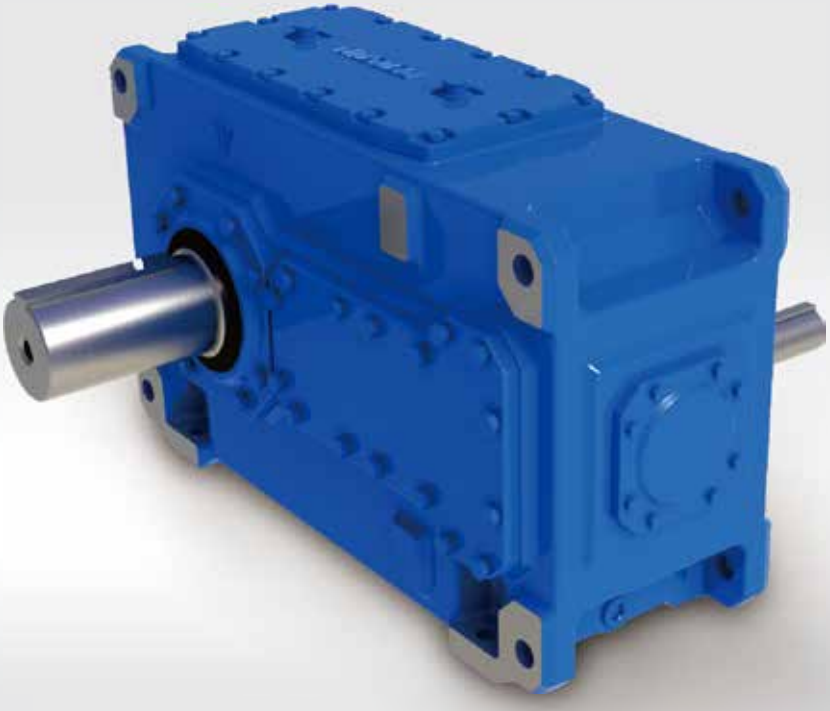
REDSUN



H&B Heavy duty gear units

08 / 2015

Note!

1. The structure scheme, appearance diagram and other attached diagrams in sample are examples, there is no strict proportion requirement. If you need exact dimension of certain types, please contact our sales dept.. (The unmarked dimension units are mm).

2. Gear unit has been tested before delivered, users should add lubrication oil before running.

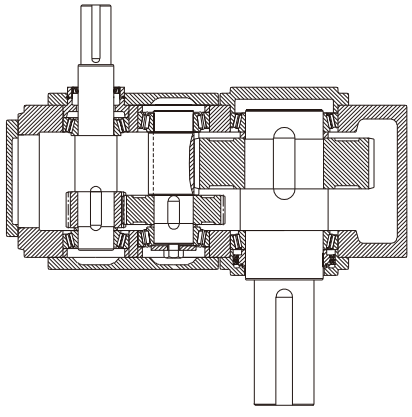
3. We can only refer to the marked oil in the mannul. Actual oil filling level should be the same with the mark on oil immersion lens.

4. Lubrication oil viscosity should be selected according to working conditions and ambient temperature.

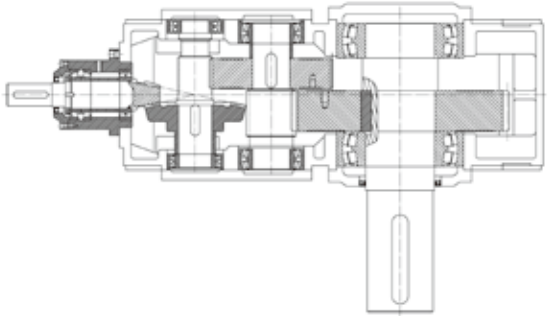
5. To prevent accidents, all the rotation parts should be added with protective covers according to safety regulation of the nation and region.

H.B structure:

H



B



HB

H.B type designation:

B 3 S H 10 – 56 – A

H=Helical gear units B=Bevel-helical gear units	Stages(1, 2, 3, 4)	Output shaft mode S=Solid shaft H=Hollow shaft with parallel key D=Hollow shaft with shrink disc	Mounting modes H=Horizontal M=Horizontal design without feet V=Vertical	Size	Nominal ratio Designs

Key to symbols:

ED=Duty cycle per hour

f1=Driven equipment factor(table 1)

f2=Prime mover factor

f3=Peak torque factor

f4, f5=Thermal factor(table 2, 3)

f6,f7=Altitude factor(table 4, 5)

f8=Vertical mounting gear units oil supply factor(table 6)

f9,f10, f11, f12=Thermal factor(table 7, 8, 9, 10)

a1=Size factor(table 11)

a2=Ratio factor(table 12)

P1=Input power

PG1=Rated thermal capacity of gear unit without auxiliary cooling

PG2=Rated thermal capacity of gear unit with cooling fan

PG3=Rated thermal capacity of gear unit with cooling coil

PG4=Rated thermal capacity of gear unit with cooling oil and fan

HB Selection:

Steps	Description	Symbols	Parameters Calculation&Guidelines	
1	Driven equipment factor	f1	Refer to f1 tab;e P05	
2	Prime mover factor	f2	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	Input speed	n1	Consult us if higher speed required	
4	Shaft arrangement	H、B	H: Helical gear units; B: Bevel-helical gear units	
5	Calculation of the ratio	i	i=n1/n2	
6	Transmission efficiency	η	sigle stage:98%, 2-stage:96%, 3-stage:94%, 四级4-stage:92%	
7	Confirm gear unit input power with torque or power needed by driven equipment	P1	P1=T2 · n1/(9550 · i · η) or P1=P2/ η	
8	According to calculation, check transmission capacity table to determine gear unit size	T2N、P1N	T2N≥T2 · f1 · f2 (or) P1N≥P1 · f1 · f2 If it doesn't satisfy conditions:3.33·P1≥P1N, Please consult us.	
9	Determine output mode		Output mode & mounting position	
10	Peak torque verification	TA	$P_{1N} \geq T_A \cdot n1 \cdot f3/9550$	

f3	Load peaks per hour			
	1–5	6–30	31–100	> 100
Single direction loading	0.5	0.65	0.7	0.85
Alternate loading	0.7	0.95	1.10	1.25

11	After selecting connection mounting and accessories, check allowable strength of the shaft	Fr、Fa	Radial load need to be checked when radial load imposed by belt pulley, chain sprocket and gear are present(See P05)	
12	Determine lubrication method, select lubrication oil		Horizontal mounting	Vertical mounting
			Lubrication methods for selection: 1. Splash lubrication 2. Dip-in lubrication 3. Forced lubrication Shaft end pump lubrication Motor oil pump lubrication Oil station lubrication	Lubrication methods for selection: 1. Dip-in lubrication 2. Forced lubrication Shaft end pump lubrication Motor oil pump lubrication Oil station lubrication
13	Determine cooling method		1. If it satisfies the following condition, the gear unit will not be equipped with auxiliary cooling device. 2. If it satisfies the following condition, the gear unit will be equipped with cooling fan. 3. If it satisfies the following condition, the gear unit will be equipped with cooling coil. 4. If it satisfies the following condition, the gear unit will be equipped with cooling coil and fan. 5. Gear unit can be equipped with other cooling devices: air-oil cooler, water-oil cooler, users can equip petrol station by themselves to provide circulated cooling oil.(Refer to P06 for f4, f5, f6, f7, f8, f9, f10, f11, f12)	

*Peak torque: maximum loading torque means the maximum torque caused by starting, braking or maximum pulse loading.
(Under common working conditions, peak torque is the maximum torque may occur when a machine starts or brakes)

Selection example

Known conditions:

Prime mover:

Motor power: 75kW

Motor speed: 1500 rpm

Maximum starting torque: TA=720 N`m

Driven equipment(working machine):

Type: Belt conveyor

Required power: P2=72kW

Speed: n2=26rpm

Duty: 12 hours/day

Starts per hour: 10

Operating cycle per hour: 100%

Ambient temperature: 30

Place of installation: Outdoor mounting

Altitude: 500m

Bevel-helical gear unit

Horizontal mounting

Shaft arrangement form C

Selection procedure:

1. Calculation of ratio:

i=n1/n2=1500/26=57.7 iN=56

2.Determine rated power of gear unit

P1N≥P1*f1*f2=P2*f1*f2/ =66*1.3*1/0.94=91.3kW

Refer to transmission capacity table B3, select size 9, P1N=96kW

3.33*P1=3.33*P2/ =3.33*66/0.94=233.8≥P1N Satisfy requirements

3. Peak torque verification:

P1N≥TA*n1*f3/9550=720*1500*0.65/9550=73.5kW

P1N=96kW≥73.5kW Satisfy requirements

4. Verify thermal capacity:

PG1*f4*f6*f8*f9=70.7kW*0.88*1*1*(1.23-2.8*0.085*0.15)=74.3kW

P1=P2/ =66kW/0.94=70.2≤74.3kW Thermal capacity is sufficient

5. Determine gear unit type: B3SH9-56-C

Service Factor

Driven equipment factor				f1
Driven equipment	Daily operating time with load(hour)			
	⩽ 2	> 2–10	> 10	
Sewage treatment				
Concentrator(Central Transmission)	–	–	1.2	
Compressed filter	1.0	1.3	1.5	
Flocculator	0.8	1.0	1.3	
Aerator	–	1.8	2.0	
Collector	1.0	1.2	1.3	
Vertical,rotary group				
Blended collector	1.0	1.3	1.5	
Concentrator	–	1.1	1.3	
Screw pump	–	1.3	1.5	
Water wheel machine	–	–	2.0	
Pump				
Centrifugal pump	1.0	1.2	1.3	
Volume–down pump				
1Piston	1.3	1.4	1.8	
>1Piston	1.2	1.4	1.5	
Dredge				
Bucket conveyor	–	1.6	1.6	
Unloading device	–	1.3	1.5	
Carterpillar traveling mechanism	1.2	1.6	1.8	
Bucket digger				
Be used for picking up	–	1.7	1.7	
Be used for rough materials	–	2.2	2.2	
Chopper	–	2.2	2.2	
Traveling mechanism*	–	1.4	1.8	
Plate blender	–	1.0	1.0	
Chemical industry				
Extruder	–	–	1.6	
Paste mixer	–	1.8	1.8	
Rubber calendar	–	1.5	1.5	
Cooling cylinder	–	1.3	1.4	
Material mixer,be used for				
Uniform medium	1.0	1.3	1.4	
Non–uniform medium	1.4	1.6	1.7	
Blender,be used for				
Uniform density medium	1.0	1.3	1.5	
Un–uniformed medium	1.2	1.4	1.6	
Un–uniformed gas absorption	1.4	1.6	1.8	
Oven	1.0	1.3	1.5	
Centrifugal machine	1.0	1.2	1.3	
Metal processing equipment				
Plate turnover	1.0	1.0	1.2	
Steel pushing device	1.0	1.2	1.2	
Winding machine	–	1.6	1.6	
Cooling bed transverse frame	–	1.5	1.5	
Roller leveler	–	1.6	1.6	
Roller path				
Continuous	–	1.5	1.5	
Interval	–	2.0	2.0	
Reversing mill	–	1.8	1.8	
Cutter				
Continuous*	–	1.5	1.5	
Crank type*	1.0	1.0	1.0	
Continuous casting driving device	–	1.4	1.4	
Rolling mill	–	2.5	2.5	
Reversing cogging mill	–	2.5	2.5	
Reversing plate slab mill	–	1.8	1.8	
Reversing wire mill	–	2.0	2.0	
Reversing thin plate mill	–	1.8	1.8	
Reversing middle thickness plate mill				
Roll gap adjusting and driving device	0.9	1.0	–	

Driven equipment	Daily operating time with load(hour)		
	⩽ 2	> 2–10	> 10
Conveyingmachine			
Bucket conveyor	–	1.4	1.5
Winch	1.4	1.6	1.6
Hoist	–	1.5	1.8
Belt conveyor≤150kW	1.0	1.2	1.3
Belt conveyor≥150kW	1.1	1.3	1.4
Elevators for goods*	–	1.2	1.5
Elevators for customers*	–	1.5	1.8
Scraper conveyor	–	1.2	1.5
Automatic ladder	1.0	1.2	1.4
Rail traveling mechanism	–	1.5	–
Various frequency device	–	1.8	2.0
Reciprocating compressor	–	1.8	1.9
Hoisting mechanism**			
Rotary mechanism*		1.4	1.8
Pitching mechanism		1.1	1.4
Traveling mechanism		1.6	2.0
Lifting mechanism		1.1	1.4
Jibcrane		1.2	1.6
Cooling tower			
Cooling tower fan	–	–	2.0
Fan (Shaft flow and centrifugal type)	–	1.4	1.5
Food industry			
Sugar production			
Sugar–cane cutter*	–	–	1.7
Sugar crane mill			
Beet sugar production	–	–	1.7
Beet masher			
Squeeze machine,	–	–	1.2
mechanical refrigerator,			
cooking machine	–	–	1.4
Beet cleaner			
Beet chopper	–	–	1.5
Paper-making machinery			
Various kinds***	–	1.8	2.0
Pulper driving device	Supply goods according to customer requirements		
Centrifugal compressor	–	1.4	1.5
Rope way cable car			
Delivery ropeway	–	1.3	1.4
Cableway of shuttle system	–	1.6	1.8
T rod elevator	–	1.3	1.4
Continuous cableway	–	1.4	1.6
Cement industry			
Concrete blender	–	1.5	1.5
Crusher*	–	1.2	1.4
Rotary kiln	–	–	2.0
Tube mill	–	–	2.0
Powder concentrator	–	1.6	1.6
Roller press	–	–	2.0

Driven equipment factor f_1

Driven equipment	Daily running time with load(hour) ≤ 2	> 2–10	> 10	Driven equipment	Daily running time with load(hour) ≤ 2	> 2–10	> 10
Wood industry				**Plastics industry**			
Barking machine				Miller, compound grinding			
Feed drive	1.25	1.25	1.50	Coating, film	1.25	1.25	1.25
Main drive	1.75	1.75	1.75	Conveying pipe, Pulling rod, thin type			
Conveyor				Pipe type, Pile drawer	1.25	1.25	1.50
Burner,repeating saw	1.25	1.25	1.50	Continuous mixer, Calender	1.50	1.50	1.50
Rotary tower,transit transport	1.50	1.50	1.50	Blow film, to plasticizing			
Main loading,heavy loading	1.75	1.75	2.00	Batch mixer	1.75	1.75	1.75
Main original wood,land base				**Rubber industry**			
Conveying chain				Continuous strong inner mixer,Mix roller,			
Floor	1.50	1.50	1.50	Batch feeding mixer (except for double sticks)	1.50	1.50	1.50
Green–wood	1.50	1.50	1.75	Refiner, calender			
Cutting Chain							
Saw transmission,traction	1.50	1.50	1.75	Double roller clamp feeding and mixed miller	1.25	1.25	1.50
Peeling barrel	1.75	1.75	2.00				
Feed drive				Batch strong inner mixer,			
Edging,wood trimmer				Double stick single groove grain stick	1.75	1.75	1.75
Planer feed,assorting table,	1.25	1.25	1.50	Miller heater, double sticks			
Automatic incline lifting				Batch feeding mixer			
Multi–shaft feed,raw wood	1.75	1.75	1.75	Wave stick miller	2.00	2.00	2.00
Transportation and rotation				**Generator and exciter**	1.00	1.00	1.25
Transportation				**Hammer crusher**	1.75	1.75	2.00
Charging tray				**Sand miller**	1.25	1.25	1.50
Plywood lathe drive	1.50	1.50	1.75				
Conveying chain,Lifting							

⚠ Note: 1.Determine required power P2 of the driven equipment;

*) Determine rated power according to maximum torque

**) The actual service factor should be selected according to accurate loading classification, for specific information, please consult us.

***) It is necessary to check thermal capacity.

2. The factors are experience value. The premise of using these factors is that the above mechanical equipment should conform to common design regulation and loading conditions. If there is special situation, please consult us.

3. For machines that are not listed in this table, please consult us.

Table 2 Thermal factor f4

Without auxiliary cooling or only with fan

Ambient temperature	Operating cycle per hour (ED) in %				
	100	80	60	40	20
10 ℃	1.11	1.31	1.60	2.14	3.64
20 ℃	1.00	1.18	1.44	1.93	3.28
30 ℃	0.88	1.04	1.27	1.70	2.89
40 ℃	0.75	0.89	1.08	1.45	2.46
50 ℃	0.63	0.74	0.91	1.22	2.07

Table 3 Thermal factor f5

With cooling coil, or with cooling coil with fan

Ambient temperature	Operating cycle per hour (ED) in %				
	100	80	60	40	20
10 ℃	1.05	1.23	1.50	2.03	3.41
20 ℃	1.00	1.17	1.43	1.93	3.25
30 ℃	0.93	1.09	1.33	1.79	3.02
40 ℃	0.87	1.02	1.24	1.68	2.83
50 ℃	0.81	0.95	1.16	1.56	2.63

Table 4 **Altitude factor** f6

Without auxiliary cooling or only with fan

Factor	Altitude (metres above MSL)				
	up to 1000	up to 2000	up to 3000	up to 4000	up to 5000
f6	1.0	0.95	0.90	0.85	0.80

Table 5 **Factor for altitude** f7

With cooling coil, or with cooling coil with fan

Factor	Altitude (metres above MSL)				
	up to 1000	up to 2000	up to 3000	up to 4000	up to 5000
f7	1.0	0.98	0.96	0.94	0.92

Table 6 Oil supply factor for vertical gear units. For horizontal gear units f_8 = 1.0, and in case of forced lubrication f_8 = 1.05 **f8**

Gear unit type	Oil supply	Sizes 4 ... 12				Sizes 13 ... 18			
		Without auxiliary cooling	With fan	With cooling coil	With fan and cooling coil	Without auxiliary cooling	With fan	With cooling coil	With fan and cooling coil
H2.V, H3.V H4.V	Dip lubrication	0.95	*	0.95	*	*	*	*	*
	Forced lubrication	1.15	*	1.05	*	1.15	*	1.05	*
B2.V, B3.V B4.V	Dip lubrication	0.95	0.95	0.95	0.95	*	*	*	*
	Forced lubrication	1.15	1.10	1.10	1.10	1.15	1.10	1.10	1.10

Table 7 Thermal capacity factor for gear units without auxiliary cooling **f9**

Gear unit type	n 1/min	Place of installation		
		Small confined spaces Wind velocity ⩾ 0.5 m/s	Large halls, workshops Wind velocity ⩾ 1.4 m/s	In the open Wind velocity ⩾ 4.0 m/s
H1	750	0.68 - 0.26 x a_1 x a_2	0.79 - 0.27 x a_1 x a_2	1.00
	1000	0.70 - 0.79 x a_1 x a_2	0.84 - 0.85 x a_1 x a_2	1.14 - 0.81 x a_1 x a_2
	1500	0.72 - 2.50 x a_1 x a_2	0.89 - 2.60 x a_1 x a_2	1.25 - 2.60 x a_1 x a_2
H2	750	0.70 - 0.08 x a_1 x a_2	0.79 - 0.21 x a_1 x a_2	1.00
	1000	0.76 - 1.00 x a_1 x a_2	0.87 - 1.40 x a_1 x a_2	1.12 - 1.30 x a_1 x a_2
	1500	0.83 - 4.10 x a_1 x a_2	0.96 - 4.60 x a_1 x a_2	1.25 - 4.20 x a_1 x a_2
H3	750	0.76	0.81 - 0.06 x a_1 x a_2	1.00
	1000	0.83 - 1.20 x a_1 x a_2	0.90 - 1.36 x a_1 x a_2	1.11 - 1.30 x a_1 x a_2
	1500	0.93 - 4.70 x a_1 x a_2	1.00 - 4.80 x a_1 x a_2	1.27 - 5.10 x a_1 x a_2
H4	750	0.78	0.83	1.00
	1000	0.85	0.91 - 1.60 x a_1 x a_2	1.10 - 2.40 x a_1 x a_2
	1500	0.97 - 10.0 x a_1 x a_2	1.03 - 12.5 x a_1 x a_2	1.27 - 14.0 x a_1 x a_2
B2	750	0.66 - 0.09 x a_1 x a_2	0.77 - 0.14 x a_1 x a_2	1.00
	1000	0.69 - 0.70 x a_1 x a_2	0.81 - 0.77 x a_1 x a_2	1.08 - 0.64 x a_1 x a_2
	1500	0.74 - 3.20 x a_1 x a_2	0.88 - 3.30 x a_1 x a_2	1.20 - 2.90 x a_1 x a_2
B3	750	0.73	0.80 - 0.05 x a_1 x a_2	1.00
	1000	0.79 - 0.63 x a_1 x a_2	0.87 - 0.81 x a_1 x a_2	1.10 - 0.73 x a_1 x a_2
	1500	0.86 - 2.40 x a_1 x a_2	0.95 - 2.60 x a_1 x a_2	1.23 - 2.80 x a_1 x a_2
B4	750	0.77	0.82	1.00
	1000	0.83	0.88	1.09 - 0.29 x a_1 x a_2
	1500	0.92 - 1.70 x a_1 x a_2	0.99 - 2.20 x a_1 x a_2	1.24 - 2.60 x a_1 x a_2

For factor f9<0.5,please refer to us!

Table 8 Thermal capacity factor for gear units with fan **f10**

Gear unit type	n 1/min	Place of installation		
		Small confined spaces Wind velocity ⩾ 0.5 m/s	Large halls, workshops Wind velocity ⩾ 1.4 m/s	In the open Wind velocity ⩾ 4.0 m/s
H1	750	0.97 - 0.05 x a_1 x a_2	0.97 - 0.04 x a_1 x a_2	1.00
	1000	1.18 - 0.33 x a_1 x a_2	1.20 - 0.33 x a_1 x a_2	1.23 - 0.32 x a_1 x a_2
	1500	1.53 - 1.00 x a_1 x a_2	1.53 - 0.95 x a_1 x a_2	1.56 - 0.94 x a_1 x a_2
H2	750	0.95 - 0.07 x a_1 x a_2	0.96 - 0.06 x a_1 x a_2	1.00
	1000	1.16 - 0.65 x a_1 x a_2	1.17 - 0.63 x a_1 x a_2	1.21 - 0.55 x a_1 x a_2
	1500	1.54 - 2.40 x a_1 x a_2	1.55 - 2.40 x a_1 x a_2	1.58 - 2.20 x a_1 x a_2
H3	750	0.89 - 0.29 x a_1 x a_2	0.91 - 0.25 x a_1 x a_2	1.00
	1000	1.06 - 1.30 x a_1 x a_2	1.08 - 1.20 x a_1 x a_2	1.17 - 0.93 x a_1 x a_2
	1500	1.38 - 4.20 x a_1 x a_2	1.40 - 4.10 x a_1 x a_2	1.48 - 3.70 x a_1 x a_2
B2	750	0.95	0.96	1.00
	1000	1.13 - 0.15 x a_1 x a_2	1.14 - 0.16 x a_1 x a_2	1.19 - 0.19 x a_1 x a_2
	1500	1.47 - 0.95 x a_1 x a_2	1.48 - 0.92 x a_1 x a_2	1.52 - 0.95 x a_1 x a_2
B3	750	0.94	0.96	1.00
	1000	1.13 - 0.17 x a_1 x a_2	1.14 - 0.18 x a_1 x a_2	1.18 - 0.25 x a_1 x a_2
	1500	1.48 - 1.40 x a_1 x a_2	1.49 - 1.40 x a_1 x a_2	1.52 - 1.40 x a_1 x a_2

If f10<0.5, please consult us!

"⋆" On request。

HB

Table 9 Thermal capacity factor for gear units with cooling coil f_{11}

Gear unit type	n 1/min	Place of installation: Small confined spaces Wind velocity ⩾0.5m/s	Large halls,workshops Wind velocity ⩾ 1.4 m/s	In the open Wind velocity ⩾ 4.0 m/s
H1	750	0.87	0.91	1.00
	1000	0.97 - 0.02 x a_1 x a_2	1.03 - 0.05 x a_1 x a_2	1.16 - 0.10 x a_1 x a_2
	1500	1.15 - 0.19 x a_1 x a_2	1.22 - 0.23 x a_1 x a_2	1.39 - 0.33 x a_1 x a_2
H2	750	0.88	0.91	1.00
	1000	1.01	1.06 - 0.08 x a_1 x a_2	1.17 - 0.24 x a_1 x a_2
	1500	1.27 - 0.79 x a_1 x a_2	1.33 - 0.88 x a_1 x a_2	1.47 - 1.10 x a_1 x a_2
H3	750	0.89	0.91	1.00
	1000	1.04	1.07	1.18 - 0.38 x a_1 x a_2
	1500	1.38 - 0.78 x a_1 x a_2	1.34 - 1.10 x a_1 x a_2	1.47 - 1.60 x a_1 x a_2
B2	750	0.86	0.90	1.00
	1000	0.98	1.02	1.15 - 0.09 x a_1 x a_2
	1500	1.14	1.19 - 0.05 x a_1 x a_2	1.38 - 0.37 x a_1 x a_2
B3	750	0.88	0.91	1.00
	1000	1.03	1.06	1.17 - 0.18 x a_1 x a_2
	1500	1.28 - 0.35 x a_1 x a_2	1.32 - 0.48 x a_1 x a_2	1.46 - 0.84 x a_1 x a_2

If f11<0.5, please consult us!

Table 10 Thermal capacity factor for gear units with fan and cooling coil f_{12}

Gear unit type	n 1/min	Place of installation: Small confined spaces Wind velocity ⩾0.5m/s	Large halls,workshops Wind velocity ⩾ 1.4 m/s	In the open Wind velocity ⩾ 4.0 m/s
H1	750	0.98	0.98	1.00
	1000	1.19 - 0.09 x a_1 x a_2	1.20 - 0.09 x a_1 x a_2	1.22 - 0.09 x a_1 x a_2
	1500	1.56 - 0.31 x a_1 x a_2	1.56 - 0.30 x a_1 x a_2	1.57 - 0.29 x a_1 x a_2
H2	750	0.97	0.98	1.00
	1000	1.19 - 0.25 x a_1 x a_2	1.20 - 0.25 x a_1 x a_2	1.22 - 0.25 x a_1 x a_2
	1500	1.59 - 1.06 x a_1 x a_2	1.59 - 1.00 x a_1 x a_2	1.61 - 1.00 x a_1 x a_2
H3	750	0.94	0.95	1.00
	1000	1.14 - 0.46 x a_1 x a_2	1.15 - 0.47 x a_1 x a_2	1.20 - 0.48 x a_1 x a_2
	1500	1.51 - 2.10 x a_1 x a_2	1.52 - 2.00 x a_1 x a_2	1.57 - 2.00 x a_1 x a_2
B2	750	0.97	0.98	1.00
	1000	1.17 - 0.08 x a_1 x a_2	1.18 - 0.08 x a_1 x a_2	1.21 - 0.12 x a_1 x a_2
	1500	1.55 - 0.47 x a_1 x a_2	1.55 - 0.47 x a_1 x a_2	1.58 - 0.52 x a_1 x a_2
B3	750	0.97	0.97	1.00
	1000	1.17 - 0.08 x a_1 x a_2	1.18 - 0.10 x a_1 x a_2	1.21 - 0.19 x a_1 x a_2
	1500	1.56 - 0.84 x a_1 x a_2	1.57 - 0.85 x a_1 x a_2	1.60 - 0.92 x a_1 x a_2

If f12<0.5, please consult us!

Table 11 Size factor a_1

Size	3	4	5	6	7	8	9	10	11	12	13	14
a_1	0.024	0.030	0.050	0.055	0.065	0.075	0.085	0.095	0.135	0.160	0.190	0.200
Size	15	16	17	18	19	20	21	22	23	24	25	26
a_1	0.270	0.290	0.320	0.345	0.370	0.390	0.530	0.610	Please refer to us.			

HB

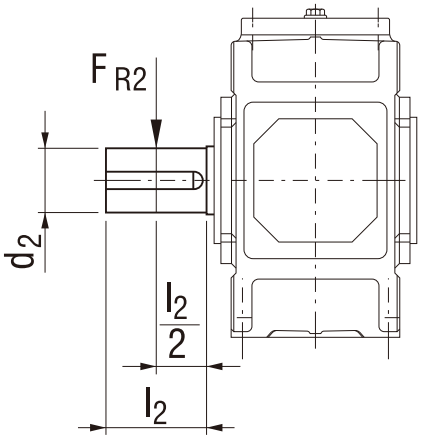
Table 12 Ratio factor a_2

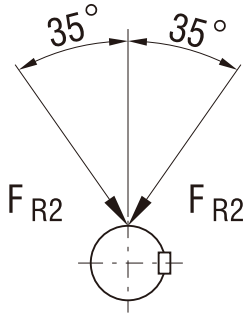
i	H1SH	i	H2SH	i	H3SH	i	H4SH	i	B2SH	i	B3SH	i	B4SH
1.25	13.000	6.3	1.800	22.4	0.320	100	0.020	5	3.500	12.5	0.950	80	0.110
1.4	12.000	7.1	1.600	25	0.310	112	0.015	5.6	2.800	14	0.850	90	0.100
1.6	10.000	8	1.400	28	0.270	125	0.012	6.3	2.400	16	0.800	100	0.090
1.8	8.500	9	1.100	31.5	0.230	140	0.009	7.1	1.900	18	0.750	112	0.080
2	8.000	10	0.890	35.5	0.190	160	0.007	8	1.600	20	0.700	125	0.070
2.24	7.000	11.2	0.740	40	0.170	180	0.004	9	1.350	22.4	0.650	140	0.060
2.5	6.500	12.5	0.630	45	0.160	200	0.002	10	1.200	25	0.550	160	0.050
2.8	6.000	14	0.530	50	0.110	224	0	11.2	1.100	28	0.450	180	0.040
3.15	3.500	16	0.450	56	0.080	250	0	12.5	0.950	31.5	0.380	200	0.030
3.55	3.300	18	0.370	63	0.050	280	0	14	0.850	35.5	0.330	224	0.020
4	2.900	20	0.330	71	0.045	315	0	16	0.800	40	0.300	250	0.010
4.5	2.100	22.4	0.320	80	0.040	355	0	18	0.750	45	0.270	280	0
5	1.600	25	0.310	90	0.035	400	0			50	0.200	315	0
5.6	1.600	28	0.270	100	0.020	450	0			56	0.150	355	0
				112	0.015					63	0.130	400	0
										71	0.120		
										80	0.110		
										90	0.100		

Note: Gear units installed in open field will avoid direct sunshine by equiping a shelter.

Permissible additional radial force on output shaft

Permissible additional radial force on output shaft d2:





Permissible direction of force

Permissible additional radial force FR2(kN), applied at mid point of extension of output shaft

Type	Arrangement	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
H1SH	A / B	*	—	*	—	*	—	*	—	*	—	*	—	*	—	*	—
H2S.	A / B / G / H	—	10	22	22	30	30	30	45	64	64	150	150	140	205	205	205
	C / D	—	10	13	13	18	18	10	28	35	35	112	112	85	135	135	135
H3S.	A / B / G / H	—	—	29	29	40	40	40	60	85	85	190	190	185	265	265	265
	C / D	—	—	18	18	26	26	18	40	50	50	150	150	120	185	185	190
H4S.	A / B	—	—	—	—	26	26	18	40	50	50	150	150	120	185	185	190
	C / D	—	—	—	—	40	40	40	60	85	85	190	190	185	265	265	265
B2S.	A / C	—	13	27	27	37	37	38	55	78	78	160	160	150	210	210	210
	B / D	—	12	15	15	17	17	10	30	35	38	110	110	75	145	100	100
B3S.	A / C	—	14	29	29	40	40	40	60	85	85	190	190	185	265	265	265
	B / D	—	9	18	18	26	26	18	40	50	50	150	150	120	185	185	190
B4S.	A / C	—	—	29	29	40	40	40	60	85	85	190	190	185	265	265	265
	B / D	—	—	18	18	26	26	18	40	50	50	150	150	120	185	185	190

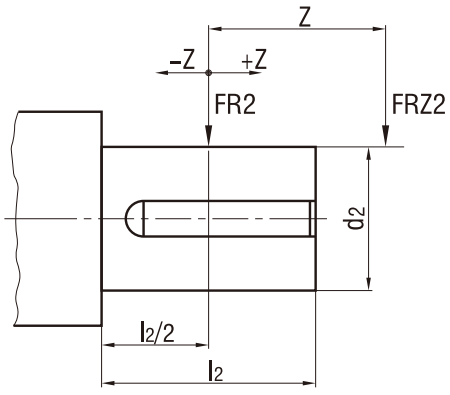
Note:

1. If the angle of applied force and the direction of rotation are given, in most of cases, higher additional force can mostly allowed. Please consult us.
2. "*" upon request.
3. When the force is not applied at mid point of shaft, please refer to R09.
4. Lowest performance level of foundation bolt is 8.8. The foundation should be dry and grease free. If customers have requirements, radial force is allowed to be applied at input shaft d1. Please consult us.

Permissible additional radial force on output shaft d2:

Force is not applied at mid point of shaft extension of output shaft

$$F_{RZ2} = F_{R2} \times k$$



F_{RZ2} Permissible external radial force

F_{R2} Permissible additional radial force Determined according to previous table

k Apllied force factor should be determined according to the following table

Applied force factor k

Size	Distance z (mm)														
	- 200	- 150	- 100	- 75	- 50	- 25	0	25	50	75	100	150	200	250	300
3					1.21	1.09	1.00	0.85	0.74	0.65	0.58	0.48			
4					1.17	1.08	1.00	0.86	0.76	0.68	0.62	0.52	0.44		
5、6				1.22	1.14	1.06	1.00	0.88	0.79	0.72	0.66	0.56	0.49	0.43	
7、8				1.19	1.12	1.06	1.00	0.89	0.81	0.74	0.68	0.58	0.51	0.46	0.41
9、10			1.22	1.15	1.10	1.05	1.00	0.90	0.82	0.76	0.70	0.61	0.54	0.48	0.44
11、12			1.18	1.13	1.08	1.04	1.00	0.91	0.84	0.78	0.73	0.64	0.57	0.51	0.47
13、14		1.24	1.15	1.11	1.07	1.03	1.00	0.92	0.86	0.80	0.75	0.67	0.60	0.55	0.50
15、16		1.20	1.12	1.09	1.06	1.03	1.00	0.93	0.87	0.82	0.77	0.69	0.63	0.58	0.53
17、18	1.25	1.17	1.11	1.08	1.05	1.03	1.00	0.94	0.88	0.84	0.79	0.72	0.66	0.60	0.56

H1 transmission capacity(iN=1.25-5.6):

n_1 (r/min)	n_{2N} (r/min)	i_N	H1–3			H1–5			H1–7			H1–9			H1–11			H1–13			H1–15			H1–17			H1–19		
			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)	T_{2N} (kN·m)	iex	P_{1N} (kW)	T_{2N} (kN·m)	iex	P_{1N} (kW)
1500	1200				327			880			1671			2702															
1000	800	1.25	2.6	1.243	218	7	1.256	586	13.3	1.263	1114	21.5	1.270	1801														
750	600				163			440			836			1351															
1500	1071				303			807			1559			2501															
1000	714	1.4	2.7	1.371	202	7.2	1.378	538	13.9	1.389	1039	22.3	1.400	1667														
750	536				152			404			780			1252															
1500	938				285			737			1395			2318			3929												
1000	625	1.6	2.9	1.594	190	7.5	1.588	491	14.2	1.606	929	23.6	1.625	1545	40	1.636	2618	63	1.588	4123									
750	469				142			368			697			1159			1964			3094									
1500	833				209			672			1326			2128			3611												
1000	556	1.8	2.4	1.829	140	7.7	1.839	448	15.2	1.774	885	24.4	1.800	1421	41.4	1.806	2410	66.3	1.839	3860									
750	417				105			336			664			1065			1808			2895									
1500	750				196			644			1217			1963			3353												
1000	500	2.0	2.5	2.000	131	8.2	2.034	429	15.5	1.966	812	25	2.000	1309	42.7	2.000	2236	68.2	2.034	3571	121	2.000							
750	375				98			322			609			982			1677			2678			4751						
1500	670				175			589			1087			1754			3087												
1000	446	2.24	2.5	2.194	117	8.4	2.259	392	15.5	2.308	724	25	2.231	1168	44	2.222	2055	70.3	2.259	3283	122	2.231							
750	335				88			295			544			877			1543			2466			4280						
1500	600				163			528			974			1571			2764												
1000	400	2.5	2.6	2.536	109	8.4	2.520	352	15.5	2.583	649	25	2.500	1047	44	2.480	1843	72	2.520	3016	110	2.481	4607						
750	300				82			264			487			785			1382			2262			3455						
1500	536				152			471			836			1330			2470												
1000	357	2.8	2.7	2.808	101	8.4	2.826	314	14.9	2.800	557	23.7	2.741	886	44	2.783	1645	72	2.826	2692	113	2.760	4224	171	2.760				
750	268				76			236			418			665			1235			2021			3171			4799			
1500	476				135			419			758			1221			2088			3409									
1000	317	3.15	2.7	3.125	90	8.4	3.190	279	15.2	3.130	505	24.5	3.208	813	41.9	3.080	1391	68.4	3.208	2270	116	3.087	3850	173	3.087				
750	238				67			209			379			611			1044			1705			2891			4311			
1500	423				124			368			687			1103			1936			3083									
1000	282	3.55	2.8	3.500	83	8.3	3.591	245	15.5	3.524	458	24.9	3.591	735	43.7	3.478	1290	69.6	3.591	2055	118	3.476	3484	173	3.476				
750	211				62			183			342			550			966			1538			2607			3822			
1500	375				110			330			609			982			1728			2780									
1000	250	4.0	2.8	3.950	73	8.4	4.050	220	15.5	4.000	406	25	4.050	654	44	3.905	1152	70.8	4.050	1853	122	3.947	3194	173	3.947	4529	245	3.994	
750	188				55			165			305			492			866			1394			2402			3406			4823
1500	333				77			234			481			746			1395			2008			3557						
1000	222	4.5	2.2	4.435	51	6.7	4.619	156	13.8	4.400	321	21.4	4.381	497	40	4.421	930	57.6	4.619	1339	102	4.579	2371	146	4.526	3394	216	4.400	
750	167				38			117			241			374			699			1007			1784			2553			3777
1500	300				66			198			377			644			1059			1712			2790						
1000	200	5.0	2.1	4.952	44	6.3	4.900	132	12	4.905	251	20.5	4.947	429	33.7	5.150	706	54.5	4.900	1141	88.8	5.100	1860	124	4.900	2597	174	4.950	3644
750	150				33			99			188			322			529			856			1395			1948			2733
1500	268				56			168			320			491			892			1454			2371						
1000	179	5.6	2	5.579	37	6	5.556	112	11.4	5.526	214	17.5	5.684	328	31.8	5.474	596	51.8	5.556	971	84.5	5.778	1584	118	5.556	2212	150	5.700	2812
750	134				28			84			160			246			446			727			1186			1656			2105

Note: Forced lubrication required on horizontal gear units.

HB

H series transmission capacity(iN=6.3-35.5):

n_1 (r/min)	n_{2N} (r/min)	i_N	H–4			H–5			H–6			H–7			H–8			H–9		
			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)
1500	238				157			262						474						785
1000	159	6.3	6.3	6.319	105	10.5	6.286	175				19	6.088	316				31.5	6.260	524
750	119				79			131						237						393
1500	211				139			232						420						696
1000	141	7.1	6.3	6.857	93	10.5	7.213	155				19	7.048	281				31.5	7.247	465
750	106				70			117						211						350
1500	188				124			207			266			374			472			620
1000	125	8.0	6.3	7.778	82	10.5	7.889	137	13.5	7.792	177	19	7.799	249	24	7.676	314	31.5	8.018	412
750	94				62			103			133			187			236			310
1500	167				110			184			236			332			420			551
1000	111	9	6.3	8.485	73	10.5	8.652	122	13.5	8.940	157	19	8.660	221	24	8.887	279	31.5	8.904	366
750	83				55			91			117			165			209			274
1500	150				99			165			212			298			377			495
1000	100	10	6.3	9.722	66	10.5	10.002	110	13.5	9.778	141	19	9.660	199	24	9.833	251	31.5	9.932	330
750	75				49			82			106			149			188			247
1500	134				88			147			189			267			337			442
1000	89	11.2	6.3	10.694	59	10.5	11.075	98	13.5	10.724	126	19	10.648	177	24	10.920	224	31.5	11.138	294
750	67				44			74			95			133			168			221
1500	120				79			132			170			239			302			396
1000	80	12.5	6.3	12.444	53	10.5	12.326	88	13.5	12.397	113	19	11.807	159	24	12.180	201	31.5	12.574	264
750	60				40			66			85			119			151			198
1500	107				71			118			151			213			269			353
1000	71	14	6.3	13.865	47	10.5	13.806	78	13.5	13.726	100	19	13.939	141	24	13.426	178	31.5	14.152	234
750	54				36			59			76			107			136			178
1500	94				62			103			133			187			236			310
1000	63	16	6.3	15.556	42	10.5	15.581	69	13.5	15.278	89	19	15.717	125	24	14.887	158	31.5	15.962	208
750	47				31			52			66			94			118			155
1500	83				55			91			117			165			209			274
1000	56	18	6.3	17.602	37	10.5	17.493	62	13.5	17.111	79	19	17.598	111	24	17.576	141	31.5	18.204	185
750	42				28			46			59			84			106			139
1500	75				49			82			106			149			188			247
1000	50	20	6.3	19.444	33	10.5	19.534	55	13.5	19.311	71	19	19.742	99	24	19.817	126	31.5	19.312	165
750	38				25			42			54			76			95			125
1500	67				43			72			95			130			168			217
1000	45	22.4	6.2	22.037	29	10.2	22.006	48	13.5	21.681	64	18.6	20.982	88	24	22.189	113	31	21.895	146
750	33				21			35			47			64			83			107
1500	60							69			85			129			151			214
1000	40	25				11	25.011	46	13.5	24.212	57	20.5	25.540	86	24	24.892	101	34	25.439	142
750	30							35			42			64			75			107
1500	54							62			74			116			133			192
1000	36	28				11	28.490	41	13	27.275	49	20.5	27.711	77	23.5	26.456	89	34	29.187	128
750	27							31			37			58			66			96
1500	48							55			73			103			128			171
1000	32	31.5				11	31.161	37	14.5	30.999	49	20.5	31.433	69	25.5	32.202	85	34	31.924	114
750	24							28			36			52			64			85
1500	42							48			64			90			112			150
1000	28	35.5				11	34.177	32	14.5	35.312	43	20.5	34.291	60	25.5	34.940	75	34	35.013	100
750	21							24			32			45			56			75

H–10			H–11			H–12			H–13			H–14			H–15			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)			
					1383						2143						3564		238	1500
			55.5	6.246	924				86	6.410	1432				143	6.449	2381	6.3	159	1000
					692						1072						1782		119	750
					1226						1900						3159		211	1500
			55.5	6.900	819				86	7.100	1270				143	7.120	2111	7.1	141	1000
					616						955						1587		106	750
		778			1093			1358			1693			2106			2815		188	1500
39.5	7.848	517	55.5	7.644	726	69	7.941	903	86	7.889	1126	107	7.944	1401	143	7.882	1872	8.0	125	1000
		389			546			679			846			1053			1408		94	750
		691			971			1207			1504			1871			2501		167	1500
39.5	9.085	459	55.5	8.974	645	69	8.772	802	86	8.799	1000	107	8.800	1244	143	8.758	1662	9	111	1000
		343			482			600			747			930			1243		83	750
		620			872			1084			1351			1681			2246		150	1500
39.5	10.053	414	55.5	10.046	581	69	9.718	723	86	9.861	901	107	9.778	1120	143	9.774	1497	10	100	1000
		310			436			542			675			840			1123		75	750
		554			779			968			1207			1501			2006		134	1500
39.5	11.163	368	55.5	10.889	517	69	11.410	643	86	10.811	801	107	10.906	997	143	10.967	1333	11.2	89	1000
		277			389			484			603			751			1003		67	750
		496			697			867			1081			1345			1797		120	1500
39.5	12.452	331	55.5	12.174	465	69	12.773	578	86	12.655	720	107	12.222	896	143	12.139	1198	12.5	80	1000
		248			349			434			540			672			898		60	750
		443			622			773			964			1199			1602		107	1500
39.5	13.964	294	55.5	13.704	413	69	13.844	513	86	14.164	639	107	13.399	795	143	13.708	1063	14	71	1000
		223			314			390			486			605			809		54	750
		389			546			679			846			1053			1408		94	1500
39.5	15.765	261	55.5	15.556	366	69	15.478	455	86	15.975	567	107	15.685	706	143	15.389	943	16	63	1000
		194			273			340			423			527			704		47	750
		343			482			600			747			930			1243		83	1500
39.5	17.743	232	55.5	17.111	325	69	17.423	405	86	17.280	504	107	17.556	627	143	17.424	839	18	56	1000
		174			244			303			378			471			629		42	750
		310			436			542			675			840			1123		75	1500
39.5	20.012	207	55.5	19.074	291	69	19.778	361	86	19.515	450	107	19.800	560	143	20.297	749	20	50	1000
		157			221			275			342			426			569		38	750
		277			382			484			617			751			1073		67	1500
39.5	22.824	186	54.5	21.491	257	69	21.756	325	88	22.020	415	107	21.418	504	153	21.374	721	22.4	45	1000
		136			188			238			304			370			529		33	750
		248			377			434			553			672			961		60	1500
39.5	24.212	165	60	24.706	251	69	24.251	289	88	25.372	369	107	24.187	448	153	24.716	641	25	40	1000
		124			188			217			276			336			481		30	750
		220			339			383			498			616			865		54	1500
38.9	27.451	147	60	28.602	226	67.8	27.325	256	88	29.373	332	109	27.292	411	153	27.304	577	28	36	1000
		110			170			192			249			308			433		27	750
		216			302			377			442			548			769		48	1500
43	31.894	144	60	31.648	201	75	31.412	251	88	32.501	295	109	31.447	365	153	30.248	513	31.5	32	1000
		108			151			188			221			274			385		24	750
		189			264			330			387			479			673		42	1500
43	36.593	126	60	35.144	176	75	36.366	220	88	36.092	258	109	36.406	320	153	35.514	449	35.5	28	1000
		95			132			165			194			240			336		21	750

Note: ▭ Forced lubrication required on horizontal gear units.

H series transmission capacity(iN=6.3-35.5):

n_1 (r/min)	n_{2N} (r/min)	i_N	H–16			H–17			H–18			H–19			H–20			H–21		
			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)
1500	238							4860												
1000	159	6.3				195	6.154	3247				292	6.410	4862					6.500	
750	119							2430						3639						
1500	211				3535			4308			5082									
1000	141	7.1	160	7.316	2362	195	7.125	2879	230	7.147	3396	292	7.100	4311	335	7.312	4946	410	7.200	
750	106				1776			2164			2553			3241			3718			4551
1500	188				3150			3839			4528									
1000	125	8.0	160	8.076	2094	195	7.884	2552	230	8.274	3010	292	7.889	3822	335	8.100	4385	410	8.000	5366
750	94				1575			1919			2264			2874			3297			4036
1500	167				2798			3410			4022									
1000	111	9	160	8.941	1860	195	8.755	2266	230	9.155	2673	292	8.799	3394	335	9.000	3894	410	8.923	4765
750	83				1391			1695			1999			2538			2912			3563
1500	150				2513			3063			3613									
1000	100	10	160	9.935	1675	195	9.765	2042	230	10.167	2408	292	9.788	3058	335	10.038	3508	410	9.926	4293
750	75				1257			1531			1806			2293			2631			3220
1500	134				2245			2736			3227									
1000	89	11.2	160	11.087	1491	195	10.951	1817	230	11.340	2143	292	10.887	2721	335	11.167	3122	410	11.040	3821
750	67				123			1368			1614			2049			2350			2876
1500	120				2010			2450			2890			3669						
1000	80	12.5	160	12.440	1340	195	12.432	1634	230	12.717	1927	292	12.176	2446	335	12.420	2806	410	12.348	3435
750	60				1005			1225			1445			1835			2105			2576
1500	107				1793			2185			2577			3272			3753			
1000	71	14	160	13.769	190	195	13.914	1450	230	14.438	1710	292	13.712	2171	335	13.891	2491	410	13.905	3048
750	54				905			1103			1301			1651			1894			2318
1500	94				1575			1919			2264			2874			3297			
1000	63	16	160	15.550	1055	195	15.694	1286	230	16.159	1517	292	15.570	1926	335	15.643	2210	410	15.789	2705
750	47				787			960			132			1437			1649			2018
1500	83				1391			1695			1999			2538			2912			
1000	56	18	160	17.457	938	195	17.899	1143	230	18.225	1349	292	18.061	1712	335	17.763	1964	410	18.316	2404
750	42				704			858			1012			1284			1473			1803
1500	75				1257			1531			1806			2293			2631			
1000	50	20	160	19.765	838	195	18.988	1021	230	20.786	1204	292	20.117	1529	335	20.605	1754	410	20.400	2147
750	38				637			776			915			1162			1333			1631
1500	67				123			1403			1614			2105			2350			2947
1000	45	22.4	160	23.024	754	200	20.930	942	230	22.050	1084	300	21.782	1414	335	22.950	1579	420	22.368	1979
750	33				553			691			795			1037			158			1451
1500	60				1087			1257			1508			1885			2168			2639
1000	40	25	173	24.245	725	200	24.202	838	240	24.306	1005	300	25.283	1257	345	24.850	1445	420	25.837	1759
750	30				543			628			754			942			1084			1319
1500	54				978			1131			1357			1696			1951			2375
1000	36	28	173	28.036	652	200	26.736	754	240	28.106	905	300	28.006	1131	345	28.844	1301	420	28.523	1583
750	27				489			565			679			848			975			1187
1500	48				870			1005			1206			1508			1734			2111
1000	32	31.5	173	30.971	580	200	29.619	670	240	31.048	804	300	31.117	1005	345	31.950	156	420	31.579	1407
750	24				435			503			603			754			867			1055
1500	42				761			880			1055			1319			1517			1847
1000	28	35.5	173	34.311	507	200	34.776	586	240	34.397	704	300	34.708	880	345	35.500	1012	420	35.088	1231
750	21				308			440			528			660			759			924

Note: ▭ Forced lubrication required on horizontal gear units.

H–22			H–23			H–24			H–25			H–26			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)			
																238	1500
				6.306						6.280					6.3	159	1000
																119	750
																211	1500
	7.265			7.038			7.059			6.915			7.232		7.1	141	1000
																106	750
																188	1500
458	8.047			7.882			7.878			7.635			7.963		8.0	125	1000
		4508														94	750
																167	1500
458	8.941	5323	540	8.868			8.824			8.915			8.792		9	111	1000
		3981			4693											83	750
																150	1500
458	9.973	4796	540	9.780		620	9.926			9.939			10.266		10	100	1000
		3597			4241			4869								75	750
																134	1500
458	11.094	4268	540	10.878	5032	620	10.948		780	11.141			11.445		11.2	89	1000
		3213			3788			4350								67	750
																120	1500
458	12.339	3837	540	12.166	4524	620	12.176		780	12.571		880	12.829		12.5	80	1000
		2877			3393			3895			4900					60	750
																107	1500
458	13.801	3405	540	13.700	4015	620	13.619	4609	780	13.394		880	14.476		14	71	1000
		2590			3053			3506			4410			4976		54	750
																94	1500
458	15.541	3021	540	15.557	3562	620	15.336	4090	780	15.314	5146	880	15.424		16	63	1000
		2254			2658			3051			3839			4331		47	750
																83	1500
458	17.647	2686	540	17.839	3166	620	17.415	3636	780	17.082	4574	880	17.634	5160	18	56	1000
		2014			2375			2727			3430			3870		42	750
																75	1500
458	20.471	2398	540	19.312	2827	620	19.969	3246	780	19.218	4084	880	19.671	4607	20	50	1000
		1822			2149			2467			3104			3502		38	750
					3929											67	1500
458	22.800	2158	560	22.039	2639	620	21.618	2921	800	21.108	3770	880	22.129	4147	22.4	45	1000
		1583			1935			2142			2764			3041		33	750
		2953			3518			4021			5026					60	1500
470	25.000	1969	560	25.457	2346	640	24.671	2681	800	24.322	3351	900	24.306	3770	25	40	1000
		1476			1759			2010			2513			2827		30	750
		2658			3166			3619			4524			5089		54	1500
470	28.877	1772	560	28.103	2111	640	28.497	2413	800	28.157	3016	900	28.007	3393	28	36	1000
		1329			1583			1809			2262			2545		27	750
		2362			2815			3217			4021			4524		48	1500
470	31.879	1575	560	31.115	1876	640	31.459	2145	800	31.156	2681	900	32.424	3016	31.5	32	1000
		181			1407			1608			2010			2262		24	750
		2067			2463			2815			3518			3958		42	1500
470	35.294	1378	560	34.572	1642	640	34.830	1876	800	34.598	2346	900	35.876	2639	35.5	28	1000
		1034			1231			1407			1759			1979		21	750

Note: ▭ Forced lubrication required on horizontal gear units.

H series transmission capacity(iN=40-450):

n_1 (r/min)	n_{2N} (r/min)	i_N	H-5			H-6			H-7			H-8			H-9		
			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)
1500	38				44			58			82			101			135
1000	25	40	11	39.508	29	14.5	38.622	38	20.5	39.292	54	25.5	39.633	67	34	40.474	89
750	18.8				22			29			40			50			67
1500	33				38			50			71			88			117
1000	22	45	11	43.745	25	14.5	42.360	33	20.5	43.221	47	25.5	43.236	59	34	44.816	78
750	16.7				19			25			36			45			59
1500	30				35			46			64			80			107
1000	20	50	11	48.689	23	14.5	48.967	30	20.5	50.293	43	25.5	49.542	53	34	49.881	71
750	15				17			23			32			40			53
1500	27				31			41			58			72			96
1000	17.9	56	11	54.532	21	14.5	54.220	27	20.5	56.033	38	25.5	54.496	48	34	55.866	64
750	13.4				15			20			29			36			48
1500	24				28			36			52			64			85
1000	15.9	63	11	61.543	18	14.5	60.347	24	20.5	62.867	34	25.5	63.413	42	34	63.049	57
750	11.9				14			18			26			32			42
1500	21				24			32			45			56			75
1000	14.1	71	11	69.742	16	14.5	67.589	21	20.5	71.139	30	25.5	70.651	38	34	70.787	50
750	10.6				12			16			23			28			38
1500	18.8				22			29			40			50			67
1000	12.5	80	11	78.723	14	14.5	76.279	19	20.5	78.583	27	25.5	79.267	33	34	79.049	45
750	9.4				11			14			20			25			33
1500	16.7				19			25			35			45			59
1000	11.1	90	11	86.806	13	14.5	86.440	17	20	89.061	23	25.5	89.696	30	33.5	89.050	39
750	8.3				10			13			17			22			29
1500	15							23			32			40			53
1000	10	100				14.5	97.572	15	20.5	101.554	21	25.5	99.083	27	34	101.210	36
750	7.5							11			16			20			27
1500	13.4							20			29			35			48
1000	8.9	112				14.1	107.590	13	20.5	115.256	19	25.2	112.294	23	34	115.290	32
750	6.7							10			14			18			24
1500	12										26			32			43
1000	8	125							20.5	125.733	17	25.5	128.046	21	34	126.098	28
750	6										13			16			21
1500	10.7										23			29			38
1000	7.1	140							20.5	143.985	15	25.5	145.322	19	34	138.301	25
750	5.4										12			14			19
1500	9.4										20			25			33
1000	6.3	160							20.5	158.251	14	25.5	158.533	17	34	159.874	22
750	4.7										10			13			17
1500	8.3										18			22			30
1000	5.6	180							20.5	174.630	12	25.5	181.546	15	34	177.022	20
750	4.2										9.0			11			15
1500	7.5										16			20			27
1000	5	200							20.5	193.629	11	25.5	199.533	13	34	197.028	18
750	3.8										8.2			10			14
1500	6.7										14			18			24
1000	4.5	224							20.5	228.606	10	25.5	220.185	12	34	220.671	16
750	3.3										7.1			8.8			12
1500	6										13			16			21
1000	4	250							20.5	257.753	8.6	25.5	244.141	11	34	249.043	14
750	3										6.4			8.0			11
1500	5.4										12			14			19
1000	3.6	280							20.5	288.615	7.7	25.5	288.242	9.6	34	282.219	13
750	2.7										5.8			7.2			10
1500	4.8										10.3			13			17
1000	3.2	315							20.5	305.352	7	25.5	324.993	8.5	34	318.563	11
750	2.4										5.2			6.4			8.5
1500	4.2										8.6			11			15
1000	2.8	355							19.6	344.112	5.7	25.5	363.906	7.5	33	351.273	9.7
750	2.1										4.3			5.6			7.3
1500	3.8													10.1			
1000	2.5	400										25.5	385.010	6.7			
750	1.9													5.1			
1500	3.3													8.6			
1000	2.2	450										24.8	433.881	5.7			
750	1.7													4.4			

H–10			H–11			H–12			H–13			H–14			H–15			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)			
		171			239			298			350			434			609		38	1500
43	40.024	113	60	39.200	157	75	40.238	196	88	40.257	230	109	40.283	285	153	39.756	401	40	25	1000
		85			118			148			173			215			301		18.8	750
		149			207			259			304			377			529		33	1500
43	43.897	99	60	43.210	138	75	44.683	173	88	45.147	203	109	44.733	251	153	43.090	352	45	22	1000
		75			105			131			154			191			268		16.7	750
		135			188			236			276			342			481		30	1500
43	50.744	90	60	47.911	126	75	49.840	157	88	50.968	184	109	49.896	228	153	48.175	320	50	20	1000
		68			94			118			138			171			240		15	750
		122			170			212			249			308			433		27	1500
43	56.187	81	60	56.566	112	75	54.938	141	88	57.365	165	109	55.957	204	153	54.229	287	56	17.9	1000
		60			84			105			123			153			215		13.4	750
		108			151			188			221			274			385		24	1500
43	62.537	72	60	63.778	100	75	60.916	125	88	64.699	147	109	63.171	181	153	61.557	255	63	15.9	1000
		54			75			93			110			136			191		11.9	750
		95			132			165			194			240			336		21	1500
43	70.041	63	60	71.414	89	75	71.919	111	88	73.789	130	109	71.100	161	153	67.713	226	71	14.1	1000
		48			67			83			98			121			170		10.6	750
		85			118			148			173			215			301		18.8	1500
43	79.046	56	60	80.111	79	75	81.089	98	88	78.278	115	109	80.190	143	153	75.481	200	80	12.5	1000
		42			59			74			87			107			151		9.4	750
		75			105			131			154			191			268		16.7	1500
43	88.748	50	60	85.146	70	75	90.798	87	88	88.750	102	109	91.457	127	153	85.046	178	90	11.1	1000
		37			52			65			76			95			133		8.3	750
		68			94			118			138			171			240		15	1500
43	99.106	45	60	103.639	63	75	101.856	79	88	103.114	92	109	97.020	114	153	97.768	160	100	10	1000
		34			47			59			69			86			120		7.5	750
		59			84			105			123			153			215		13.4	1500
42	111.645	39	60	112.450	56	75	108.257	70	88	118.306	82	109	110.000	102	153	113.186	143	112	8.9	1000
		29			42			53			62			76			107		6.7	750
		54			75			94			111			137			192		12	1500
43	126.890	36	60	127.556	50	75	131.769	63	88	129.398	74	109	127.803	91	153	125.238	128	125	8	1000
		27			38			47			55			68			96		6	750
		48			67			84			99			122			171		10.7	1500
43	144.542	32	60	139.152	45	75	142.973	56	88	141.920	65	109	146.633	81	153	139.074	114	140	7.1	1000
		24			34			42			50			62			87		5.4	750
		42			59			74			87			107			151		9.4	1500
43	158.093	28	60	159.444	40	75	162.178	49	88	164.058	58	109	160.380	72	153	155.125	101	160	6.3	1000
		21			30			37			43			54			75		4.7	750
		37			52			65			76			95			133		8.3	1500
43	173.392	25	60	175.389	35	75	176.921	44	88	181.654	52	109	175.901	64	153	170.993	90	180	5.6	1000
		19			26			33			39			48			67		4.2	750
		34			47			59			69			86			120		7.5	1500
43	200.439	23	60	204.089	31	75	202.722	39	88	202.184	46	109	203.339	57	153	189.597	80	200	5	1000
		17			24			30			35			43			61		3.8	750
		30			42			53			62			76			107		6.7	1500
43	221.938	20	60	227.382	28	75	222.994	35	88	226.446	41	109	225.149	51	153	223.845	72	224	4.5	1000
		15			21			26			30			38			53		3.3	750
		27			38			47			55			68			96		6	1500
43	247.020	18	60	255.111	25	75	259.484	31	88	255.560	37	109	250.594	46	153	252.385	64	250	4	1000
		14			19			24			28			34			48		3	750
		24			34			42			50			62			87		5.4	1500
43	276.663	16	60	288.678	23	75	289.100	28	88	286.925	33	109	280.665	41	153	282.605	58	280	3.6	1000
		12			17			21			25			31			43		2.7	750
		22			30			38			44			55			77		4.8	1500
43	312.234	14	60	318.889	20	75	324.356	25	88	320.413	29	109	316.751	37	153	317.021	51	315	3.2	1000
		11			15			19			22			27			38		2.4	750
		19			26			33			39			48			62		4.2	1500
43	353.827	13	59	361.407	17	75	367.034	22	88	360.951	26	109	355.625	32	140	336.946	41	355	2.8	1000
		9.5			13			16			19			24			31		2.1	750
		17						30						43					3.8	1500
43	399.393	11				75	405.444	20				109	397.131	29				400	2.5	1000
		8.6						15						22					1.9	750
		14						26						38					3.3	1500
41.6	440.402	9.6				74	459.504	17				109	447.376	25				450	2.2	1000
		7.4						13						19					1.7	750

H series transmission capacity(iN=40-450):

n_1 (r/min)	n_{2N} (r/min)	i_N	H–16			H–17			H–18			H–19			H–20		
			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)
1500	38				688			796			955			1194			1373
1000	25	40	173	40.284	453	200	38.929	524	240	40.385	628	300	38.897	785	345	39.596	903
750	18.8				341			394			472			591			679
1500	33				598			691			829			1037			1192
1000	22	45	173	45.096	399	200	42.194	461	240	45.208	553	300	42.642	691	345	44.375	795
750	16.7				303			350			420			525			603
1500	30				543			628			754			942			1084
1000	20	50	173	48.878	362	200	47.174	419	240	49.000	503	300	49.917	628	345	48.648	723
750	15				272			314			377			471			542
1500	27				489			565			679			848			975
1000	17.9	56	173	54.647	324	200	53.102	375	240	54.783	450	300	55.870	562	345	56.948	647
750	13.4				243			281			337			421			484
1500	24				435			503			603			754			867
1000	15.9	63	173	61.514	288	200	60.278	333	240	61.667	400	300	63.013	499	345	63.739	574
750	11.9				216			249			299			374			430
1500	21				380			440			528			660			759
1000	14.1	71	173	69.826	255	200	66.306	295	240	70.000	354	300	68.162	443	345	71.888	509
750	10.6				192			222			266			333			383
1500	18.8				341			394			472			591			679
1000	12.5	80	173	76.809	226	200	73.912	262	240	77.000	314	300	76.974	393	345	77.762	452
750	9.4				170			197			236			295			340
1500	16.7				303			350			420			507			603
1000	11.1	90	173	85.620	201	200	83.279	232	240	85.833	279	290	88.439	337	345	87.816	401
750	8.3				150			174			209			252			300
1500	15				272			314			355			471			526
1000	10	100	173	96.471	181	200	95.735	209	226	96.711	237	300	100.079	314	335	100.895	351
750	7.5				136			157			177			236			263
1500	13.4				243			281			337			421			484
1000	8.9	112	173	110.901	161	200	110.833	186	240	111.176	224	300	115.862	280	345	114.174	322
750	6.7				121			140			168			210			242
1500	12				217			251			302			377			434
1000	8	125	173	128.390	145	200	122.634	168	240	128.710	201	300	128.198	251	345	132.180	289
750	6				109			126			151			188			217
1500	10.7				194			224			269			336			387
1000	7.1	140	173	142.060	129	200	136.183	149	240	142.414	178	300	142.362	223	345	146.254	256
750	5.4				98			113			136			170			195
1500	9.4				170			197			236			295			340
1000	6.3	160	173	157.756	114	200	151.900	132	240	158.148	158	300	158.792	198	345	162.413	228
750	4.7				85			98			118			148			170
1500	8.3				150			174			209			261			300
1000	5.6	180	173	175.962	101	200	167.438	117	240	176.400	141	300	178.079	176	345	181.156	202
750	4.2				76			88			106			132			152
1500	7.5				136			157			188			236			271
1000	5	200	173	193.962	91	200	185.656	105	240	194.444	126	300	201.040	157	345	203.160	181
750	3.8				69			80			95			119			137
1500	6.7				121			140			168			210			242
1000	4.5	224	173	215.065	82	200	219.192	94	240	215.600	113	300	226.272	141	345	229.355	163
750	3.3				60			69			83			104			119
1500	6				109			126			151			188			217
1000	4	250	173	253.914	72	200	247.139	84	240	254.545	101	300	255.201	126	345	258.141	145
750	3				54			63			75			94			108
1500	5.4				98			113			136			170			195
1000	3.6	280	173	286.288	65	200	276.730	75	240	287.000	90	300	291.058	113	345	291.144	130
750	2.7				49			57			68			85			98
1500	4.8				87			101			121			151			173
1000	3.2	315	173	320.566	58	200	310.431	67	240	321.364	80	300	308.761	101	345	332.052	116
750	2.4				43			50			60			75			87
1500	4.2				76			84			106			128			152
1000	2.8	355	173	359.606	51	192	329.942	56	240	360.500	70	290	350.069	85	345	352.249	101
750	2.1				38			42			53			64			76
1500	3.8				63						89						133
1000	2.5	400	158	382.207	41				223	383.158	58				335	399.375	88
750	1.9				31						44						67
1500	3.3																
1000	2.2	450															
750	1.7																

H-21			H-22			H-23			H-24			H-25			H-26			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)			
		1671			1870			2228			2547			3183			3581		38	1500
420	39.158	1099	470	39.216	1230	560	38.582	1466	640	38.700	1675	800	38.591	2094	900	39.840	2356	40	25	1000
		827			925			1102			1260			1575			1772		18.8	750
		1451			1624			1935			2212			2764			3110		33	1500
420	43.936	968	470	43.765	1083	560	43.290	1290	640	43.189	1474	800	43.278	1843	900	44.438	2073	45	22	1000
		734			822			979			1119			1399			1574		16.7	750
		1319			1476			1759			2010			2513			2827		30	1500
420	48.632	880	470	49.105	984	560	47.916	1173	640	48.459	1340	800	49.132	1675	900	49.835	1885	50	20	1000
		660			738			880			1005			1257			1414		15	750
		1187			1329			1583			1809			2262			2545		27	1500
420	54.920	787	470	54.353	881	560	54.112	1050	640	53.638	1200	800	54.990	1499	900	56.576	1687	56	17.9	1000
		589			659			786			898			1123			1263		13.4	750
		1055			1181			1407			1608			2010			2262		24	1500
420	61.654	699	470	61.381	783	560	60.747	932	640	60.573	1066	800	62.021	1332	900	63.322	1498	63	15.9	1000
		523			586			698			797			997			1121		11.9	750
		924			1034			1231			1407			1759			1979		21	1500
420	69.806	620	470	68.908	694	560	68.780	827	640	68.001	945	800	70.735	1181	900	71.418	1329	71	14.1	1000
		466			522			622			710			888			999		10.6	750
		827			925			1102			1260			1575			1772		18.8	1500
420	81.316	550	470	78.019	615	560	80.120	733	640	76.992	838	800	75.037	1047	900	81.452	1178	80	12.5	1000
		413			463			551			630			787			886		9.4	750
		717			822			979			1119			1399			1574		16.7	1500
410	86.427	477	470	90.882	546	560	85.156	651	640	89.687	744	800	85.076	930	900	86.407	1046	90	11.1	1000
		356			408			487			556			695			782		8.3	750
		660			730			880			1005			1257			1414		15	1500
420	99.020	440	465	96.594	487	560	97.564	586	640	95.323	670	800	100.783	838	900	97.967	942	100	10	1000
		330			365			440			503			628			707		7.5	750
		589			659			786			898			1123			1263		13.4	1500
420	109.386	391	470	110.670	438	560	107.778	522	640	109.214	596	800	111.637	746	900	116.054	839	112	8.9	1000
		295			330			393			449			561			631		6.7	750
		528			591			704			804			1005			1131		12	1500
420	121.182	352	470	122.255	394	560	119.400	469	640	120.647	536	800	124.041	670	900	128.552	754	125	8	1000
		264			295			352			402			503			565		6	750
		471			527			627			717			896			1008		10.7	1500
420	142.279	312	470	135.439	349	560	140.186	416	640	133.657	476	800	138.354	595	900	142.835	669	140	7.1	1000
		237			266			317			362			452			509		5.4	750
		413			463			551			630			787			886		9.4	1500
420	159.273	277	470	159.017	310	560	156.931	369	640	156.925	422	800	155.051	528	900	159.316	594	160	6.3	1000
		207			231			276			315			394			443		4.7	750
		365			408			487			556			695			782		8.3	1500
420	172.632	246	470	178.011	276	560	170.093	328	640	175.669	375	800	169.982	469	900	178.544	528	180	5.6	1000
		185			207			264			281			352			396		4.2	750
		330			369			440			503			628			707		7.5	1500
420	193.004	220	470	192.941	246	560	190.166	293	640	190.402	335	800	198.983	419	900	195.737	471	200	5	1000
		167			187			223			255			318			358		3.8	750
		295			330			393			449			561			631		6.7	1500
420	217.257	198	470	215.711	221	560	214.062	264	640	212.872	302	800	222.710	377	900	229.132	424	224	4.5	1000
		145			162			194			221			276			311		3.3	750
		264			295			352			402			503			565		6	1500
420	246.617	176	470	242.817	197	560	242.990	235	640	239.622	268	800	251.183	355	900	256.454	377	250	4	1000
		132			148			176			201			251			283		3	750
		237			266			317			362			452			509		5.4	1500
420	271.278	158	470	275.630	177	560	267.289	211	640	272.004	241	800	271.709	302	900	289.241	339	280	3.6	1000
		119			133			158			181			226			254		2.7	750
		211			236			281			322			402			452		4.8	1500
420	302.399	141	470	303.193	157	560	297.952	188	640	299.204	214	800	306.839	268	900	312.877	302	315	3.2	1000
		106			118			141			161			201			226		2.4	750
		180			207			246			281			352			396		4.2	1500
410	340.720	120	470	337.975	138	560	335.710	164	640	333.528	188	800	352.538	235	900	353.329	264	355	2.8	1000
		90			103			123			141			176			198		2.1	750
					185						255						358		3.8	1500
			465	380.805	122				640	375.794	168				900	405.953	236	400	2.5	1000
					93						127						179		1.9	750
																			3.3	1500
																		450	2.2	1000
																			1.7	750

B series transmission capacity(iN=5-28):

n_1 (r/min)	n_{2N} (r/min)	i_N	B-4			B-5			B-6			B-7			B-8			B-9		
			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)
1500	300				182			295						559						880
1000	200	5	5.8	4.936	121	9.4	5.006	197				17.8	4.865	373				28	5.002	586
750	150				91			148						280						440
1500	268				163			264						500						786
1000	179	5.6	5.8	5.480	109	9.4	5.488	176				17.8	5.333	334				28	5.483	525
750	134				81			132						250						393
1500	238				145			234			299			444			556			698
1000	159	6.3	5.8	6.296	97	9.4	6.386	157	12	6.205	200	17.8	6.206	296	22.3	6.135	371	28	6.381	466
750	119				72			117			150			222			278			349
1500	211				128			208			265			393			493			619
1000	141	7.1	5.8	6.959	86	9.4	7.058	139	12	6.802	177	17.8	6.860	263	22.3	6.725	329	28	7.053	413
750	106				64			104			133			198			248			311
1500	188				114			185			236			350			439			551
1000	125	8	5.8	7.549	76	9.4	7.657	123	12	7.915	157	17.8	7.880	233	22.3	7.825	292	28	8.101	366
750	94				57			93			811			175			219			276
1500	167				101			164			210			311			390			490
1000	111	9	5.8	8.693	67	9.4	8.817	109	12	8.749	139	17.8	8.569	207	22.3	8.649	259	28	8.810	325
750	83				50			82			104			155			194			243
1500	150				91			148			188			280			350			440
1000	100	10	5.8	9.872	61	9.4	10.108	98	12	9.490	126	17.8	9.823	186	22.3	9.935	234	28	10.099	293
750	75				46			74			94			140			175			220
1500	134				81			132			168			250			313			393
1000	89	11.2	5.8	10.769	54	9.4	10.923	88	12	10.928	112	17.8	10.615	166	22.3	10.804	208	28	10.914	261
750	67				41			66			84			125			156			196
1500	120				69			118			151			214			280			352
1000	80	12.5	5.5	12.034	46	9.4	12.703	79	12	12.528	101	17.0	12.433	142	22.3	12.385	187	28	12.554	235
750	60				35			59			75			107			140			176
1500	107				67			110			134			204			250			331
1000	71	14	6	13.484	45	9.8	13.964	73	12	13.538	89	18.2	13.515	135	22.3	13.385	166	29.5	14.137	219
750	54				34			55			68			103			126			167
1500	94				61			100			118			188			212			305
1000	63	16	6.2	15.601	41	10.2	15.835	67	12	15.826	79	19.1	16.275	126	21.5	15.773	142	31	15.952	205
750	47				31			50			59			94			106			153
1500	83				56			92			110			172			201			282
1000	56	18	6.4	17.482	38	10.6	17.407	62	12.6	17.307	74	19.8	17.692	116	23.1	17.041	135	32.5	17.963	191
750	42				28			47			55			87			102			143
1500	75				52			86			104			161			188			267
1000	50	20	6.6	19.614	35	11	19.645	58	13.2	19.729	69	20.5	19.948	107	23.9	20.648	125	34	20.259	178
750	38				26			44			53			82			95			135
1500	67				46			77			97			144			174			239
1000	45	22.4	6.6	21.919	31	11	21.954	52	13.8	21.575	65	20.5	22.146	97	24.8	22.308	117	34	22.208	160
750	33				23			38			48			71			86			117
1500	60				41			69			91			129			160			214
1000	40	25	6.6	25.380	28	11	25.421	46	14.5	24.349	61	20.5	25.446	86	25.5	25.152	107	34	25.843	142
750	30				21			35			46			64			80			107
1500	54				37			62			82			116			144			192
1000	36	28	6.6	27.836	25	11	27.881	41	14.5	27.211	55	20.5	28.125	77	25.5	27.923	96	34	28.563	128
750	27				19			31			41			58			72			96

B-10			B-11			B-12			B-13			B-14			B-15			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)			
					1351						2073								300	1500
			43	4.897	901				66	4.967	1382				122	4.963	2555	5	200	1000
					675						1037						1916		150	750
					1263						1880								268	1500
			45	5.534	843				67	5.613	1256				122	5.609	2287	5.6	179	1000
					631						940						1712		134	750
		887			1171			1371			1769			2044					238	1500
35.6	6.271	593	47	6.296	783	55	6.226	916	71	6.386	1182	82	6.156	1365	130	6.340	2164	6.3	159	1000
		444			586			685			885			1022			1620		119	750
		787			1083			1259			1613			1856					211	1500
35.6	6.875	526	49	7.037	723	57	7.036	842	73	7.138	1078	84	6.957	1240	132	7.132	1949	7.1	141	1000
		395			544			633			810			932			1465		106	750
		701			994			1161			1516			1732			2598		188	1500
35.6	8.000	466	50.5	7.994	661	59	8.005	772	77	8.108	1008	88	7.915	1152	132	8.101	1728	8	125	1000
		350			497			581			758			866			1299		94	750
		623			883			1067			1364			1591			2309		167	1500
35.6	8.842	414	50.5	8.693	587	61	8.947	709	78	8.817	907	91	8.847	1058	132	8.810	1534	9	111	1000
		309			439			530			678			791			1147		83	750
		559			793			974			1225			1492			2073		150	1500
35.6	10.157	373	50.5	9.965	529	62	10.164	649	78	10.108	817	95	10.049	995	132	10.099	1382	10	100	1000
		280			397			487			613			746			1037		75	750
		500			709			870			1094			1368			1852		134	1500
35.6	11.045	332	50.5	10.769	471	62	11.052	578	78	10.923	727	97.5	10.928	909	132	10.914	1230	11.2	89	1000
		250			354			435			547			684			926		67	750
		447			635			779			980			1225			1659		120	1500
35.6	12.662	298	50.5	12.334	423	62	12.670	519	78	12.482	653	97.5	12.528	817	132	12.172	1106	12.5	80	1000
		224			317			390			490			613			829		60	750
		399			594			695			896			1092			1535		107	1500
35.6	13.683	265	53	13.821	394	62	13.692	461	80	13.721	595	97.5	13.538	725	137	13.810	1019	14	71	1000
		201			300			351			452			551			775		54	750
		350			551			610			817			960			1398		94	1500
35.6	15.693	235	56	15.522	369	62	15.888	409	83	16.354	548	97.5	15.552	643	142	15.215	937	16	63	1000
		175			276			305			408			480			699		47	750
		326			504			565			739			869			1286		83	1500
37.5	17.724	220	58	17.393	340	65	17.572	381	85	17.978	498	100	17.007	586	148	17.262	868	18	56	1000
		165			255			286			374			440			651		42	750
		309			471			534			691			809			1202		75	1500
39.3	19.940	206	60	19.744	314	68	19.995	356	88	20.276	461	103	20.376	539	153	19.379	801	20	50	1000
		156			239			271			350			410			609		38	750
		288			421			505			617			744			1073		67	1500
41	22.520	193	60	21.643	283	72	22.114	339	88	22.226	415	106	22.282	499	153	21.900	721	22.4	45	1000
		142			207			249			304			366			529		33	750
		270			377			471			553			685			961		60	1500
43	25.400	180	60	25.185	251	75	25.103	314	88	25.864	369	109	25.131	457	153	24.916	641	25	40	1000
		135			188			236			276			342			481		30	750
		243			339			424			498			616			865		54	1500
43	27.842	162	60	27.836	226	75	27.517	283	88	28.587	332	109	27.548	411	153	27.847	577	28	36	1000
		122			170			212			249			308			433		27	750

Note: ▭ Forced lubrication required on horizontal gear units.

B series transmission capacity(iN=5-28):

n_1 (r/min)	n_{2N} (r/min)	i_N	B–16			B–17			B–18			B–19			B–20			B–21		
			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)
1500	300																			
1000	200	5																		
750	150																			
1500	268																			
1000	179	5.6	135	5.630		195	5.514													
750	134				1894			2736												
1500	238																			
1000	159	6.3	141	6.362	2348	195	6.234													
750	119				1757			2430												
1500	211																			
1000	141	7.1	145	7.192	2141	195	7.012	2879	230	7.239										
750	106				1609			2164			2553									
1500	188																			
1000	125	8	148	8.090	1937	195	7.965	2552	230	8.143										
750	94				1457			1919			2264									
1500	167				2588															
1000	111	9	148	9.190	1720	195	8.662	2266	230	9.250	2673									
750	83				1286			1695			1999									
1500	150				2325															
1000	100	10	148	9.993	1550	195	9.930	2042	230	10.059	2408									
750	75				1162			1531			1806									
1500	134				2077															
1000	89	11.2	148	11.456	1379	195	10.731	1817	230	11.531	2143									
750	67				1038			1368			1614									
1500	120				1860			2450												
1000	80	12.5	148	12.380	1240	195	12.770	1634	230	12.462	1927	250	12.062	2094				340	12.256	2848
750	60				930			1225			1445			1571						2136
1500	107				1658			2185			2577									
1000	71	14	148	13.832	1100	195	13.790	1450	230	14.654	1710	262	13.709	1948	295	13.698	2193	360	13.902	2676
750	54				837			1103			1301			1481			1668			2036
1500	94				1516			1969			2264									
1000	63	16	154	15.665	1016	200	16.226	1319	230	16.014	1517	275	15.192	1814	308	15.640	2032	380	15.436	2507
750	47				758			984			132			1353			1516			1870
1500	83				1391			1738			2086									
1000	56	18	160	17.290	938	200	17.522	1173	240	18.620	1407	288	17.267	1689	320	17.252	1876	400	17.510	2346
750	42				704			880			1055			1267			1407			1759
1500	75				1312			1571			1885									
1000	50	20	167	19.581	874	200	19.762	1047	240	20.348	1257	300	19.607	1571	332	19.698	1738	420	19.883	2199
750	38				665			796			955			1194			1321			1671
1500	67				1214			1403			1684			2105			2420			
1000	45	22.4	173	21.982	815	200	22.333	942	240	22.950	1311	300	22.158	1414	345	22.368	1626	420	22.470	1979
750	33				598			691			829			1037			1192			1451
1500	60				1087			1257			1508			1885			2168			
1000	40	25	173	24.842	725	200	25.409	838	240	25.936	1005	300	25.048	1257	345	25.278	1445	420	25.400	1759
750	30				543			628			754			942			1084			1319
1500	54				978			1131			1357			1696			1950			2375
1000	36	28	173	28.263	652	200	28.398	754	240	29.507	905	300	28.175	1131	345	28.576	1301	420	28.571	1583
750	27				489			565			679			848			975			1187

Note: Forced lubrication required on horizontal gear units.

B–22			B–23			B–24			B–25			B–26			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)			
															5	300	1500
																200	1000
																150	750
															5.6	268	1500
																179	1000
																134	750
															6.3	238	1500
																159	1000
																119	750
															7.1	211	1500
																141	1000
																106	750
															8	188	1500
																125	1000
																94	750
															9	167	1500
																111	1000
																83	750
															10	150	1500
																100	1000
																75	750
															11.2	134	1500
																89	1000
																67	750
															12.5	120	1500
																80	1000
																60	750
405	13.719														14	107	1500
																71	1000
		2299														54	750
422	15.538														16	94	1500
		2784														63	1000
		2077														47	750
438	17.279														18	83	1500
		2568														56	1000
		1926														42	750
455	19.570														20	75	1500
		2382	560	19.591	2932											50	1000
		1810			2228											38	750
470	22.222														22.4	67	1500
		2215	560	22.139	2639	640	21.930	3015	800	21.793						45	1000
		1624			1935			2212			2764					33	750
470	25.113														25	60	1500
		1969	560	25.027	2346	640	24.783	2681	800	24.635		900	25.095			40	1000
		1476			1759			2010			2513			2827		30	750
470	28.389														28	54	1500
		1772	560	28.151	2111	640	28.015	2413	800	27.711	3016	900	28.368			36	1000
		1329			1583			1809			2262			2545		27	750

Note: ▭ Forced lubrication required on horizontal gear units.

B series transmission capacity(iN=31.5-400):

n_1 (r/min)	n_{2N} (r/min)	i_N	B-4			B-5			B-6			B-7			B-8			B-9		
			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)
1500	48				33			55			73			103			128			171
1000	32	31.5	6.6	30.196	22	11	30.245	37	14.5	31.508	49	20.5	30.509	69	25.5	32.084	85	34	30.985	114
750	24				17			28			36			52			64			85
1500	42				29			48			64			90			112			150
1000	28	35.5	6.6	34.771	19	11	34.827	32	14.5	34.557	43	20.5	35.131	60	25.5	35.461	75	34	35.679	100
750	21				15			24			32			45			56			75
1500	38				26			44			58			82			101			135
1000	25	40	6.6	39.487	17	11	39.551	29	14.5	37.486	38	20.5	39.896	54	25.5	38.468	67	34	40.902	89
750	18.8				13			22			29			40			50			67
1500	33				23			38			50			71			88			117
1000	22	45	6.6	43.077	15	11	43.146	25	14.5	43.166	33	20.5	43.523	47	25.5	44.296	59	34	44.202	78
750	16.7				12			19			25			36			45			59
1500	30				21			35			46			64			80			107
1000	20	50	6.6	49.060	14	11	49.139	23	14.5	49.021	30	20.5	49.568	43	25.5	50.304	53	34	50.341	71
750	15				10.4			17			23			32			40			53
1500	27				19			31			41			58			72			96
1000	17.9	56	6.6	55.152	12	11	55.240	21	14.5	53.477	27	20.5	55.723	38	25.5	54.877	48	34	56.592	64
750	13.4				9.3			15			20			29			36			48
1500	24				17			28			36			50			64			85
1000	15.9	63	6.6	60.808	11	11	60.906	18	14.5	60.904	24	20	61.438	33	25.5	62.499	42	34	62.396	57
750	11.9				8.2			14			18			25			32			42
1500	21				14.5			24			32			44			56			75
1000	14.1	71	6.6	69.293	9.7	11	69.404	16	14.5	68.467	21	20	70.011	30	25.5	70.259	38	34	71.102	50
750	10.6				7.3			12			16			22			28			38
1500	18.8							22			28			40			50			67
1000	12.5	80				11	77.598	14	14	75.489	18	20.5	79.267	27	25.2	77.465	33	34	79.497	45
750	9.4							11			14			20			25			33
1500	16.7							19			24			36			44			59
1000	11.1	90				11	86.720	13	14	86.022	16	20.5	88.585	24	25.2	88.274	29	34	88.842	40
750	8.3							9.6			12			18			22			30
1500	15							17.3			23			32			40			53
1000	10	100				11	100.413	12	14.5	96.178	15	20.5	102.572	21	25.5	99.945	27	34	102.869	36
750	7.5							8.6			11.4			16			20			27
1500	13.4							15			20			29			36			48
1000	8.9	112				11	110.130	10.3	14.5	107.484	13.5	20.5	112.498	19	25.5	111.694	24	34	112.824	32
750	6.7							7.7			10			14			18			24
1500	12							14			18			26			32			43
1000	8	125				11	119.446	9.2	14.5	124.455	12	20.5	122.035	17	25.5	129.330	21	34	122.389	28
750	6							6.9			9.1			13			16			21
1500	10.7							12			16.2			23			29			38
1000	7.1	140				11	137.567	8.2	14.5	136.499	11	20.5	140.525	15	25.5	141.846	19	34	140.933	25
750	5.4							6.2			8.2			12			14.4			19
1500	9.4							11			14.3			20			25			33
1000	6.3	160				11	156.225	7.3	14.5	148.071	9.6	20.5	159.585	14	25.5	153.871	17	34	160.047	22
750	4.7							5.4			7.1			10			13			17
1500	8.3							9.6			13			18			22			30
1000	5.6	180				11	170.427	6.5	14.5	170.506	8.5	20.5	174.092	12	25.5	177.184	15	34	174.597	20
750	4.2							4.8			6.4			9.0			11.2			15
1500	7.5							8.6			11.4			16			20			27
1000	5	200				11	194.098	5.8	14.5	193.631	7.6	20.5	198.272	11	25.5	201.215	13.4	34	198.847	18
750	3.8							4.4			5.8			8.2			10			14
1500	6.7							7.7			10			14.4			18			24
1000	4.5	224				11	218.199	5.2	14.5	211.234	6.8	20.5	222.891	9.7	25.5	219.508	12	34	223.537	16
750	3.3							3.8			5.0			7.1			9			12
1500	6							6.9			9.1			13			16			21
1000	4	250				11	240.578	4.6	14.5	240.572	6.1	20.5	245.752	8.6	25.5	249.995	11	34	246.464	14
750	3							3.5			4.6			6.4			8.0			11
1500	5.4							6.2			8.2			12			14.4			19
1000	3.6	280				11	274.147	4.1	14.5	270.443	5.5	20.5	280.042	7.7	25.5	281.036	9.6	34	280.855	13
750	2.7							3.1			4.1			5.8			7.2			10
1500	4.8							5.5			7.3			10.3			13			17
1000	3.2	315				11	302.121	3.7	14.5	298.181	4.9	20.5	308.618	6.9	25.5	309.861	8.5	34	309.513	11
750	2.4							2.8			3.6			5.2			6.4			8.5
1500	4.2										6.4						11.2			
1000	2.8	355							14.5	339.788	4.3				25.5	353.097	7.5			
750	2.1										3.2						5.6			
1500	3.8										5.8						10			
1000	2.5	400							14.5	374.460	3.8				25.5	389.127	6.7			
750	1.5										2.9						5.1			

B–10			B–11			B–12			B–13			B–14			B–15			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)			
		216			302			377			442			548			769		48	1500
43	32.400	144	60	31.975	201	75	32.021	251	88	32.838	295	109	32.057	365	153	31.634	513	31.5	32	1000
		108			151			188			221			274			385		24	750
		189			264			330			387			479			673		42	1500
43	35.811	126	60	34.771	176	75	35.392	220	88	35.709	258	109	35.432	320	153	34.400	449	35.5	28	1000
		95			132			165			194			240			336		21	750
		171			239			298			350			434			609		38	1500
43	38.846	113	60	39.861	157	75	40.654	196	88	40.936	230	109	40.700	285	153	39.435	401	40	25	1000
		85			118			148			173			215			301		18.8	750
		149			207			259			304			377			529		33	1500
43	44.732	99	60	43.077	138	75	44.209	173	88	44.238	203	109	44..259	251	153	42.617	352	45	22	1000
		75			105			131			154			191			268		16.7	750
		135			188			236			276			342			481		30	1500
43	51.280	90	60	49.060	126	75	50.681	157	88	50.383	184	109	50.737	228	153	48.536	320	50	20	1000
		68			94			118			138			171			240		15	750
		122			170			212			249			308			433		27	1500
43	55.417	81	60	55.152	112	75	54.769	141	88	56.639	165	109	54.831	204	153	54.562	287	56	17.9	1000
		60			84			105			123			153			215		13.4	750
		108			151			188			221			274			385		24	1500
43	63.114	72	60	60.808	100	75	62.376	125	88	62.448	147	109	62.446	181	153	60.158	255	63	15.9	1000
		54			75			93			110			136			191		11.9	750
		95			132			165			194			240			336		21	1500
43	70.951	63	60	69.293	89	75	70.121	111	88	71.161	130	109	70.200	161	153	68.553	226	71	14.1	1000
		48			67			83			98			121			170		10.6	750
		85			118			148			173			215			301		18.8	1500
43	78.228	56	60	80.949	79	75	77.313	98	88	82.118	115	109	77.400	143	153	78.131	200	80	12.5	1000
		42			59			74			87			107			151		9.4	750
		75			105			131			154			191			268		16.7	1500
43	89.143	50	60	89.869	70	75	88.101	87	88	90.016	102	109	88.200	127	153	85.645	178	90	11.1	1000
		37			52			65			76			95			133		8.3	750
		68			94			118			138			171			240		15	1500
43	99.667	45	60	103.259	63	75	102.921	79	88	104.750	92	109	101.780	114	153	99.664	160	100	10	1000
		34			47			59			69			86			120		7.5	750
		60			84			105			123			153			215		13.4	1500
43	111.384	40	60	114.129	56	75	114.262	70	88	115.777	82	109	111.569	102	153	110.155	143	112	8.9	1000
		30			42			53			62			76			107		6.7	750
		54			75			94			111			137			192		12	1500
43	128.971	36	60	123.804	50	75	131.287	63	88	125.592	74	109	129.831	91	153	126.535	128	125	8	1000
		27			38			47			55			68			96		6	750
		48			67			84			99			122			171		10.7	1500
43	141.452	32	60	142.562	45	75	145.106	56	88	144.621	65	109	143.498	81	153	137.599	114	140	7.1	1000
		24			34			42			50			62			87		5.4	750
		42			59			74			87			107			151		9.4	1500
43	153.443	28	60	161.897	40	75	157.408	49	88	165.791	58	109	155.663	72	153	157.741	101	160	6.3	1000
		21			30			37			43			54			75		4.7	750
		37			52			65			76			95			133		8.3	1500
43	176.692	25	60	176.615	35	75	181.258	44	88	179.166	52	109	179.248	64	153	170.467	90	180	5.6	1000
		19			26			33			39			48			67		4.2	750
		34			47			59			69			86			120		7.5	1500
43	200.656	23	60	201.145	31	75	205.841	39	88	204.050	46	109	205.487	57	153	194.143	80	200	5	1000
		17			24			30			35			43			61		3.8	750
		30			42			53			62			76			107		6.7	1500
43	218.898	20	60	226.121	28	75	224.554	35	88	229.386	41	109	222.065	51	153	218.249	72	224	4.5	1000
		15			21			26			30			38			53		3.3	750
		27			38			47			55			68			96		6	1500
43	249.300	18	60	249.313	25	75	255.742	31	88	252.913	37	109	252.907	46	153	240.634	64	250	4	1000
		14			19			24			28			34			48		3	750
		24			34			42			50			62			87		5.4	1500
43	280.256	16	60	284.101	23	75	287.497	28	88	288.204	33	109	284.310	41	153	274.210	58	280	3.6	1000
		12			17			21			25			31			43		2.7	750
		22			30			38			44			55			77		4.8	1500
43	309.000	14	60	313.091	20	75	316.984	25	88	317.612	29	109	313.470	37	153	302.191	51	315	3.2	1000
		11			15.1			19			22			27			38		2.4	750
		19						33						48					4.2	1500
43	352.116	13				75	361.214	22				109	357.210	32				355	2.8	1000
		9.5						16						24					2.1	750
		17						30						43					3.8	1500
43	388.046	11.3				75	398.073	20				109	393.660	29				400	2.5	1000
		8.6						15						22					1.5	750

B series transmission capacity(iN=31.5-400):

n_1 (r/min)	n_{2N} (r/min)	i_N	B–16			B–17			B–18			B–19			B–20			B–21		
			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)
1500	48				870			1005			1206			1508			1734			2111
1000	32	31.5	173	31.588	580	200	32.259	670	240	32.979	804	300	32.005	1005	345	32.143	1156	420	32.456	1407
750	24				435			503			603			754			867			1055
1500	42				761			880			1055			1319			1517			1847
1000	28	35.5	173	35.883	507	200	35.080	586	240	37.463	704	300	34.804	880	345	36.513	1012	420	35.294	1231
750	21				380			440			528			660			759			924
1500	38				688			796			955			1194			1373			1671
1000	25	40	173	39.021	453	200	40.215	524	240	40.738	628	300	39.899	785	345	39.706	903	420	40.461	1099
750	18.8				341			394			472			591			679			827
1500	33				598			691			829			1037			1192			1451
1000	22	45	173	44.732	399	200	43.460	461	240	46.702	553	300	43.117	691	345	45.518	795	420	43.725	968
750	16.7				303			350			420			525			603			734
1500	30				543			628			754			942			1083			1319
1000	20	50	173	48.341	362	200	49.496	419	240	50.469	503	300	49.106	628	345	49.190	723	420	49.798	880
750	15				272			314			377			471			542			660
1500	27				489			565			679			848			975			1187
1000	17.9	56	173	55.055	324	200	55.641	375	240	57.479	450	300	55.203	562	345	56.022	647	420	55.981	787
750	13.4				243			281			337			421			484			589
1500	24				435			503			603			754			867			1055
1000	15.9	63	173	61.892	288	200	61.348	333	240	64.616	400	300	60.865	499	345	62.978	574	420	61.722	699
750	11.9				216			249			299			374			430			523
1500	21				380			440			528			660			759			924
1000	14.1	71	173	68.239	255	200	69.909	295	240	71.243	354	300	69.358	443	345	69.438	509	420	70.335	620
750	10.6				192			222			266			333			383			466
1500	18.8				341			394			472			591			679			827
1000	12.5	80	173	77.761	226	200	76.506	262	240	81.184	314	300	79.977	393	345	79.127	452	420	77.639	550
750	9.4				170			197			236			295			340			413
1500	16.7				303			350			420			525			603			734
1000	11.1	90	173	88.626	201	200	83.865	232	240	88.846	279	300	87.670	349	345	91.242	401	420	87.739	488
750	8.3				150			174			209			261			300			365
1500	15				272			314			377			471			542			660
1000	10	100	173	97.150	181	200	97.593	209	240	97.391	251	300	102.020	314	345	100.017	361	420	99.821	440
750	7.5				136			157			188			236			271			330
1500	13.4				243			281			337			421			484			589
1000	8.9	112	173	113.052	161	200	107.865	186	240	13.333	224	300	112.759	280	345	116.389	322	420	111.565	391
750	6.7				121			140			168			210			242			295
1500	12				217			251			302			377			434			528
1000	8	125	173	124.952	145	200	123.904	168	240	125.263	201	300	129.526	251	345	128.641	289	420	126.733	352
750	6				109			126			151			188			217			264
1500	10.7				194			224			269			336			387			471
1000	7.1	140	173	143.532	129	200	134.739	149	240	143.889	178	300	140.851	223	345	147.769	256	420	137.815	312
750	5.4				98			113			136			170			195			237
1500	9.4				170			197			236			295			340			413
1000	6.3	160	173	156.082	114	200	154.462	132	240	156.471	158	300	161.470	198	345	160.690	228	420	157.989	277
750	4.7				85			98			118			148			170			207
1500	8.3				150			174			209			261			300			365
1000	5.6	180	173	178.930	101	200	166.923	117	240	179.375	141	300	174.496	176	345	184.212	202	420	170.735	246
750	4.2				76			88			106			132			152			185
1500	7.5				136			157			188			236			271			330
1000	5	200	173	193.365	91	200	190.107	105	240	193.846	126	300	198.732	157	345	199.073	181	420	194.448	220
750	3.8				69			80			95			119			137			167
1500	6.7				121			140			168			210			242			295
1000	4.5	224	173	220.222	82	200	213.712	94	240	220.769	113	300	223.408	141	345	226.722	163	420	218.592	198
750	3.3				60			69			83			104			119			145
1500	6				109			126			151			188			217			264
1000	4	250	173	247.566	72	200	235.631	84	240	248.182	101	300	246.322	126	345	254.874	145	420	241.012	176
750	3				54			63			75			94			108			132
1500	5.4				98			113			136			170			195			237
1000	3.6	280	173	272.957	65	200	268.510	75	240	273.636	90	300	280.692	113	345	281.015	130	420	274.641	158
750	2.7				49			57			68			85			98			119
1500	4.8				87			101			121			151			173			211
1000	3.2	315	173	311.045	58	200	295.909	67	240	311.818	80	300	309.334	101	345	320.226	116	420	302.666	141
750	2.4				43			50			60			75			87			106
1500	4.2				76						106						152			
1000	2.8	355	173	342.784	51				240	343.636	70				345	352.902	101			
750	2.1				38						53						76			
1500	3.8																			
1000	2.5	400																		
750	1.5																			

Note: Forced lubrication required on horizontal gear units.

B-22			B-23			B-24			B-25			B-26			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)			
																48	1500
470	31.933	1575	560	31.979	1876	640	31.513	2145	800	31.478	2681	900	31.909	3016	31.5	32	1000
		181			1407			1608			2010			2262		24	750
		2067			2463			2815								42	1500
470	36.275	1378	560	34.775	1642	640	35.797	1876	800	34.231	2346	900	36.248	2639	35.5	28	1000
		1034			1231			1407			1759			1979		21	750
		1870			2228			2597								38	1500
470	39.446	1230	560	39.866	1466	640	38.927	1675	800	39.241	2094	900	39.417	2356	40	25	1000
		925			1102			1260			1575			1772		18.8	750
		1624			1935			2212			2764					33	1500
470	45.221	1083	560	43.082	1290	640	44.626	1474	800	42.407	1843	900	45.187	2073	45	22	1000
		822			979			1119			1399			1574		16.7	750
		1476			1759			2010			2513			2827		30	1500
470	48.869	984	560	49.065	1173	640	48.226	1340	800	48.297	1675	900	48.833	1885	50	20	1000
		738			880			1005			1257			1414		15	750
		1329			1583			1809			2262			2545		27	1500
470	55.656	881	560	55.158	1050	640	54.924	1200	800	54.294	1499	900	55.615	1687	56	17.9	1000
		659			786			898			1123			1263		13.4	750
		1181			1407			1608			2010			2262		24	1500
470	62.567	783	560	60.815	932	640	61.744	1066	800	59.863	1332	900	62.520	1498	63	15.9	1000
		586			698			797			997			1121		11.9	750
		1034			1231			1407			1759			1979		21	1500
470	68.984	694	560	69.301	827	640	68.076	945	800	68.216	1181	900	68.933	1329	71	14.1	1000
		522			622			710			888			999		10.6	750
		925			1102			1260			1575			1772		18.8	1500
470	78.610	615	560	76.497	733	640	77.575	838	800	78.100	1047	900	78.551	1178	80	12.5	1000
		463			551			630			787			886		9.4	750
		822			979			1119			1399			1574		16.7	1500
470	86.772	546	560	86.448	651	640	85.631	744	800	88.260	930	900	89.933	1046	90	11.1	1000
		408			487			556			695			782		8.3	750
		738			880			1005			1257			1414		15	1500
470	98.061	492	560	98.353	586	640	96.770	670	800	100.414	838	900	101.633	942	100	10	1000
		369			440			503			628			707		7.5	750
		659			786			898			1123			1263		13.4	1500
470	111.565	438	560	109.924	522	640	110.097	596	800	112.228	746	900	115.629	839	112	8.9	1000
		330			393			449			561			631		6.7	750
		591			704			804			1005			1131		12	1500
470	124.690	394	560	124.870	469	640	123.049	536	800	127.487	670	900	129.232	754	125	8	1000
		295			352			402			503			565		6	750
		527			627			717			896			1008		10.7	1500
470	141.643	349	560	135.788	416	640	139.780	476	800	138.634	595	900	146.803	669	140	7.1	1000
		266			317			362			452			509		5.4	750
		463			551			630			787			886		9.4	1500
470	154.029	310	560	155.665	369	640	152.002	422	800	158.928	528	900	159.639	594	160	6.3	1000
		231			276			315			394			443		4.7	750
		408			487			556			695			782		8.3	1500
470	176.576	276	560	168.224	328	640	174.252	375	800	171.749	469	900	183.008	528	180	5.6	1000
		207			246			281			352			396		4.2	750
		369			440			503			628			707		7.5	1500
470	190.821	246	560	191.588	293	640	188.310	335	800	195.603	419	900	197.772	471	200	5	1000
		187			223			255			318			358		3.8	750
		330			393			449			561			631		6.7	1500
470	217.324	221	560	215.377	264	640	214.464	302	800	219.891	377	900	225.240	424	224	4.5	1000
		162			194			221			276			311		3.3	750
		295			352			402			503			565		6	1500
470	244.309	197	560	237.467	235	640	241.094	268	800	242.444	335	900	253.208	377	250	4	1000
		148			176			201			251			283		3	750
		266			317			362			452			509		5.4	1500
470	269.366	177	560	270.602	211	640	265.822	241	800	276.274	302	900	279.178	339	280	3.6	1000
		133			158			181			226			254		2.7	750
		236			281			322			402			452		4.8	1500
470	306.952	157	560	298.215	188	640	302.913	214	800	304.465	268	900	318.133	302	315	3.2	1000
		118			141			161			201			226		2.4	750
		207						281						396		4.2	1500
470	338.273	138				640	333.823	188				900	350.596	264	355	2.8	1000
		103						141						198		2.1	750
																3.8	1500
															400	2.5	1000
																1.5	750

Note: ▭ Forced lubrication required on horizontal gear units.

H series rated thermal capacity(kW):

iN		H1-3	H1-5	H1-7	H1-9	H1-11	H1-13	H1-15	H1-17	H1-19
1.25	PG1	110	207	230	190					
	PG2	171	408	562	642					
	PG3	268	641	923	1322					
	PG4	322	819	1177	1621					
1.4	PG1	110	214	250	247					
	PG2	169	409	567	670					
	PG3	260	629	901	1305					
	PG4	312	800	1149	1589					
1.6	PG1	108	215	261	303	234				
	PG2	164	399	548	686	967	891			
	PG3	244	593	836	1246	2138	2631			
	PG4	295	754	1064	1519	2632	3220			
1.8	PG1	120	214	274	323	330				
	PG2	181	387	552	682	1000	1011			
	PG3	264	557	818	1195	2082	2547			
	PG4	319	712	1040	1454	2555	3095			
2	PG1	116	209	273	334	393	302			
	PG2	174	372	534	668	1010	1085	794		
	PG3	251	526	775	1135	2004	2483	2249		
	PG4	303	670	985	1382	2449	3001	3099		
2.24	PG1	112	202	263	335	433	416			
	PG2	166	353	496	643	999	1119	908		
	PG3	236	490	699	1063	1897	2377	2190		
	PG4	286	628	888	1296	2322	2874	2984		
2.5	PG1	103	192	252	328	452	486			
	PG2	153	332	466	611	971	1121	1001		
	PG3	212	453	644	984	1778	2246	2140		
	PG4	257	580	818	1201	2174	2714	2876		
2.8	PG1	97.0	180	263	347	456	525			
	PG2	143	309	477	630	928	1095	1063	884	
	PG3	195	413	649	990	1643	2091	2063	2359	
	PG4	237	529	824	1205	2010	2525	2744	3138	
3.15	PG1	95.1	185	293	371	520	620	464		
	PG2	138	305	535	664	976	1151	1291	1253	
	PG3	189	408	755	1075	1672	2082	2218	2585	
	PG4	227	517	967	1320	2030	2495	2847	3297	
3.55	PG1	87.5	182	272	349	493	607	527	420	
	PG2	126	297	490	616	902	1086	1259	1288	
	PG3	170	390	676	973	1508	1899	2057	2443	
	PG4	205	494	870	1198	1835	2277	2628	3088	
4	PG1	79.4	166	247	301	465	580	550	514	
	PG2	114	269	438	523	833	1006	1194	1267	1221
	PG3	151	346	592	806	1358	1171	1869	2249	
	PG4	182	439	763	998	1655	2055	2384	2829	
4.5	PG1	87.5	172	254	347	446	608	657	649	563
	PG2	122	272	437	585	789	1037	1273	1337	1351
	PG3	161	346	586	890	1290	1766	1905	2236	
	PG4	193	438	749	1093	1580	2126	2403	2782	
5	PG1	79.2	163	245	316	443	586	676	776	788
	PG2	111	257	419	527	770	989	1246	1495	1578
	PG3	143	325	551	783	1220	1662	1805	2414	
	PG4	172	411	707	964	1500	2003	2276	2988	
5.6	PG1	70.9	145	221	304	423	535	630	745	904
	PG2	98.3	227	374	503	730	890	1131	1374	1658
	PG3	125	281	483	729	1143	1457	1595	2148	
	PG4	150	357	621	902	1409	1761	2014	2660	

H series rated thermal capacity(kW): p ( )

iN		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
6.3	PG1	68.2	89.4		128		177		253		333		325		230		291							
	PG2	93.5	129		202		273		443		607		652		775									
	PG3	114	181		291		454		669		1164		1405		1713									
	PG4	137	218		357		539		835		1394		1653		2122									
7.1	PG1	69.9	91.1		124		173		256		340		351	342	315	260	375	321	372					
	PG2	95.7	131		194		264		440		601		659	672	807	802								
	PG3	115	180		273		427		650		1123		1358	1416	1658	1710								
	PG4	139	217		336		506		813		1344		1599	1670	2040	2129								
8	PG1	67.1	88.5	97.8	120	137	169	176	252	291	341	372	368	368	365	340	431	402	458	398				
	PG2	91.4	127	140	187	213	255	267	428	495	590	661	658	679	826	831								
	PG3	109	173	187	259	297	405	450	619	849	1069	1218	1310	1370	1611	1658								
	PG4	131	208	226	320	365	481	530	777	1023	1284	1468	1535	1614	1980	2042								
9	PG1	64.9	85.7	99.5	116	133	163	172	243	293	338	378	375	383	399	388	469	457	516	479	1037			
	PG2	88.2	123	141	180	204	245	257	406	491	573	652	647	676	829	848								
	PG3	104	165	187	246	280	383	421	572	824	1012	1175	1247	1321	1562	1615								
	PG4	126	198	225	302	344	456	496	717	994	1216	1407	1461	1550	1907	1983								
10	PG1	61.4	81.0	96.6	112	129	157	167	235	289	331	378	375	390	418	419	508	492	572	535	1076	1119		
	PG2	83.0	115	137	171	197	234	249	388	478	552	637	629	664	820	850								
	PG3	96.9	152	179	231	266	359	401	537	783	955	1116	1177	1254	1493	1556								
	PG4	117	183	215	285	327	428	472	672	950	1146	1343	1379	1475	1819	1908								
11.2	PG1	58.8	77.6	93.5	113	125	149	162	238	277	337	373	370	390	426	437	530	530	607	589	1118	1163		
	PG2	79.4	110	132	172	189	221	240	389	452	556	618	606	647	799	840								
	PG3	91.7	143	171	229	251	335	378	533	720	941	1062	1100	1187	1411	1494								
	PG4	111	173	206	283	310	400	447	668	872	1133	1275	1292	1391	1717	1822								
12.5	PG1	56.7	76.3	88.1	111	119	146	156	238	267	323	364	372	384	444	443	555	550	641	621	1118	1163	1337	
	PG2	75.7	107	124	167	180	215	229	381	430	523	595	600	622	799	817								
	PG3	88.5	141	157	224	237	324	356	522	675	863	997	1078	1114	1370	1410								
	PG4	106	169	190	275	292	384	421	650	818	1036	1199	1261	1305	1665	1716								
14	PG1	53.7	72.1	84.2	102	120	142	149	226	270	310	369	359	385	434	459	551	574	643	653	1110	1194	1327	1393
	PG2	71.5	101	118	153	181	207	217	359	433	495	598	569	615	766	816								
	PG3	82.7	131	148	200	235	305	331	483	670	799	987	1001	1087	1280	1369								
	PG4	99.1	156	179	247	290	364	392	602	813	963	1187	1173	1276	1557	1665								
16	PG1	49.2	67.6	82.6	95.3	118	133	145	212	269	283	354	361	371	420	448	536	568	627	653	1084	1127	1296	1361
	PG2	65.2	93.7	114	142	175	193	210	334	424	449	563	565	583	725	781								
	PG3	74.5	120	146	184	229	280	321	440	653	707	900	978	1009	1188	1281								
	PG4	89.6	144	175	226	282	334	378	549	789	855	1084	1147	1183	1444	1559								
18	PG1	47.0	64.5	78.1	91.1	108	125	140	196	255	285	338	340	373	415	433	534	551	617	637	1050	1092	1256	1318
	PG2	62.0	89.4	108	136	160	181	202	310	398	450	533	527	579	702	739								
	PG3	70.0	113	135	175	206	261	302	410	602	709	836	901	987	1132	1185								
	PG4	84.2	136	163	216	253	312	357	513	729	854	1007	1059	1159	1373	1446								
20	PG1	46.0	60.4	73.1	84.9	102	121	132	189	238	267	308	326	351	406	429	517	548	598	634	1015	1056	1214	1274
	PG2	60.4	83.5	100	126	149	174	189	297	369	419	482	498	540	681	717								
	PG3	67.7	105	124	160	189	250	278	387	547	646	740	828	910	1085	1124								
	PG4	81.4	126	150	198	232	298	329	484	663	780	893	970	1069	1318	1368								
22.4	PG1	42.5	56.1	69.8	81.8	97	111	124	176	220	240	310	330	336	355	420	440	531	524	607	775	1005	928	1210
	PG2	55.8	77.1	95.8	121	143	161	177	275	343	301	482	443	510	460	695								
	PG3	61.7	95.4	118	153	180	225	259	352	512	525	740	844	834	844	1078								
	PG4	74.3	115	142	188	221	269	307	441	620	580	893	941	980	934	1311								
25	PG1		56.8	65.4	84.3	90.6	115	120	173	213	234	290	322	341	344	367	435	453	537	535	760	790	908	945
	PG2		69.2	89.3	105	132	145	171	224	329	292	448	429	456	445	474								
	PG3		98.7	108	158	165	231	248	392	480	499	676	795	854	796	847								
	PG4		110	131	177	203	258	294	436	583	550	815	888	953	881	940								
28	PG1		54.5	60.7	84.7	87.1	114	111	167	198	225	259	318	333	339	355	427	447	540	548	778	809	930	967
	PG2		66.5	82.6	106	127	143	158	215	304	281	323	421	441	436	456								
	PG3		93.2	98.8	157	157	224	224	367	435	468	548	767	804	766	799								
	PG4		104	119	176	193	250	267	410	530	518	605	858	898	850	887								
31.5	PG1		52.9	61.2	81.2	90.3	111	115	161	194	219	252	310	328	329	349	417	439	537	549	773	804	925	962
	PG2		64.3	73.9	101	112	139	144	207	247	272	312	409	433	422	447								
	PG3		89.4	102	148	162	215	268	350	403	449	520	732	775	734	772								
	PG4		100	114	167	181	240	293	391	450	496	574	819	867	813	856								
35.5	PG1		51.0	58.7	78.6	90.6	107	114	155	186	212	243	295	320	313	339	405	429	530	545	766	797	916	953
	PG2		62.0	70.9	98.1	112	134	141	199	236	262	301	388	420	399	433								
	PG3		85.4	96.3	142	160	205	260	331	377	427	489	678	741	678	738								
	PG4		95.4	108	160	180	230	284	371	423	472	541	759	831	753	819								

H series rated thermal capacity(kW):

iN		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
40	PG1	48.1	56.6	74.6	86.8	101	110	149	180	204	236	284	304	300	322	390	416	517	537	754	784	902	938
	PG2	58.3	68.6	92.8	107	127	137	190	228	251	291	371	398	382	409								
	PG3	79.3	92.4	132	151	191	248	312	359	403	467	639	686	641	683								
	PG4	88.6	103	149	170	214	272	349	402	446	517	717	770	711	760								
45	PG1	46.0	54.9	71.8	84.1	97.2	107	148	173	195	227	282	293	297	309	386	401	501	524	745	775	891	927
	PG2	55.7	66.2	89	104	121	133	189	219	240	280	368	381	377	392								
	PG3	74.9	88.3	126	145	181	238	305	341	379	444	626	648	627	644								
	PG4	83.8	98.7	142	163	203	261	342	382	419	491	702	725	695	716								
50	PG1	44.4	51.7	67.6	79.8	94.9	101	145	166	191	219	281	291	292	306	379	395	500	508	736	765	880	915
	PG2	53.6	62.2	83.7	98.0	118	125	184	210	233	269	362	378	368	386								
	PG3	72.3	82.0	118	136	177	221	299	322	369	419	619	634	613	628								
	PG4	80.9	91.7	133	152	197	242	334	360	408	465	691	710	681	701								
56	PG1	42.1	49.6	64.4	76.7	90.3	97.0	134	165	184	209	267	289	278	300	362	388	477	506	720	749	861	895
	PG2	50.7	59.5	79.4	94.1	112	120	170	208	225	256	343	371	350	377								
	PG3	67.9	77.6	111	129	165	209	271	315	349	394	577	626	574	617								
	PG4	75.6	86.9	125	145	185	229	302	353	386	437	645	698	636	684								
63	PG1	39.6	47.7	60.0	72.4	85.3	94.7	127	161	174	204	252	275	262	286	338	371	456	482	697	724	834	867
	PG2	47.6	57.1	73.8	88.5	105	116	160	202	212	249	323	353	329	357								
	PG3	62.9	74.9	102	121	153	204	251	309	325	384	533	582	530	576								
	PG4	70.2	83.8	114	136	172	224	280	345	359	425	596	653	589	640								
71	PG1	39.2	45.2	58.2	68.9	83.4	90.1	124	150	169	197	245	260	252	270	333	346	431	461	669	696	800	832
	PG2	47.0	54.0	71.3	84.1	103	111	155	187	205	239	313	332	315	337								
	PG3	62.2	70.2	97.9	113	150	191	242	279	310	364	513	540	507	534								
	PG4	69.4	78.3	110	127	167	209	270	312	343	403	573	604	564	592								
80	PG1	37.2	42.6	56.8	64.3	78.9	85.1	117	141	164	186	236	252	242	259	315	341	411	435	655	681	783	814
	PG2	44.5	50.6	69.6	78.2	96.8	104	146	176	199	226	300	321	302	323								
	PG3	57.8	65.2	94.2	104	139	177	223	259	299	338	484	519	479	511								
	PG4	64.6	72.8	106	117	156	194	250	290	330	375	542	580	532	567								
90	PG1	36.7	42.2	53.7	62.2	74.9	83.0	113	138	153	180	222	243	228	248	299	322	399	415	627	652	750	780
	PG2	43.9	50.2	65.7	75.4	91.8	101	141	171	186	218	282	308	284	309								
	PG3	56.2	64.6	87.1	100	129	173	214	250	274	323	448	490	443	483								
	PG4	63.0	72.1	98.3	113	145	189	240	280	304	357	501	549	493	537								
100	PG1		40.0	48.1	60.9	67.1	78.8	99.5	130	133	175	179	228	201	234	282	306	388	403	509	632	611	756
	PG2		47.5		73.8		95.9		161		212		289		290								
	PG3		60.0		96.7		161		231		311		453		447								
	PG4		67.2		109		176		259		344		507		497								
112	PG1		39.5	46.3	57.6	64.2	74.9	98.7	126	130	164	171	184	192	206	270	289	379	392	498	518	596	620
	PG2		47.0		69.8		91.2		156		198												
	PG3		58.5		89.6		149		222		286												
	PG4		65.5		101		164		249		317												
125	PG1			44.9	51.6	62.1	67.3	94.6	110	126	142	165	177	185	197	261	276	367	383	488	508	584	607
140	PG1			42.6	49.5	60.1	64.4	91.5	109	122	138	159	170	178	190	251	267	347	371	475	494	568	591
160	PG1			41.0	48.0	56.8	62.4	87.0	105	115	134	153	164	171	183	241	257	333	351	455	473	544	566
180	PG1			39.4	45.6	54.4	60.4	83.9	101	111	130	150	157	167	175	230	247	328	336	439	457	525	546
220	PG1			37.9	43.9	52.6	57.0	79.2	96.4	108	123	146	154	161	172	222	236	309	331	432	449	516	537
224	PG1			35.7	42.0	50.5	54.6	75.9	92.8	103	118	136	150	150	166	213	227	295	312	428	445	512	532
250	PG1			34.1	40.7	48.2	53.0	72.1	87.6	98.0	115	129	139	143	155	202	218	279	297	409	425	489	509
280	PG1			33.1	38.2	46.8	50.8	69.4	84.3	94.9	109	125	132	139	147	194	207	268	281	388	404	467	486
315	PG1			32.4	38.6	44.6	48.5	67.7	79.9	91.0	105	119	128	133	143	190	199	257	270	374	389	447	465
355	PG1			30.9	35.5	43.8	47.1	64.4	76.9	86.8	101	117	123	130	137	181	195	245	260	363	378	435	452
400	PG1				34.8		44.9		75.1		97.1		120		134		185		248		359		429
450	PG1				33.1		44.1		71.4		92.6												

B series rated thermal capacity(kW):

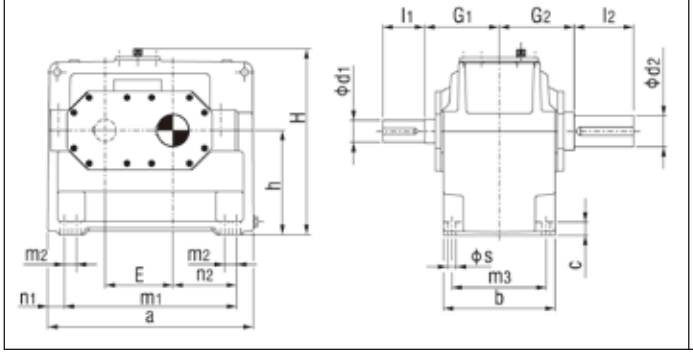
iN		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
5	PG1	66.3	86.9		122		150		233		286		330											
	PG2	101	140		223		272		458		662		797											
	PG3	135	202		313		391		664		1318		1786											
	PG4	166	250		403		500		862		1632		2158											
5.6	PG1	64.1	85.2		117		144		233		295		349		328									
	PG2	96.9	137		209		256		446		653		789		862									
	PG3	130	196		288		360		631		1264		1729		2015									
	PG4	160	242		371		461		821		1573		2084		2427									
6.3	PG1	62.4	81.9	96.5	110	134	137	155	218	277	282	337	351	374	353									
	PG2	93.8	130	152	194	235	240	272	406	516	597	726	752	815	836									
	PG3	124	182	259	261	381	327	451	555	957	1110	1384	1596	1748	1872									
	PG4	153	225	307	337	471	421	554	723	1166	1377	1712	1922	2105	2262									
7.1	PG1	58.8	77.7	94.7	104	127	130	148	217	275	284	341	346	372	364	388								
	PG2	87.6	122	148	182	221	225	256	397	501	589	712	715	775	804	867								
	PG3	114	168	252	240	350	300	414	535	913	1076	1326	1479	1613	1752	1882								
	PG4	140	208	298	310	433	387	510	697	1106	1339	1649	1781	1941	2109	2269								
8	PG1	55.4	73.3	90.6	98.9	120	124	141	201	254	268	322	330	365	356	393								
	PG2	82.1	114	140	171	205	212	240	362	454	539	648	659	736	750	832								
	PG3	105	154	233	222	317	278	376	473	801	959	1162	1330	1501	1590	1758								
	PG4	130	192	277	287	393	359	464	619	974	1190	1441	1598	1802	1909	2115								
9	PG1	52.7	69.6	85.8	94.6	113	119	134	193	252	260	322	321	347	351	381								
	PG2	77.5	108	132	162	192	202	225	345	444	515	638	633	678	723	773								
	PG3	96.9	142	214	208	292	262	346	446	776	897	1130	1258	1342	1512	1593								
	PG4	120	176	255	270	362	339	428	583	941	1118	1403	1513	1614	1815	1915								
10	PG1	44.3	64.6	80.6	88.6	107	112	127	183	232	249	301	307	337	342	374								
	PG2	64.2	98.9	123	150	180	189	212	323	403	485	583	591	650	684	745								
	PG3	77.4	127	197	189	269	240	319	409	687	830	999	1148	1271	1403	1516								
	PG4	95.9	158	235	246	335	310	395	537	835	1033	1244	1383	1528	1684	1818								
11.2	PG1	42.8	57.9	76.6	79.3	102	101	122	164	223	224	290	280	322	315	363								
	PG2	61.9	88.0	116	133	171	167	202	285	384	431	555	532	608	618	705								
	PG3	73.9	111	180	165	252	208	301	354	647	720	934	1010	1159	1243	1411								
	PG4	91.7	138	215	215	314	270	374	465	788	900	1167	1221	1400	1494	1688								
12.5	PG1	45.0	61.1	70.9	97.2	95.7	129	115	183	210	238	277	334	293	377	334								
	PG2	58.5	83.0	106	133	159	182	189	288	359	379	522	533	546	684	636								
	PG3	72.5	117	160	206	230	305	275	431	593	674	865	1054	1019	1264	1251								
	PG4	85.2	137	192	239	287	353	342	526	724	795	1078	1222	1235	1518	1500								
14	PG1	43.7	59.2	63.4	93.9	85.8	125	103	180	187	240	248	322	349	363	411								
	PG2	56.8	80.3	94.4	128	141	176	168	282	316	382	462	512	552	657	734								
	PG3	70.3	113	140	199	201	296	239	422	512	679	749	1006	1066	1214	1331								
	PG4	82.6	132	167	230	250	341	297	514	627	801	937	1166	1241	1455	1598								
16	PG1	41.5	57.2	66.4	89.5	105	122	137	171	203	221	259	318	334	365	379								
	PG2	54.0	77.3	88.6	122	140	172	190	268	311	349	404	503	528	652	672								
	PG3	66.8	109	121	189	211	287	324	401	526	617	699	984	1018	1194	1219								
	PG4	78.3	127	141	219	243	331	371	487	621	727	824	1142	1181	1433	1460								
18	PG1	40.3	55.4	64.3	86.4	101	118	126	168	203	222	261	306	332	351	399								
	PG2	52.4	74.9	85.8	118	136	166	175	262	311	352	407	482	521	626	698								
	PG3	64.7	105	116	182	205	277	298	393	527	621	703	945	1003	1142	1257								
	PG4	76.0	123	136	211	236	320	341	477	622	732	829	1091	1161	1371	1506								
20	PG1	38.0	53.1	61.9	82.8	96	113	129	160	189	209	239	296	317	340	366	411		475		795			
	PG2	49.4	71.8	82.6	113	129	159	180	250	289	329	371	464	497	602	639	745		838		993			
	PG3	61.2	101	112	174	193	265	305	374	487	581	639	907	953	1099	1146								
	PG4	71.6	118	131	201	223	307	350	454	575	684	753	1047	1104	1316	1375								
22.4	PG1	37.1	52.2	60.0	80.0	93.2	110	119	153	189	201	242	289	306	337	354	409	431	473	492	814	847	974	
	PG2	48.1	70.6	80.1	109	125	155	165	237	289	313	374	450	478	586	614	725	762	818	849	993	1033	1188	
	PG3	59.5	99.8	109	168	187	257	279	347	486	542	645	859	912	1051	1099								
	PG4	69.8	117	127	193	216	297	320	423	574	639	759	994	1057	1261	1318								
25	PG1	35.2	49.4	57.5	77.3	89.3	105	114	145	181	190	226	273	300	322	350	399	427	461	487	783	814	936	983
	PG2	45.5	66.6	76.6	105	119	147	158	222	275	294	349	419	462	548	598	692	741	778	828	955	993	1142	1199
	PG3	56.1	93.8	104	160	179	239	268	318	462	498	602	777	867	956	1053								
	PG4	65.7	109	121	185	207	276	306	388	547	588	708	899	1004	1147	1264								
28	PG1	33.8	47.7	56.5	73.4	86.3	100	111	138	173	181	217	266	283	318	334	388	415	446	473	762	793	912	958
	PG2	43.5	64.0	75.3	98.8	115	139	154	211	262	278	332	406	430	535	559	659	706	740	786	952	991	1140	1197
	PG3	52.9	88.7	103	148	173	222	259	286	431	462	560	745	785	925	958								
	PG4	62.1	103	120	171	199	257	297	362	509	547	660	863	909	1109	1148								

B series rated thermal capacity(kW):

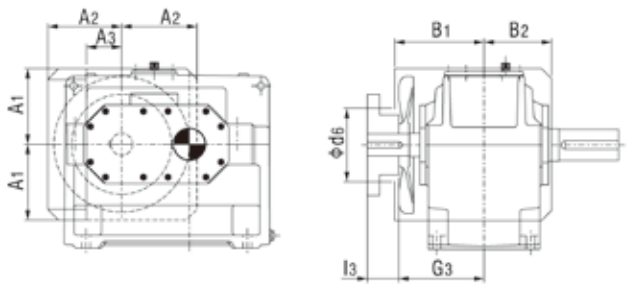
iN		4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
31.5	PG1	32.0	45.2	53.4	69.7	83.1	95.6	106	131	163	172	205	250	276	301	328	370	403	423	458	742	772	888	932
	PG2	41.2	60.5	71.0	93.6	111	132	146	199	245	263	311	378	418	499	545	618	673	688	748	927	965	1110	1165
	PG3	49.6	82.7	96.7	138	165	208	240	275	394	428	513	675	752	846	927								
	PG4	58.2	96.5	113	160	189	240	276	337	467	508	606	784	873	1014	1111								
35.5	PG1	30.1	42.6	51.5	66.2	78.9	90.8	101	126	155	166	195	241	259	291	311	361	383	409	433	726	755	868	911
	PG2	38.5	56.6	68.2	88.4	105	125	138	190	232	252	295	363	388	480	509	596	630	660	695	885	921	1059	1111
	PG3	45.6	75.7	91.4	128	153	190	224	261	367	407	478	642	684	805	847								
	PG4	53.6	88.7	107	148	176	221	257	318	434	483	565	746	794	966	1017								
40	PG1	26.3	37.0	48.9	57.9	75.3	84.9	96.4	119	147	156	186	228	250	278	301	343	373	388	419	703	731	841	883
	PG2	33.5	48.8	64.5	76.7	99.4	116	132	178	218	237	279	341	373	453	489	560	607	618	667	844	877	1009	1060
	PG3	38.4	63.0	85.3	106	143	172	210	239	340	375	445	592	649	749	805								
	PG4	45.2	73.9	99.8	126	164	200	241	293	403	446	526	690	755	900	968								
45	PG1	25.7	36.0	45.9	56.2	71.4	78.0	91.5	109	141	144	178	211	236	258	287	321	355	359	396	665	692	796	836
	PG2	32.7	47.5	60.3	74.0	93.8	106	124	163	209	216	267	313	351	418	463	519	570	569	624	778	810	931	978
	PG3	37.3	60.7	78.3	102	132	155	192	215	321	336	421	533	599	679	753								
	PG4	44.0	71.3	91.6	118	152	180	221	265	382	398	499	621	698	816	903								
50	PG1	25.9	35.8	40.0	55.4	62.5	76.6	85.6	109	133	146	169	216	218	268	266	317	331	386	367	611	635	730	767
	PG2	32.9	46.9	52.2	72.6	81.4	103	116	160	195	216	250	315	322	424	427	498	529	596	574	670	724	832	874
	PG3	37.3	59.1	65.3	98.6	110	148	174	210	295	333	389	535	539	686	684								
	PG4	43.8	69.5	76.6	114	127	173	201	256	350	397	462	620	629	820	821								
56	PG1	23.9	33.0	39.0	51.4	60.6	70.7	78.9	99.1	122	134	155	198	223	247	276	305	326	365	393	599	623	717	753
	PG2	30.2	43.3	50.8	67.4	78.8	95.3	106	145	179	197	228	287	323	388	432	478	506	560	601	683	710	817	858
	PG3	33.6	53.3	63.0	89.4	105	133	157	186	264	298	346	479	541	617	688								
	PG4	39.7	62.9	74.0	104	122	155	181	228	315	354	413	555	628	738	823								
63	PG1	23.0	31.7	38.7	49.7	59.8	68.2	77.4	95.5	121	129	157	189	204	237	254	295	314	353	371	567	590	679	713
	PG2	29.1	41.6	50.2	65.1	77.4	91.9	103	139	175	189	229	273	294	370	395	460	486	540	563	635	661	760	798
	PG3	31.8	50.3	61.4	84.8	102	125	150	175	256	280	345	449	482	581	620								
	PG4	37.6	59.5	72.2	99.0	119	147	173	215	304	334	409	521	561	698	740								
71	PG1	21.3	30.2	35.7	47.3	55.5	63.9	71.7	88.4	111	121	144	180	195	224	244	279	304	333	360	547	569	654	687
	PG2	27.0	39.5	46.2	62	71.8	86.0	95.6	129	159	177	208	258	281	347	377	431	468	505	544	602	626	719	756
	PG3	28.9	46.6	55.5	78.4	92.8	113	135	157	227	253	309	413	454	537	585								
	PG4	34.3	55.3	65.4	92.1	108	134	156	194	271	303	366	482	528	644	701								
80	PG1		32.5	34.2	48.2	53.6	68.2	69.2	103	106	138	138	185	186	208	231	285	287	399	339	560	538	670	650
	PG2			44.5		69.4		92.3		153		200		266		353		438		509		592		715
	PG3			52.3		88.0		127		212		290		417		538								
	PG4			61.8		103		148		255		346		487		647								
90	PG1		31.8	32.6	46.7	51.0	66.7	64.9	99.9	98.7	135	129	177	190	199	214	273	292	386	404	554	576	662	695
	PG2			42.3		66.0		86.5		142		187												
	PG3			48.5		81.5		115		190		262												
	PG4			57.6		95.4		135		230		314												
100	PG1		30.3	34.8	44.2	51.5	63.2	68.7	96.0	115	128	148	167	182	187	205	258	280	363	391	549	571	657	690
112	PG1		29.2	34.0	42.5	50.0	60.8	67.1	91.4	111	122	144	159	172	179	193	246	264	352	367	497	517	595	625
125	PG1		27.9	32.5	40.6	47.3	58.0	63.7	87.5	106	117	136	151	164	170	184	234	252	331	356	497	517	595	625
140	PG1		26.6	31.3	38.6	45.6	54.7	61.3	82.8	101	111	130	146	156	164	175	225	240	320	335	467	486	559	587
160	PG1		24.5	29.9	35.2	43.5	50.0	58.4	75.5	96.8	105	125	138	150	155	169	213	231	302	323	453	471	542	569
180	PG1		24.0	28.6	34.3	41.4	48.8	55.4	73.5	91.6	99.2	118	130	142	146	159	199	218	282	306	433	450	518	544
200	PG1		23.2	26.3	34.0	37.8	47.8	50.7	71.9	83.7	96.9	112	128	134	144	151	198	204	273	286	401	417	480	504
224	PG1		21.6	25.8	31.7	36.9	44.7	49.4	67.6	81.6	90.8	106	120	132	134	148	186	204	255	277	400	416	478	502
250	PG1		21.1	24.8	30.6	36.5	43.1	48.4	65.4	79.7	87.9	103	116	123	130	139	180	191	247	259	371	386	444	466
280	PG1		20.1	23.2	28.7	34.1	41.1	45.3	62.5	74.8	83.0	96.9	108	119	122	134	169	184	236	250	354	368	423	444
315	PG1		18.8	22.6	26.9	32.8	38.6	43.7	58.4	72.4	79.2	93.7	102	112	115	126	160	174	220	239	333	346	398	418
355	PG1			21.6		30.8		41.7		69.1		88.5		105		119		164		223		317		383
400	PG1			20.2		28.9		39.3		64.5		84.3												

H1SH3 ~ H1SH19

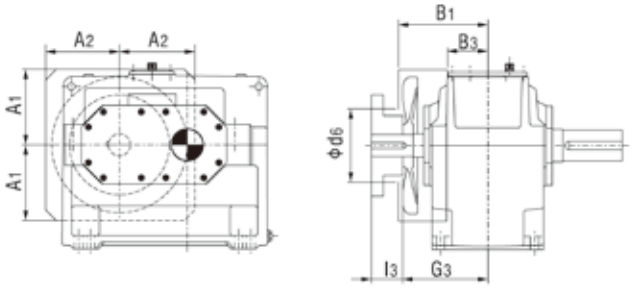
H1SH



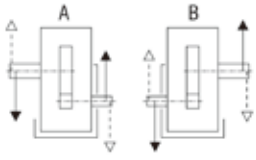
H1SH 3 ... 11



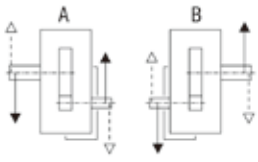
H1SH 13...19



Design



Sizes3 ... 11



Sizes13 ... 19

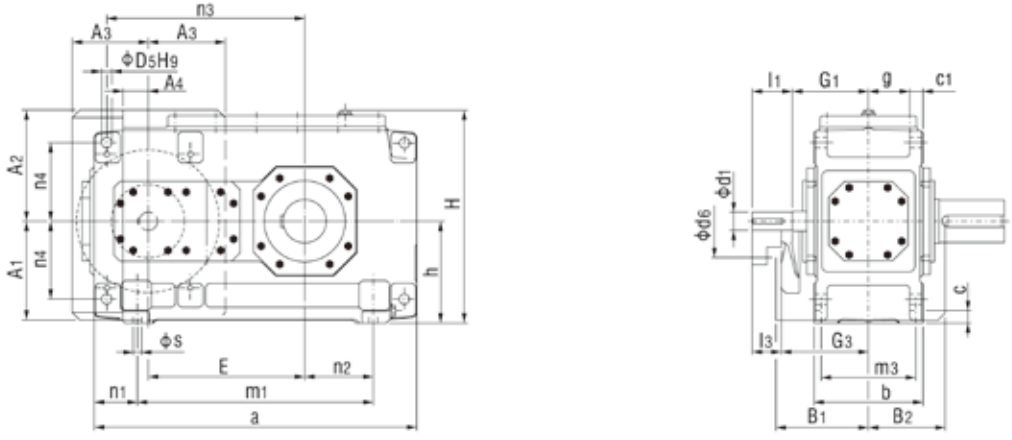
Size	i_N = 1.25 – 2.8			i_N = 1.6 – 2.8			i_N = 2 – 2.8			i_N = 3.15 – 4			i_N = 4.5 – 5.6			a	A1	A2	A3	b	B1	B2
	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3							
3	60	125	105							45	100	80	32	80	60	420	150	145	80	200	205	130
5	85	160	130							60	135	105	50	110	80	580	225	215	115	285	255	185
7	100	200	165							75	140	105	60	140	105	690	225	250	120	375	300	230
9	110	200	165							90	165	130	75	140	105	805	300	265	140	425	330	265
11				130	240	205				110	205	170	90	170	135	960	360	330	190	515	375	320
13				150	245	200				130	245	200	100	210	165	1100	415	350	-	580	430	-
15							180	290	240	150	250	200	125	250	200	1295	500	430	-	545	430	-
17							200	330	280	170	290	240	140	250	200	1410	550	430	-	615	470	-
19							220	340	290	190	340	290	160	300	250	1590	630	475	-	690	510	-

Size	B3	c	d2	d6	E	G1	G2	G3	h	H	l2	m1	m2	m3	n1	n2	s	oil (l)		weight (kg)
																		(1)*	(2)*	
3	-	28	60	130	130	170	170	190	200	375	125	310	-	160	55	110	19	7	5.5	128
5	-	35	85	190	185	210	210	240	290	525	160	440	-	240	70	160	24	22	19	302
7	-	45	105	245	225	250	250	285	350	625	200	540	-	315	75	195	28	42	36	547
9	-	50	125	280	265	280	270	315	420	735	210	625	-	350	90	225	35	68	60	862
11	-	60	150	350	320	325	320	360	500	875	240	770	-	440	95	280	35	120	106	1515
13	150	70	180	350	370	365	360	410	580	1020	310	870	-	490	115	315	42	175	155	2395
15	120	80	220	450	442	360	360	410	600	1115	350	1025	-	450	135	370	48	190	156	3200
17	150	80	240	445	490	400	400	450	670	1235	400	1170	130	530	120	425	42	270	225	4250
19	190	90	270	445	555	440	440	490	760	1395	450	1290	150	590	150	465	48	390	330	5800

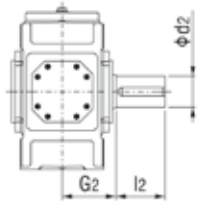
(1)*Shaft seal, (2)*Labyrinth seal.

H2.H4 ~ H2.H12

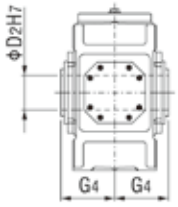
H2SH、H2HH、H2DH



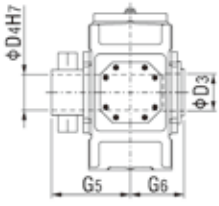
H2SH
Solid shaft



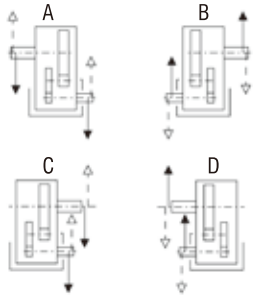
H2HH
Hollow shaft



H2DH
Hollow shaft with shrink disc



Shaft assemblies:



HB

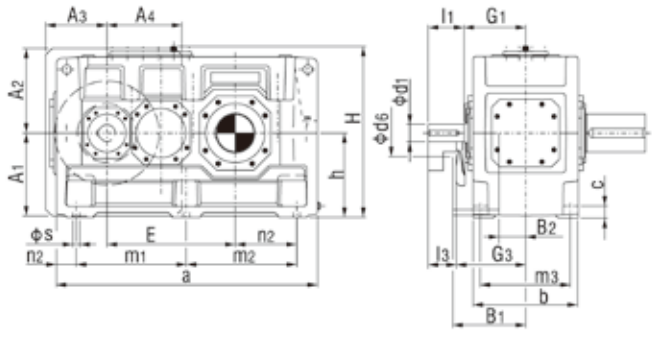
Size	i_N = 6.3 – 11.2			i_N = 8 – 14			i_N = 12.5 – 22.4			i_N = 16 – 28			a	A1	A2	A3	A4	b	B1	B2	c	c1	d2	d6	D2	D3
	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3														
4	45	100	80				32	80	60				565	195	225	150	30	215	205	158	28	30 ±1	80	136	80	85
5	50	100	80				38	80	60				640	225	260	175	55	255	230	177.5	28	30 ±1	100	150	95	100
6				50	100	80				38	80	60	720	225	260	175	55	255	230	177.5	28	30 ±1	110	150	105	110
7	60	135	105				50	110	80				785	272	305	210	70	300	255	210	35	36 ±1	120	200	115	120
8				60	135	105				50	110	80	890	272	305	210	70	300	255	210	35	36 ±1	130	200	125	130
9	75	140	110				60	140	110				925	312	355	240	100	370	285	245	40	45 ±1.5	140	200	135	140
10				75	140	110				60	140	110	1025	312	355	240	100	370	285	245	40	45 ±1.5	160	200	150	150
11	90	165	130				70	140	105				1105	372	420	285	135	430	325	285	50	54 ±1.5	170	210	165	165
12				90	165	130				70	140	105	1260	372	420	285	135	430	325	285	50	54 ±1.5	180	210	180	180

Size	D4	D5	E	g	G1	G2	G3	G4	G5	G6	h	H	l2	m1	m3	n1	n2	n3	n4	s	oil (l)		weight (kg)
																					(1)*	(2)*	
4	85	24	270	77.5	170	140	190	140	205	140	200	415	170	355	180	105	85	345	150	19	10	7	190
5	100	24	315	97.5	195	165	215	165	240	165	230	482	210	430	220	105	100	405	180	19	15	11	300
6	110	24	350	97.5	195	165	215	165	240	165	230	482	210	510	220	105	145	440	180	19	16	12	355
7	120	28	385	114	210	195	240	195	280	195	280	572	210	545	260	120	130	500	215	24	27	21	505
8	130	28	430	114	210	195	240	195	285	195	280	582	250	650	260	120	190	545	215	24	30	23	590
9	140	36	450	140	240	235	270	235	330	235	320	662	250	635	320	145	155	585	245	28	42	33	830
10	150	36	500	140	240	235	270	235	350	235	320	662	300	735	320	145	205	635	245	28	45	34	960
11	165	40	545	161	275	270	310	270	400	270	380	782	300	775	370	165	180	710	300	35	71	58	1335
12	180	40	615	161	275	270	310	270	405	270	380	790	300	930	370	165	265	780	300	35	76	60	1615

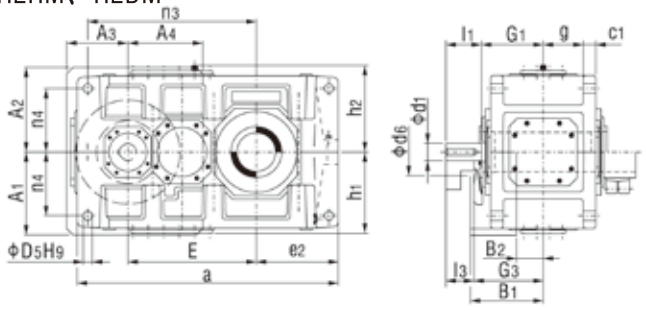
(1)*Shaft seal, (2)*Labyrinth seal.

H2.H13 ~ H2.H26

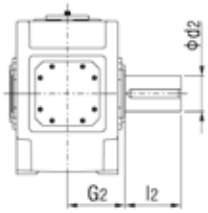
H2SH、H2HH、H2DH



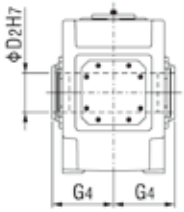
H2HM、H2DM



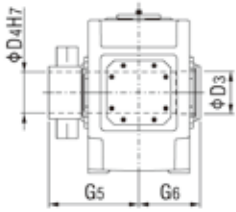
H2SH
Solid shaft



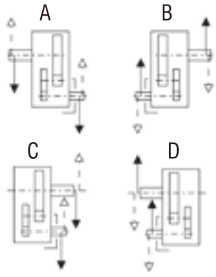
H2HH, H2HM
Hollow shaft



H2DH, H2DM
Hollow shaft with shrink disc



Shaft assemblies:



Size	i_N=6.3–11.2			i_N=7.1–12.5			i_N=8–14			i_N=12.5–20			i_N=14–22.4			i_N=16–25			a	A_1	A_2	A_3	A_4	b	B_1	B_2	c	c_1	d_2	d6	D_2	D_3
	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3														
13	100	205	170							85	170	135							1290	430	460	330	365	550	385	135	60	61±2	200	250	190	190
14							100	205	170							85	170	135	1430	430	460	330	365	550	385	135	60	61±2	210	250	210	210
15	120	210	165							100	210	165							1550	490	500	370	440	625	430	155	70	72±2	230	280	230	230
16				120	210	165							100	210	165				1640	490	500	370	440	625	430	155	70	72±2	240	280	240	240
17	125	245	200							110	210	165							1740	540	565	435	505	690	485	140	80	81±2	250	280	250	250
18				125	245	200							110	210	165				1860	540	565	435	505	690	485	140	80	81±2	270	280	275	280
19	150	245	200							120	210	165							2010	600	600	500	450	790	540	190	90	91±2	290	310	–	285
20				150	245	200							120	210	165				2130	600	600	500	450	790	540	190	90	91±2	300	310	–	310
21	170	290	240							140	250	200							2140	680	680	500	610	830	565	200	100	100±2	320	450	–	330
22				170	290	240							140	250	200				2250	680	680	500	610	830	565	200	100	100±2	340	450	–	340
23	190	330	280							150	250	200							2380	770	770	550	550	930	630	220	115	120±2	360	450	–	360
24				190	330	280							150	250	200				2510	770	770	550	550	930	630	220	115	120±2	380	450	–	380
25	200	340	290							170	300	250							2580	845	860	550	550	1045	670	240	130	120±2	400	450	–	400
26				200	340	290							170	300	250				2760	845	860	550	550	1045	670	240	130	120±2	420	450	–	430

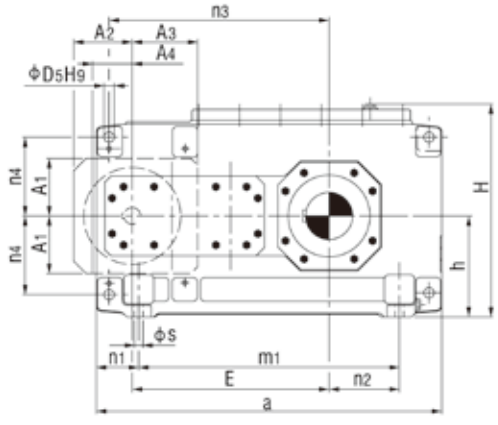
Size	D_4	D_5	e_2	E	g	G_1	G_2	G_3	G_4	G_5	G_6	h	h_1	h_2	H	l_2	m_1	m_2	m_3	n_1	n_2	n_3	n_4	s	oil (l)			weight (kg)	
																									H2.H		H2.M		
																									(1)*	(2)*		H2.H	H2.M
13	190	48	405	635	211.5	330	335	365	335	480	335	440	450	460	900	350	545	545	475	100	305	835	340	35	135	120	110	2000	1880
14	210	48	475	705	211.5	330	335	365	335	480	335	440	450	460	900	350	545	685	475	100	375	905	340	35	140	130	115	2570	2430
15	230	55	485	762	238	365	380	410	380	550	380	500	490	500	1000	410	655	655	535	120	365	1005	375	42	210	190	160	3430	3240
16	240	55	530	808	238	365	380	410	380	550	380	500	490	500	1000	410	655	745	535	120	410	1050	375	42	215	200	165	3655	3465
17	250	55	525	860	259	420	415	465	415	600	415	550	555	560	1110	410	735	735	600	135	390	1145	425	42	290	260	230	4650	4420
18	280	55	585	920	259	420	415	465	415	600	415	550	555	560	1110	470	735	855	600	135	450	1205	425	42	300	270	240	5125	4870
19	285	65	590	997	299	475	465	520	–	670	465	620	615	620	1240	470	850	850	690	155	435	1345	475	48	320	–	300	6600	6300
20	310	65	650	1057	299	475	465	520	–	670	465	620	615	620	1240	500	850	970	690	155	495	1405	475	48	340	–	320	7500	7200
21	330	75	655	1067	310	495	490	545	–	715	490	700	685	690	1390	500	900	900	720	170	485	1400	520	56	320	–	350	8900	8400
22	340	75	710	1122	310	495	490	545	–	725	490	700	685	690	1390	550	900	1010	720	170	540	1455	520	56	340	–	370	9600	9200
23	360	80	730	1185	342	560	540	610	–	785	540	780	770	770	1550	590	1010	1010	810	180	550	1560	580	56	430	–	470	11600	11000
24	380	80	795	1250	342	560	540	610	–	805	540	780	770	770	1550	590	1010	1140	810	180	615	1625	580	56	450	–	500	13000	12300
25	400	90	790	1325	400	600	605	650	–	875	605	860	860	860	1720	650	1090	1090	910	200	590	1685	660	66	600	–	660	15500	14700
26	430	90	880	1415	400	600	605	650	–	900	605	860	860	860	1720	650	1090	1270	910	200	680	1775	660	66	640	–	700	17200	16200

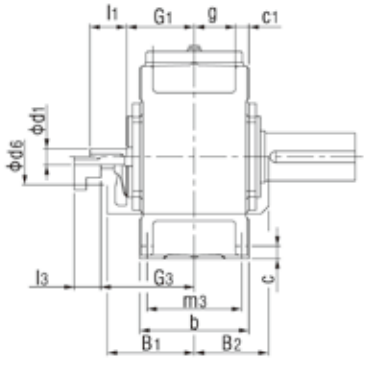
(1)*Shaft seal, (2)*Labyrinth seal.

HB

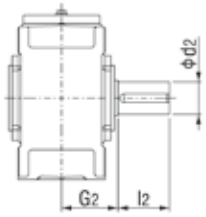
H3.H5 ~ H3.H12

H3SH、H3HH、H3DH

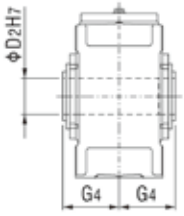




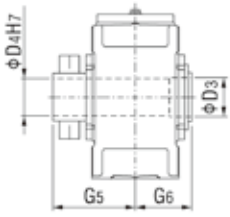
H3SH
Solid shaft



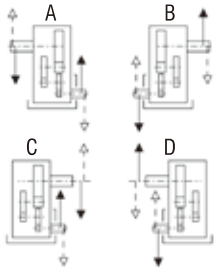
H3HH
Hollow shaft



H3DH
Hollow shaft with shrink disc



Shaft assemblies:



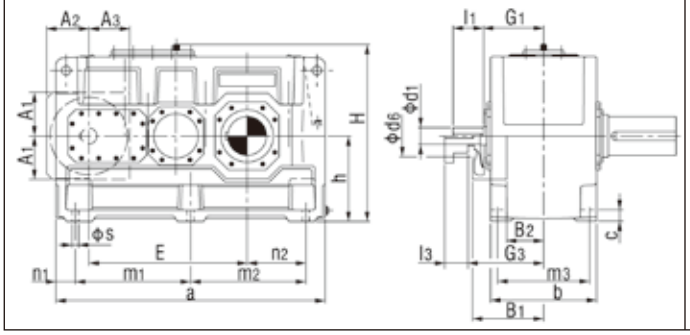
HB

Size	i_N = 25 – 45			i_N = 31.5 – 56			i_N = 50 – 63			i_N = 63 – 80			i_N = 71 – 90			i_N = 90 – 112			a	A4	A1	A2	A3	b	B1	B2	c1	c	d2
	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3											
5	40	70	70				30	50	50				24	40	40				690	80	137	135	140	255	215	175	30±1	28	100
6				40	70	70				30	50	50				24	40	40	770	80	137	135	140	255	215	175	30±1	28	110
7	45	80	80				35	60	60				28	50	50				845	100	157	160	180	300	245	205	36±1	35	120
8				45	80	80				35	60	60				28	50	50	950	100	157	160	180	300	245	205	36±1	35	130
9	60	125	105				45	100	80				32	80	60				1000	120	182	190	205	370	295	240	45±1.5	40	140
10				60	125	105				45	100	80				32	80	60	1100	120	182	190	205	370	295	240	45±1.5	40	160
11	70	120	120				50	80	80				42	70	70				1200	150	218	220	255	430	325	280	54±1.5	50	170
12				70	120	120				50	80	80				42	70	70	1355	150	218	220	255	430	325	280	54±1.5	50	180

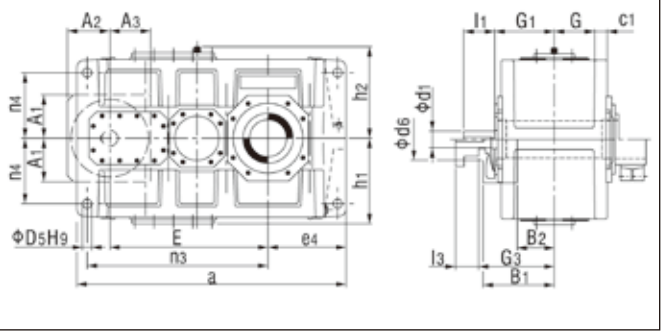
Size	d6	D2	D3	D4	D5	E	g	G1	G2	G3	G4	G5	G6	h	H	l2	m1	m3	n1	n2	n3	n4	s	oil (l)	weight (kg)
5	60	95	100	100	24	405	97.5	160	165	220	165	240	165	230	482	210	480	220	105	100	455	180	19	15	320
6	60	105	110	110	24	440	97.5	160	165	220	165	240	165	230	482	210	560	220	105	145	490	180	19	17	365
7	75	115	120	120	28	495	114	185	195	250	195	280	195	280	572	210	605	260	120	130	560	215	24	28	540
8	75	125	130	130	28	540	114	185	195	250	195	285	195	280	582	250	710	260	120	190	605	215	24	30	625
9	90	135	140	140	36	580	140	230	235	300	235	330	235	320	662	250	710	320	145	155	660	245	28	45	875
10	90	150	150	150	36	630	140	230	235	300	235	350	235	320	662	300	810	320	145	205	710	245	28	46	1020
11	100	165	165	165	40	705	161	255	270	330	270	400	270	380	782	300	870	370	165	180	805	300	35	85	1400
12	100	180	180	180	40	775	161	255	270	330	270	405	270	380	790	300	1025	370	165	265	875	300	35	90	1675

H3.H13 ~ H3.H26

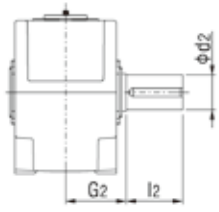
H3SH、H3HH、H3DH



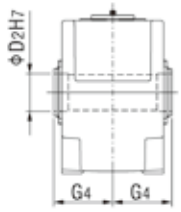
H3HM、H3DM



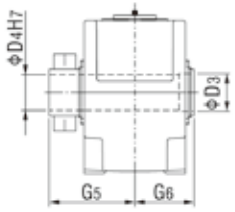
H3SH
Solid shaft



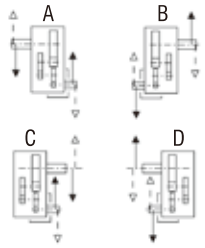
H3HH H3HM
Hollow shaft



H3DH H3DM
Hollow shaft with shrink disc



Shaft assemblies:



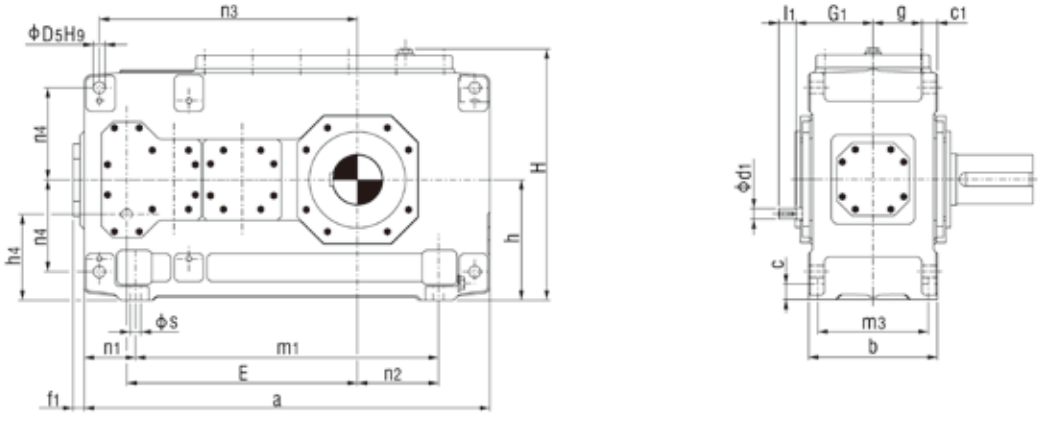
Size	i_N=22.4–45			i_N=25–50			i_N=50–63			i_N=56–71			i_N=71–90			i_N=80–100			a	A1	A2	A3	b	B1	B2	c	c1	d2	d6	D2	D3
	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3												
13	85	160	130				60	135	105				50	110	80				1395	225	225	212	550	380	195	60	61±2	200	120	190	190
14				iN=28–56						iN=63–80						iN=90–112			1535	225	225	212	550	380	195	60	61±2	210	120	210	210
				85	160	130				60	135	105				50	110	80													
15	100	200	165				75	140	105				60	140	105				1680	270	265	252	625	415	205	70	72±2	230	150	230	230
16				100	200	165				75	140	105				60	140	105	1770	270	265	252	625	415	205	70	72±2	240	150	240	240
17	100	200	165				75	140	105				60	140	105				1770	270	265	252	690	445	235	80	81±2	250	150	250	250
18				100	200	165				75	140	105				60	140	105	1890	270	265	252	690	445	235	80	81±2	270	150	275	280
19	110	200	*				90	165	*				75	140	*				2030	*	*	*	790	*	*	90	91±2	290	*	–	285
20				110	200	*				90	165	*				75	140	*	2150	*	*	*	790	*	*	90	91±2	300	*	–	310
21	130	240	*				110	205	*				90	170	*				2340	*	*	*	830	*	*	100	100±2	320	*	–	330
22				130	240	*				110	205	*				90	170	*	2450	*	*	*	830	*	*	100	100±2	340	*	–	340
23	130	240	–				110	205	–				90	170	–				2530	–	–	–	930	–	–	115	120±2	360	–	–	360
24				130	240	–				110	205	–				90	170	–	2660	–	–	–	930	–	–	115	120±2	380	–	–	380
25	150	245	–				130	245	–				100	210	–				2830	–	–	–	1045	–	–	130	120±2	400	–	–	400
26				150	245	–				130	245	–				100	210	–	3010	–	–	–	1045	–	–	130	120±2	420	–	–	430

Size	D4	D5	e2	E	g	G1	G2	G3	G4	G5	G6	h	h1	h2	H	l2	m1	m2	m3	n1	n2	n3	n4	s	oil (l)		weight(kg)	
																									H3.H	H3.M	H3.H	H3.M
13	190	48	405	820	211.5	310	335	385	335	480	335	440	450	460	900	350	597.5	597.5	475	100	305	940	340	35	160	125	2295	2155
14	210	48	475	890	211.5	310	335	385	335	480	335	440	450	460	900	350	597.5	737.5	475	100	375	1010	340	35	165	130	2625	2490
15	230	55	485	987	238	350	380	420	380	550	380	500	490	500	1000	410	720	720	535	120	365	1135	375	42	235	190	3475	3260
16	240	55	530	1033	238	350	380	420	380	550	380	500	490	500	1000	410	720	810	535	120	410	1180	375	42	245	195	3875	3625
17	250	55	525	1035	259	380	415	450	415	600	415	550	555	560	1110	410	750	750	600	135	390	1175	425	42	305	240	4560	4250
18	280	55	585	1095	259	380	415	450	415	600	415	550	555	560	1110	470	750	870	600	135	450	1235	425	42	315	250	5030	4740
19	285	65	590	1190	299	430	465	*	–	670	465	620	615	620	1240	470	860	860	690	155	435	1365	475	48	420	390	6700	6200
20	310	65	650	1250	299	430	465	*	–	670	465	620	615	620	1240	500	860	980	690	155	495	1425	475	48	450	415	8100	7600
21	330	75	655	1387	310	470	490	*	–	715	490	700	685	690	1390	500	1000	1000	720	170	485	1600	520	56	470	510	9100	8500
22	340	75	710	1442	310	470	490	*	–	725	490	700	685	690	1390	550	1000	1110	720	170	540	1655	520	56	490	540	9800	9300
23	360	80	730	1505	342	510	540	–	–	785	540	780	770	790	1570	590	1085	1085	810	180	550	1725	580	56	620	690	11500	10600
24	380	80	795	1570	342	510	540	–	–	805	540	780	770	790	1570	590	1085	1215	810	180	615	1790	580	56	650	725	13400	12500
25	400	90	790	1695	400	570	605	–	–	875	605	860	860	860	1720	650	1215	1215	910	200	590	1965	660	66	880	970	16100	15200
26	430	90	880	1785	400	570	605	–	–	900	605	860	860	860	1720	650	1215	1395	910	200	680	2055	660	66	935	1030	17600	16500

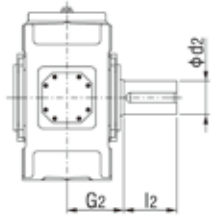
Note: * On request.

H4.H7 ~ H4.H12

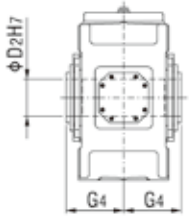
H4SH、H4HH、H4DH



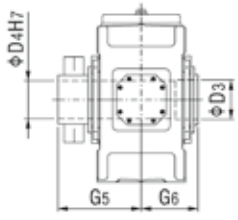
H4SH
Solid shaft



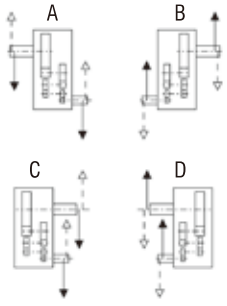
H4HH
Hollow shaft



H4DH
Hollow shaft with shrink disc



Shaft assemblies:



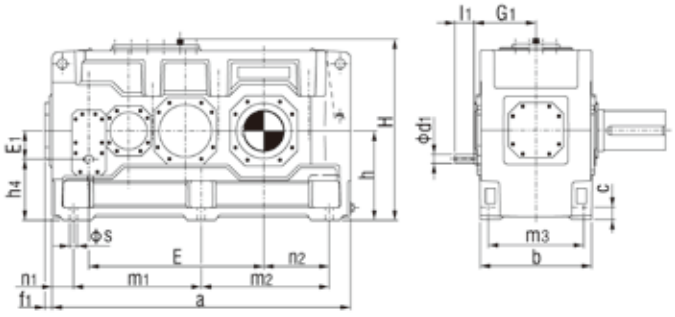
HB

Size	i_N = 100 – 180		i_N = 125 – 224		i_N = 200 – 355		i_N = 250 – 450		a	b	c	c1	d2	D2	D3	D4	D5	E
	d1	l1	d1	l1	d1	l1	d1	l1										
7	30	50			24	40			845	300	35	36±1	120	115	120	120	28	495
8			30	50			24	40	950	300	35	36±1	130	125	130	130	28	540
9	35	60			28	50			1000	370	40	45±1.5	140	135	140	140	36	580
10			35	60			28	50	1100	370	40	45±1.5	160	150	150	150	36	630
11	45	100			32	80			1200	430	50	54±1.5	170	165	165	165	40	705
12			45	100			32	80	1355	430	50	54±1.5	180	180	180	180	40	775

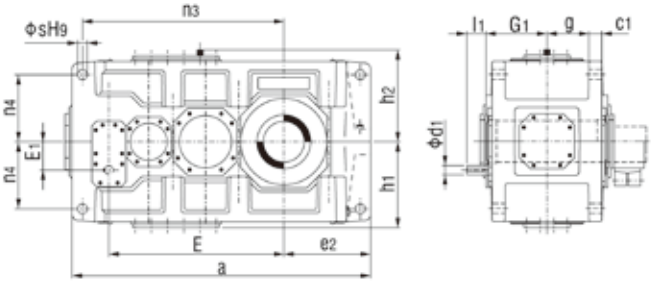
Size	f1	g	G1	G2	G4	G5	G6	h	h4	H	l2	m1	m3	n1	n2	n3	n4	s	oil (l)	weight (kg)
7	37	114	180	195	195	280	195	280	200	572	210	605	260	120	130	560	215	24	25	550
8	37	114	180	195	195	285	195	280	200	582	250	710	260	120	190	605	215	24	27	645
9	43	140	215	235	235	330	235	320	230	662	250	710	320	145	155	660	245	28	48	875
10	43	140	215	235	235	350	235	320	230	662	300	810	320	145	205	710	245	28	50	1010
11	47	161	250	270	270	400	270	380	270	782	300	870	370	165	180	805	300	35	80	1460
12	47	161	250	270	270	405	270	380	270	790	300	1025	370	165	265	875	300	35	87	1725

H4.H13 ~ H4.H26

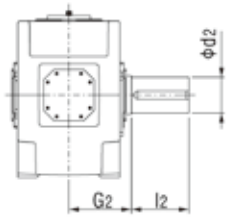
H4SH、H4HH、H4DH



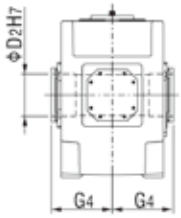
H4HM、H4DM



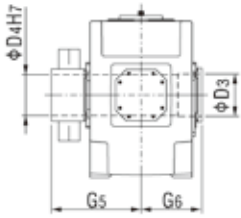
H4SH
Solid shaft



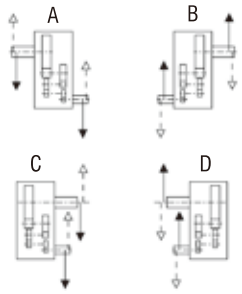
H4HH, H4HM
Hollow shaft



H4DH, H4DM
Hollow shaft with shrink disc



Shaft assemblies:

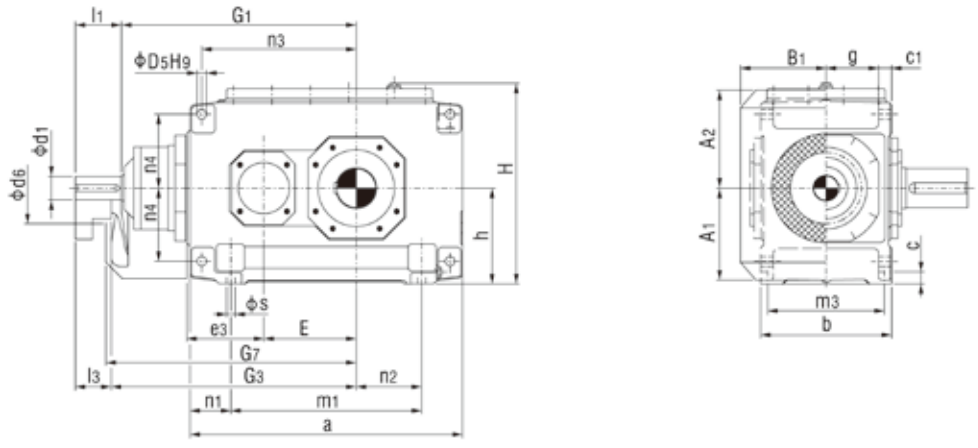


Size	i_N=100–180		i_N=112–200		i_N=125–224		i_N=200–355		i_N=224–400		i_N=250–450		a	b	c	c1	d2	D2	D3	D4	D5	e2	E	E1
	d1	l1	d1	l1	d1	l1	d1	l1	d1	l1	d1	l1												
13	50	100					38	80					1395	550	60	61 ± 2	200	190	190	190	48	405	820	130
14					50	100					38	80	1535	550	60	61 ± 2	210	210	210	210	48	475	890	130
15	60	135					50	110					1680	625	70	72 ± 2	230	230	230	230	55	485	987	160
16			60	135					50	110			1770	625	70	72 ± 2	240	240	240	240	55	530	1033	160
17	60	105					50	80					1770	690	80	81 ± 2	250	250	250	250	55	525	1035	160
18			60	105					50	80			1890	690	80	81 ± 2	270	275	280	280	55	585	1095	160
19	75	105					60	105					2030	790	90	91 ± 2	290	–	285	285	65	590	1190	185
20			75	105					60	105			2150	790	90	91 ± 2	300	–	310	310	65	650	1250	185
21	90	165					70	140					2340	830	100	100 ± 2	320	–	330	330	75	655	1387	225
22			90	165					70	140			2450	830	100	100 ± 2	340	–	340	340	75	710	1442	225
23	90	165					70	105					2530	930	115	120 ± 2	360	–	360	360	80	730	1505	225
24			90	165					70	105			2660	930	115	120 ± 2	380	–	380	380	80	795	1570	225
25	100	205					85	170					2830	1045	130	120 ± 2	400	–	400	400	90	790	1695	265
26			100	205					85	170			3010	1045	130	120 ± 2	420	–	430	430	90	880	1785	265

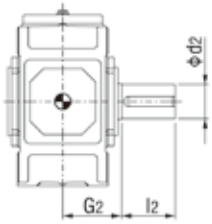
Size	f1	g	G1	G2	G4	G5	G6	h	h1	h2	h4	H	l2	m1	m2	m3	n1	n2	n3	n4	s	oil (l)		weight(kg)	
																						H4.H	H4.M	H4.H	H4.M
13	47	211.5	305	335	335	480	335	440	450	460	310	900	350	597.5	597.5	475	100	305	940	340	35	130	120	2390	2270
14	47	211.5	305	335	335	480	335	440	450	460	310	900	350	597.5	737.5	475	100	375	1010	340	35	140	125	2730	2600
15	56	238	345	380	380	550	380	500	490	500	340	1000	410	720	720	535	120	365	1135	375	42	230	170	3635	3440
16	56	238	345	380	380	550	380	500	490	500	340	1000	410	720	810	535	120	410	1180	375	42	235	175	3965	3740
17	53	259	380	415	415	600	415	550	555	560	390	1110	410	750	750	600	135	390	1175	425	42	290	225	4680	4445
18	53	259	380	415	415	600	415	550	555	560	390	1110	470	750	870	600	135	450	1235	425	42	305	230	5185	4915
19	53	299	440	465	–	670	465	620	615	620	435	1240	470	860	860	690	155	435	1365	475	48	360	310	6800	6300
20	53	299	440	465	–	670	465	620	615	620	435	1240	500	860	980	690	155	495	1425	475	48	380	330	8200	7700
21	62	310	460	490	–	715	490	700	685	690	475	1390	500	1000	1000	720	170	485	1600	520	56	395	430	9200	8600
22	62	310	460	490	–	725	490	700	685	690	475	1390	550	1000	1110	720	170	540	1655	520	56	420	450	9900	9400
23	35	342	505	540	–	785	540	780	770	790	555	1570	590	1085	1085	810	180	550	1725	580	56	520	500	11600	10700
24	35	342	505	540	–	805	540	780	770	790	555	1570	590	1085	1215	810	180	615	1790	580	56	550	600	13500	12600
25	65	400	565	605	–	875	605	860	860	860	595	1720	650	1215	1215	910	200	590	1965	660	66	735	800	16100	15200
26	65	400	565	605	–	900	605	860	860	860	595	1720	650	1215	1395	910	200	680	2055	660	66	780	850	17600	16500

B2.H4 ~ B2.H12

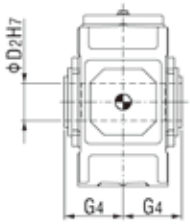
B2SH、B2HH、B2DH



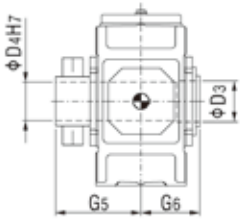
B2SH
Solid shaft



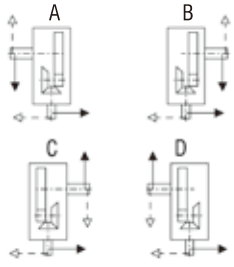
B2HH
Hollow shaft



B2DH
Hollow shaft with shrink disc



Shaft assemblies:



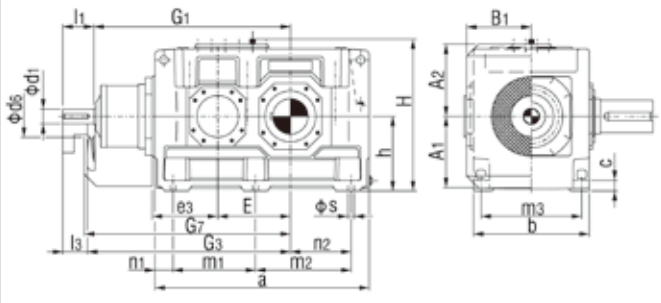
Size	i_N = 5 – 11.2			i_N = 6.3 – 14			a	A1	A2	b	B1	c	c1	d2	d6	D2	D3	D4	D5	e3	E
	d1	l1	l3	d1	l1	l3															
4	50	100	80				505	195	200	270	188	28	30±1	80	150	80	85	85	24	160	160
5	60	110	80				565	220	235	320	215	28	30±1	100	160	95	100	100	24	185	185
6				60	110	80	645	220	235	320	215	28	30±1	110	160	105	110	110	24	185	220
7	75	135	105				690	270	285	380	250	35	36±1	120	210	115	120	120	28	225	225
8				75	135	105	795	270	285	380	250	35	36±1	130	210	125	130	130	28	225	270
9	85	165	130				820	310	325	440	270	40	48±1.5	140	195	135	140	140	36	265	265
10				85	165	130	920	310	325	440	270	40	48±1.5	160	195	150	150	150	36	265	315
11	95	165	130				975	370	385	530	328	50	54±1.5	170	210	165	165	165	40	320	320
12				95	165	130	1130	370	385	530	328	50	54±1.5	180	210	180	180	180	40	320	390

Size	g	G1	G2	G3	G4	G5	G6	G7	h	H	l2	m1	m3	n1	n2	n3	n4	s	oil (l)		weight (kg)
																			(1)*	(2)*	
4	105	465	170	485	170	235	170	495	200	415	170	295	235	105	85	285	150	19	10	–	235
5	130	535	200	565	200	275	200	575	230	482	210	355	285	105	100	330	180	19	16	14	360
6	130	570	200	600	200	275	200	610	230	482	210	435	285	105	145	365	180	19	19	15	410
7	154	640	235	670	235	320	235	685	280	582	210	450	340	120	130	405	215	24	31	28	615
8	154	685	235	715	235	325	235	730	280	582	250	555	340	120	190	450	215	24	34	29	700
9	172	755	270	790	270	365	270	805	320	662	250	530	390	145	155	480	245	28	48	38	1000
10	172	805	270	840	270	385	270	855	320	662	300	630	390	145	205	530	245	28	50	40	1155
11	211	925	320	960	320	450	320	980	380	790	300	645	470	165	180	580	300	35	80	65	1640
12	211	995	320	1030	320	455	320	1050	380	790	300	800	470	165	265	650	300	35	95	71	1910

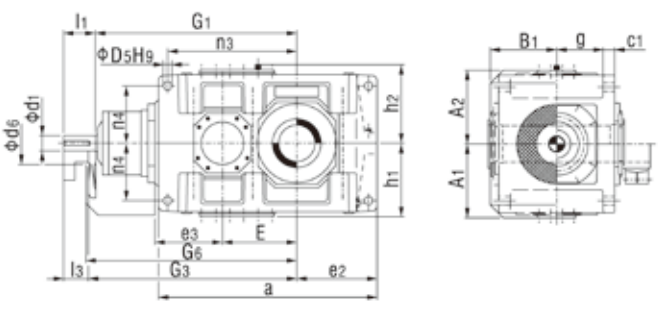
(1)*Shaft seal, (2)*Labyrinth seal.

B2.H13 ~ B2.H18

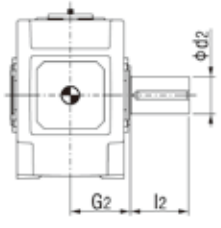
B2SH、B2HH、B2DH



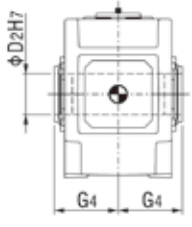
B2HM、B2DM



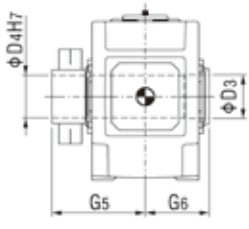
B2SH
Solid shaft



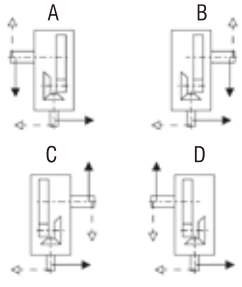
B2HH, B2HM
Hollow shaft



B2DH, B2DM
Hollow shaft with shrink disc



Shaft assemblies:



HB

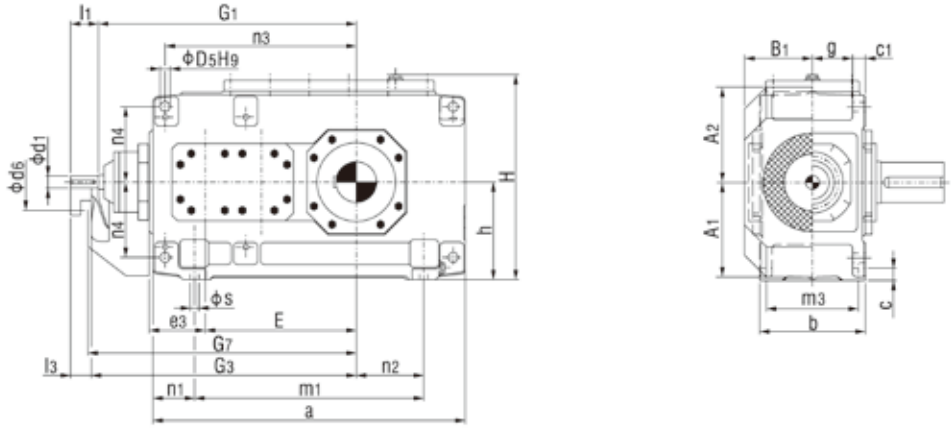
Size	i_N=5–11.2			i_N=5.6–11.2			i_N=5.6–12.5			i_N=6.3–14			i_N=7.1–12.5			a	A1	A2	b	B1	c	c1	d2	d6	D2	D3	D4	D5	e2	e3
	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3	d1	l1	l3															
13	115	205	165													1130	430	450	655	375	60	61 ± 2	200	245	–	–	–	48	405	380
14										115	205	165				1270	430	450	655	375	60	61 ± 2	210	245	210	210	210	48	475	380
15	140	245	200													1350	490	495	765	435	70	72 ± 2	230	280	–	–	–	55	485	450
16							140	245	200							1440	490	495	765	435	70	72 ± 2	240	280	240	240	240	55	530	450
17				150	245	200										1490	540	555	885	505	80	81 ± 2	250	380	–	–	–	65	525	510
18													150	245	200	1610	540	555	885	505	80	81 ± 2	270	380	275	280	280	65	585	510

Size	E	g	G1	G2	G3	G4	G5	G6	G7	h	h1	h2	H	l2	m1	m2	m3	n1	n2	n3	n4	s	oil (l)			weight (kg)	
																							B2.H		B2.M	B2.H	B2.M
																							(1)*	(2)*			
13	370	264	1070	390	1110	–	–	–	1130	440	450	460	900	350	465	465	580	100	305	675	340	35	140	125	120	2450	2350
14	440	264	1140	390	1180	390	535	390	1200	440	450	460	900	350	465	605	580	100	375	745	340	35	155	140	130	2825	2725
15	442	308	1277	460	1322	–	–	–	1340	500	490	500	1000	410	555	555	670	120	365	805	375	42	220	195	180	3990	3795
16	488	308	1323	460	1368	450	620	450	1385	500	490	500	1000	410	555	645	670	120	410	850	375	42	230	205	190	4345	4160
17	490	356	1435	540	1480	–	–	–	1500	550	555	560	1110	410	610	610	780	135	390	895	420	48	320	280	260	5620	5320
18	550	356	1495	540	1540	510	700	510	1560	550	555	560	1110	470	610	730	780	135	450	955	420	48	335	300	275	6150	5860

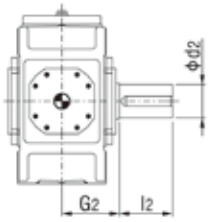
(1)*Shaft seal, (2)*Labyrinth seal.

B3.H4 ~ B3.H12

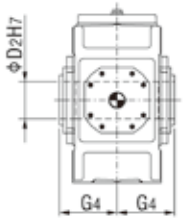
B3SH、B3HH、B3DH



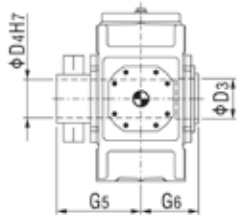
B3SH
Solid shaft



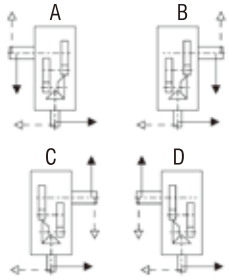
B3HH
Hollow shaft



B3DH
Hollow shaft with shrink disc



Shaft assemblies:



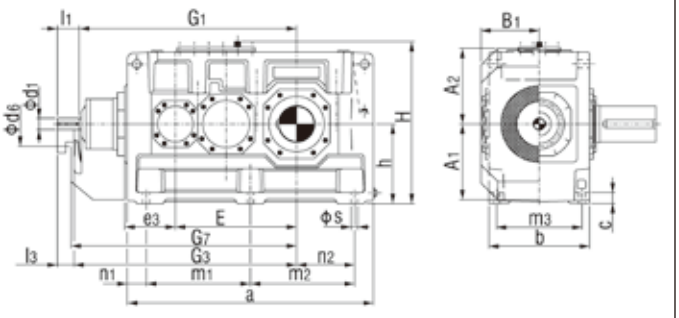
HB

Size	i_N = 12.5 – 45			i_N = 16 – 56			i_N = 50 – 71			i_N = 63 – 90			a	A_1	A_2	b	B_1	c	c_1	d_2	d_6	D_2	D_3	D_4
	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3												
4	35	70	50				30	60	40				565	195	200	215	143	28	30 ± 1	80	110	80	85	85
5	45	80	60				35	60	40				640	220	235	255	168	28	30 ± 1	100	130	95	100	100
6				45	80	60				35	60	40	720	220	235	255	168	28	30 ± 1	110	130	105	110	110
7	50	100	80				40	80	60				785	275	275	300	193	35	36 ± 1	120	165	115	120	120
8				50	100	80				40	80	60	890	275	275	300	193	35	36 ± 1	130	165	125	130	130
9	60	110	80				50	100	70				925	315	325	370	231	40	45 ± 1.5	140	175	135	140	140
10				60	110	80				50	100	70	1025	315	325	370	231	40	45 ± 1.5	160	175	150	150	150
11	75	135	105				60	110	80				1105	370	385	430	263	50	54 ± 1.5	170	190	165	165	165
12				75	135	105				60	110	80	1260	370	385	430	263	50	54 ± 1.5	180	190	180	180	180

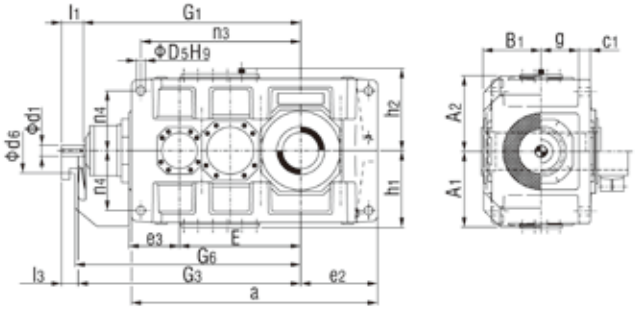
Size	D_5	e_3	E	g	G_1	G_2	G_3	G_4	G_5	G_6	G_7	h	h_5	H	l_2	m_1	m_3	n_1	n_2	n_3	n_4	s	oil (l)	weight (kg)
4	24	110	270	77.5	500	140	520	140	205	140	530	200	100	415	170	355	180	105	85	345	150	19	9	210
5	24	130	315	97.5	575	165	595	165	240	165	605	230	130	482	210	430	220	105	100	405	180	19	14	325
6	24	130	350	97.5	610	165	630	165	240	165	640	230	130	482	210	510	220	105	145	440	180	19	15	380
7	28	160	385	114	690	195	710	195	280	195	720	280	170	572	210	545	260	120	130	500	215	24	25	550
8	28	160	430	114	735	195	755	195	285	195	765	280	160	582	250	650	260	120	190	545	215	24	28	635
9	36	185	450	140	800	235	830	235	330	235	845	320	175	662	250	635	320	145	155	585	245	28	40	890
10	36	185	500	140	850	235	880	235	350	235	895	320	175	662	300	735	320	145	205	635	245	28	42	1020
11	40	225	545	161	960	270	990	270	400	270	1010	380	220	782	300	775	370	165	180	710	300	35	66	1455
12	40	225	615	161	1030	270	1060	270	405	270	1080	380	210	790	300	930	370	165	265	780	300	35	72	1730

B3.H13 ~ B3.H26

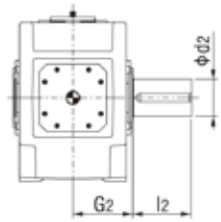
B3SH、B3HH、B3DH



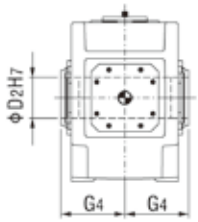
B3HM、B3DM



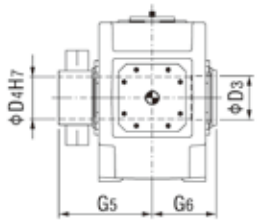
B3SH
Solid shaft



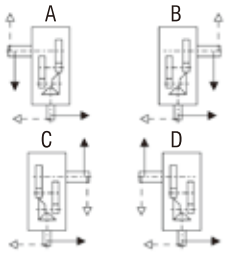
B3HH, B3HM
Hollow shaft



B3DH, B3DM
Hollow shaft with shrink disc



Shaft assemblies:

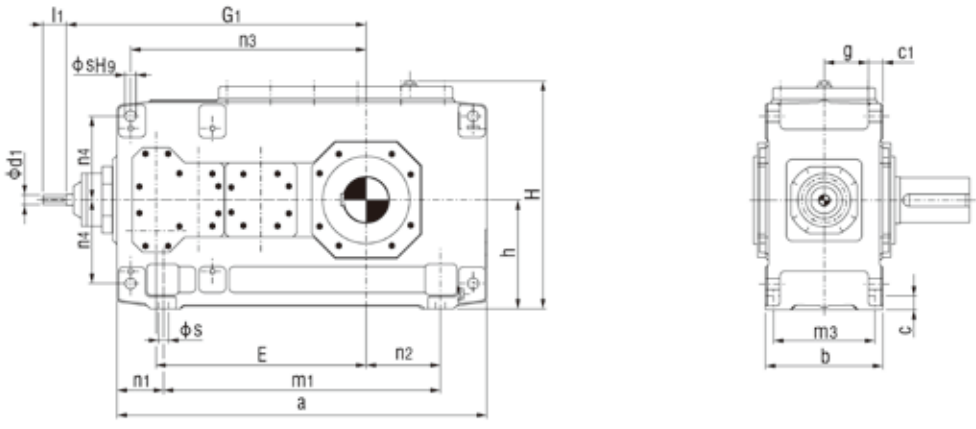


Size	i_N=12.5–45			i_N=14–50			i_N=16–56			i_N=50–71			i_N=56–80			i_N=63–90			a	A_1	A_2	b	B_1	c	c_1	d_2	d_6	D_2	D_3	D_4
	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3											
13	85	165	130							70	140	105							1290	425	435	550	325	60	61 ± 2	200	210	190	190	190
14							85	165	130							70	140	105	1430	425	435	550	325	60	61 ± 2	210	210	210	210	210
15	95	165	130							75	140	105							1550	485	520	625	365	70	72 ± 2	230	210	230	230	230
16				95	165	130							75	140	105				1640	485	520	625	365	70	72 ± 2	240	210	240	240	240
17	115	205	165							90	170	130							1740	535	570	690	395	80	81 ± 2	250	230	250	250	250
18				115	205	165							90	170	130				1860	535	570	690	395	80	81 ± 2	270	230	275	280	280
19	140	245	200							110	210	165							2010	610	630	790	448	90	91 ± 2	290	245	-	285	285
20				140	245	200							110	210	165				2130	610	630	790	448	90	91 ± 2	300	245	-	310	310
21	140	245	200							110	210	165							2140	690	690	830	473	100	100 ± 2	320	280	-	330	330
22				140	245	200							110	210	165				2250	690	690	830	473	100	100 ± 2	340	280	-	340	340
23	150	245	200							115	210	165							2380	770	770	930	528	115	120 ± 2	360	350	-	360	360
24				150	245	200							115	210	165				2510	770	770	930	528	115	120 ± 2	380	350	-	380	380
25	150	245	200							115	210	165							2580	845	865	1045	585	130	120 ± 2	400	380	-	400	400
26				150	245	200							115	210	165				2760	845	865	1045	585	130	120 ± 2	420	380	-	430	430

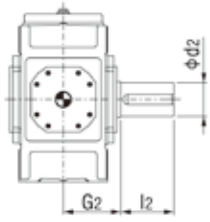
Size	D_5	e_2	e_3	E	g	G_1	G_2	G_3	G_4	G_5	G_6	G_7	h	h_1	h_2	H	l_2	m_1	m_2	m_3	n_1	n_2	n_3	n_4	s	oil (l)		weight (kg)	
																										B3.H	B3.M	B3.H	B3.M
13	48	405	265	635	211.5	1125	335	1160	335	480	335	1180	440	450	460	900	350	545	545	475	100	305	835	340	35	130	110	2380	2260
14	48	475	265	705	211.5	1195	335	1230	335	480	335	1250	440	450	460	900	350	545	685	475	100	375	905	340	35	140	115	2750	2615
15	55	485	320	762	238	1367	380	1402	380	550	380	1420	500	490	500	1000	410	655	655	535	120	365	1005	375	42	210	160	3730	3540
16	55	530	320	808	238	1413	380	1448	380	550	380	1470	500	490	500	1000	410	655	745	535	120	410	1050	375	42	220	165	3955	3765
17	55	525	370	860	259	1560	415	1600	415	600	415	1620	550	555	560	1110	410	735	735	600	135	390	1145	425	42	290	230	4990	4760
18	55	585	370	920	259	1620	415	1660	415	600	415	1680	550	555	560	1110	470	735	855	600	135	450	1205	425	42	300	235	5495	5240
19	65	590	420	997	299	1832	465	1877	-	670	465	1900	620	615	620	1240	470	850	850	690	155	435	1345	475	48	380	360	7000	6500
20	65	650	420	1057	299	1892	465	1937	-	670	465	1960	620	615	620	1240	500	850	970	690	155	495	1405	475	48	440	420	8100	7600
21	75	655	450	1067	310	1902	490	1947	-	715	490	1970	700	685	690	1390	500	900	900	720	170	485	1400	520	56	370	420	9200	8600
22	75	710	450	1122	310	1957	490	2002	-	725	490	2025	700	685	690	1390	550	900	1010	720	170	540	1455	520	56	430	490	9900	9400
23	80	730	490	1185	342	2130	540	2175	-	785	540	2200	780	770	790	1570	590	1010	1010	810	180	550	1560	580	56	520	560	11500	10600
24	80	795	490	1250	342	2195	540	2240	-	805	540	2265	780	770	790	1570	590	1010	1140	810	180	615	1625	580	56	600	650	13400	12500
25	90	790	490	1325	400	2270	605	2315	-	875	605	2315	860	860	860	1720	650	1090	1090	910	200	590	1685	660	66	720	790	16000	15100
26	90	880	490	1415	400	2360	605	2405	-	900	605	2430	860	860	860	1720	650	1090	1270	910	200	680	1775	660	66	840	920	17500	16400

B4.H5 ~ B4.H12

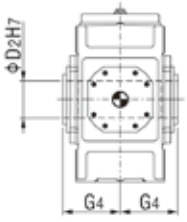
B4SH、B4HH、B4DH



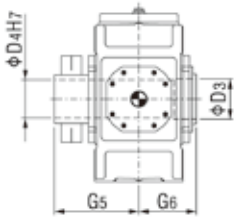
B4SH
Solid shaft



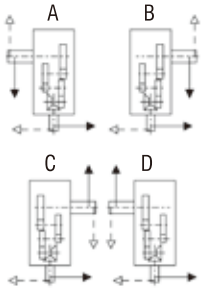
B4HH
Hollow shaft



B4DH
Hollow shaft with shrink disc



Shaft assemblies:



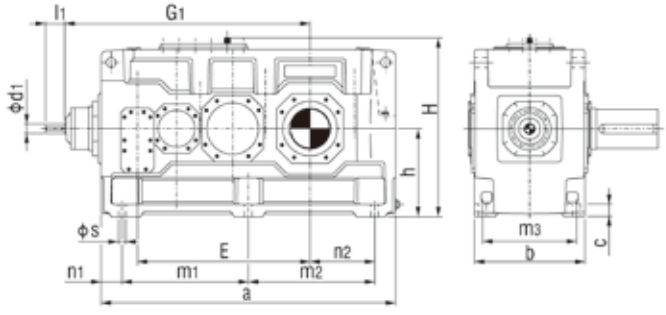
HB

Size	i_N = 80 – 180		i_N=100–224		i_N=200–315		i_N=250–400		a	b	c	c1	d2	D2	D3	D4	D5	E	g
	d1	l1	d1	l1	d1	l1	d1	l1											
5	35	55			25	50			690	255	28	30±1	100	95	100	100	24	405	97.5
6			35	55			25	50	770	255	28	30±1	110	105	110	110	24	440	97.5
7	35	70			30	60			845	300	35	36±1	120	115	120	120	28	495	114
8			35	70			30	60	950	300	35	36±1	130	125	130	130	28	540	114
9	45	80			35	60			1000	370	40	45±1.5	140	135	140	140	36	580	140
10			45	80			35	60	1100	370	40	45±1.5	160	150	150	150	36	630	140
11	50	100			40	80			1200	430	50	54±1.5	170	165	165	165	40	705	161
12			50	100			40	80	1355	430	50	54±1.5	180	180	180	180	40	775	161

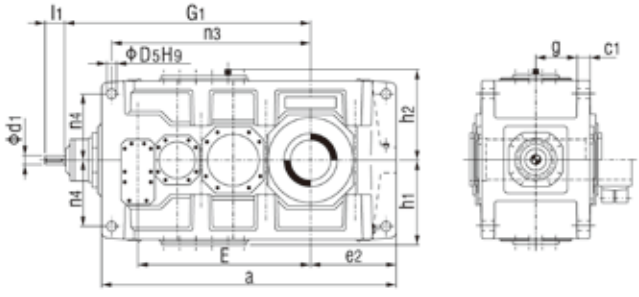
Size	G1	G2	G4	G5	G6	h	h5	H	l2	m1	m3	n1	n2	n3	n4	s	oil (l)	weight (kg)
5	615	165	165	240	165	230	100	482	210	480	220	105	100	455	180	19	16	335
6	650	165	165	240	165	230	100	482	210	560	220	105	145	490	180	19	18	385
7	725	195	195	280	195	280	140	572	210	605	260	120	130	560	215	24	30	555
8	770	195	195	285	195	280	130	582	250	710	260	120	190	605	215	24	33	655
9	840	235	235	330	235	320	135	662	250	710	320	145	155	660	245	28	48	890
10	890	235	235	350	235	320	135	662	300	810	320	145	205	710	245	28	50	1025
11	1010	270	270	400	270	380	170	782	300	870	370	165	180	805	300	35	80	1485
12	1080	270	270	405	270	380	160	790	300	1025	370	165	265	875	300	35	90	1750

B4.H13 ~ B4.H26

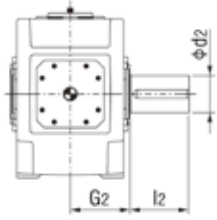
B4SH、B4HH、B4DH



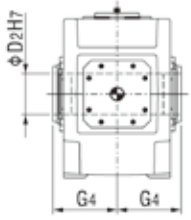
B4HM、B4DM



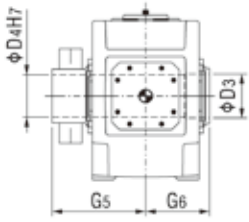
B4SH
Solid shaft



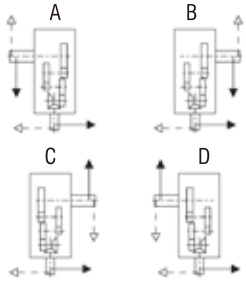
B4HH, B4HM
Hollow shaft



B4DH, B4DM
Hollow shaft with shrink disc



Shaft assemblies:

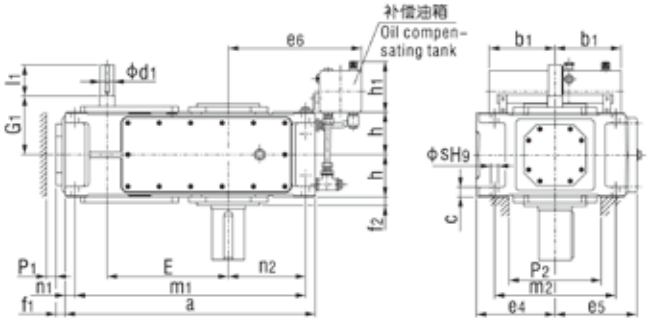


Size	i_N = 80–180		i_N = 90–200		i_N = 100–224		i_N = 200–315		i_N = 224–355		i_N = 250–400		a	b	c	c1	d2	D2	D3	D4	D5
	d1	l1	d1	l1	d1	l1	d1	l1	d1	l1	d1	l1									
13	60	110					50	100					1395	550	60	61 ± 2	200	190	190	190	48
14					60	110					50	100	1535	550	60	61 ± 2	210	210	210	210	48
15	75	135					60	110					1680	625	70	72 ± 2	230	230	230	230	55
16			75	135					60	110			1770	625	70	72 ± 2	240	240	240	240	55
17	75	135					60	110					1770	690	80	81 ± 2	250	250	250	250	55
18			75	135					60	110			1890	690	80	81 ± 2	270	275	280	280	55
19	85	165					70	140					2030	790	90	91 ± 2	290	–	285	285	65
20			85	165					70	140			2150	790	90	91 ± 2	300	–	310	310	65
21	95	165					75	140					2340	830	100	100 ± 2	320	–	330	330	75
22			95	165					75	140			2450	830	100	100 ± 2	340	–	340	340	75
23	95	165					75	140					2530	930	115	120 ± 2	360	–	360	360	80
24			95	165					75	140			2660	930	115	120 ± 2	380	–	380	380	80
25	115	205					90	170					2830	1045	130	120 ± 2	400	–	400	400	90
26			115	205					90	170			3010	1045	130	120 ± 2	420	–	430	430	90

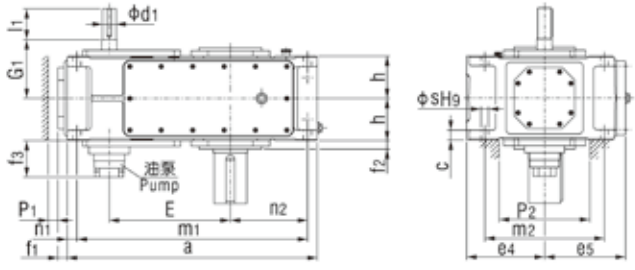
Size	G1	e2	E	g	G2	G4	G5	G6	h	h1	h2	H	l2	m1	m2	m3	n1	n2	n3	n4	s	oil (l)		weight (kg)	
																						B4.H	B4.M	B4.H	B4.M
13	1170	405	820	211.5	335	335	480	335	440	450	460	900	350	597.5	597.5	475	100	305	940	340	35	145	120	2395	2280
14	1240	475	890	211.5	335	335	480	335	440	450	460	900	350	597.5	737.5	475	100	375	1010	340	35	150	125	2735	2605
15	1402	485	987	238	380	380	550	380	500	490	500	1000	410	720	720	535	120	365	1135	375	42	230	170	3630	3435
16	1448	530	1033	238	380	380	550	380	500	490	500	1000	410	720	810	535	120	410	1180	375	42	235	175	3985	3765
17	1450	525	1035	259	415	415	600	415	550	555	560	1110	410	750	750	600	135	390	1175	425	42	295	230	4695	4460
18	1510	585	1095	259	415	415	600	415	550	555	560	1110	470	750	870	600	135	450	1235	425	42	305	235	5200	4930
19	1680	590	1190	299	465	–	670	465	620	615	620	1240	470	860	860	690	155	435	1365	475	48	480	440	6800	6300
20	1740	650	1250	299	465	–	670	465	620	615	620	1240	500	860	980	690	155	495	1425	475	48	550	510	8200	7700
21	1992	655	1387	310	490	–	715	490	700	685	690	1390	500	1000	1000	720	170	485	1600	520	56	540	590	9200	8600
22	2047	710	1442	310	490	–	725	490	700	685	690	1390	550	1000	1110	720	170	540	1655	520	56	620	680	9900	9400
23	2110	730	1505	342	540	–	785	540	780	770	790	1570	590	1085	1085	810	180	550	1725	580	56	710	790	11600	10700
24	2175	795	1570	342	540	–	805	540	780	770	790	1570	590	1085	1215	810	180	615	1790	580	56	810	910	13500	12600
25	2395	790	1695	400	605	–	875	605	860	860	860	1720	650	1215	1215	910	200	590	1965	660	66	1000	1110	16100	15200
26	2485	880	1785	400	605	–	900	605	860	860	860	1720	650	1215	1395	910	200	680	2055	660	66	1100	1200	17600	16500

H2.V4 ~ H2.V12

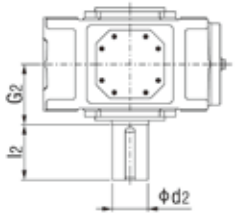
H2SV、H2HV、H2DV (With dip lubrication)



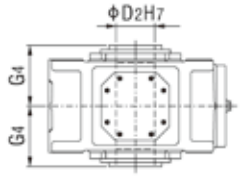
H2SV、H2HV、H2DV (With forced lubrication)



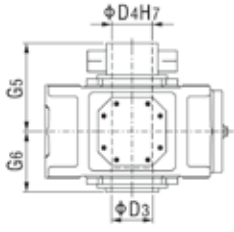
H2SV
Solid shaft



H2HV
Hollow shaft

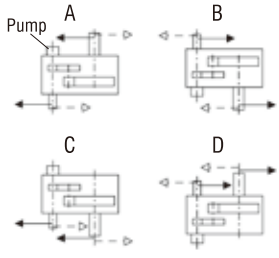


H2DV
Hollow shaft with shrink disc



A、D布置形式按客户要求供货
Design A&D on request

Shaft assemblies:



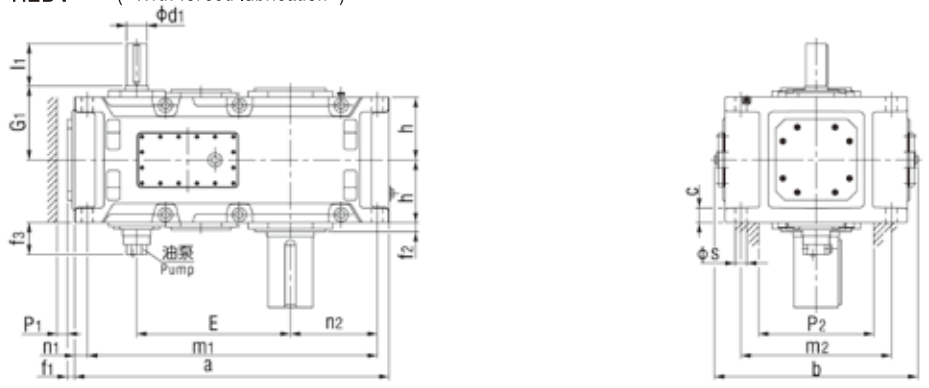
Size	i_N = 6.3 – 11.2		i_N = 8 – 14		i_N = 12.5 – 22.4		i_N = 16 – 28		a	b1	c	d2	D2	D3	D4	e4	e5	e6	E
	d1	l1	d1	l1	d1	l1	d1	l1											
4	45	100			32	80			565	150	30 ± 1	80	80	85	85	200	215	320	270
5	50	100			38	80			640	240	30 ± 1	100	95	100	100	230	252	385	315
6			50	100			38	80	720	240	30 ± 1	110	105	110	110	230	252	425	350
7	60	135			50	110			785	240	36 ± 1	120	115	120	120	280	292	425	385
8			60	135			50	110	890	240	36 ± 1	130	125	130	130	280	302	485	430
9	75	140			60	140			925	330	45 ± 1.5	140	135	140	140	320	342	560	450
10			75	140			60	140	1025	330	45 ± 1.5	160	150	150	150	320	342	610	500
11	90	165			70	140			1105	330	54 ± 1.5	170	165	165	165	380	402	595	545
12			90	165			70	140	1260	330	54 ± 1.5	180	180	180	180	380	410	680	615

Size	f1	f2	f3	G1	G2	G4	G5	G6	h	h1	l2	m1	m2	n1	n2	p1	p2	s	oil (l)		weight (kg)
																			(1)**	(2)**	
4	28	22	–	170	140	140	205	140	107.5	165	170	505	300	30	160	35	220	24	25	–	190
5	38	28	150	195	165	165	240	165	127.5	205	210	580	360	30	175	35	270	24	23	10	300
6	38	28	150	195	165	165	240	165	127.5	205	210	660	360	30	220	35	270	24	27	11	355
7	42	30	145	210	195	195	280	195	150	205	210	715	430	35	215	35	330	28	58	22	505
8	42	32	145	210	195	195	285	195	150	205	250	820	430	35	275	35	330	28	62	25	590
9	42	32	135	240	235	235	330	235	185	275	250	845	490	40	260	40	370	36	100	42	830
10	42	32	135	240	235	235	350	235	185	275	300	945	490	40	310	40	370	36	110	46	960
11	48	35	145	275	270	270	400	270	215	275	300	1005	600	50	295	50	440	40	160	60	1335
12	48	35	145	275	270	270	405	270	215	275	300	1160	600	50	380	50	440	40	180	70	1615

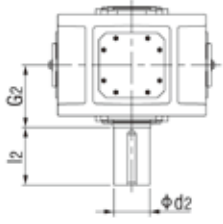
(1)**Dip lubrication, (2)**Forced lubrication.

H2.V13 ~ H2.V22

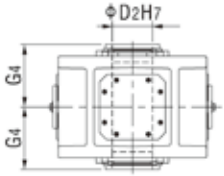
H2SV、H2HV、H2DV (With forced lubrication)



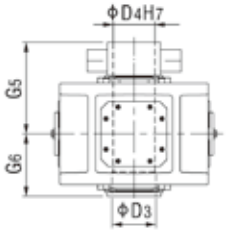
H2SV
Solid shaft



H2HV
Hollow shaft

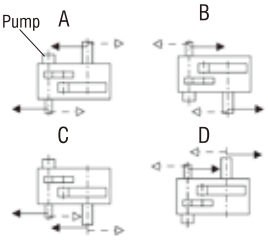


H2DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:

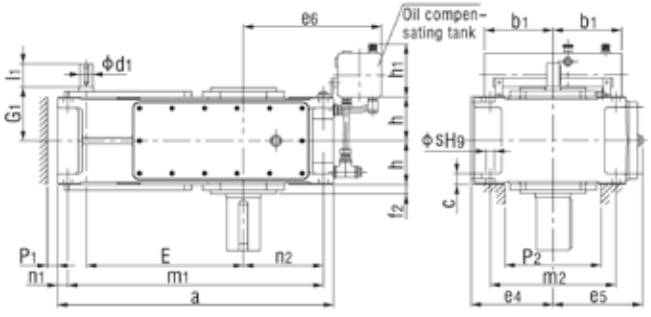


Size	i_N = 6.3 – 11.2		i_N = 7.1 – 12.5		i_N = 8 – 14		i_N = 12.5 – 20		i_N = 14 – 22.4		i_N = 16 – 25		a	b	c	d_2	D_2	D_3	D_4	E
	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1								
13	100	205					85	170					1290	900	61 ± 2	200	190	190	190	635
14					100	205					85	170	1430	900	61 ± 2	210	210	210	210	705
15	120	210					100	210					1550	980	72 ± 2	230	230	230	230	762
16			120	210					100	210			1640	980	72 ± 2	240	240	240	240	808
17	125	245					110	210					1740	1110	81 ± 2	250	250	250	250	860
18			125	245					110	210			1860	1110	81 ± 2	270	275	280	280	920
19	On request																			
20																				
21																				
22																				

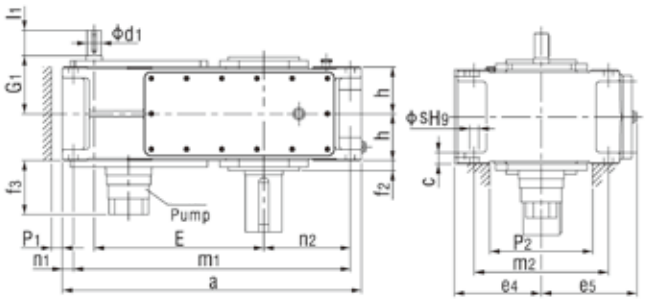
Size	f_1	f_2	f_3	G_1	G_2	G_4	G_5	G_6	h	l_2	m_1	m_2	n_1	n_2	p_1	p_2	s	oil (l)	weight (kg)
13	53	35	130	330	335	335	480	335	272.5	350	1195	680	50	360	50	500	48	80	1880
14	53	35	130	330	335	335	480	335	272.5	350	1335	680	50	430	50	500	48	90	2430
15	63	42	130	365	380	380	550	380	310	410	1435	750	60	430	50	570	55	140	3240
16	63	42	130	365	380	380	550	380	310	410	1525	750	60	475	50	570	55	150	3465
17	60	42	170	420	415	415	600	415	340	410	1610	850	70	465	70	630	55	175	4420
18	60	42	170	420	415	415	600	415	340	470	1730	850	70	525	70	630	55	185	4870
19	On request																		
20																			
21																			
22																			

H3.V5 ~ H3.V12

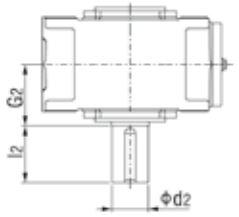
H3SV、H3HV、H3DV (With dip lubrication)



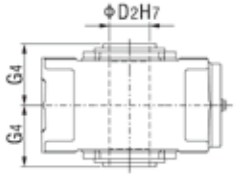
H3SV、H3HV、H3DV (With forced lubrication)



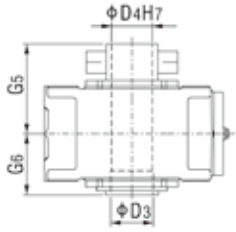
H3SV
Solid shaft



H3HV
Hollow shaft

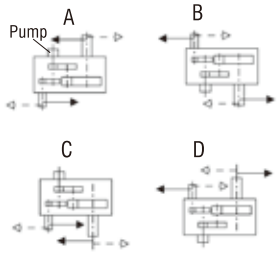


H3DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:



HB

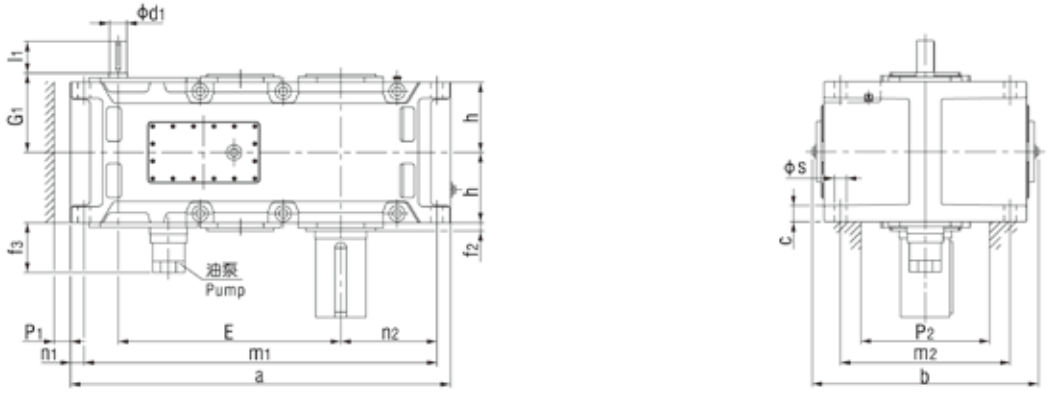
Size	i_N = 25 – 45		i_N = 31.5 – 56		i_N = 50 – 63		i_N = 63 – 80		i_N = 71 – 90		i_N = 90 – 112		a	b1	c	d2	D2	D3	D4	e4	e5
	d1	l1	d1	l1	d1	l1	d1	l1	d1	l1	d1	l1									
5	40	70			30	50			24	40			690	240	30±1	100	95	100	100	230	252
6			40	70			30	50			24	40	770	240	30±1	110	105	110	110	230	252
7	45	80			35	60			28	50			845	240	36±1	120	115	120	120	280	292
8			45	80			35	60			28	50	950	240	36±1	130	125	130	130	280	312
9	60	125			45	100			32	80			1000	330	45±1.5	140	135	140	140	320	342
10			60	125			45	100			32	80	1100	330	45±1.5	160	150	150	150	320	342
11	70	120			50	80			42	70			1200	330	54±1.5	170	165	165	165	380	402
12			70	120			50	80			42	70	1355	330	54±1.5	180	180	180	180	380	410

Size	e6	E	f2	f3	G1	G2	G4	G5	G6	h	h1	l2	m1	m2	n1	n2	p1	p2	s	oil (l)		weight (kg)
																				(1)**	(2)**	
5	385	405	28	190	160	165	165	240	165	127.5	205	210	630	360	30	175	35	270	24	35	13	320
6	425	440	28	190	160	165	165	240	165	127.5	205	210	710	360	30	220	35	270	24	37	15	365
7	425	495	30	185	185	195	195	280	195	150	205	210	775	430	35	215	35	330	28	60	25	540
8	485	540	32	185	185	195	195	285	195	150	205	250	880	430	35	275	35	330	28	72	30	625
9	560	580	32	170	230	235	235	330	235	185	275	250	920	490	40	260	40	370	36	100	40	875
10	610	630	32	170	230	235	235	350	235	185	275	300	1020	490	40	310	40	370	36	110	45	1020
11	595	705	35	170	255	270	270	400	270	215	275	300	1100	600	50	295	50	440	40	170	66	1400
12	680	775	35	170	255	270	270	405	270	215	275	300	1255	600	50	380	50	440	40	190	75	1675

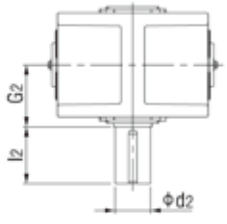
(1)**Dip lubrication, (2)**Forced lubrication.

H3.V13 ~ H3.V22

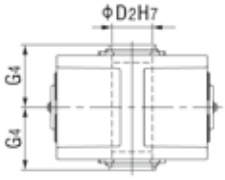
H3SV、H3HV、H3DV (With forced lubrication)



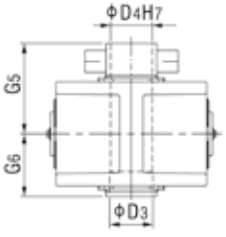
H3SV
Solid shaft



H3HV
Hollow shaft

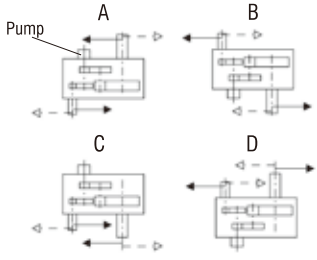


H3DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:

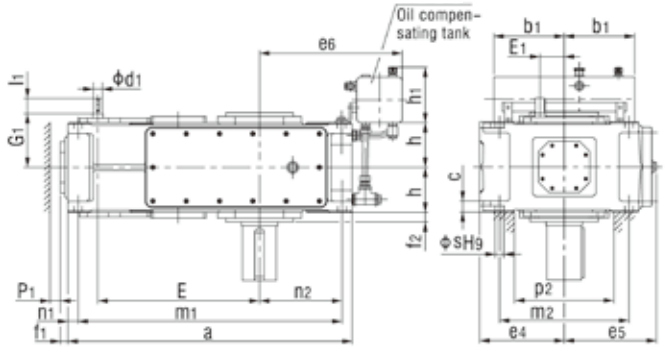


Size	i_N=22.4 – 45		i_N=25 – 50		i_N=28 – 56		i_N=50 – 63		i_N=56 – 71		i_N=63 – 80		i_N=71 – 90		i_N=80 – 100		i_N=90 – 112		a	b	c	d_2	D_2
	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1					
13	85	160					60	135					50	110					1395	900	61±2	200	190
14					85	160					60	135					50	110	1535	900	61±2	210	210
15	100	200					75	140					60	140					1680	980	72±2	230	230
16			100	200					75	140					60	140			1770	980	72±2	240	240
17	100	200					75	140					60	140					1770	1110	81±2	250	250
18			100	200					75	140					60	140			1890	1110	81±2	270	275
19	On request																						
20																							
21																							
22																							

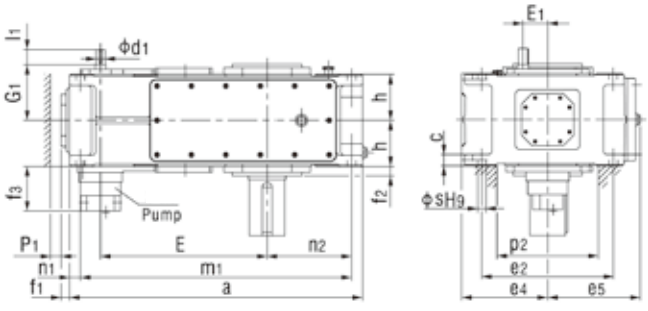
Size	D_3	D_4	E	f_2	f_3	G_1	G_2	G_4	G_5	G_6	h	l_2	m_1	m_2	n_1	n_2	P_1	P_2	s	oil (l)	weight (kg)
13	190	190	820	35	170	310	335	335	480	335	272.5	350	1300	680	50	360	50	500	48	115	2155
14	210	210	890	35	170	310	335	335	480	335	272.5	350	1440	680	50	430	50	500	48	126	2490
15	230	230	987	42	170	350	380	380	550	380	310	410	1565	750	60	430	50	570	55	180	3260
16	240	240	1033	42	170	350	380	380	550	380	310	410	1655	750	60	475	50	570	55	190	3625
17	250	250	1035	42	210	380	415	415	600	415	340	410	1640	850	70	465	70	630	55	190	4250
18	280	280	1095	42	210	380	415	415	600	415	340	470	1760	850	70	525	70	630	55	200	4740
19	On request																				
20																					
21																					
22																					

H4.V7 ~ H4.V12

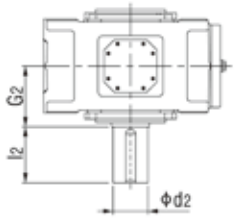
H4SV、H4HV、H4DV (With dip lubrication)



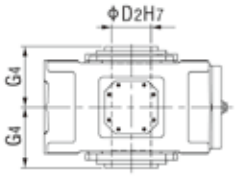
H4SV、H4HV、H4DV (With forced lubrication)



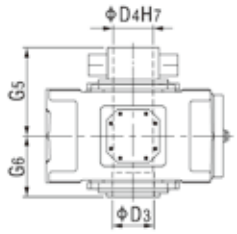
H4SV
Solid shaft



H4HV
Hollow shaft

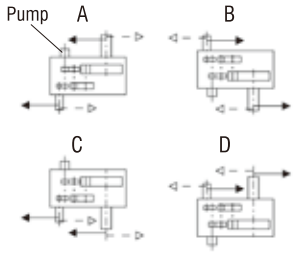


H4DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:



HB

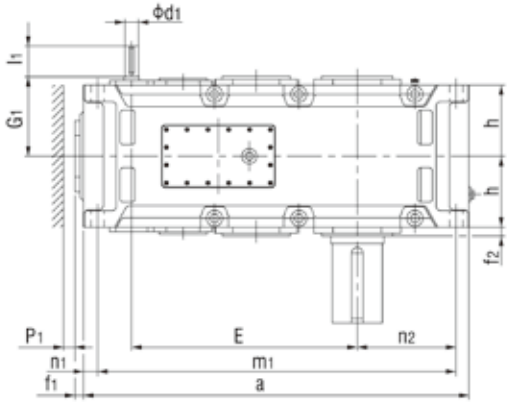
Size	i_N = 100 – 180		i_N = 125 – 224		i_N = 200 – 355		i_N = 250 – 450		a	b_1	c	d_2	D_2	D_3	D_4	e_4	e_5	e_5	E
	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1											
7	30	50			24	40			845	240	36 ± 1	120	115	120	120	280	292	425	495
8			30	50			24	40	950	240	36 ± 1	130	125	130	130	280	302	485	540
9	35	60			28	50			1000	330	45 ± 1.5	140	135	140	140	320	342	560	580
10			35	60			28	50	1100	330	45 ± 1.5	160	150	150	150	320	342	610	630
11	45	100			32	80			1200	330	54 ± 1.5	170	165	165	165	380	402	595	705
12			45	100			32	80	1355	330	54 ± 1.5	180	180	180	180	380	410	680	775

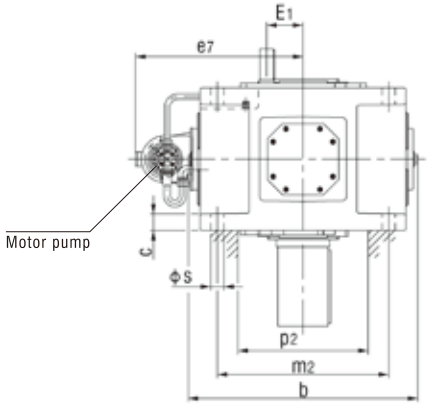
Size	E_1	f_1	f_2	f_3	G_1	G_2	G_4	G_5	G_6	h	h_1	l_2	m_1	m_2	n_1	n_2	p_1	p_2	s	oil (l)		weight (kg)
																				(1)**	(2)**	
7	80	37	30	160	180	195	195	280	195	150	205	210	775	430	35	215	35	330	28	50	20	550
8	80	37	32	160	180	195	195	285	195	150	205	250	880	430	35	275	35	330	28	60	25	645
9	90	43	32	170	215	235	235	330	235	185	275	250	920	490	40	260	40	370	36	95	38	875
10	90	43	32	170	215	235	235	350	235	185	275	300	1020	490	40	310	40	370	36	110	45	1010
11	110	47	35	170	250	270	270	400	270	215	275	300	1100	600	50	295	50	440	40	165	65	1460
12	110	47	35	170	250	270	270	405	270	215	275	300	1255	600	50	380	50	440	40	180	75	1725

(1)**Dip lubrication, (2)**Forced lubrication.

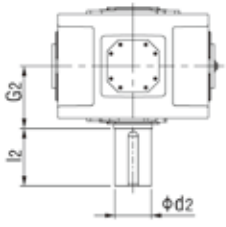
H4.V13 ~ H4.V22

H4SV、H4HV、H4DV (With forced lubrication)

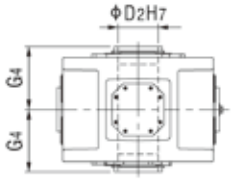




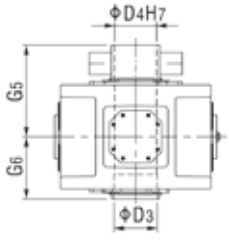
H4SV
Solid shaft



H4HV
Hollow shaft

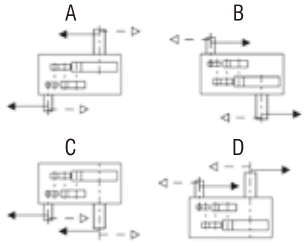


H4DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:

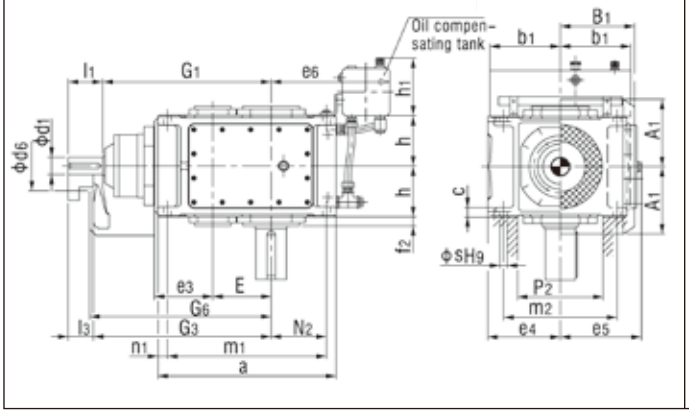


Size	i_N = 100 – 180		i_N = 112 – 200		i_N = 125 – 224		i_N = 200 – 355		i_N = 224 – 400		i_N = 250 – 450		a	b	c	d_2	D_2	D_3	D_4	e_7
	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1								
13	50	100					38	80					1395	900	61±2	200	190	190	190	670
14					50	100					38	80	1535	900	61±2	210	210	210	210	670
15	60	135					50	110					1680	980	72±2	230	230	230	230	710
16			60	135					50	110			1770	980	72±2	240	240	240	240	710
17	60	105					50	80					1770	1110	81±2	250	250	250	250	775
18			60	105					50	80			1890	1110	81±2	270	275	280	280	775
19	On request																			
20																				
21																				
22																				

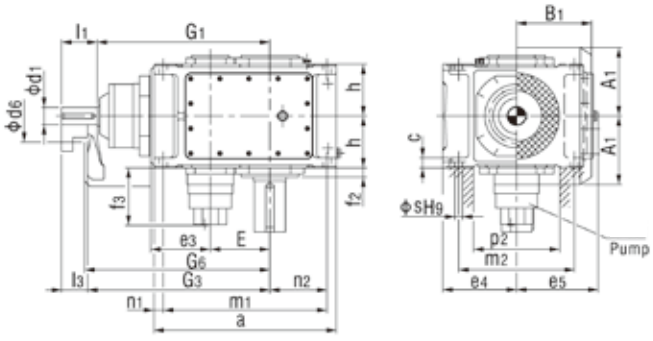
Size	E	E_1	f_1	f_2	G_1	G_2	G_4	G_5	G_6	h	l_2	m_1	m_2	n_1	n_2	p_1	p_2	s	oil (l)	weight (kg)
13	820	130	47	35	305	335	335	480	335	272.5	350	1300	680	50	360	50	500	48	95	2270
14	890	130	47	35	305	335	335	480	335	272.5	350	1440	680	50	430	50	500	48	105	2600
15	987	160	56	42	345	380	380	550	380	310	410	1565	750	60	430	50	570	55	150	3440
16	1033	160	56	42	345	380	380	550	380	310	410	1655	750	60	475	50	570	55	160	3740
17	1035	160	53	42	380	415	415	600	415	340	410	1640	850	70	465	70	630	55	190	4445
18	1095	160	53	42	380	415	415	600	415	340	470	1760	850	70	525	70	630	55	200	4915
19	On request																			
20																				
21																				
22																				

B2.V4 ~ B2.V12

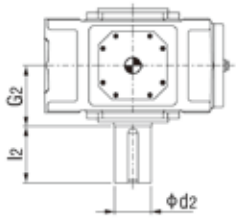
B2SV、B2HV、B2DV (With dip lubrication)



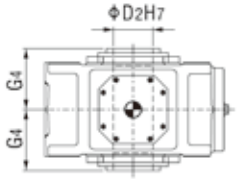
B2SV、B2HV、B2DV (With forced lubrication)



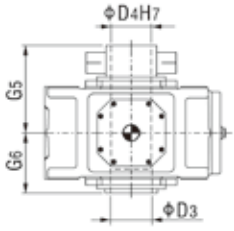
B2SV
Solid shaft



B2HV
Hollow shaft

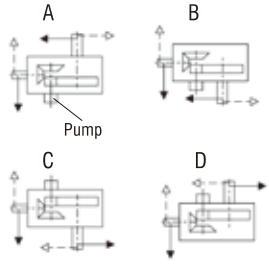


B2DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:



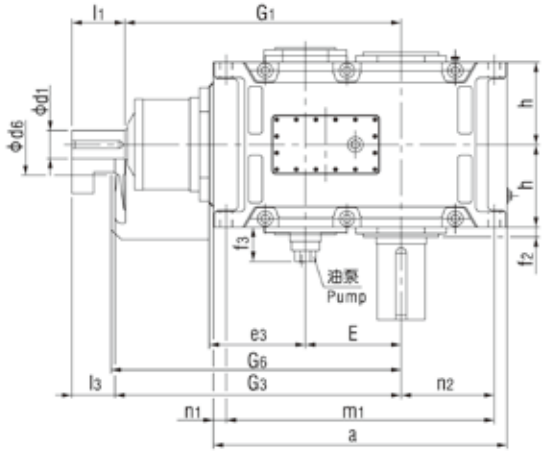
Size	i_N = 5 – 11.2			i_N = 6.3 – 14			a	A_1	b_1	B_1	c	d_2	d_6	D_2	D_3	D_4	e_3	e_4	e_5
	d_1	l_1	l_3	d_1	l_1	l_3													
4	50	100	80				505	188	150	200	30±1	80	150	80	85	85	160	200	215
5	60	110	80				565	215	240	235	30±1	100	160	95	100	100	185	230	252
6				60	110	80	645	215	240	235	30±1	110	160	105	110	110	185	230	252
7	75	135	105				690	250	240	285	36±1	120	210	115	120	120	225	280	302
8				75	135	105	795	250	240	285	36±1	130	210	125	130	130	225	280	302
9	85	165	130				820	270	330	325	48±1.5	140	195	135	140	140	265	320	342
10				85	165	130	920	270	330	325	48±1.5	160	195	150	150	150	265	320	342
11	95	165	130				975	328	330	385	54±1.5	170	210	165	165	165	320	380	410
12				95	165	130	1130	328	330	385	54±1.5	180	210	180	180	180	320	380	410

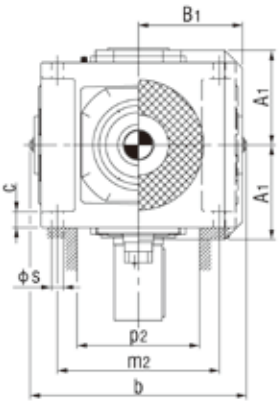
Size	e_6	E	f_2	f_3	G_1	G_2	G_3	G_4	G_5	G_6	G_7	h	h_1	l_2	m_1	m_2	n_1	n_2	p_2	s	oil (l)		weight (kg)
																					(1)**	(2)**	
4	320	160	26	–	465	170	485	170	235	170	495	135	165	170	445	300	30	160	220	24	28	–	235
5	385	185	30	190	535	200	565	200	275	200	575	160	205	210	505	360	30	175	270	24	41	20	360
6	425	220	30	190	570	200	600	200	275	200	610	160	205	210	585	360	30	220	270	24	50	23	410
7	425	225	32	200	640	235	670	235	320	235	685	190	205	210	620	430	35	215	330	28	75	35	615
8	485	270	32	200	685	235	715	235	325	235	730	190	205	250	725	430	35	275	330	28	90	38	700
9	560	265	45	200	755	270	790	270	365	270	805	220	275	250	740	490	40	260	370	36	115	53	1000
10	610	315	45	200	805	270	840	270	385	270	855	220	275	300	840	490	40	310	370	36	135	60	1155
11	595	320	47	200	925	320	960	320	450	320	980	265	275	300	875	600	50	295	440	40	190	86	1640
12	680	390	47	200	995	320	1030	320	455	320	1050	265	275	300	1030	600	50	380	440	40	215	95	1910

(1)**Dip lubrication, (2)**Forced lubrication.

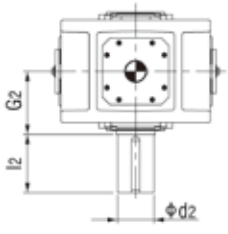
B2.V13 ~ B2.V18

B2SV、B2HV、B2DV (With forced lubrication)

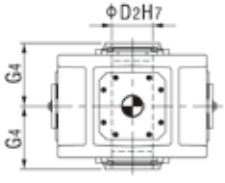




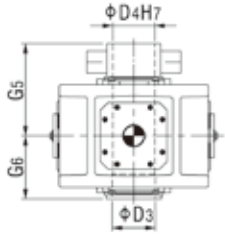
B2SV
Solid shaft



B2HV
Hollow shaft

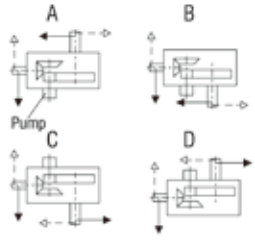


B2DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:

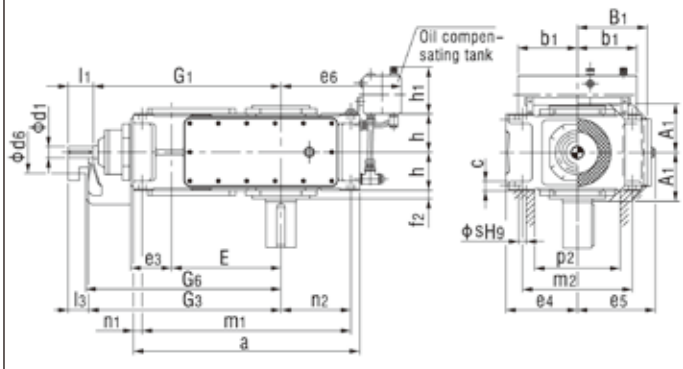


Size	i_N = 5 – 11.2			i_N = 5.6 – 11.2			i_N = 5.6 – 12.5			i_N = 6.3 – 14			i_N = 7.1 – 12.5			a	A_1	b	B_1	c	d_2	d_6	D_2	D_3
	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3									
13	115	205	165													1130	375	900	450	61±2	200	245	–	–
14										115	205	165				1270	375	900	450	61±2	210	245	210	210
15	140	245	200													1350	435	980	495	72±2	230	280	–	–
16							140	245	200							1440	435	980	495	72±2	240	280	240	240
17				150	245	200										1490	505	1110	555	81±2	250	380	–	–
18													150	245	200	1610	505	1110	555	81±2	270	380	275	280

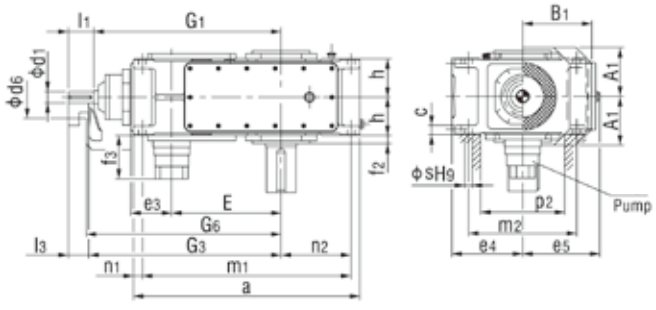
Size	D_4	e_3	E	f_2	f_3	G_1	G_2	G_3	G_4	G_5	G_6	G_7	h	l_2	m_1	m_2	n_1	n_2	p_2	s	oil (l)	weight (kg)
13	–	380	370	38	200	1070	390	1110	–	–	–	1130	325	350	1035	680	50	360	500	48	100	2350
14	210	380	440	45	200	1140	390	1180	390	535	390	1200	325	350	1175	680	50	430	500	48	110	2725
15	–	450	442	75	200	1277	460	1322	–	–	–	1340	380	410	1235	750	60	430	570	55	145	3795
16	240	450	488	75	200	1323	460	1368	450	620	450	1385	380	410	1325	750	60	475	570	55	160	4160
17	–	510	490	98	200	1435	540	1480	–	–	–	1500	437.5	410	1360	840	70	465	630	65	210	5320
18	280	510	550	98	200	1495	540	1540	510	700	510	1560	437.5	470	1480	840	70	525	630	65	220	5860

B3.V4 ~ B3.V12

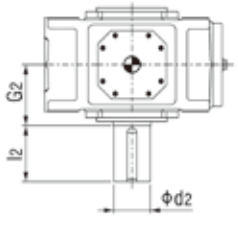
B3SV、B3HV、B3DV (With dip lubrication)



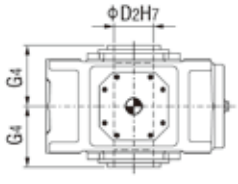
B3SV、B3HV、B3DV (With forced lubrication)



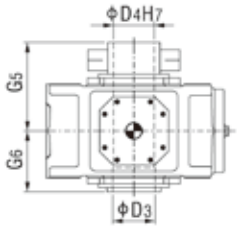
B3SV
Solid shaft



B3HV
Hollow shaft

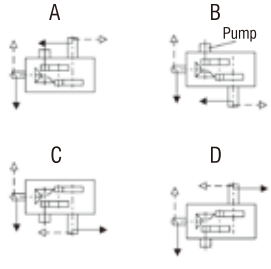


B3DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:



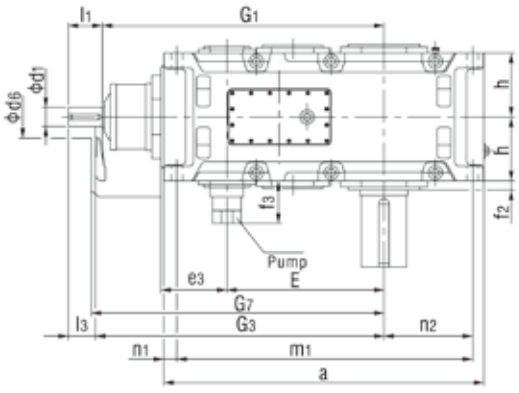
Size	i_N = 12.5 – 45			i_N = 16 – 56			i_N = 50 – 71			i_N = 63 – 90			a	A_1	b_1	B_1	c	d_2	d_6	D_2	D_3	D_4	e_3	e_4
	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3												
4	35	70	50				30	60	40				565	143	150	200	30±1	80	110	80	85	85	110	200
5	45	80	60				35	60	40				640	168	240	235	30±1	100	130	95	100	100	130	230
6				45	80	60				35	60	40	720	168	240	235	30±1	110	130	105	110	110	130	230
7	50	100	80				40	80	60				785	193	240	275	36±1	120	165	115	120	120	160	280
8				50	100	80				40	80	60	890	193	240	275	36±1	130	165	125	130	130	160	280
9	60	110	80				50	100	70				925	231	330	325	45±1.5	140	175	135	140	140	185	320
10				60	110	80				50	100	70	1025	231	330	325	45±1.5	160	175	150	150	150	185	320
11	75	135	105				60	110	80				1105	263	330	385	54±1.5	170	190	165	165	165	225	380
12				75	135	105				60	110	80	1260	263	330	385	54±1.5	180	190	180	180	180	225	380

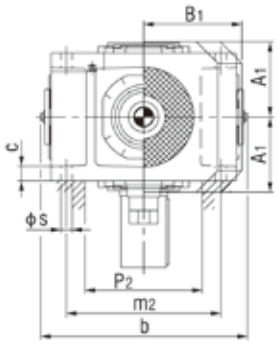
Size	e_5	e_6	E	f_2	f_3	G_1	G_2	G_3	G_4	G_5	G_6	G_7	h	h_1	l_2	m_1	m_2	n_1	n_2	p_2	s	oil (l)		weight (kg)
																						(1)**	(2)**	
4	215	320	270	22	–	500	140	520	140	205	140	530	107.5	165	170	505	300	30	160	220	24	28	–	210
5	252	385	315	28	190	575	165	595	165	240	165	605	127.5	205	210	580	360	30	175	270	24	32	12	325
6	252	425	350	28	190	610	165	630	165	240	165	640	127.5	205	210	660	360	30	220	270	24	35	13	380
7	292	425	385	30	190	690	195	710	195	280	195	720	150	205	210	715	430	35	215	330	28	52	22	550
8	302	485	430	32	190	735	195	755	195	285	195	765	150	205	250	820	430	35	275	330	28	67	28	635
9	342	560	450	32	180	800	235	830	235	330	235	845	185	275	250	845	490	40	260	370	36	115	48	890
10	342	610	500	32	180	850	235	880	235	350	235	895	185	275	300	945	490	40	310	370	36	125	52	1020
11	402	595	545	35	180	960	270	990	270	400	270	1010	215	275	300	1005	600	50	295	440	40	180	75	1455
12	410	680	615	35	180	1030	270	1060	270	405	270	1080	215	275	300	1160	600	50	380	440	40	200	85	1730

(1)**Dip lubrication, (2)**Forced lubrication.

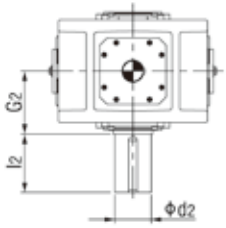
B3.V13 ~ B3.V18

B3SV、B3HV、B3DV (With forced lubrication)

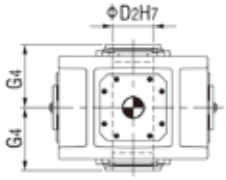




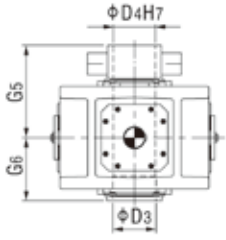
B3SV
Solid shaft



B3HV
Hollow shaft

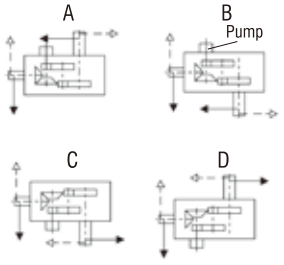


B3DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:

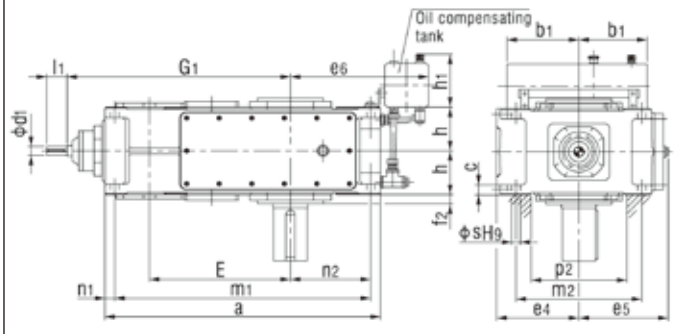


Size	i_N = 12.5 – 45			i_N = 14 – 50			i_N = 16 – 56			i_N = 50 – 71			i_N = 56 – 80			i_N = 63 – 90			a	A_1	b	B_1	c	d_2	d_6	D_2
	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3	d_1	l_1	l_3								
13	85	165	130							70	140	105							1290	325	900	475	61±2	200	210	190
14							85	165	130							70	140	105	1430	325	900	475	61±2	210	210	210
15	95	165	130							75	140	105							1550	365	980	520	72±2	230	210	230
16				95	165	130							75	140	105				1640	365	980	520	72±2	240	210	240
17	115	205	165							90	170	130							1740	395	1110	570	81±2	250	230	250
18				115	205	165							90	170	130				1860	395	1110	570	81±2	270	230	275
19	On request																									
20																										
21																										
22																										

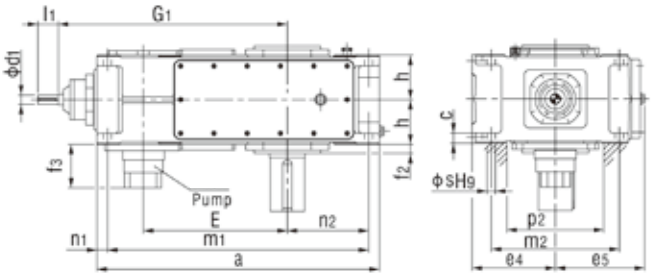
Size	D_3	D_4	e_3	E	f_2	f_3	G_1	G_2	G_3	G_4	G_5	G_6	G_7	h	l_2	m_1	m_2	n_1	n_2	p_2	s	oil (l)	weight (kg)
13	190	190	265	635	35	170	1125	335	1160	335	480	335	1180	272.5	350	1195	680	50	360	500	48	95	2260
14	210	210	265	705	35	170	1195	335	1230	335	480	335	1250	272.5	350	1335	680	50	430	500	48	110	2615
15	230	230	320	762	42	170	1367	380	1402	380	550	380	1420	310	410	1435	750	60	430	570	55	165	3540
16	240	240	320	808	42	170	1413	380	1448	380	550	380	1470	310	410	1525	750	60	475	570	55	190	3765
17	250	250	370	860	42	170	1560	415	1600	415	600	415	1620	340	410	1610	850	70	465	630	55	210	4760
18	280	280	370	920	42	170	1620	415	1660	415	600	415	1680	340	470	1730	850	70	525	630	55	240	5240
19	On request																						
20																							
21																							
22																							

B4.V5 ~ B4.V12

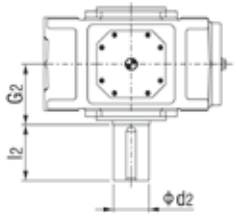
B4SV、B4HV、B4DV (With dip lubrication)



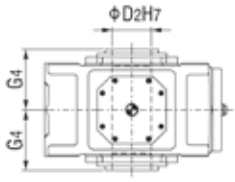
B4SV、B4HV、B4DV (With forced lubrication)



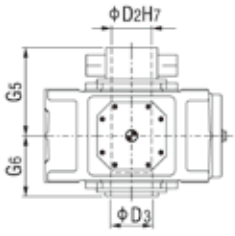
B4SV
Solid shaft



B4HV
Hollow shaft

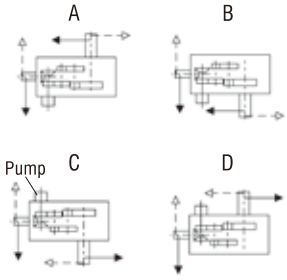


B4DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:



HB

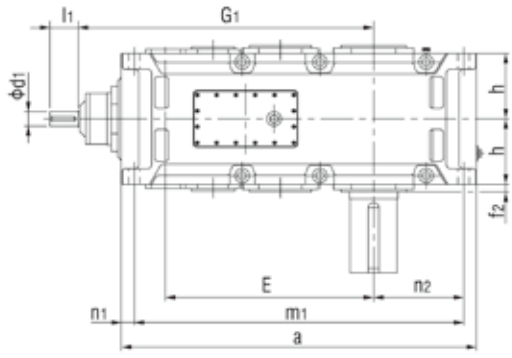
Size	i_N = 80 – 180		i_N = 100 – 224		i_N = 200 – 315		i_N = 250 – 400		a	b1	c	d2	D2	D3	D4	e4	e5	e6
	d1	l1	d1	l1	d1	l1	d1	l1										
5	35	55			25	50			690	240	30±1	100	95	100	100	230	252	385
6			35	55			25	50	770	240	30±1	110	105	110	110	230	252	425
7	35	70			30	60			845	240	36±1	120	115	120	120	280	292	425
8			35	70			30	60	950	240	36±1	130	125	130	130	280	302	485
9	45	80			35	60			1000	330	45±1.5	140	135	140	140	320	342	560
10			45	80			35	60	1100	330	45±1.5	160	150	150	150	320	342	610
11	50	100			40	80			1200	330	54±1.5	170	165	165	165	380	402	595
12			50	100			40	80	1355	330	54±1.5	180	180	180	180	380	410	680

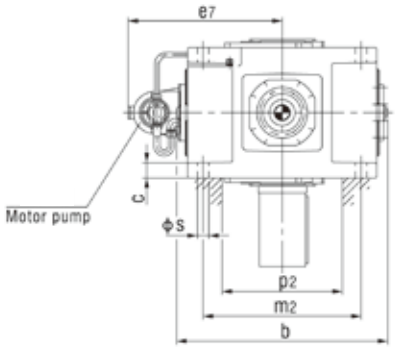
Size	E	G1	f2	f3	G2	G4	G5	G6	h	h1	l2	m1	m2	n1	n2	P2	s	oil (l)		weight (kg)
																		(1)**	(2)**	
5	405	615	28	200	165	165	240	165	127.5	205	210	630	360	30	175	270	24	36	15	335
6	440	650	28	200	165	165	240	165	127.5	205	210	710	360	30	220	270	24	40	16	385
7	495	725	30	120	195	195	280	195	150	205	210	775	430	35	215	330	28	60	30	555
8	540	770	32	120	195	195	285	195	150	205	250	880	430	35	275	330	28	70	35	655
9	580	840	32	120	235	235	330	235	185	275	250	920	490	40	260	370	36	110	60	890
10	630	890	32	120	235	235	350	235	185	275	300	1020	490	40	310	370	36	130	67	1025
11	705	1010	35	130	270	270	440	270	215	275	300	1100	600	50	295	440	40	180	75	1485
12	775	1080	35	130	270	270	405	270	215	275	300	1255	600	50	380	440	40	195	85	1750

(1)**Dip lubrication, (2)**Forced lubrication.

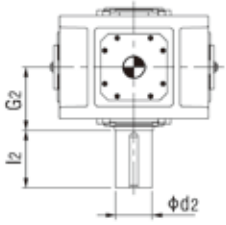
B4.V13 ~ B4.V22

B4SV、B4HV、B4DV (With forced lubrication)

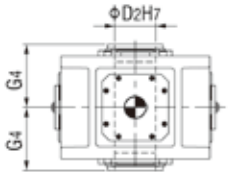




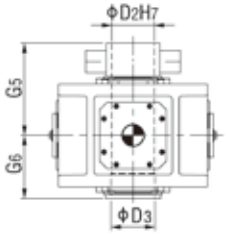
B4SV
Solid shaft



B4HV
Hollow shaft

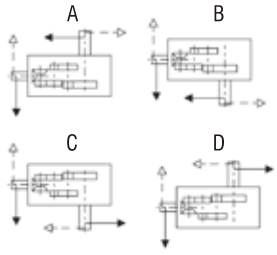


B4DV
Hollow shaft with shrink disc



Assemblies A&D on request

Shaft assemblies:



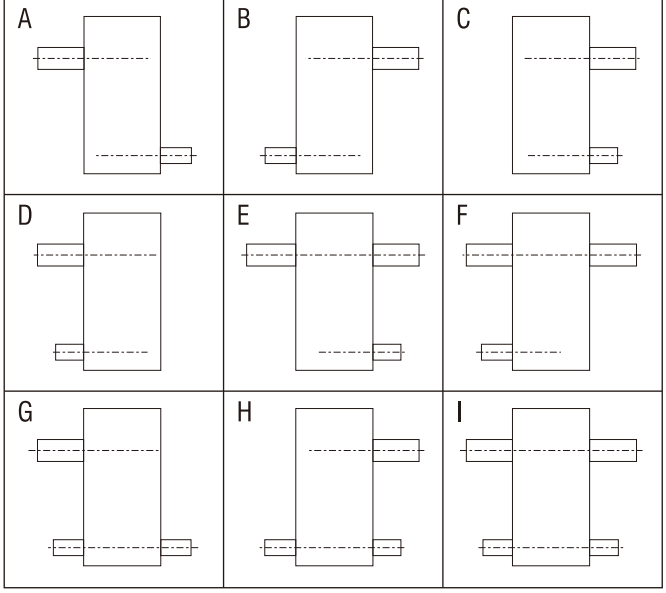
Size	i_N = 80 – 180		i_N = 90 – 200		i_N = 100 – 224		i_N = 200 – 315		i_N = 224 – 355		i_N = 250 – 400		a	b	c	d_2	D_2	D_3
	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1	d_1	l_1						
13	60	110					50	100					1395	900	61±2	200	190	190
14					60	110					50	100	1535	900	61±2	210	210	210
15	75	135					60	110					1680	980	72±2	230	230	230
16			75	135					60	110			1770	980	72±2	240	240	240
17	75	135					60	110					1770	1110	81±2	250	250	250
18			75	135					60	110			1890	1110	81±2	270	275	280
19	On request																	
20																		
21																		
22																		

Size	D_4	e_7	E	f_2	G_1	G_2	G_4	G_5	G_6	h	l_2	m_1	m_2	n_1	n_2	p_2	s	oil (l)	weight (kg)
13	190	670	820	35	1170	335	335	480	335	272.5	350	1300	680	50	360	500	48	130	2280
14	210	670	890	35	1240	335	335	480	335	272.5	350	1440	680	50	430	500	48	150	2605
15	230	710	987	42	1402	380	380	550	380	310	410	1565	750	60	430	570	55	200	3435
16	240	710	1033	42	1448	380	380	550	380	310	410	1655	750	60	475	570	55	235	3765
17	250	775	1035	42	1450	415	415	600	415	340	410	1640	850	70	465	630	55	215	4460
18	280	775	1095	42	1510	415	415	600	415	340	470	1760	850	70	525	630	55	250	4930
19	On request																		
20																			
21																			
22																			

Shaft assemblies:

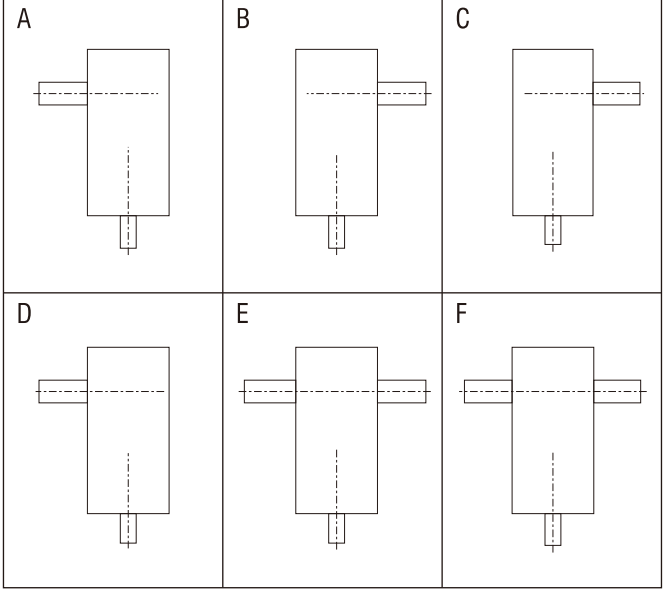
Helical gear units

H.SH, H.SV Solid shaft

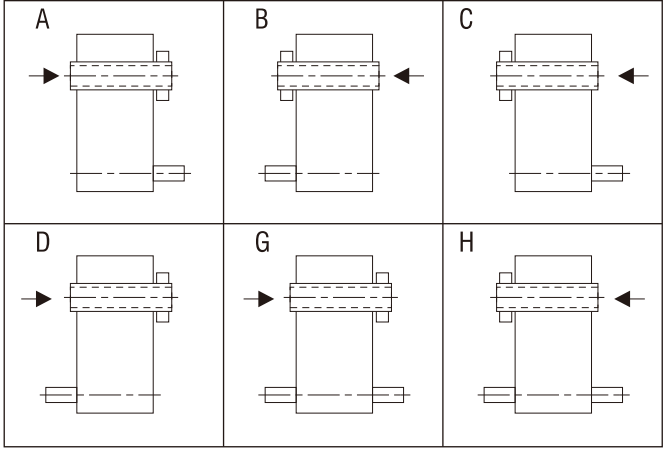


Bevel-helical gear units

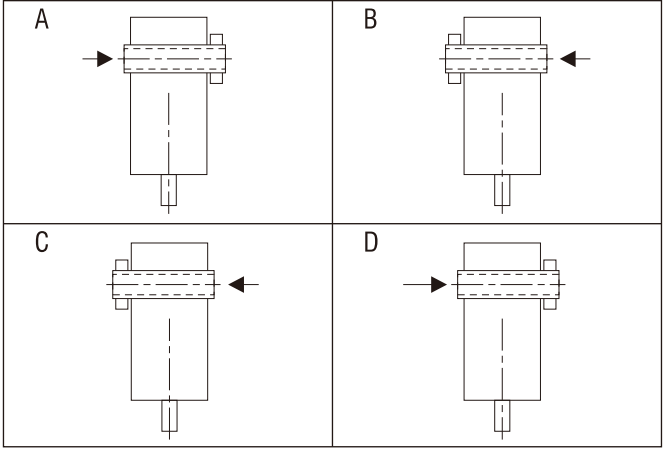
B.SH, B.SV Solid shaft



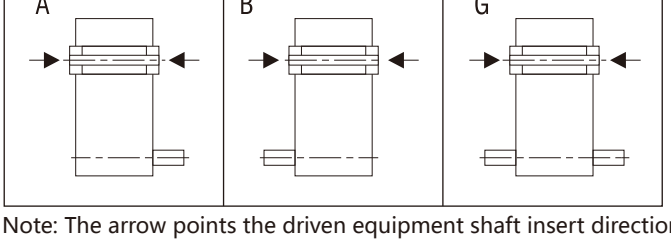
H.DH, H.DM, H.DV Hollow shaft with shrink disk



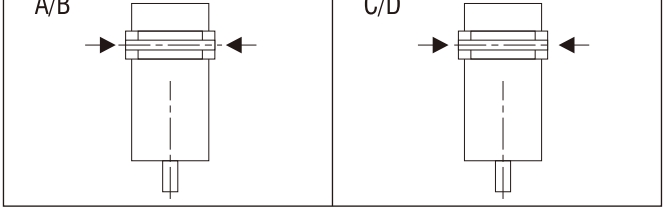
B.DH, B.DM, B.DV Hollow shaft with shrink disk



H.HH, H.HM, H.HV Hollow shaft

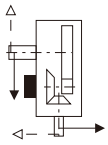
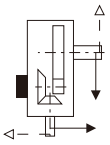
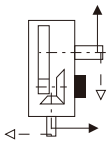
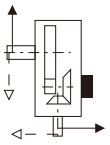
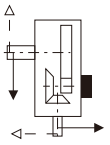
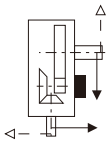
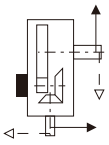
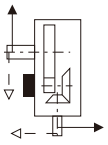
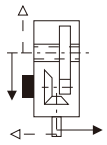
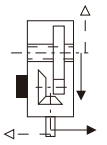
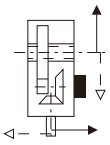
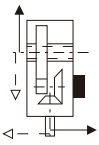
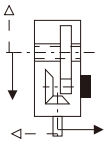
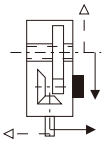
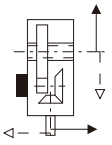
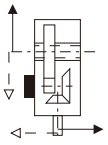
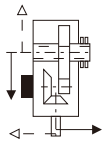
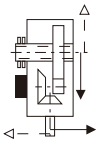
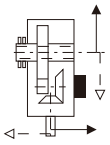
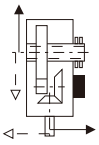
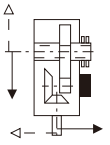
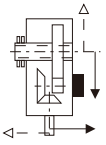
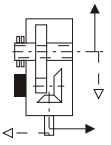
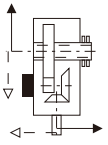


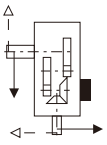
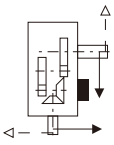
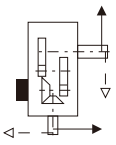
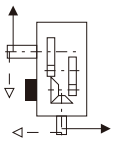
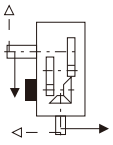
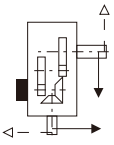
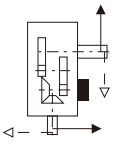
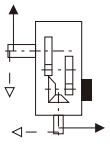
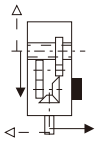
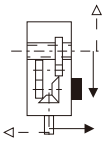
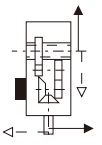
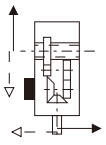
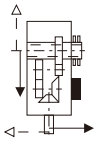
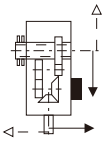
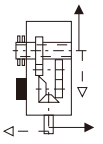
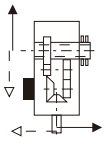
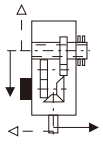
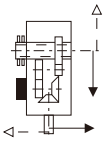
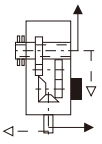
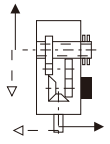
B.HH, B.HM, B.HV Hollow shaft



Note: The arrow points the driven equipment shaft insert direction.

Backstop assemblies and direction of shaft rotation direction:

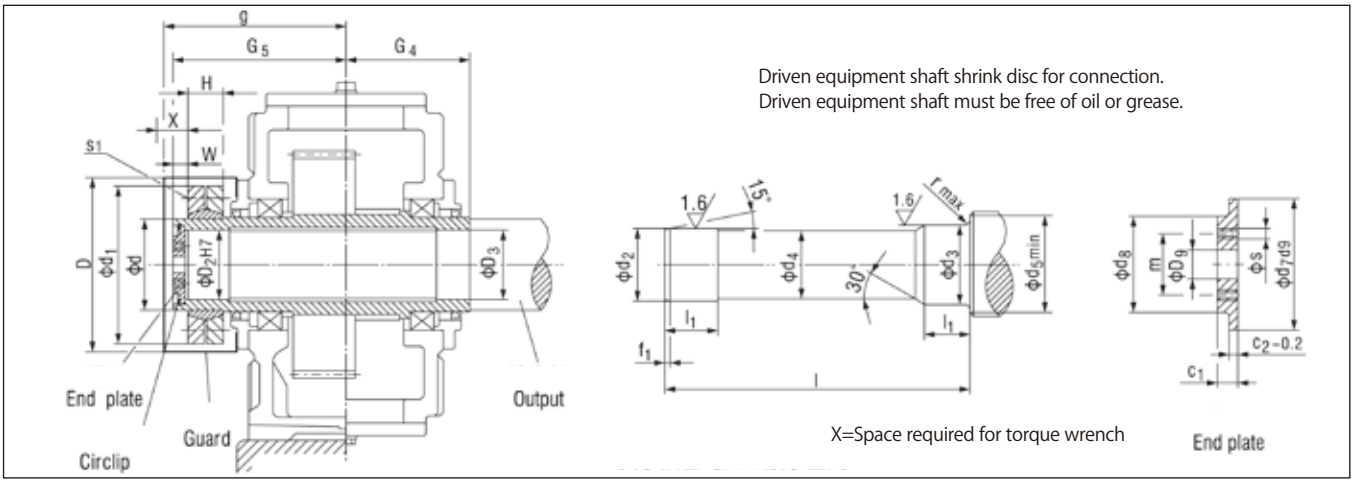
Type	Sizes 3 ... 14				Sizes 15 ... 18			
	A	B	C	D	A	B	C	D
B2SH								
B2HH B2HM								
B2DH B2DM								

Type	Sizes 3 ... 18				Sizes 19 ... 22			
	A	B	C	D	A	B	C	D
B3SH								
B3HH B3HM								
B3DH B3DM								

HB

Suggested output connection dimensions:

Hollow shaft with shrink disc:



Type H2D., H3D., H4D., B3D., B4D. (Size 4 ~ 22)

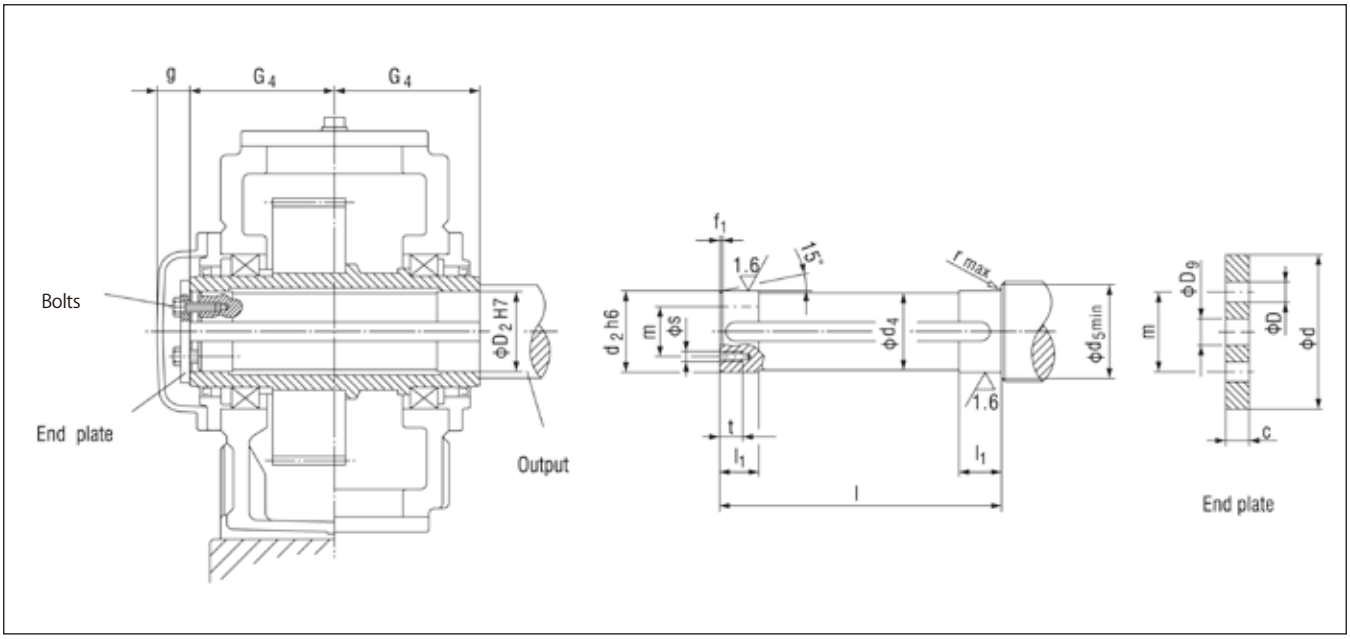
Gear unit size	Driven equipment shaft 2)								End plate								Circlip	Hollow shaft				Shrink disk 1)					Bolt	Protection cover	
	d_2	d_3	d_4	d_5	f_1	l	l_1	r	c_1	c_2	d_7	d_8	D_9	m	s	Qty.		D_2	D_3	G_4	G_5	Type	d	d_1	H	W	s_1	D	g
4	85 g6	85 h6	84.5	95	4	326	48	2	17	7	90	70	22	50	M 8	2	90 x 3	85	85	140	205	SP2-110	110	185	49	20	M 12	235	220
5	100 g6	100 h6	99.5	114	5	383	53	2	20	8	105	80	26	55	M 10	2	105 x 4	100	100	165	240	SP2-125	125	215	53	20	M 12	275	255
6	110 g6	110 h6	109.5	124	5	383	58	3	20	8	115	85	26	60	M 10	2	115 x 4	110	110	165	240	SP2-140	140	230	58	20	M 14	285	255
7	120 g6	120 h6	119.5	134	5	453	68	3	20	8	125	90	26	65	M 12	2	125 x 4	120	120	195	280	SP2-155	155	263	62	23	M 14	330	295
8	130 g6	130 h6	129.5	145	6	458	73	3	20	8	135	100	26	70	M 12	2	135 x 4	130	130	195	285	SP2-165	165	290	68	23	M 16	340	300
9	140 g6	140 m6	139.5	160	6	539	82	4	23	10	150	110	33	80	M 12	2	150 x 4	140	140	235	330	SP2-175	175	300	68	28	M 16	360	345
10	150 g6	150 m6	149.5	170	6	559	92	4	23	10	160	120	33	90	M 12	2	160 x 4	150	150	235	350	SP2-200	200	340	85	28	M 16	395	365
11	165 f6	165 m6	164.5	185	7	644	112	4	23	10	175	130	33	90	M 12	2	175 x 4	165	165	270	400	SP2-220	220	370	103	30	M 20	435	420
12	180 f6	180 m6	179.5	200	7	649	122	4	23	10	190	140	33	100	M 16	2	190 x 4	180	180	270	405	SP2-240	240	405	107	30	M 20	450	420
13	190 f6	190 m6	189.5	213	7	789	137	5	23	10	200	150	33	110	M 16	2	200 x 4	190	190	335	480	SP2-260	260	430	119	30	M 20	500	505
14	210 f6	210 m6	209.5	233	8	784	147	5	28	14	220	170	33	130	M 16	2	220 x 5	210	210	335	480	SP2-280	280	460	132	30	M 20	525	505
15	230 f6	230 m6	229.5	253	8	899	157	5	28	14	240	180	39	140	M 16	2	240 x 5	230	230	380	550	SP2-300	300	485	140	35	M 24	575	575
16	240 f6	240 m6	239.5	263	8	899	157	5	28	14	250	190	39	150	M 20	2	250 x 5	240	240	380	550	SP2-320	320	520	140	35	M 24	595	575
17	250 f6	250 m6	249.5	278	8	982	177	5	30	14	265	200	39	150	M 20	2	265 x 5	250	250	415	600	SP2-340	340	570	155	35	M 24	615	630
18	280 f6	280 m6	279.5	306	9	982	177	5	30	14	290	210	39	160	M 20	2	290 x 5	280	280	415	600	SP2-360	360	590	162	35	M 24	635	625
19	285 f6	285 m6	284.5	316	9	1100	187	5	32	15	300	220	39	170	M 24	2	300 x 5	285	285	465	670	SP2-380	380	640	166	40	M 27	▮	▮
20	310 f6	310 m6	309.5	336	9	1100	187	5	32	15	320	230	39	180	M 24	2	320 x 6	310	310	465	670	SP2-390	390	650	166	40	M 27	▮	▮
21	330 f6	330 m6	329	358	9	1160	205	5	40	20	340	250	45	190	M 24	2	340 x 6	330	330	490	715	SP2-420	420	670	186	45	M 27	▮	▮
22	340 f6	340 m6	339	368	9	1170	215	5	40	20	350	260	45	200	M 24	2	350 x 6	340	340	490	725	SP2-440	440	720	194	45	M 27	▮	▮
23、24 25、26	On request																												

Type B2D. (Size 4 ~ 18)

Gear unit size	Driven equipment shaft 2)								End plate								Circlip	Hollow shaft				Shrink disk 1)					Bolt	Protection cover	
	d_2	d_3	d_4	d_5	f_1	l	l_1	r	c_1	c_2	d_7	d_8	D_9	m	s	Qty.		D_2	D_3	G_4	G_5	Type	d	d_1	H	W	s_1	D	g
4	85 g6	85 h6	84.5	95	4	386	48	2	17	7	90	70	22	50	M 8	2	90 x 3	85	85	170	235	SP2-110	110	185	49	20	M 12	235	250
5	100 g6	100 h6	99.5	114	5	453	53	2	20	8	105	80	26	55	M 10	2	105 x 4	100	100	200	275	SP2-125	125	215	53	20	M 12	275	285
6	110 g6	110 h6	109.5	124	5	453	58	3	20	8	115	85	26	60	M 10	2	115 x 4	110	110	200	275	SP2-140	140	230	58	20	M 14	285	285
7	120 g6	120 h6	119.5	134	5	533	68	3	20	8	125	90	26	65	M 12	2	125 x 4	120	120	235	320	SP2-155	155	263	62	23	M 14	330	335
8	130 g6	130 h6	129.5	145	6	538	73	3	20	8	135	100	26	70	M 12	2	135 x 4	130	130	235	325	SP2-165	165	290	68	23	M 16	340	340
9	140 g6	140 m6	139.5	160	6	609	82	4	23	10	150	110	33	80	M 12	2	150 x 4	140	140	270	365	SP2-175	175	300	68	28	M 16	360	380
10	150 g6	150 m6	149.5	170	6	629	92	4	23	10	160	120	33	90	M 12	2	160 x 4	150	150	270	385	SP2-200	200	340	85	28	M 16	395	400
11	165 f6	165 m6	164.5	185	7	744	112	4	23	10	175	130	33	90	M 12	2	175 x 4	165	165	320	450	SP2-220	220	370	103	30	M 20	435	470
12	180 f6	180 m6	179.5	200	7	749	122	4	23	10	190	140	33	100	M 16	2	190 x 4	180	180	320	455	SP2-240	240	405	107	30	M 20	450	470
14	210 f6	210 m6	209.5	233	8	894	147	5	28	14	220	170	33	130	M 16	2	220 x 5	210	210	390	535	SP2-280	280	460	132	30	M 20	525	555
16	240 f6	240 m6	239.5	263	8	1039	157	5	28	14	250	190	39	150	M 20	2	250 x 5	240	240	450	620	SP2-320	320	520	140	35	M 24	595	645
18	280 f6	280 m6	279.5	306	9	1177	177	5	30	14	290	210	39	160	M 20	2	290 x 5	280	280	510	700	SP2-360	360	590	162	35	M 24	635	725

1. Shrink disc is not in scope of supply, please order if required.
2. Material of driven equipment shaft: 40cr or steel with higher strength.

Hollow shaft with parallel key connection:



Type H2H., H3H., H4H., B3H., B4H. (Size 4 ~ 18)

Gear unit size	Driven equipment shaft									End plate					Bolt		Hollow shaft		
	d_2	d_4	d_5	f_1	l	l_1	r	s	t	c	D	D_9	d	m	Size	Qty.	D_2	G_4	g
4	80	79.5	88	4	278	35	1.2	M 10	18	10	11	22	100	60	M 10 x 25	2	80	140	35
5	95	94.5	105	5	328	40	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	95	165	40
6	105	104.5	116	5	328	45	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	105	165	40
7	115	114.5	126	5	388	50	1.6	M 12	20	12	13.5	26	140	80	M 12 x 30	2	115	195	40
8	125	124.5	136	6	388	55	2.5	M 12	20	12	13.5	26	150	85	M 12 x 30	2	125	195	40
9	135	134.5	147	6	467	60	2.5	M 12	20	12	13.5	33	160	90	M 12 x 30	2	135	235	45
10	150	149.5	162	6	467	65	2.5	M 12	20	12	13.5	33	185	110	M 12 x 30	2	150	235	45
11	165	164.5	177	7	537	70	2.5	M 16	28	15	17.5	33	195	120	M 16 x 40	2	165	270	45
12	180	179.5	192	7	537	75	2.5	M 16	28	15	17.5	33	220	130	M 16 x 40	2	180	270	45
13	190	189.5	206	7	667	80	3	M 16	28	18	17.5	33	230	140	M 16 x 40	2	190	335	45
14	210	209.5	226	8	667	85	3	M 16	28	18	17.5	33	250	160	M 16 x 40	2	210	335	45
15	230	229.5	248	8	756	100	3	M 20	38	25	22	39	270	180	M 20 x 55	4	230	380	60
16	240	239.5	258	8	756	100	3	M 20	38	25	22	39	280	180	M 20 x 55	4	240	380	60
17	250	249.5	270	8	826	110	4	M 20	38	25	22	39	300	190	M 20 x 55	4	250	415	60
18	275	274.5	295	9	826	120	4	M 20	38	25	22	39	330	210	M 20 x 55	4	275	415	60

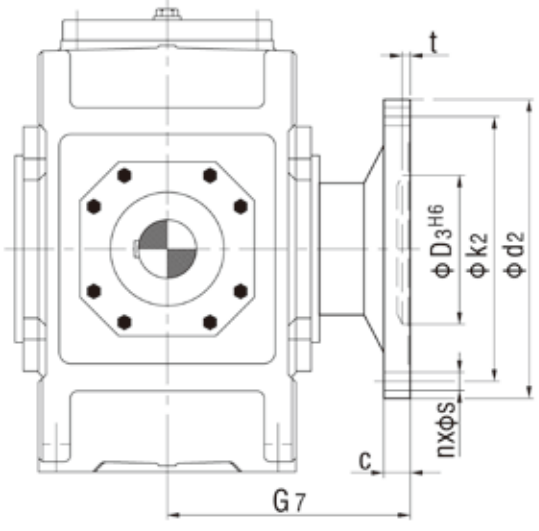
Type B2H. (Size 4 ~ 18)

Gear unit size	Driven equipment shaft									End plate					Bolt		Hollow shaft		
	d_2	d_4	d_5	f_1	l	l_1	r	s	t	c	D	D_9	d	m	Size	Qty.	D_2	G_4	g
4	80	79.5	88	4	338	35	1.2	M 10	18	10	11	22	100	60	M 10 x 25	2	80	170	35
5	95	94.5	105	5	398	40	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	95	200	40
6	105	104.5	116	5	398	45	1.6	M 10	18	10	11	26	120	70	M 10 x 25	2	105	200	40
7	115	114.5	126	5	468	50	1.6	M 12	20	12	13.5	26	140	80	M 12 x 30	2	115	235	40
8	125	124.5	136	6	468	55	2.5	M 12	20	12	13.5	26	150	85	M 12 x 30	2	125	235	40
9	135	134.5	147	6	537	60	2.5	M 12	20	12	13.5	33	160	90	M 12 x 30	2	135	270	45
10	150	149.5	162	6	537	65	2.5	M 12	20	12	13.5	33	185	110	M 12 x 30	2	150	270	45
11	165	164.5	177	7	637	70	2.5	M 16	28	15	17.5	33	195	120	M 16 x 40	2	165	320	45
12	180	179.5	192	7	637	75	2.5	M 16	28	15	17.5	33	220	130	M 16 x 40	2	180	320	45
14	210	209.5	226	8	777	85	3	M 16	28	18	17.5	33	250	160	M 16 x 40	2	210	390	45
16	240	239.5	258	8	896	100	3	M 20	38	25	22	39	280	180	M 20 x 55	4	240	450	60
18	275	274.5	295	9	1016	120	4	M 20	38	25	22	39	330	210	M 20 x 55	4	275	510	60

1. Material of driven equipment shaft: 40cr or steel with higher strength.
2. Shaft and parallel key of driven equipment are not within the scope of supply. Please order if required.

Counter flange for flanged shaft:

B2FH,B3FH,B2FM,B3FM,B3FE

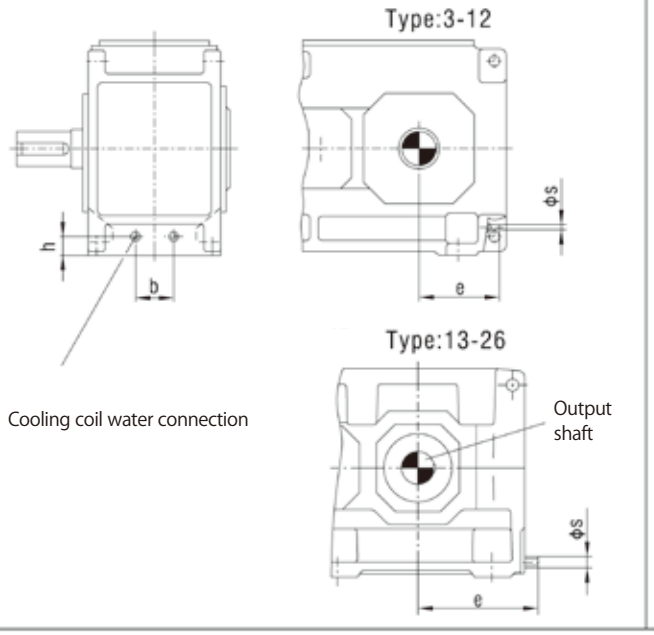


Gear unit size	c	d_2	D_3	k_2	n	s	t	B3F.		B2F.	
								G 7	add. weight	G 7	add. weight
5	25	300	150	260	16	22	10	255	35	290	40
6	25	320	160	280	18	22	10	255	40	290	45
7	30	370	180	320	16	26	10	300	50	340	55
8	30	390	190	340	18	26	10	300	55	340	60
9	38	430	220	380	20	26	12	350	85	385	90
10	38	470	240	420	22	26	12	350	90	385	95
11	42	510	260	450	18	33	12	400	130	450	135
12	42	540	280	480	22	33	12	400	140	450	150
13	48	580	310	500	20	33	14	480	160	525	170
14	48	620	310	540	24	33	14	480	170	525	180
15	55	710	360	630	28	33	17	550	240	625	255
16	55	740	360	660	30	33	17	550	255	625	270
17	60	750	410	660	24	39	18	600	300	695	320
18	60	800	410	710	26	39	18	600	350	695	370
19	65	860	460	770	30	39	18	670	On request	———	———
20	65	930	460	830	32	39	18	670			
21	75	950	520	850	28	45	20	710			
22	75	1040	520	940	28	45	20	710			
23,24,25,26	On request										

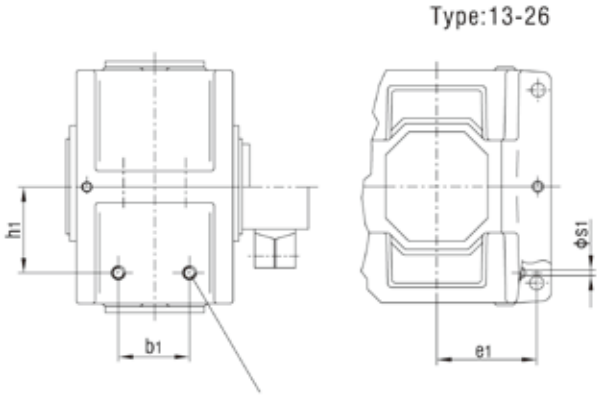
Cooling Coils:

Horizontal mounting:

H1SH, H2.H, H3.H, B2.H, B3.H



H2.M, H3.M, B2.M, B3.M



Size	H1SH					H2.H / B3.H					H3.H					B2.H				
	b	e	h	s	Water quantity (1)	b	e	h	s	Water quantity (1)	b	e	h	s	Water quantity (1)	b	e	h	s	Water quantity (1)
3	48	205	74	G 1/2	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4	–	–	–	–	–	34	155	60	G 1/2	4	–	–	–	–	–	74	160	54	G 1/2	4
5	88	270	90	G 1/2	4	68	170	64	G 1/2	4	70	175	60	G 1/2	4	130	175	62	G 1/2	8
6	–	–	–	–	–	70	215	68	G 1/2	4	70	220	69	G 1/2	4	120	220	68	G 1/2	4
7	124	310	135	G 1/2	4	100	210	83	G 1/2	4	80	210	83	G 1/2	4	140	210	80	G 1/2	8
8	–	–	–	–	–	100	270	83	G 1/2	4	80	270	83	G 1/2	4	140	270	80	G 1/2	4
9	116	365	110	G 1/2	8	140	245	110	G 1/2	8	150	245	107	G 1/2	4	232	245	110	G 1/2	8
10	–	–	–	–	–	100	295	95	G 1/2	8	90	295	95	G 1/2	4	150	295	90	G 1/2	8
11	146	425	130	G 1/2	8	110	275	95	G 1/2	8	200	275	115	G 1/2	8	312	275	115	G 1/2	8
12	–	–	–	–	–	200	360	109	G 1/2	8	200	360	115	G 1/2	8	300	360	115	G 1/2	8
13	152	480	150	G 1/2	8	252	455	116	G 1/2	8	252	460	116	G 1/2	8	324	460	116	G 1/2	8
14	–	–	–	–	–	252	525	116	G 1/2	8	252	530	116	G 1/2	8	324	530	116	G 1/2	8
15	172	560	130	G 1/2	8	290	535	119	G 1/2	8	290	540	119	G 1/2	8	396	540	119	G 1/2	8
16	–	–	–	–	–	290	580	119	G 1/2	8	290	585	119	G 1/2	8	396	585	119	G 1/2	8
17	202	600	145	G 1/2	8	340	575	134	G 1/2	8	300	580	134	G 1/2	8	468	580	134	G 1/2	8
18	–	–	–	–	–	340	635	134	G 1/2	8	300	640	134	G 1/2	8	468	640	134	G 1/2	8
19	On request					On request					On request									
20 - 26	–																			

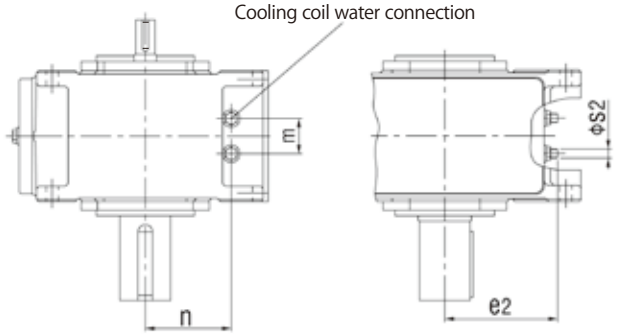
Size	H2.M / B3.M					H3.M					B2.M				
	b1	e1	h1	s1	Water quantity (1)	b1	e1	h1	s1	Water quantity (1)	b1	e1	h1	s1	Water quantity (1)
13	252	335	300	G 1/2	8	252	335	300	G 1/2	8	324	335	300	G 1/2	8
14	252	405	300	G 1/2	8	252	405	300	G 1/2	8	324	405	300	G 1/2	8
15	290	395	335	G 1/2	8	290	395	340	G 1/2	8	396	390	345	G 1/2	8
16	290	440	335	G 1/2	8	290	440	340	G 1/2	8	396	435	345	G 1/2	8
17	340	425	380	G 1/2	8	300	425	380	G 1/2	8	324	425	395	G 1/2	8
18	340	485	380	G 1/2	8	300	485	380	G 1/2	8	324	485	395	G 1/2	8
19 - 26	On request					On request					–				

Note: Cooling coil is appropriate for fresh water, sea water and brackish water.

Vertical:

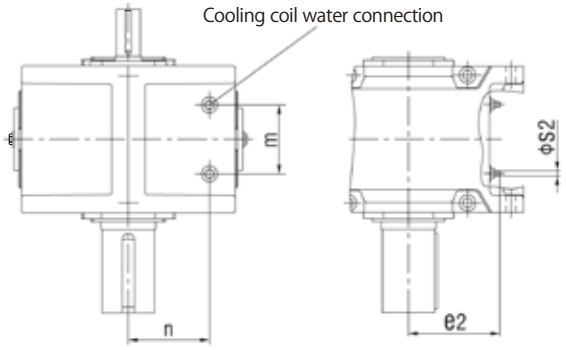
H2.V, H3.V, B2.V, B3.V

Type: 4-12



H2.V, H3.V, B2.V, B3.V

Type: 13-26



Size	H2.V / B3.V					H3.V					B2.V				
	m	n	e2	s2	Water quantity (1)	m	n	e2	s2	Water quantity (1)	m	n	e2	s2	Water quantity (1)
4	34	140	155	G 1/2	4	–	–	–	–	–	74	146	160	G 1/2	4
5	68	166	170	G 1/2	4	70	170	175	G 1/2	4	130	168	175	G 1/2	8
6	70	162	215	G 1/2	4	70	161	220	G 1/2	4	120	162	220	G 1/2	4
7	100	197	210	G 1/2	4	80	197	210	G 1/2	4	140	200	210	G 1/2	8
8	100	197	270	G 1/2	4	80	197	270	G 1/2	4	140	200	270	G 1/2	4
9	140	210	245	G 1/2	8	150	213	245	G 1/2	4	232	210	245	G 1/2	8
10	100	225	295	G 1/2	8	90	225	295	G 1/2	4	150	230	295	G 1/2	8
11	110	285	275	G 1/2	8	200	265	275	G 1/2	8	312	265	275	G 1/2	8
12	200	271	360	G 1/2	8	200	265	360	G 1/2	8	300	265	360	G 1/2	8
13	252	300	335	G 1/2	8	252	300	335	G 1/2	8	324	300	335	G 1/2	8
14	252	300	405	G 1/2	8	252	300	405	G 1/2	8	324	300	405	G 1/2	8
15	290	335	395	G 1/2	8	290	340	395	G 1/2	8	396	345	390	G 1/2	8
16	290	335	440	G 1/2	8	290	340	440	G 1/2	8	396	345	435	G 1/2	8
17	340	380	425	G 1/2	8	300	380	425	G 1/2	8	324	395	425	G 1/2	8
18	340	380	485	G 1/2	8	300	380	485	G 1/2	8	324	395	485	G 1/2	8
19–26	On request					On request					–				

Type	Size	Cooling coil for											
		Compensation oil tank dip-in lubrication				Flange pump forced lubrication				Motor oil pump forced lubrication			
		Applicable shaft assemblies				Applicable shaft assemblies				Applicable shaft assemblies			
		A	B	C	D	A	B	C	D	A	B	C	D
H2.V	4	√	√	√	√	–	–	–		Please consult			
	5 – 12	√	√	√	√	–	√	–	√				
	13 – 18	–	–	–	–	–	√	–	√				
H3.V	5 – 12	√	√	√	√	–	√	–	√				
	13 – 18	–	–	–	–	–	√	–	√				
B2.V	4	√	√	√	√	–	–	–	–				
	5 – 12	√	√	√	√	√	√	–	–				
	13 – 18	–	–	–	–	√	√	–	–				
B3.V	4	√	√	√	√	–	–	–	–				
	5 – 12	√	√	√	√	–	–	√	√				
	13 – 18	–	–	–	–	–	–	√	√				

Note: Cooling coil is appropriate for fresh water, sea water and brackish water.

Lubrication for vertical mounting:

Lubrication for vertical mounting has following options(table 1).

Table1

Type	Size	Compensation oil tank dip-in lubrication	Flange pump forced lubrication	Motor oil pump forced lubrication
H2.V	4	√	—	—
	5 ... 12	√	√	—
	13 ... 18	—	√	—
H3.V	5 ... 12	√	√	√
	13 ... 18	—	√	√
H4.V	7 ... 12	√	√	√
	13 ... 18	—	—	√
B2.V	4	√	—	—
	5 ... 12	√	√	√
	13 ... 18	—	√	√
B3.V	4	√	—	—
	5 ... 12	√	√	√
	13 ... 18	—	√	√
B4.V	5 ... 12	√	√	√
	13 ... 18	—	—	√

Suggested lubrication way:
Size 6 or under it: Compensation oil tank dip-in lubrication
Size 7 or beyond it: Forced lubrication

Lubrication method
Compensation oil tank dip-in lubrication:
When installing gearbox vertically, all the gear teeth and bearings are immersed in lubrication oil.
When temperature rises and lubrication greases expands, the space needed is provided by the additional oil box connected with gear unit by bolts.
Forced lubrication:
Forced lubrication includes flange pump or motor oil pump, filter, pipeline system.

Dip-in lubrication must meet following requirements.
a) Permissible oil temperature, see table 2.
a)Maximum input speed n1, see table 3.

Table 2

Viscosity ISO-VG at 40℃ $mm^2/s(cSt)$	Permissible temperature for dip-in lubrication(℃)	
	Mineral oil	Synthetic oil
VG 220	- 15	- 25
VG 320	- 12	- 22
VG 460	- 9	- 25

If oil temperature is lower than above value, please heat oil before running.

Table3

Size	H2.V		H3.V		H4.V		B2.V		B3.V		B4.V	
	i_N	n_{1max}	i_N	n_{1max}	i_N	n_{1max}	i_N	n_{1max}	i_N	n_{1max}	i_N	n_{1max}
4	6.3–10 11.2–12.5 14–22.4	1200 1500 1800	—		—		5–5.6 6.3–7.1 8–9 10–11.2	750 900 1000 1200	12.5–71	1800	—	
5	6.3–9 10–12.5 14–16 18–22.4	1000 1200 1500 1800	25–90	1800	—		6.3–7.1 8–9 10–11.2	750 900 1000	12.5–71	1800	80–315	1800
6	8–11.2 12.5–16 18–20 22.4–28	1000 1200 1500 1800	31.5–112	1800	—		9 10–11.2 12.5–14	750 900 1000	16–90	1800	100–400	1800
7	6.3–7.1 8–9 10–11.2 12.5–18 18–22.4	750 900 1000 1200 1500	25–90	1800	100–355	1800	9–10 11.2	750 900	12.5–25 28–71	1500 1800	80–315	1800
8	8–9 10–11.2 12.5–14 16–20 22.4–28	750 900 1000 1200 1500	31.5–112	1800	125–450	1800	11.2–12.5 14	750 900	16–31.5 35.5–90	1500 1800	100–400	1800
9	6.3–7.1 8–10 11.2–22.4	1200 1500 1800	25–90	1800	100–355	1800	5–5.6 6.3–7.1 8–10 11.2	900 1000 1200 1500	12.5–71	1800	80–315	1800
10	8–9 10–12.5 14–28	1200 1500 1800	31.5–112	1800	125–450	1800	6.3–7.1 8–9 10–12.5 14	900 1000 1200 1500	16–90	1800	100–400	1800
11	6.3–7.1 8–10 11.2–12.5 14–22.4	1000 1200 1500 1800	25–90	1800	100–355	1800	5.6–6.3 7.1–8 9–10 11.2	750 900 1000 1200	12.5–22.4 25–71	1500 1800	80–315	1800
12	8–9 10–12.5 14–16 18–28	1000 1200 1500 1800	31.5–112	1800	125–450	1800	7.1–8 9–10 1.2–12.5 14	750 900 1000 1200	16–28 31.5–90	1500 1800	100–400	1800

Note: Forced lubrication is necessary if n1 or iN is not listed on above table.

Permissible temperature for forced lubrication(℃)

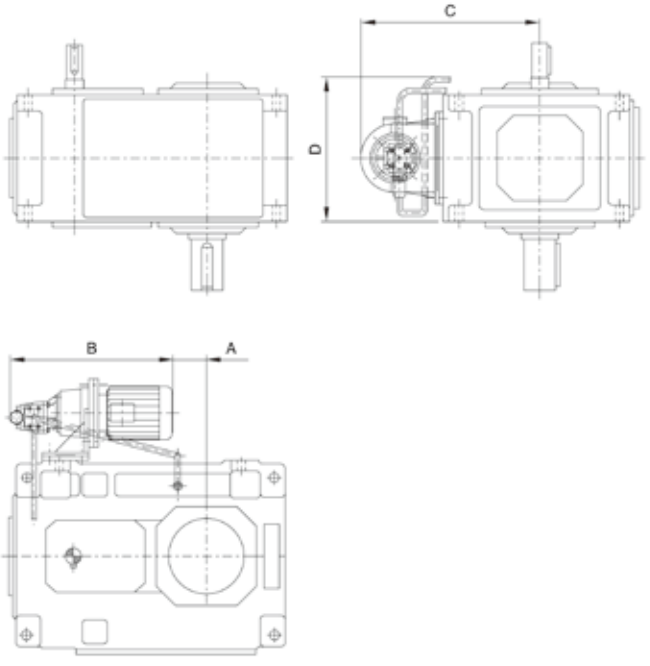
Table 4

Viscosity ISO-VG at 40℃ mm^2/s(cSt)	Permissible temperature for forced lubrication(℃)			
	Mineral oil		Synthetic oil	
	min.	max.	min.	max.
VG 220	10	80	0	90
VG 320	15	90	5	100
VG 460	20	95	10	105

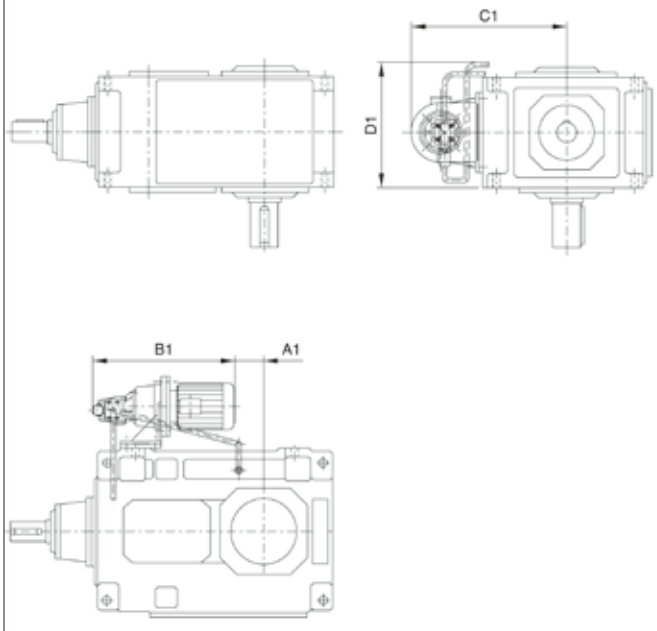
Forced lubrication:
Oil viscosity should not be over 1800 cSt while starting.
The minimum viscosity should not lower than 20 cTs.
If oil temperature is lower than the value which listed on table 4, the oil should be hearted or provide dip-in lubrication.

Motor oil pump forced lubrication(Vertical mounting):

H3.V , H4.V



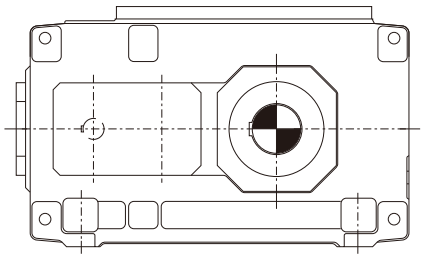
B2.V , B3.V , B4.V



Mounting dimension							Mounting dimension						
Type	Size	Design	A	B	C	D	Type	Size	Design	A1	B1	C1	D1
H3.V	5 / 6	A / B / C / D	−30 / 5	560	480	385	B2.V	5 / 6	A / B / C / D	−160 / −125	480	470	415
	7 / 8	A / B / C / D	55 / 100	585	550	430		7 / 8	A / B / C / D	5 / 50	480	525	510
	9 / 10	A / B / C / D	140 / 190	610	565	500		9 / 10	A / B / C / D	60 / 110	480	565	570
	11 / 12	A / B / C / D	375 / 445	530	625	560		11 / 12	A / B / C / D	150 / 220	480	625	660
	13 / 14	A / C	155 / 225	880	670	700		13 / 14	A / B / C / D	−70 / 0	755	670	805
	13 / 14	B / D	100 / 170	935	670	700		15 / 16	A / B / C / D	15 / 60	780	710	910
	15 / 16	A / C	275 / 320	965	710	770		17 / 18	A / B / C / D	−5 / 55	890	775	1025
	15 / 16	B / D	220 / 265	1020	710	770	B3.V	5 / 6	A / B / C / D	−85 / −50	480	480	365
	17 / 18	A / C	250 / 310	1040	770	835		7 / 8	A / B / C / D	−5 / 40	480	550	430
	17 / 18	B / D	195 / 255	1095	770	835		9 / 10	A / B / C / D	65 / 115	480	565	500
H4.V	7 / 8	A / C	55 / 100	600	550	430		11 / 12	A / B / C / D	280 / 350	480	625	560
	7 / 8	B / D	0 / 45	680	550	430		13 / 14	A / B / C / D	35 / 105	810	670	700
	9 / 10	A / C	140 / 190	625	565	500		15 / 16	A / B / C / D	120 / 165	875	710	775
	9 / 10	B / D	85 / 135	705	565	500		17 / 18	A / B / C / D	165 / 225	970	775	835
	11 / 12	A / C	375 / 445	550	625	560	B4.V	5 / 6	A / B / C / D	−35 / 0	480	480	385
	11 / 12	B / D	320 / 390	635	625	560		7 / 8	A / B / C / D	55 / 100	480	550	430
	13 / 14	A / B / C / D	135 / 205	910	670	700		9 / 10	A / B / C / D	140 / 190	615	565	500
	15 / 16	A / B / C / D	255 / 300	1000	710	775		11 / 12	A / B / C / D	375 / 445	530	625	560
	17 / 18	A / B / C / D	230 / 290	1070	775	835		13 / 14	A / B / C / D	135 / 205	905	670	700
								15 / 16	A / B / C / D	255 / 300	990	710	775
								17 / 18	A / B / C / D	230 / 290	1065	775	835

HB series combi-type or special desgin:

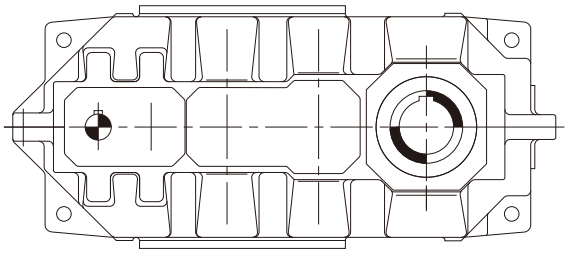
Helical gear units and bevel-helical gear units



Output torque: 0.62 ... 900 kNm
Ratio: 1.25 ... 450
Number of stages 1, 2, 3 or 4

1

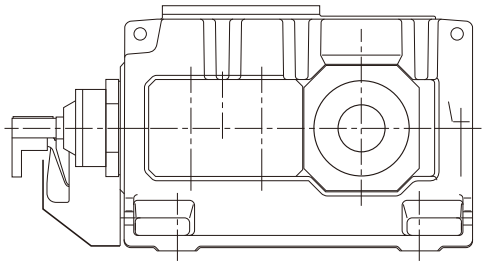
Helical gear units with extended total centre distance



Output torque: 11 ... 109 kNm
Ratio: 14 ... 250
No. of stages 3 or 4

2

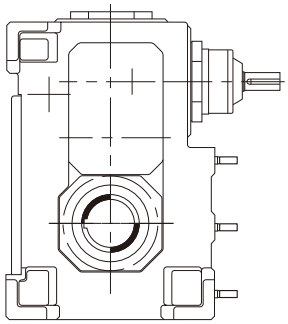
Belt conveyor drives
Bevel-helical gear units



Output torque: 1.03 ... 900 kNm
Ratio: 5 ... 90
Number of stages 2 or 3

3

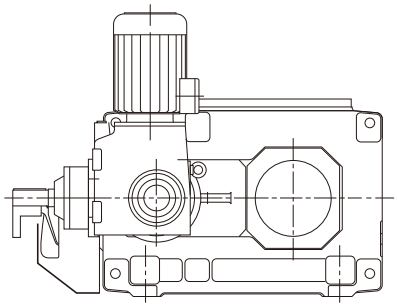
Travelling gear drives
Bevel-helical gear units



Output torque: 3.6 ... 75 kNm
Ratio: 12.5 ... 400
Number of stages 3 or 4

4

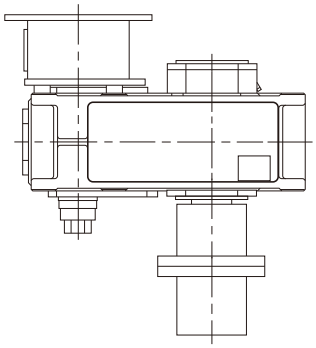
Bucket Elevator drives
Bevel-helical gear units
with auxiliary drive



Output torque: 5.5 ... 470 kNm
Ratio: 12.5 ... 90
Number of stages 3

5

Water turbine drives
Helical gear units and
bevel-helical gear units



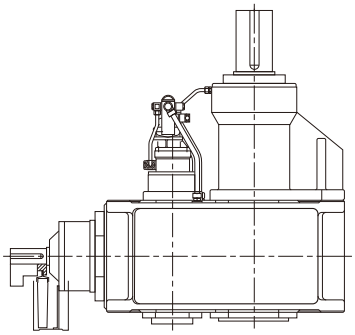
Output torque: 8.5 ... 195 kNm
Ratio: 5 ... 28
Number of stages 2

6

HB

Cooling tower drives

Helical gear units and bevel-helical gear units

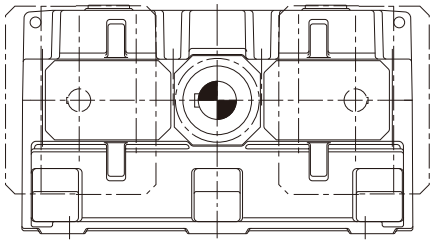


Output torque: 3 ... 97.5 kNm
Ratio: 5 ... 28
Number of stages 2

7

Paper machine drives

Helical gear units bevel–helical gear units

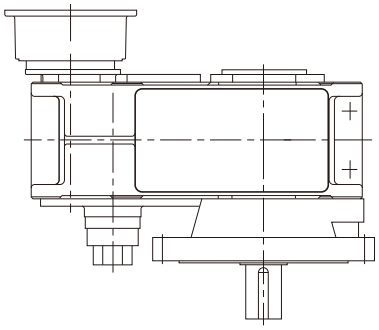


Output torque: 0.62 ... 820 kNm
Ratio: 1.25 ... 22.4
Number of stages 1, 2 or 3

8

Agitator Drives

Helical gear units

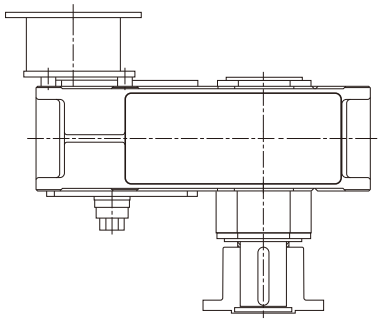


Output torque: 10.2 ... 240 kNm
Ratio: 6.3 ... 450
Number of stages 2, 3 or 4

9

Aerator drives

Helical gear units and bevel-helical gear units

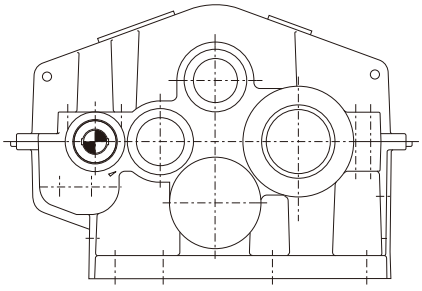


Output torque: 9.4 ... 173 kNm
Ratio: 6.3 ... 112
Number of stages 2 or 3

10

Load sharing

Helical gear units

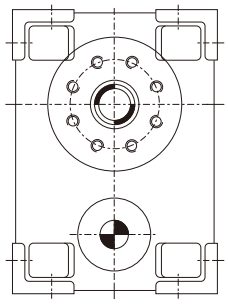


Output torque: 550 ... 4800 kNm
Ratio: 18 ... 900
Number of stages 3, 4 or 5

11

Extruders drives

Helical gear units



Output torque: 0.3 ... 2300 kNm
Ratio: 3 ... > 500
Number of stages 2,3 or 4

12

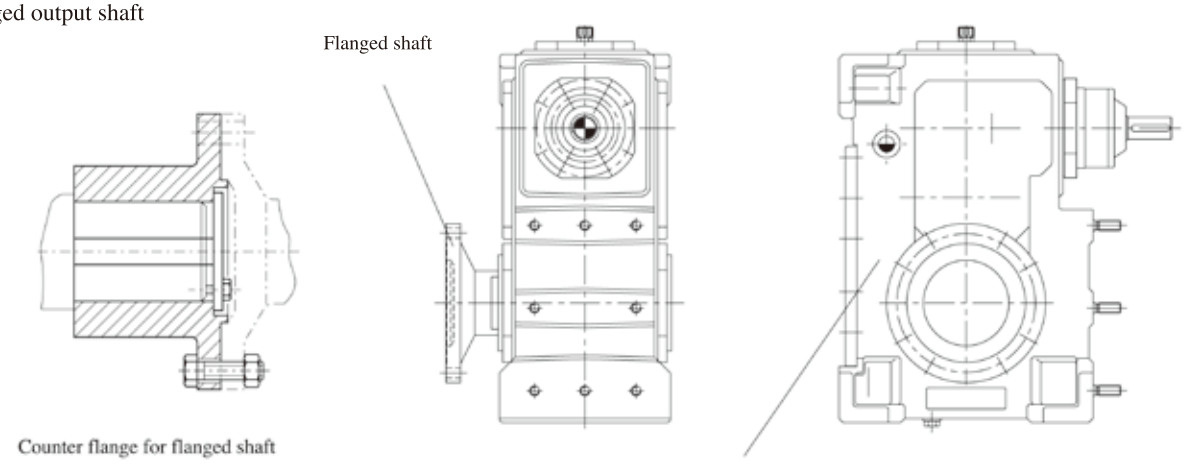
HB

Please consult us for detailed materialls.

Travelling Gear Drives

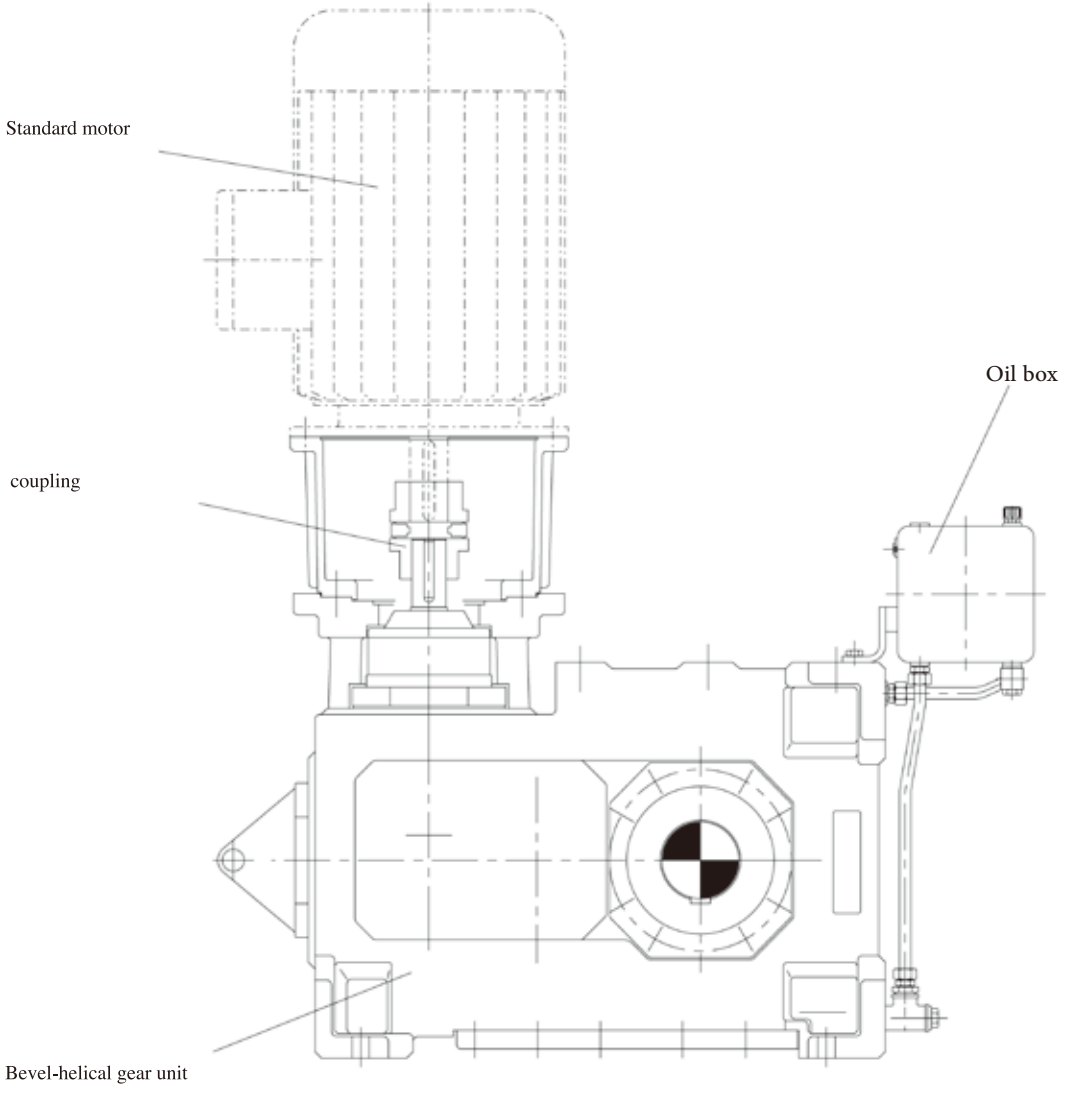
q

Flanged output shaft



Bevel-helical gear units.

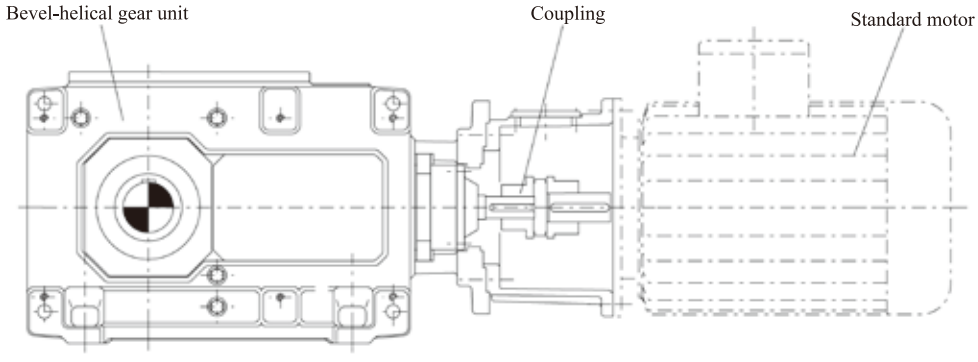
Motor mounting flanges for standard motors



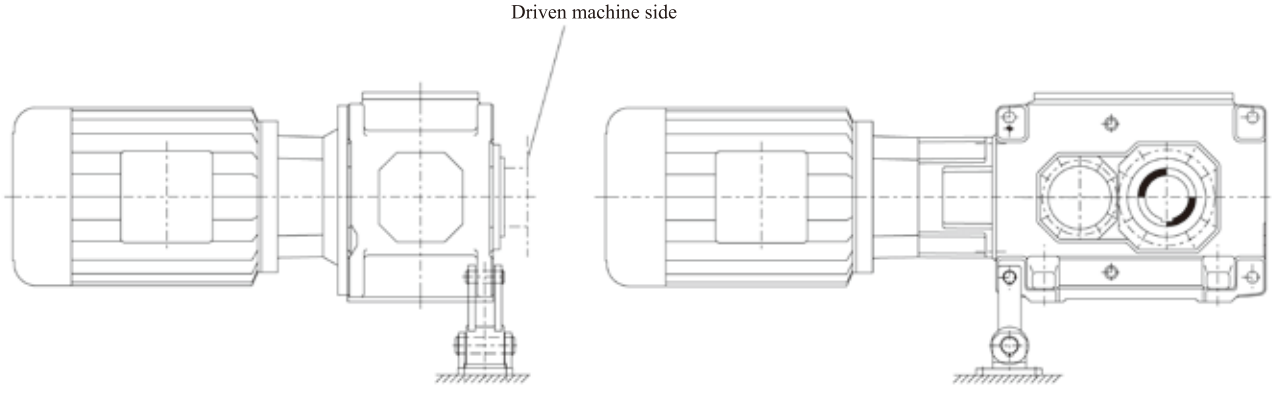
HB

Conveyor drives

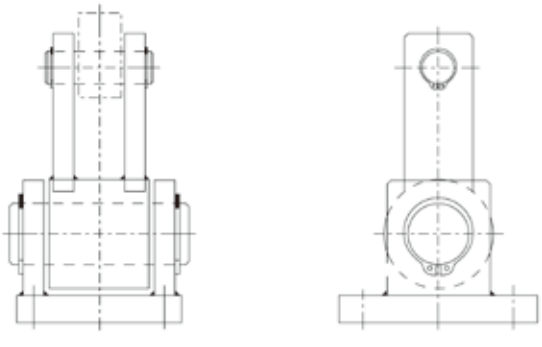
Motor bell housings for standard motors



Torque supports for gear housings



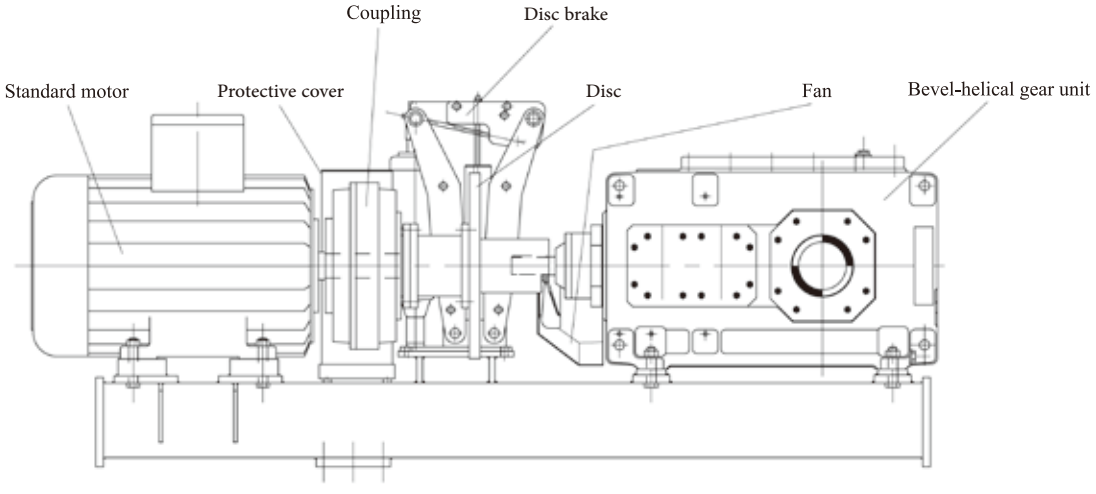
Torque support on driven machine side. If the gear unit has a fan, the torque support has to be located opposite the fan.

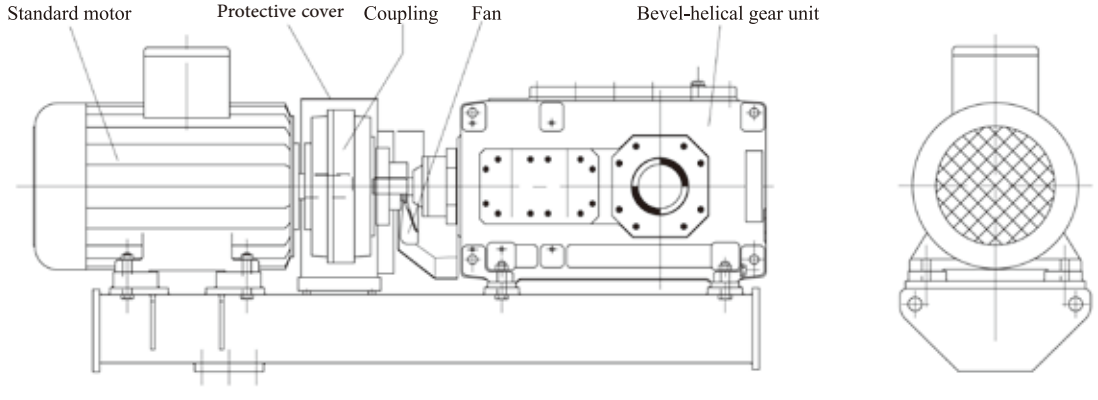


Torque supports

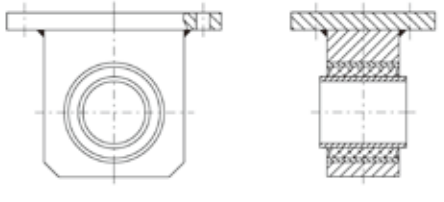
Conveyor drives

Gear unit swing-bases

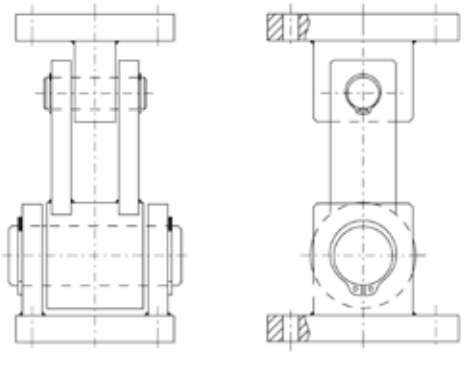




Swing base



Movable base



Base with torque arm

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