



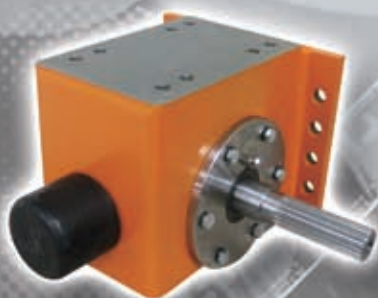
Motor : 0.18KW~30KW
GEARED UNITS : HG2~HG7

CRANE COMPONENTS

End Carriage, Wheel Blocks, Bumper
Hollow Shaft Helical Geared Motors



SERIES
HG/EC
MB



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GENERAL

With precise machining and accurate assembly, our hollow shaft geared motors reach outstanding performance and high efficiency. The modularized design to connect with different types of gear box and wide range of ratios provides economical solution to meet customers' needs.

MOTORS

1. Design Standards:

Motors comply with the DIN VDE 0530 specification for electrical machinery and VDE 0171 standard for motors with increased safety respect.

2. Enclosure:

The standard motor protection is IP54 according to IEC60034-5 standard.
IP55 is also available on request.

3. Applicable voltage:

The motors are applied to following standard voltage.

50HZ- 220V, 380V, 400V, 415V, 525V

60HZ- 220V, 380V, 440V, 460V, 480V, 575V

- Other voltages and frequencies are available
- Please advise the type of starting (direct-on-line or star-delta starting) when placing orders.

4. Insulation:

The standard insulation class is F but class H is also available on request.

5. Increased safety design:

Degree of motor protection ----- IP54 (standard)

Power range: ----- 0.18KW~30KW

Speed Reducers ----- double, triple, or multi-stage reduction

Conditions of sale

*We reserve the right to change ratings, data, and dimensions without prior notice due to further product improvement.

*Gear Motors must be installed according to our installation instructions and applicable safety regulation.

Ordering example: HG3-22HA/VF90-4C/B 5-42

Order no.:

Nominal reduction ratio:

4, 5, 6, 7, 9, 11, 14, 18, 22, 28, 36,
45, 56, 71, 90, 112, 140, 180, 224

B :

With Brake

BH :

With Brake and Hand release

TH :

With Thermistor

SH :

With Space heater

HG 3	22	HA	/ VF90-4C	/ B	5-38
Mode	Ratio	Mounted	Motor Type		Power Supply

HG2 : 250Nm
HG3 : 600Nm
HG4 : 1100Nm
HG5 : 2400Nm
HG6 : 4500Nm
HG7 : 7200Nm

HA :

Parallel shaft helical geared motor.
With hollow shaft mounted or foot mounted
With parallel key to DIN 6885

HB :

Parallel shaft helical geared motor.
With hollow shaft mounted or foot mounted
With splined to DIN 5480

5-53 :

3 φ -50Hz-525V

5-42 :

3 φ -50Hz-415V

5-38 :

3 φ -50Hz-380V

5-22 :

3 φ -50Hz-220V

6-58 :

3 φ -60Hz-575V

6-48 :

3 φ -60Hz-480V

6-46 :

3 φ -60Hz-460V

6-44 :

3 φ -60Hz-440V

6-38 :

3 φ -60Hz-380V

6-22 :

3 φ -60Hz-220V



1. The material of gears SCM415.
2. The manufacture process of gears by carbonizing hardening to HRC 48~52, and gear-grinding etc...
3. Using ISO VG220 lubricating oil make the working life increased.
4. The precision of gears up to standard of ISO

50/60HZ, 4POLE

MOTOR(KW)	GEAR BOX
0.18	HG2, HG3
0.25	HG2, HG3
0.37	HG2, HG3, HG4
0.55	HG2, HG3
0.75	HG2, HG3, HG4, HG5
1.10	HG2, HG3, HG4, HG5
1.50	HG3, HG4, HG5, HG6
2.20	HG3, HG4, HG5, HG6, HG7
3.70	HG4, HG5, HG6, HG7
5.50	HG5, HG6, HG7
7.50	HG5, HG6, HG7
11.00	HG6, HG7
15.00	HG6, HG7
18.50	HG6, HG7
22.00	HG7
30.00	HG7

50/60HZ, 6POLE

MOTOR(KW)	GEAR BOX
0.18	HG2, HG3
0.25	HG2, HG3
0.37	HG2, HG3
0.55	HG2, HG3, HG4, HG5
0.75	HG2, HG3, HG4, HG5
1.10	HG3, HG4, HG5, HG6
1.50	HG3, HG4, HG5, HG6, HG7
2.20	HG4, HG5, HG6, HG7
3.70	HG5, HG6, HG7
5.50	HG5, HG6, HG7
7.50	HG6, HG7
11.00	HG6, HG7
15.00	HG6, HG7
18.50	HG7
22.00	HG7

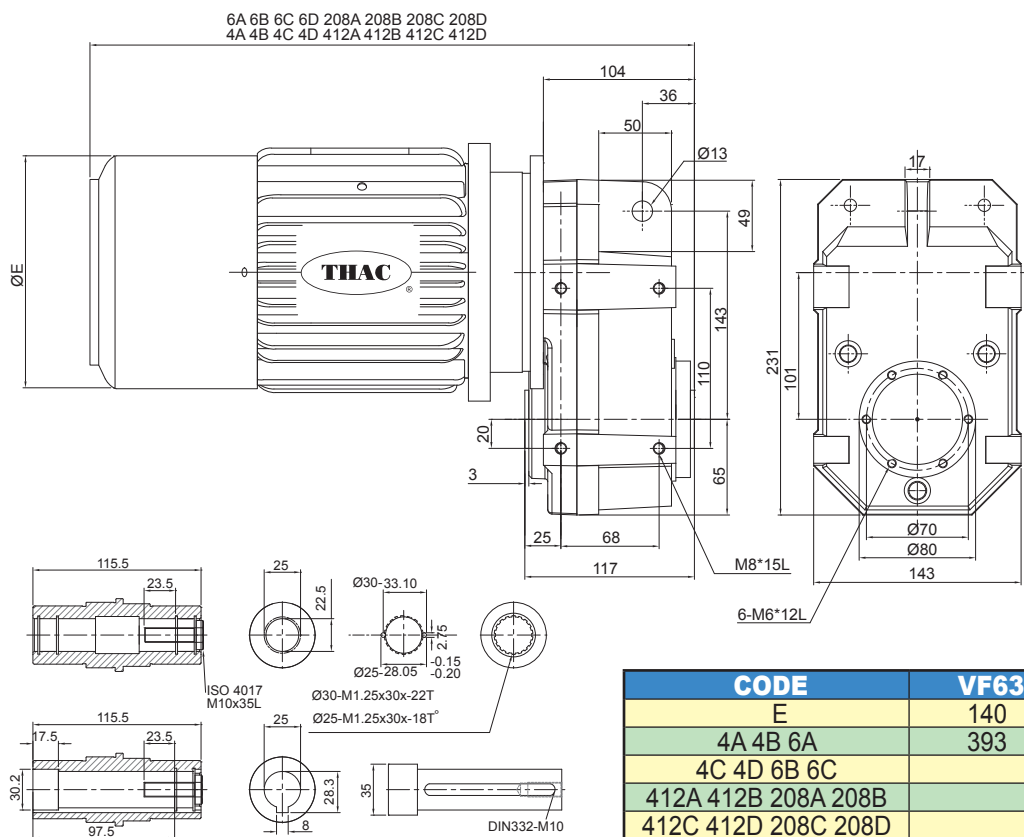
50/60HZ, 4/12POLE

MOTOR(KW)	GEAR BOX
0.18/0.06	HG2, HG3
0.25/0.08	HG2, HG3
0.37/0.12	HG2, HG3, HG4
0.55/0.18	HG2, HG3, HG4, HG5
0.75/0.25	HG2, HG3, HG4, HG5
1.10/0.37	HG2, HG3, HG4, HG5
1.50/0.50	HG3, HG4, HG5, HG6
2.20/0.75	HG4, HG5, HG6, HG7
3.00/1.00	HG5, HG6, HG7
3.75/1.25	HG5, HG6, HG7
5.50/1.85	HG6, HG7
7.50/2.50	HG6, HG7

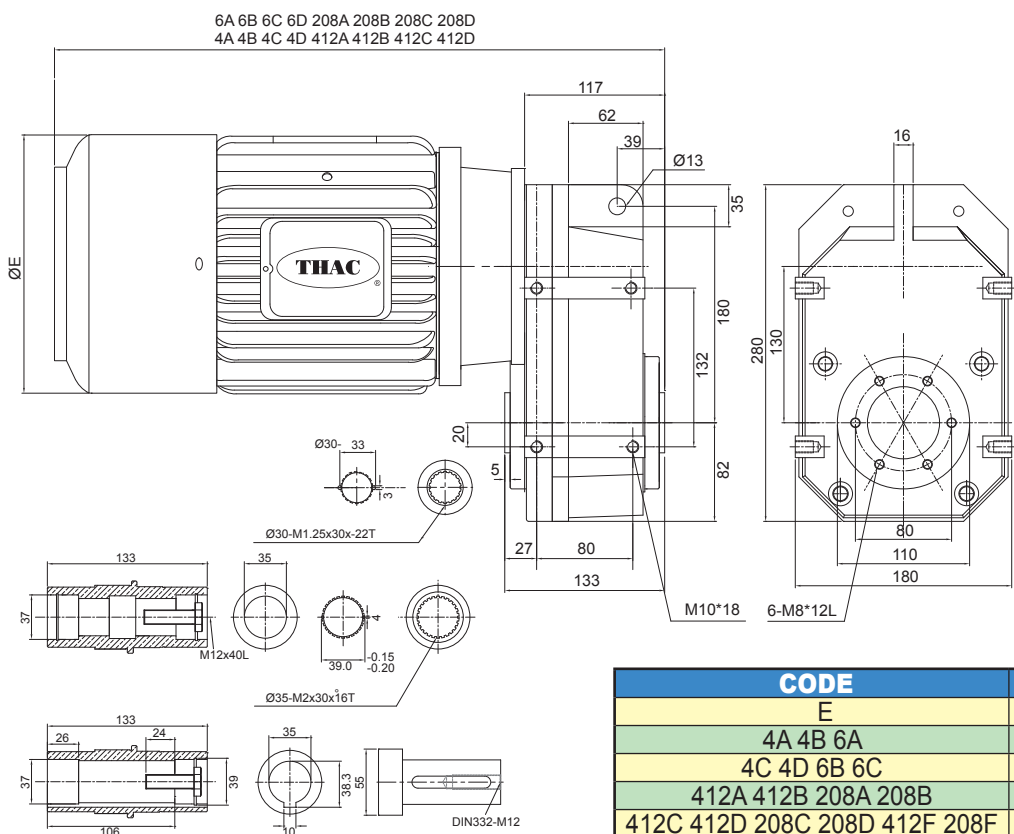
50/60HZ, 2/8POLE

MOTOR(KW)	GEAR BOX
0.18/0.04	HG2
0.25/0.06	HG2
0.37/0.09	HG2, HG3
0.55/0.12	HG2, HG3
0.75/0.18	HG2, HG3, HG4
1.10/0.25	HG2, HG3, HG4, HG5
1.50/0.37	HG3, HG4, HG5
2.20/0.55	HG4, HG5, HG6
3.00/0.75	HG5, HG6, HG7
3.75/1.25	HG5, HG6, HG7
5.50/1.40	HG6, HG7
7.50/1.80	HG6, HG7

HG2-...HA/HG2-...HB Dimension of Gear Motors



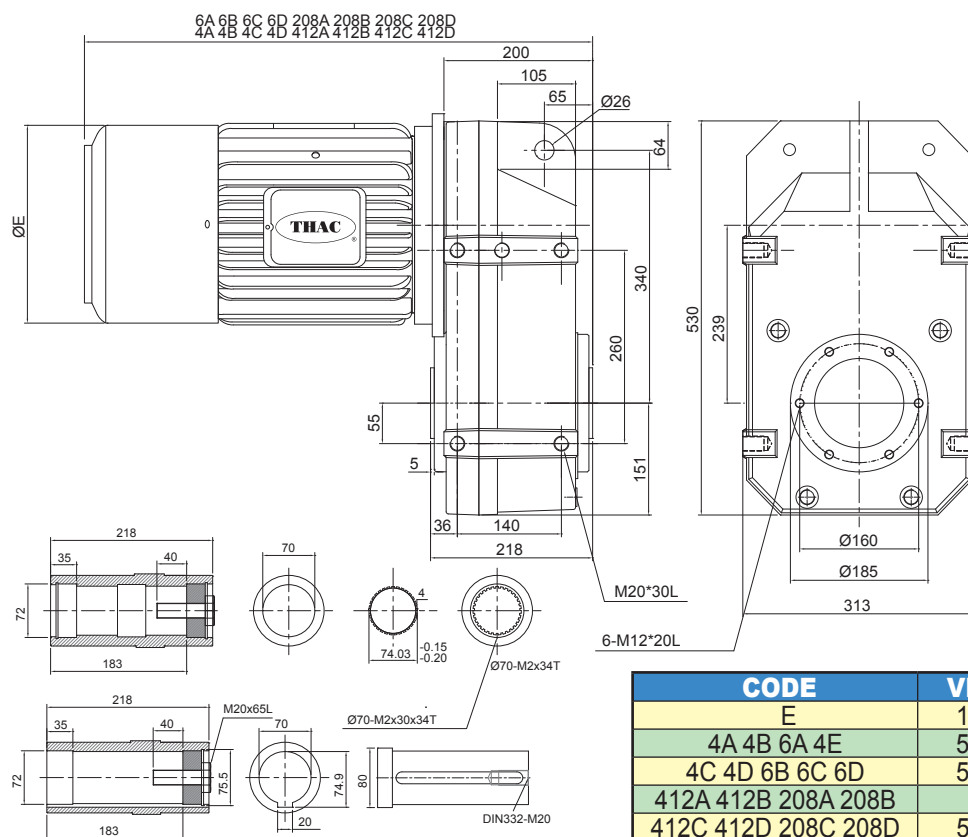
HG3-...HA/HG3-...HB Dimension of Gear Motors



CODE	VF80	VF90	VF112
E	173	198	232
4A 4B 6A 4E	448.5	488	550
4C 4D 6B 6C	488.5	528	550
412A 412B 208A 208B	448.5		550
412C 412D 208C 208D	488.5	528	

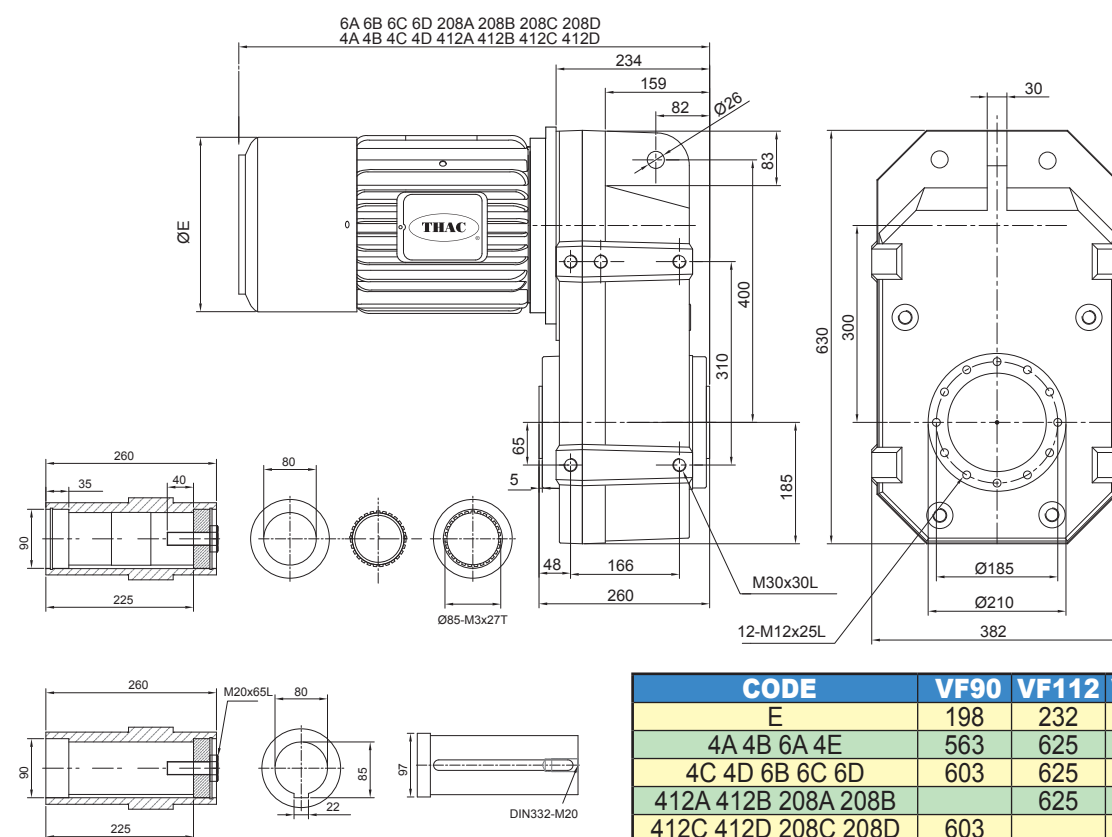
CODE	VF80	VF90	VF112	VF132
E	173	198	232	266
4A 4B 6A 4E	488	527.5	589.5	674.5
4C 4D 6B 6C	528	567.5	589.5	674.5
412A 412B 208A 208B	488	567.5	589.5	674.5
412C 412D 208C 208D	528	567.5		

HG6---HA/HG6---HB Dimension of Gear Motors



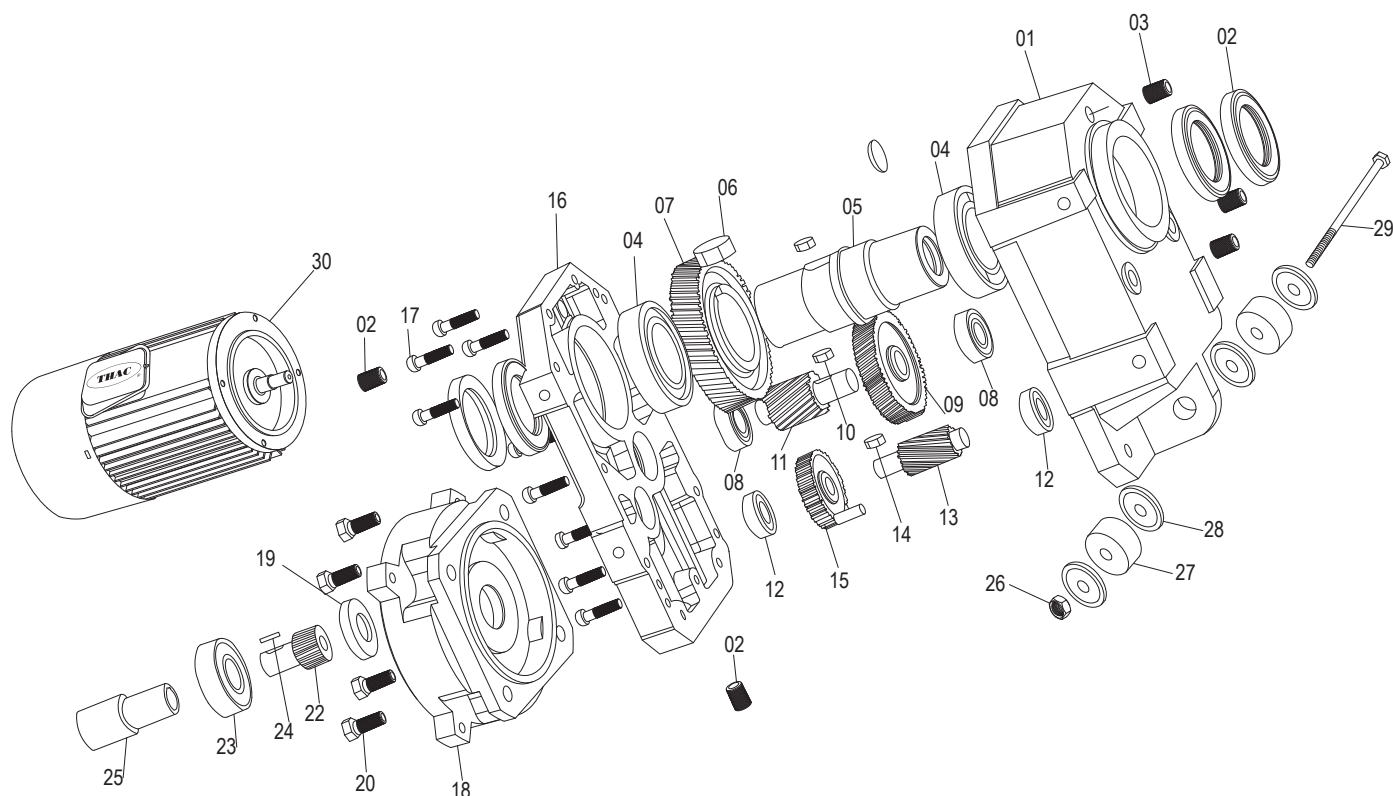
CODE	VF90	VF112	VF132	VF160
E	198	232	266	315
4A 4B 6A 4E	551	613	685	785
4C 4D 6B 6C 6D	591	613	685	825
412A 412B 208A 208B		613		785
412C 412D 208C 208D	591		685	

HG7---HA/HG7---HB Dimension of Gear Motors



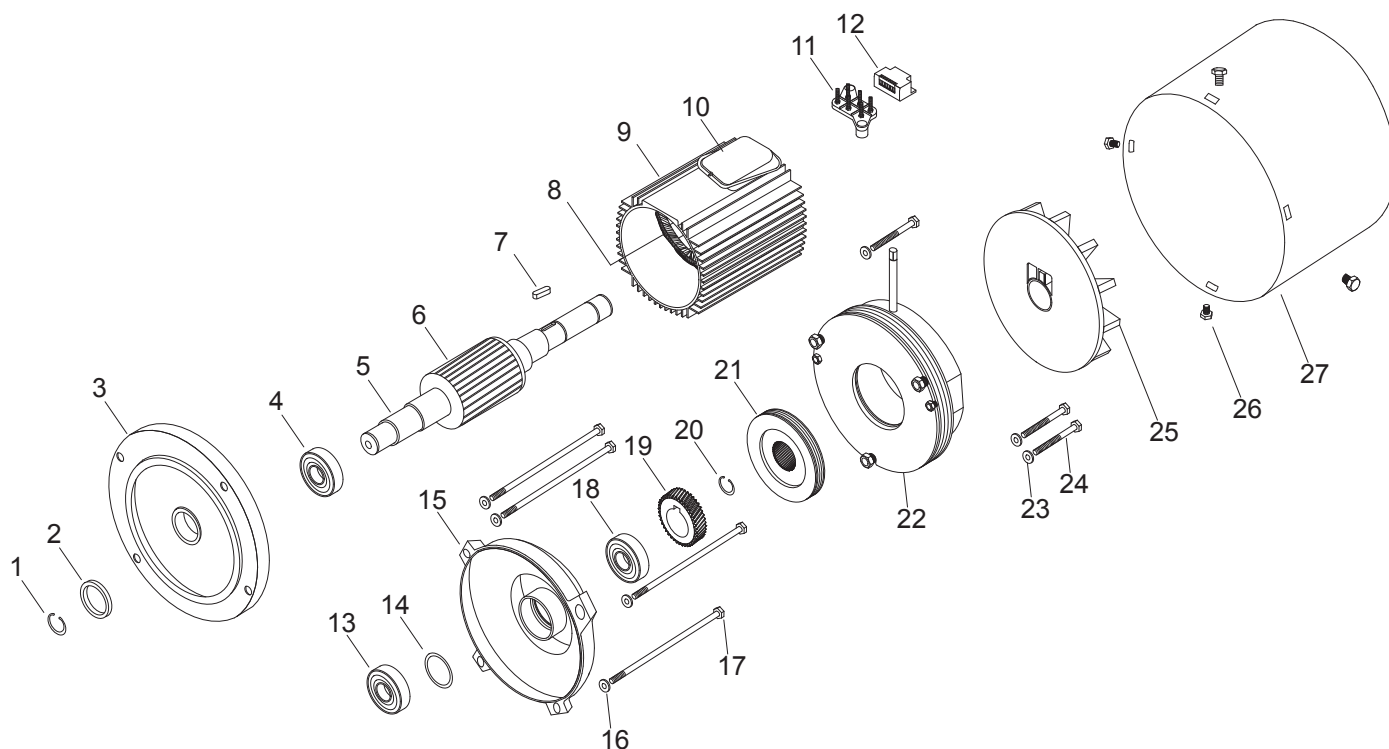
CODE	VF90	VF112	VF132	VF160	VF180
E	198	232	266	315	360
4A 4B 6A 4E	563	625	697	797	927
4C 4D 6B 6C 6D	603	625	697	837	967
412A 412B 208A 208B		625		797	929
412C 412D 208C 208D	603		697		

Exploded View of Gear Motor



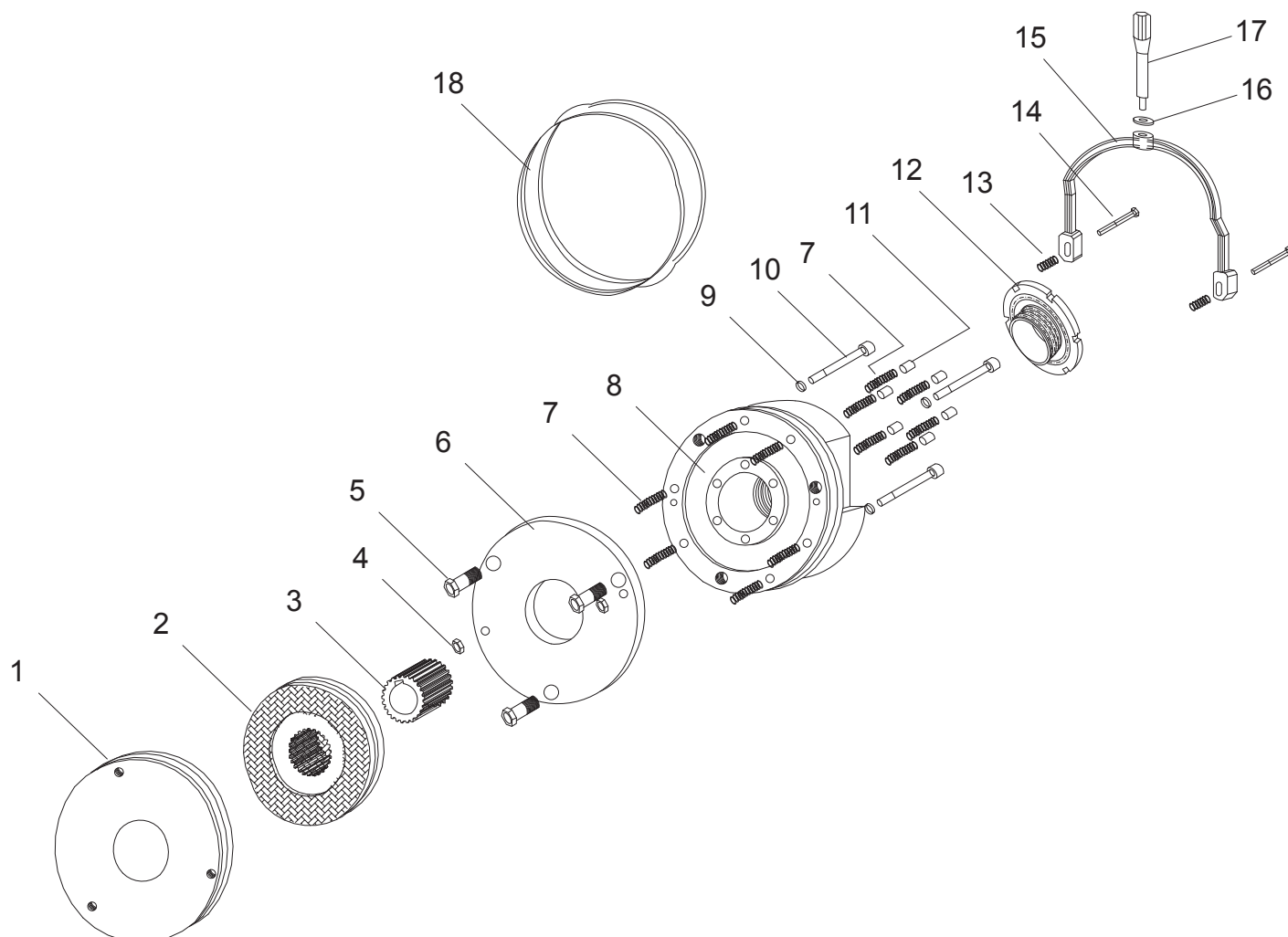
ITEM	DESCRIPTION	Q'TY	ITEM	DESCRIPTION	Q'TY
01	Gear Housing-A	1	16	Gear Housing-B	1
02	Oil Seal	4	17	Connecting Fixed Bolt(Cap.)	9
03	Oil Level Nipple	5	18	Flange	1
04	Anti-friction Ball Bearing	2	19	Oil Seal	1
05	Hollow Shaft	1	20	Connecting Fixed Bolt(Cap.)	4
06	Parallel Key	1	21	C-Ring of Shaft	1
07	Output Gear	1	22	Motor Pinion	1
08	Anti-friction Ball Bearing	2	23	Anti-friction Ball Bearing	1
09	2 ND Gear	1	24	Parallel Key	1
10	Parallel Key	1	25	Motor Shaft	1
11	2 ND Pinion	1	26	Lock Nut (Nylon Nut)	1
12	Anti-friction Ball Bearing	2	27	Rubber Bumper	2
13	1 ST Pinion	1	28	Flat Washer	4
14	Parallel Key	1	29	Torque Arm Bolt (Hex)	3
15	1 ST Gear	1	30	Motor	1

Exploded View of Motor

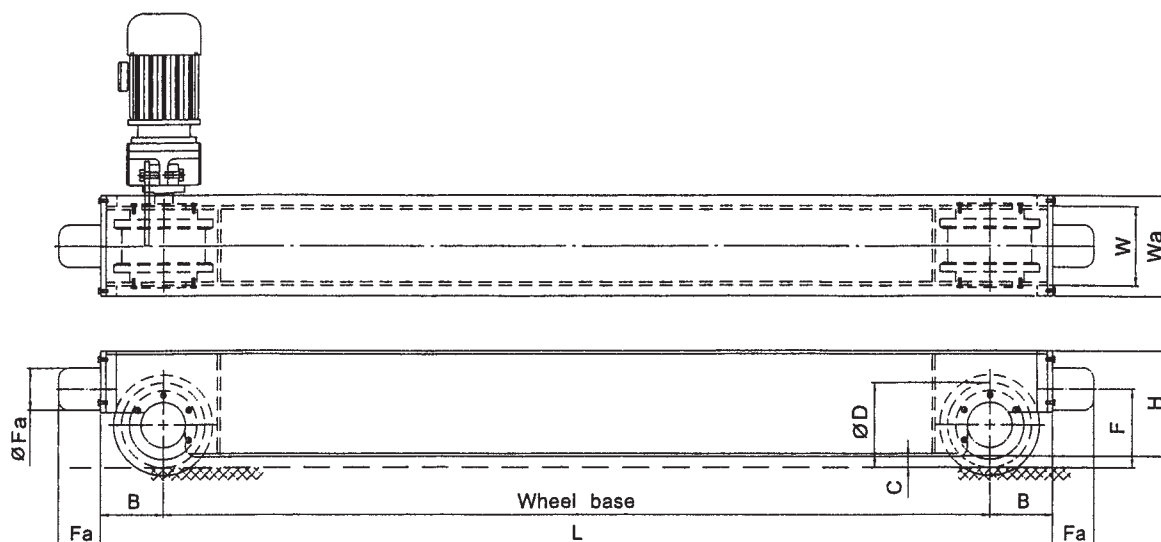


ITEM	DESCRIPTION	Q'TY	ITEM	DESCRIPTION	Q'TY
01	Shaft Retaining Ring	1	16	Spring Lock Washer	4
02	Oil Seal	1	17	Hex Bolt	4
03	Motor Mounted Flange	1	18	Oil Seal	1
04	Ball Bearing	1	19	Brake Rotor Hub	1
05	Motor Shaft	1	20	Shaft Retaining Ring	1
06	Rotor	1	21	Brake Lining	1
07	Key	1	22	Brake Plate	1
08	Motor Coil with Stator	1	23	Spring Lock Washer	3
09	Housing	1	24	Hex Bolt	3
10	Terminal Box	1	25	Plastic Fan	1
11	Terminal Plate	1	26	Hex Bolt(With Washer)	4
12	Rectifier	1	27	Fan Cover	1
13	Ball Bearing	1			
14	Weave Washer	1			
15	Cap	1			

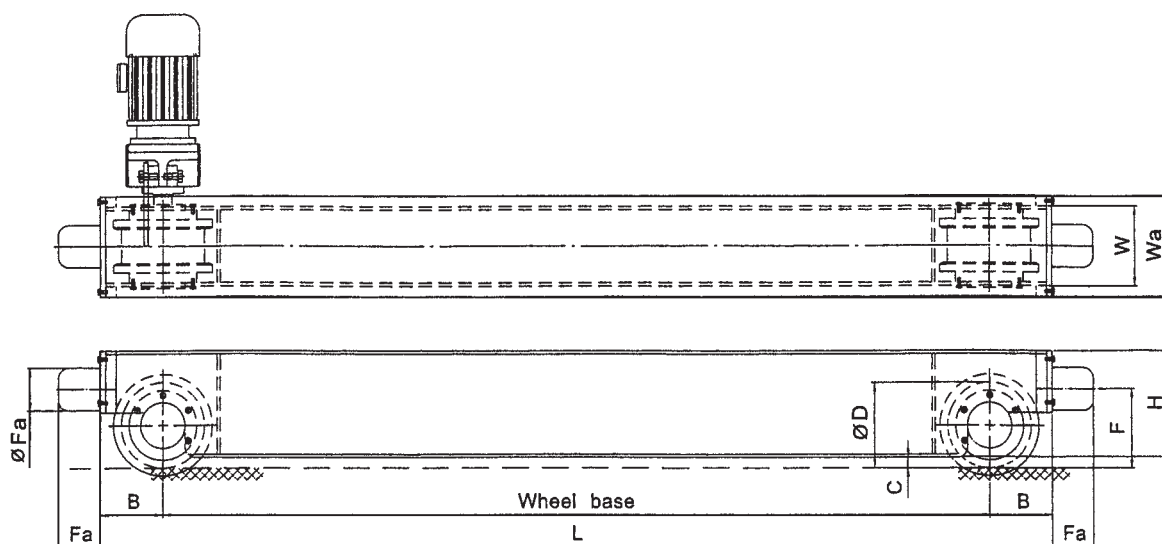
Exploded View of Brake



ITEM	DESCRIPTION	Q'TY	REMARK
01	Mounted Flange	1	
02	Rotor with Lining	1	
03	Rotor Hub	1	
04	Nut	2	Option
05	Adjuster Air Gap Tube Screw	3	
06	Armature Plate	1	
07	Compression Spring	12	
08	Stator with Coil	1	
09	Spring Washer	3	
10	Connecting Fixed Bolt	3	
11	Round Bar	6	
12	Adjuster Torque Nut	1	
13	Compression Springs	2	Option
14	Connecting Fixed Bolt	2	Option
15	Hand Release Body	1	Option
16	Spring Washer	1	Option
17	Hander	1	Option
18	Seal	1	Option



Model	Section coefficients	Max. Wheel Load	Length (L)	Wheel Base	øD	Groove	B	C	F	H	W	Wa	Fa
EC-1615	A = 3360 mm ²	50 kN	1500	1290	160	65	105	20	165	200	150	190	100
EC-1620	I _x = 23586000 mm ⁴		2000	1790									
EC-1625	I _y = 15077000 mm ⁴		2500	2290									
EC-1630	Z _x = 235900 mm ³		3000	2790									
EC-1635	Z _y = 201000 mm ³ Wr = 0.1034 (N / kg) is special rolling resistance		3500	3290									
EC-2020	A = 4570 mm ²	80 kN	2000	1740	200	75	130	25	195	250	165	210	100
EC-2025	I _x = 43493000 mm ⁴		2500	2240									
EC-2030	I _y = 23488000 mm ⁴		3000	2740									
EC-2035	Z _x = 347900 mm ³ Z _y = 279600 mm ³ Wr = 0.0913 (N / kg) is special rolling resistance		3500	3240									
EC-2520	A = 7200 mm ²	100 kN	2000	1680	250	80	160	30	245	300	185	235	125
EC-2525	I _x = 93650000 mm ⁴		2500	2180									
EC-2530	I _y = 44056000 mm ⁴		3000	2680									
EC-2535	Z _x = 624400 mm ³ Z _y = 521400 mm ³ Wr = 0.082 (N / kg) is special rolling resistance		3500	3180									



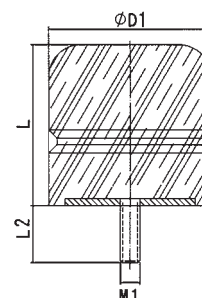
Model	Section coefficients	Max. Wheel Load	Length (L)	Wheel Base	ØD	Groove	B	C	F	H	W	Wa	Fa
EC-3225	A = 13760 mm ² I _x = 323520000 mm ⁴	120 kN	2500	2100	320	80	200	30	280	400	200	260	125
EC-3230	I _y = 152715000 mm ⁴ Z _x = 1617600 mm ³		3000	2600									
EC-3235	Z _y = 117500 mm ³		3500	3100									
EC-3240	W _r = 0.0738 (N / kg) is special rolling resistance		4000	3600									
EC-4030	A = 20280 mm ² I _x = 737071000 mm ⁴	180 kN	3000	2550	400	85	240	35	355	500	240	300	160
EC-4035	I _y = 301537500 mm ⁴ Z _x = 2947280 mm ³		3500	3020									
EC-4040	Z _y = 2010250 mm ³		4000	3520									
EC-4045	W _r = 0.0675 (N / kg) is special rolling resistance		4500	4020									
EC-5030	A = 30200 mm ² I _x = 1566427000 mm ⁴	225 kN	3000	2420	500	90	290	40	440	600	260	335	200
EC-5035	I _y = 555713000 mm ⁴ Z _x = 5221400 mm ³		3500	2920									
EC-5040	Z _y = 3317700 mm ³		4000	3420									
EC-5045	W _r = 0.062 (N / kg) is special rolling resistance		4500	3920									

Remork: 1. Above groove is standard, special size is available on request.
2. The material of wheel, bearing and rail size affect the wheel load.

Crane Bumper

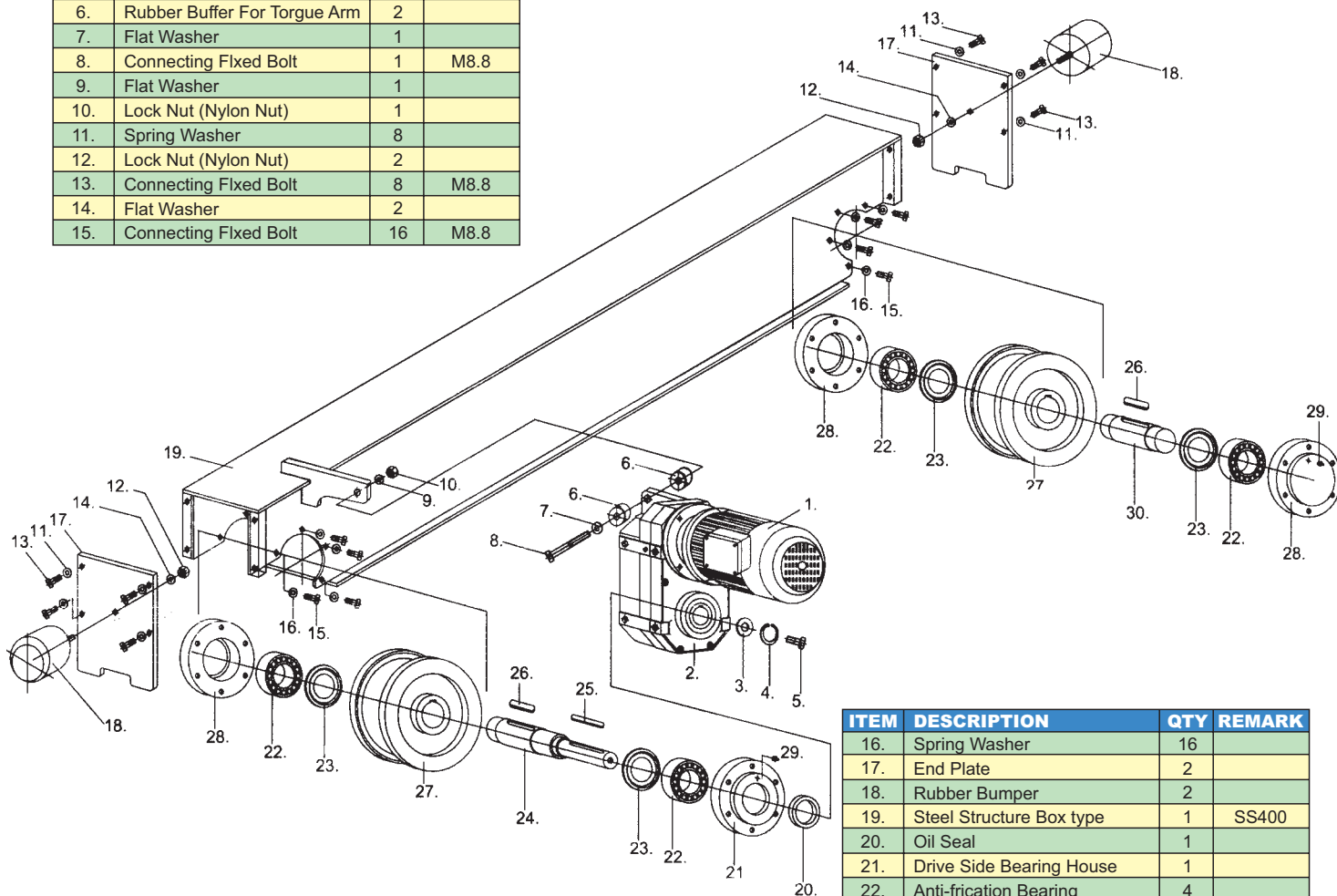
Dimensions in (mm)

TYPE	øD1	L	L2	M1	max. deflection
BF-75-75	75	75	35	M12	55
BF-100-100	100	100	35	M12	75
BF-125-125	125	125	50	M16	95
BF-160-160	160	160	50	M16	120



TOP RUNNING END CARRIAGE

ITEM	DESCRIPTION	QTY	REMARK
1.	Drive Motors & Disc Brake	1	
2.	Hollow Shaft Geared Unit	1	
3.	Connecting Ring	1	
4.	Hole use C Ring	1	
5.	Connecting Flxed Bolt	1	M8.8
6.	Rubber Buffer For Torgue Arm	2	
7.	Flat Washer	1	
8.	Connecting Flxed Bolt	1	M8.8
9.	Flat Washer	1	
10.	Lock Nut (Nylon Nut)	1	
11.	Spring Washer	8	
12.	Lock Nut (Nylon Nut)	2	
13.	Connecting Flxed Bolt	8	M8.8
14.	Flat Washer	2	
15.	Connecting Flxed Bolt	16	M8.8



ITEM	DESCRIPTION	QTY	REMARK
16.	Spring Washer	16	
17.	End Plate	2	
18.	Rubber Bumper	2	
19.	Steel Structure Box type	1	SS400
20.	Oil Seal	1	
21.	Drive Side Bearing House	1	
22.	Anti-friction Bearing	4	
23.	NIL OS-Ring	4	
24.	Drive Wheel Shaft	1	
25.	Parallel Key	1	
26.	Parallel Key	2	
27.	Alloy Steel Wheel	2	
28.	Bearing House	3	
29.	Grease-lubricated Nipple	4	
30.	Wheel Shaft		

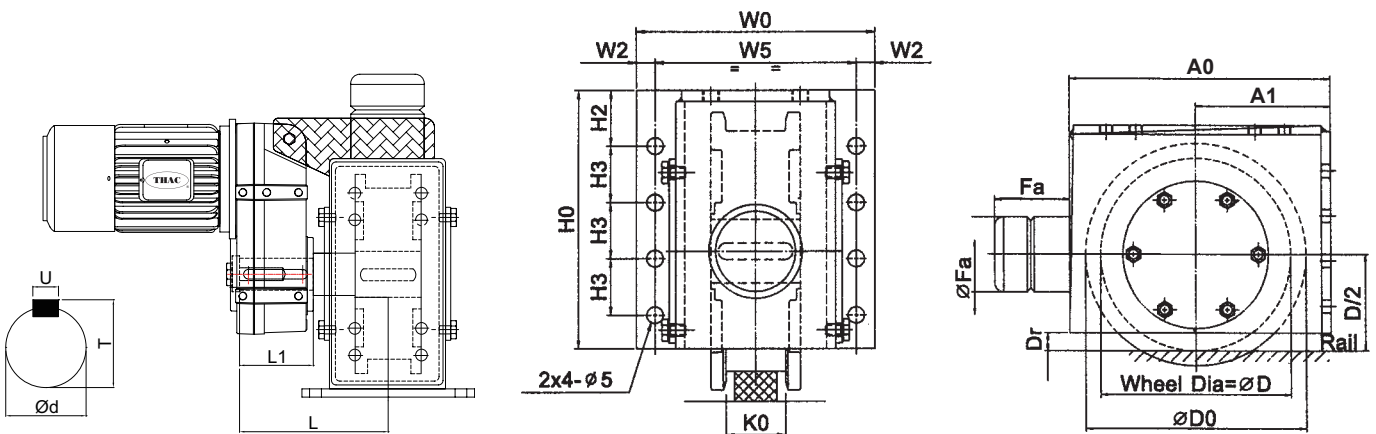
The Wheel block system is an advanced rail Mounted range designed for moving loads at variable speeds and is the ideal choice for most handing operations.

The wheel block travel units system is precision engineered for outstanding performance and minimal maintenance proven under full dynamic load tests. Stringent testing and multi-stage quality control ensures maximum safety and reliability under the toughest service condition.

- Size ranges for wheel load up to 180 kN.
- Designed to allow for ease of maintenance insitu.
- Alloy steel (JIS-S45C) ravel wheel reduces friction between wheel flanges and rails giving less wear than normally encountered with other materials.
- Heavy duty steel housing protects the bearing assembly from damage and dirt.
- Torque arm, connecting parts and buffer are easily fitted.
- Rapid fitting and removal for all connection variants.
- The perfect match for the axle drive system.

Axle Drive Assembly

Wheel block	Combined with Gear	Shaft for Key					Shaft for Spline	L
		d	T	U	L	L1		
BW-12	HG2	25	28	8	198	100	25-1.25*30*18	198
BW-16	HG2	25	28	8	205	100	25-1.25*30*18 30-1.25*30*22	205
	HG3	30	33	8	210	110	30-1.25*30*22	210
BW-20	HG2	25	28	8	215	100	30-1.25*30*22	215
	HG3	30	33	8	220	110	30-1.25*30*22 35-2*30*16	220
	HG4	45	48.5	14	240	125	45-2*30*21	240
BW-25	HG3	-	-	-	253	110	35-2*30*16	233
	HG4	45	48.5	14	253	125	45-2*30*21	253
	HG5	55	59	16	293	170	55-2*30*26	293
BW-32	HG4	45	48.5	14	260	125	45-2*30*21	260
	HG5	55	59	16	300	170	55-2*30*26	300
	HG6	70	74.5	20	320	185	70-2*30*34	320
BW-40	HG5	55	59	16	318	170	55-2*30*26	318
	HG6	70	74.5	20	338	185	70-2*30*34	338



Wheel Block	Wheel Load kN	Travel Wheel D	Dimensions in (mm)																	
			Ao	A1	A2	A3	A5	A6	Do	Dr	Ho	H2	H3	S	Ko	Fa	Wo	W2	W5	M*P
BW-12	35	125	200	100	40	30	60	80	155	10	150	40	30	14	60	75	190	15	160	M12*P1.75
BW-16	50	160	235	120	40	30	100	100	190	20	180	50	35	14	65	75	220	15	190	M12*P1.75
BW-20	80	200	280	145	50	35	120	120	240	30	220	50	45	18	75	100	260	25	210	M16*P2.0
BW-25	100	250	350	180	65	40	150	120	290	30	260	75	50	18	80	100	280	25	230	M16*P2.0
BW-32	120	320	440	220	75	50	200	120	370	35	350	75	75	22	80	125	320	30	260	M20*P2.5
BW-40	180	400	580	290	90	50	300	120	450	40	440	100	100	22	85	125	360	30	300	M20*P2.5

NOTES:Dimensions are for estimating purposes only, and are not certified dimension.



WARNING:

The equipment shown in this catalogue is intended for industrial use only and should not be used to lift, support, or otherwise transport people, or to suspend loads over people.



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