1150	3.2				162			187			216			241			265			295			329
960	2.7				135			156			180			201			221			246			275
1740	4.4	400	513	426.24	220	592	426.24	253	684	426.24	293	763	426.24	326	852	416.52	373	950	416.52	415	1060	416.52	463
1450	3.6				183			211			244			272			311			346			386
1150	2.9				145			168			193			216			247			274			307
960	2.4				121			140			161			180			206			229			256
1740	3.9	450	513	489.8	191	592	489.8	221	684	489.8	254	763	489.8	284	852	482.56	322	950	482.56	359	1060	482.56	401
1450	3.2				159			184			212			237			268			299			334
1150	2.6				126			146			168			188			213			237			265
960	2.1				105			122			140			157			178			198			221
1740	3.5	500	513	546.62	172	592	546.62	197	684	546.6	228	763	546.6	254	852	545.35	284	950	545.35	318	1060	545.35	354
1450	2.9				143			164			190			212			237			265			295
1150	2.3				113			131			151			168			188			210			234
960	1.9				94			109			126			140			157			175			195
1740	3.1	560	513	628.12	149	592	628.12	172	684	628.12	198	763	628.12	221	852	631.81	246	950	631.81	274	1060	631.81	306
1450	2.6				124			143			165			184			205			228			255
1150	2.1				98			114			131			146			163			181			202
960	1.7				82			95			109			122			136			151			169
1740	2.8	630	513	670.15	139	592	670.15	161	684	670.15	186	763	670.15	208	852	662.65	234	950	662.65	262	1060	662.65	292
1450	2.3				116			134			155			173			195			218			243
1150	1.8				92			107			123			137			155			173			193
960	1.5				77			89			103			114			129			144			161
1740	2.5	710	513	770.08	121	592	770.08	140	684	770.08	162	763	770.08	180	852	767.7	203	950	767.7	226	1060	767.7	252
1450	2				101			117			135			150			169			188			210
1150	1.6				80			92			107			120			134			149			167
960	1.4				67			77			89			100			112			124			139
1740	2.2	800	513	829.8	113	592	829.8	130	684	829.8	150	763	829.8	168	852	822.54	188	950	822.54	210	1060	822.54	235
1450	1.8				94			108			125			140			157			175			196
1150	1.4				74			86			99			110			125			139			156
960	1.2				62			72			83			92			104			116			130
1740	1.9	900	513	961.35	97	592	961.35	113	684	961.35	130	763	961.35	145	852	952.94	163	950	952.94	181	1060	952.94	203
1450	1.6				81			94			108			121			136			151			169
1150	1.3				65			74			86			96			108			120			134
960	1.1				54			62			72			80			90			100			112

P3S

P3..30			P3..31			P3..32			P3..33			P3..34			P3..35			P3..36			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
1200	296.01	739	1330	300.72	787	1500	300.72	908	1680	292.05	1048	1920	292.05	1198	2240	292.66	1394	2600	292.66	1619	280	6.2	1740
		616			656			757			873			998			1162			1349		5.2	1450
		489			526			600			692			792			921			1070		4.1	1150
		408			439			501			578			661			769			893		3.4	960
1200	334.59	654	1330	337.97	701	1500	337.97	809	1680	330.11	928	1920	330.11	1060	2240	328.9	1241	2600	328.9	1440	315	5.5	1740
		545			584			674			773			883			1034			1200		4.6	1450
		432			467			534			613			701			821			952		3.7	1150
		361			390			446			512			585			685			795		3	960
1200	387.63	564	1330	388.37	610	1500	388.37	703	1680	382.45	800	1920	382.45	914	2240	377.95	1080	2600	377.95	1254	355	4.9	1740
		470			508			586			667			762			900			1045		4.1	1450
		373			407			465			529			605			714			829		3.2	1150
		311			340			388			442			505			596			692		2.7	960
1200	416.52	524	1330	426.24	556	1500	426.24	641	1680	417.18	733	1920	417.18	839	2240	415.65	982	2600	415.65	1140	400	4.4	1740
		437			463			534			611			699			818			950		3.6	1450
		347			371			424			485			555			649			753		2.9	1150
		290			310			354			405			463			542			629		2.4	960
1200	482.56	454	1330	489.8	484	1500	489.8	558	1680	483.31	634	1920	483.31	724	2240	477.63	854	2600	477.63	992	450	3.9	1740
		378			403			465			528			603			712			827		3.2	1450
		299			322			369			418			478			564			655		2.6	1150
		250			269			308			349			399			471			547		2.1	960
1200	545.35	401	1330	546.6	433	1500	546.6	500	1680	535.9	571	1920	535.9	653	2240	533.94	764	2600	533.94	887	500	3.5	1740
		334			361			417			476			544			637			739		2.9	1450
		265			289			331			377			431			506			587		2.3	1150
		221			241			276			315			360			422			490		1.9	960
1200	631.81	346	1330	628.12	377	1500	628.12	436	1680	620.86	493	1920	620.86	564	2240	613.55	665	2600	613.55	772	560	3.1	1740
		288			314			363			411			470			554			643		2.6	1450
		229			252			288			326			373			440			510		2.1	1150
		191			210			240			272			311			367			426		1.7	960
1200	662.65	330	1330	670.15	354	1500	670.15	408	1680	657.74	466	1920	657.74	532	2240	655.34	623	2600	655.34	722	630	2.8	1740
		275			295			340			388			443			519			602		2.3	1450
		218			236			270			308			351			412			478		1.8	1150
		182			197			225			257			293			344			399		1.5	960
1200	767.7	284	1330	770.08	307	1500	770.08	355	1680	762.02	402	1920	762.02	460	2240	753.05	542	2600	753.05	629	710	2.5	1740
		237			256			296			335			383			452			524		2	1450
		188			205			235			266			303			358			416		1.6	1150
		157			171			196			222			253			299			347		1.4	960
1200	822.54	266	1330	827.92	286	1500	827.92	330	1680	819.53	373	1920	819.53	427	2240	809.89	504	2600	809.89	584	800	2.2	1740
		222			238			275			311			356			420			487		1.8	1450
		176			190			218			247			283			333			387		1.4	1150
		147			159			182			206			236			278			323		1.2	960
1200	952.94	229	1330	959.17	247	1500	959.17	284	1680	941.73	325	1920	941.73	372	2240	930.65	438	2600	930.65	509	900	1.9	1740
		191			206			237			271			310			365			424		1.6	1450
		152			165			188			214			246			290			337		1.3	1150
		127			138			157			179			205			242			281		1.1	960

P3S

P

6.3 P3L.. (i=31.5-100):

n_1 (r/min)	n_{2N} (r/min)	i_N	P2..09			P2..10			P2..11			P2..12			P2..13		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	55.2	31.5	22	32.5353	123.6	31	32.5353	174	42	32.8413	232.8	60	31.7089	344.4	83	31.6775	477.6
1450	46				103			145			194			287			398
1150	36.5				81.5			115			154.5			227.6			315.1
960	30.5				68			96			129			190			263
1740	49	35.5	22	35.6114	112.8	31	35.6114	158.4	42	35.8344	213.6	60	34.5987	315.6	83	34.6723	436.8
1450	40.8				94			132			178			263			364
1150	32.4				74.3			105.4			141.4			208.4			288.7
960	27				62			88			118			174			241
1740	43.5	40	22	39.5264	102	31	39.5264	142.8	42	39.6083	193.2	60	38.2424	285.6	83	38.4842	392.4
1450	36.3				85			119			161			238			327
1150	28.8				67.1			94.6			128.2			189.3			259.9
960	24				56			79			107			158			217
1740	38.7	45	22	43.882	91.2	31	43.882	128.4	42	43.4177	176.4	60	41.9206	260.4	83	42.1856	358.8
1450	32.2				76			107			147			217			299
1150	25.6				59.9			85.1			116.2			172.5			237.2
960	21.3				50			71			97			144			198
1740	34.8	50	22	50.4204	79.2	31	50.4204	111.6	42	50.5248	151.2	60	48.7826	224.4	83	49.091	308.4
1450	29				66			93			126			187			257
1150	23				52.7			74.3			100.6			148.5			203.6
960	19.2				44			62			84			124			170
1740	31.1	56	22	55.7278	72	31	55.7278	100.8	42	55.8432	136.8	60	53.9176	202.8	83	54.2585	278.4
1450	25.9				60			84			114			169			232
1150	20.5				47.9			67.1			91			134.2			184.5
960	17.1				40			56			76			112			154
1740	27.6	63	22	60.4521	66	31	60.4521	93.6	42	60.5773	126	60	58.4884	187.2	83	62.3263	242.4
1450	23				55			78			105			156			202
1150	18.3				44.3			61.1			83.9			123.4			160.5
960	15.2				37			51			70			103			134
1740	24.5	71	22	69.6115	57.6	31	69.6115	81.6	42	69.7557	109.2	60	67.3503	162	83	67.7761	223.2
1450	20.4				48			68			91			135			186
1150	16.2				38.3			53.9			73.1			107.8			147.3
960	13.5				32			45			61			90			123
1740	21.8	80	22	79.0528	50.4	31	79.0528	72	42	80.2465	94.8	60	77.477	141.6	83	77.968	194.4
1450	18.1				42			60			79			118			162
1150	14.4				33.5			46.7			63.5			93.4			128.2
960	12				28			39			53			78			107
1740	19.3	90	22	86.2394	46.8	31	86.2394	66	42	86.418	88.8	60	83.438	130.8	83	83.9656	180
1450	16.1				39			55			74			109			150
1150	12.8				31.1			43.1			58.7			86.3			118.6
960	10.7				26			36			49			72			99
1740	17.4	100	22	99.088	40.8	31	99.088	57.6	42	99.295	76.8	60	95.868	114	83	96.476	157.2
1450	14.5				34			48			64			95			131
1150	11.5				26.4			37.1			51.5			75.5			103
960	9.6				22			31			43			63			86

P2L

P2..14			P2..16			P2..17			P2..18			P2..19			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
117	31.6775	673.2	160	31.4135	927.6	202	31.4135	1171.2	244	31.4286	1414.8	295	33.5237	1603.2	31.5	55.2	1740
		561			773			976			1179			1336		46	1450
		444.4			613.3			773.9			935.6			1060.2		36.5	1150
		371			512			646			781			885		30.5	960
117	34.6723	614.4	160	34.3835	848.4	202	34.3835	1070.4	244	34.3999	1292.4	295	36.6933	1465.2	35.5	49	1740
		512			707			892			1077			1221		40.8	1450
		406.1			560.6			708			854.1			967.9		32.4	1150
		339			468			591			713			808		27	960
117	38.4842	554.4	160	38.1635	764.4	202	38.1635	964.8	244	38.1819	1164	295	40.7272	1320	40	43.5	1740
		462			637			804			970			1100		36.3	1450
		366.6			504.3			637.3			769.1			872.1		28.8	1150
		306			421			532			642			728		24	960
117	42.1856	505.2	160	41.834	697.2	202	41.834	879.6	244	43.149	1030.8	295	46.0254	1167.6	45	38.7	1740
		421			581			733			859			973		32.2	1450
		334.2			461.2			581			681.6			771.5		25.6	1150
		279			385			485			569			644		21.3	960
117	49.091	434.4	160	48.6818	598.8	202	48.6818	756	244	49.091	906	295	52.3636	1026	50	34.8	1740
		362			499			630			755			855		29	1450
		287.5			395.3			499.5			599			678		23	1150
		240			330			417			500			566		19.2	960
117	54.2585	392.4	160	53.8063	542.4	202	53.8063	684	244	54.8664	808.8	295	58.524	918	56	31.1	1740
		327			452			570			674			765		25.9	1450
		259.9			358.2			451.6			534.3			607.3		20.5	1150
		217			299			377			446			507		17.1	960
117	62.3263	342	160	61.8069	471.6	202	61.8069	595.2	244	62.3263	712.8	295	66.4812	808.8	63	27.6	1740
		285			393			496			594			674		23	1450
		226.4			311.5			394.1			472			534.3		18.3	1150
		189			260			329			394			446		15.2	960
117	67.7761	314.4	160	67.2113	433.2	202	67.2113	547.2	244	67.7761	656.4	295	72.2943	744	71	24.5	1740
		262			361			456			547			620		20.4	1450
		208.4			286.3			361.8			433.6			491.1		16.2	1150
		174			239			302			362			410		13.5	960
117	77.968	273.6	160	77.318	376.8	202	77.318	476.4	244	77.968	570	295	83.165	646.8	80	21.8	1740
		228			314			397			475			539		18.1	1450
		180.9			249.2			315.1			377.3			427.7		14.4	1150
		151			208			263			315			357		12	960
117	83.9656	254.4	160	83.2658	350.4	202	83.2658	441.6	244	83.9656	529.2	295	89.563	600	90	19.3	1740
		212			292			368			441			500		16.1	1450
		167.7			231.2			292.3			349.8			396.5		12.8	1150
		140			193			244			292			331		10.7	960
117	96.476	220.8	160	95.671	304.8	202	95.671	385.2	244	96.476	460.8	295	102.906	522	100	17.4	1740
		184			254			321			384			435		14.5	1450
		146.1			201.3			254			304.3			345		11.5	1150
		122			168			212			254			288		9.6	960

P2L

n_1 (r/min)	n_{2N} (r/min)	i_N	P2..20			P2..21			P2..22			P2..23			P2..24			P2..25		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	55.2	31.5	354	33.5237	1923.6	392	33.5237	2131.2	450	33.5237	2445.6	513	33.8391	2762.4	592	33.8391	3188.4	684	33.8391	3682.8
1450	46				1603			1776			2038			2302			2657			3069
1150	36.5				1272.2			1408.8			1617.2			1825.6			2107.1			2434.2
960	30.5				1062			1176			1350			1524			1759			2032
1740	49	35.5	354	36.6933	1758	392	36.6933	1946.4	450	36.6933	2234.4	513	36.9231	2532	592	36.9231	2922	684	36.9231	3375.6
1450	40.8				1465			1622			1862			2110			2435			2813
1150	32.4				1162			1286.6			1477			1673.5			1931			2230.5
960	27				970			1074			1233			1397			1612			1862
1740	43.5	40	354	40.7272	1584	392	40.7272	1754.4	450	40.7272	2013.6	513	40.8116	2290.8	592	40.8116	2643.6	684	40.8116	3054
1450	36.3				1320			1462			1678			1909			2203			2545
1150	28.8				1047			1159.6			1330.9			1514.2			1746.6			2018.5
960	24				874			968			1111			1264			1458			1685
1740	38.7	45	354	46.0254	1401.6	392	46.0254	1551.6	450	46.0254	1782	513	46.1208	2026.8	592	46.1208	2338.8	684	46.1208	2702.4
1450	32.2				1168			1293			1485			1689			1949			2252
1150	25.6				926			1025.4			1177.6			1339.3			1545.3			1786.1
960	21.3				773			856			983			1118			1290			1491
1740	34.8	50	354	52.3636	1232.4	392	52.3636	1364.4	450	52.3636	1566	513	52.472	1782	592	52.472	2055.6	684	52.1365	2374.8
1450	29				1027			1137			1305			1485			1713			1979
1150	23				814.6			902			1035			1177.6			1358.4			1570.5
960	19.2				680			753			864			983			1134			1311
1740	31.1	56	354	58.524	1102.8	392	58.524	1220.4	450	58.524	1401.6	513	58.6452	1593.6	592	58.6452	1839.6	684	58.6452	2125.2
1450	25.9				919			1017			1168			1328			1533			1771
1150	20.5				728.3			806.2			926			1053			1215.9			1405.2
960	17.1				608			673			773			879			1015			1173
1740	27.6	63	354	66.4812	970.8	392	66.4812	1074	450	66.4812	1233.6	513	66.6189	1402.8	592	66.6189	1618.8	684	66.6189	1870.8
1450	23				809			895			1028			1169			1349			1559
1150	18.3				640.9			710.4			814.6			927.2			1069.7			1236.3
960	15.2				535			593			680			774			893			1032
1740	24.5	71	354	72.2943	892.8	392	72.2943	987.6	450	72.2943	1134	513	72.4441	1290	592	72.4441	1489.2	684	72.4441	1720.8
1450	20.4				744			823			945			1075			1241			1434
1150	16.2				589.4			652.9			749.9			852.9			984.7			1136.8
960	13.5				492			545			626			712			822			949
1740	21.8	80	354	83.165	775.2	392	83.165	859.2	450	83.165	986.4	513	83.337	1124.4	592	83.337	1293.6	684	83.337	1495.2
1450	18.1				646			716			822			937			1078			1246
1150	14.4				512.7			567.8			651.7			742.7			855.3			988.3
960	12				428			474			544			620			714			825
1740	19.3	90	354	89.563	720	392	89.563	798	450	89.563	915.6	513	89.7486	1041.6	592	89.7486	1202.4	684	89.7486	1388.4
1450	16.1				600			665			763			868			1002			1157
1150	12.8				475.6			527.1			604.9			688.8			794.2			917.6
960	10.7				397			440			505			575			663			766
1740	17.4	100	354	102.904	626.4	392	102.904	693.6	450	102.904	796.8	513	103.120	906	592	103.120	1046.4	684	103.120	1208.4
1450	14.5				522			578			664			755			872			1007
1150	11.5				414.5			458.8			527.1			599			691.2			799
960	9.6				346			383			440			500			577			667

P2L

P2..26			P2..27			P2..28			P2..29			P2..30			P2..31 ~ P2..36			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
763	33.8391	4108.8	852	33.5237	4630.8	950	33.5237	5163.6	1060	33.5237	5761.2	1200	33.5237	6522				280	6.2	1740
		3424			3859			4303			4801			5435					5.2	1450
		2715.7			3060.7			3412.9			3808.2			4311.3					4.1	1150
		2267			2555			2849			3179			3599					3.4	960
763	36.9231	3765.6	852	36.6933	4231.2	950	36.6933	4717.2	1060	36.6933	5264.4	1200	36.6933	5959.2				315	5.5	1740
		3138			3526			3931			4387			4966					4.6	1450
		2488.1			2795.9			3118.2			3478.8			3938.8					3.7	1150
		2077			2334			2603			2904			3288					3	960
763	40.8116	3406.8	852	40.7272	3812.4	950	40.7272	4250.4	1060	40.7272	4742.4	1200	40.7272	5368.8				355	4.9	1740
		2839			3177			3542			3952			4474					4.1	1450
		2252.1			2519.2			2809.1			3134.9			3548.2					3.2	1150
		1880			2103			2345			2617			2962					2.7	960
763	46.1208	3014.4	852	46.0254	3373.2	950	46.0254	3760.8	1060	46.0254	4196.4	1200	46.0254	4750.8				400	4.4	1740
		2512			2811			3134			3497			3959					3.6	1450
		1992.1			2229.3			2485.7			2773.2			3139.7					2.9	1150
		1663			1861			2075			2315			2621					2.4	960
763	52.1365	2649.6	852	52.0288	2965.2	950	52.0288	3306	1060	52.0288	3688.8	1200	52.0288	4176				450	3.9	1740
		2208			2471			2755			3074			3480					3.2	1450
		1751.4			1959.8			2185			2437.8			2760					2.6	1150
		1462			1636			1824			2035			2304					2.1	960
763	58.6452	2371.2	852	58.524	2653.2	950	58.524	2958	1060	58.524	3300	1200	58.524	3736.8	On request			500	3.5	1740
		1976			2211			2465			2750			3114					2.9	1450
		1566.9			1753.8			1955			2181.4			2468.9					2.3	1150
		1308			1464			1632			1821			2061					1.9	960
763	66.6189	2086.8	852	66.4812	2335.2	950	66.4812	2604	1060	66.4812	2905.2	1200	66.4812	3289.2				560	3.1	1740
		1739			1946			2170			2421			2741					2.6	1450
		1378.8			1542.9			1721.4			1920.3			2174.2					2.1	1150
		1151			1288			1437			1603			1815					1.7	960
763	72.4441	1918.8	852	72.2943	2148	950	72.2943	2394	1060	72.2943	2671.2	1200	72.2943	3025.2				630	2.8	1740
		1599			1790			1995			2226			2521					2.3	1450
		1268.6			1419.5			1582.4			1765.7			1999.3					1.8	1150
		1059			1185			1321			1474			1669					1.5	960
763	83.337	1668	852	83.165	1867.2	950	83.165	2082	1060	83.165	2322	1200	83.165	2629.2				710	2.5	1740
		1390			1556			1735			1935			2191					2	1450
		1102.1			1233.9			1375.2			1534.5			1738.2					1.6	1150
		920			1030			1148			1281			1451					1.4	960
763	89.7486	1549.2	852	89.563	1734	950	89.563	1933.2	1060	89.563	2156.4	1200	89.563	2442				800	2.2	1740
		1291			1445			1611			1797			2035					1.8	1450
		1024.2			1145.2			1277			1425.5			1613.6					1.4	1150
		855			956			1066			1190			1347					1.2	960
763	103.120	1348.8	852	102.904	1508.4	950	102.904	1682.4	1060	102.904	1876.8	1200	102.904	2125.2				900	1.9	1740
		1124			1257			1402			1564			1771					1.6	1450
		891.3			996.7			1111.7			1241			1404					1.3	1150
		744			832			928			1036			1172					1.1	960

P2L

6.4 P2K.. (i=112-560):

n_1 (r/min)	n_{2N} (r/min)	i_N	P2..09			P2..10			P2..11			P2..12			P2..13			P2..14		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	15.5	112	22	111.25	36	31	111.25	50.4	42	111.83	68.4	60	107.97	100.8	83	107.97	140.4	117	107.76	198
1450	12.9				30			42			57			84			117			165
1150	10.3				24			33.5			45.5			67.1			92.2			130.6
960	8.6				20			28			38			56			77			109
1740	13.9	125	22	125.75	32.4	31	125.75	44.4	42	125.68	61.2	60	121.35	90	83	121.8	124.8	117	121.8	175.2
1450	11.6				27			37			51			75			104			146
1150	9.2				21.6			29.9			40.7			59.9			82.7			116.2
960	7.7				18			25			34			50			69			97
1740	12.4	140	22	145.69	27.6	31	145.69	38.4	42	144.42	52.8	60	139.44	78	83	141.11	108	117	141.11	151.2
1450	10.4				23			32			44			65			90			126
1150	8.2				18			25.2			34.7			51.5			71.9			99.4
960	6.9				15			21			29			43			60			83
1740	10.9	160	22	157.28	25.2	31	157.28	36	42	155.27	49.2	60	149.91	73.2	83	151.19	100.8	117	151.19	141.6
1450	9.1				21			30			41			61			84			118
1150	7.2				16.8			24			32.3			47.9			67.1			93.4
960	6				14			20			27			40			56			78
1740	9.7	180	22	175.77	22.8	31	175.77	32.4	42	173.52	44.4	60	167.54	64.8	83	167.85	90	117	167.85	127.2
1450	8.1				19			27			37			54			75			106
1150	6.4				15.6			21.6			28.8			43.1			59.9			83.9
960	5.3				13			18			24			36			50			70
1740	8.7	200	22	203.53	19.2	31	203.53	27.6	42	200.92	38.4	60	193.99	56.4	83	192.86	78	117	192.86	110.4
1450	7.3				16			23			32			47			65			92
1150	5.8				13.2			18			25.2			37.1			51.5			73.1
960	4.8				11			15			21			31			43			61
1740	7.7	225	22	223.22	18	31	223.22	25.2	42	220.36	34.8	60	212.76	51.6	83	213.16	70.8	117	213.16	99.6
1450	6.4				15			21			29			43			59			83
1150	5.1				11.9			16.8			22.8			33.5			46.7			65.9
960	4.3				9.9			14			19			28			39			55
1740	7	250	22	242.15	16.8	31	242.15	22.8	42	239.04	32.4	60	230.8	46.8	83	231.23	66	117	231.23	92.4
1450	5.8				14			19			27			39			55			77
1150	4.6				10.9			15.6			21.6			31.1			43.1			61.1
960	3.8				9.1			13			18			26			36			51
1740	6.2	280	22	278.84	14.4	31	278.84	20.4	42	275.26	27.6	60	265.77	40.8	83	266.26	56.4	117	266.26	80.4
1450	5.2				12			17			23			34			47			67
1150	4.1				9.5			13.2			18			27.6			37.1			52.7
960	3.4				7.9			11			15			23			31			44
1740	5.4	320	22	316.65	13.2	31	316.65	18	42	312.6	24	60	301.82	36	83	302.38	50.4	117	302.38	70.8
1450	4.5				11			15			20			30			42			59
1150	3.6				8.4			12			16.8			24			33.5			46.7
960	3				7			10			14			20			28			39
1740	4.8	360	22	345.44	11.6	31	345.44	16.8	42	341.01	22.8	60	329.25	33.6	83	329.86	45.6	117	329.86	64.8
1450	4				9.7			14			19			28			38			54
1150	3.2				7.7			10.8			14.4			21.6			29.9			43.1
960	2.7				6.4			9			12			18			25			36
1740	4.4	400	22	396.9	10.1	31	396.9	14.4	42	391.83	19.2	60	378.31	28.8	83	379.01	39.6	117	379.01	56.4
1450	3.6				8.4			12			16			24			33			47
1150	2.9				6.7			9.5			13.2			19.2			26.4			37.1
960	2.4				5.6			7.9			11			16			22			31
1740	3.9	450	22	443.52	9	31	443.52	13.2	42	437.85	18	60	422.75	26.4	83	423.53	36	117	423.53	50.4
1450	3.2				7.5			11			15			22			30			42
1150	2.6				6			8.4			12			16.8			24			33.5
960	2.1				5			7			10			14			20			28
1740	3.5	500	22	485.1	8.3	31	485.1	12	42	478.9	16	60	462.38	24	83	462.24	32.4	117	462.24	45.6
1450	2.9				6.9			10			13.3			20			27			38
1150	2.3				5.5			7.7			10.5			15.6			21.6			29.9
960	1.9				4.6			6.4			8.8			13			18			25

P2K

P2..16			P2..17			P2..18			P2..19			P2..20			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
160	108.47	268.8	202	108.47	339.6	244	107.76	412.8	295	114.94	468	354	114.94	561.6	112	15.5	1740
		224			283			344			390			468		12.9	1450
		177.3			224			273.1			309.1			371.4		10.3	1150
		148			187			228			258			310		8.6	960
160	122.6	237.6	202	122.6	300	244	121.8	364.8	295	129.92	414	354	129.92	496.8	125	13.9	1740
		198			250			304			345			414		11.6	1450
		156.9			198.9			240.8			273.1			328.2		9.2	1150
		131			166			201			228			274		7.7	960
160	142.04	205.2	202	142.04	259.2	244	141.11	315.6	295	150.52	357.6	354	150.52	428.4	140	12.4	1740
		171			216			263			298			357		10.4	1450
		135.4			171.3			208.4			236			282.7		8.2	1150
		113			143			174			197			236		6.9	960
160	153.05	190.8	202	153.05	240	244	151.19	294	295	161.27	333.6	354	161.27	399.6	160	10.9	1740
		159			200			245			278			333		9.1	1450
		125.8			159.3			194.1			220.4			264.7		7.2	1150
		105			133			162			184			221		6	960
160	167.77	174	202	167.77	219.6	244	165.73	265.2	295	176.78	303.6	354	176.78	364.8	180	9.7	1740
		145			183			221			253			304		8.1	1450
		115			144.9			174.9			201.3			240.8		6.4	1150
		96			121			146			168			201		5.3	960
160	195.23	148.8	202	195.23	188.4	244	192.86	230.4	295	205.71	261.6	354	205.71	313.2	200	8.7	1740
		124			157			192			218			261		7.3	1450
		98.2			124.6			152.1			172.5			207.2		5.8	1150
		82			104			127			144			173		4.8	960
160	215.79	135.6	202	215.79	170.4	244	213.16	208.8	295	227.37	236.4	354	227.37	283.2	225	7.7	1740
		113			142			174			197			236		6.4	1450
		89.8			112.6			137.8			155.7			188.1		5.1	1150
		75			94			115			130			157		4.3	960
160	234.08	124.8	202	234.08	157.2	244	244.85	192	295	261.18	206.4	354	261.18	247.2	250	7	1740
		104			131			160			172			206		5.8	1450
		82.7			104.2			127			136.6			162.9		4.6	1150
		69			87			106			114			136		3.8	960
160	269.55	108	202	269.55	136.8	244	266.26	166.8	295	284.01	189.6	354	284.01	226.8	280	6.2	1740
		90			114			139			158			189		5.2	1450
		71.9			89.8			110.2			124.6			149.7		4.1	1150
		60			75			92			104			125		3.4	960
160	309	94.8	202	309	118.8	244	305.24	147.6	295	325.59	165.6	354	325.59	198	320	5.4	1740
		79			99			123			138			165		4.5	1450
		62.3			79.1			97			109			130.6		3.6	1150
		52			66			81			91			109		3	960
160	333.93	87.6	202	333.93	110.4	244	329.86	134.4	295	351.86	152.4	354	351.86	183.6	360	4.8	1740
		73			92			112			127			153		4	1450
		57.5			73.1			88.6			100.6			121		3.2	1150
		48			61			74			84			101		2.7	960
160	383.68	75.6	202	383.68	96	244	379.01	117.6	295	404.28	133.2	354	404.28	159.6	400	4.4	1740
		63			80			98			111			133		3.6	1450
		50.3			63.5			77.9			87.4			105.4		2.9	1150
		42			53			65			73			88		2.4	960
160	428.75	68.4	202	428.75	86.4	244	423.53	104.4	295	451.76	118.8	354	451.77	142.8	450	3.9	1740
		57			72			87			99			119		3.2	1450
		45.5			56.3			69.5			79.1			94.6		2.6	1150
		38			47			58			66			79		2.1	960
160	468.95	62.4	202	468.95	78	244	462.24	96	295	494.12	109.2	354	494.12	130.8	500	3.5	1740
		52			65			80			91			109		2.9	1450
		40.7			51.5			63.5			71.9			86.3		2.3	1150
		34			43			53			60			72		1.9	960

P2K

6.5 P3K.. (i=560-1400):

n_1 (r/min)	n_{2N} (r/min)	i_N	P3..09			P3..10			P3..11			P3..12			P3..13		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	3.1	560	22	566.22	7.1	31	566.22	10	42	567.4	13.4	60	567.83	19.9	83	551.29	27.5
1450	2.6				5.9			8.3			11.2			16.6			22.9
1150	2.1				4.7			6.6			8.9			13.2			18.1
960	1.7				3.9			5.5			7.4			11			15.1
1740	2.8	630	22	640.02	6.2	31	640.02	8.9	42	637.68	12	60	615.69	17.8	83	623.14	24.2
1450	2.3				5.2			7.4			10			14.8			20.2
1150	1.8				4.2			5.9			7.9			11.7			16.1
960	1.5				3.5			4.9			6.6			9.8			13.4
1740	2.5	710	22	700.53	5.8	31	700.53	8	42	697.96	10.9	60	673.9	16.2	83	682.06	22.2
1450	2				4.8			6.7			9.1			13.5			18.5
1150	1.6				3.8			5.3			7.2			10.8			14.6
960	1.4				3.2			4.4			6			9			12.2
1740	2.2	800	22	777.54	5.2	31	777.54	7.3	42	774.7	9.8	60	747.98	14.6	83	757.04	19.9
1450	1.8				4.3			6.1			8.2			12.2			16.6
1150	1.4				3.4			4.8			6.6			9.7			13.2
960	1.2				2.8			4			5.5			8.1			11
1740	1.9	900	22	878.88	4.6	31	878.88	6.5	42	875.66	8.8	60	845.46	12.8	83	855.7	17.6
1450	1.6				3.8			5.4			7.3			10.7			14.7
1150	1.3				3			4.2			5.8			8.5			11.7
960	1.1				2.5			3.5			4.8			7.1			9.8
1740	1.7	1000	22	982.19	4.1	31	982.19	5.8	42	978.6	7.8	60	944.85	11.5	83	956.3	15.8
1450	1.5				3.4			4.8			6.5			9.6			13.2
1150	1.2				2.8			3.8			5.2			7.7			10.4
960	1				2.3			3.2			4.3			6.4			8.7
1740	1.6	1120	22	1137.3	3.5	31	1137.3	4.9	42	1133.1	6.7	60	1094	10	83	1107.3	13.7
1450	1.3				2.9			4.1			5.6			8.3			11.4
1150	1				2.3			3.2			4.4			6.6			9
960	0.9				1.9			2.7			3.7			5.5			7.5
1740	1.4	1250	22	1247.3	3.2	31	1247.3	4.6	42	1242.8	6.1	60	1199.9	9.1	83	1214.4	12.5
1450	1.2				2.7			3.8			5.1			7.6			10.4
1150	0.9				2.2			3			4.1			6			8.3
960	0.8				1.8			2.5			3.4			5			6.9
1740	1.2	1400	22	1351.1	3	31	1351.1	4.2	42	1348.1	5.6	60	1301.6	8.4	83	1317.4	11.5
1450	1				2.5			3.5			4.7			7			9.6
1150	0.8				1.9			2.8			3.7			5.5			7.5
960	0.7				1.6			2.3			3.1			4.6			6.3

P3K

P3..14			P3..16			P3..17			P3..18			P3..19			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
117	551.29	38.6	160	551.25	52.9	202	551.25	66.7	244	544.28	81.7	295	580.56	92.6	560	3.1	1740
		32.2			44.1			55.6			68.1			77.2		2.6	1450
		25.5			35			44.1			54			61.2		2.1	1150
		21.3			29.2			36.8			45.1			51.1		1.7	960
117	623.14	34.2	160	623.09	46.8	202	623.09	59	244	615.21	72.2	295	656.22	82	630	2.8	1740
		28.5			39			49.2			60.2			68.3		2.3	1450
		22.6			30.9			39.1			47.8			54.1		1.8	1150
		18.9			25.8			32.6			39.9			45.2		1.5	960
117	682.06	31.2	160	679.88	42.8	202	679.88	54.1	244	673.37	66	295	718.27	74.9	710	2.5	1740
		26			35.7			45.1			55			62.4		2	1450
		20.6			28.4			35.8			43.6			49.5		1.6	1150
		17.2			23.7			29.9			36.4			41.3		1.4	960
117	757.04	28.2	160	751.48	38.8	202	751.48	49	244	747.4	59.5	295	797.23	67.4	800	2.2	1740
		23.5			32.3			40.8			49.6			56.2		1.8	1450
		18.6			25.6			32.3			39.3			44.6		1.4	1150
		15.5			21.4			27			32.8			37.2		1.2	960
117	855.7	25	160	844.56	34.6	202	844.56	43.6	244	844.81	52.7	295	901.13	59.6	900	1.9	1740
		20.8			28.8			36.3			43.9			49.7		1.6	1450
		16.4			22.8			28.8			34.7			39.4		1.3	1150
		13.7			19			24			29			32.9		1.1	960
117	956.3	22.3	160	943.84	30.8	202	943.84	39	244	937.9	47.4	295	1000.4	53.8	1000	1.7	1740
		18.6			25.7			32.5			39.5			44.8		1.5	1450
		14.7			20.4			25.8			31.4			35.5		1.2	1150
		12.3			17			21.5			26.2			29.6		1	960
117	1107.3	19.2	160	1092.4	28.3	202	1092.9	35.8	244	1077.6	41.3	295	1149.5	46.8	1120	1.6	1740
		16			23.6			29.8			34.4			39		1.3	1450
		12.7			18.7			23.6			27.3			30.9		1	1150
		10.6			15.6			19.7			22.8			25.8		0.9	960
117	1214.4	17.5	160	1198.6	24.4	202	1198.6	30.7	244	1191.1	37.3	295	1270.5	42.4	1250	1.4	1740
		14.6			20.3			25.6			31.1			35.3		1.2	1450
		11.6			16.1			20.2			24.7			27.9		0.9	1150
		9.7			13.4			16.9			20.6			23.3		0.8	960
117	1317.4	16.2	160	1300.2	22.4	202	1300.2	28.3	244	1292.1	34.4	295	1378.2	39	1400	1.2	1740
		13.5			18.7			23.6			28.7			32.5		1	1450
		10.7			14.9			18.7			22.8			25.8		0.8	1150
		8.9			12.4			15.6			19			21.5		0.7	960

P3K

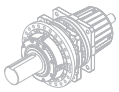
P3K.. (i=560-1400)(continued):

n_1 (r/min)	n_{2N} (r/min)	i_N	P3..20			P3..21			P3..22			P3..23			P3..24			P3..25		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	3.1	560	354	580.56	111.1	392	580.56	123.6	450	580.56	141.6	513	593.88	157.2	592	593.88	181.2	684	593.88	210
1450	2.6				92.6			103			118			131			151			175
1150	2.1				73.4			81.5			93.4			104.2			119.8			139
960	1.7				61.3			68			78			87			100			116
1740	2.8	630	354	656.22	98.3	392	656.22	109.2	450	656.22	124.8	513	667.44	140.4	592	667.44	162	684	667.44	187.2
1450	2.3				81.9			91			104			117			135			156
1150	1.8				64.9			71.9			82.7			92.2			106.6			123.4
960	1.5				54.2			60			69			77			89			103
1740	2.5	710	354	718.27	89.8	392	718.27	99.6	450	718.27	114	513	730.55	128.4	592	730.55	147.6	684	730.55	170.4
1450	2				74.8			83			95			107			123			142
1150	1.6				59.3			65.9			75.5			85.1			97			112.6
960	1.4				49.5			55			63			71			81			94
1740	2.2	800	354	797.23	80.9	392	797.23	90	450	797.23	103.2	513	810.87	115.2	592	810.87	133.2	684	810.87	153.6
1450	1.8				67.4			75			86			96			111			128
1150	1.4				53.4			58.7			68.3			76.7			87.4			101.8
960	1.2				44.6			49			57			64			73			85
1740	1.9	900	354	901.13	71.6	392	901.13	79.2	450	901.13	91.2	513	916.54	102	592	916.54	117.6	684	916.54	135.6
1450	1.6				59.7			66			76			85			98			113
1150	1.3				47.3			52.7			59.9			67.1			77.9			89.8
960	1.1				39.5			44			50			56			65			75
1740	1.7	1000	354	1000.4	64.4	392	1000.4	72	450	1000.4	81.6	513	1004.7	93.6	592	1004.7	106.8	684	1004.7	123.6
1450	1.5				53.7			60			68			78			89			103
1150	1.2				42.6			46.7			53.9			61.1			70.7			81.5
960	1				35.6			39			45			51			59			68
1740	1.6	1120	354	1149.5	56.2	392	1149.5	62.4	450	1149.5	70.8	513	1169.1	80.4	592	1169.1	92.4	684	1169.1	106.8
1450	1.3				46.8			52			59			67			77			89
1150	1				37.1			40.7			46.7			52.7			61.1			70.7
960	0.9				31			34			39			44			51			59
1740	1.4	1250	354	1270.5	50.8	392	1270.5	56.4	450	1270.5	64.8	513	1292.2	72	592	1292.2	84	684	1992.2	96
1450	1.2				42.3			47			54			60			70			80
1150	0.9				33.5			37.1			43.1			47.9			55.1			63.5
960	0.8				28			31			36			40			46			53
1740	1.2	1400	354	1378.2	46.8	392	1378.2	51.6	450	1378.2	60	513	1401.8	67.2	592	1401.8	76.8	684	1401.8	88.8
1450	1				39			43			50			56			64			74
1150	0.8				30.9			34.7			39.5			44.3			50.3			58.7
960	0.7				25.8			29			33			37			42			49

P3K

P3..26			P3..27			P3..28			P3..29			P3..30			P3..31 ~ P3..36			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
763	593.88	234	852	580.56	267.6	950	580.56	297.6	1060	580.56	332.4	1200	580.56	376.8				560	3.1	1740
		195			223			248			277			314					2.6	1450
		154.5			177.3			197.7			220.4			249.2					2.1	1150
		129			148			165			184			208					1.7	960
763	667.44	208.8	852	656.22	236.4	950	656.22	264	1060	656.22	294	1200	656.22	333.6				630	2.8	1740
		174			197			220			245			278					2.3	1450
		137.8			156.9			174.9			194.1			220.4					1.8	1150
		115			131			146			162			184					1.5	960
763	730.55	190.8	852	718.27	216	950	718.27	241.2	1060	718.27	268.8	1200	718.27	304.8				710	2.5	1740
		159			180			201			224			254					2	1450
		125.8			142.6			159.3			177.3			201.3					1.6	1150
		105			119			133			148			168					1.4	960
763	810.87	171.6	852	797.23	194.4	950	797.23	217.2	1060	797.23	242.4	1200	797.23	274.8				800	2.2	1740
		143			162			181			202			229					1.8	1450
		113.8			128.2			143.8			160.5			180.9					1.4	1150
		95			107			120			134			151					1.2	960
763	916.54	151.2	852	901.13	172.8	950	901.13	192	1060	901.13	214.8	1200	901.13	242.4	On request			900	1.9	1740
		126			144			160			179			202					1.6	1450
		100.6			113.8			127			141.4			160.5					1.3	1150
		84			95			106			118			134					1.1	960
763	1004.7	138	852	987.8	154.8	950	987.8	172.8	1060	987.8	193.2	1200	987.8	218.4				1000	1.7	1740
		115			129			144			161			182					1.5	1450
		91			103			113.8			128.2			144.9					1.2	1150
		76			86			95			107			121					1	960
763	1169.1	118.8	852	1149.5	135.6	950	1149.5	150	1060	1149.5	168	1200	1149.5	190.8				1120	1.6	1740
		99			113			125			140			159					1.3	1450
		79.1			89.8			99.4			111.4			125.8					1	1150
		66			75			83			93			105					0.9	960
763	1992.2	108	852	1270.5	122.4	950	1270.5	136.8	1060	1270.5	152.4	1200	1270.5	171.6				1250	1.4	1740
		90			102			114			127			143					1.2	1450
		70.7			80.3			89.8			100.6			113.8					0.9	1150
		59			67			75			84			95					0.8	960
763	1401.8	99.6	852	1459.4	112.8	950	1459.4	126	1060	1459.4	140.4	1200	1459.4	158.4				1400	1.2	1740
		83			94			105			117			132					1	1450
		65.9			74.3			82.7			92.2			105.4					0.8	1150
		55			62			69			77			88					0.7	960

P3K



P3K.. (i=1600-4000)(continued):

n_1 (r/min)	n_{2N} (r/min)	i_N	P3..09			P3..10			P3..11			P3..12			P3..13		
			T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1740	1.1	1600	22	1558.1	2.5	31	1558.1	3.6	42	1552.4	4.9	60	1498.9	7.3	83	1517	10
1450	0.9				2.1			3			4.1			6.1			8.3
1150	0.7				1.7			2.4			3.2			4.8			6.6
960	0.6				1.4			2			2.7			4			5.5
1740	1	1800	22	1769.4	2.3	31	1769.4	3.2	42	1762.9	4.3	60	1702.1	6.5	83	1722.8	8.8
1450	0.8				1.9			2.7			3.6			5.4			7.3
1150	0.6				1.4			2.2			2.9			4.2			5.8
960	0.5				1.2			1.8			2.4			3.5			4.8
1740	0.9	2000	22	1930.3	2.2	31	1930.3	3	42	1923.2	4	60	1856.9	5.9	83	1879.4	8
1450	0.7				1.8			2.5			3.3			4.9			6.7
1150	0.6				1.4			1.9			2.6			3.8			5.3
960	0.5				1.2			1.6			2.2			3.2			4.4
1740	0.8	2240	22	2218.92	1.8	31	2218.92	2.5	42	2209.74	3.5	60	2133.53	5.2	83	2159.37	7
1450	0.6				1.5			2.1			2.9			4.3			5.8
1150	0.5				1.2			1.7			2.3			3.4			4.7
960	0.4				1			1.4			1.9			2.8			3.9
1740	0.7	2500	22	2479.56	1.6	31	2479.56	2.3	42	2469.29	3.1	60	2384.14	4.6	83	2413.01	6.2
1450	0.6				1.3			1.9			2.6			3.8			5.2
1150	0.5				1.1			1.6			2			3			4.2
960	0.4				0.9			1.3			1.7			2.5			3.5
1740	0.6	2800	22	2712.01	1.4	31	2712.01	2	42	2700.79	2.9	60	2607.65	4.2	83	2639.23	5.8
1450	0.5				1.2			1.7			2.4			3.5			4.8
1150	0.4				1			1.3			1.9			2.8			3.8
960	0.3				0.8			1.1			1.6			2.3			3.2
1740	0.6	3150	22	3138.19	1.3	31	3138.19	1.8	42	3125.2	2.4	60	3017.42	3.6	83	3053.96	4.9
1450	0.5				1.1			1.5			2			3			4.1
1150	0.4				0.8			1.2			1.7			2.4			3.2
960	0.3				0.7			1			1.4			2			2.7
1740	0.5	3550	22	3633.91	1.1	31	3633.91	1.6	42	3620.67	2.2	60	3495.81	3.1	83	3538.14	4.3
1450	0.4				0.9			1.3			1.8			2.6			3.6
1150	0.3				0.7			1.1			1.4			2			2.9
960	0.3				0.6			0.9			1.2			1.7			2.4
1740	0.4	4000	22	4210.03	1	31	4210.03	1.3	42	4160.53	1.8	60	4017.07	2.8	83	4099	3.7
1450	0.4				0.8			1.1			1.5			2.3			3.1
1150	0.3				0.6			0.8			1.2			1.8			2.4
960	0.2				0.5			0.7			1			1.5			2

P3K

P3..14			P3..16			P3..17			P3..18			P3..19			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
117	1517	14	160	1497.3	19.7	202	1497.3	24.8	244	1487.8	29.9	295	1587	33.8	1600	1.1	1740
		11.7			16.4			20.7			24.9			28.2		0.9	1450
		9.3			13.1			16.4			19.8			22.4		0.7	1150
		7.8			10.9			13.7			16.5			18.7		0.6	960
117	1722.8	12.4	160	1700.3	17.2	202	1700.3	21.6	244	1689.6	26.3	295	1802.3	29.9	1800	1	1740
		10.3			14.3			18			21.9			24.9		0.8	1450
		8.1			11.4			14.3			17.4			19.8		0.6	1150
		6.8			9.5			11.9			14.5			16.5		0.5	960
117	1879.4	11.4	160	1854.9	15.7	202	1854.9	19.8	244	1843.2	24.1	295	1966.1	27.4	2000	0.9	1740
		9.5			13.1			16.5			20.1			22.8		0.7	1450
		7.5			10.4			13.1			15.9			18.1		0.6	1150
		6.3			8.7			10.9			13.3			15.1		0.5	960
117	2159.4	9.8	160	2131.3	13.7	202	2131.3	17.3	244	2117.8	21	295	2259	23.8	2240	0.8	1740
		8.2			11.4			14.4			17.5			19.8		0.6	1450
		6.5			9			11.4			13.9			15.7		0.5	1150
		5.4			7.5			9.5			11.6			13.1		0.4	960
117	2413	8.9	160	2381.6	12.2	202	2381.6	15.5	244	2366.6	18.8	295	2524.4	21.2	2500	0.7	1740
		7.4			10.2			12.9			15.7			17.7		0.6	1450
		5.9			8.1			10.2			12.5			14		0.5	1150
		4.9			6.8			8.5			10.4			11.7		0.4	960
117	2654	8	160	2604.9	11.2	202	2604.9	14.2	244	2588.4	17.2	295	2761	19.4	2800	0.6	1740
		6.7			9.3			11.8			14.3			16.2		0.5	1450
		5.4			7.4			9.3			11.4			12.8		0.4	1150
		4.5			6.2			7.8			9.5			10.7		0.3	960
117	3054	7	160	3014.2	9.7	202	3014.2	12.2	244	2995.2	14.9	295	3194.9	16.8	3150	0.6	1740
		5.8			8.1			10.2			12.4			14		0.5	1450
		4.7			6.3			8			9.8			11.1		0.4	1150
		3.9			5.3			6.7			8.2			9.3		0.3	960
117	3538.1	6	160	3463.7	8.4	202	3463.7	10.7	244	3470.1	12.8	295	3701.4	14.5	3550	0.5	1740
		5			7			8.9			10.7			12.1		0.4	1450
		4			5.5			7.1			8.5			9.6		0.3	1150
		3.3			4.6			5.9			7.1			8		0.3	960
117	4099	5.2	160	4012.7	7.3	202	4012.7	9.1	244	4020.2	11	295	4288.2	12.5	4000	0.4	1740
		4.3			6.1			7.6			9.2			10.4		0.4	1450
		3.5			4.8			6.1			7.3			8.3		0.3	1150
		2.9			4			5.1			6.1			6.9		0.2	960

P3K

P

P3K.. (i=1600-4000)(continued):

n_1 (r/min)	n_{2N} (r/min)	i_N	P3..20			P3..21			P3..22			P3..23			P3..24			P3..25		
			T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)	T_{2N} (kN•m)	iex	P_{1N} (kW)
1740	1.1	1600	354	1587	40.7	392	1587	45.6	450	1587	51.6	513	1614.2	57.6	592	1614.2	67.2	684	1614.2	76.8
1450	0.9				33.9			38			43			48			56			64
1150	0.7				26.8			29.9			34.7			38.3			44.3			51.5
960	0.6				22.4			25			29			32			37			43
1740	1	1800	354	1802.3	35.8	392	1802.3	39.6	450	1802.3	45.6	513	1850.4	50.4	592	1850.4	58.8	684	1850.4	67.2
1450	0.8				29.8			33			38			42			49			56
1150	0.6				23.6			26.4			29.9			33.5			38.3			44.3
960	0.5				19.7			22			25			28			32			37
1740	0.9	2000	354	1966.1	32.8	392	1966.1	36	450	1966.1	42	513	1999.7	46.8	592	1999.7	54	684	1999.7	62.4
1450	0.7				27.3			30			35			39			45			52
1150	0.6				21.7			24			27.6			31.1			35.9			40.7
960	0.5				18.1			20			23			26			30			34
1740	0.8	2240	354	2259	28.6	392	2259	31.2	450	2259	36	513	2297.7	40.8	592	2297.7	46.8	684	2297.7	54
1450	0.6				23.8			26			30			34			39			45
1150	0.5				18.9			20.4			24			26.4			31.1			35.9
960	0.4				15.8			17			20			22			26			30
1740	0.7	2500	354	2524.4	25.6	392	2524.4	28.8	450	2524.4	32.4	513	2567.6	36	592	2567.6	42	684	2567.6	48
1450	0.6				21.3			24			27			30			35			40
1150	0.5				16.9			19.2			21.6			24			27.6			32.3
960	0.4				14.1			16			18			20			23			27
1740	0.6	2800	354	2761	23.4	392	2761	25.9	450	2761	29.6	513	2808.3	33.6	592	2808.3	38.4	684	2808.3	44.4
1450	0.5				19.5			21.6			24.7			28			32			37
1150	0.4				15.5			17.1			19.6			21.6			25.2			28.8
960	0.3				12.9			14.3			16.4			18			21			24
1740	0.6	3150	354	3194.9	20.2	392	3194.9	22.3	450	3194.9	25.7	513	3249.6	28.8	592	3249.6	33.6	684	3249.6	38.4
1450	0.5				16.8			18.6			21.4			24			28			32
1150	0.4				13.3			14.7			17			19.2			21.6			25.2
960	0.3				11.1			12.3			14.2			16			18			21
1740	0.5	3550	354	3701.4	17.4	392	3701.4	19.3	450	3701.4	22.2	513	3734	25.2	592	3734	28.8	684	3734	33.6
1450	0.4				14.5			16.1			18.5			21			24			28
1150	0.3				11.5			12.7			14.6			16.8			19.2			21.6
960	0.3				9.6			10.6			12.2			14			16			18
1740	0.4	4000	354	4288.2	15	392	4288.2	16.7	450	4288.2	19.1	513	4326.1	21.6	592	4326.1	25.2	684	4326.1	28.8
1450	0.4				12.5			13.9			15.9			18			21			24
1150	0.3				9.9			11			12.6			14.4			16.8			19.2
960	0.2				8.3			9.2			10.5			12			14			16

P3K

P3..26			P3..27			P3..28			P3..29			P3..30			P3..31 ~ P3..36			i_N	n_{2N} (r/min)	n_1 (r/min)
T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)			
763	1614.2	86.4	852	1587	98.4	950	1587	109.2	1060	1587	121.2	1200	1587	138				1600	1.1	1740
		72			82			91			101			115					0.9	1450
		57.5			64.7			71.9			80.3			91					0.7	1150
		48			54			60			67			76					0.6	960
763	1850.4	75.6	852	1819.3	86.4	950	1819.3	96	1060	1819.3	106.8	1200	1819.3	121.2				1800	1	1740
		63			72			80			89			101					0.8	1450
		49.1			57.5			63.5			70.7			80.3					0.6	1150
		41			48			53			59			67					0.5	960
763	1999.7	69.6	852	1966.1	79.2	950	1966.1	87.6	1060	1966.1	98.4	1200	1966.1	111.6				2000	0.9	1740
		58			66			73			82			93					0.7	1450
		45.5			52.7			58.7			64.7			73.1					0.6	1150
		38			44			49			54			61					0.5	960
763	2297.7	60	852	2259	68.4	950	2259	76.8	1060	2259	85.2	1200	2259	97.2				2240	0.8	1740
		50			57			64			71			81					0.6	1450
		39.5			45.5			50.3			56.3			63.5					0.5	1150
		33			38			42			47			53					0.4	960
763	2567.6	54	852	2524.4	61.2	950	2524.4	68.4	1060	2524.4	76.8	1200	2524.4	86.4	On request			2500	0.7	1740
		45			51			57			64			72					0.6	1450
		35.9			40.7			45.5			50.3			57.5					0.5	1150
		30			34			38			42			48					0.4	960
763	2808.3	49.2	852	2761	56.4	950	2761	62.4	1060	2761	69.6	1200	2761	79.2				2800	0.6	1740
		41			47			52			58			66					0.5	1450
		32.3			37.1			41.9			46.7			52.7					0.4	1150
		27			31			35			39			44					0.3	960
763	3249.6	43.2	852	3194.9	48	950	3194.9	54	1060	3194.9	60	1200	3194.9	68.4				3150	0.6	1740
		36			40			45			50			57					0.5	1450
		28.8			32.3			35.9			39.5			45.5					0.4	1150
		24			27			30			33			38					0.3	960
763	3734	37.2	852	3701.4	42	950	3701.4	46.8	1060	3701.4	51.6	1200	3701.4	58.8				3550	0.5	1740
		31			35			39			43			49					0.4	1450
		25.2			27.6			31.1			34.7			39.5					0.3	1150
		21			23			26			29			33					0.3	960
763	4326.1	32.4	852	4288.2	36	950	4288.2	40.8	1060	4288.2	45.6	1200	4288.2	50.4				4000	0.4	1740
		27			30			34			38			42					0.4	1450
		21.6			24			26.4			29.9			33.5					0.3	1150
		18			20			22			25			28					0.2	960

P3K

6.6 Nominal Thermal Capacity:

6.6.1 P2N.. (Mounting position B5):

Size / Wind velocity / PG1	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36
Small confined spaces Wind velocity≥0.5m/s	21	26	32	42	49	65	75	92	100	119	142	174	201	242	287	326	366	437
Large halls or workshops Wind velocity≥1.4m/s	29	37	45	60	69	92	106	130	147	169	201	246	285	343	406	462	519	619
In the open Wind velocity≥3.7m/s	39	50	60	80	93	125	143	175	191	228	272	333	386	464	505	626	702	838

6.6.2 P2S.. (Mounting position B52\B53\B54):

Size / Wind velocity / PG1	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36
Small confined spaces Wind velocity≥0.5m/s	15	20	24	32	36	49	56	69	75	89	106	130	151	182	215	245	275	328
Large halls or workshops Wind velocity≥1.4m/s	22	28	34	45	52	69	79	97	106	127	151	185	214	257	305	347	389	464
In the open Wind velocity≥3.7m/s	29	38	45	60	70	94	107	132	143	171	204	250	289	348	412	469	527	628

6.6.3 P3N.. (Mounting position B5):

Size / Wind velocity / PG1	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36
Small confined spaces Wind velocity≥0.5m/s	14	18	22	29	34	46	52	64	70	83	99	121	141	169	200	228	256	305
Large halls or workshops Wind velocity≥1.4m/s	20	26	31	41	48	64	74	91	99	118	140	172	199	240	284	323	362	432
In the open Wind velocity≥3.7m/s	28	35	42	56	65	87	100	123	133	159	190	233	269	324	384	437	490	585

6.6.4 P3S.. (Mounting position B52\B53\B54):

Size / Wind velocity / PG1	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31/32	33/34	35/36
Small confined spaces Wind velocity≥0.5m/s	12	15	18	24	28	40	43	53	57	69	82	100	116	139	165	188	211	252
Large halls or workshops Wind velocity≥1.4m/s	17	21	26	34	40	53	61	75	81	97	116	142	164	197	234	266	298	356
In the open Wind velocity≥3.7m/s	23	29	35	46	54	72	82	101	110	131	156	192	222	267	316	360	404	482

Note: Thermal capacity of other mounting positions on request.

6.6.5 P2L.. (Mounting position B52\B53\B54):

Size / Wind velocity PG1	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31 ~ 36
Small confined spaces Wind velocity≥0.5m/s	14	18	22	29	34	46	52	64	70	83	99	121	141	169	200	On request
Large halls or workshops Wind velocity≥1.4m/s	20	26	31	41	48	64	74	91	99	118	140	172	199	240	284	
In the open Wind velocity≥3.7m/s	28	35	42	56	65	87	100	123	133	159	190	233	269	324	384	

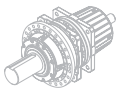
6.6.6 P2K.. (Mounting position B52\B53\B54):

Size / Wind velocity PG1	09	10	11	12	13	14	16	17	18	19/20
Small confined spaces Wind velocity≥0.5m/s	12	15	18	24	28	38	44	53	58	69
Large halls or workshops Wind velocity≥1.4m/s	17	22	26	35	40	54	62	76	82	98
In the open Wind velocity≥3.7m/s	23	29	35	47	54	73	83	102	111	133

6.6.7 P3K.. (Mounting position B52\B53\B54):

Size / Wind velocity PG1	09	10	11	12	13	14	16	17	18	19/20	21/22	23/24	25/26	27/28	29/30	31 ~ 36
Small confined spaces Wind velocity≥0.5m/s	10	12	15	20	23	31	35	43	47	56	67	82	95	109	125	On request
Large halls or workshops Wind velocity≥1.4m/s	14	17	21	28	33	44	50	61	66	79	95	116	106	125	144	
In the open Wind velocity≥3.7m/s	19	24	28	38	44	59	67	83	90	107	128	157	166	195	225	

Note: Thermal capacity of other mounting positions on request.



7 Radial force on output shaft:

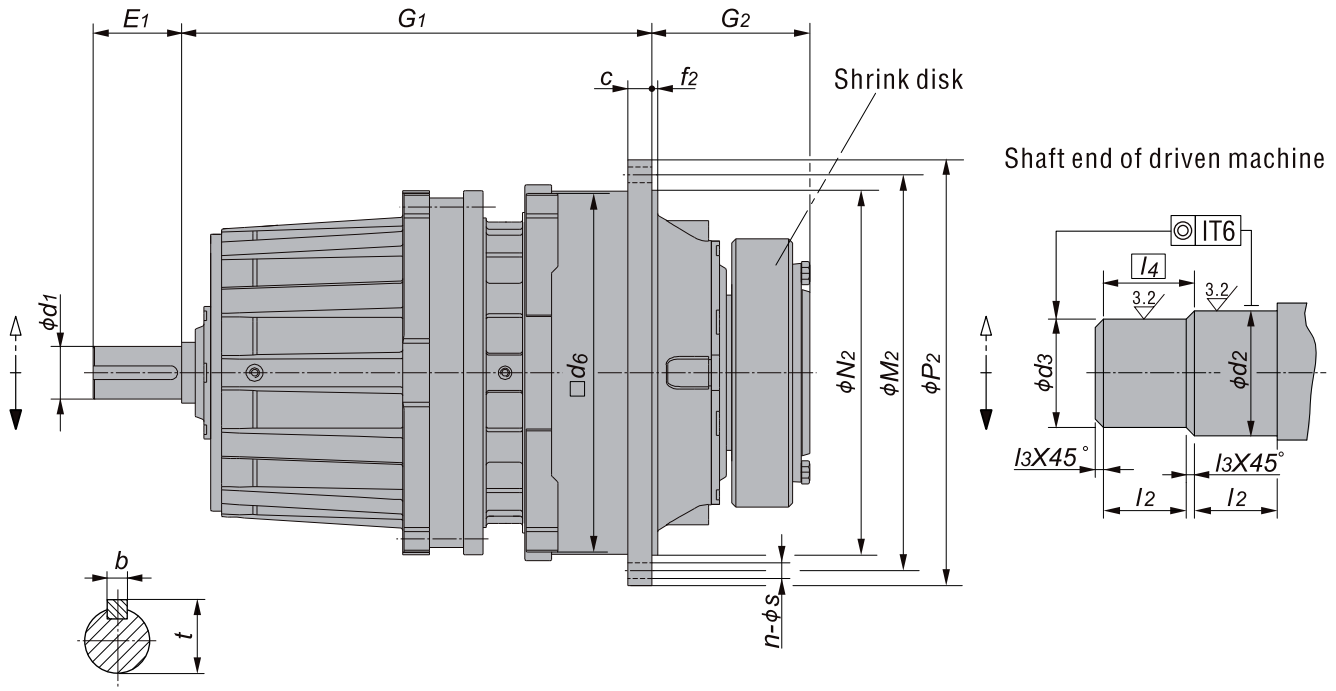
n_{2N} (r/min)	Fr2 (N)													
	09	10	11	12	13	14	16	17	18	19-20	21-22	23-24	25-26	27-28
56 ~ 71	9538	23353	32518	42407	34737	41183	72297	64454	69713	70477	99136	99347	123583	126071
50 ~ 56	9905	24252	33770	44039	36075	42768	75080	66935	72396	73190	102952	103171	128341	130925
45 ~ 50	10302	25223	35122	45803	37519	44481	78086	69616	75295	76121	107075	107302	133480	136167
40 ~ 45	10720	26249	36550	47665	39044	46289	81261	72446	78356	79215	111428	111665	138907	141703
35.5 ~ 40	11155	27314	38033	49599	40629	48167	84559	75386	81536	82430	115950	116196	144544	147454
31.5 ~ 35.5	11602	28408	39556	51585	42256	50096	87945	78404	84801	85731	120593	120849	150332	153358
28 ~ 31.5	12017	29423	40970	53429	43766	51887	91088	81207	87832	88795	124903	125169	155705	158840
25 ~ 28	12479	30556	42547	55486	45451	53884	94595	84333	91214	92214	129712	129988	161700	164955
22.4 ~ 25	12979	31779	44251	57708	47271	56042	98383	87710	94866	95906	134906	135193	168175	171560
20 ~ 22.4	13507	33071	46050	60054	49193	58320	102382	91276	98723	99805	140390	140689	175011	178534
18 ~ 20	14055	34413	47919	62491	51189	60687	106537	94980	102729	103856	146088	146398	182114	185780
16 ~ 18	14618	35791	49838	64993	53239	63117	110803	98783	106843	108014	151937	152260	189406	193219
14 ~ 16	15140	37071	51619	67316	55142	65373	114764	102314	110662	111875	157368	157703	196176	200125
12.5 ~ 14	15723	38498	53606	69908	57265	67890	119182	106253	114922	116182	163427	163774	203729	207830
11.2 ~ 12.5	16309	39933	55605	72514	59400	70421	123626	110215	119207	120514	169520	169880	211325	215578
≤11.2	16937	41471	57746	75306	61687	73132	128385	114458	123796	125153	176046	176420	219460	223878

Note: For lower output speed, apply the largest Fr2 value in each type.

8 Outline Dimensions:

8.1 Gear unit:

P2NA..　　iN = 25 ... 40

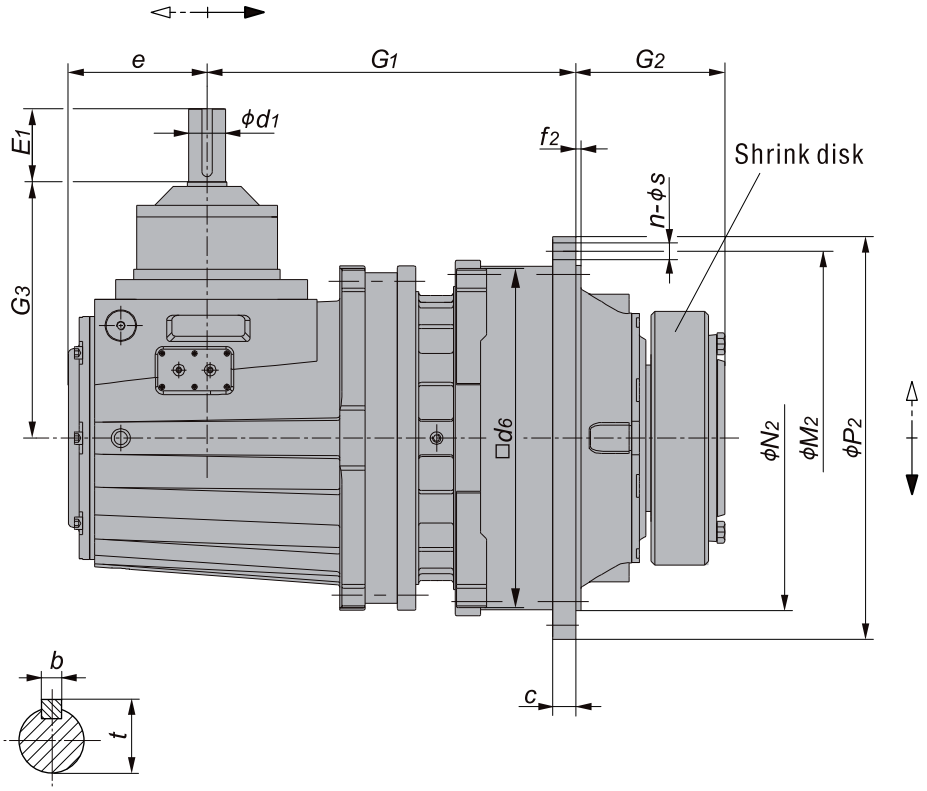


P2NA.. Size	Nominal output touque T2N (N·m)	Input shaft d1	E1	b	t	c	d2	d3	d6	f2	G1	G2	l2	l3	l4	M2	N2	P2	Flange bolts n	s	Weight (Kg)*
09	22 000	55m6	90	16	59	24	120h6	115h6	356	$6^{\pm1.5}$	469	165	65	2.5	67.5	388	350h7	428	24	18	145
10	31 000	55m6	90	16	59	28	130h6	125h6	400	$8^{\pm1.5}$	489	174	70	2.5	72.5	436	394h7	472	28	18	195
11	42 000	70m6	120	20	74.5	32	140h6	135h6	436	$8^{\pm1.5}$	579	204	82.5	2.5	85.0	485	425h7	525	20	22	280
12	60 000	70m6	120	20	74.5	34	160h6	155h6	510	$9^{\pm1.5}$	593	224	90	2.5	92.5	555	495h7	605	20	26	425
13	83 000	80m6	140	22	85	39	180g6	175g6	554	$11^{\pm1.5}$	714	241	95	2.5	97.5	595	535h7	645	24	26	540
14	117 000	80m6	140	22	85	42	210g6	205g6	629	9	737	278	105	2.5	107.5	665	610h7	720	32	26	805
16	160 000	95m6	160	25	100	44	230g6	225g6	680	10	851	285	110	2.5	112.5	715	660h7	770	36	26	1030
17	202 000	95m6	160	25	100	50	250g6	245g6	775	10	877	294	120	2.5	122.5	830	750h7	895	24	33	1500
18	244 000	110m6	180	28	116	50	260g6	255g6	815	10	1006	303	120	2.5	122.5	865	785h7	930	32	33	1900
19	295 000	110m6	180	28	116	56	280g6	275g6	870	12	1029.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2000
20	354 000	110m6	180	28	116	56	300g6	295g6	870	12	1029.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2100
21	392 000	120m6	210	32	127	62	310g6	305g6	960	24	1046	354	152	2.5	154.5	1025	935h7	1115	32	39	2650
22	450 000	120m6	210	32	127	62	330g6	325g6	960	24	1046	354	152	2.5	154.5	1025	935h7	1115	32	39	2800
23	513 000	130m6	210	32	137	68	350g6	345g6	1056	28	1150	380	164	2.5	166.5	1120	1025h7	1210	36	39	3450
24	592 000	130m6	210	32	137	68	360g6	355g6	1056	28	1150	380	164	2.5	166.5	1120	1025h7	1210	36	39	3900
25	684 000	140m6	240	36	148	74	380g6	375g6	1150	29	1241	407	180	2.5	182.5	1220	1115h7	1320	36	45	4750
26	763 000	140m6	240	36	148	74	400g6	395g6	1150	29	1241	407	180	2.5	182.5	1220	1115h7	1320	36	45	5150
27	852 000	150m6	240	36	158	81	430g6	425g6	1248	31	1379	453	191	2.5	193.5	1345	1215h7	1460	32	52	6100
28	950 000	150m6	240	36	158	81	450g6	445g6	1248	31	1379	453	191	2.5	193.5	1345	1215h7	1460	32	52	6550
29	1060 000	160m6	270	40	169	87	460g6	450g6	1355	34	1457	483	197.5	5	202.5	1450	1320h7	1565	36	52	7800
30	1200 000	160m6	270	40	169	87	480g6	470g6	1355	34	1457	483	197.5	5	202.5	1450	1320h7	1565	36	52	8300
31	1330 000	170m6	270	40	179	94	480g6	470g6	1443	36	1607	538	232	5	237.0	1545	1400h7	1665	32	62	10200
32	1500 000	170m6	270	40	179	94	510g6	500g6	1443	36	1607	538	232	5	237.0	1545	1400h7	1665	32	62	10700
33	1680 000	180m6	310	40	179	100	530g6	520g6	1536	36	1683	573	242	5	247.0	1635	1495h7	1755	36	62	12350
34	1920 000	180m6	310	45	190	100	570g6	560g6	1536	36	1683	573	242	5	247.0	1635	1495h7	1755	36	62	13150
35	2240 000	190m6	310	45	200	112	600g6	590g6	1720	40	1899	656	272	5	277.0	1825	1685h7	1945	40	62	17300
36	2600 000	190m6	310	45	200	112	640g6	630g6	1720	40	1899	656	272	5	277.0	1825	1685h7	1945	40	62	18400

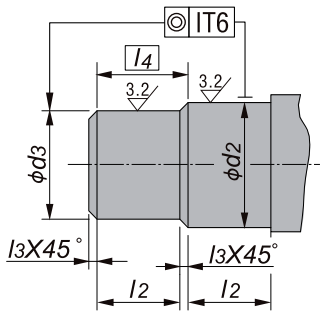
Note:*Weight without shrink disk and oil.

P2LA..

i_N = 31.5 ...100



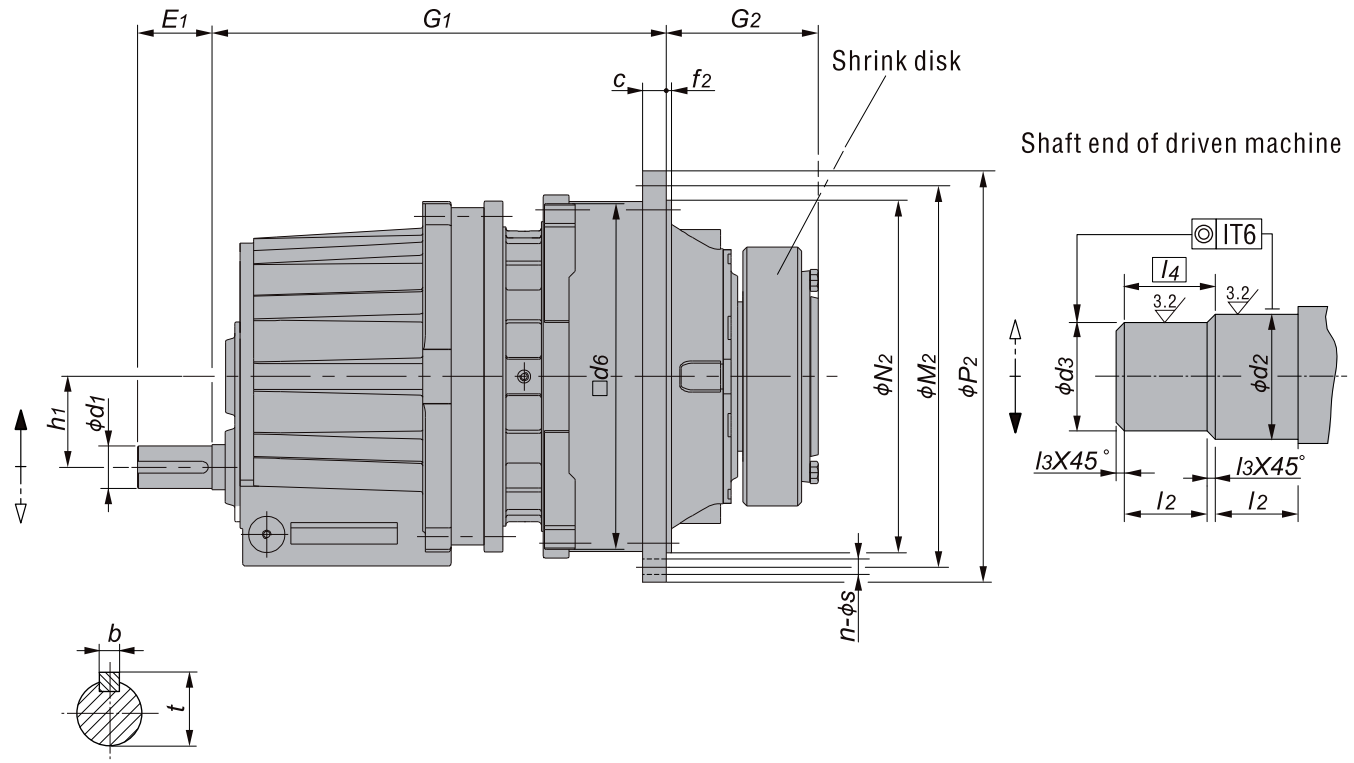
Shaft end of driven machine



P2LA.. Size	Nominal output touque T_{2N} (N · m)	Input shaft $i_N \leqslant 90$ d1	E1	b	t	$i_N \geqslant 100$ d1	E1	b	t	c	d2	d3	d6	e	f2	G1	G2	G3	l2	l3	l4	M2	N2	P2	Flange bolts n	s	Weight (Kg)*
09	22 000	50k6	100	14	53.5	40k6	80	12	43	24	120h6	115h6	356	185	6±1.5	425	165	305	65	2.5	67.5	388	350h7	428	24	18	159
10	31 000	50k6	100	14	53.5	40k6	80	12	43	28	130h6	125h6	400	185	8±1.5	445	174	305	70	2.5	72.5	436	394h7	472	28	18	215
11	42 000	60m6	110	18	64	50k6	100	14	53.5	32	140h6	135h6	436	210	8±1.5	501	204	350	82.5	2.5	85.0	485	425h7	525	20	22	310
12	60 000	60m6	110	18	64	50k6	100	14	53.5	34	160h6	155h6	510	210	9±1.5	515	224	350	90	2.5	92.5	555	495h7	605	20	26	470
13	83 000	75m6	135	20	79.5	60m6	110	18	64	39	180g6	175g6	554	250	11±1.5	619	241	415	95	2.5	97.5	595	535h7	645	24	26	595
14	117 000	75m6	135	20	79.5	60m6	110	18	64	42	210g6	205g6	629	250	9	642	278	415	105	2.5	107.5	665	610h7	720	32	26	890
16	160 000	85m6	165	22	90	70m6	140	20	74.5	44	230g6	225g6	680	295	10	705	285	490	110	2.5	112.5	715	660h7	770	36	26	1137
17	202 000	85m6	165	22	90	70m6	140	20	74.5	50	250g6	245g6	775	295	10	731	294	490	120	2.5	122.5	830	750h7	895	24	33	1660
18	244 000	95m6	165	25	100	75m6	140	20	79.5	50	260g6	255g6	815	350	10	882	303	605	120	2.5	122.5	865	785h7	930	32	33	2100
19	295 000	95m6	165	25	100	75m6	140	20	79.5	56	280g6	275g6	870	350	12	905.5	327.5	605	135	2.5	137.5	915	840h7	980	36	33	2200
20	354 000	95m6	165	25	100	75m6	140	20	79.5	56	300g6	295g6	870	350	12	905.5	327.5	605	135	2.5	137.5	915	840h7	980	36	33	2300
21	392 000	115m6	205	32	122	90m6	170	25	95	62	310g6	305g6	960	400	24	996	354	700	152	2.5	154.5	1025	935h7	1115	32	39	2930
22	450 000	115m6	205	32	122	90m6	170	25	95	62	330g6	325g6	960	400	24	996	354	700	152	2.5	154.5	1025	935h7	1115	32	39	3100
23	513 000	115m6	205	32	122	90m6	170	25	95	68	350g6	345g6	1056	400	28	1055	380	700	164	2.5	166.5	1120	1025h7	1210	36	39	3800
24	592 000	115m6	205	32	122	90m6	170	25	95	68	360g6	355g6	1056	400	28	1055	380	700	164	2.5	166.5	1120	1025h7	1210	36	39	4300
25	684 000	140m6	245	36	148	110m6	210	28	116	74	380g6	375g6	1150	475	29	1138	407	835	180	2.5	182.5	1220	1115h7	1320	36	45	5250
26	763 000	140m6	245	36	148	110m6	210	28	116	74	400g6	395g6	1150	475	29	1138	407	835	180	2.5	182.5	1220	1115h7	1320	36	45	5660
27	852 000	140m6	245	36	148	110m6	210	28	116	81	430g6	425g6	1248	475	31	1272	453	835	191	2.5	193.5	1345	1215h7	1460	32	52	6680
28	950 000	140m6	245	36	148	110m6	210	28	116	81	450g6	445g6	1248	475	31	1272	453	835	191	2.5	193.5	1345	1215h7	1460	32	52	7180
29	1060 000	150m6	245	40	169	115m6	210	32	122	87	460g6	450g6	1355	530	34	1367	483	945	197.5	5	202.5	1450	1320h7	1565	36	52	8500
30	1200 000	150m6	245	40	169	115m6	210	32	122	87	480g6	470g6	1355	530	34	1367	483	945	197.5	5	202.5	1450	1320h7	1565	36	52	9070
31 – 36	On request																										

Note:*Weight without shrink disk and oil.

P2SA.. i_N = 45 ... 125



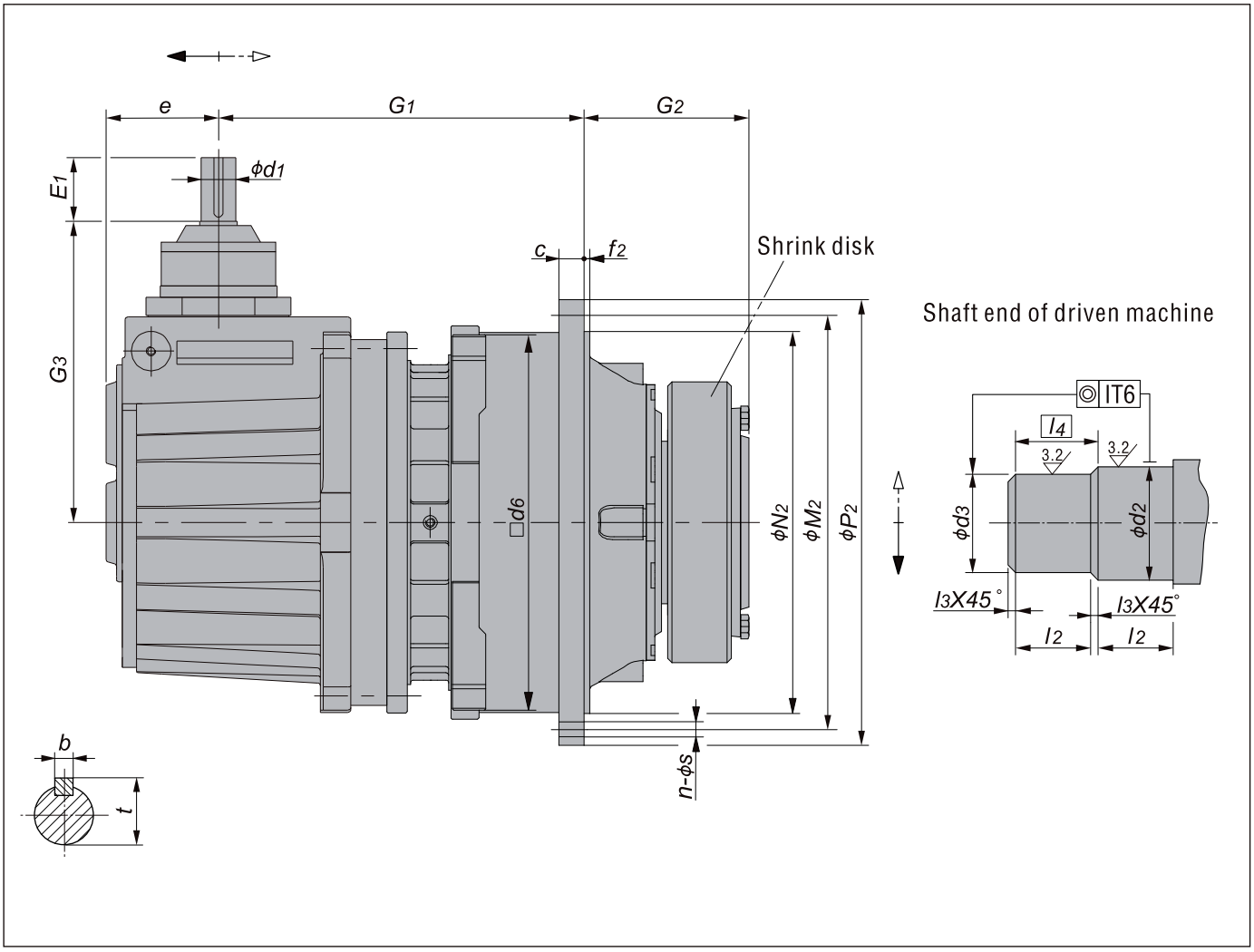
P2SA.. Size	Nominal output touque T_{2N} (N · m)	Input shaft				c	d2	d3	d6	f2	G1	G2	h1	l2	l3	l4	M2	N2	P2	Flange bolts		Weight (Kg)*
		d1	E1	b	t															n	s	
09	22 000	38k6	60	10	41	24	120h6	115h6	356	6±1.5	469	165	90	65	2.5	67.5	388	350h7	428	24	18	160
10	31 000	38k6	60	10	41	28	130h6	125h6	400	8±1.5	489	174	90	70	2.5	72.5	436	394h7	472	28	18	220
11	42 000	55m6	90	16	59	32	140h6	135h6	436	8±1.5	579	204	115	82.5	2.5	85.0	485	425h7	525	20	22	310
12	60 000	55m6	90	16	59	34	160h6	155h6	510	9±1.5	593	224	115	90	2.5	92.5	555	495h7	605	20	26	470
13	83 000	70m6	120	20	74.5	39	180g6	175g6	554	11±1.5	714	241	140	95	2.5	97.5	595	535h7	645	24	26	600
14	117 000	70m6	120	20	74.5	42	210g6	205g6	629	9	737	278	140	105	2.5	107.5	665	610h7	720	32	26	900
16	160 000	80m6	140	22	85	44	230g6	225g6	680	10	851	285	170	110	2.5	112.5	715	660h7	770	36	26	1150
17	202 000	80m6	140	22	85	50	250g6	245g6	775	10	877	294	170	120	2.5	122.5	830	750h7	895	24	33	1650
18	244 000	90m6	160	25	95	50	260g6	255g6	815	10	1006	303	200	120	2.5	122.5	865	785h7	930	32	33	1950
19	295 000	90m6	160	25	95	56	280g6	275g6	870	12	1029.5	327.5	200	135	2.5	137.5	915	840h7	980	36	33	2400
20	354 000	90m6	160	25	95	56	300g6	295g6	870	12	1029.5	327.5	200	135	2.5	137.5	915	840h7	980	36	33	2500
21	392 000	100m6	180	28	106	62	310g6	305g6	960	24	1076	354	230	152	2.5	154.5	1025	935h7	1115	32	39	2900
22	450 000	100m6	180	28	106	62	330g6	325g6	960	24	1076	354	230	152	2.5	154.5	1025	935h7	1115	32	39	3100
23	513 000	120m6	210	32	127	68	350g6	345g6	1056	28	1175	380	265	164	2.5	166.5	1120	1025h7	1210	36	39	3800
24	592 000	120m6	210	32	127	68	360g6	355g6	1056	28	1175	380	265	164	2.5	166.5	1120	1025h7	1210	36	39	4100
25	684 000	130m6	210	32	137	74	380g6	375g6	1150	29	1291	407	300	180	2.5	182.5	1220	1115h7	1320	36	45	4950
26	763 000	130m6	210	32	137	74	400g6	395g6	1150	29	1291	407	300	180	2.5	182.5	1220	1115h7	1320	36	45	5350
27	852 000	140m6	240	36	148	81	430g6	425g6	1248	31	1429	453	320	191	2.5	193.5	1345	1215h7	1460	32	52	6800
28	950 000	140m6	240	36	148	81	450g6	445g6	1248	31	1429	453	320	191	2.5	193.5	1345	1215h7	1460	32	52	7200
29	1 060 000	150m6	240	36	158	87	460g6	450g6	1355	34	1507	483	360	197.5	5	202.5	1450	1320h7	1565	36	52	8500
30	1 200 000	150m6	240	36	158	87	480g6	470g6	1355	34	1507	483	360	197.5	5	202.5	1450	1320h7	1565	36	52	9000
31	1 330 000	160m6	270	40	169	94	480g6	470g6	1443	36	1662	538	400	232	5	237.0	1545	1400h7	1665	32	62	10500
32	1 500 000	160m6	270	40	169	94	510g6	500g6	1443	36	1662	538	400	232	5	237.0	1545	1400h7	1665	32	62	11200
33	1 680 000	170m6	270	40	179	100	530g6	520g6	1536	36	1743	573	400	242	5	247.0	1635	1495h7	1755	36	62	12700
34	1 920 000	170m6	270	40	179	100	570g6	560g6	1536	36	1743	573	400	242	5	247.0	1635	1495h7	1755	36	62	13500
35	2 240 000	180m6	310	45	190	112	600g6	590g6	1720	40	1960	656	442	272	5	277.0	1825	1685h7	1945	40	62	17800
36	2 600 000	180m6	310	45	190	112	640g6	630g6	1720	40	1960	656	442	272	5	277.0	1825	1685h7	1945	40	62	18900

Note:*Weight without shrink disk and oil.

P

P2KA..

i_N = 112 ... 500

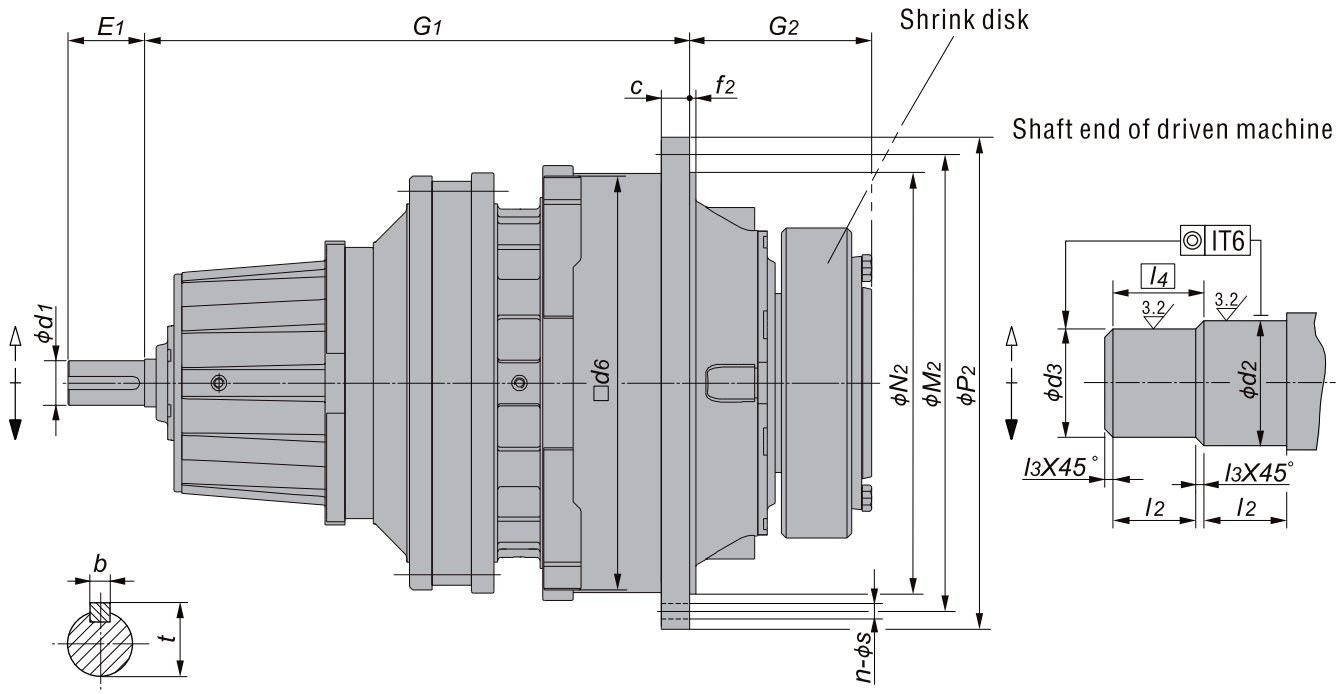


P2KA.. Size	Nominal output touque T_{2N} (N · m)	Input shaft								c	d2	d3	d6	e	f2	G1	G2	G3	l2	l3	l4	M2	N2	P2	Flange bolts		Weight (Kg)*
		$i_N \leq 360$				$i_N \geq 400$																			n	s	
		d1	E1	b	t	d1	E1	b	t																		
09	22 000	35k6	70	10	38	30k6	60	8	33	24	120h6	115h6	356	119	6±1.5	339	165	320	65	2.5	67.5	388	350h7	428	24	18	165
10	31 000	35k6	70	10	38	30k6	60	8	33	28	130h6	125h6	400	119	8±1.5	359	174	320	70	2.5	72.5	436	394h7	472	28	18	227
11	42 000	45k6	80	14	48.5	35k6	60	10	38	32	140h6	135h6	436	137	8±1.5	419	204	375	82.5	2.5	85	485	425h7	525	20	22	320
12	60 000	45k6	80	14	48.5	35k6	60	10	38	34	160h6	155h6	510	137	9±1.5	433	224	375	90	2.5	92.5	555	495h7	605	20	26	484
13	83 000	50k6	100	14	53.5	40k6	80	12	43	39	180g6	175g6	554	172	11±1.5	518.5	241	445	95	2.5	97.5	595	535h7	645	24	26	618
14	117 000	50k6	100	14	53.5	40k6	80	12	43	42	210g6	205g6	629	172	9	541.5	278	445	105	2.5	107.5	665	610h7	720	32	26	927
16	160 000	60m6	110	18	64	50k6	100	14	53.5	44	230g6	225g6	680	194	10	632	285	520	110	2.5	112.5	715	660h7	770	36	26	1184
17	202 000	60m6	110	18	64	50k6	100	14	53.5	50	250g6	245g6	775	194	10	658	294	520	120	2.5	122.5	830	750h7	895	24	33	1700
18	244 000	75m6	135	20	79.5	60m6	110	18	64	50	260g6	255g6	815	240	10	741.5	303	615	120	2.5	122.5	865	785h7	930	32	33	2010
19	295 000	75m6	135	20	79.5	60m6	110	18	64	56	280g6	275g6	870	240	12	764.5	327.5	615	135	2.5	137.5	915	840h7	980	36	33	2470
20	354 000	75m6	135	20	79.5	60m6	110	18	64	56	300g6	295g6	870	240	12	764.5	327.5	615	135	2.5	137.5	915	840h7	980	36	33	2550
21 – 26	On request																										

Note:*Weight without shrink disk and oil.

P3NA..

i_N = 140 ... 280



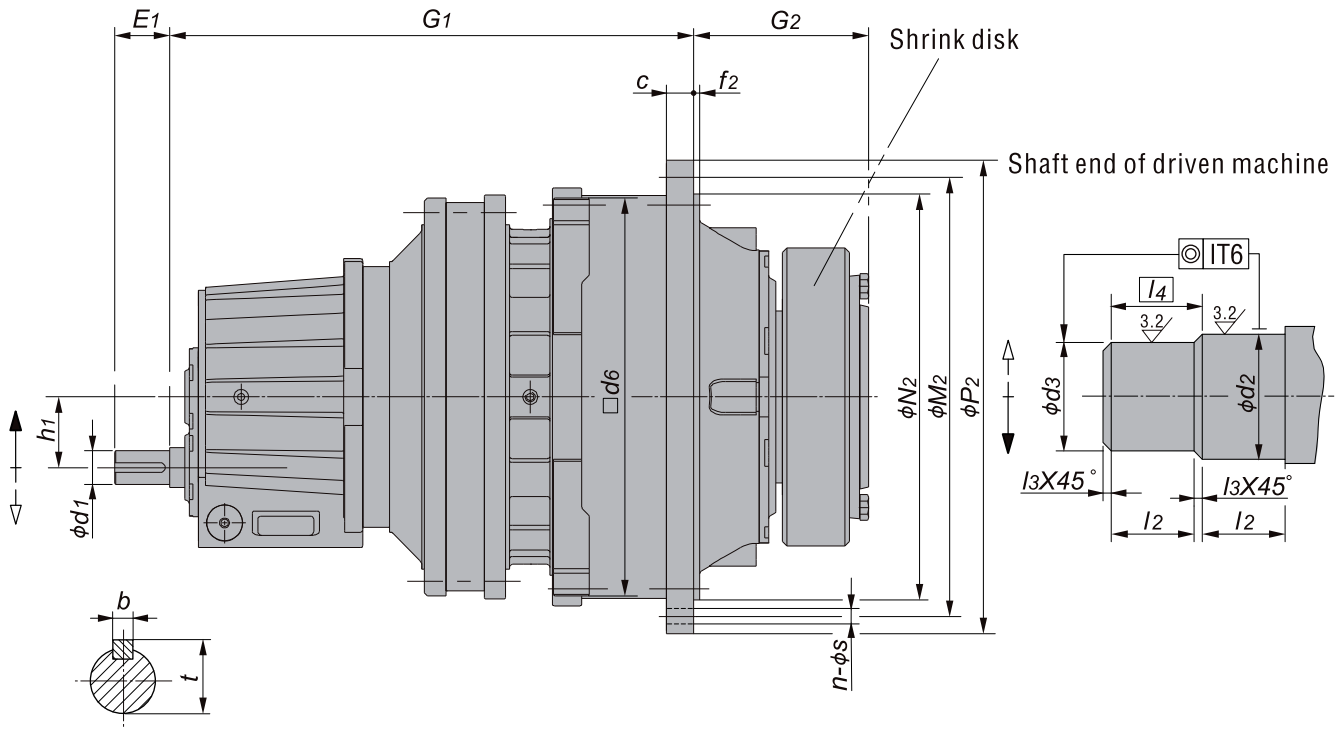
P3NA.. Size	Nominal output touque T_{2N} (N · m)	Input shaft				c	d2	d3	d6	f2	G1	G2	l2	l3	l4	M2	N2	P2	Flange bolts		Weight (Kg)*
		d1	E1	b	t														n	s	
09	22 000	55m6	90	16	59	24	120h6	115h6	356	$6^{\pm1.5}$	565	165	65	2.5	67.5	388	350h7	428	24	18	152
10	31 000	55m6	90	16	59	28	130h6	125h6	400	$6^{\pm1.5}$	585	174	70	2.5	72.5	436	394h7	472	28	18	205
11	42 000	55m6	90	16	59	32	140h6	135h6	436	$8^{\pm1.5}$	616	204	82.5	2.5	85.0	485	425h7	525	20	22	295
12	60 000	55m6	90	16	59	34	160h6	155h6	510	$9^{\pm1.5}$	630	224	90	2.5	92.5	555	495h7	605	20	26	447
13	83 000	55m6	90	16	59	39	180g6	175g6	554	$11^{\pm1.5}$	688	241	95	2.5	97.5	595	535h7	645	24	26	567
14	117 000	55m6	90	16	59	42	210g6	205g6	629	9	711	278	105	2.5	107.5	665	610h7	720	32	26	850
16	160 000	70m6	120	20	74.5	44	230g6	225g6	680	10	853	285	110	2.5	112.5	715	660h7	770	36	26	1085
17	202 000	70m6	120	20	74.5	50	250g6	245g6	775	10	879	294	120	2.5	122.5	830	750h7	895	24	33	1580
18	244 000	80m6	140	22	85	50	260g6	255g6	815	10	1013.5	303	120	2.5	122.5	865	785h7	930	32	33	2000
19	295 000	80m6	140	22	85	56	280g6	275g6	870	12	1036.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2100
20	354 000	80m6	140	22	85	56	300g6	295g6	870	12	1036.5	327.5	135	2.5	137.5	915	840h7	980	36	33	2200
21	392 000	80m6	140	22	85	62	310g6	305g6	960	24	1093	354	152	2.5	154.5	1025	935h7	1115	32	39	2785
22	450 000	80m6	140	22	85	62	330g6	325g6	960	24	1093	354	152	2.5	154.5	1025	935h7	1115	32	39	2950
23	513 000	95m6	160	25	100	68	350g6	345g6	1056	28	1222	380	164	2.5	166.5	1120	1025h7	1210	36	39	3625
24	592 000	95m6	160	25	100	68	360g6	355g6	1056	28	1222	380	164	2.5	166.5	1120	1025h7	1210	36	39	4100
25	684 000	95m6	160	25	100	74	380g6	375g6	1150	29	1284.5	407	180	2.5	182.5	1220	1115h7	1320	36	45	5000
26	763 000	95m6	160	25	100	74	400g6	395g6	1150	29	1284.5	407	180	2.5	182.5	1220	1115h7	1320	36	45	5400
27	852 000	110m6	180	28	116	81	430g6	425g6	1248	31	1470	453	191	2.5	193.5	1345	1215h7	1460	32	52	6400
28	950 000	110m6	180	28	116	81	450g6	445g6	1248	31	1470	453	191	2.5	193.5	1345	1215h7	1460	32	52	6875
29	1 060 000	110m6	180	28	116	87	460g6	450g6	1355	34	1517	483	197.5	5	202.5	1450	1320h7	1565	36	52	8190
30	1 200 000	110m6	180	28	116	87	480g6	470g6	1355	34	1517	483	197.5	5	202.5	1450	1320h7	1565	36	52	8715
31	1 330 000	120m6	210	32	127	94	480g6	470g6	1433	36	1585	540	232	5	237.0	1545	1400h7	1665	32	62	10700
32	1 500 000	120m6	210	32	127	94	510g6	500g6	1443	36	1585	540	232	5	237.0	1545	1400h7	1665	32	62	11200
33	1 680 000	130m6	210	32	137	100	530g6	520g6	1536	36	1710	573	242	5	247.0	1635	1495h7	1755	36	62	12950
34	1 920 000	130m6	210	32	137	100	570g6	560g6	1536	36	1710	573	242	5	247.0	1635	1495h7	1755	36	62	13800
35–36	On request																				

Note:*Weight without shrink disk and oil.

P

P3SA..

i_N = 280 ... 900

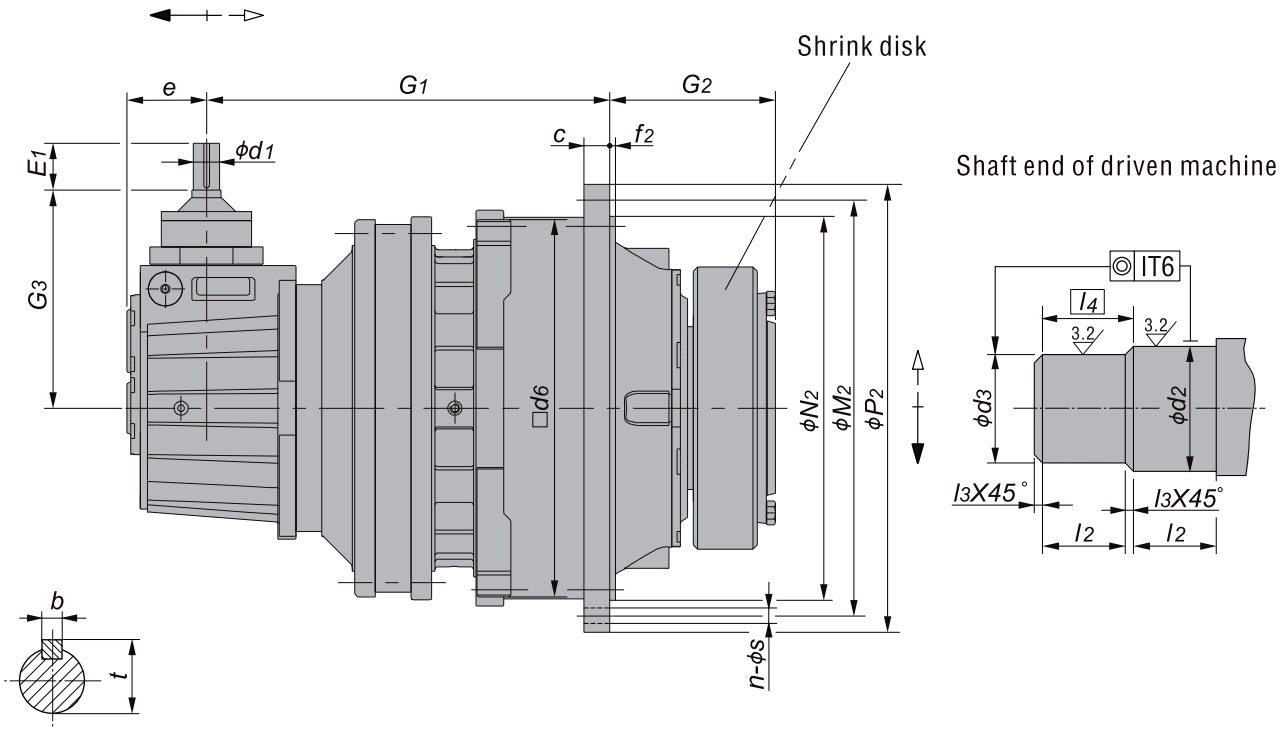


P3SA.. Size	Nominal output touque T2N (N · m)	Input shaft				c	d2	d3	d6	f2	G1	G2	h1	l2	l3	l4	M2	N2	P2	Flange bolts		Weight (Kg)*
		d1	E1	b	t															n	s	
09	22 000	38k6	60	10	41	24	120h6	115h6	356	$6^{\pm1.5}$	565	165	90	65	2.5	67.5	388	350h7	428	24	18	170
10	31 000	38k6	60	10	41	28	130h6	125h6	400	$8^{\pm1.5}$	585	174	90	70	2.5	72.5	436	394h7	472	28	18	230
11	42 000	38k6	60	10	41	32	140h6	135h6	436	$8^{\pm1.5}$	616	204	90	82.5	2.5	85.0	485	425h7	525	20	22	310
12	60 000	38k6	60	10	41	34	160h6	155h6	510	$9^{\pm1.5}$	630	224	90	90	2.5	92.5	555	495h7	605	20	26	460
13	83 000	38k6	60	10	41	39	180g6	175g6	554	$11^{\pm1.5}$	688	241	90	95	2.5	97.5	595	535h7	645	24	26	584
14	117 000	38k6	60	10	41	42	210g6	205g6	629	9	711	278	90	105	2.5	107.5	665	610h7	720	32	26	875
16	160 000	55m6	90	16	59	44	230g6	225g6	680	10	853	285	115	110	2.5	112.5	715	660h7	770	36	26	1115
17	202 000	55m6	90	16	59	50	250g6	245g6	775	10	879	294	115	120	2.5	122.5	830	750h7	895	24	33	1625
18	244 000	70m6	120	20	74.5	50	260g6	255g6	815	10	1013.5	303	140	120	2.5	122.5	865	785h7	930	32	33	2060
19	295 000	70m6	120	20	74.5	56	280g6	275g6	870	12	1036.5	327.5	140	135	2.5	137.5	915	840h7	980	36	33	2160
20	354 000	70m6	120	20	74.5	56	300g6	295g6	870	12	1036.5	327.5	140	135	2.5	137.5	915	840h7	980	36	33	2260
21	392 000	70m6	120	20	74.5	62	310g6	305g6	960	24	1093	354	140	152	2.5	154.5	1025	935h7	1115	32	39	2870
22	450 000	70m6	120	20	74.5	62	330g6	325g6	960	24	1093	354	140	152	2.5	154.5	1025	935h7	1115	32	39	3040
23	513 000	80m6	140	22	85	68	350g6	345g6	1056	28	1222	380	170	164	2.5	166.5	1120	1025h7	1210	36	39	3730
24	592 000	80m6	140	22	85	68	360g6	355g6	1056	28	1222	380	170	164	2.5	166.5	1120	1025h7	1210	36	39	4220
25	684 000	80m6	140	22	85	74	380g6	375g6	1150	29	1284	407	170	180	2.5	182.5	1220	1115h7	1320	36	45	5150
26	763 000	80m6	140	22	85	74	400g6	395g6	1150	29	1284	407	170	180	2.5	182.5	1220	1115h7	1320	36	45	5560
27	852 000	90m6	160	25	95	81	430g6	425g6	1248	31	1470	453	200	191	2.5	193.5	1345	1215h7	1460	32	52	6580
28	950 000	90m6	160	25	95	81	450g6	445g6	1248	31	1470	453	200	191	2.5	193.5	1345	1215h7	1460	32	52	7080
29	1 060 000	90m6	160	25	95	87	460g6	450g6	1355	34	1517	483	200	197.5	5	202.5	1450	1320h7	1565	36	52	8400
30	1 200 000	90m6	160	25	95	87	480g6	470g6	1355	34	1517	483	200	197.5	5	202.5	1450	1320h7	1565	36	52	8970
31	1 330 000	100m6	180	28	106	94	480g6	470g6	1443	36	1617	538	230	232	5	237.0	1545	1400h7	1665	32	62	11000
32	1 500 000	100m6	180	28	106	94	510g6	500g6	1443	36	1617	538	230	232	5	237.0	1545	1400h7	1665	32	62	11500
33	1 680 000	120m6	210	32	127	100	530g6	520g6	1536	36	1735	573	265	242	5	247.0	1635	1495h7	1755	36	62	13300
34	1 920 000	120m6	210	32	127	100	570g6	560g6	1536	36	1735	573	265	242	5	247.0	1635	1495h7	1755	36	62	14200
35–36	On request																					

Note:*Weight without shrink disk and oil.

P3KA..

i_N = 560 ... 4000



P3KA.. Size	Nominal output touque T_{2N} (N · m)	Input shaft $i_N \leqslant 2000$ d1	E1	b	t	Input shaft $i_N \geqslant 2240$ d1	E1	b	t	c	d2	d3	d6	e	f2	G1	G2	G3	l2	l3	l4	M2	N2	P2	Flange bolts n	s	Weight (Kg)*
09	22 000	35k6	70	10	38	30k6	60	8	33	24	120h6	115h6	356	119	6±1.5	435	165	320	65	2.5	67.5	388	350h7	428	24	18	180
10	31 000	35k6	70	10	38	30k6	60	8	33	28	130h6	125h6	400	119	8±1.5	455	174	320	70	2.5	72.5	436	394h7	472	28	18	240
11	42 000	35k6	70	10	38	30k6	60	8	33	32	140h6	135h6	436	119	8±1.5	486	204	320	82.5	2.5	85	485	425h7	525	20	22	315
12	60 000	35k6	70	10	38	30k6	60	8	33	34	160h6	155h6	510	119	9±1.5	500	224	320	90	2.5	92.5	555	495h7	605	20	26	470
13	83 000	35k6	70	10	38	30k6	60	8	33	39	180g6	175g6	554	119	11±1.5	558	241	320	95	2.5	97.5	595	535h7	645	24	26	595
14	117 000	35k6	70	10	38	30k6	60	8	33	42	210g6	205g6	629	119	9	581	278	320	105	2.5	107.5	665	610h7	720	32	26	890
16	160 000	45k6	80	14	48.5	35k6	60	10	38	44	230g6	225g6	680	137	10	693	285	375	110	2.5	112.5	715	660h7	770	36	26	1137
17	202 000	45k6	80	14	48.5	35k6	60	10	38	50	250g6	245g6	775	137	10	719	294	375	120	2.5	122.5	830	750h7	895	24	33	1660
18	244 000	50k6	100	14	53.5	40k6	80	12	43	50	260g6	255g6	815	172	10	818	303	445	120	2.5	122.5	865	785h7	930	32	33	2100
19	295 000	50k6	100	14	53.5	40k6	80	12	43	56	280g6	275g6	870	172	12	841	327.5	445	135	2.5	137.5	915	840h7	980	36	33	2200
20	354 000	50k6	100	14	53.5	40k6	80	12	43	56	300g6	295g6	870	172	12	841	327.5	445	135	2.5	137.5	915	840h7	980	36	33	2300
21	392 000	50k6	100	14	53.5	40k6	80	12	43	62	310g6	305g6	960	172	24	897.5	354	445	152	2.5	154.5	1025	935h7	1115	32	39	2930
22	450 000	50k6	100	14	53.5	40k6	80	12	43	62	330g6	325g6	960	172	24	897.5	354	445	152	2.5	154.5	1025	935h7	1115	32	39	3100
23	513 000	60m6	110	18	64	50k6	100	14	53.5	68	350g6	345g6	1056	194	28	1003	380	520	164	2.5	166.5	1120	1025h7	1210	36	39	3800
24	592 000	60m6	110	18	64	50k6	100	14	53.5	68	360g6	355g6	1056	194	28	1003	380	520	164	2.5	166.5	1120	1025h7	1210	36	39	4300
25	684 000	60m6	110	18	64	50k6	100	14	53.5	74	380g6	375g6	1150	194	29	1065	407	520	180	2.5	182.5	1220	1115h7	1320	36	45	5250
26	763 000	60m6	110	18	64	50k6	100	14	53.5	74	400g6	395g6	1150	194	29	1065	407	520	180	2.5	182.5	1220	1115h7	1320	36	45	5660
27	852 000	75m6	135	20	79.5	60m6	110	18	64	81	430g6	425g6	1248	240	31	1205.5	453	615	191	2.5	193.5	1345	1215h7	1460	32	52	6680
28	950 000	75m6	135	20	79.5	60m6	110	18	64	81	450g6	445g6	1248	240	31	1205.5	453	615	191	2.5	193.5	1345	1215h7	1460	32	52	7180
29	1 060 000	75m6	135	20	79.5	60m6	110	18	64	87	460g6	450g6	1355	240	34	1252.5	483	615	197.5	5	202.5	1450	1320h7	1565	36	52	8500
30	1 200 000	75m6	135	20	79.5	60m6	110	18	64	87	480g6	470g6	1355	240	34	1252.5	483	615	197.5	5	202.5	1450	1320h7	1565	36	52	9070

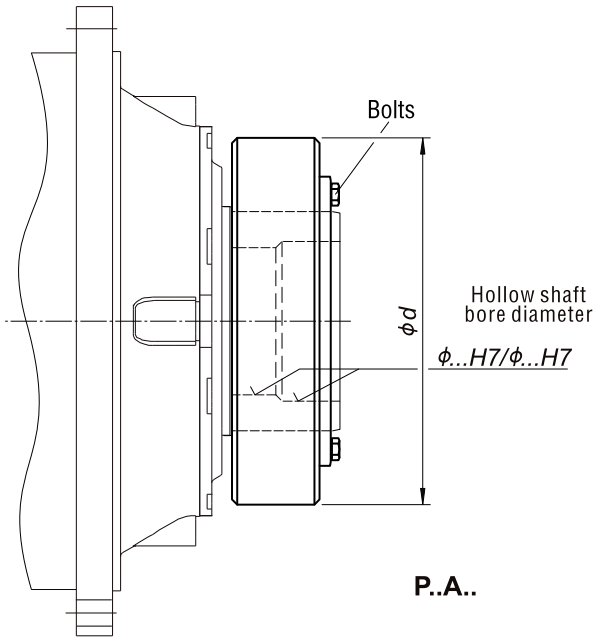
Note:*Weight without shrink disk and oil.

P

8.2 Dimensions of output shafts:

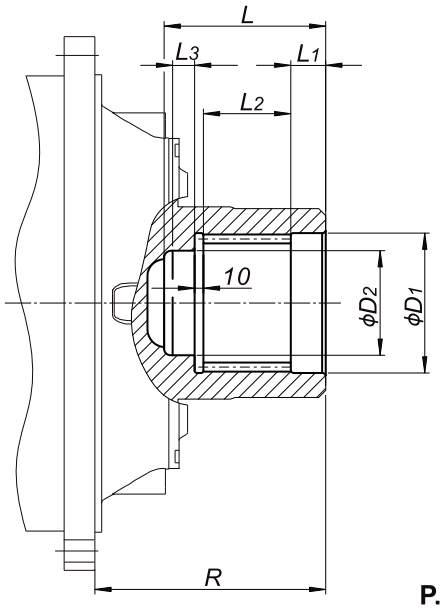
8.2.1 Hollow shaft:

Hollow shaft with shrink disk



P..A..

Hollow shaft with involute spline



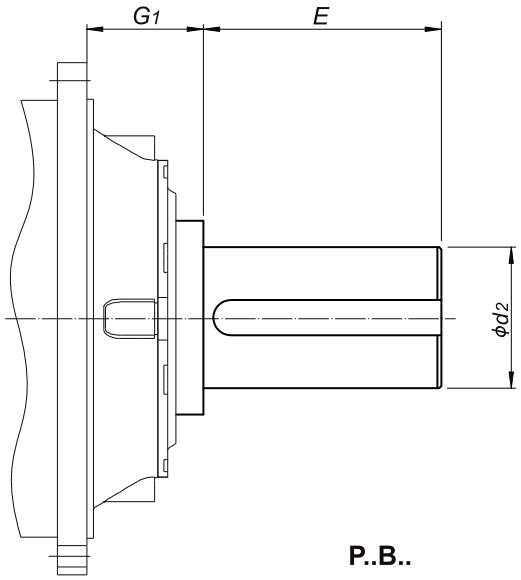
P..C..

Hollow shaft with involute splines acc. to DIN 5480.

Size	Nominal output touque T_{2N} (N · m)	Shrink disk				Hollow shaft with involute spline							
		Size	d	Bolts	Weight (kg)	Internal spline	D_1	D_2	L	L_1	L_2	L_3	R
09	22 000	SP2-155	263	M 12	15.2	N120 x 5 x 30 x 22 x 9H	122H7	107H7	150	40	70	20	165
10	31 000	SP2-165	290	M 16	21.5	N130 x 5 x 30 x 24 x 9H	132H7	117H7	160	40	80	20	174
11	42 000	SP2-185	320	M 16	32.7	N140 x 5 x 30 x 26 x 9H	142H7	125H7	180	45	90	25	204
12	60 000	SP2-220	370	M 16	53	N160 x 5 x 30 x 30 x 9H	162H7	145H7	190	45	100	25	223
13	83 000	SP2-240	405	M 20	66	N180 x 5 x 30 x 34 x 9H	182H7	165H7	200	45	110	25	237
14	117 000	SP2-280	460	M 20	103	N210 x 5 x 30 x 40 x 9H	212H7	195H7	215	45	125	25	264
16	160 000	SP2-300	485	M 20	120	N240 x 8 x 30 x 28 x 9H	242H7	220H7	235	50	140	25	285
17	202 000	SP2-320	520	M 20	138	N250 x 8 x 30 x 30 x 9H	252H7	230H7	250	50	150	30	290
18	244 000	SP2-340	570	M 20	189	N260 x 8 x 30 x 31 x 9H	262H7	240H7	260	50	160	30	303
19	295 000	SP2-360	590	M 20	207	N280 x 8 x 30 x 34 x 9H	282H7	260H7	270	50	170	30	327.5
20	354 000	SP2-380	640	M 24	244	N300 x 8 x 30 x 36 x 9H	302H7	280H7	280	50	180	30	327.5
21	392 000	SP2-390	650	M 24	249	N310 x 8 x 30 x 37 x 9H	312H7	290H7	310	60	190	40	354
22	450 000	SP2-420	670	M 24	285	N330 x 8 x 30 x 40 x 9H	332H7	310H7	320	60	200	40	354
23	513 000	SP2-440	720	M 24	357	N340 x 8 x 30 x 41 x 9H	342H7	320H7	320	60	200	40	348
24	592 000	SP2-460	770	M 24	419	N360 x 8 x 30 x 44 x 9H	362H7	340H7	340	60	220	40	368
25	684 000	SP2-480	800	M 24	492	N380 x 8 x 30 x 46 x 9H	382H7	360H7	350	60	230	40	372
26	763 000	SP2-500	850	M 27	567	N400 x 8 x 30 x 48 x 9H	402H7	380H7	360	60	240	40	382
27	852 000	SP2-530	910	M 27	744	N440 x 8 x 30 x 54 x 9H	442H7	420H7	370	60	250	40	423
28	950 000	SP2-560	940	M 27	776	N450 x 8 x 30 x 55 x 9H	452H7	430H7	385	65	260	40	428
29	1 060 000	SP2-560	940	M 27	736	N460 x 8 x 30 x 56 x 9H	462H7	440H7	400	65	270	45	433
30	1 200 000	SP2-590	960	M 27	845	N480 x 8 x 30 x 58 x 9H	482H7	460H7	415	65	285	45	448
31	1 330 000	SP2-590	960	M 27	835								
32	1 500 000	SP2-620	1020	M 30	1064								
33	1 680 000	SP2-660	1070	M 33	1178								
34	1 920 000	SP2-700	1140	M 33	1345								
35	2 240 000	SP2-750	1150	M 33	1346								
36	2 600 000	SP2-800	1230	M 33	1646								

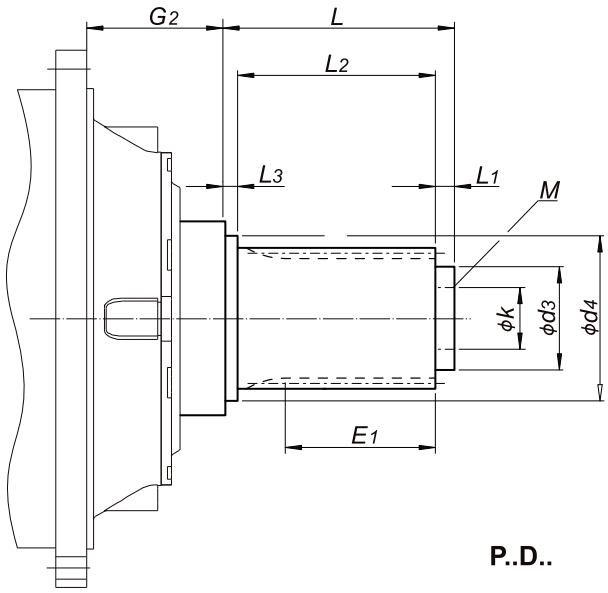
8.2.2 Solid shaft:

Solid shaft with parallel keys



P..B..

Solid shaft with involute splines



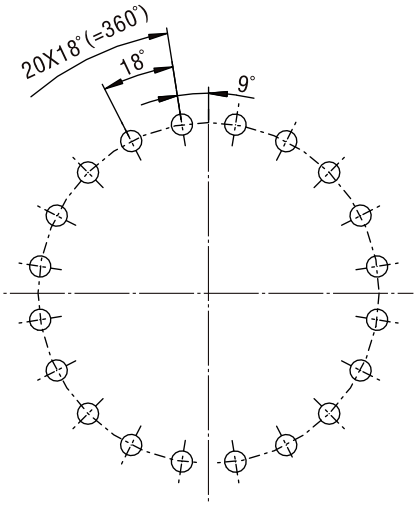
P..D..

Hollow shaft with involute splines acc. to DIN 5480.

Size	Nominal output touque	Solid shaft with parallel key			Solid shaft with involute splines										
	T_{2N} (N · m)	d_2	E	G_1	External splines	d_3	d_4	E_1	G_2	k	L	L_1	L_2	L_3	M
09	22 000	120n6	210	95	W130 x 5 x 30 x 24 x 8m	110k6	132k6	70	95	80	120	20	80	20	3 x M16 x 24
10	31 000	130n6	210	95	W140 x 5 x 30 x 26 x 8m	120k6	142k6	80	95	90	130	20	90	20	3 x M16 x 24
11	42 000	150n6	240	109	W160 x 5 x 30 x 30 x 8m	140k6	162k6	90	109	110	150	25	100	25	3 x M16 x 24
12	60 000	160n6	270	106	W180 x 5 x 30 x 34 x 8m	90k6	182k6	100	106	130	160	25	110	25	3 x M16 x 24
13	83 000	180n6	310	118	W200 x 5 x 30 x 38 x 8m	100k6	202k6	110	118	140	175	30	120	25	3 x M16 x 24
14	117 000	210n6	350	139	W220 x 5 x 30 x 42 x 8m	120k6	222k6	125	139	160	195	30	135	30	3 x M16 x 24
16	160 000	230n6	350	142	W250 x 8 x 30 x 30 x 8m	140k6	252k6	140	142	185	220	35	155	30	3 x M20 x 30
17	202 000	250n6	400	139	W260 x 8 x 30 x 31 x 8m	155k6	262k6	150	139	200	240	40	165	35	3 x M20 x 30
18	244 000	260n6	400	134	W280 x 8 x 30 x 34 x 8m	170k6	282k6	160	134	215	250	40	175	35	3 x M20 x 30
19	295 000	280n6	450	148.5	W300 x 8 x 30 x 36 x 8m	180k6	302k6	170	148.5	225	260	40	185	35	3 x M20 x 30
20	354 000	300n6	500	148.5	W310 x 8 x 30 x 37 x 8m	190k6	312k6	180	148.5	235	270	40	195	35	6 x M20 x 30
21	392 000	310n6	500	158	W320 x 8 x 30 x 38 x 8m	200k6	322k6	190	158	250	280	40	205	35	6 x M20 x 30
22	450 000	330n6	500	158	W340 x 8 x 30 x 41 x 8m	210k6	342k6	200	158	265	290	40	215	35	6 x M20 x 30
23	513 000	350n6	550	175	W360 x 8 x 30 x 44 x 8m	230k6	362k6	200	175	275	290	40	215	35	6 x M20 x 30
24	592 000	360n6	590	175	W380 x 8 x 30 x 46 x 8m	245k6	382k6	220	175	290	310	40	235	35	6 x M20 x 30
25	684 000	380n6	590	182	W400 x 8 x 30 x 48 x 8m	260k6	402k6	230	182	310	320	40	245	35	6 x M24 x 36
26	763 000	400n6	650	182	W420 x 8 x 30 x 51 x 8m	280k6	422k6	240	182	330	330	40	255	35	6 x M24 x 36
27	852 000	430n6	690	196.5	W440 x 8 x 30 x 54 x 8m	310k6	442k6	250	196.5	370	340	40	265	35	6 x M24 x 36
28	950 000	450n6	750	196.5	W450 x 8 x 30 x 55 x 8m	330k6	452k6	260	196.5	380	360	45	275	40	6 x M24 x 36
29	1 060 000	460n6	750	209	W460 x 8 x 30 x 56 x 8m	340k6	462k6	270	209	390	370	45	285	40	6 x M24 x 36
30	1 200 000	480n6	790	209	W480 x 8 x 30 x 58 x 8m	360k6	482k6	285	209	410	385	45	300	40	6 x M24 x 36
31	1 330 000	500n6	790	232											
32	1 500 000	510n6	850	232											
33	1 690 000	530n6	900	251											
34	1 920 000	570n6	950	251											
35	2 240 000	600n6	1000	276											
36	2 600 000	640n6	1000	276											

P

8.3 Hole pattern on output flanges:



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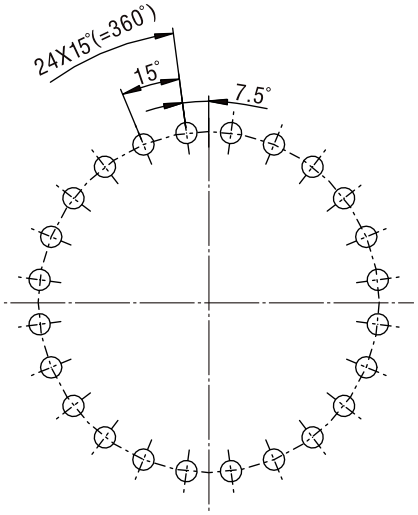

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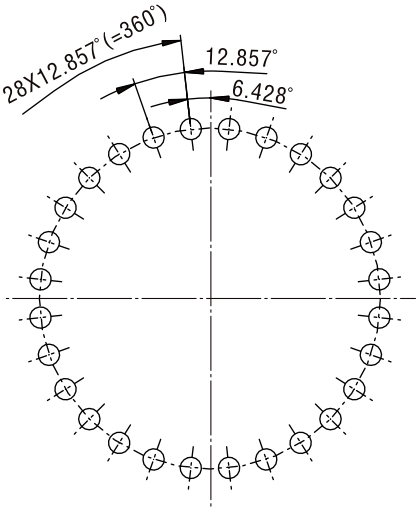

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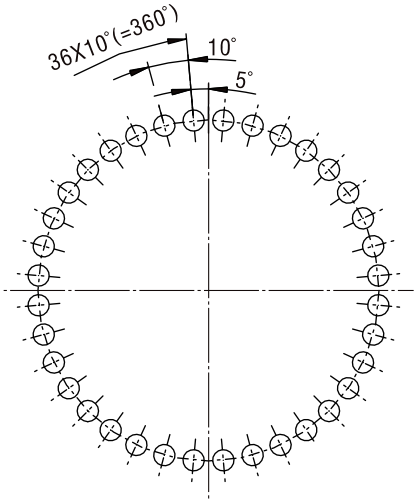
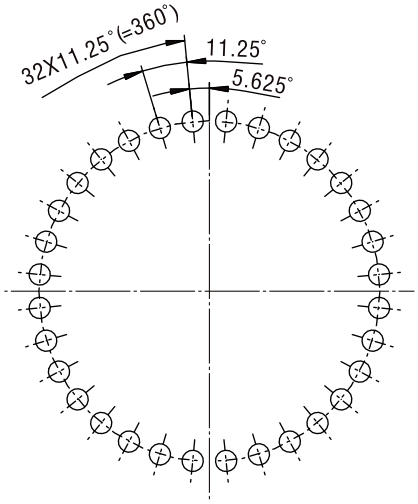
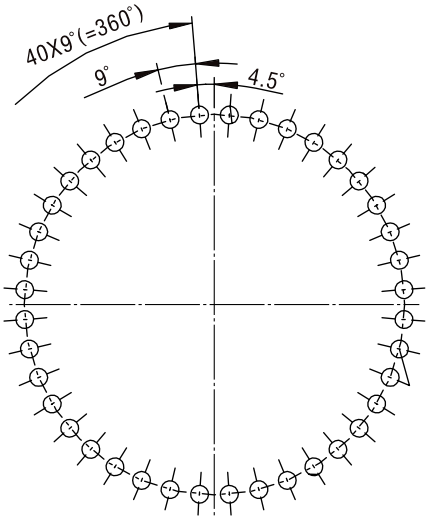


Size: 16, 19, 20, 23, 24, 25, 26, 29, 30, 33, 34



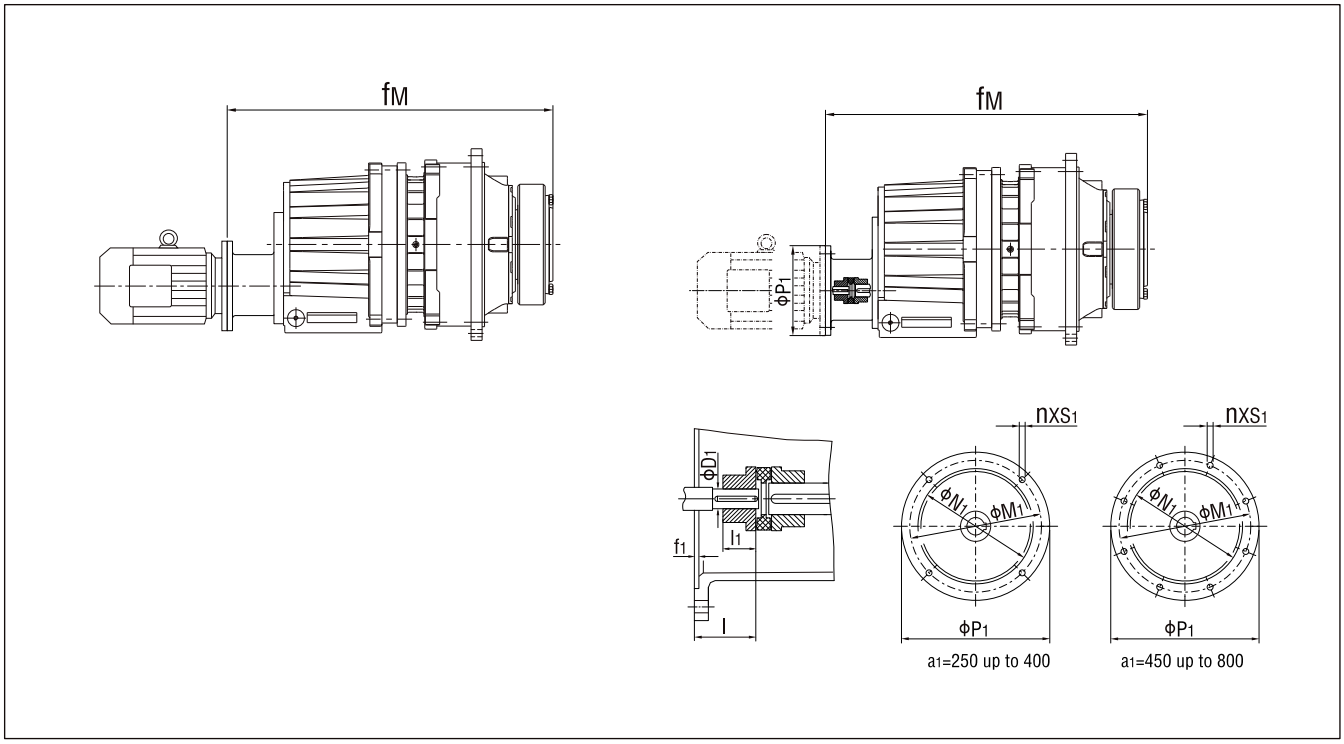
Size: 14, 18, 21, 22, 27, 28, 31, 32



Size: 35, 36

9 Flange input:

P2S..

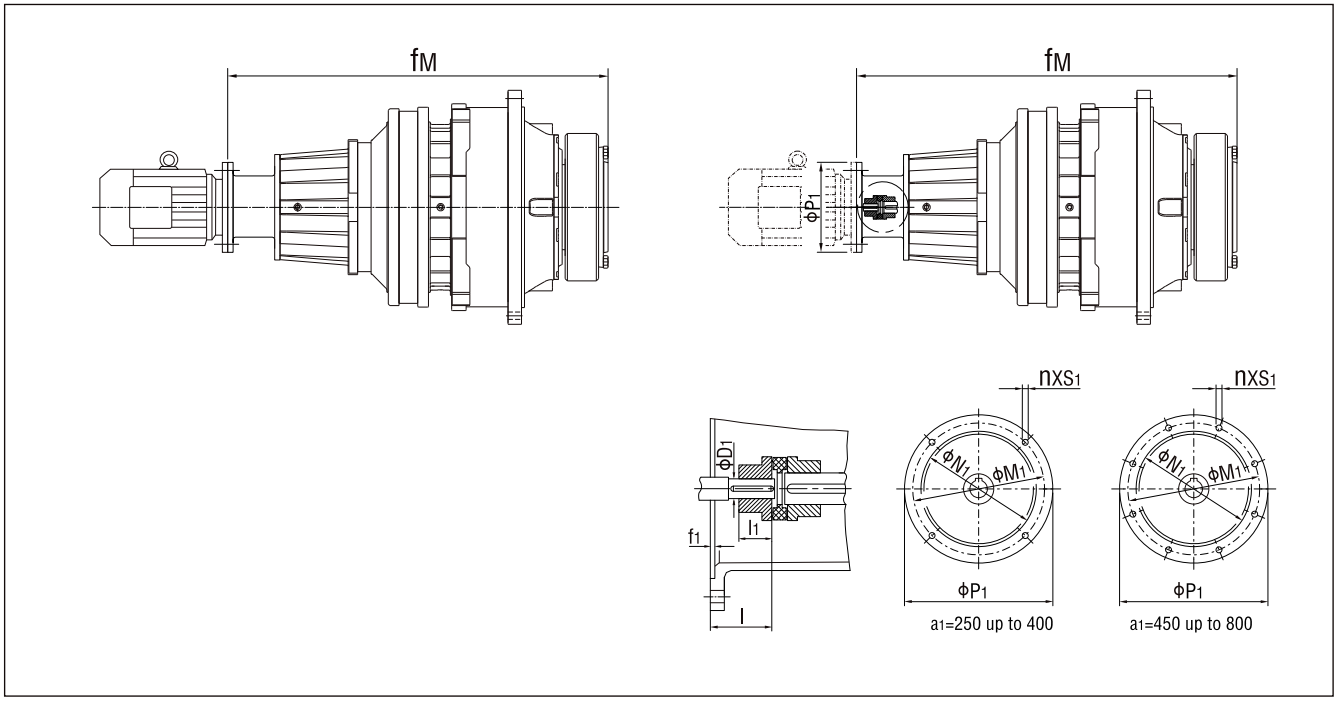


P2S..	Motor (Y)*	Flange (F)**	D1	f1	fM	l	l1	M1	n	N1	P1	s1
09	160		42	6	832	110	75	300	4	250h7	350	M16
	180		48	6	832	110	75	300	4	250h7	350	M16
10	160		42	6	861	110	75	300	4	250h7	350	M16
	180		48	6	861	110	75	300	4	250h7	350	M16
11	160		42	6	1010	110	75	300	4	250h7	350	M16
	180		48	6	1010	110	75	300	4	250h7	350	M16
	200		55	7	1010	110	75	350	4	300h7	400	M16
12	160		42	6	1044	110	75	300	4	250h7	350	M16
	180		48	6	1044	110	75	300	4	250h7	350	M16
	200		55	7	1044	110	75	350	4	300h7	400	M16
13	225		60	7	1247	140	90	400	8	350h7	450	M16
	250		65	8	1247	140	90	500	8	450h7	550	M16
14	225		60	7	1307	140	90	400	8	350h7	450	M16
	250		65	8	1307	140	90	500	8	450h7	550	M16
16	250		65	7	1452	140	100	500	8	450h7	550	M16
	280		75	8	1452	140	100	500	8	450h7	550	M16
17	250		65	7	1487	140	100	500	8	450h7	550	M16
	280		75	8	1487	140	100	500	8	450h7	550	M16
18	315		80	11	1680	140	110	600	8	550h7	660	M20
19–20	315		80	11	1728	140	110	600	8	550h7	660	M20

Note: (1) “*” the power of the coupled motor in selection must be sufficient for the transmission capacity requirements; “**” the flanges listed in the table are standard. Consult us if any deviation exists.

(2) For combinations with torque arm on one side, please consult us.

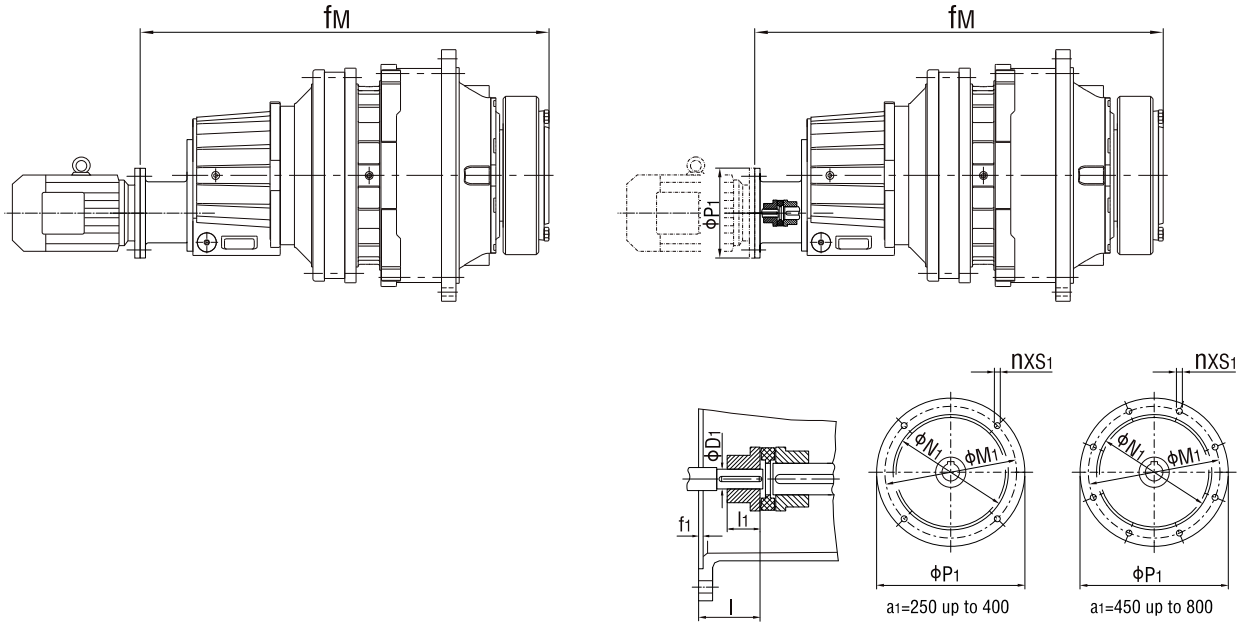
P3N..



P3N..	Motor (Y)*	Flange (F)**	D1	f1	fM	l	l1	M1	n	N1	P1	s1
09	132		38	5	912	80	56	265	4	230h7	300	M12
	160		42	6	960	110	80	300	4	250h7	350	M16
	180		48	6	960	110	80	300	4	250h7	350	M16
10	132		38	5	941	80	56	265	4	230h7	300	M12
	160		42	6	989	110	80	300	4	250h7	350	M16
	180		48	6	989	110	80	300	4	250h7	350	M16
11	132		38	5	1002	80	56	265	4	230h7	300	M12
	160		42	6	1050	110	80	300	4	250h7	350	M16
	180		48	6	1050	110	80	300	4	250h7	350	M16
12	132		38	5	1036	80	56	265	4	230h7	300	M12
	160		42	6	1084	110	80	300	4	250h7	350	M16
	180		48	6	1084	110	80	300	4	250h7	350	M16
13	160		42	6	1159	110	80	300	4	250h7	350	M16
	180		48	6	1159	110	80	300	4	250h7	350	M16
	200		55	7	1159	110	80	350	4	300h7	400	M16
14	160		42	6	1219	110	80	300	4	250h7	350	M16
	180		48	6	1219	110	80	300	4	250h7	350	M16
	200		55	7	1219	110	80	350	4	300h7	400	M16
16	200		55	7	1400	110	90	350	4	300h7	400	M16
	225		60	7	1430	140	90	400	8	350h7	450	M16
17	200		55	7	1435	110	90	350	4	300h7	400	M16
	225		60	7	1465	140	90	400	8	350h7	450	M16
18	250		65	7	1636.5	140	100	500	8	450h7	550	M16
	280		75	8	1636.5	140	100	500	8	450h7	550	M16
19, 20	250		65	7	1685	140	100	500	8	450h7	550	M16
	280		75	8	1685	140	100	500	8	450h7	550	M16

Note: (1) "*" the power of the coupled motor in selection must be sufficient for the transmission capacity requirements; "**" the flanges listed in the table are standard. Consult us if any deviation exists.
(2) For combinations with torque arm on one side, please consult us.

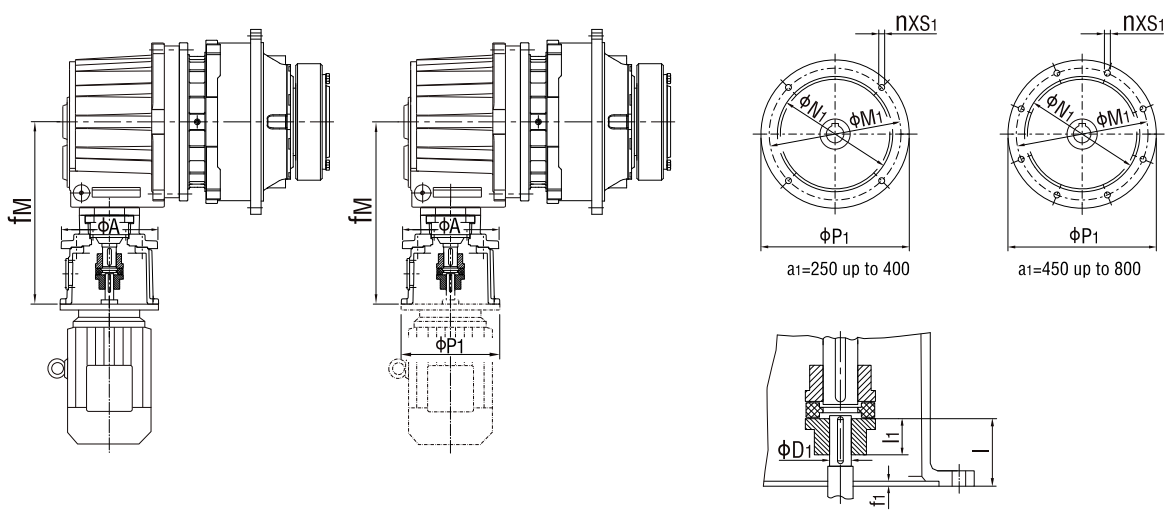
P3S..



P3S..	Motor (Y)* / Flange (F)**	D1	f1	fM	l	l1	M1	n	N1	P1	s1
09	100	28	5	865	60	45	215	4	180h7	250	M12
	112	28	5	865	60	45	215	4	180h7	250	M12
	132	38	5	896	80	70	265	4	230h7	300	M12
	160	42	6	931	110	75	300	4	250h7	350	M16
10	100	28	5	894	60	45	215	4	180h7	250	M12
	112	28	5	894	60	45	215	4	180h7	250	M12
	132	38	5	925	80	70	265	4	230h7	300	M12
	160	42	6	957	110	75	300	4	250h7	350	M16
11	112	28	5	955	60	45	215	4	180h7	250	M12
	132	38	5	986	80	70	265	4	230h7	300	M12
	160	42	6	1018	110	75	300	4	250h7	350	M16
	180	48	6	1018	110	75	300	4	250h7	350	M16
12	112	28	5	989	60	45	215	4	180h7	250	M12
	132	38	5	1020	80	70	265	4	230h7	300	M12
	160	42	6	1052	110	75	300	4	250h7	350	M16
	180	48	6	1052	110	75	300	4	250h7	350	M16
13	132	38	5	1095	80	70	265	4	230h7	300	M12
	160	42	6	1127	110	75	300	4	250h7	350	M16
	180	48	6	1127	110	75	300	4	250h7	350	M16
14	132	38	5	1155	80	70	265	4	230h7	300	M12
	160	42	6	1187	110	75	300	4	250h7	350	M16
	180	48	6	1187	110	75	300	4	250h7	350	M16
16	160	42	6	1365	110	75	300	4	250h7	350	M16
	180	48	6	1365	110	75	300	4	250h7	350	M16
	200	55	7	1365	110	75	350	4	300h7	400	M16
17	160	42	6	1390	110	75	300	4	250h7	350	M16
	180	48	6	1390	110	75	300	4	250h7	350	M16
	200	55	7	1400	110	75	350	4	300h7	400	M16
18	180	48	6	1558.5	110	90	300	4	250h7	350	M16
	200	55	6	1570.5	110	90	350	4	300h7	400	M16
	225	60	7	1608.5	110	90	400	8	350h7	450	M16
	250	65	7	1608.5	110	90	500	8	450h7	550	M16
19, 20	180	48	6	1606	110	90	300	4	250h7	350	M16
	200	55	6	1618	110	90	350	4	300h7	400	M16
	225	60	7	1656	110	90	400	8	350h7	450	M16
	250	65	7	1656	110	90	500	8	450h7	550	M16

Note: (1) "*" the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;
"**" the flanges listed in the table are standard. Consult us if any deviation exists.
(2) For combinations with torque arm on one side, please consult us.

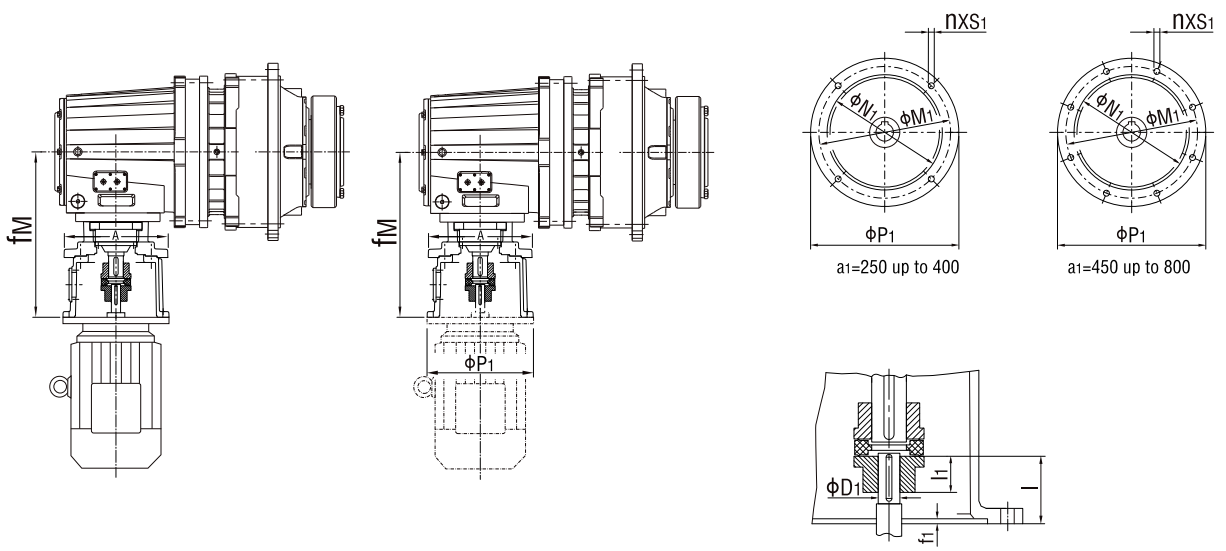
P2K..



P2K..	Motor (Y)*	Flange (F)**	A	D1	f1	fM	l	l1	M1	n	N1	P1	s1
09, 10	132		250	38	5	486	80	70	265	4	230h7	300	M12
	160		250	42	6	528	110	75	300	4	250h7	350	M16
11, 12	160		300	42	6	593	110	75	300	4	250h7	350	M16
	180		350	48	6	593	110	75	300	4	250h7	350	M16
	200		350	55	7	593	110	75	350	4	300h7	400	M16
13,14	160		440	42	6	663	110	75	300	4	250h7	350	M16
	180		440	48	6	663	110	75	300	4	250h7	350	M16
	200		440	55	7	663	110	75	350	4	300h7	400	M16
	225		440	60	7	695	140	80	400	8	350h7	450	M16
	250		440	65	8	707	140	85	500	8	450h7	550	M16
16, 17	200		440	55	7	770	110	80	350	4	300h7	400	M16
	225		440	60	7	800	140	80	400	8	350h7	425	M16
	250		440	65	8	812	140	85	500	8	450h7	550	M16
	280		440	75	8	812	140	85	500	8	450h7	550	M16
18, 19, 20	225		440	60	7	932	140	80	400	8	350h7	450	M16
	250		440	65	8	932	140	85	500	8	450h7	550	M16
	280		440	75	8	932	140	85	500	8	450h7	550	M16
	315 *		440	80	11	967	170	100	600	8	550h7	660	M20

Note: (1) “*” the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;
“**” the flanges listed in the table are standard. Consult us if any deviation exists.
(2) For combinations with torque arm on one side, please consult us.

P2L..

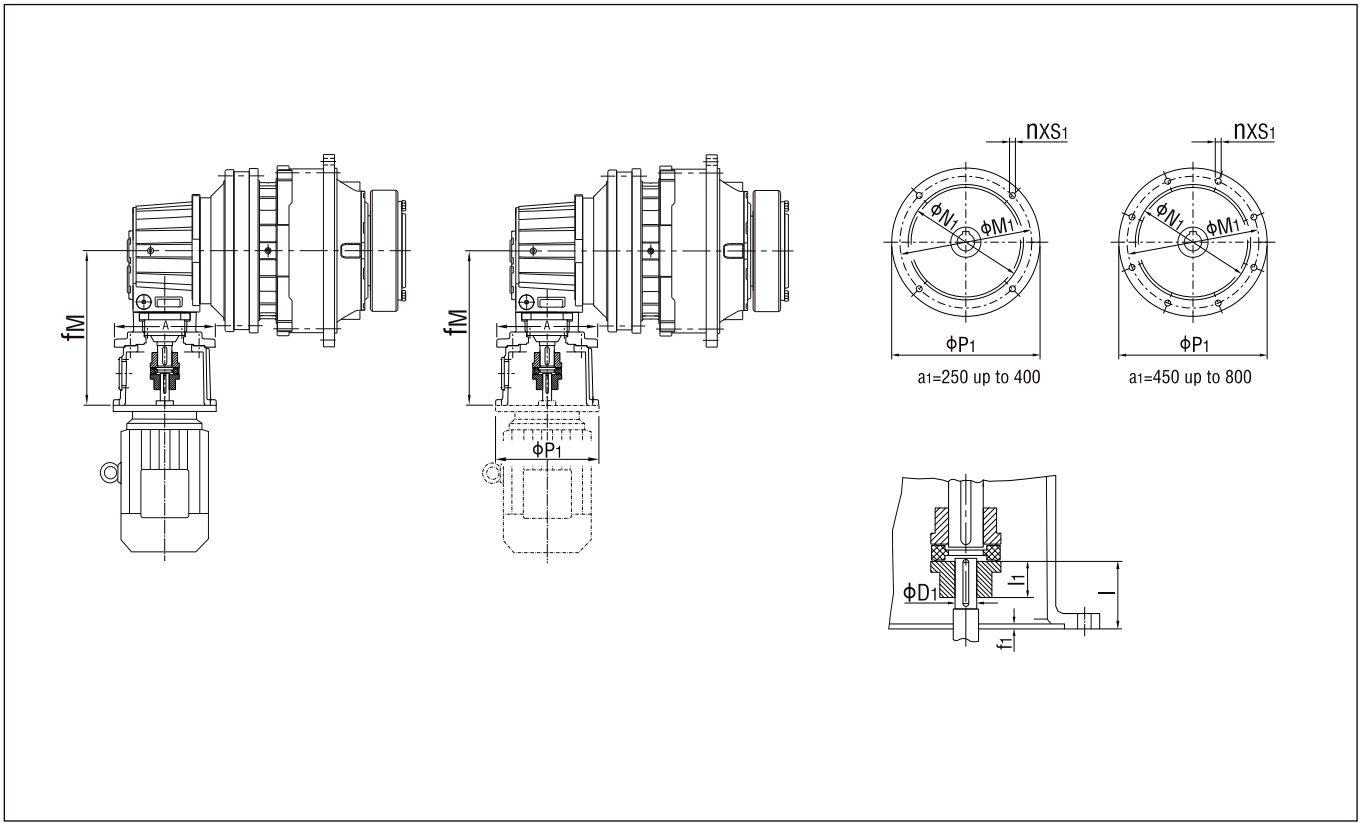


P2L..	Motor (Y)*	Flange (F)**	A	D1	f1	fM	l1	l	M1	n	N1	P1	s1
09, 10	160		440	42	6	543	75	110	300	4	250h7	350	M16
	180		440	48	6	543	75	110	300	4	250h7	350	M16
	200		440	55	7	543	75	110	350	4	300h7	400	M16
	225		440	60	7	575	80	140	400	8	350h7	450	M16
11, 12	200		440	55	7	600	75	110	350	4	300h7	400	M16
	225		440	60	7	630	80	140	400	8	350h7	450	M16
	250		440	65	8	642	85	140	500	8	450h7	550	M16
13,14	225		440	60	7	732	85	140	400	8	350h7	450	M16
	250		440	65	8	732	85	140	500	8	450h7	550	M16
	280		440	75	8	732	85	140	500	8	450h7	550	M16
16, 17	280		600	75	8	842	100	140	500	8	450h7	550	M16
	315*		650	80	11	872	100	170	600	8	550h7	660	M20
18, 19, 20	315*		650	80	11	987	100	170	600	8	550h7	660	M20
21, 22, 23, 24	315		650	80	11	1122	125	170	600	8	550h7	660	M20
	355		650	95	11	1122	125	170	740	8	680h7	800	M20

Note: (1) “*” the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;
“**” the flanges listed in the table are standard. Consult us if any deviation exists.
(2) For combinations with torque arm on one side, please consult us.

P

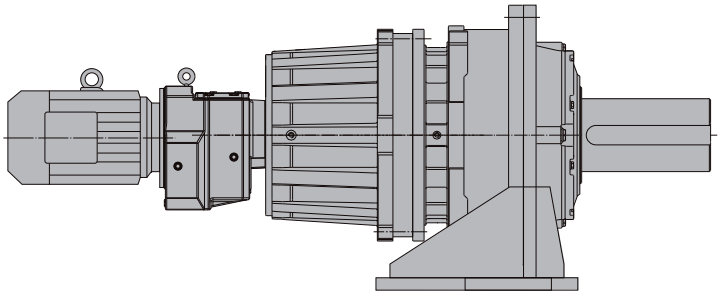
P3K..



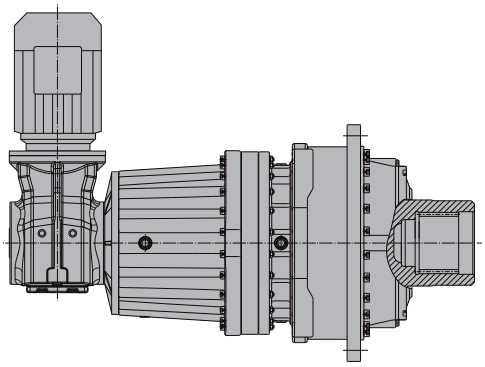
P3K..	Motor (Y)*	Flange (F)**	A	D1	f1	fM	l	l1	M1	N1	n	P1	s1
09,10,11 12,13,14	132		250	38	5	486	80	70	265	230h7	4	300	M12
	160		250	42	6	528	110	75	300	250h7	4	350	M16
	180		250	48	6	528	110	75	300	250h7	4	350	M16
16, 17	160		350	42	6	593	110	75	300	250h7	4	350	M16
	180		350	40	6	593	110	75	300	250h7	4	350	M16
	200		350	55	7	593	110	75	350	300h7	4	400	M16
18,19,20 21, 22	160		440	42	6	663	110	75	300	250h7	4	350	M16
	180		440	48	6	663	110	75	300	250h7	4	350	M16
	200		440	35	7	663	110	75	350	300h7	4	400	M16
	225		440	60	7	695	140	80	400	350h7	8	450	M16
	250		440	65	8	707	140	85	500	450h7	8	550	M16
23,24 25,26	200		440	55	6	770	110	80	350	300h7	4	400	M16
	225		440	60	7	800	140	80	400	350h7	8	450	M16
	250		440	62	7	812	140	85	500	450h7	8	550	M16
	280		440	75	8	812	140	85	500	450h7	8	550	M16
27,28 29,30	225		440	60	7	932	140	85	400	350h7	8	450	M16
	250		440	65	7	932	140	85	500	450h7	8	550	M16
	280		440	75	8	932	140	85	500	450h7	8	550	M16
	315 *		440	80	11	967	170	100	600	550h7	8	660	M20

Note: (1) “*” the power of the coupled motor in selection must be sufficient for the transmission capacity requirements;
“**” the flanges listed in the table are standard. Consult us if any deviation exists.
(2) For combinations with torque arm on one side, please consult us.

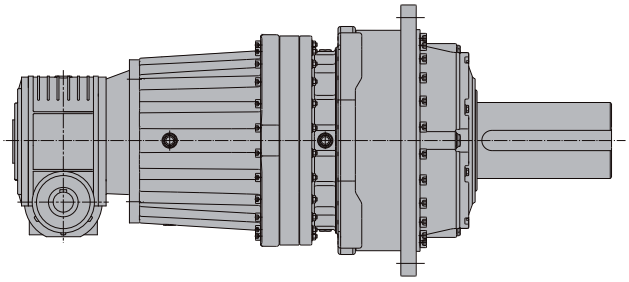
10 Combi-type:



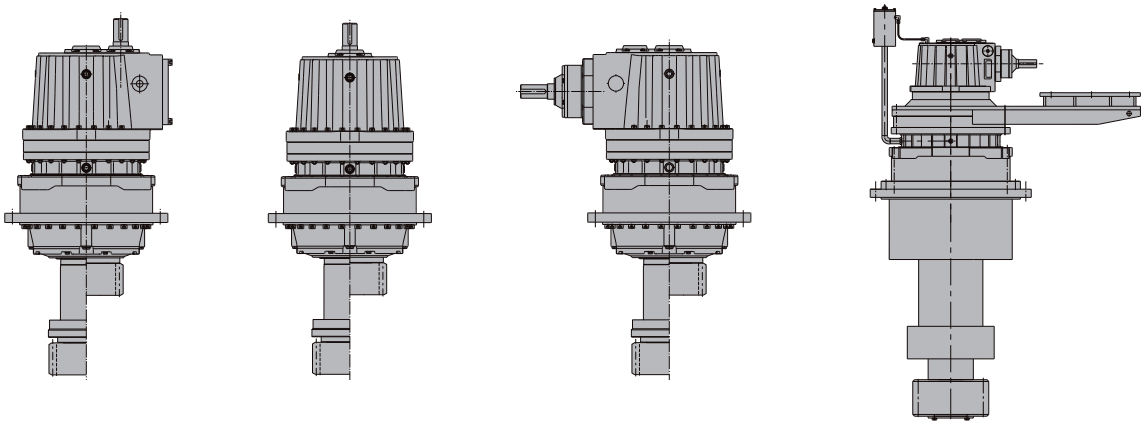
P../CR combination upon request.



P../K combination upon request.



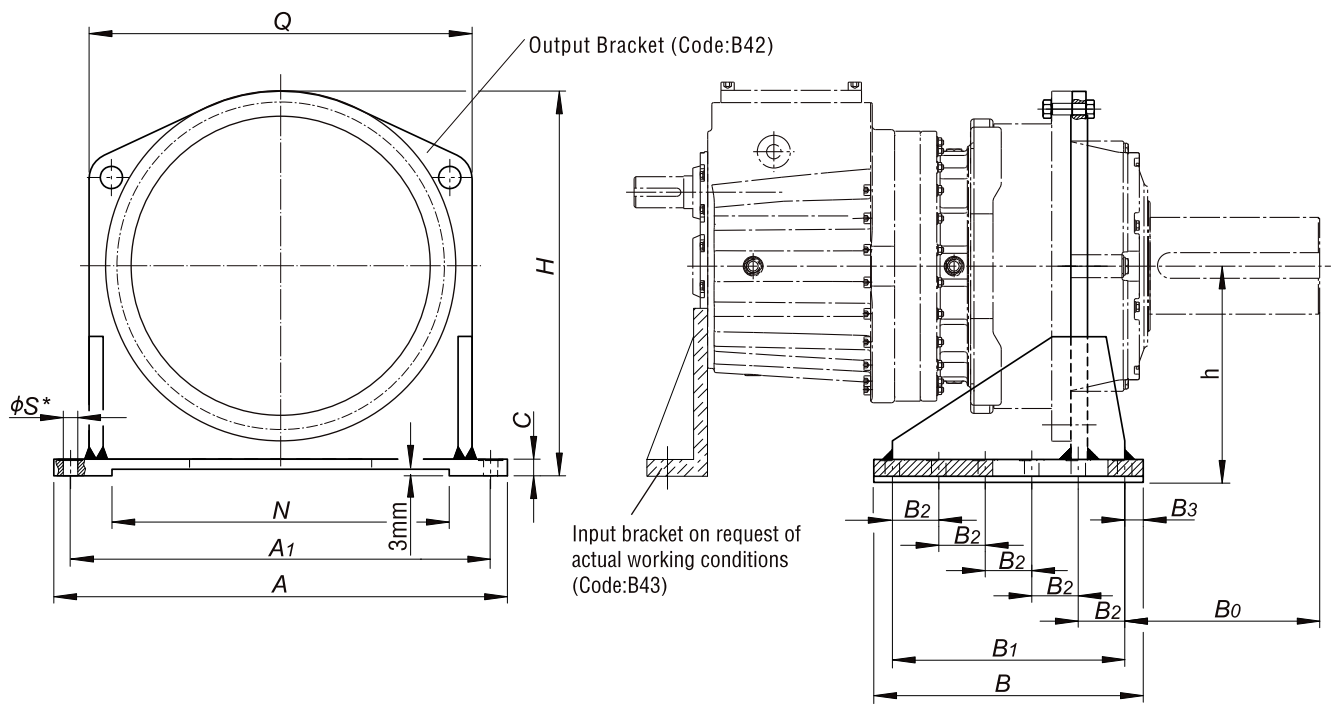
P../RV combination upon request.



P../TR combination(Slewing Gears) upon request.

11 Accessories:

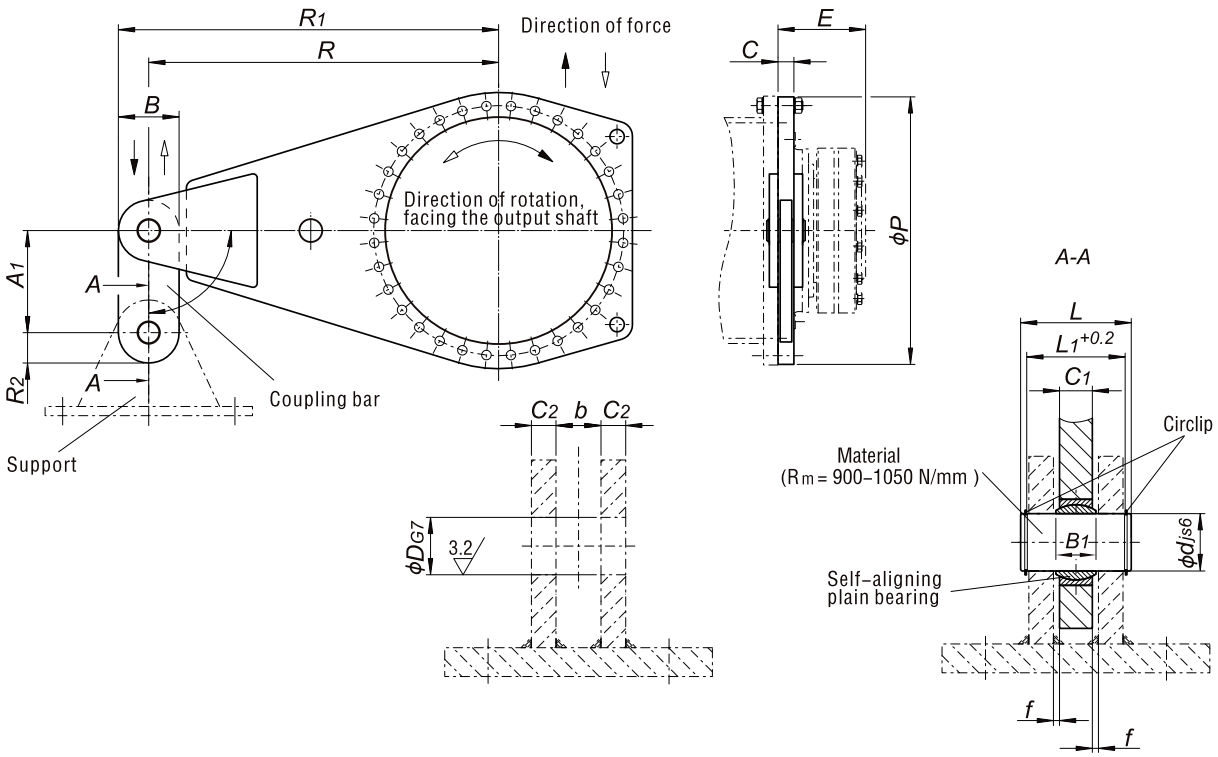
11.1 Output/Input Bracket(Code:B42/B43):



Size	A	A1	B	B0	B1	B2	B3	C	h	H	N	Q	Hole		Weight (kg)
													S*	No.	
09	580	520	330	240	260	130	35	20	260	480	380	450	26	2 x 3	56
10	630	570	360	240	290	145	35	25	280	525	430	500	26	2 x 3	82
11	680	620	400	274	330	110	35	30	315	585	480	550	26	2 x 4	122
12	760	700	450	292	380	95	35	30	360	670	560	630	26	2 x 5	157
13	820	750	490	334	420	105	35	35	390	720	610	680	26	2 x 5	213
14	920	840	560	380	480	120	40	35	430	800	680	760	33	2 x 5	270
16	980	900	580	374	500	125	40	40	470	865	700	820	33	2 x 5	350
17	1130	1040	670	405	580	145	45	45	540	998	810	940	39	2 x 5	520
18	1180	1080	720	385	620	155	50	45	560	1035	830	980	39	2 x 5	580
19	1260	1160	760	450	640	160	60	50	590	1090	880	1050	45	2 x 5	720
20	1260	1160	760	500	640	160	60	50	590	1090	880	1050	45	2 x 5	720
21	1440	1320	840	513	700	175	70	55	660	1228	1020	1170	52	2 x 5	940
22	1440	1320	840	513	700	175	70	55	660	1228	1020	1170	52	2 x 5	940
23	1540	1420	910	567	750	150	80	60	730	1345	1100	1270	52	2 x 6	1275
24	1540	1420	910	607	750	150	80	60	730	1345	1100	1270	52	2 x 6	1275
25	1700	1550	1000	574	860	215	70	65	795	1465	1240	1400	62	2 x 5	1670
26	1700	1550	1000	634	860	215	70	65	795	1465	1240	1400	62	2 x 5	1670
27	1850	1700	1100	664	950	190	75	70	870	1610	1370	1550	62	2 x 6	2170
28	1850	1700	1100	724	950	190	75	70	870	1610	1370	1550	62	2 x 6	2170
29	1980	1820	1180	731	1000	250	90	75	925	1715	1460	1640	70	2 x 5	2650
30	1980	1820	1180	771	1000	250	90	75	925	1715	1460	1640	70	2 x 5	2650
31	2150	1950	1300	773	1100	220	100	75	1000	1845	1570	1750	70	2 x 6	3100
32	2150	1950	1300	833	1100	220	100	75	1000	1845	1570	1750	70	2 x 6	3100
33	2230	2050	1350	883	1150	230	100	85	1050	1940	1630	1850	78	2 x 6	3850
34	2230	2050	1350	933	1150	230	100	85	1050	1940	1630	1850	78	2 x 6	3850
35	On request														
36															

* See 61/P

11.2 Torque arm on one side (code: T71):

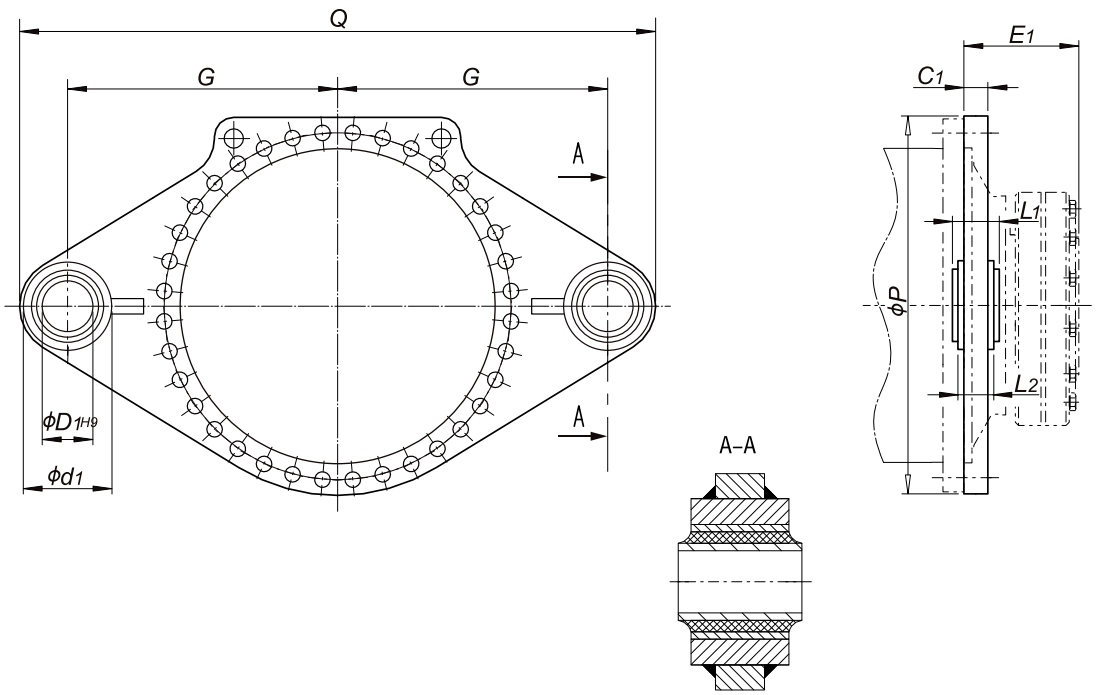


The Accessories of torque arm should be installed by the customers as it is delivered separately with the gear unit.

Size	T_{2N} (N · m)	A_1	b	B	B_1	C	C_1	C_2 min.	d	D	E	f	L_1	L	P	R	R_1	R_2	Weight (Kg)
09	22 000	140	25	100	$22^{0}_{-0.12}$	25	18	15	30		165	3.5	59.5	70	440	555	605	50	38
10	31 000	140	30	105	$25^{0}_{-0.12}$	30	20	15	35		174	5	64.5	75	485	615	667.5	52.5	51
11	42 000	160	30	130	$28^{0}_{-0.12}$	30	22	18	40		204	4	70.5	85	540	685	750	65	82
12	60 000	160	30	130	$28^{0}_{-0.12}$	30	22	18	40		224	4	70.5	85	620	785	850	65	85
13	83 000	180	35	145	$32^{0}_{-0.12}$	35	25	20	45		241	5	79.5	95	665	840	912.5	72.5	113
14	117 000	200	40	145	$35^{0}_{-0.12}$	40	30	20	50		278	5	85	100	740	940	1012.5	72.5	145
16	160 000	240	50	155	$44^{0}_{-0.15}$	50	35	25	60		285	7.5	105	120	790	1000	1077.5	77.5	206
17	202 000	240	50	170	$44^{0}_{-0.15}$	50	35	25	60		294	7.5	105	120	915	1165	1250	85	274
18	244 000	280	55	210	$49^{0}_{-0.15}$	55	40	30	70		303	7.5	120	135	955	1210	1315	105	365
19	295 000	320	60	210	$55^{0}_{-0.15}$	60	45	30	80		327.5	7.5	125	145	1005	1300	1405	105	423
20	354 000	320	60	210	$55^{0}_{-0.15}$	60	45	30	80		327.5	7.5	125	145	1005	1300	1405	105	423
21	392 000	320	60	225	$55^{0}_{-0.15}$	60	45	30	80		354	7.5	125	145	1140	1450	1562.5	113	530
22	450 000	320	60	225	$55^{0}_{-0.15}$	60	45	30	80		354	7.5	125	145	1140	1450	1562.5	113	530
23	513 000	360	65	250	$60^{0}_{-0.20}$	65	50	30	90		380	7.5	130	150	1235	1575	1700	125	665
24	592 000	360	65	250	$60^{0}_{-0.20}$	65	50	30	90		380	7.5	130	150	1235	1575	1700	125	665
25	684 000	400	75	275	$70^{0}_{-0.20}$	75	55	35	100		407	10	150	170	1350	1720	1857.5	138	940
26	763 000	400	75	275	$70^{0}_{-0.20}$	75	55	35	100		407	10	150	170	1350	1720	1857.5	138	940
27	852 000	440	75	300	$70^{0}_{-0.20}$	75	55	35	110		453	10	150	175	1490	1900	2050	150	1120
28	950 000	440	75	300	$70^{0}_{-0.20}$	75	55	35	110		453	10	150	175	1490	1900	2050	150	1120
29	1 060 000	440	75	315	$70^{0}_{-0.20}$	75	55	35	110		483	10	150	175	1600	2035	2192.5	158	1260
30	1 200 000	440	75	315	$70^{0}_{-0.20}$	75	55	35	110		483	10	150	175	1600	2035	2192.5	158	1260
31 – 36	On request																		

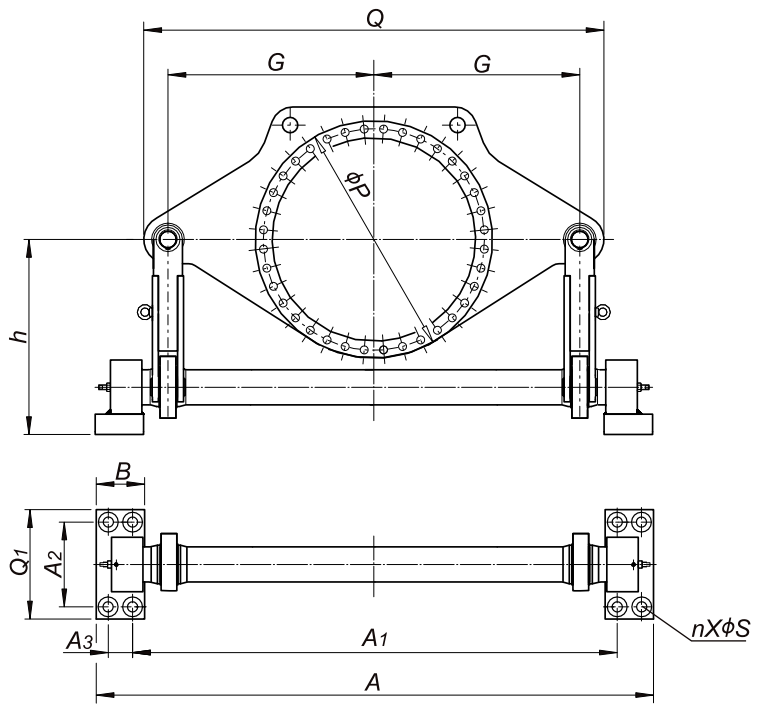
P

11.3 Torque arm on two sides with rubber bushes (code: T72):



Size	T_{2N} (N · m)	C_1	d_1	D1	E_1	G	L_1	L_2	P	Q	Weight (kg)
09	22 000	30	115	50h8	165	500	110	100	440	1140	58
10	31 000	30	115	50h8	174	550	110	100	485	1240	72
11	42 000	30	180	100h8	204	575	120	110	540	1355	95
12	60 000	35	180	100h8	224	625	120	110	620	1455	120
13	83 000	35	210	110h8	241	600	180	170	665	1435	145
14	117 000	40	210	110h8	278	650	180	170	740	1535	170
16	160 000	40	240	124h8	285	700	230	220	790	1670	230
17	202 000	40	240	124h8	294	750	230	220	915	1770	300
18	244 000	50	240	124h8	303	900	230	220	955	2070	400

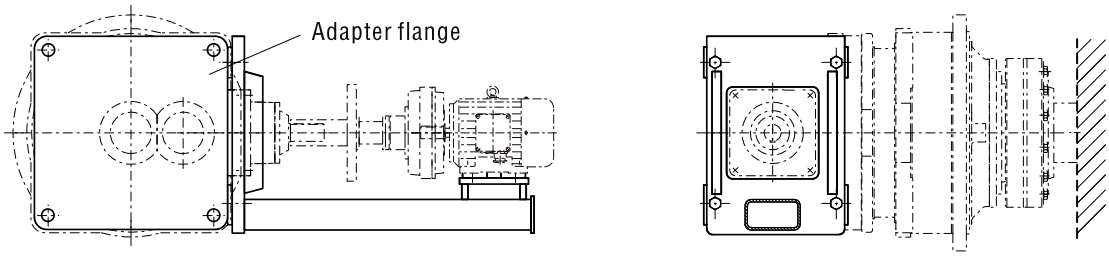
11.4 Torsion shaft support (code: B41):



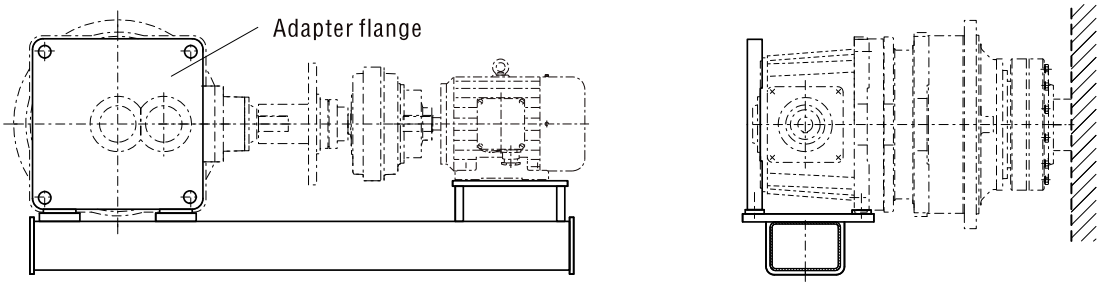
Size	T_{2N} (N · m)	A	A_1	A_2	A_3	B	C_1	E_1	G	h	h_1	n	P	Q	Q_1	R_3	R_4	S	Weight (Kg)
09	22 000	1619	1414	250	65	140	48.5	165	550	560	120	8	610	1230	330	247.5	105	33	300
10	31 000	1619	1414	250	65	140	48.5	174	550	560	120	8	610	1230	330	256.5	105	33	300
11	42 000	1619	1414	250	65	140	48.5	204	550	560	120	8	610	1230	330	286.5	105	33	300
12	60 000	1619	1414	250	65	140	48.5	224	550	560	120	8	610	1230	330	306.5	105	33	300
13	83 000	1837	1604	280	75	158	68.5	241	650	620	155	8	775	1450	380	358.5	145	39	600
14	117 000	1837	1604	280	75	158	68.5	278	650	620	155	8	775	1450	380	395.5	145	39	600
16	160 000	1837	1604	280	75	158	68.5	285	650	620	155	8	775	1450	380	402.5	145	39	600
17	202 000	2041	1777	315	84	180	73.5	294	750	700	170	8	955	1680	400	431.5	165	39	900
18	244 000	2041	1777	315	84	180	73.5	303	750	700	170	8	955	1680	400	440.5	165	39	900
19	295 000	2300	2000	350	100	200	83.5	328	850	860	195	8	985	1900	450	470.5	175	45	1400
20	354 000	2300	2000	350	100	200	83.5	328	850	860	195	8	985	1900	450	470.5	175	45	1400
21	392 000	2591	2254	400	113	225	88.5	354	950	900	210	8	1120	2110	530	506.5	190	45	1700
22	450 000	2591	2254	400	113	225	88.5	354	950	900	210	8	1120	2110	530	506.5	190	45	1700
23	513 000	2871	2496	450	125	250	98.5	380	1063	1060	235	8	1215	2385	590	562.5	220	45	2150
24	592 000	2871	2496	450	125	250	98.5	380	1063	1060	235	8	1215	2385	590	562.5	220	45	2150
25	684 000	3236	2816	500	140	280	118.5	407	1150	1200	275	8	1350	2600	650	614.5	245	52	2700
26	763 000	3236	2816	500	140	280	118.5	407	1150	1200	275	8	1350	2600	650	614.5	245	52	2700
27	852 000	3327	2887	530	150	290	128.5	453	1250	1250	300	8	1490	2820	700	670.5	255	52	3400
28	950 000	3327	2887	530	150	290	128.5	453	1250	1250	300	8	1490	2820	700	670.5	255	52	3400
29	1 060 000	3673	3200	560	158	315	128.5	483	1360	1350	300	8	1565	3080	750	718	280	62	4350
30	1 200 000	3673	3200	560	158	315	128.5	483	1360	1350	300	8	1565	3080	750	718	280	62	4350
31	1 330 000	3906	3408	590	168	330	148.5	538	1450	1400	340	8	1695	3260	790	788	300	70	5500
32	1 500 000	3906	3408	590	168	330	148.5	538	1450	1400	340	8	1695	3260	790	788	300	70	5500
33	1 680 000	4116	3588	620	178	350	158.5	573	1550	1500	375	8	1785	3520	840	840.5	320	70	7000
34	1 920 000	4116	3588	620	178	350	158.5	573	1550	1500	375	8	1785	3520	840	840.5	320	70	7000
35–36	On request																		

11.5 Motor bracket:

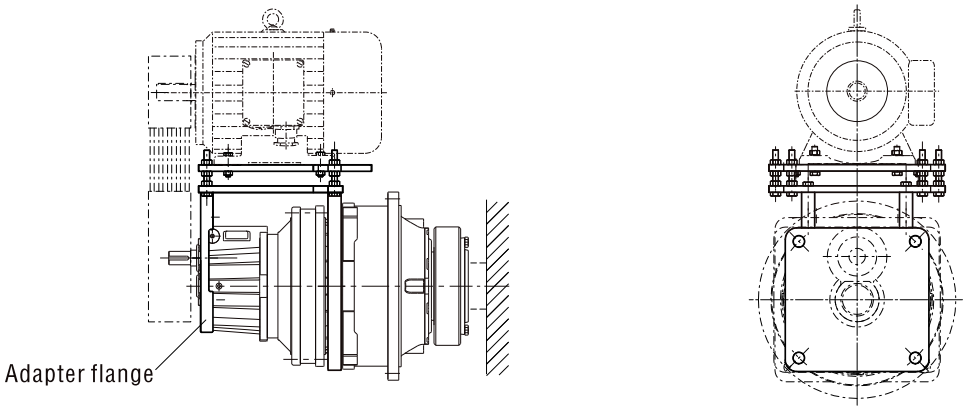
Motor bracket for P.K.., P.L.. vertical mounting(code: B62)



Motor bracket for P.K.., P.L.. horizontal mounting(code: B63)



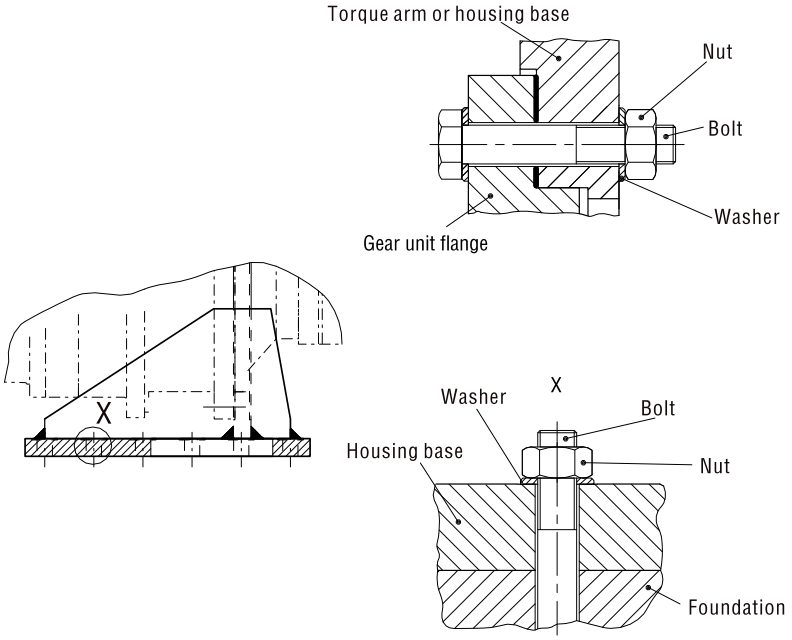
Brackets for horizontal motor(code: B61)



P

11.6 Tightening torques:

Tightening torques for flange connections and foot-mounted design.



Size	Flange		Base	
	Bolt (10.9)	Tightening torque (N · m)	Bolt (8.8)	Tightening torque (N · m)
09	M 16	295	M 24	710
10	M 16	295	M 24	710
11	M 20	580	M 24	710
12	M 24	1000	M 24	710
13	M 24	1000	M 24	710
14	M 24	1000	M 30	1450
16	M 24	1000	M 30	1450
17	M 30	2000	M 36	2530
18	M 30	2000	M 36	2530
19/20	M 30	2000	M 42	4070
21/22	M 36	3560	M 48	6140
23/24	M 36	3560	M 48	6140
25/26	M 42	5720	M 56	9840
27/28	M 48	8640	M 56	9840
29/30	M 48	8640	M 64	14300
31/32	M 56	13850	M 64	14300
33/34	M 56	13850	M 64	14300
35/36	M 56	13850	M 72X6	20800

P

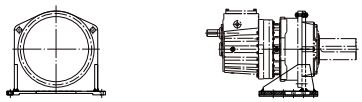
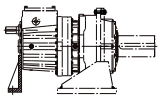
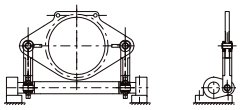
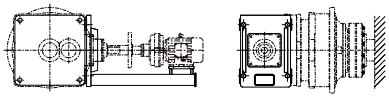
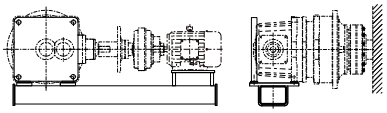
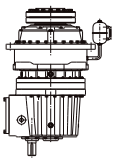
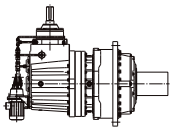
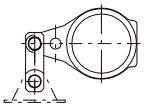
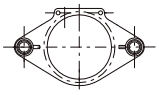
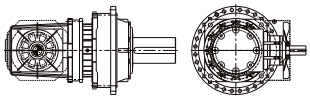
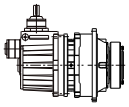
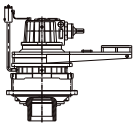
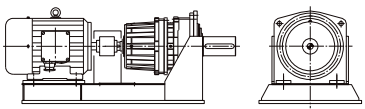
11.7 Oil :

Oil level (L)							
Type	P2N..	P2L..	P2S..	P2K..	P3N..	P3S..	P3K..
09	6	6	6	6	7	7	7
10	8	8	8	8	9	9	9
11	12	12	12	12	13	13	15
12	16	16	16	16	17	17	20
13	20	20	20	20	21	21	21
14	32	32	32	32	33	33	33
16	40	40	40	40	42	42	42
17	56	56	56	56	60	60	60
18	66	66	66	73	70	70	70
19	82	82	82	82	85	85	85
20	75	75	75	75	75	75	75
21	110	110	110		115	115	115
22	95	95	95		105	105	105
23	150	150	150		155	155	155
24	125	125	125		135	135	135
25	190	190	190		195	195	195
26	160	160	160		170	170	170
27	245	245	245		250	250	250
28	205	205	205		220	220	220
29	305	305	305		310	310	310
30	255	255	255		280	280	280
31	380		380		390	390	
32	315		315		360	360	
33	460		460		470	470	
34	380		380		430	430	
35	645		645				
36	535		535				

Note: 1)When ambient temperature is between -10℃ ～+40℃, VG320 (ISO viscosity class)should be used for P series and accessory code is V32.

2)The above oil levels are for P..N in mounting position B5 and P.K/P.L/P.S in mounting position B53. Other positions on request.

11.8 Accessory Codes:

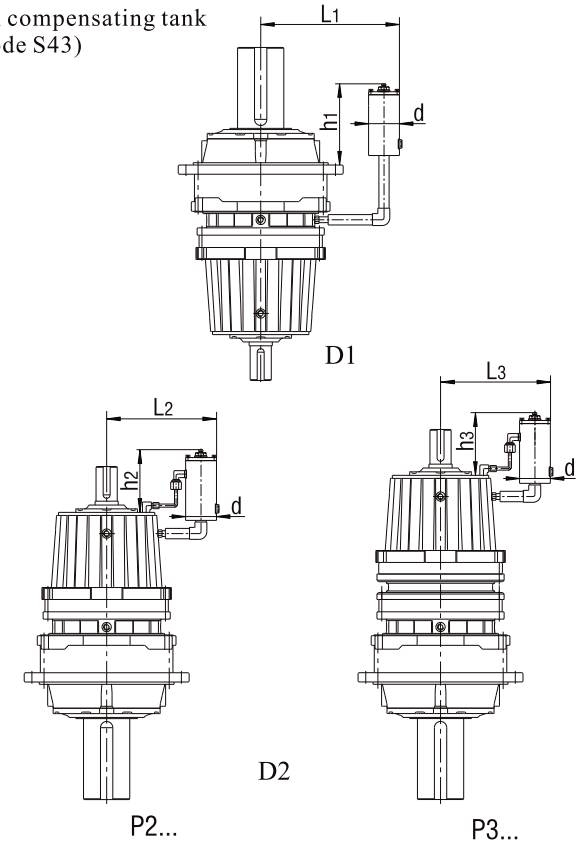
Symbol	Accessories	Examples	
B61	Motor bracket		60/P
B42	Output bracket		56/P
B43	Input bracket		56/P
B41	Torsion shaft support		59/P
B62	Motor bracket for P.K., P.L. vertical mounting		60/P
B63	Motor bracket for P..K, P..L horizontal mounting (motor, coupling)		60/P
S43	Oil compensating tank, dip lubrication		64/P
S32	Motor pump, forced lubrication		64/P
T71	Torque arm (on one side)		57/P
T72	Torque arm (on both sides)		58/P
F21	Fan		On request
B11	Backstop		
B64	Horizontal motor bracket fo P.K,P.L, vertical mounting		
B65	P.N., P.S. integral base(motor, coupling, gear unit)		

P

12 Lubrication System:

12.1 Oil compensating tank for vertical mounting positions V1,V11,V3,V31 of P.N.. and P.S..

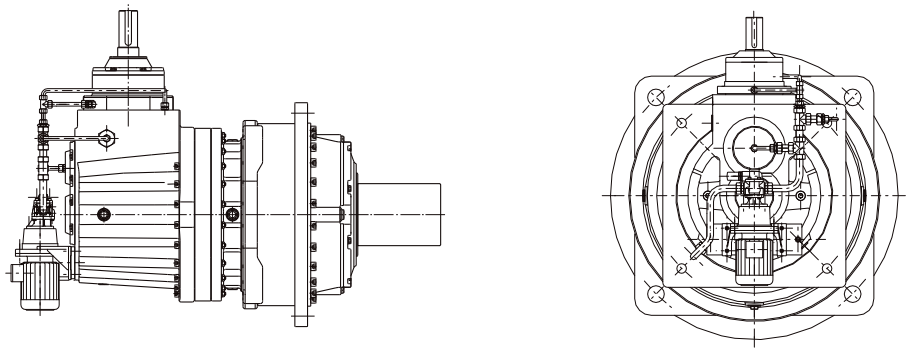
Oil compensating tank
(code S43)



Size	L1	L2	L3	h1	h2	h3	d
09	345	285	285	210	160	160	ϕ 80
10	375	285	285	210	160	160	ϕ 80
11	400	320	285	210	160	160	ϕ 80
12	435	320	285	210	160	160	ϕ 80
13	500	400	285	250	180	160	ϕ 120
14	530	400	285	250	180	160	ϕ 120
16	555	450	320	250	180	180	ϕ 120
17	620	450	320	250	180	180	ϕ 120
18	635	500	400	250	180	180	ϕ 120
19	650	500	400	250	180	180	ϕ 120
20	650	500	400	250	180	180	ϕ 120
21	730	550	400	250	180	180	ϕ 120
22	730	550	400	250	180	180	ϕ 120
23	780	550	450	250	180	180	ϕ 120
24	780	550	450	250	185	180	ϕ 120
25–36	On request						

In case of vertical mounting position, normal lubrication system would fail to feed the overhead rolling bearings. To ensure an adequate supply of lubricants, the oil level has to be increased accordingly. As shown above (D1, D2), an oil compensating tank with breather is attached for this purpose. It can be fitted either to the gear unit or to the customer's machine frame. The actual dimension and final position will be decided when the product is ordered.

12.2 Forced lubrication with motor pump for P.K.., P.L.. And P.S.21-P.S.36 in mounting position B51:



Forced lubrication with motor pump(accessory code S32)

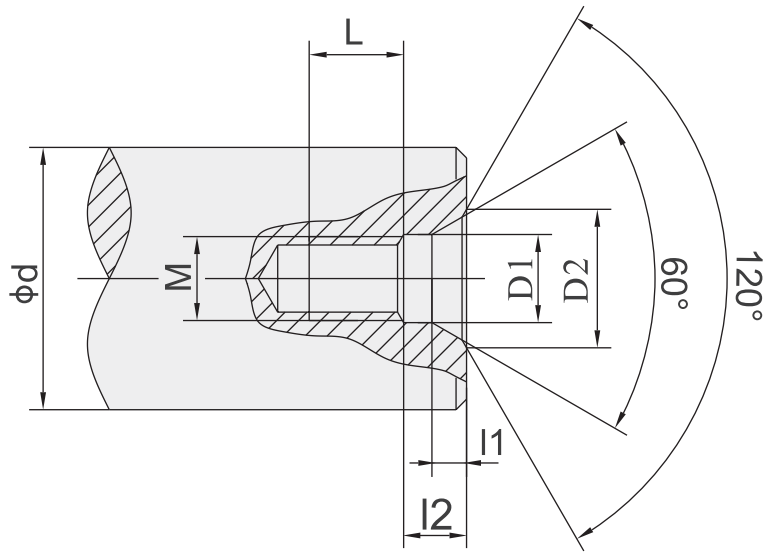
Note: For mounting positions, see P4/P.

12.3 Planetary gear units in other mounting positions are usually lubricated with splash lubrication system

Note: Verify the thermal capacity of the gear units when selecting the lubrication systems, especially the mode of oil compensating tank.

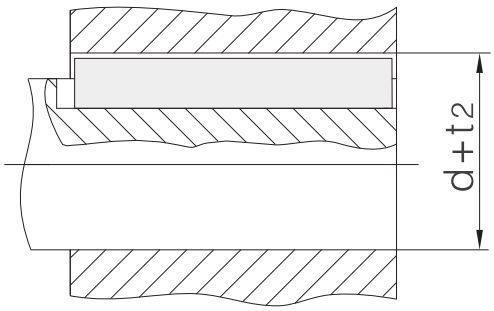
13 Shaft end central hole

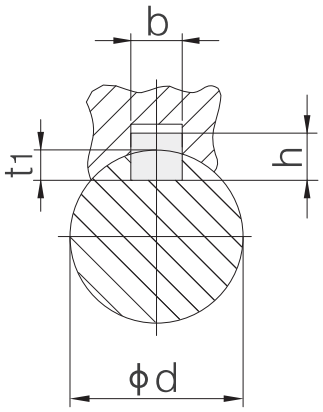
Shaft end C Type screw central hole



d	M	L	l2	l1	D1	D2
7 < d ≤ 10	M3	10	2.6	1.8	3.2	5.8
10 < d ≤ 13	M4	10	3.2	2.1	4.3	7.4
13 < d ≤ 16	M5	10	4	2.4	5.3	8.8
16 < d ≤ 21	M6	12	5	2.8	6.4	10.5
21 < d ≤ 24	M8	12	6	3.3	8.4	13.2
24 < d ≤ 30	M10	15	7.5	3.8	10.5	16.3
30 < d ≤ 38	M12	20	9.5	4.4	13	19.8
38 < d ≤ 50	M16	25	12	5.2	17	25.3
50 < d ≤ 85	M20	30	15	6.4	21	31.3
85 < d ≤ 130	M24	35	18	8	25	38
130 < d ≤ 225	M30	45	18	11	31	48

14 Dimension of parallel key and keyway





d	b	h	t_1	$d + t_2$
8 < d ≦ 10	3	3	1.8	d + 1.4
10 < d ≦ 12	4	4	2.5	d + 1.8
12 < d ≦ 17	5	5	3	d + 2.3
17 < d ≦ 22	6	6	3.5	d + 2.8
22 < d ≦ 30	8	7	4	d + 3.3
30 < d ≦ 38	10	8	5	d + 3.3
38 < d ≦ 44	12	8	5	d + 3.3
44 < d ≦ 50	14	9	5.5	d + 3.8
50 < d ≦ 58	16	10	6	d + 4.3
58 < d ≦ 65	18	11	7	d + 4.4
65 < d ≦ 75	20	12	7.5	d + 4.9
75 < d ≦ 85	22	14	9	d + 5.4
85 < d ≦ 95	25	14	9	d + 5.4
95 < d ≦ 110	28	16	10	d + 6.4
110 < d ≦ 130	32	18	11	d + 7.4
130 < d ≦ 150	36	20	12	d + 8.4
150 < d ≦ 170	40	22	13	d + 9.4
170 < d ≦ 200	45	25	15	d + 10.4
200 < d ≦ 230	50	28	17	d + 11.4
230 < d ≦ 260	56	32	20	d + 12.4

P

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