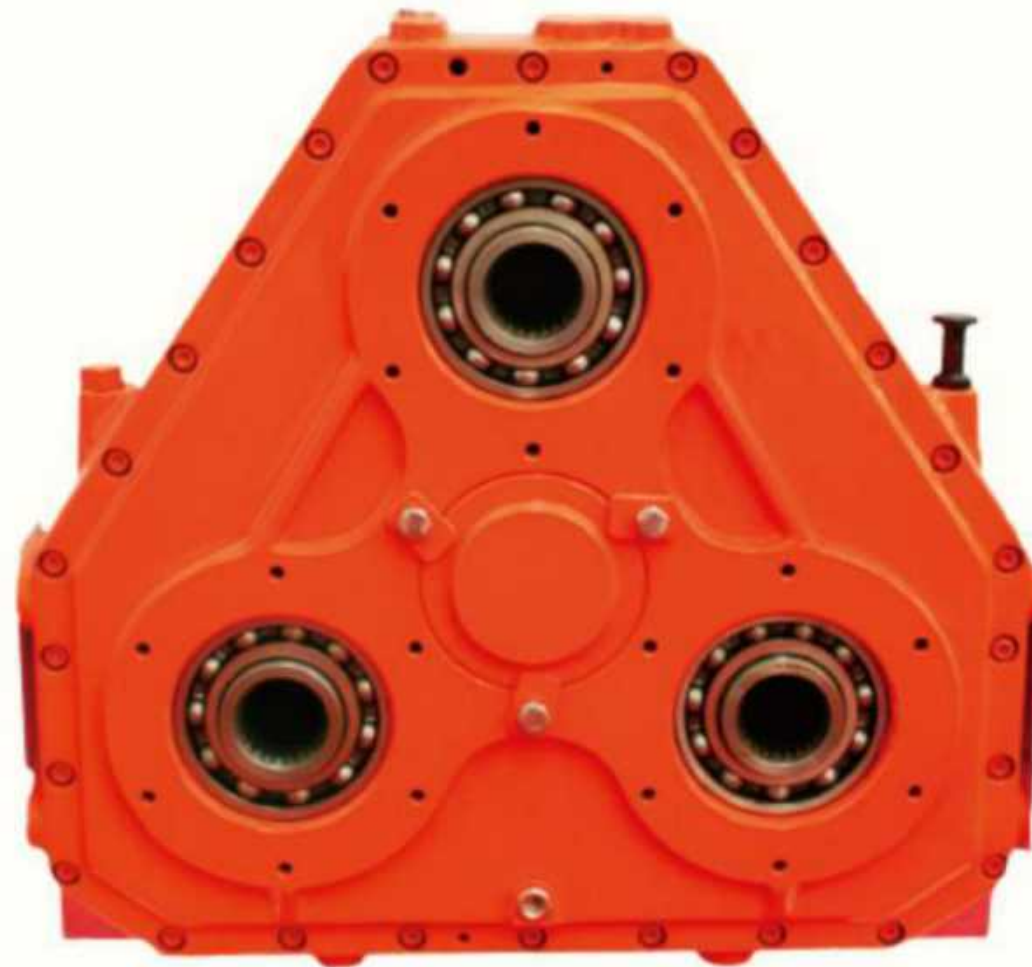


PUMP DRIVE INTRODUCTION



DESIGN FEATURES

- Standardized modular design
- Precision casting housings
- Case hardened shafts
- High-precision gears
- Radial Shaft seals made of Viton, manufactured by NOK
- Cylindrical roller bearings and Ball bearings
- Oil cooling can almost always be dispensed with thanks to the special lubrication system in conjunction with adequately ribbed housings.

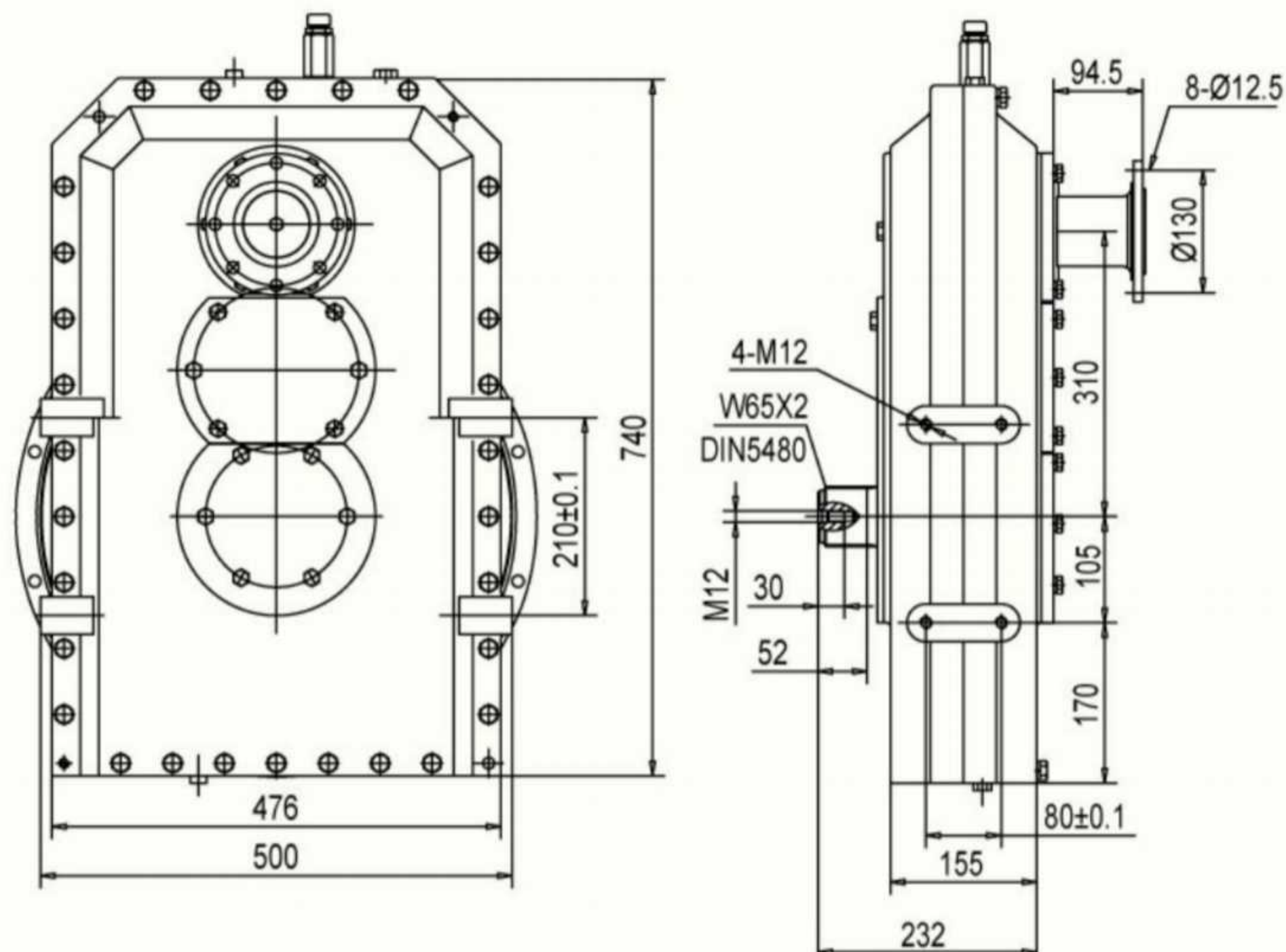
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BQ126 MAXIMUM INPUT POWER 260kW (351hp)

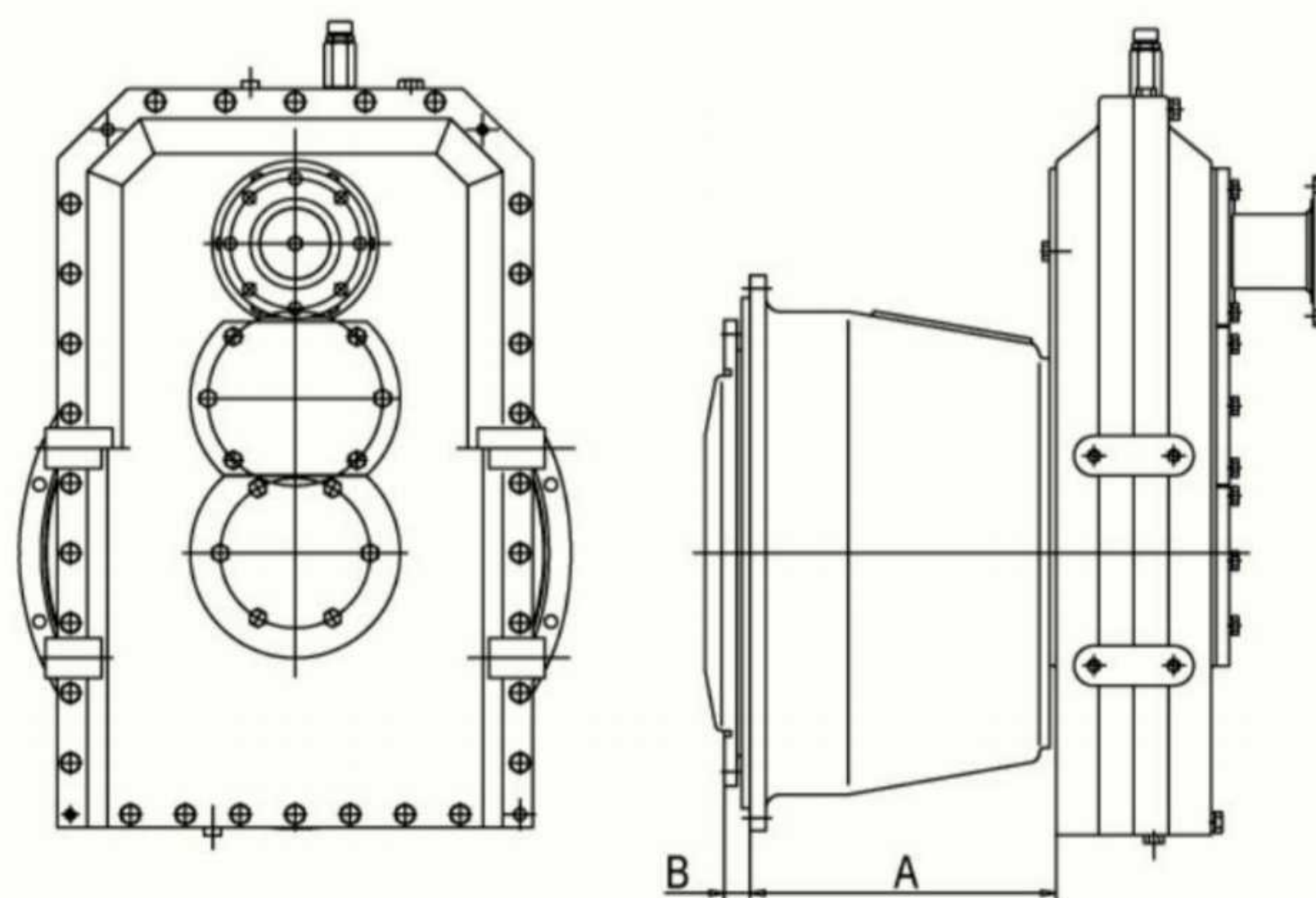
Basic Pump Drive

BQ126 B



With two plate 11" clutch

BQ126 BP211



MODEL	A(mm)	B(mm)
BQ126 BP211	210	39.6

BQ126 MAXIMUM INPUT POWER 260kW (351hp)

BQ126 TECHNICAL DATA					
RATIO : 1	MAX. INPUT TORQUE N.m	MAX. OUTPUT TORQUE N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
1.00	1560	1560	3000	3000	10

BQ126 MOMENT OF INERTIA DATA				
RATIO : 1	BQ126 B Kg.m ²	BP 211 Kg.m ²		
1.00	0.0932	0.1621		

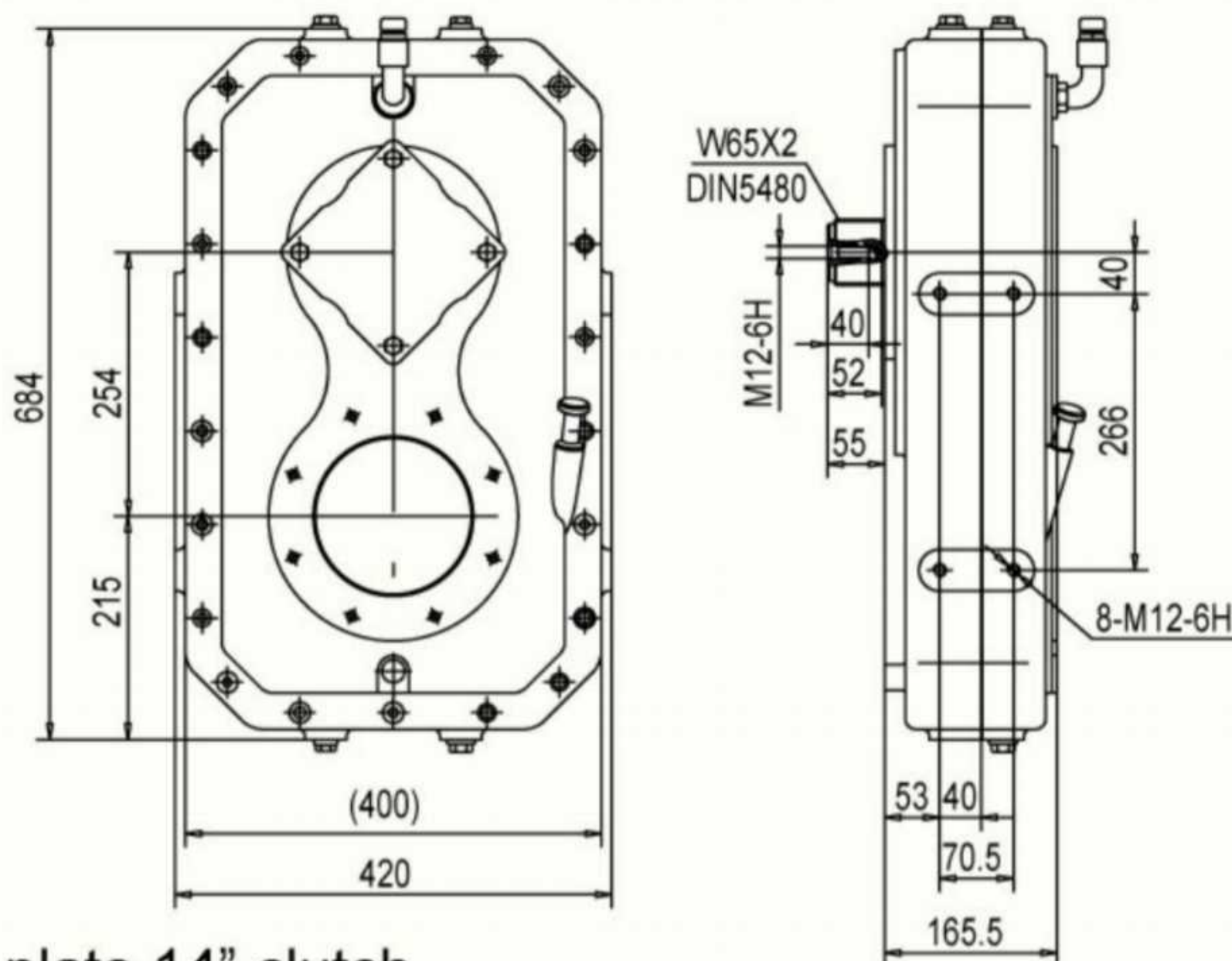
MODEL	WEIGHT Kg
BQ126 B	240
BQ126 BP211	288

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for inputand output Option Selection.

BQ135 MAXIMUM INPUT POWER 350kW (473hp)

Basic Pump Drive

BQ135 B

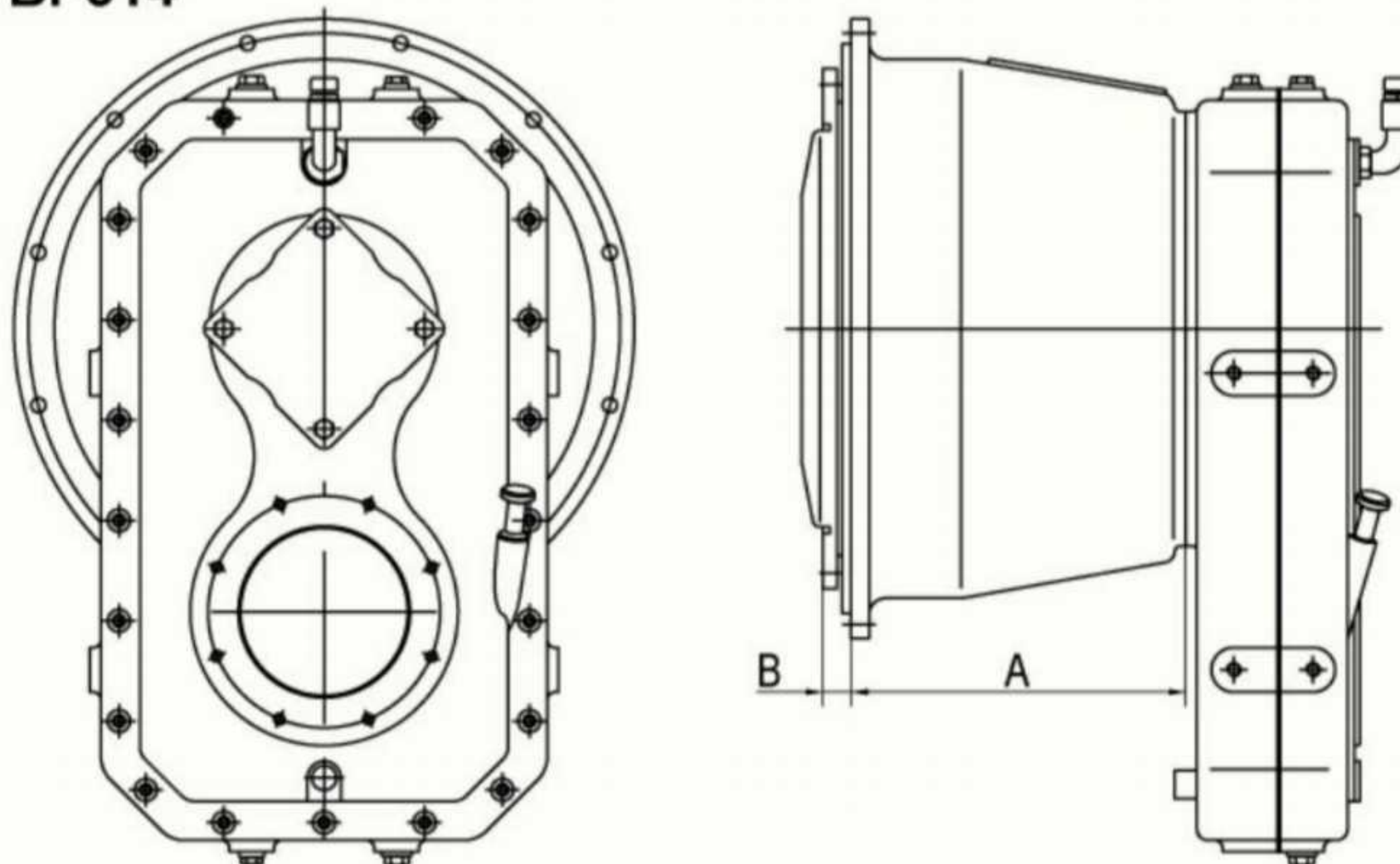


With two plate 14" clutch

BQ135 BP214

With three plate 14" clutch

BQ135 BP314



MODEL	A(mm)	B(mm)
BQ135 BP214	260	25.4
BQ135 BP314	260	25.4

BQ135 MAXIMUM INPUT POWER 350kW (473hp)

BQ135 TECHNICAL DATA					
RATIO :1	MAX. INPUT TORQUE N.m	MAX. OUTPUTTORQUE N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.57	1671	949	2000	3521	2.6
0.67	1592	1066	2100	3134	2.3
0.77	1486	1144	2250	2922	2.0
0.89	1393	1240	2400	2697	1.7
1.00	1337	1337	2500	2500	1.5

BQ135 MOMENT OF INERTIA DATA				
RATIO :1	BQ135 B Kg. m²	BP 214 Kg. m²	BP 314 Kg. m²	
0.57	0.3862	2.7962	3.7462	
0.67	0.3396	2.7496	3.6996	
0.77	0.3018	2.7118	3.6618	
0.89	0.2639	2.6739	3.6239	
1.00	0.2429	2.6529	3.6029	

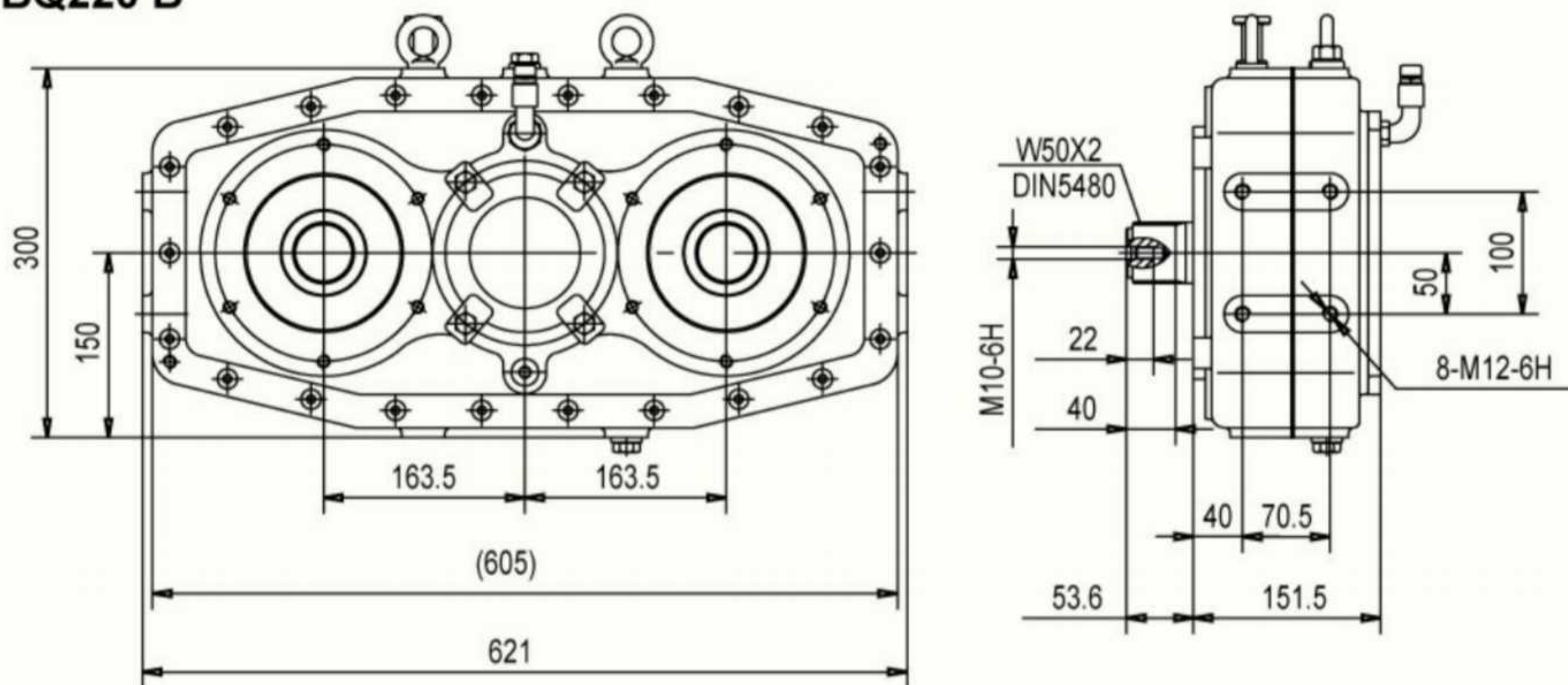
MODEL	WEIGHT Kg
BQ135 B	120
BQ135 BP214	218
BQ135 BP314	245

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ220 MAXIMUM INPUT POWER 360kW (486hp)

Basic Pump Drive

BQ220 B

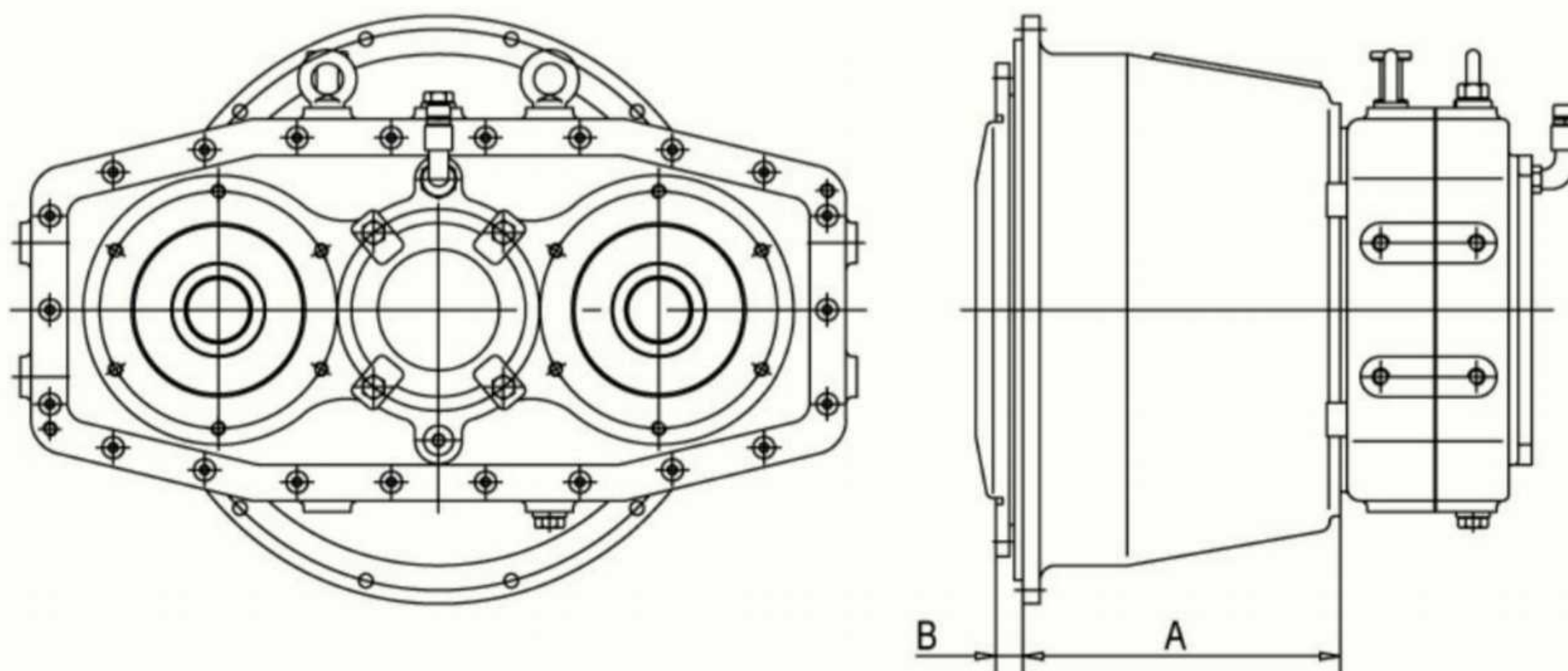


With two plate 11"clutch

BQ220 BP211

With three plate 11"clutch

BQ220 BP311



MODEL	A(mm)	B(mm)
BQ220 BP211	210	39.6
BQ220 BP311	210	39.6

BQ220 MAXIMUM INPUT POWER 360kW (486hp)

BQ220 TECHNICAL DATA					
RATIO :1	MAX. INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.56	1375	426	2500	4488	2.3
0.68	1273	479	2700	3988	2.2
0.76	1206	509	2850	3750	2.0
0.89	1146	567	*3000	3371	1.7
1.00	1074	597	*3200	3200	1.5

If you choose max input speed as * marked , please contact the technicians of Reastar for confirmation.

BQ220 MOMENT OF INERTIA DATA					
RATIO :1	BQ220 B Kg.m²	BP 211 Kg.m²	BP 311 Kg.m²		
0.56	0.1443	0.8343	1.1093		
0.68	0.1286	0.8186	1.0936		
0.76	0.1196	0.8096	1.0846		
0.89	0.1060	0.7960	1.0710		
1.00	0.0989	0.7889	1.0639		

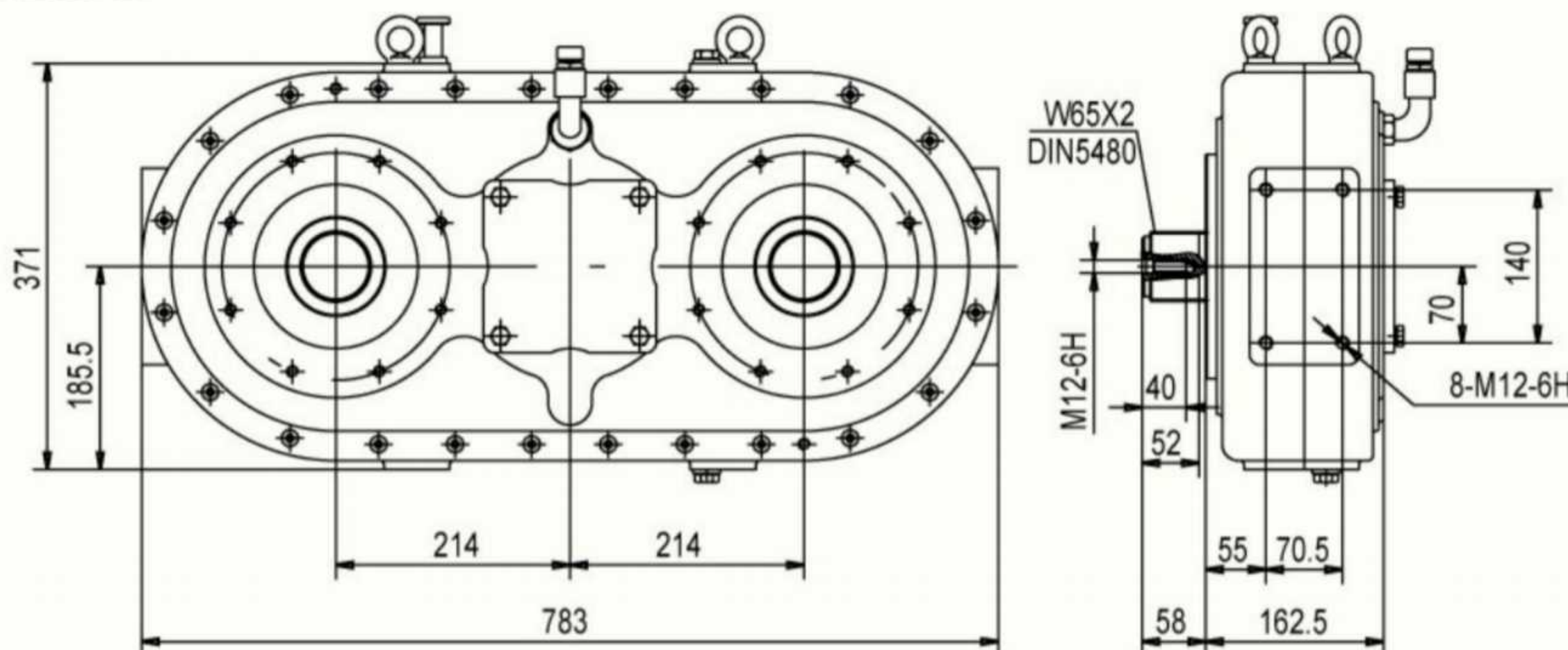
MODEL	WEIGHT Kg
BQ220 B	120
BQ220 BP211	168
BQ220 BP311	187

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ230 MAXIMUM INPUT POWER 560kW(756hp)

Basic Pump Drive

BQ230 B



With two plate 11"clutch

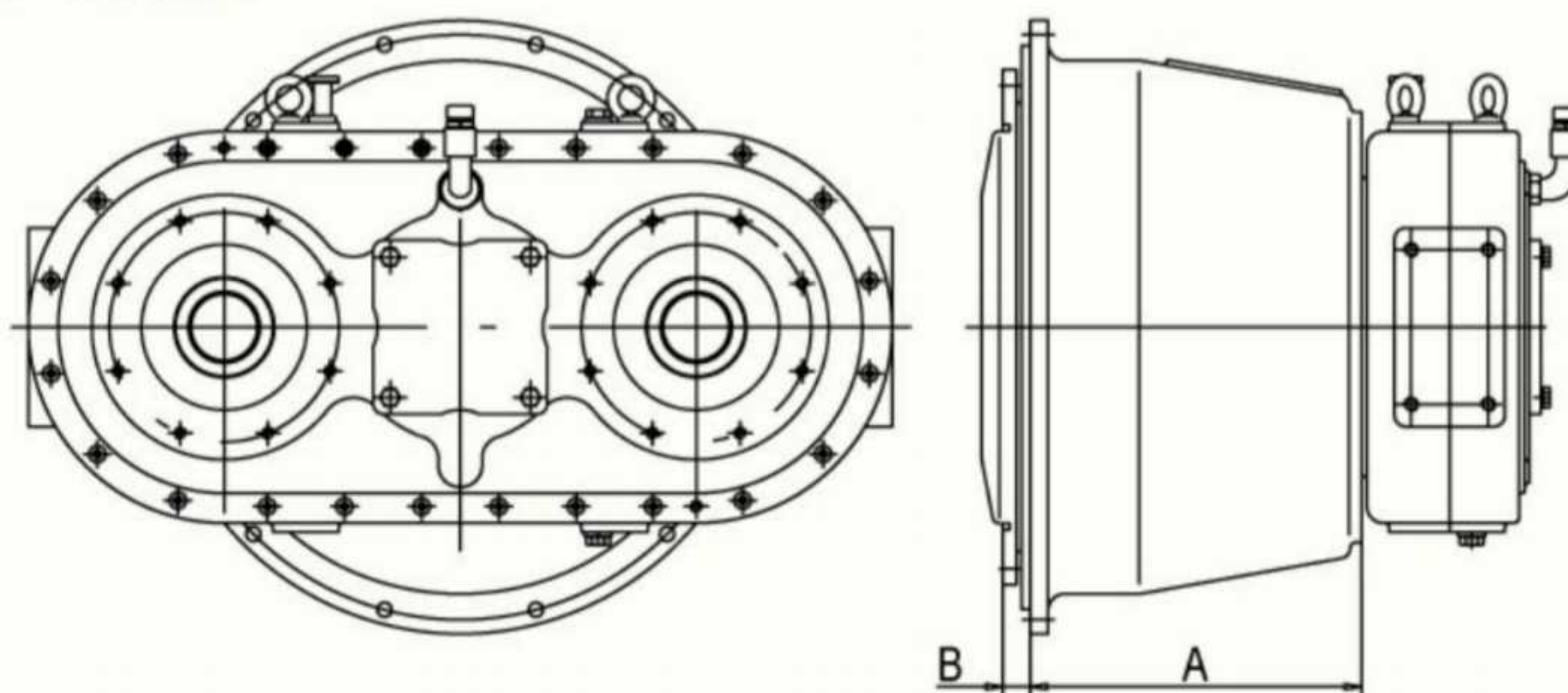
BQ230 BP211

With three plate 11"clutch

BQ230 BP311

With two plate 14"clutch

BQ230 BP214



MODEL	A(mm)	B(mm)
BQ230 BP211	210	39.6
BQ230 BP311	210	39.6
BQ230 BP214	260	25.4

BQ230 MAXIMUM INPUT POWER 560kW(756hp)

BQ230 TECHNICAL DATA					
RATIO :1	MAX.INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.55	2674	788	2000	3636	5.0
0.67	2547	914	2100	3134	4.5
0.77	2431	1003	2200	2857	4.0
0.89	2228	1062	2400	2697	3.6
1.00	2139	1146	2500	2500	3.1

BQ230 MOMENT OF INERTIA DATA					
RATIO :1	BQ230 B Kg.m ²	BP 211 Kg.m ²	BP 311 Kg.m ²	BP 214 Kg.m ²	
0.55	0.3278	1.0178	1.2928	2.7378	
0.67	0.6525	1.3425	1.6175	3.0625	
0.77	0.5886	1.2786	1.5536	2.9986	
0.89	0.2374	0.9274	1.2024	2.6474	
1.00	0.2216	0.9116	1.1866	2.6316	

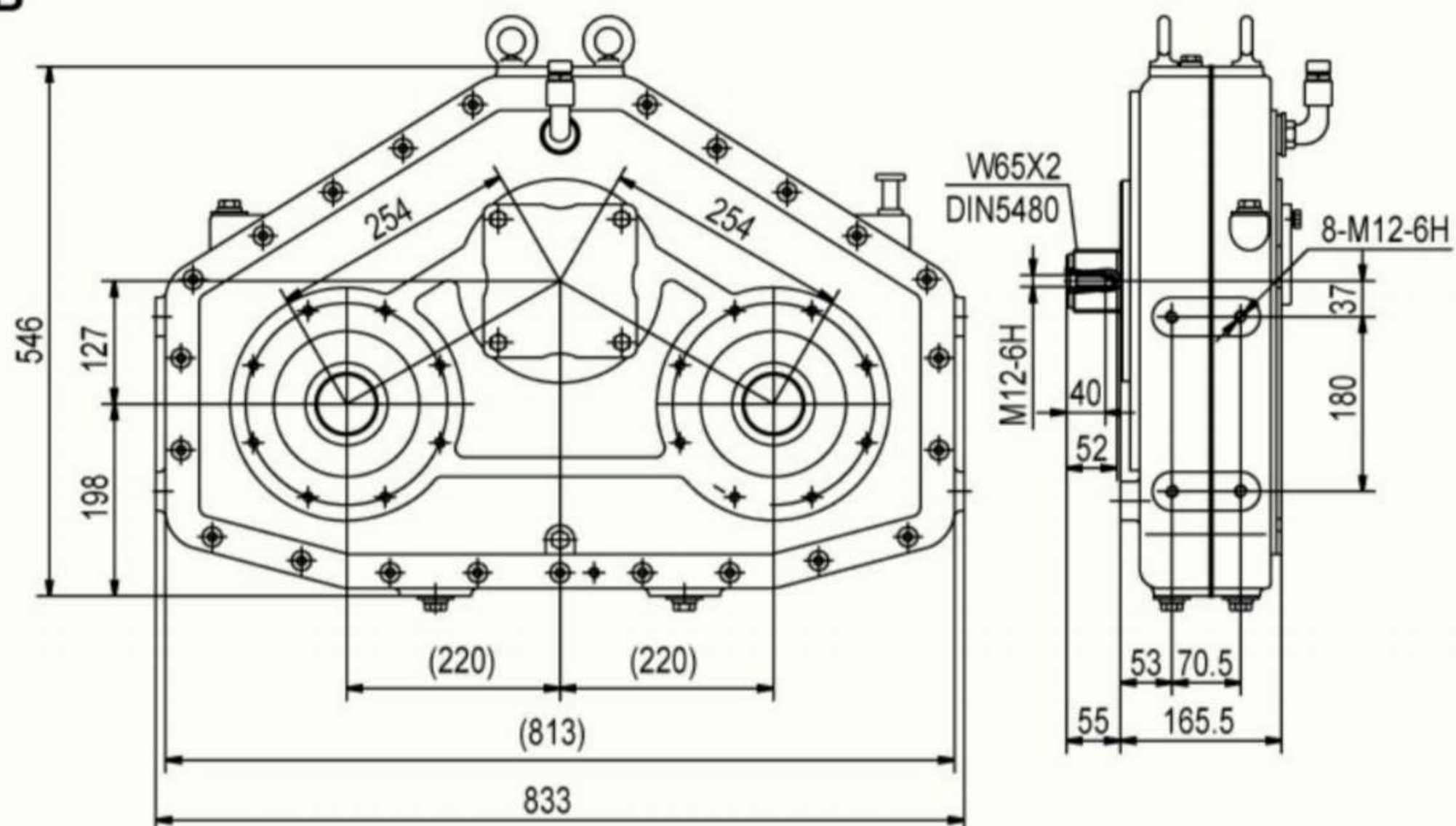
MODEL	WEIGHT Kg
BQ230 B	150
BQ230 BP211	198
BQ230 BP311	217
BQ230 BP214	248

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection for clutch limitations on page 27. Refer to pages 26-28for input and output Option Selection.

BQ235 MAXIMUM INPUT POWER 700kW (945hp)

Basic Pump Drive

BQ235 B

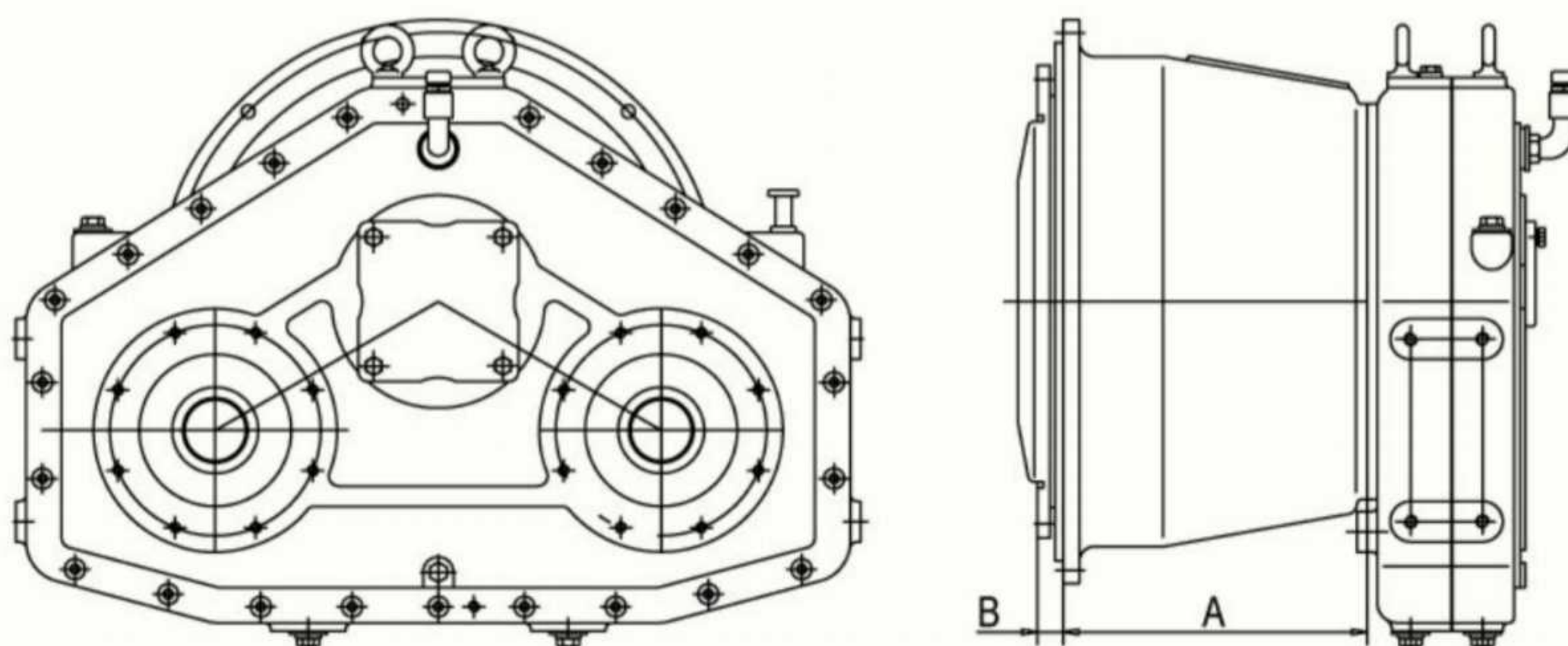


With two plate 14" clutch

BQ235 BP214

With three plate 14" clutch

BQ235 BP314



MODEL	A(mm)	B(mm)
BQ235 BP214	260	25.4
BQ235 BP314	260	25.4

BQ235 MAXIMUM INPUT POWER 700kW (945hp)

BQ235 TECHNICAL DATA					
RATIO :1	MAX. INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTIT Y L
0.57	3343	949	2000	3521	5.6
0.67	3183	1066	2100	3134	5.0
0.77	2971	1144	2250	2922	4.5
0.89	2785	1240	2400	2697	3.6
1.00	2674	1337	2500	2500	3.5

BQ235 MOMENT OF INERTIA DATA					
RATIO : 1	BQ235 B Kg.m²	BP 214 Kg.m²	BP 314 Kg.m²		
0.57	0.5204	2.9304	3.8804		
0.67	0.4711	2.8811	3.8311		
0.77	0.4267	2.8367	3.7867		
0.89	0.3852	2.7952	3.7452		
1.00	0.3617	2.7717	3.7217		

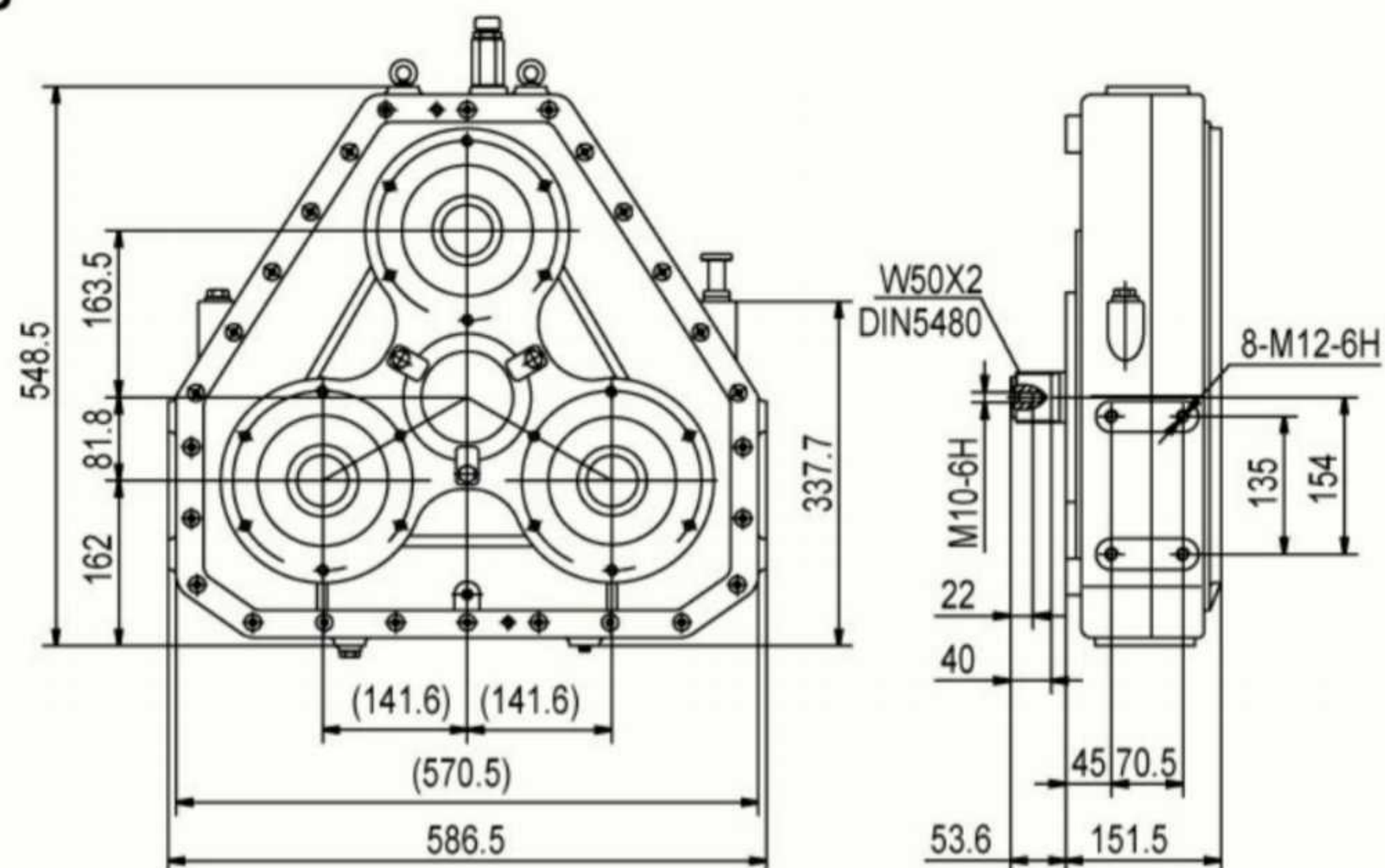
MODEL	WEIGHT Kg
BQ235 B	180
BQ235 BP214	278
BQ235 BP314	305

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ320 MAXIMUM INPUT POWER 480kW (648hp)

Basic Pump Drive

BQ320B

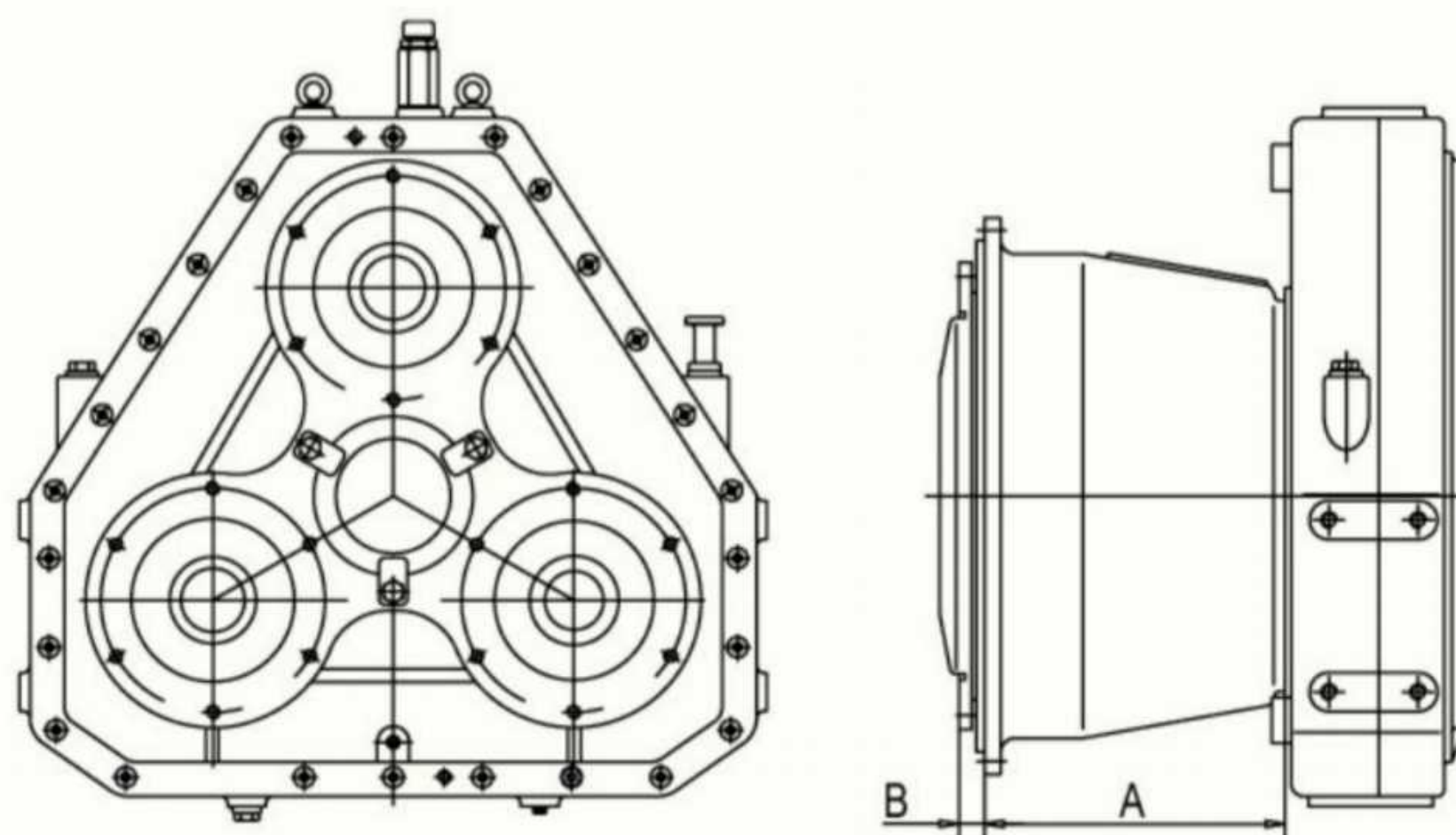


With two plate 11" clutch

BQ320 BP211

With three plate 11" clutch

BQ320 BP311



MODEL	A(mm)	B(mm)
BQ320 BP211	210	39.6
BQ320 BP311	210	39.6

BQ320 MAXIMUM INPUT POWER 480kW (648hp)

BQ320 TECHNICAL DATA					
RATIO : 1	MAX. INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.56	1834	426	2500	4488	2.3
0.68	1698	479	2700	3988	2.2
0.76	1608	509	2850	3750	2.0
0.89	1528	567	*3000	3371	1.7
1.00	1433	597	*3200	3200	1.5

If you choose max input speed as * marked , please contact the technicians of Reastar for confirmation.

BQ320 MOMENT OF INERTIA DATA					
RATIO : 1	BQ320 B Kg.m²	BP 211 Kg.m²	BP 311 Kg.m²		
0.56	0.1821	0.8721	1.1471		
0.68	0.1655	0.8555	1.1305		
0.76	0.1555	0.8455	1.1205		
0.89	0.1395	0.8295	1.1045		
1.00	0.1317	0.8217	1.0967		

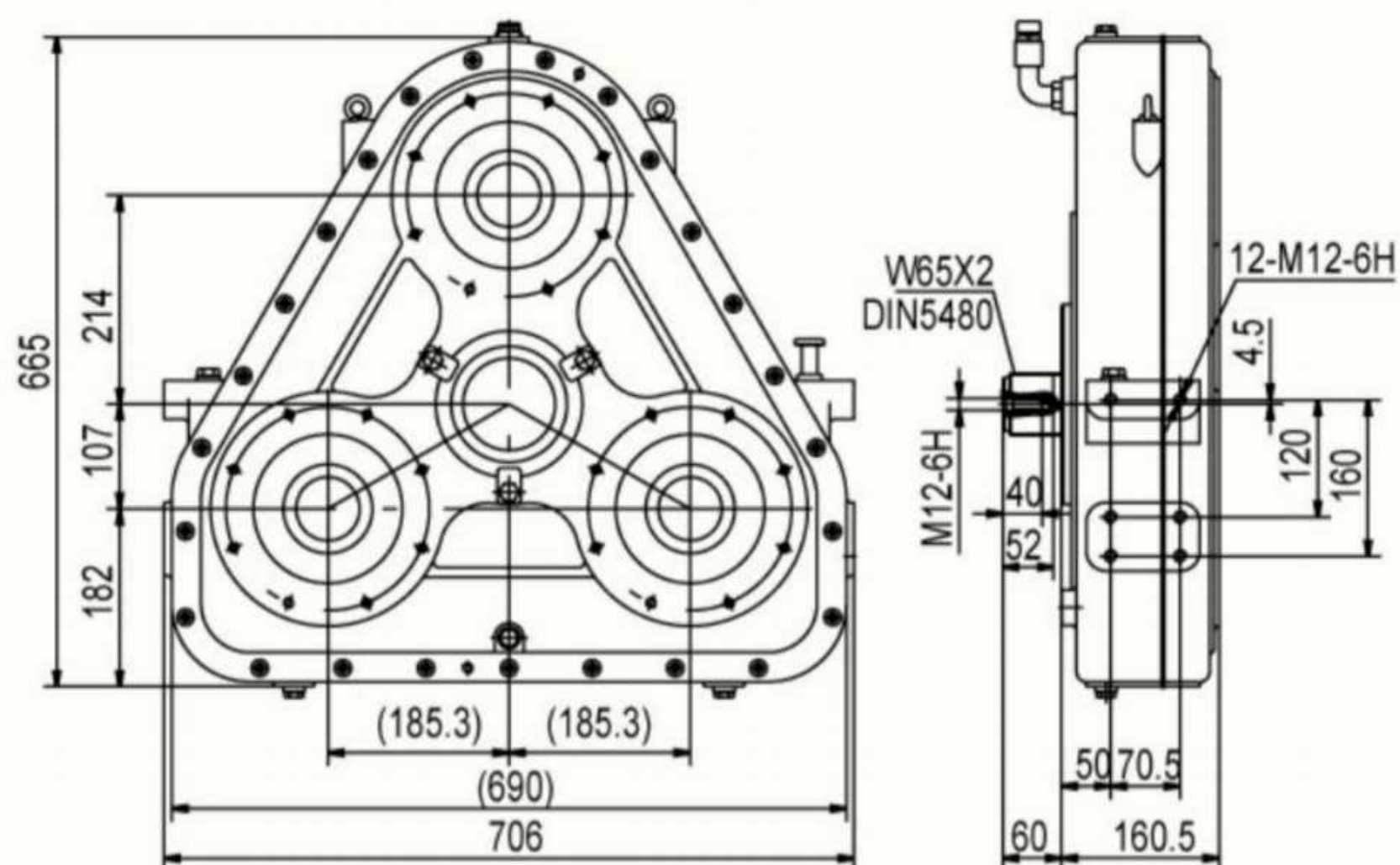
MODEL	WEIGHT Kg
BQ320 B	160
BQ320 BP211	208
BQ320 BP311	227

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ330 MAXIMUM INPUT POWER 720kW (972hp)

Basic Pump Drive

BQ330 B



With two plate 11"clutch

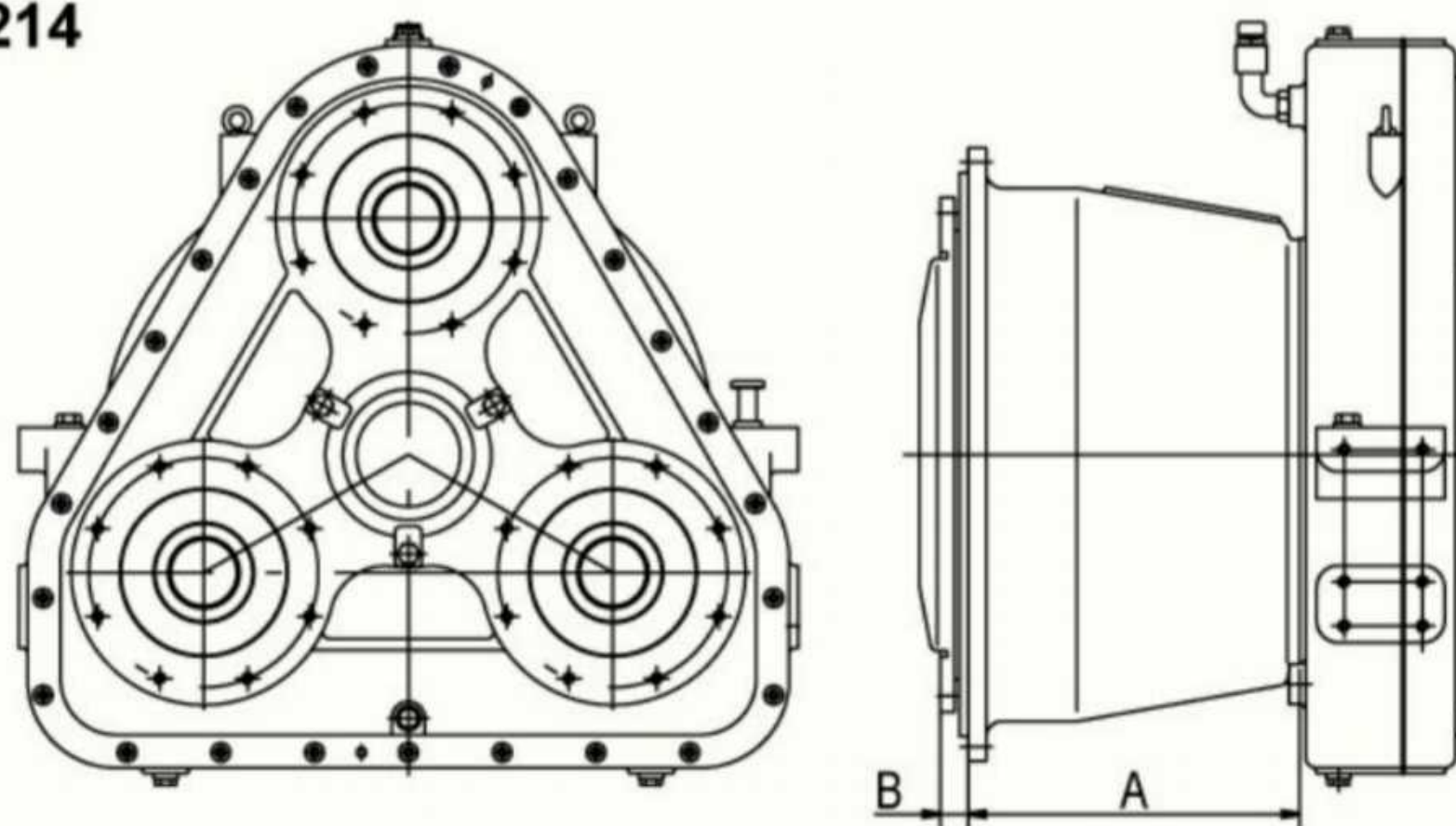
BQ330 BP211

With three plate 11"clutch

BQ330 BP311

With two plate 14"clutch

BQ330 BP214



MODEL	A(mm)	B(mm)
BQ330 BP211	210	39.6
BQ330 BP311	210	39.6
BQ330 BP214	260	25.4

BQ330 MAXIMUM INPUT POWER 720kW (972hp)

BQ330 TECHNICAL DATA					
RATIO : 1	MAX.INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.55	3438	788	2000	3636	5.0
0.67	3274	914	2100	3134	4.5
0.77	3125	1003	2200	2857	3.8
0.89	2865	1062	2400	2697	3.5
1.00	2750	1146	2500	2500	3.2

BQ330 MOMENT OF INERTIA DATA					
RATIO : 1	BQ330 B Kg.m²	BP 211 Kg.m²	BP 311 Kg.m²	BP 214 Kg.m²	
0.55	0.4138	1.1038	1.3788	2.8238	
0.67	0.9166	1.6066	1.8816	3.3266	
0.77	0.8291	1.5191	1.7941	3.2391	
0.89	0.3123	1.0023	1.2773	2.7223	
1.00	0.2951	0.9851	1.2601	2.7051	

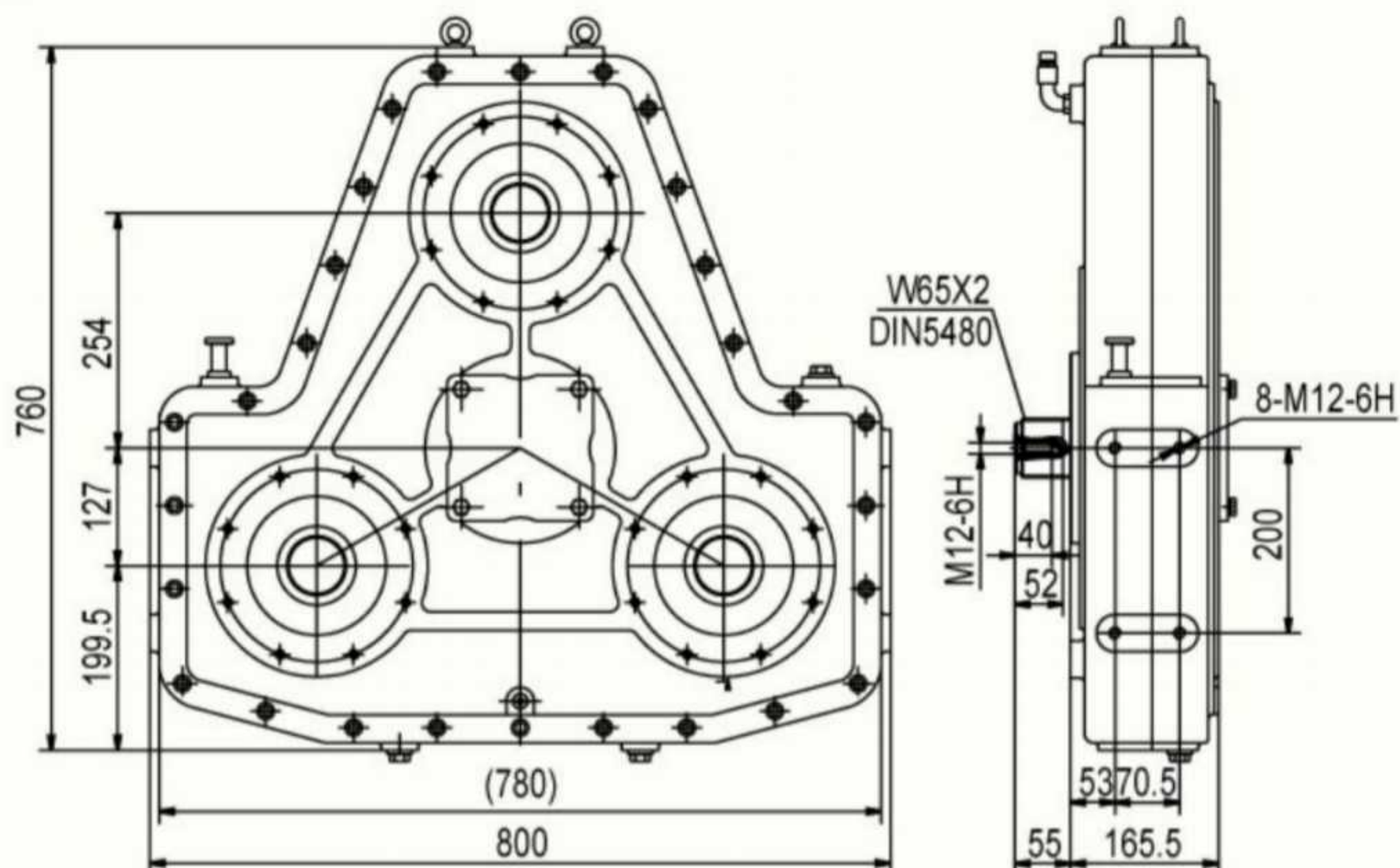
MODEL	WEIGHT Kg
BQ330 B	200
BQ330 BP211	248
BQ330 BP311	267
BQ330 BP214	298

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ335 MAXIMUM INPUT POWER 900kW(1215hp)

Basic Pump Drive

BQ335 B

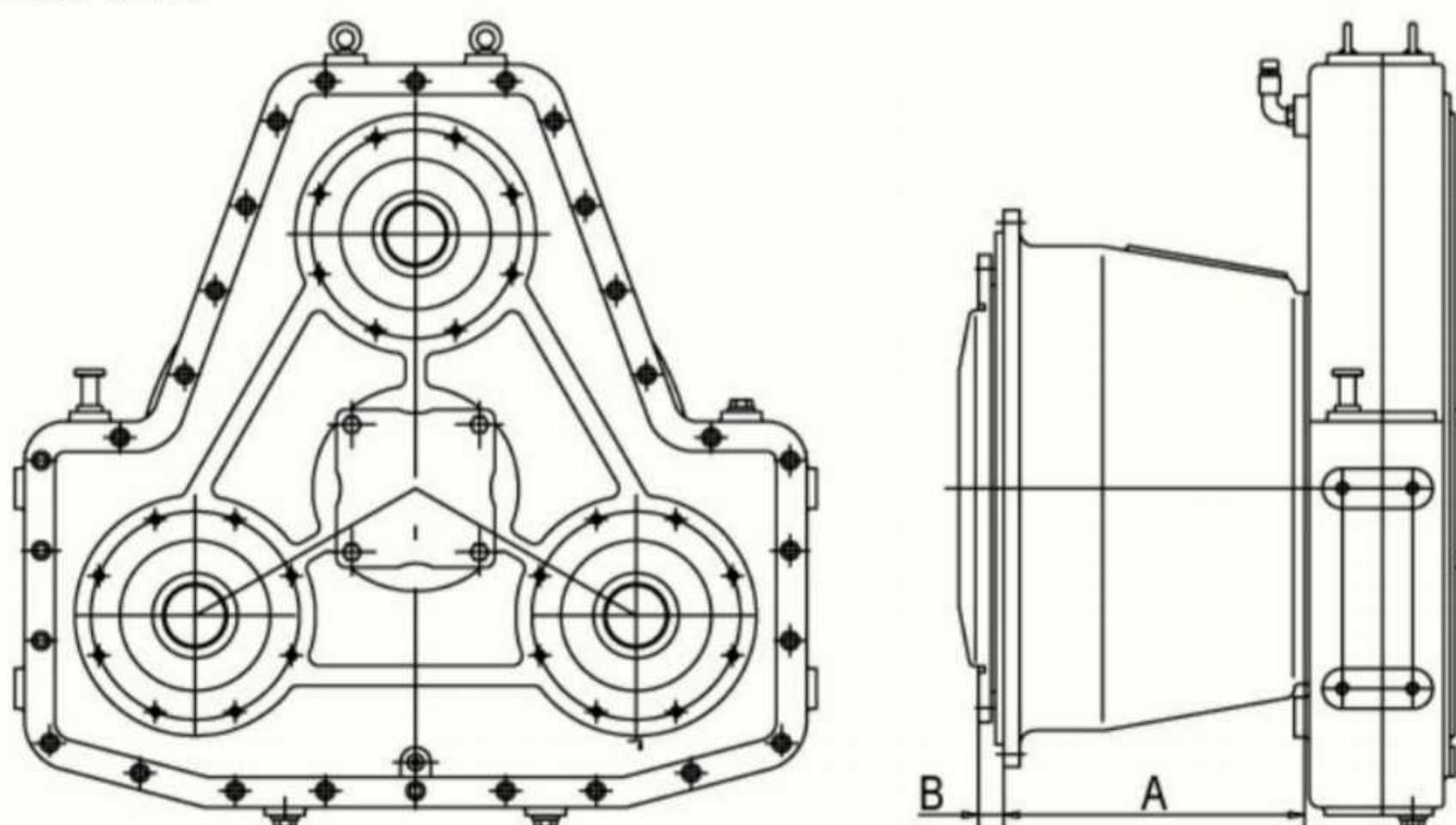


With two plate 14"clutch

BQ335 BP214

With three plate 14"clutch

BQ335 BP314



MODEL	A(mm)	B(mm)
BQ335 BP214	260	25.4
BQ335 BP314	260	25.4

BQ335 MAXIMUM INPUT POWER 900kW(1215hp)

BQ335 TECHNICAL DATA					
RATIO : 1	MAX.INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.57	4298	949	2000	3521	5.5
0.67	4093	1066	2100	3134	5.0
0.77	3820	1144	2250	2922	4.5
0.89	3581	1240	2400	2697	3.6
1.00	3438	1337	2500	2500	3.5

BQ335 MOMENT OF INERTIA DATA					
RATIO : 1	BQ335 B Kg.m²	BP 214 Kg.m²	BP 314 Kg.m²		
0.57	0.6547	3.0647	4.0147		
0.67	0.6025	3.0125	3.9625		
0.77	0.5515	2.9615	3.9115		
0.89	0.5066	2.9166	3.8666		
1.00	0.4805	2.8905	3.8405		

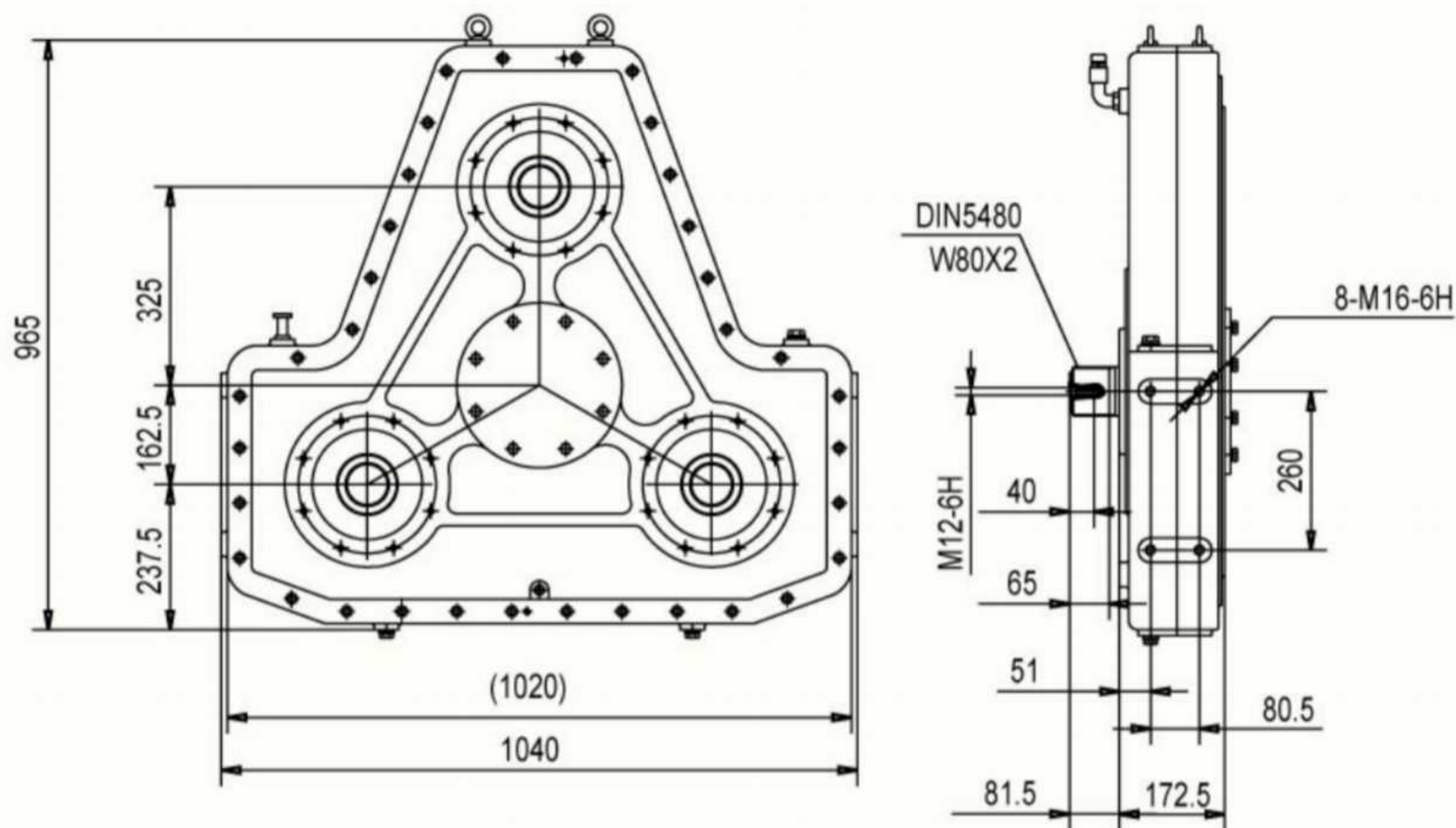
MODEL	WEIGHT Kg
BQ335 B	240
BQ335 BP214	338
BQ335 BP314	365

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ352 MAXIMUM INPUT POWER 1200kW (1620hp)

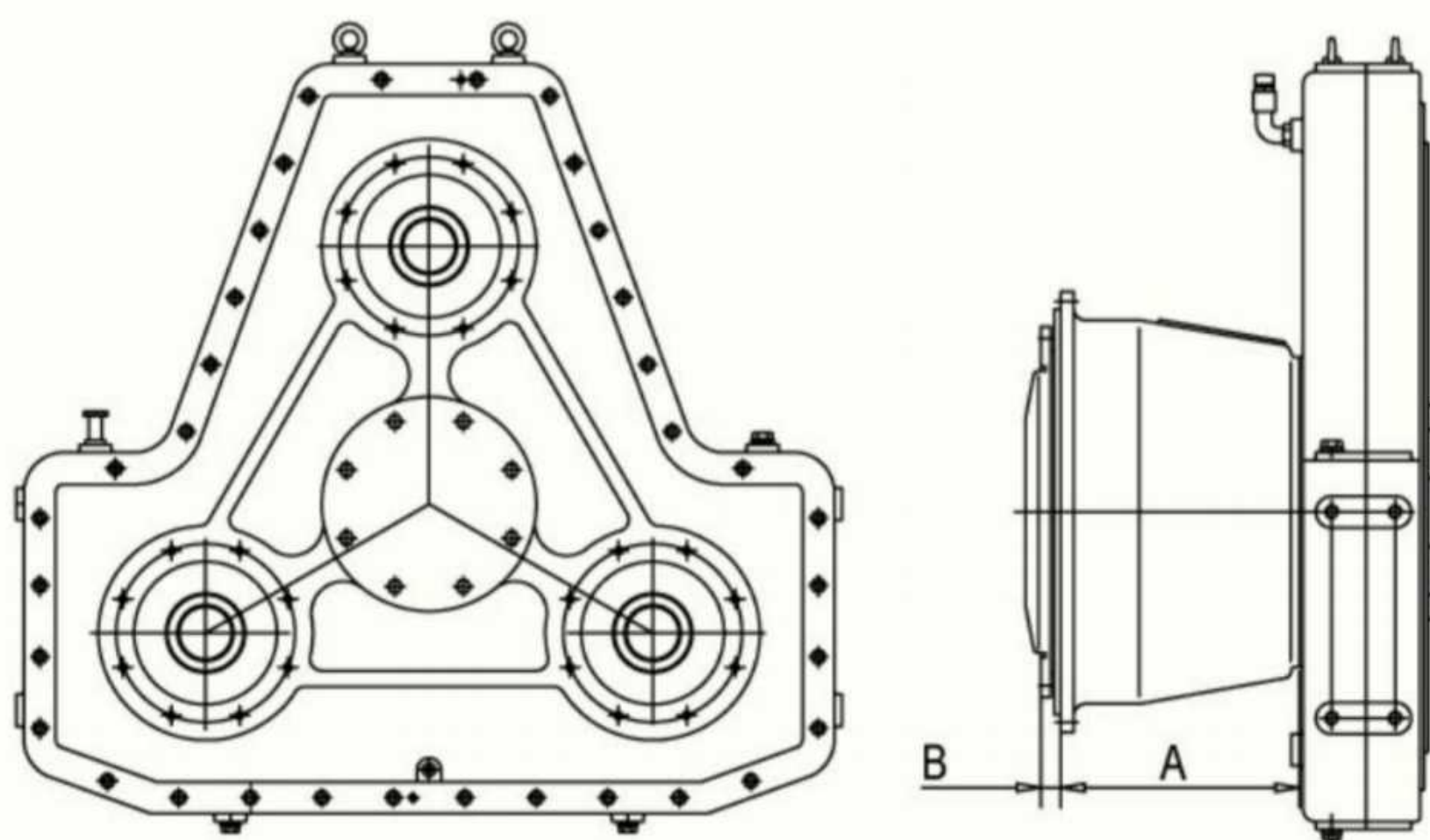
Basic Pump Drive

BQ352 B



With three plate 18" clutch

BQ352 BP318



MODEL	A(mm)	B(mm)
BQ352 BP318	300	15.8

BQ352 MAXIMUM INPUT POWER 1200kW (1620hp)

BQ352 TECHNICAL DATA					
RATIO : 1	MAX.INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.57	8130	1994	1400	2473	7.8
0.74	7248	2334	1600	2153	7.5
0.88	6758	2577	1700	1932	7.0
1.00	6367	2759	1800	1800	6.5
1.13	5975	2926	1900	1681	6.2

BQ352 MOMENT OF INERTIA DATA				
RATIO : 1	BQ352 B Kg.m²	BP 318 Kg.m²		
0.57	1.4298	9.8298		
0.74	1.2125	9.6125		
0.88	1.1185	9.5185		
1.00	1.0172	9.4172		
1.13	0.9249	9.3249		

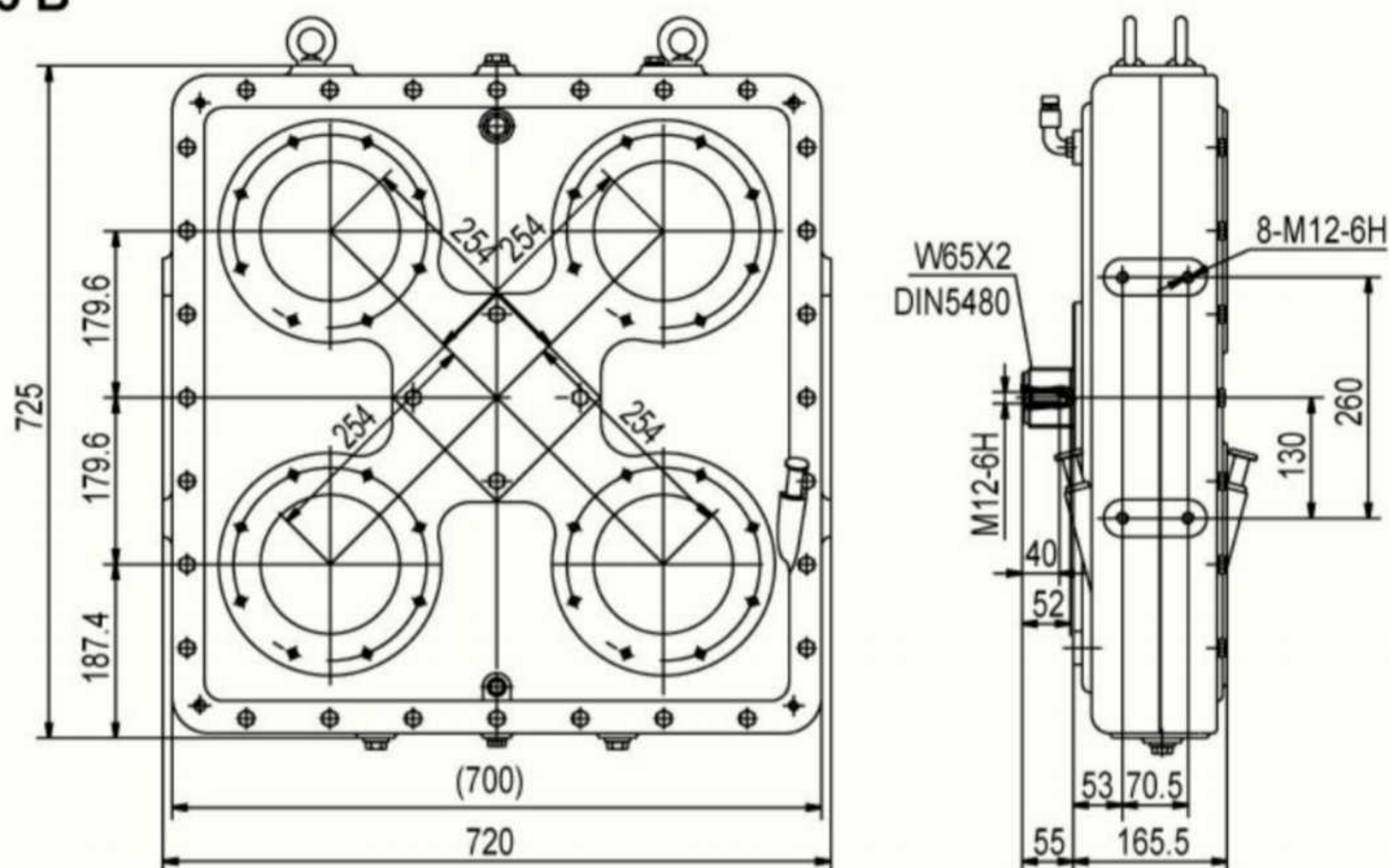
MODEL	WEIGHT Kg
BQ352 B	310
BQ352 BP318	555

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ435 MAXIMUM INPUT POWER 1150kW(1553hp)

Basic Pump Drive

BQ435 B

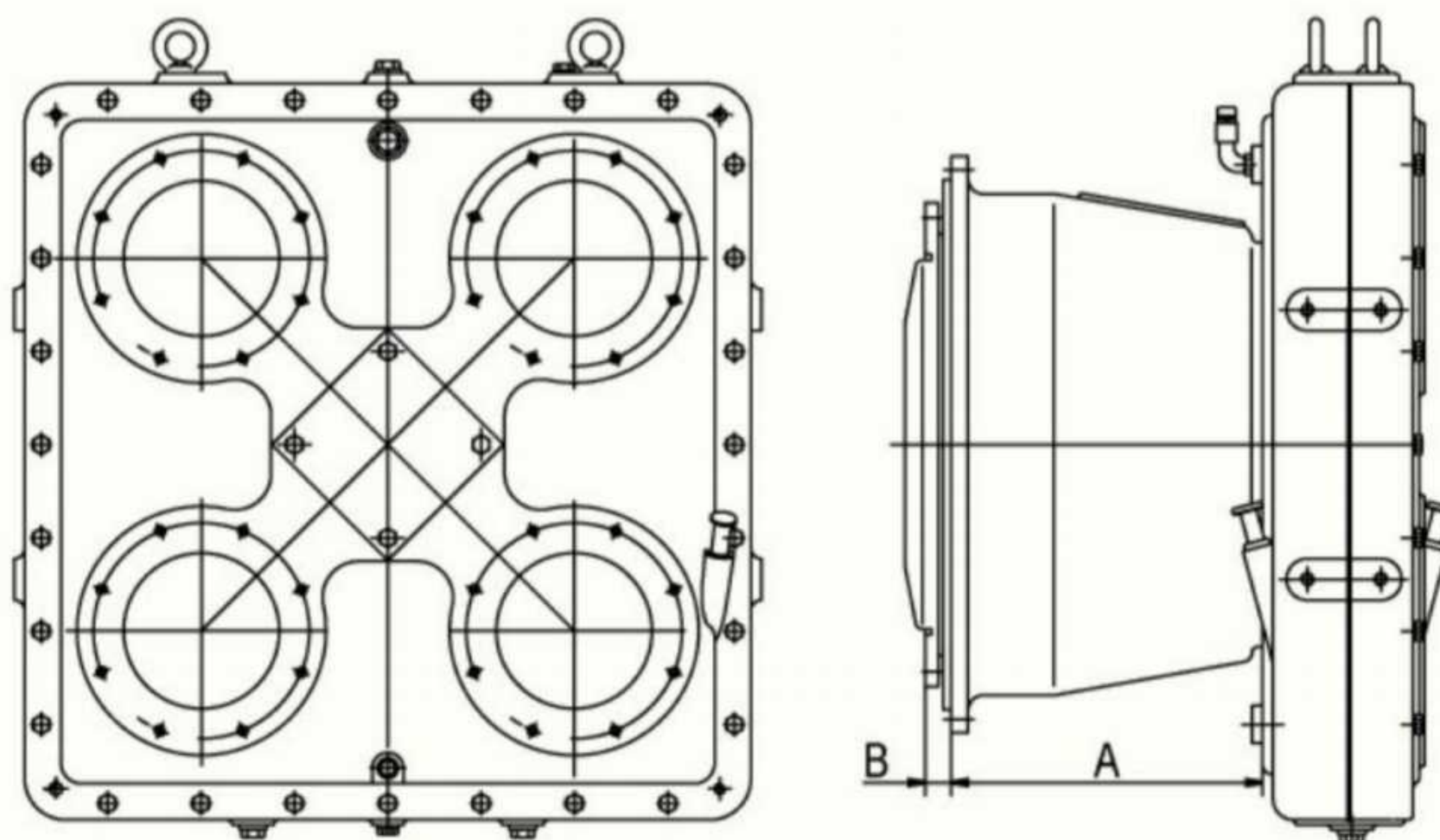


With two plate 14" clutch

BQ435 BP214

With three plate 14" clutch

BQ435 BP314



MODEL	A(mm)	B(mm)
BQ435 BP214	260	25.4
BQ435 BP314	260	25.4

BQ435 MAXIMUM INPUT POWER 1150kW(1553hp)

BQ435 TECHNICAL DATA					
RATIO : 1	MAX. INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.57	5491	949	2000	3521	5.5
0.67	5230	1066	2100	3134	4.7
0.77	4881	1144	2250	2922	4.3
0.89	4576	1240	2400	2697	3.3
1.00	4393	1337	2500	2500	3.1

BQ435 MOMENT OF INERTIA DATA					
RATIO : 1	BQ435 B Kg.m²	BP 214 Kg.m²	BP 314 Kg.m²		
0.57	0.7889	3.1989	4.1489		
0.67	0.7340	3.1440	4.0940		
0.77	0.6764	3.0864	4.0364		
0.89	0.6279	3.0379	3.9879		
1.00	0.5993	3.0093	3.9593		

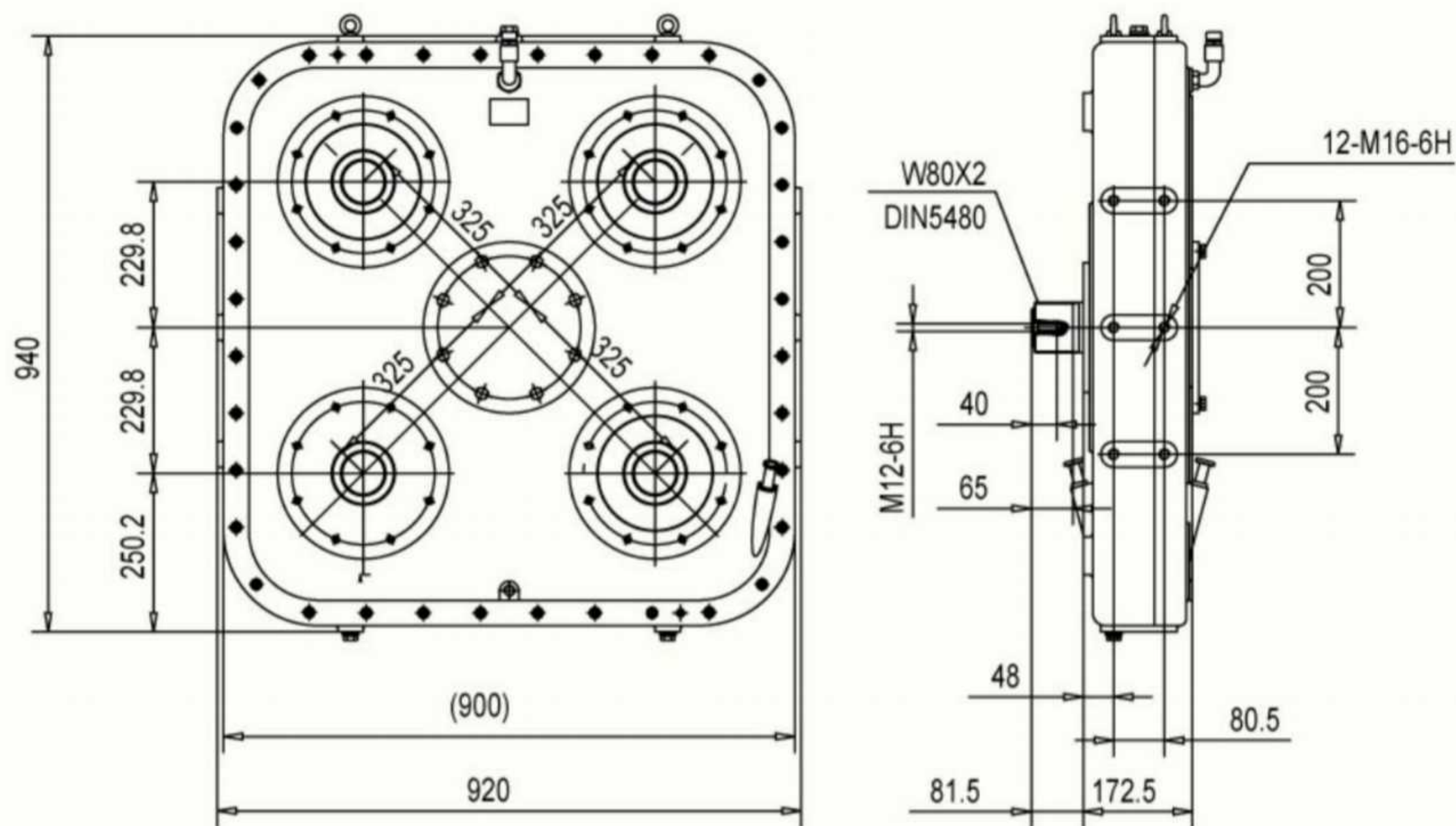
MODEL	WEIGHT Kg
BQ435 B	280
BQ435 BP214	378
BQ435 BP314	405

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

BQ452 MAXIMUM INPUT POWER 1600kW (2160hp)

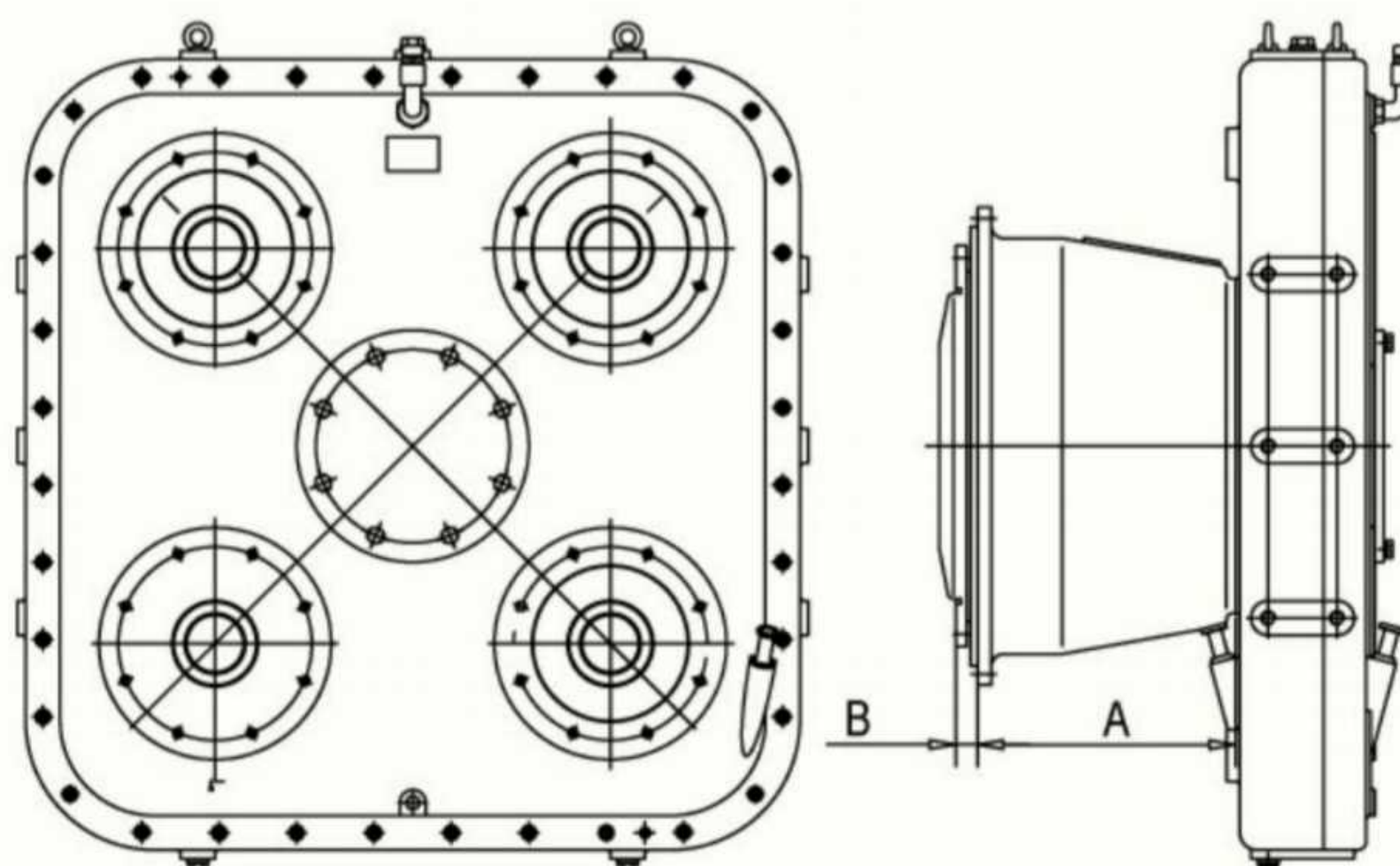
Basic Pump Drive

BQ452 B



With three plate 18"clutch

BQ452 BP318



MODEL	A (mm)	B (mm)
BQ452 BP318	300	15.8

BQ452 MAXIMUM INPUT POWER 1600kW (2160hp)

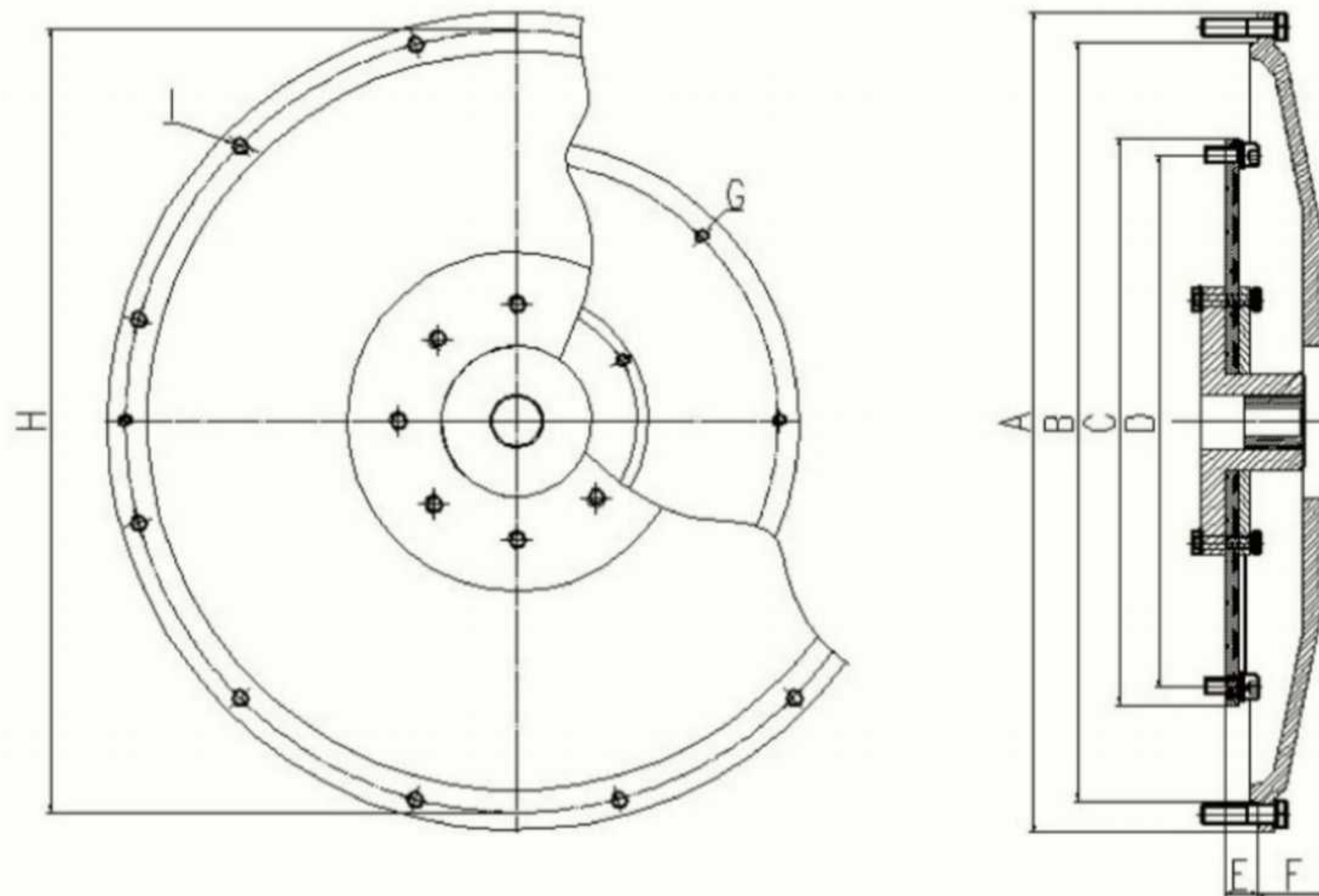
BQ452 TECHNICAL DATA					
RATIO : 1	MAX. INPUT TORQUE N.m	MAX. OUTPUT TORQUE PER PUMP PAD N.m	MAX. INPUT SPEED RPM	MAX. OUTPUT SPEED RPM	OIL QUANTITY L
0.57	10840	1994	1400	2473	7.6
0.74	9664	2334	1600	2153	7.3
0.88	9011	2577	1700	1932	7.1
1.00	8489	2759	1800	1800	6.9
1.13	7966	2926	1900	1681	6.7

BQ452 MOMENT OF INERTIA DATA				
RATIO : 1	BQ452 B Kg.m²	BP 318 Kg.m²		
0.57	1.7299	10.130		
0.74	1.4916	9.8916		
0.88	1.3899	9.7899		
1.00	1.2715	9.6715		
1.13	1.1631	9.5631		

MODEL	WEIGHT Kg
BQ452 B	360
BQ452 BP318	605

Maximum torque and maximum speed maybe limited by clutch option. Refer to Option Selection on page 27 for clutch limitations. Refer to pages 26-28for input and output Option Selection.

DIRECT DRIVE SINGLE PUMP ADAPTORS



HOUSING DIMENSIONS					
	A mm (inch)	B mm (inch)	H mm (inch)	I mm (inch)	F mm (inch)
SAE 3	450.8(17.75)	409.58(16.125)	428.62(16.875)	11(0.433)	33.0(1.299)
SAE 2	489(19.252)	447.68(17.625)	466.72(18.375)	11(0.433)	50.0(1.969)
SAE 1	552.4(21.732)	511.18(20.125)	530.22(20.875)	12(0.472)	50.0(1.969)
SAE 0	711.2(28.00)	647.70(25.500)	679.45(26.750)	13.5(0.53)	65.0(2.550)

COUPLING DIMENSIONS					
	10" mm (inch)	11.5" mm (inch)	14" mm (inch)	16" mm (inch)	18" mm (inch)
C	314.32(12.375)	352.42(13.875)	466.72(18.375)	517.52(20.375)	571.50(22.500)
D	295.28(11.625)	333.38(13.125)	438.15(17.250)	488.95(19.250)	542.92(21.375)
E	53.80(2.118)	39.60(1.559)	25.4(1.00)	15.7(0.620)	15.7(0.620)
G	10.50(0.413)	10.50(0.413)	14(0.550)	14(0.550)	17(0.660)

MAX. CONTINUOUS TORQUE RATING N.m				
10" (inch)	11.5" (inch)	14" (inch)	16" (inch)	18" (inch)
300	660	900	1100	1350

INPUT CONFIGURATIONS

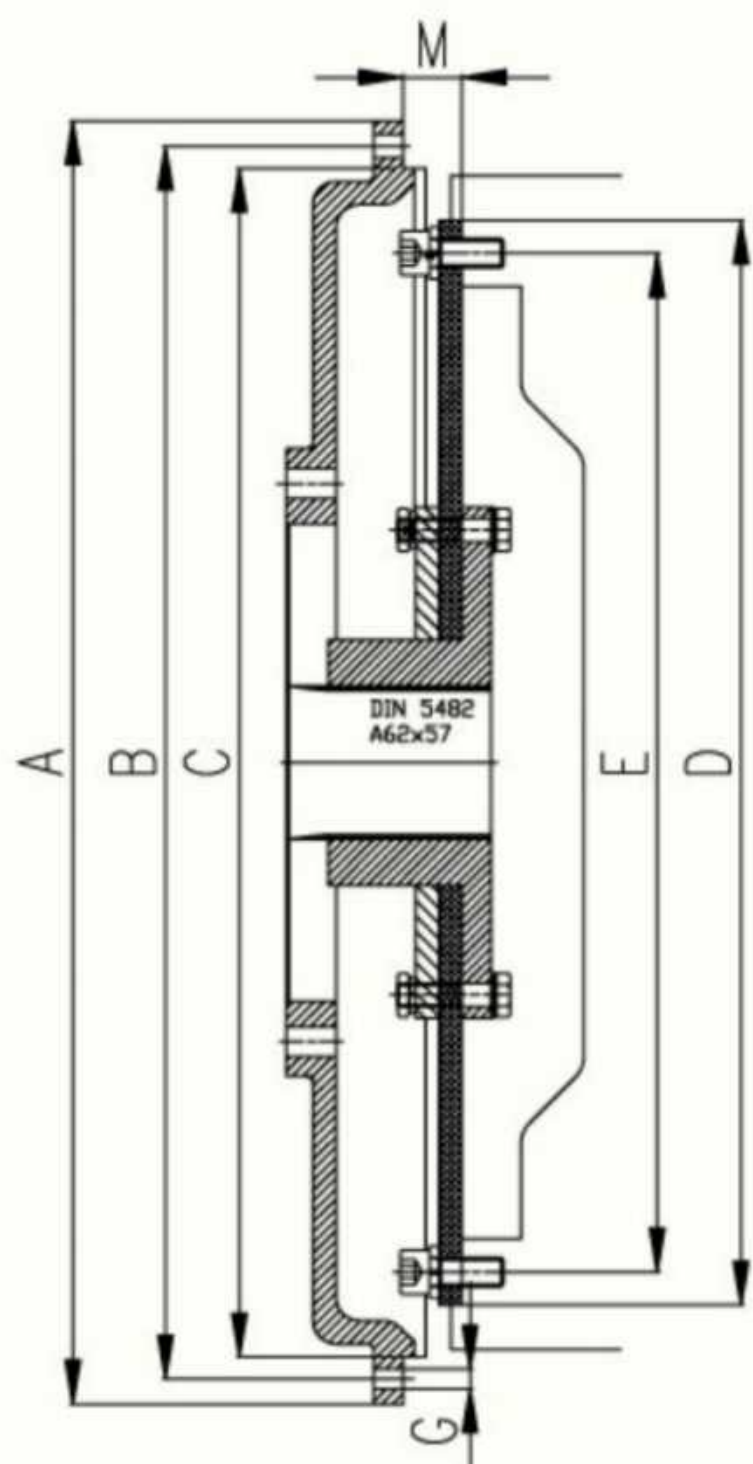
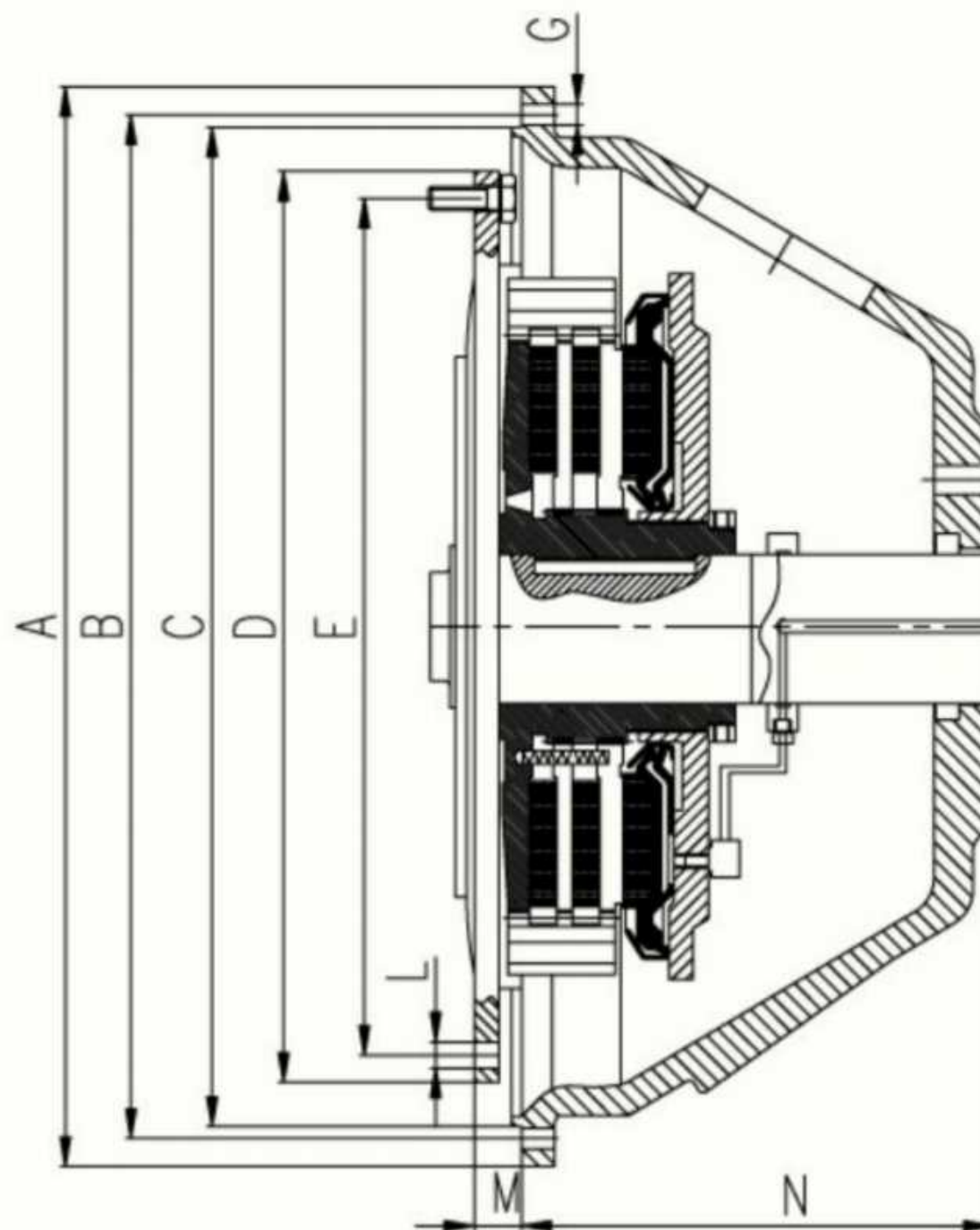


PLATE INPUT



CLUTCH INPUT

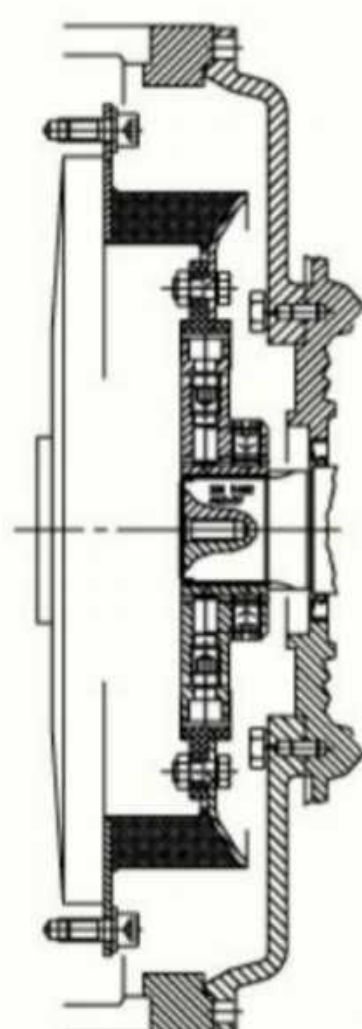
DIMENSIONS				
mm	SAE 0	SAE 1	SAE 2	SAE 3
A	711.20	552.4	489.0	450.8
B	679.45	530.22	466.72	428.62
C	647.70	511.18	447.68	409.58
G	13.5	12	11	11
NUMBER OF HOLES	16	12	12	12

D	517.52	466.72	352.42	314.32
E	488.95	438.15	333.38	295.28
L	12	10.5	10.5	10.5
NUMBER OF HOLES	8	8	8	8
M	15.8	25.4	39.6	39.6
N	300	260	210	210

INPUT CONFIGURATIONS

CLUCH OPTIONS					
MODEL	MAX. INPUT TORQUE N.m	MAX. INPUT SPEED RPM	MOMENT OF INERTIA DATA kg.m ²	PLATE	HOUSING
211	2580	2650	0.6902	11"	SAE 2
311	4275	2650	0.9651	11"	
214	6100	2500	2.4103	14"	SAE 0 SAE 1
314	9150	2500	3.3601	14"	
318	17145	2300	8.4003	18"	

Other clutch options maybe available. Please contact Luo Yang Reastar Transmission Co., LTD

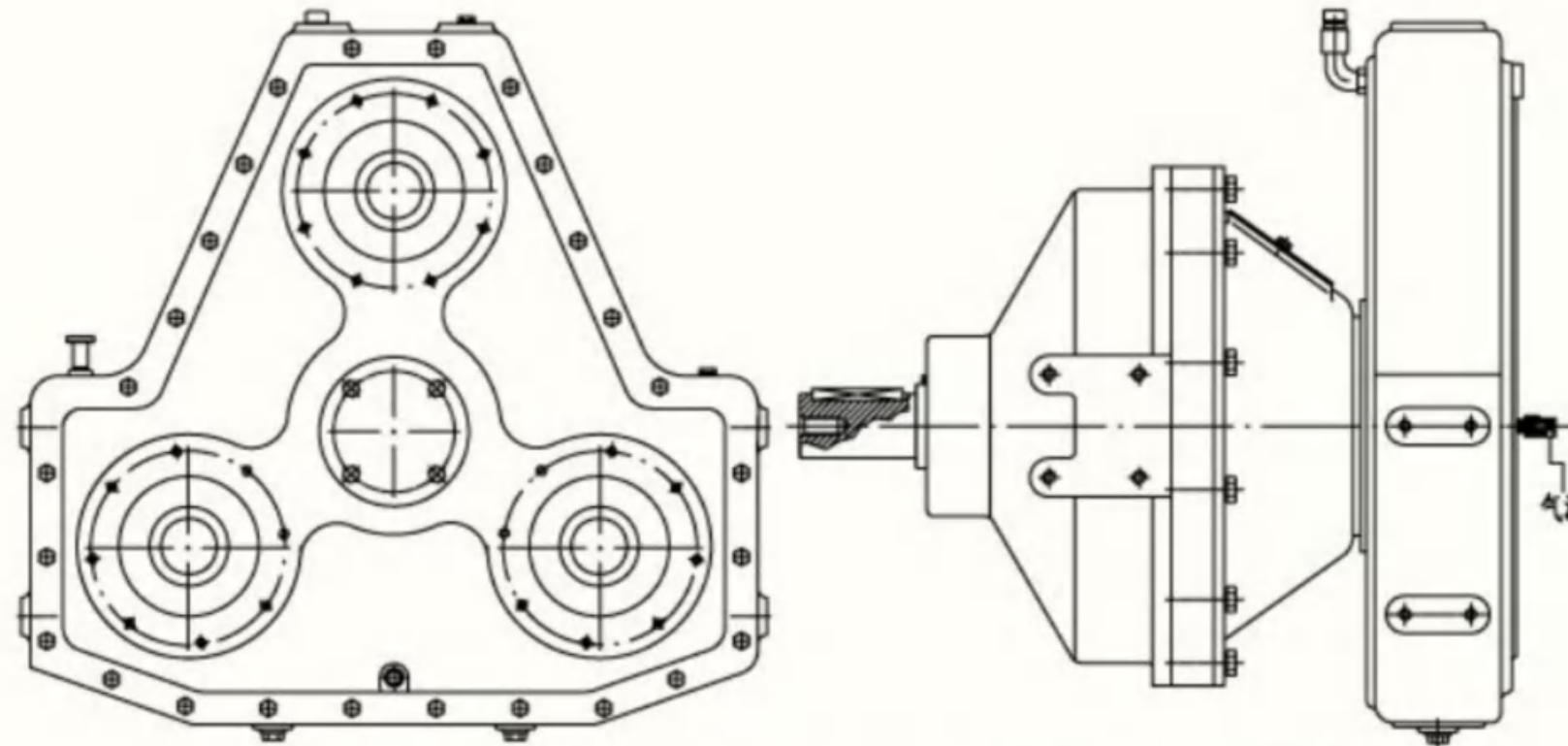


RUBBER BLOCK DRIVE INPUT

RUBBER BLOCK DRIVE INPUT OPTIONS				
RATING TORQUE N.m	FLYWHEEL	MAX. Input Speed RPM	MAX CONTINUOUS TORQUE RATING N.m	ANGLE TOLERANCE ±
1100-1400	11.5"	3600	4200	0.5°
1600-2200	11.5"	3600	6600	0.5°
1600-2200	14"	3600	6600	0.5°
2250-3150	14"	2800	10500	0.5°
2900-4000	14"	2800	12000	0.5°
4500-6000	14"	2800	18000	0.5°

Other configurations maybe available. Please contact Luo Yang Reastar Transmission Co., LTD

PUMP DRIVE SELECTION PROCEDURE



REMOTELY MOUNTED BDSP

All pump drives can use independently mounted clutch input, such as the drawing on top. The Clutch can be controlled by manual, hydraulic, pneumatic, and otherwise to meet your requirements.

PUMP DRIVE SELECTION PROCEDURE

Use the following fundamental information to select a pump drive product:

1. Number and type of hydraulic pumps to be applied.
2. Maximum torque absorbed by the pump or pumps on each output of the pump drive.
3. Maximum power entering the pump drive from the prime mover. This should be calculated by multiplying net engine power by an appropriate service factor from table 1.

Table 1 - Service Factors

Prime mover	Duration of Service	Driven Machine Load Classifications		
		Uniform	Moderate Shock	Heavy Shock
Electric Motor, Steam Turbine, or Hydraulic Motor	Occasional 12 hr. per day	0.50	0.80	1.25
	Intermittent 3 hrs. per day	0.80	1.00	1.50
	Over 3 hrs. up to and including 10 hrs. per day	1.00	1.25	1.75
	Over 10 hrs. per day	1.25	1.50	2.00
Multi-cylinder Internal Combustion Engine	Occasional 12 hr. per day	0.80	1.00	1.50
	Intermittent 3 hrs. per day	1.00	1.25	1.75
	Over 3 hrs. up to and including 10 hrs. per day	1.25	1.50	2.00
	Over 10 hrs. per day	1.50	1.75	2.25

4. Compare the size of the hydraulic pumps to the selected pump drive installation dimensions to determine if proper clearance exists to mount the pumps on the pump drive.
5. Select the desired input configuration:
 - (1) B – basic mount, either with drive plate or rubber block
 - (2) BP – engine mounted clutch input
 - (3) BPS – independently mounted clutch input

OTHER TECHNICAL INFORMATION

If a BP or BPS option is selected, verify that the input speed does not exceed the maximum allowable speed for the selected clutch. Also verify that the maximum input torque is at least 20% below the maximum torque rating of the clutch.

6. Select the desired gear ratio from those listed on the technical information pages of this catalog.

7. Select the proper output option for pump adaptation.

- (1) SAE adaptors are available for all pump drives.
- (2) Other adaptations may be available. Please contact Luo Yang Reastar Transmission Co., LTD.

OTHER TECHNICAL INFORMATION

THERMAL CAPACITY

It is advisable to check the pump drive temperature during the first hours of work, assuring that the temperature of the oil doesn't exceed 105°C (221°F). Depending on input power and application, a cooling system may be necessary (a cooling system consisting of an oil circulation pump on the input shaft on the pump side, and oil/water heat exchanger and relevant pipe fittings.).

LUBRICATION

The pump drives are supplied without oil. Before use fill to the maximum level mark on oil gauge. The oil quantity indicated in the catalog is approximate. Running for 15 minutes, check for oil level, if the oil level is below the low oil-foot line, please seasonable compensatory refueling

Oil must be replaced after the first 50 working hours. Subsequent oil changes should be made every 1,000 hours or every 12 months, whichever occurs first.

Check the oil level regularly.

OIL SELECTION

Ambient temperature range 1:

GL-5 140

041/W58 D5012-L-LIM

Ambient temperature range 2:

GL-5 85W/90

MIL-L-2105D 85W/90

Ambient temperature range 3:

GL-5 85W/90

MIL-L-2105D 85W/90

Ambient temperature range 4:

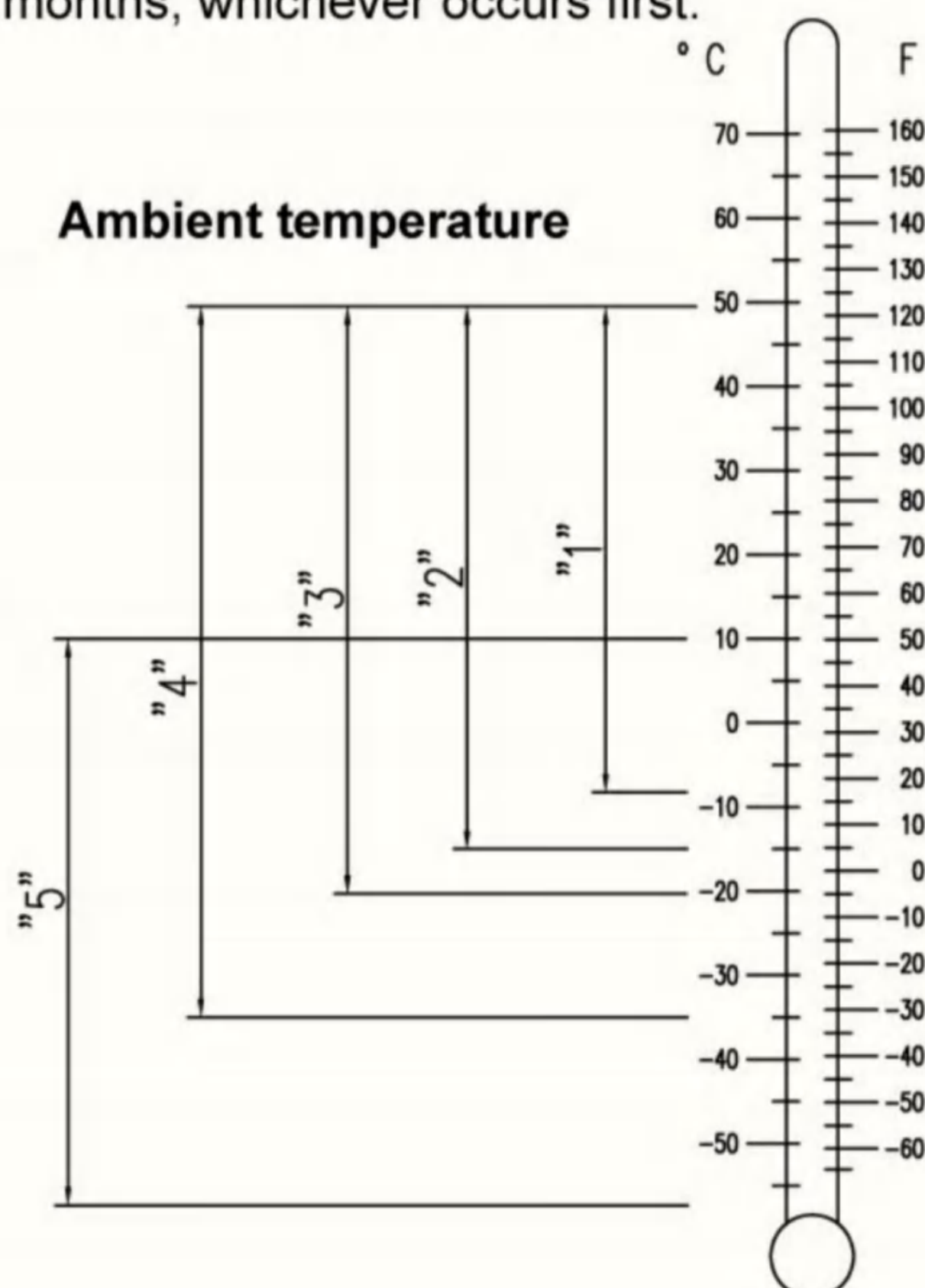
GL-5 80W/90

MIL-L-2105D 80W/90

Ambient temperature range qi5:

GL-5 70W

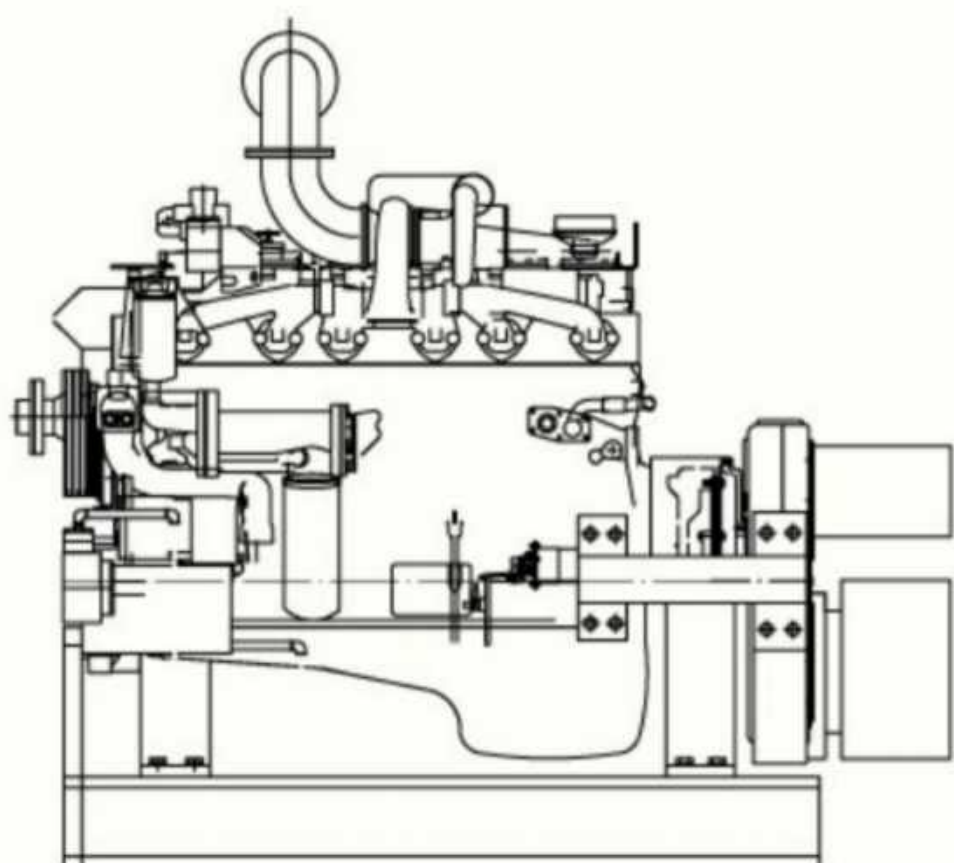
MIL-L-2105D 70W



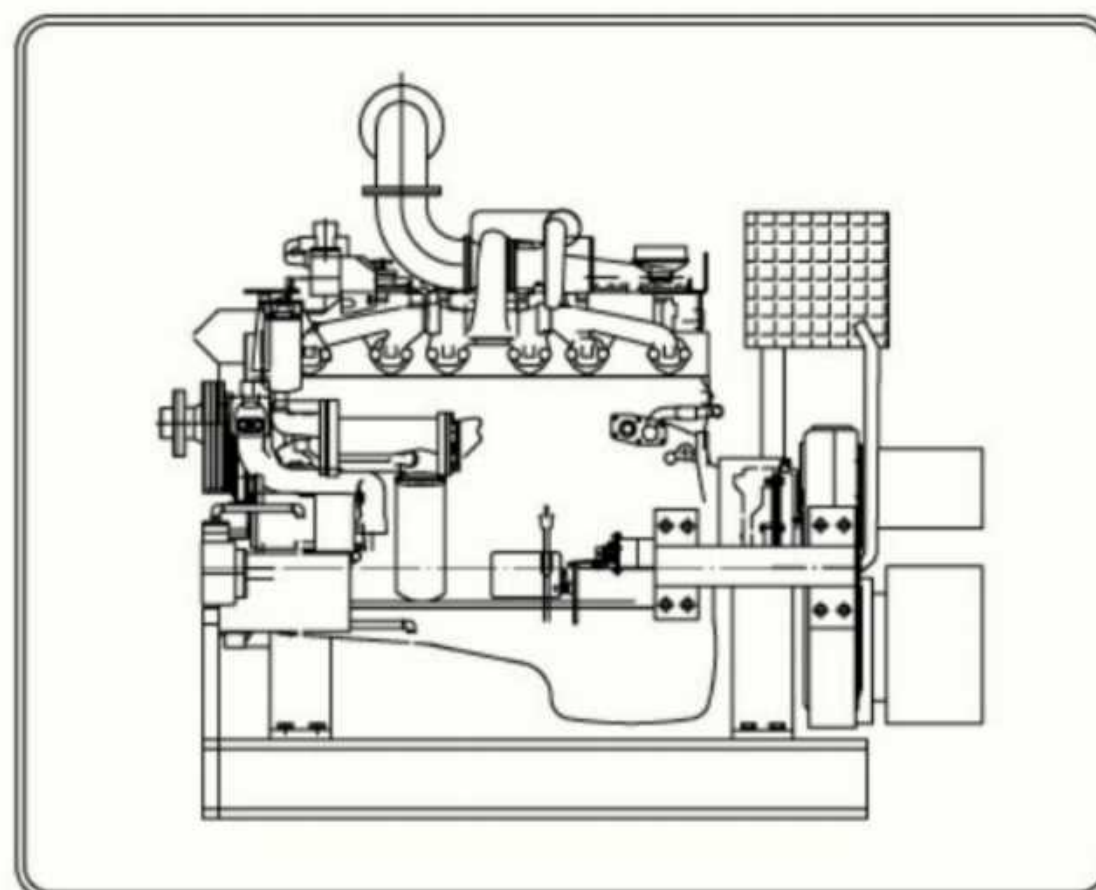
INSTALLATION

The lubricating oils must comply with the minimum requirements of DIN 51517, Part III, particularly accord with the FZG load rating and ISO / DP 6743-6 for mineral lubricating oils CLP. The ISO viscosity classification corresponds to DIN 51519 and ISO 3448. The following gear oil can also be used at ambient temperature from -5 °C to $+35\text{ °C}$: viscosity class SAE 90 EP and SAE 85W-90 EP according to DIN 51512, if it fulfils the classification API GL-4, API GL-5 or MIL-L-2105 D.

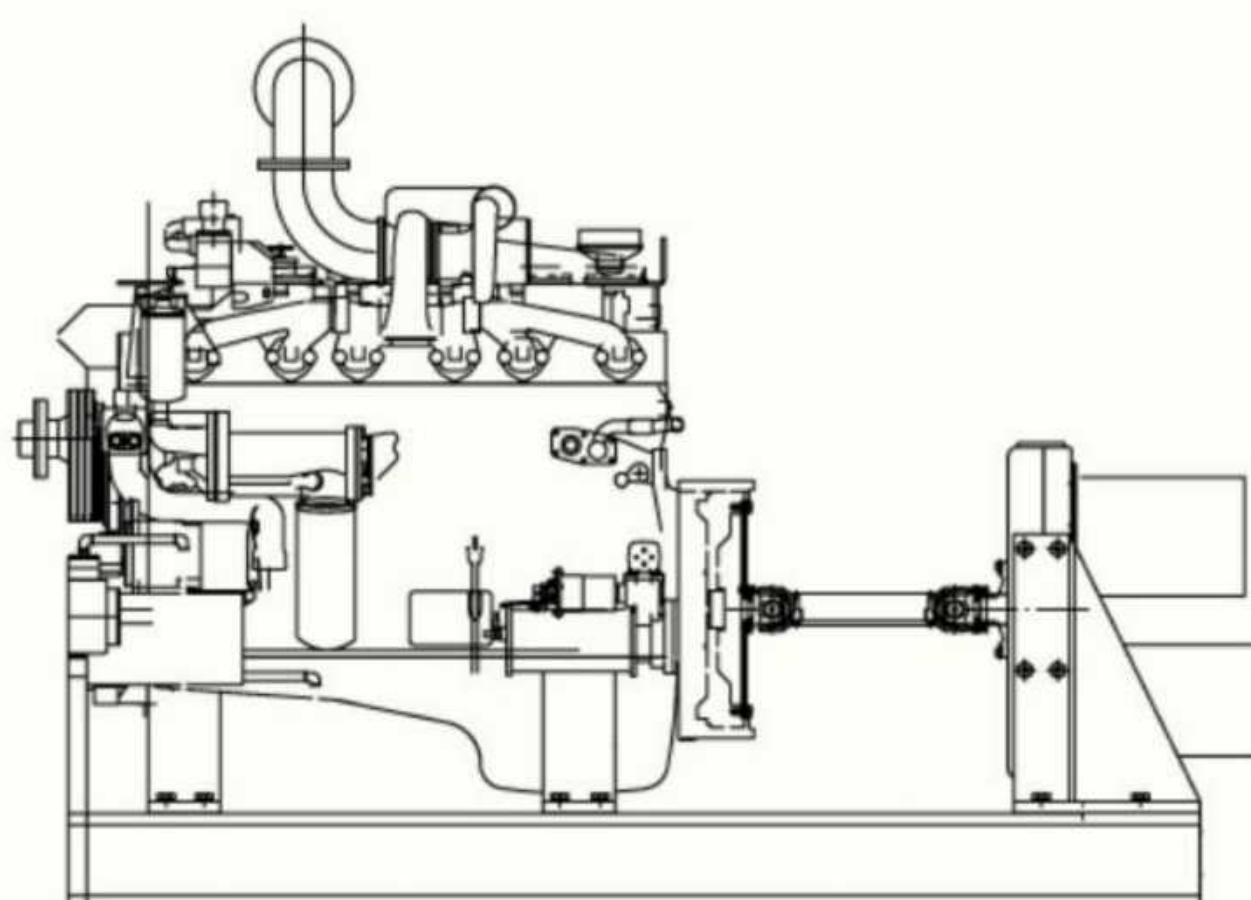
INSTALLATION



The Pump drive and the Engine are rigid connected. The support beams are required, Such as the drawings below;



Pump drive in closed surrounding without ventilation. A cooling system is needed.



Pump drive driven by cardan joint. The support brackets must be close to pump drive/pumps center of gravity.

SAE HYDRAULIC PUMP STANDARD

HYDRAULIC PUMP AND MOTOR MOUNTING AND DRIVE DIMENSIONS

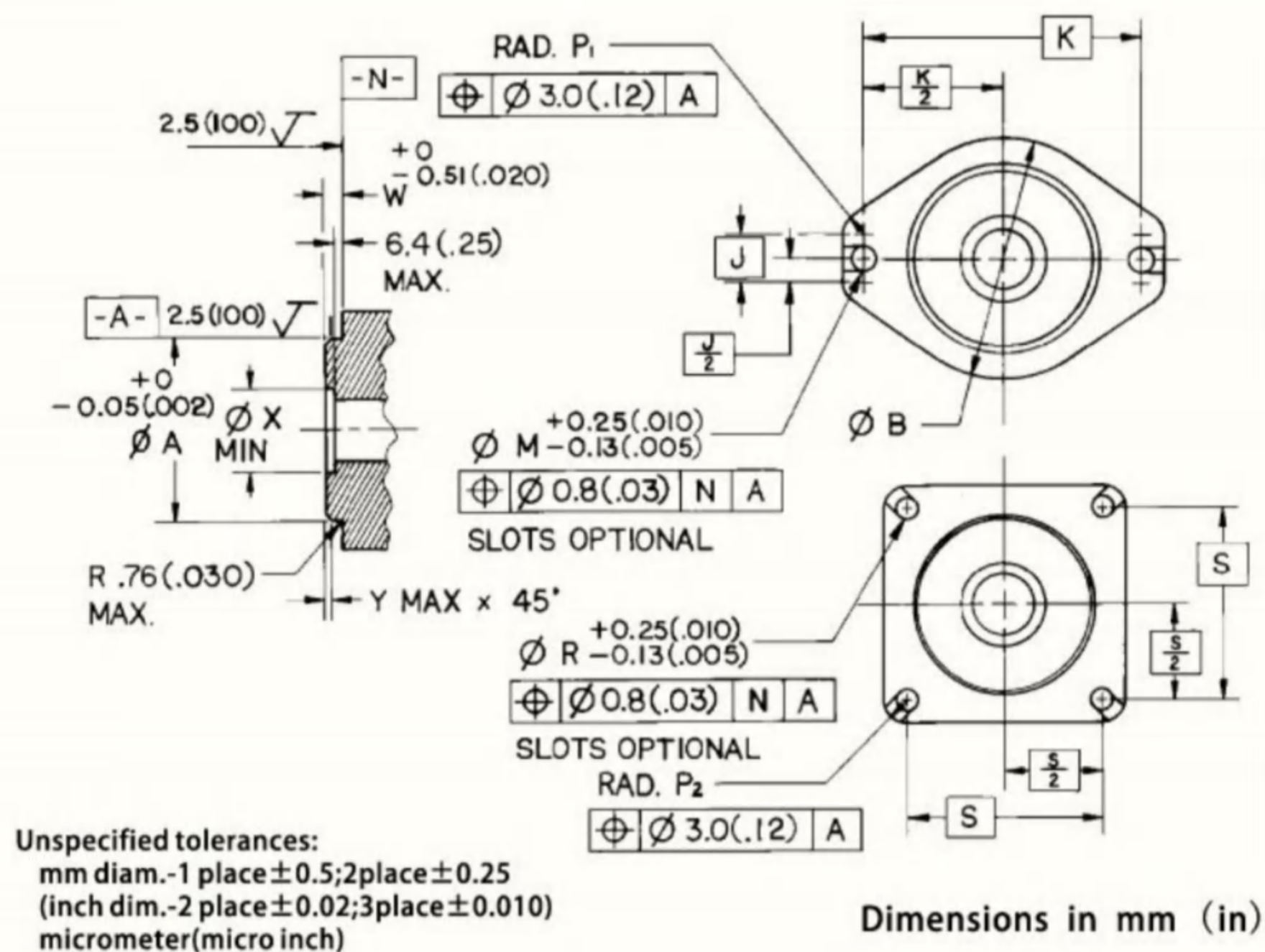
SAE HYDRAULIC PUMP STANDARD

SAE Standard J744 is intended to provide a progression of standard mounting flanges and shafts that are dimensionally compatible for hydraulic pumps and motors used on construction and industrial machinery and equipment. Dimensions and tolerances shown are millimeter (inch).

Dimensions of 2 and 4 Bolt Pump and Motor Mounting Flanges

Table1 Dimensions of 2 and 4 bolt Pump and motor mounting Flanges ,mm (inch) .

I.D. CODE	PILOT DIMENSIONS A NOTED	PILOT DIMENSIONS W NOTED	PILOT DIMENSIONS X MIN	PILOT DIMENSIONS Y MAX	2BOLT TYPE K	2 BOLT TYPE M NOTED	4 BOLT TYPE S	4 BOLT TYPE R NOTED
50-1	50.80	6.4		0.8	82.6	10.3		
(A-A)	(2.000)	(0.250)		(0.03)	(3.250)	(0.406)		
82-1	82.55	6.4		0.8	106.4	11.1		
(A)	(3.250)	(0.250)		(0.03)	(4.188)	(0.438)		
101-1	101.60	9.7	5.1	1.5	146.0	14.3	89.8	14.3
(B)	(4.000)	(0.380)	(2.00)	(0.06)	(5.750)	(0.562)	(3.536)	(0.562)
127-1	127.00	12.7	64	1.5	181.0	17.5	114.5	14.3
(C)	(5.000)	(0.500)	(2.50)	(0.06)	(7.125)	(0.688)	(4.508)	(0.562)
152-1	152.50	12.7	70	1.5	228.6	20.6	161.6	20.6
(D)	(6,000)	(0.500)	(2.75)	(0.06)	(9.000)	(0.812)	(6.364)	(0.812)
165-1	165.10	15.9	70	2.3	317.5	27.0	224.5	20.6
(E)	(6.500)	(0.625)	(2.75)	(0.09)	(12.500)	(1.062)	(8.839)	(0.812)

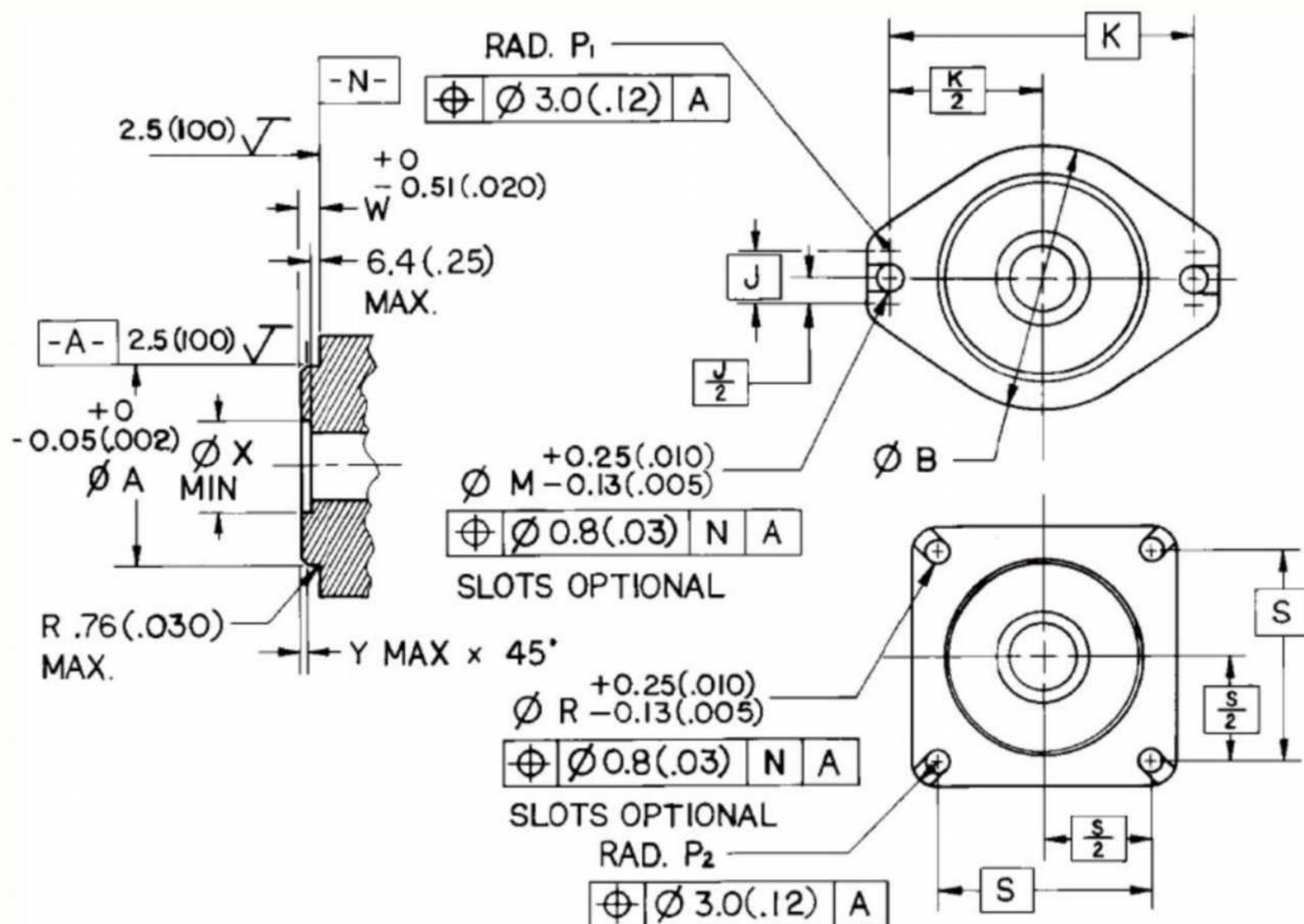


SAE HYDRAULIC PUMP STANDARD

Dimensions of Straight Shafts Without Thread

Table 2 Dimensions of Straight Shafts – Without thread, mm(inch) .

I.D. CODE	STRAIGHT SHAFT Dsl MAX	STRAIGHT SHAFT Dsl min	STRAIGHT SHAFT Ls	STRAIGHT SHAFT F NOTED	No Thread-1 E NOTED	No Thread-1 LI OPTIONAL
13-1	12.70	12.67	19	14.07	3.18	
(A-A)	(0.500)	(0.499)	(0.750)	(0.554)	(0.125)	
16-1	15.88	15.85	24	17.60	3.97	51
(A)	(0.625)	(0.624)	(0.938)	(0.693)	(0.1563)	(2.00)
22-1	22.22	22.20	33	24.90	6.35	63
(B)	(0.875)	(0.874)	(1.312)	(0.982)	(0.250)	(2.50)
25-1	25.40	25.35	38	28.10	6.35	70
(B-B)	(1.000)	(0.998)	(1.500)	(1.106)	(0.250)	(2.75)
32-1(C)	31.75(1.250)	31.70(1.248)	48(1.875)	35.20(1.386)	7.94(0.3125)	76(3.00)
38-1	38.10	38.05	54	42.27	9.52	83
(C-C)	(1.500)	(1.498)	(2.125)	(1.664)	(0.375)	(3.25)
44-1	44.45	44.40	67	49.30	11.11	92
(D & E)	(1.750)	(1.748)	(2.625)	(1.941)	(0.4375)	(3.62)



Unspecified tolerances:
 mm diam.-1 place ± 0.5 ; 2 place ± 0.25
 (inch dim.-2 place ± 0.02 ; 3 place ± 0.010)
 micrometer(micro inch)

Dimensions in mm (in)

SAE HYDRAULIC PUMP STANDARD

Dimensions of Straight Shafts With Thread

Table 3 Dimensions Of Taper Shaft Ends With Thread, mm(inch) .

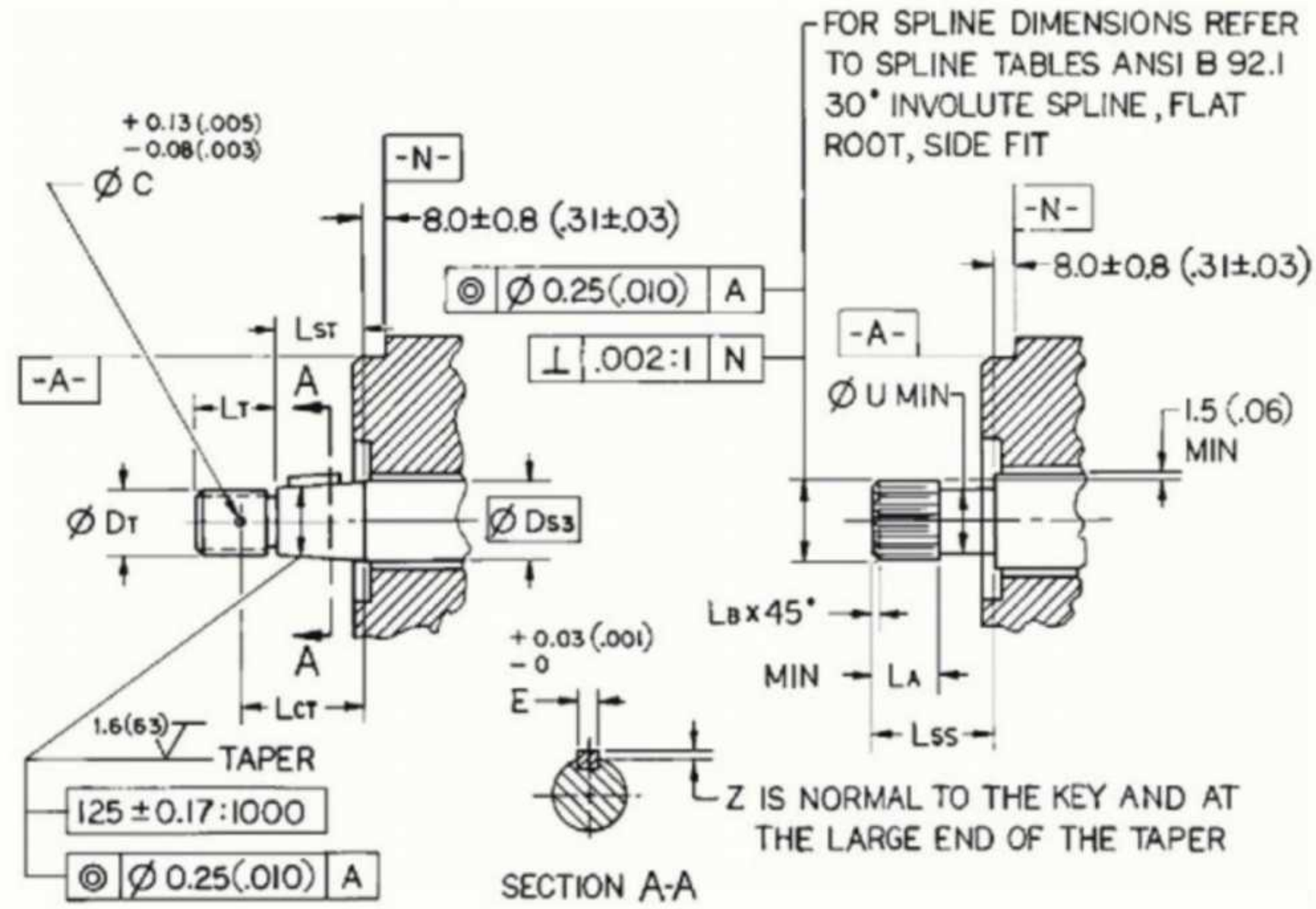
I.D. CODE	Ds3	DT ANSI B1.1	C NOTED	LCT	LST	LT	E Noted	Z Max	Z Min
13—3	12.7	5/16—32	2.0	25	17.48	12.70	3.18	1.63	1.37
(A—A)	(0.500)	UNF 2A	(0.078)	(0.984)	(0.688)	(0.500)	(0.125)	(0.064)	(0.054)
16—3	15.88	1/2—20	3.2	28	17.48	18.26	3.97	2.13	1.88
(A)	(0.625)	UNF 2A	(0.125)	(1.094)	(0.688)	(0.719)	(0.1563)	(0.084)	(0.074)
19—3	19.05	1/2—20	3.2	34	23.83	18.26	4.78	2.54	2.29
	(0.750)	UNF 2A	(0.125)	(1.344)	(0.938)	(0.719)	(0.188)	(0.100)	(0.090)
22—3	22.22	5/8—18	4.0	43	28.58	23.01	6.35	3.33	3.07
(B)	(0.875)	UNF 2A	(0.156)	(1.688)	(1.125)	(0.906)	(0.250)	(0.131)	(0.121)
25—3	25.40	3/4—16	4.0	49	34.92	26.97	6.35	3.33	3.07
(B—B)	(1.00)	UNF 2A	(0.156)	(1.938)	(1.375)	(1.062)	(0.250)	(0.131)	(0.121)
32—3	31.75	1—12	4.0	49	34.92	30.96	7.94	4.11	3.86
(C)	(1.25)	UNF 2A	(0.156)	(1.938)	(1.375)	(1.219)	(0.3125)	(0.162)	(0.152)
38—3	38.10 1	1-1/8—12	4.0	62	47.62	34.92	9.52	4.93	4.67
(C—C)	(1.50)	UNF	(0.156)	(2.438)	(1.875)	(1.375)	(0.375)	(0.194)	(0.184)
44—3	44.45	1-1/4—12	4.0	71	53.98	39.67	11.11	5.72	5.46
(D & E)	(1.75)	UNF 2A	(0.156)	(2.812)	(2.125)	(1.562)	(0.4375)	(0.225)	(0.215)
50—3	50.80	1-1/4—12	4.0	90	73.02	39.67	12.70	6.50	6.25
(F)	(2.00)	UNF 2A	(0.156)	(3.562)	(2.875)	(1.562)	(0.500)	(0.256)	(0.246)

Dimensions of 30 Degrees Involute Spline Shafts.

Table4 Dimensions Of 30 Degrees Involute Spline Shafts, mm(inch).

I.D. CODE	Spline	U min	IA min	Lssl	LB
13-4 (A-A)	9T 20/40 DP	9.40 (0.3700)	5.1 (0.20)	19 (0.750)	1.5 (0.06)
16—4 (A)	9T 16/32 DP	11.81 (0.4650)	7.6 (0.30)	24 (0.938)	1.5 (0.06)
22—4 (B)	13T 16/32 DP	18.16 (0.7150)	10.2 (0.40)	33 (1.312)	1.5 (0.06)
25—4 (B—B)	15T 16/32 DP	21.34 (0.8400)	12.7 (0.50)	38 (1.500)	1.5 (0.06)
32—4 (C)	14T 12/24 DP	26.42 (1.0400)	15.2 (0.60)	48 (1.875)	2.3 (0.09)
38—4 (C—C)	17T 12/24 DP	32.77 (1.2900)	17.8 (0.70)	54 (2.125)	2.3 (0.09)
44—4 (D & E)	13T 8/16 DP	36.63 (1.4420)	20.3 (0.80)	67 (2.625)	3.0 (0.12)

SAE HYDRAULIC PUMP STANDARD



Unspecified tolerances:
mm diam.-1 place ± 0.5 ; 2 place ± 0.25
(inch dim.-2 place ± 0.02 ; 3 place ± 0.010)
micrometer (micro inch)

Dimensions in mm (in)

SAE ENGINE FLYWHEEL HOUSING STANDARD

ENGINE FLYWHEEL HOUSING AND MATING TRANSMISSION HOUSING FLANGES

HOUSING FLANGES

SAE J617 is intended to achieve standardization in the design of "Engine Flywheel Housings" and the "Mating Transmission Housing" flanges to assure compatibility.

FLY WHEEL HOUSING

Figure 1 and Tables 1A and 1B furnish the dimensions and the hole patterns for dry type engine flywheel housings.

MATING HOUSING FLANGES

The mating housing flange pilot diameter shall be 6.4 (0.25) long, and its lead-in chamfer shall not exceed 2.0 (0.08) in length. The fillet radius between the mounting flange face and the pilot diameter shall not exceed 1.0 (0.04) R.

The diameter of the pilot on the flange of the mating housing shall be the same as the nominal diameter of the bore in the flywheel housing with tolerances as shown in Table 2. Tolerances for pilot diameter and flange face runout and hole sizes are also shown in Table 2.

Table 1 A—FLYWHEEL HOUSING Dimensions, mm(inch). –See Figure 1

SAE No. ⁽¹⁾	A (Pilot Dia) Nominal Dimension	A (Pilot Dia) Tolerance -0.000 FIM	Pilot Bore "A" and Face "X" Runout Tolerance (t) ⁽²⁾	B	C (Bolt Circle)
3	409.58(16.125)	+0.13 (0.005)	0.25 (0.010)	450.8 (17.75)	428.62(16.875)
2	447.68(17.625)	+0.13 (0.005)	0.28 (0.011)	489.0 (19.25)	466.72(18.375)
1	511.18(20.125)	+0.13 (0.005)	0.30 (0.012)	552.4 (21.75)	530.22(20.875)
0	647.70(25.500)	+0.25 (0.010)	0.41 (0.016)	711.2 (28.00)	679.45(26.750)

SAE ENGINE FLYWHEEL HOUSING STANDARD

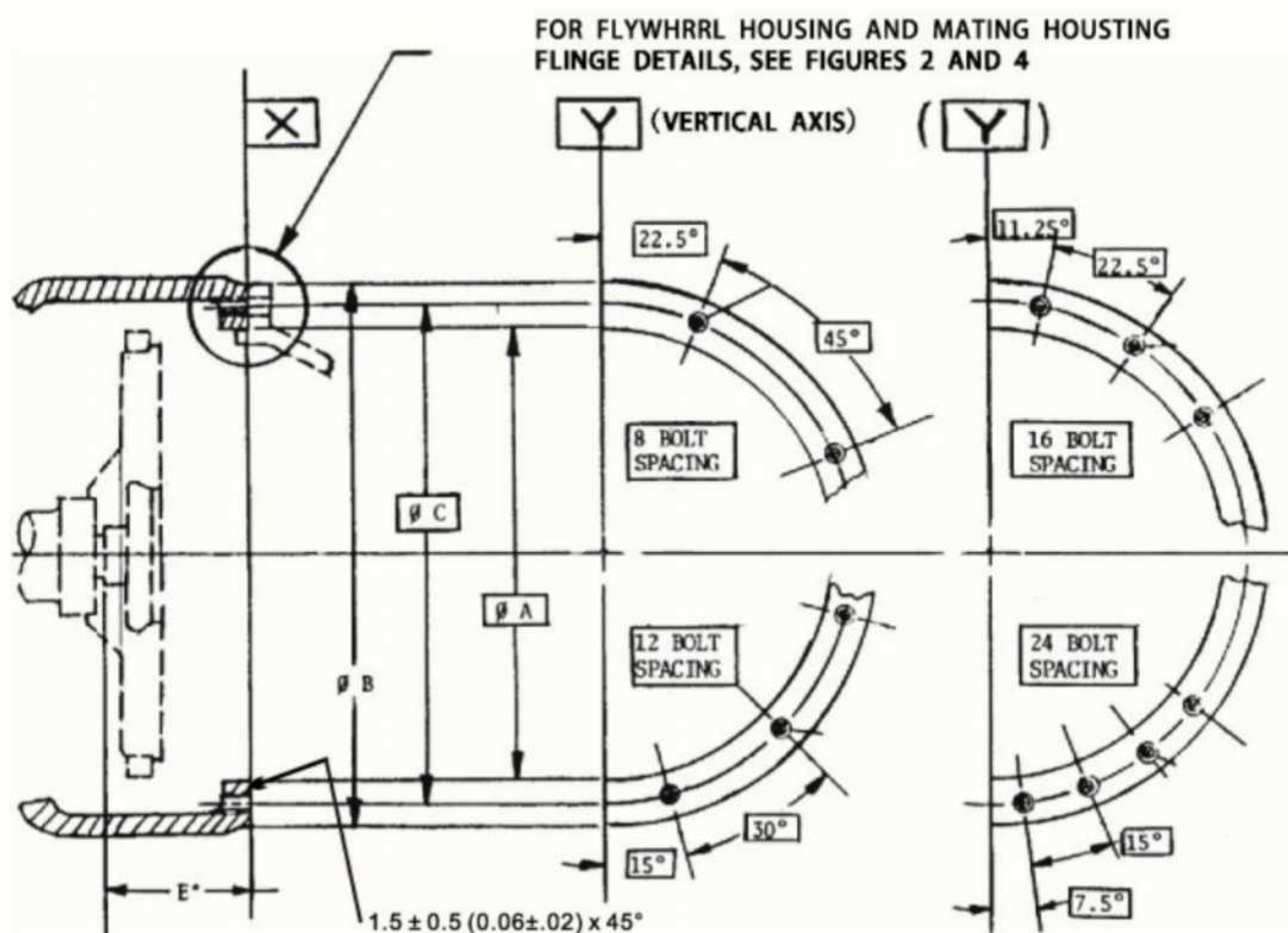


Table 1B—FLYWHEEL HOUSING Dimensions, mm(inch). –See Figure 1

SAE No. ⁽¹⁾	E Nominal Dimension	E Tolerance ±	Tapped Mounting Holes ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾ No.	Tapped Mounting Holes ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾ Metric	Tapped Mounting Holes ⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾ Inch
3	100.1 (3.94)	1.52(0.06)	12	M10x1.50	38–16
2	100.1 (3.94)	1.52(0.06)	12 ⁽⁷⁾	M10x1.50	38–16
1	100.1(3.94) ⁽⁸⁾	1.52(0.06)	12 ⁽⁷⁾	M10x1.50	7 16–14
0	100.1(3.94) ⁽⁸⁾	2.03(0.08)	16	M12x1.75	12–13

Table 2 Tolerances and Hole Sizes for Mating Transmission Housing Flanges, mm (in)

Housing SAE No. ⁽¹⁾	Pilot Diameter "A" Tolerance +0 ⁽²⁾	Pilot Diameter "A" and Face "X" Runout Tolerance (t) FIM ⁽³⁾	Drill Thru ⁽⁴⁾⁽⁵⁾ Holes Metric Bolt Size	Drill Thru ⁽⁴⁾⁽⁵⁾ Holes Metric Hole Size mm	Drill Thru ⁽⁴⁾⁽⁵⁾ Holes Inch Bolt Size	Drill Thru ⁽⁴⁾⁽⁵⁾ Holes Inch Hole Size in
3, 2	-0.13(-0.005)	0.20(0.008)	M10	11.20 ⁽⁶⁾	38	0.422 ⁽⁶⁾
1	-0.13(-0.005)	0.20(0.008)	M10	11.20	7 16	0.484
12,0,00	-0.20(-0.008)	0.25(0.010)	M12	13.50	12	0.563

SAE ENGINE FLYWHEEL STANDARD

SAE ENGINE FLYWHEEL STANDARD

SAE standard J620 defines flywheel configurations for industry standardiation , interchange ability and compatibility.

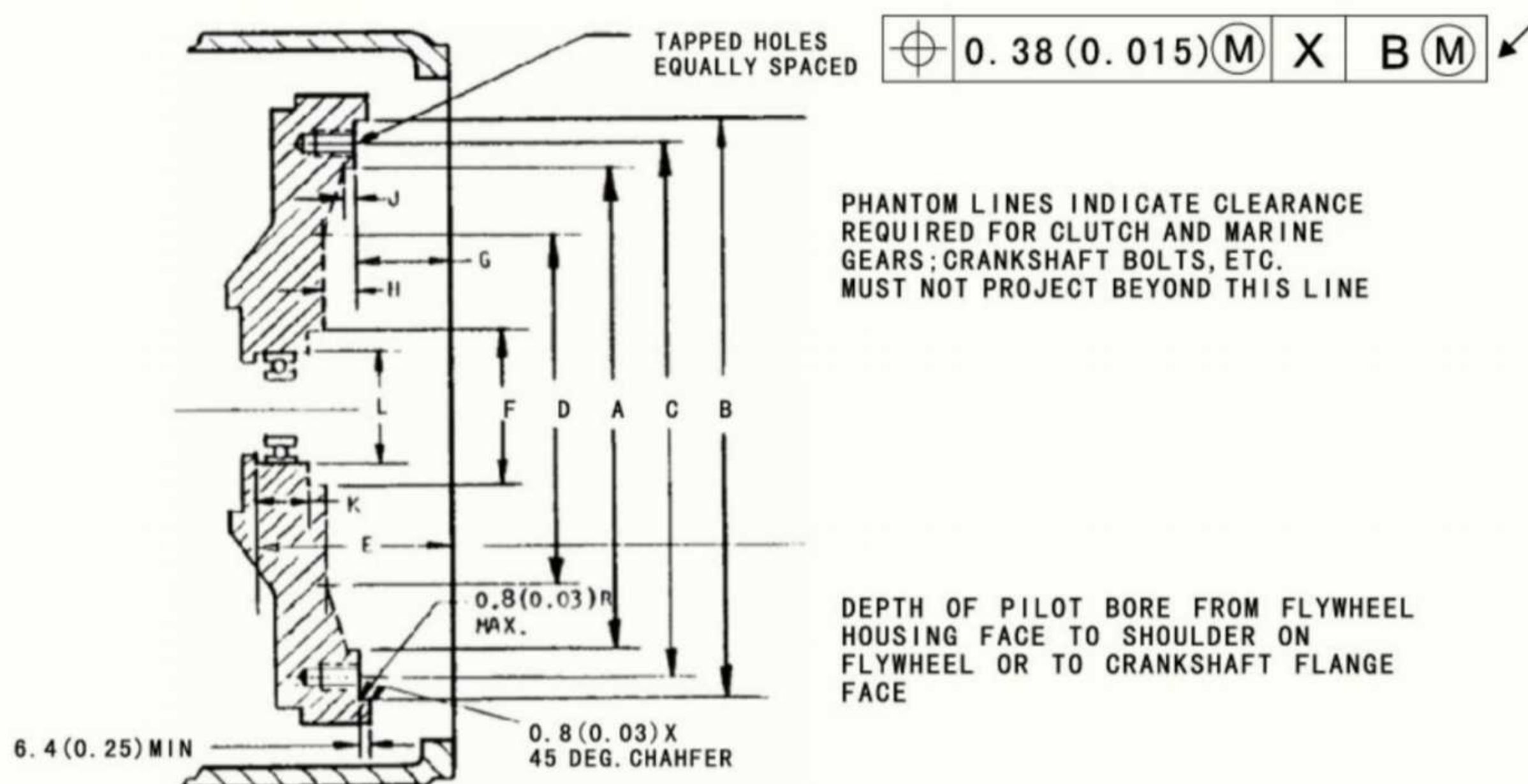


Table 1 Dimensions of Flywheels, mm (inch).

Clutch Size	A	B ^{(1), (2)}	C	D	E ^{(5), (11)}	F
255 (10) ⁽⁶⁾	276.4(10.88)	314.32(12.375)	295.28(11.625)	196.8(7.75)	100.1(3.94)	76.2 (3.00)
290(11.5) ⁽⁷⁾	314.5(12.38)	352.42(13.875)	333.38(13.125)	203.2(8.00)	100.1(3.94)	101.6(4.00)
355(14) ⁽⁸⁾	409.4(16.12)	466.72(18.375)	438.15(17.250)	222.2(8.75)	100.1(3.94)	
405 (16)	460.2(18.12)	517.52(20.375)	488.95(19.250)	254.0(10.00)	100.1(3.94)	104.6 (4.12)
460(18) ⁽⁹⁾	498.3(19.62)	571.50(22.500)	542.92(21.375)		100.1(3.94)	104.6(4.12)

Clutch Size	G ⁵	H	J	K ^{(3), (11)}	L ^{(2), (3), (22)}	Tapped Holes ⁽⁴⁾ No.	Tapped Holes ⁽⁴⁾ Size
255 (10)	53.8(2.12)	15.7(0.62)	12.7(0.50)	28.4 (1.12)	72.000 (2.8346)	8	(38 –16)
290(11.5)	39.6(1.56)	28.4(1.12)	22.4(0.88)	31.8 (1.25)	72.000 (2.8346)	8	(38 –16)
355 (14)	25.4(1.00)	28.4(1.12)	22.4(0.88)	38.1 (1.50)	80.000 (3.1496)	8	(12 –13)
405 (16)	15.7(0.62)	28.4(1.12)	22.4(0.88)	44.4 (1.75)	100.000(3.9370)	8	(12 –13)
460 (18)	15.7(0.62)	31.8(1.25)	31.8(1.25)	44.4 (1.75)	100.000(3.9370)	6	(58 –11)

Company: _____ Contact: _____
 Phone: _____ E-Mail: _____
 FAX: _____ Postcode, Town: _____

PUMP DRIVE APPLICATION DATA SHEET

1. What is the prime mover of the pump drive?

Type: Electric Motor Gasoline Engine Diesel Engine Others
 Brand Name: _____ Model NO.: _____
 H.P.: _____ @ _____ RPM MAX. Torque; _____ @ _____ RPM
 Duty Cycle: _____ Hrs/Day Ambient temp: _____ °C

If you have any questions about the application of Engines, please contact Reastar. We will provide you with our best service.

2. Specify the gear ratio of the pump drive:

1:1 Ratio: _____ Increaser Ratio: _____ Decreaser Ratio: _____

3. Input Configuratin:

Clutch Rubber Block Drive Flex Plate Others: _____

4. Specify the size of the engine housing the pump drive will be attached to

SAE #0 SAE #1 SAE #2 SAE #3 Others: _____

5. Specify the size of Engine Flywheel

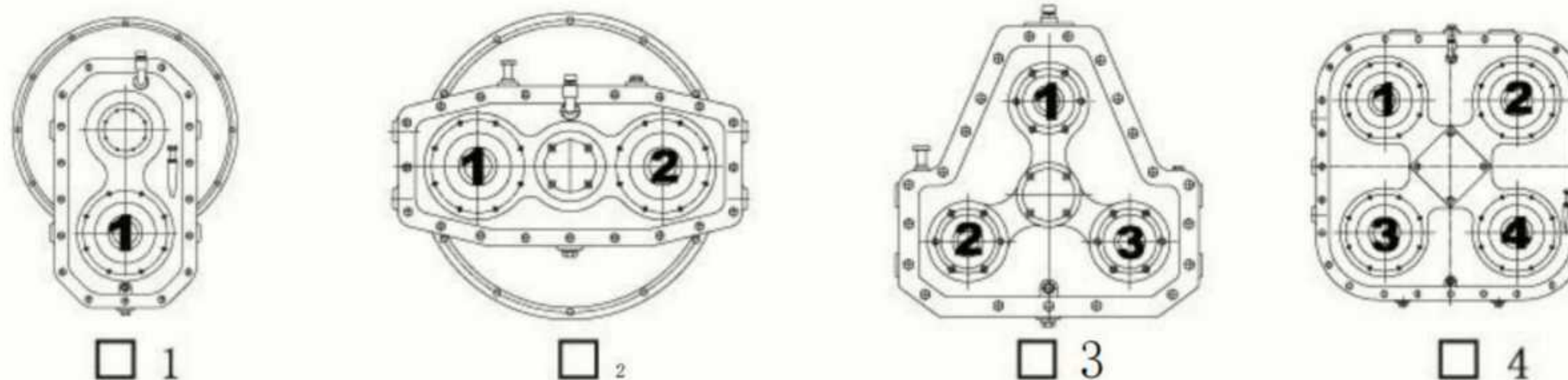
SAE 16 SAE 14 SAE 1112 SAE 10 Others: _____

6. Please provide us outside drawings of the Engine Flywheel and Engine Flywheel Housing.

7. Specify the infomation of the pump, according to the drawings below:

1. Flange SAE____ holes Drive shaft, profile _____
 2. Flange SAE____ holes Drive shaft, profile _____
 3. Flange SAE____ holes Drive shaft, profile _____
 4. Flange SAE____ holes Drive shaft, profile _____

8. Specify the pump arrangement and orientation, cording to the drawings below



9. Please provide us the outside drawings of the pump.

10. Others Pump Drive may be used. Please contact wgt.net.cn@gmail.com