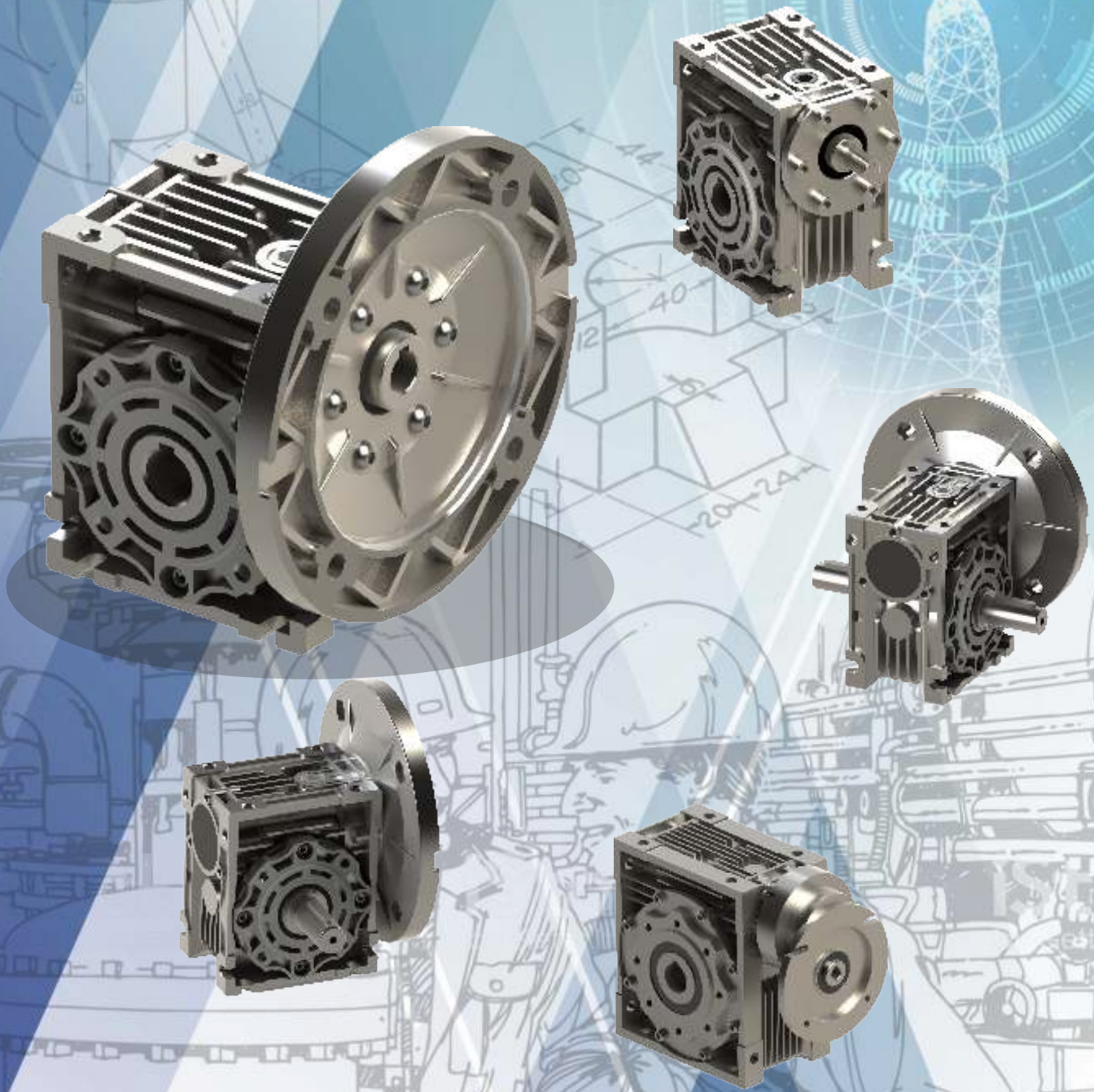
tough nut GEAR

JK Fenner

Powered by innovation, Driven by excellence

Smart Integrated Engineering Solutions



Aluminium Worm Gear Reducers

Engineering Business

Smart Integrated / Engineering Solutions

JK Fenner

Powered by innovation, Driven by excellence

More POWER at your fingertips!





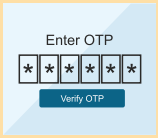


Step 1

Scan the QR code on the product

Step 2

Receive the OTP



Step 3

Get the Authentic details of the product



• Pulleys • Couplings • Gear Boxes • Vibro Motors

Instant Verification | User friendly interface...

Digital connect through JKFDART (Feedback on Products & Services)



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GET IT ON Google Play | Download on the App Store

JKFDART ▶ Register on App ▶ Verify ▶ Enter your Feedback ▶ Team will respond shortly

CONTENT

Introduction

1.1	JK Fenner Company Profile	4
1.2	Product Overview	4
1.3	Operation Manual	5
1.4	General Problems & Improvements	7

Product Information and Tables

2.1	Variants	8
2.2	Direction Of Shaft	9
2.3	Exploded View & Parts List	10
2.4	Order Code For Aluminum Worm Gear Unit	11
2.5	Mounting Positions	12
2.6	Lubrication	14
2.7	Predisposition	15
2.8	Information of Selection Tables	16

Aluminum Worm Gear Unit H Series

3.1	1400RPM Selection Tables	17
	3.1.1 Input Flange Type (Single Reduction)	17
	3.1.2 Input Flange +PC Type	27
	3.1.3 Input Flange Type (Double Reduction)	30
	3.1.4 Solid Input Type	40
3.2	Dimension Sheets (Metric)	42
3.3	Dimension Sheets-Double Reduction (Metric)	60
3.4	Dimension Sheets-Input Quill Depth	61
3.5	Accessories	62
3.7	Small Motor	63
3.8	Dimension Sheets (Inch)	64

1.1 JK Fenner Company Profile

For over 150 years the name JK Fenner has been synonymous with the best in Mechanical Power Transmission, Sealing and Fluid Transfer Solutions. JK Fenner products, such as Transmission Belts, Oil Seals, Hoses, Pulleys, Couplings, Gear Boxes, Geared Motors, Aerators, Rubber Rolls, Belt Tensioners, Control Cables & Engine Mounts have been trusted for performance and reliability, efficiency and economy.

Today J.K, Fenner (India) Ltd is a member of the multi-crore JK Group, one of the leading industrial houses of India. This association since 1987 has put JK Fenner on the speedy growth and consolidated its position as dominant market leader. JK Fenner commenced operation in India in 1929 and put up their first manufacturing unit at Madurai in Tamilnadu in the year 1956. Currently there are 5 state-of-the-art manufacturing and 3 R&D units, situated over 5 different locations. 12 branches, and two Textile units in Karur & Salem in TN. JK Fenner has a large network of 900 Channel Partners and over 100 Application & Design engineers. JK Fenner exports to more than 50 countries globally.

JK Fenner has been maintaining highest quality standards by using the best materials available and state-of-the-art manufacturing process. JK Fenner's manufacturing facilities are ISO 9001, TS 16949 for quality, OHSAS 18001 for Health and Safety 6, ISO 14001 for Environmental protection certified.

1.2 Product Overview

- High accuracy.
- Enlarged facial area for a better heat radiating and durability promoting.
- Light duty and compact design.
- Less expenses on maintaining.
- Oil change is an optional.
- Capability of back-drivable.
- Higher strength design on hollow output shaft.
- Enhanced input shaft made of Cr-Mo alloy steel under carburized heat treatment.
- Numerous accessories with a wider collocation.
- Transmission of power with minimized vibration and noise level.
- Aluminum alloy casting for size #30-#90 and cast-iron casting for size #110-#150.
- General design on dimensions for a higher compatibility.
- Extensive applicability.
- Available for universal mounting positions.
- Rusting free from power coating casting parts.

1.3 Operation Manual

This operation manual is to help you install and operate speed reducer correctly. To avoid damages to the speed reducers, proper installation and operation is very crucial. This manual also includes official recommendations on maintenance for an extended lifespan of speed reducers.

Every JK Fenner speed reducer passed strict inspection and testing before being properly packaged for shipping. Upon receipt of the speed reducer, please check for any shortage or damage of parts during transit. Please be sure to contact JK Fenner for identification of responsible carrier and made record of the issue. We are committed to excellence in quality and devoted to solving problems for our clients.

I. INSTALLATION

1. Flexible couplings are preferred when input shaft connects directly to the motor; gear couplings are preferred on the output shaft's connection to the application.
2. Install on a stable base with good air ventilation; the accessibility of oil filling / draining should be considered.
3. The input shaft of the reducer and the motor shaft should be in alignment within the tolerance allowance.
4. After installation, please turn the input shaft manually first to check for any locking.
5. No-load running test should be performed first; any abnormality should be corrected prior to regular operation.

II. LUBRICATION

1. For an extension on life cycle of gearbox, the first oil change should be performed after 500 hrs of operation; subsequent oil change is needed every 2,500 hrs of operation. Nevertheless, a regular check on oil level and conditions before the next oil change are recommended.
2. Please fill only with compatible specifications of oil and do not mix oil of different specifications in a single unit.
3. The interior of the reducer should be flushed and drained before filling with fresh oil.
4. Please shut the reducer immediately for inspection if the temperature rises above 80°C or any abnormal noise occurred. Restart only after the issues identified and cleared.
5. Lubricant recommendation: MOBIL Gear 632, SHELL Omala 320, MOBIL MobilubeHD8OW-90, SHELL Spirax E.P 90.
6. Unless specified otherwise by the customer, every JK Fenner speed reducer is supplied with appropriate amount of lubrication according to different installation position before shipping. If customer prefers to fill in the lubricant oil post shipment, please follow the instruction section of this catalog.

III. STORAGE

1. If the speed reducer is not for immediate installation, please keep the unit away from humidity and heat sources. After extended period of storage, please contact our service personnel for instruction on restoring the original performance prior to installation.

IV. ATTACHMENTS THE PARTS ON REDUCER'S SHAFT

1. Notice: Avoid heavy impact on shafts! It may cause bearing damages and undermines bearing performances. If bearings are to be replaced, we recommend heating method, which heats the bearing above 80 C, that would allow a clear fit on the shafts and reduce the damage to the bearing. For the tolerance of shaft's diameter, please refer to the specification in catalog.

2 While installing the coupling, make sure to check the alignment of coupling and shaft of speed reducer properly to eliminate the damage on bearings and reduce to vibration frequency and abnormal wear.

3. To avoid overload on the bearings of output shaft, please refer to the OHL (overhung loading) in catalog. For exceeding axial load, please contact our service engineer for consultation.

4. The actual application of following factors such as input and output speed, direction of rotation, installation site and over axial and radial loading should be carefully examined.

V. Installation & Operation

1. The underlying factors should be taken into consideration:

*Ambient temperature below 40'C

* Proper positions for oil plug and drain plug

*Sufficient space for periodical inspection, maintenance, and replacement

2. It is necessary for the unit to be installed on a flat, stable and rigid base for accurate alignment to prevent damages to the reducer's housing.

3. Before installation, please check the input horse power and ratio to be the same as the punched name plate of reducer.

VI. Caution

Caution! The power should be turned off before removal or replacement of the reducer.

1. Oil level and quality lubricant is key point of daily maintenance. Please refer to our suggestion to change the lubricant periodically according to operation frequency site situation.

2. Check the alignment of coupling, the tightness of chain, and nuts and keep the reducer away from excessive dust and grease externally .

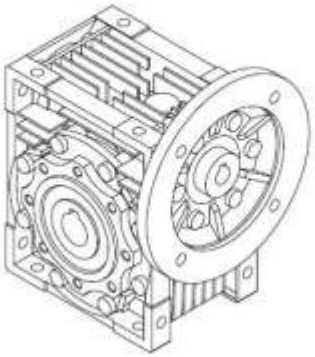
1.4 General Problems & Improvements

The following lists are general problem situations. In case that other problems happen, please contact us directly to get more information.

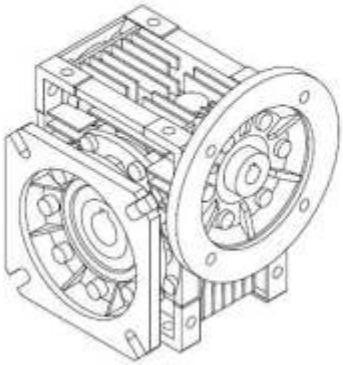
CAUSE	REASON	IMPROVEMENT
I. Overheat	1. Overload 2. Lubricant oil overfill or shortage 3. Improper lubricant oil 4. Extra friction on oil seal(lack of lubricant)	1. Adjust to proper loading 2. Add lubricant to the level of oil gauge 3. Chang proper lubricant oil 4. Lip lubricant at oil seal
II. Noise	1. Consistent noise { improper gears contact; bearing damaged 2. Screaming noise { bearing gap too small; lubricant oil shortage 3. Inconsistent noise { some object insert; bearing damaged	1. { Repair gears; Replace bearing 2. { Replace bearing; Fill in lubricant oil 3. { Remove debris & replace lubricant oil: Replace bearing
III. Vibration	1. Worm gear wear 2. Debris inside 3. Bearing worn-out or damaged 4. Bolt loose	1. Replace worm gear 2. Remove debris & replace lubricant oil 3. Replace bearing 4. Tighten bolt
IV. Oil Leakage	1. Oil seal damage 2. Gasket damage 3. Loose covers or flange	1. Replace Oil Seal 2. Replace gasket 3. Tighten the bolts
V. Input and Output Shaft Fail	1. Worm gear-bound caused by overheat 2. Bearing damage 3. Debris between gears	1. Adjust or replace gears 2. Replace bearing 3. Remove debris, clean inside then replace lubricant oil
VI. Input shaft fail to drive output shaft	1. Worm gear wear 2. Damage to key connecting gear and output shaft 3. Input shaft rupture 4. Output shaft rupture	1. Replace gears 2. Replace Key 3. Replace input shaft 4. Replace output shaft
VII. Gear Worn-out	1. Overload 2. Improper lubricant oil 3. Lubricant oil shortage 4. Excessive ambient temperature	1. Adjust to proper loading 2. Change proper lubricant oil 3. Refill lubricant oil 4. Ventilation Improvement

2.1 Variants

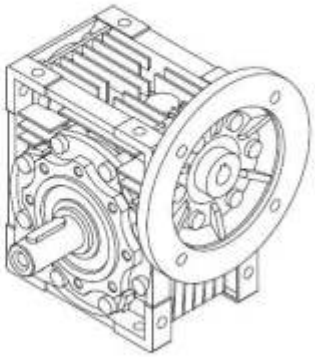
Input Flange



FW
Fenner Worm

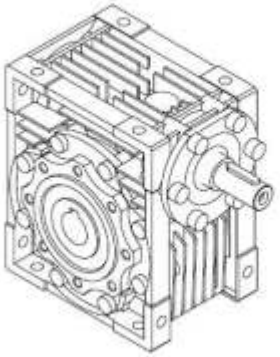


FWOF
Output Flange

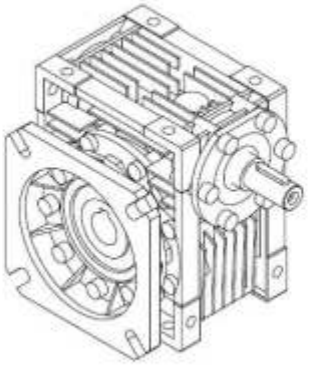


FWSO
Solid Output

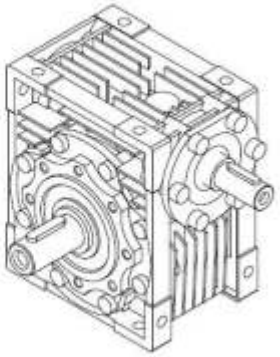
Solid Input Shaft



FWSI
Solid Input

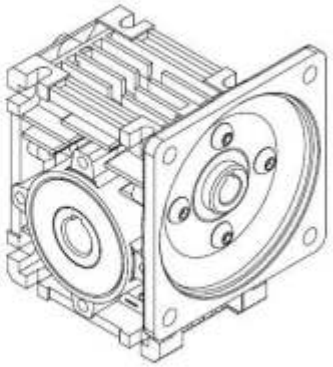


FWSIOF
Solid Input Output Flange

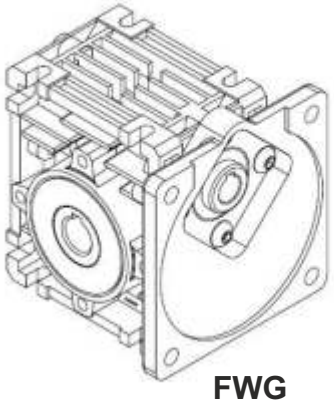


FWSISO
Solid Input Solid Output

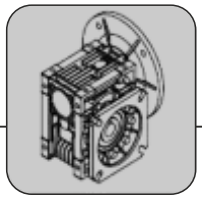
Small Motor Coupling



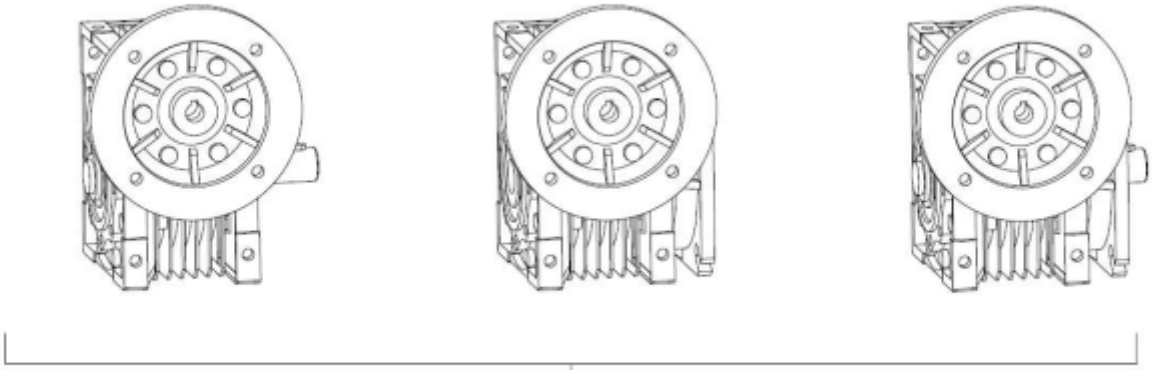
FWF
F Type Flange



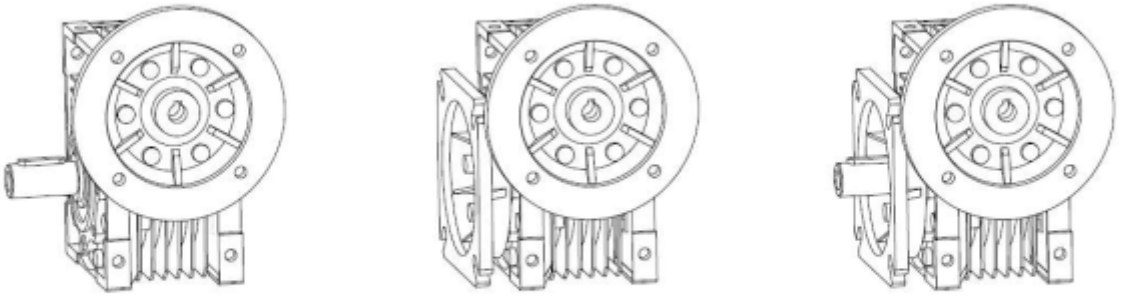
FWG
G Type Flange



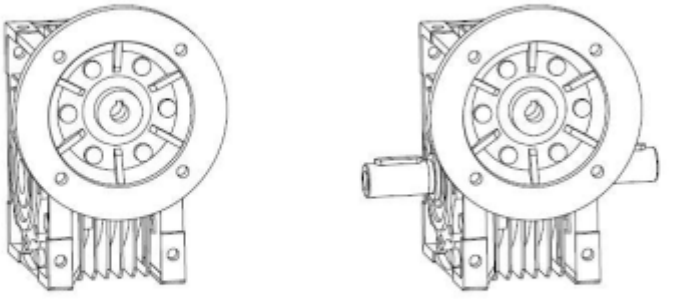
2.2 Direction of Shaft



A

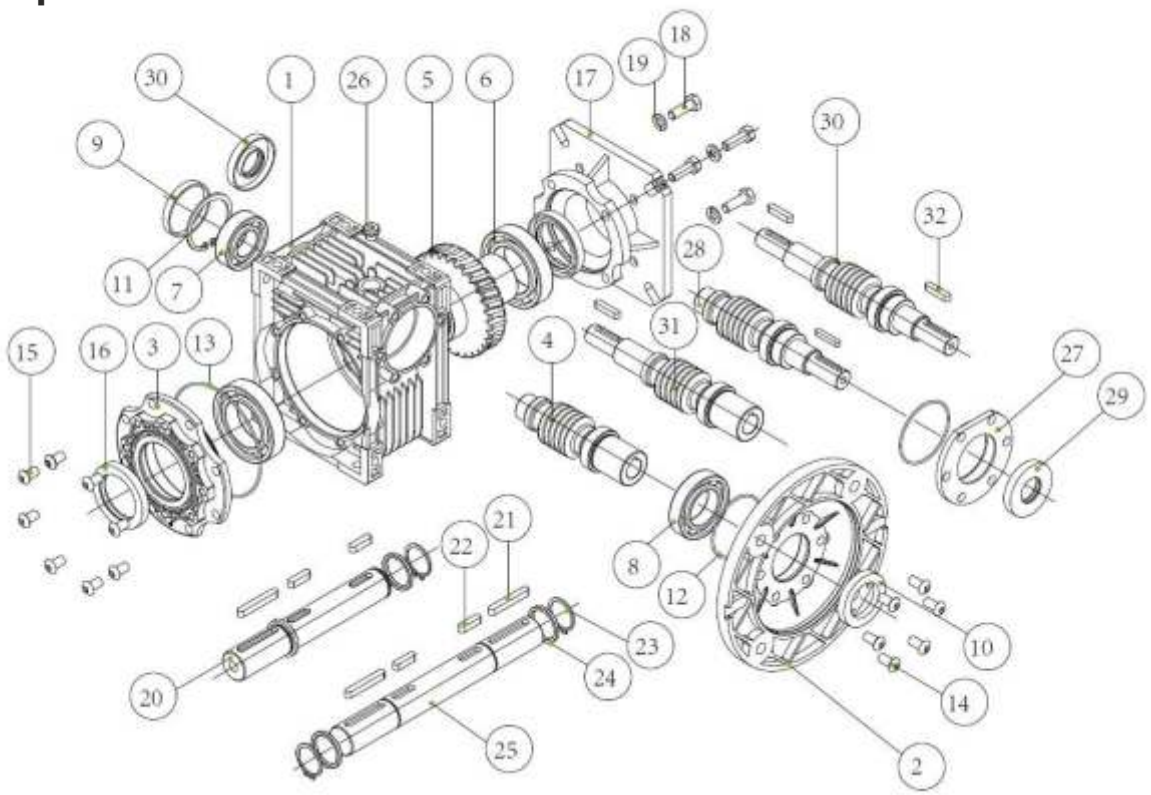


B

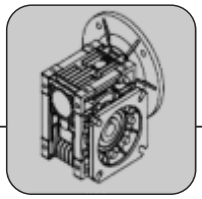


C

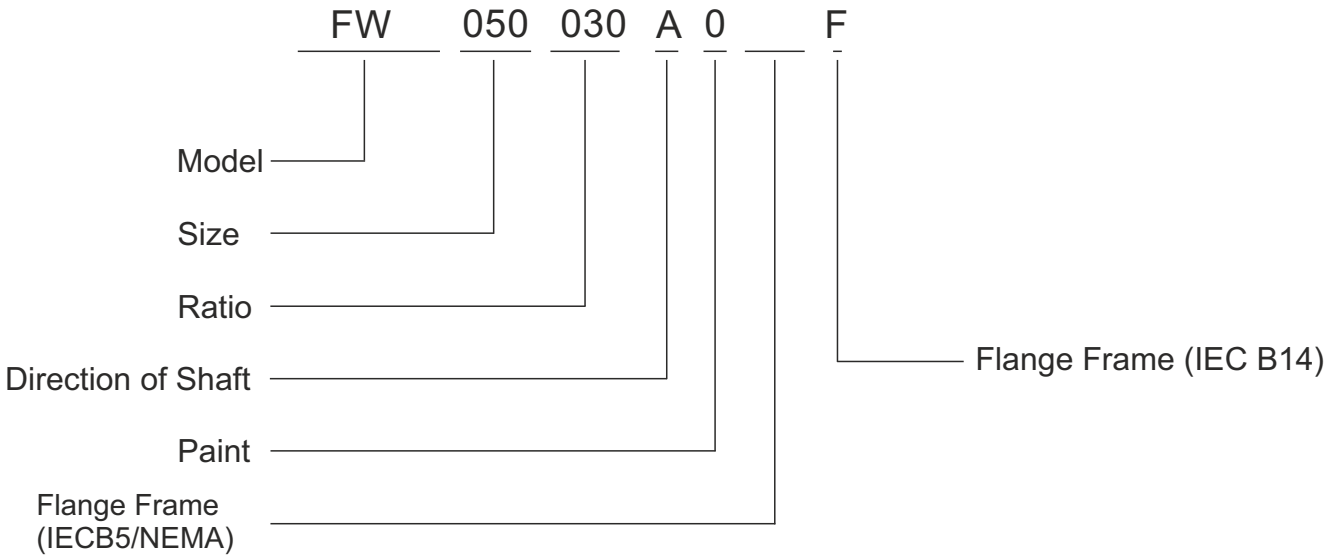
2.3 Exploded Views & Parts List



Item	Part Name	Item	Part Name
1	Housing	17	Output flange
2	Input flange	18	Screw
3	Cover	19	Washer
4	Input shaft	20	Output shaft
5	Worm gear	21	Key
6	Bearing	22	Key
7	Bearing	23	C - ring
8	Bearing	24	Spacer
9	cover	25	Output shaft
10	Oil seal	26	Filler
11	C - ring	27	Input cover
12	O - ring	28	Input shaft
13	O - ring	29	Oil seal
14	Screw	30	Input shaft
15	Screw	31	Input shaft
16	Oil	seal	Key



2.4 Order Code



Model

FW	(030-150)
FWOF	(030-150)
FWSO	(030-150)
FWSI	(030-150)
FWSIOF	(030-150)
FWF	(030-040)
FWG	(030-040)

Size

030 : 30	090 : 90
040 : 40	110: 110
050 : 50	130 : 130
063 : 63	150 : 150
075 : 75	

Ratio

05: 1/5

≀

100: 1/100

Flange Frame

IEC Standard 4-Pole

00: 1/4 HP	- 63 B5
FW: 1/2 HP	- 71 B5
01 : 1 HP	- 80 B5
02 : 2 HP	- 90 B5
03 : 3 HP	- 100 B5
05 : 5 HP	- 112 B5
07 : 7.5HP	- 132 B5
10: 10HP	- 132 B5
15 : 15HP	- 160 B5

NEMA Standard

01: 56C

02:143T

04:182/184T

06:213/215T

08:254/256T

Direction of shaft

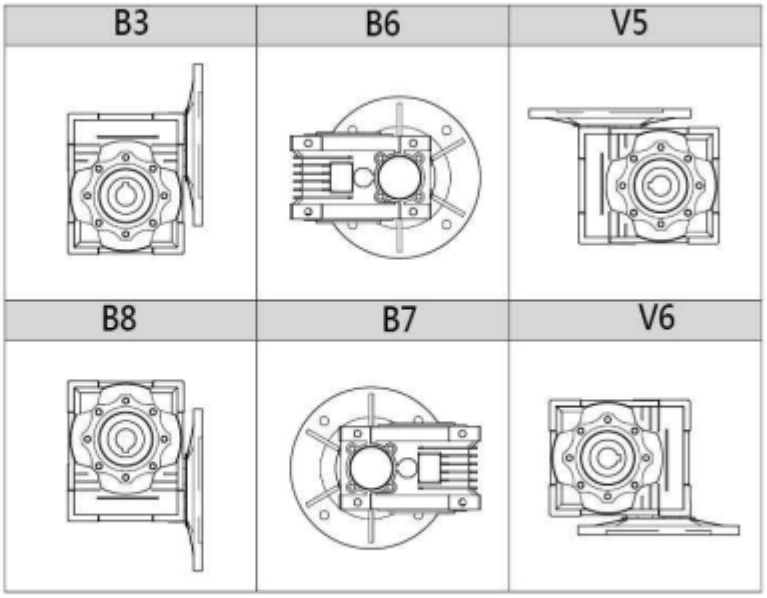
A-B-C

Paint

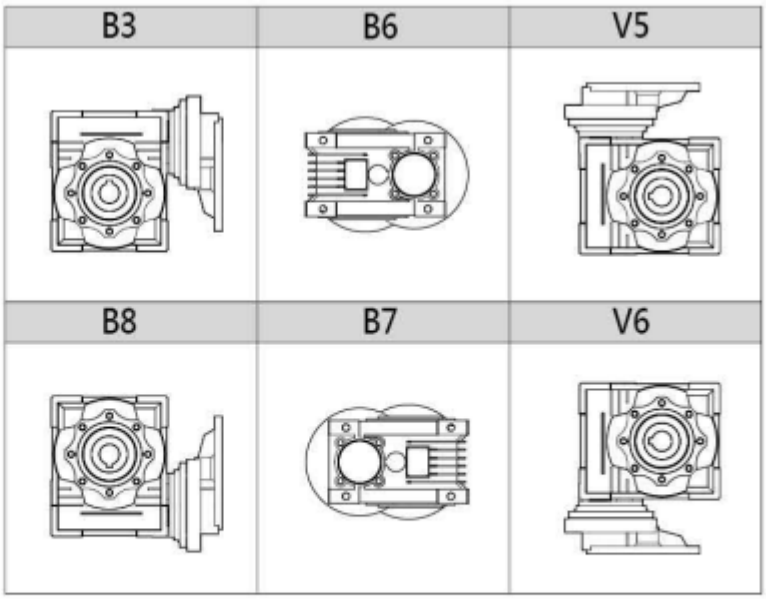
Metallic Aluminium

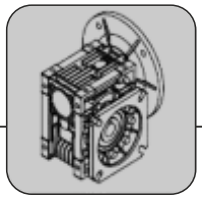
2.5 Mounting Positions

FW

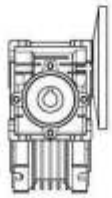
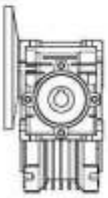
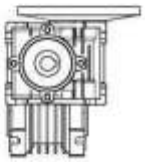
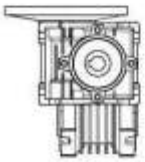
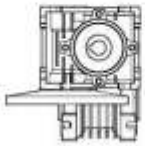
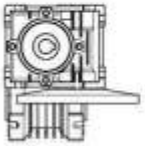
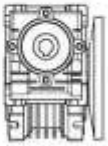
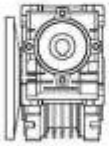


FWHW





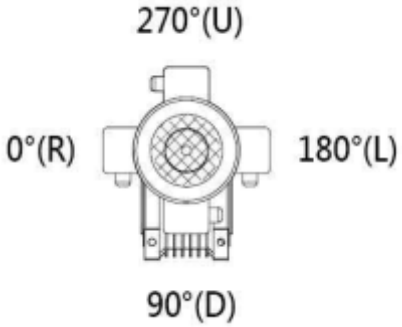
FWX

AS1	AS2	VS1	VS2
			
PS1	**PS2**	**BS1**	**BS2**
			

While motor mounting position is vertically or have any other specifit request, please contact with sales representative.

Position of Terminal Box

Standard position “U”, unless specific requirements





2.6 Lubrication

Lubricant Volume & Lubricant Selection

Size	Ambient Temperature	
	Mineral ISO/VG/Mobile/Omala 320	Synthetic ISO/VG/Mobile/Omala 320
30-90	X	-25°C-50°C
110-150	-5°C-40°C	-25°C-50°C

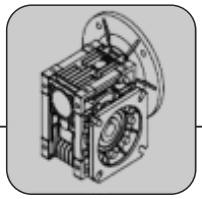
HH..

Lubricant Volume(ml)						
Size	B3	B6	B7	B8	V5	V6
30	40	35	35	30	50	50
40	80	70	70	60	100	100
50	100	85	85	75	125	125
63	250	220	220	190	310	310
75	500	430	430	370	620	620
90	800	700	700	600	1000	1000
110	3000	2500	2200	2500	3000	2200
130	4500	3500	3100	3500	4500	3300
150	7000	5400	5100	5400	7000	5100

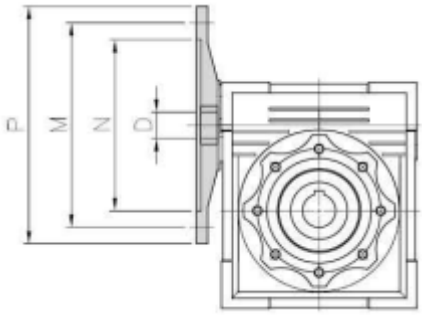
HW

Lubricant Volume(ml)						
Size	B3	B6	B7	B8	V5	V6
HW63	50					
HW71	70					
HW80	150					
HW90	160					

RECOMMENDATIONS



2.7 Predisposition



Size	IEC	N	M	P	I											
					5	7.5	10	15	20	25	30	40	50	60	80	100
30	63B5	95	115	140	11	11	11	11	11	11	11	11	11	-	-	-
	63B14	60	75	90												
	56B5	80	100	120	9	9	9	9	9	9	9	9	9	9	9	-
	56814	50	65	80												
40	71B5	110	130	160	14	14	14	14	14	14	14	14	-	-	-	-
	71814	70	85	105												
	6385	95	115	140	11	11	11	11	11	11	11	11	11	11	11	11
	63B14	60	75	90												
	56135	80	100	120	-	-	-	-	-	-	-	-	9	9	9	9
50	80135	130	165	200	19	19	19	19	19	19	19	-	-	-	-	-
	80B14	80	100	120												
	7185	110	130	160	14	14	14	14	14	14	14	14	14	14	14	-
	71814	70	85	105												
	6385	95	115	140	-	-	-	-	-	-	-	11	11	11	11	11
63	9085	130	165	200	24	24	24	24	24	24	24	-	-	-	-	-
	90814	95	115	140												
	80B5	130	165	200	19	19	19	19	19	19	19	19	19	19	19	19
	801314	80	100	120												
	7185	110	130	160	-	-	-	-	-	-	-	14	14	14	14	14
	71B14	70	85	105												
75	100/	180	215	250	-	28	28	28	-	-	-	-	-	-	-	-
	100/	110	130	160												
	9085	130	165	200	-	24	24	24	24	24	24	24	-	-	-	-
	90814	95	115	140												
	80135	130	165	200	-	-	-	-	19	19	19	19	19	19	19	19
	80814	80	100	120												
	71B5	110	130	160	-	-	-	-	-	-	-	-	14	14	14	14
90	100/	180	215	250	-	28	28	28	28	28	28	-	-	-	-	-
	100/	110	130	160												
	9085	130	165	200	-	24	24	24	24	24	24	24	24	24	-	-
	90814	95	115	140												
	8085	130	165	200	-	-	-	-	-	-	-	19	19	19	19	19
	80B14	80	100	120												
110	13265	230	265	300	-	38	38	38	38	-	-	-	-	-	-	-
	132B14	130	165	200												
	100/	180	215	250	-	28	28	28	28	28	28	28	28	28	-	-
	100/	110	130	160												
	9065	130	165	200	-	-	-	-	-	24	24	24	24	24	24	24
	90814	95	115	140												
	8085	130	165	200	-	-	-	-	-	-	-	-	-	-	19	19
130	132B5	230	265	300	-	38	38	38	38	38	38	38	-	-	-	-
	132B14	130	165	200												
	100/	180	215	250	-	-	-	-	-	28	28	28	28	28	28	28
	100/	110	130	160												
	9085	130	165	200	-	-	-	-	-	-	-	-	-	-	24	24
	90614	95	115	140												
110	160B5	250	300	350	-	42	42	42	42	-	-	-	-	-	-	-
	13265	230	265	300	-	-	-	-	38	38	38	38	38	-	-	-
	132B14	130	165	200												
	100/	180	215	250	-	-	-	-	-	-	-	-	28	28	28	28

2.8 Information of Selection Tables

FW / FWSI / FWSO...



[1] Rated power driving motor

[2] Output speed

[3] Output torque

[4] Gear unit reduction ratio

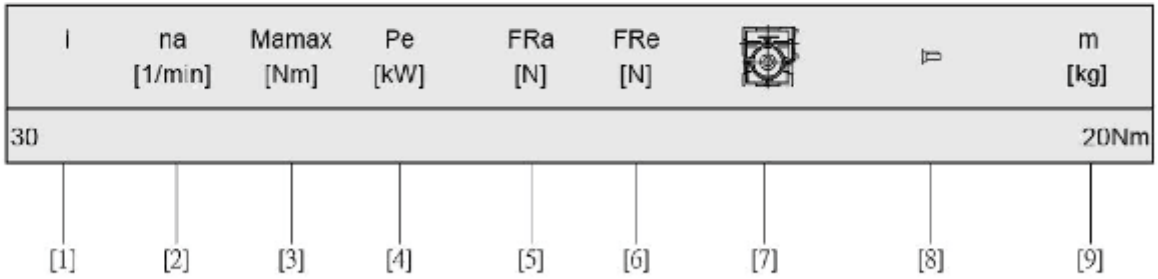
[5] Permissible overhung load output side

[6] Service factor

[7] Gear unit size

[8] Motor type

[9] Weight (Kg)



[1] Gear unit reduction ratio

[2] Output speed

[3] Maximum permitted output torque

[4] Calculated drive power of the gear unit

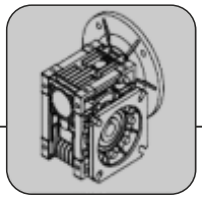
[5] Permitted overhug load at maximum output torque

[6] Permitted overhung load on the iput side

[7] Gear unit size

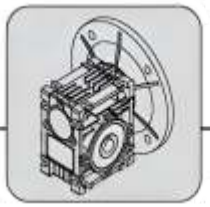
[8] Input shaft diameter

[9] Weight (Kg)



3.1 FW+Motor Input Flange Type (Single Reduction)

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
0.06	280	1.8	5	597	10.7			
(0.08HP)	186.7	2.6	7.5	683	7.3			
	140	3.4	10	752	5.7			
	93.3	4.8	15	861	4.0			
	70	6	20	948	3.0			
	56	6.9	25	1021	3.2	30	56	1.2
	46.7	7.9	30	1085	2.7			
	35	9.5	40	1194	2.0			
	28	12	50	1286	1.5			
	23.3	12	60	1367	1 3			
	17.5	16	80	1504	0.8			
	28	13	50	2475	3.3			
	23.3	15	60	2630	2.7	40	56	2.3
	17.5	18	80	2895	1.8			
	14	19	100	3118	1.5			
0.09	280	2.7	5	597	7.1			
(0.12HP)	186.7	3.9	7.5	683	4.9			
	140	5	10	752	3.8			
	93.3	7.1	15	861	2.7			
	70	9	20	948	2.0	30	56	1.2
	56	10	25	1021	2.1			
	46.7	12	30	1085	1.8			
	35	14	40	1194	1.3			
	28	18	50	1286	1.0			
	23.3	18	60	1367	0.9			
	28	19	50	2475	2.2			
	23.3	22	60	2630	1.8	40	56	2.3
	17.5	27	80	2895	1.2			
	14	29	100	3118	1.0			
0.12	280	3.6	5	597	5.3			
(0.16HP)	186.7	5.2	7.5	683	3.7			
	140	6.7	10	752	2.8			
	93.3	9.5	15	861	2.0	30	63	1.2
	70	12	20	948	1.5			
	56	14	25	1021	1.6			
	46.7	16	30	1085	1.3			



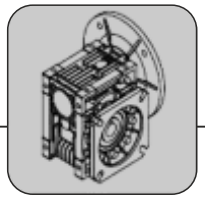
Aluminium Worm Gear Reducers

Selection Tables [kW] FW

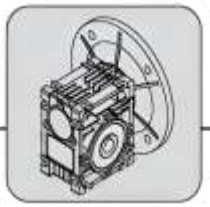
1400 Input Rpm

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	35	19	40	1194	1.0			
	28	24	50	1286	0.8			
	70	13	20	1824	3.3			
	56	16	25	1964	2.5			
	46.7	17	30	2087	2.8			
	35	22	40	2298	2.1	40	63	2.3
	28	25	50	2475	1.7			
	23.3	29	60	2630	1.3			
	17.5	36	80	2895	0.9			
	14	39	100	3118	0.8			
	28	26	50	3397	2.9			
	23.3	30	60	3610	2.4	50	63	3.5
	17.5	35	80	3973	1.8			
	14	41	100	4280	1.3			
0.18	280	5.3	5	597	3.6			
(0.25HP)	186.7	7.8	7.5	683	2.4			
	140	10	10	752	1.9			
	93.3	14	15	861	1.3	30	63	1.2
	70	18	20	948	1.0			
	56	21	25	1021	1.1			
	46.7	24	30	1085	0.9			
	93.3	15	15	1657	2.9			
	70	19	20	1824	2.2			
	56	23	25	1964	1.7			
	46.7	26	30	2087	1.8	40	63	2.3
	35	32	40	2298	1.4			
	28	38	50	2475	1.1			
	23.3	44	60	2630	0.9			
	35	34	40	3153	2.4			
	28	40	50	3397	1.9			
	23.3	45	60	3610	1.6	50	63	3.5
	17.5	53	80	3973	1.2			
	14	62	100	4280	0.9			
0.25	280	7.6	5	1149	4.8			
(0.34HP)	186.7	11	7.5	1315	3.8			
	140	14	10	1447	3.0			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW



Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	93.3	21	15	1657	2.1	40	71	2.3
	70	27	20	1824	1.6			
	56	33	25	1964	1.2			
	46.7	36	30	2087	1.3			
	35	45	40	2298	1.0			
	70	27	20	2503	2.8			
	56	33	25	2696	2.2			
	46.7	37	30	2865	2.4			
	35	47	40	3153	1.8	50	71	3.5
	28	55	50	3397	1.4			
	23.3	62	60	3610	1.2			
	17.5	74	80	3973	0.9			
	35	48	40	4122	3.0			
	28	57	50	4440	2.4			
	23.3	65	60	4719	2.0	63	71	6.2
	17.5	78	80	5193	1.6			
	14	89	100	5595	1.3			
	23.3	68	60	5569	3.0			
	17.5	83	80	6130	2.3	75	71	9
	14	96	100	6603	1.9			
0.37	280	11	5	1149	3.2			
(0.5HP)	186.7	17	7.5	1315	2.5			
	140	21	10	1447	2.1			
	93.3	31	15	1657	1.4	40	71	2.3
	70	40	20	1824	1.1			
	56	48	25	1964	0.8			
	46.7	54	30	2087	0.9			
	140	22	10	1987	3.6			
	93.3	32	15	2274	2.6			
	70	41	20	2503	1.9			
	56	49	25	2696	1.5	50	71	3.5
	46.7	55	30	2865	1.6			
	35	69	40	3153	1.2			
	28	81	50	3397	0.9			
	23.3	92	60	3610	0.8			
	56	50	25	3524	2.6			

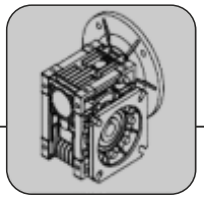


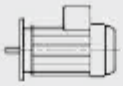
Aluminium Worm Gear Reducers

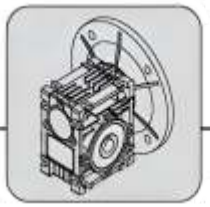
Selection Tables [kW] FW

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	46.7	57	30	3745	2.8			
	35	72	40	4122	2.0			
	28	85	50	4440	1.6	63	71	6.2
	23.3	96	60	4719	1.4			
	17.5	116	80	5193	1.1			
	14	132	100	5595	0.9			
	35	74	40	4865	3.0			
	28	88	50	5241	2.4			
	23.3	100	60	5569	2.0	75	71	9
	17.5	123	80	6130	1.5			
	14	142	100	6603	1.3			
0.55	280	17	5	1577	4.1			
(0.75HP)	186.7	25	7.5	1805	3.1			
	140	33	10	1987	2.4			
	93.3	47	15	2274	1.7	50	80	3.5
	70	60	20	2503	1.3			
	56	72	25	2696	1.0			
	46.7	82	30	2865	1.1			
	93.3	47	15	2973	3.0			
	70	61	20	3272	2.2			
	56	74	25	3524	1.7			
	46.7	85	30	3745	1.9	63	80	6.2
	35	106	40	4122	1.4			
	28	126	50	4440	1.1			
	23.3	143	60	4719	0.9			
	17.5	172	80	5193	0.7			
	56	76	25	4160	2.6			
	46.7	87	30	4421	2.7			
	35	110	40	4865	2.0			
	28	131	50	5241	1.6	75	80	9
	23.3	149	60	5569	1.3			
	17.5	183	80	6130	1.0			
	14	211	100	6603	0.9			
	35	114	40	5383	3.5			
	28	137	50	5799	2.7			
	23.3	157	60	6163	2.2	90	80	13

Aluminium Worm Gear Reducers
Selection Tables [kW] FW



Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	17.5	191	80	6783	1.5			
	14	225	100	7306	1.2			
	17.5	204	80	8571	2.5	110	80	21
	14	239	100	9232	2.0			
0.75	280	23	5	1577	3.0			
(1HP)	186.7	34	7.5	1805	2.3			
	140	45	10	1987	1.8			
	93.3	64	15	2274	1.3	50	80	3.5
	70	82	20	2503	0.9			
	56	99	25	2696	0.7			
	46.7	112	30	2865	0.8			
	140	45	10	2597	2.9			
	93.3	64	15	2973	2.2			
	70	84	20	3272	1.6			
	56	102	25	3524	1.3	63	80	6.2
	46.7	115	30	3745	1.4			
	35	145	40	4122	1.0			
	28	172	50	4440	0.8			
	93.3	66	15	3509	3.0			
	70	85	20	3862	2.5			
	56	103	25	4160	1.9			
	46.7	118	30	4421	1.9	75	80	9
	35	150	40	4865	1.5			
	28	179	50	5241	1.2			
	23.3	203	60	5569	1.0			
	17.5	250	80	6130	0.8			
	35	155	40	5383	2.5			
	28	187	50	5799	2.0			
	23.3	215	60	6163	1.6	90	80	13
	17.5	261	80	6783	1.1			
	14	307	100	7306	0.9			
	28	220	50	7328	3.0			
	23.3	226	60	7787	2.7	110	80	21
	17.5	278	80	8571	1.9			
	14	326	100	9232	1.5			
1.1	280	34	5	1980	3.0			

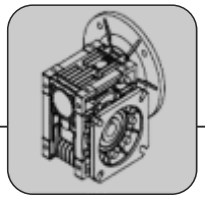


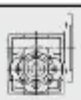
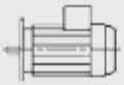
Aluminium Worm Gear Reducers

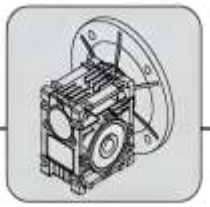
Selection Tables [kW] FW

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
(1.5HP)	186.7	50	7.5	2359	2.6			
	140	65	10	2597	2.0			
	93.3	94	15	2973	1.5	63	90	6.2
	70	123	20	3272	1.1			
	56	149	25	3524	0.9			
	46.7	169	30	3745	0.9			
	140	66	10	3065	3.0			
	93.3	97	15	3509	2.1			
	70	125	20	3862	1.7			
	56	152	25	4160	1.3	75	90	9
	46.7	173	30	4421	1.3			
	35	220	40	4865	1.0			
	28	263	50	5241	0.8			
	23.3	297	60	5569	0.7			
	70	128	20	4273	3.1			
	56	156	25	4603	2.4			
	46.7	178	30	4891	2.4			
	35	228	40	5383	1.7	90	90	13
	28	274	50	5799	1.4			
	23.3	315	60	6163	1.1			
	17.5	382	80	6783	0.7			
	35	237	40	6803	3.0			
	28	323	50	7328	2.0			
	23.3	332	60	7787	1.9	110	90	21
	17.5	408	80	8571	1.3			
	14	479	100	9232	1.0			
	17.5	414	80	11210	2.0	130	90	43.5
	14	487	100	12076	1.5			
1.5	280	46	5	1980	2.2			
(2HP)	186.7	68	7.5	2359	1.9			
	140	89	10	2597	1.5	63	90	6.2
	93.3	129	15	2973	1.1			
	70	167	20	3272	0.8			
	186.7	68	7.5	2785	2.7			
	140	90	10	3065	2.2			
	93.3	132	15	3509	1.5			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW



Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	70	170	20	3862	1.2	75	90	9
	56	207	25	4160	1.0			
	46.7	236	30	4421	1.0			
	35	300	40	4865	0.7			
	93.3	133	15	3882	3.0			
	70	174	20	4273	2.2			
	56	213	25	4603	1.8			
	46.7	243	30	4891	1.8	90	90	13
	35	311	40	5383	1.3			
	28	374	50	5799	1.0			
	23.3	429	60	6163	0.8			
	56	218	25	5816	3.1			
	46.7	245	30	6181	3.0			
	35	323	40	6803	2.2			
	28	440	50	7328	1.5	110	90	21
	23.3	453	60	7787	1.4			
	17.5	556	80	8571	0.9			
	14	653	100	9232	0.7			
2.2	186.7	100	7.5	2785	1.8			
(3HP)	140	132	10	3065	1.5			
	93.3	194	15	3509	1.0	75	100	9
	70	250	20	3862	0.8			
	56	303	25	4160	0.7			
	46.7	347	30	4421	0.7			
	186.7	101	7.5	3081	3.2			
	140	133	10	3391	2.6			
	93.3	196	15	3882	2.0			
	70	255	20	4273	1.5	90	100	13
	56	312	25	4603	1.2			
	46.7	356	30	4891	1.2			
	35	456	40	5383	0.9			
	93.3	196	15	4905	3.4			
	70	258	20	5399	2.5			
	56	319	25	5816	2.1	110	100	21
	46.7	360	30	6181	2.0			
	35	474	40	6803	1.5			

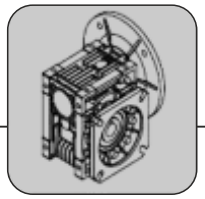


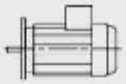
Aluminium Worm Gear Reducers

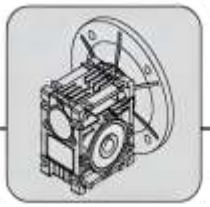
Selection Tables [kW] FW

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	28	645	50	7328	1.0			
	23.3	664	60	7787	0.9			
	56	319	25	7607	2.9			
	46.7	365	30	8084	2.9			
	35	474	40	8897	2.2			
	28	570	50	9584	1.7	130	100	43.5
	23.3	658	60	10185	1.4			
	17.5	829	80	11210	1.0			
	14	975	100	12076	0.8			
	28	578	50	13103	2.4			
	23.3	666	60	13924	1.9	150	100	77
	17.5	830	80	15325	1.4			
	14	973	100	16508	1.0			
3	186.7	137	7.5	2785	1.4			
(4HP)	140	180	10	3065	1.1	75	100	9
	93.3	264	15	3509	0.8			
	186.7	138	7.5	3081	2.3			
	140	182	10	3391	1.9			
	93.3	267	15	3882	1.5	90	100	13
	70	348	20	4273	1.1			
	56	425	25	4603	0.9			
	46.7	485	30	4891	0.9			
	140	182	10	4285	3.3			
	93.3	267	15	4905	2.5			
	70	352	20	5399	1.8			
	56	435	25	5816	1.6	110	100	21
	46.7	491	30	6181	1.5			
	35	646	40	6803	1.1			
	28	880	50	7328	0.8			
	56	435	25	7607	2.1			
	46.7	498	30	8084	2.1			
	35	647	40	8897	1.6	130	100	43.5
	28	778	50	9584	1.3			
	23.3	897	60	10185	1.0			
	17.5	1130	80	11210	0.7			
	28	788	50	13103	1.8			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW



Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	23.3	909	60	13924	1.4			
	17.5	1131	80	15325	1.0	150	100	77
	14	1327	100	16508	0.8			
4	186.7	182	7.5	2785	1.0	75	112	9
(5.4HP)	140	240	10	3065	0.8			
	186.7	184	7.5	3081	1.7			
	140	243	10	3391	1.4	90	112	13
	93.3	356	15	3882	1.1			
	70	464	20	4273	0.8			
	186.7	184	7.5	3893	3.0			
	140	243	10	4285	2.5			
	93.3	356	15	4905	1.8			
	70	469	20	5399	1.4	110	112	21
	56	580	25	5816	1.2			
	46.7	655	30	6181	1.1			
	35	861	40	6803	0.8			
	56	579	25	7607	1.6			
	46.7	663	30	8084	1.6			
	35	862	40	8897	1.2	130	112	43.5
	28	1037	50	9584	0.9			
	23.3	1196	60	10185	0.8			
	28	1051	50	13103	1.3			
	23.3	1212	60	13924	1.0	150	112	77
	17.5	1508	80	15325	0.8			
5.5	186.7	253	7.5	3893	2.2			
(7.4HP)	140	334	10	4285	1.8			
	93.3	490	15	4905	1.3	110	132S	21
	70	645	20	5399	1.0			
	56	798	25	5816	0.9			
	46.7	900	30	6181	0.8			
	140	334	10	5605	2.5			
	93.3	490	15	6416	1.9			
	70	653	20	7062	1.4	130	132S	43.5
	56	797	25	7607	1.2			
	46.7	912	30	8084	1.1			
	35	1186	40	8897	0.9			

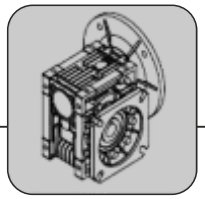


Aluminium Worm Gear Reducers

Selection Tables [kW] FW

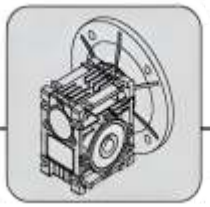
1400 Input Rpm

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	70	653	20	9654	2.0			
	56	797	25	10400	1.5			
	46.7	946	30	11051	1.3	150	132S	77
	35	1186	40	12163	1.3			
	28	1445	50	13103	1.0			
	23.3	1666	60	13924	0.8			
7.5	186.7	345	7.5	3893	1.6			
(10HP)	140	455	10	4285	1.3	110	132M	21
	93.3	668	15	4905	1.0			
	70	880	20	5399	0.7			
	186.7	349	7.5	5092	2.1			
	140	455	10	5605	1.8			
	93.3	668	15	6416	1.4			
	70	890	20	7062	1.0	130	132M	43.5
	56	1086	25	7607	0.9			
	46.7	1244	30	8084	0.8			
	35	1617	40	8897	0.6			
	70	890	20	9654	1.5			
	56	1087	25	10400	1.1			
	46.7	1289	30	11051	0.9	150	132M	77
	35	1617	40	12163	1.0			
	28	1970	50	13103	0.7			
11	186.7	512	7.5	6962	2.3			
(15HP)	140	675	10	7663	1.8			
	93.3	991	15	8771	1.3	150	160M	77
	70	1306	20	9654	1.0			
	56	1594	25	10400	0.8			
15	186.7	698	7.5	6962	1.7			
(20HP)	140	921	10	7663	1.3	150	160L	77
	93.3	1351	15	8771	0.9			
	70	1781	20	9654	0.7			



3.1.2 FW+HW Input Flange+ HW Type

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
0.12	20.5	42	68.25	2833	1.2			
(0.16HP)	17.1	46	81.9	3011	1.2			
	12.8	57	109.2	3314	0.9	40	HW063	3.4
	10.3	66	136.5	3490	0.7			
	8.5	74	163.8	3490	0.6			
	10.3	68	136.5	4840	1.3			
	8.5	75	163.8	4840	1.1	50	HW063	4.6
	6.4	88	218.4	4840	0.8			
	5.1	98	273	4840	0.7			
	6.4	92	218.4	6270	1.5	63	HW063	7.3
	5.1	103	273	6270	1.2			
0.18	20.5	64	68.25	2833	0.8			
(0.25HP)	17.1	70	81.9	3011	0.8	40	HW063	3.4
	12.8	85	109.2	3314	0.6			
	20.5	64	68.25	3889	1.4			
	17.1	71	81.9	4132	1.5			
	12.8	87	109.2	4548	1.1	50	HW063	4.6
	10.3	101	136.5	4840	0.9			
	8.5	113	163.8	4840	0.7			
	6.4	133	218.4	4840	0.6			
	10.3	103	136.5	6270	1.7			
	8.5	117	163.8	6270	1.4	63	HW063	7.3
	6.4	139	218.4	6270	1.0			
	5.1	155	273	6270	0.8			
0.22	20.5	78	68.25	3889	1.2			
(0.3HP)	17.1	86	81.9	4132	1.2	50	HW063	4.6
	12.8	106	109.2	4548	0.9			
	10.3	126	136.5	6270	1.4	63	HW063	7.3
	8.5	143	163.8	6270	1.1			
0.25	20.5	88	68.25	3889	1.0			
(0.34HP)	17.1	98	81.9	4132	1.1	50	HW071	5.1
	12.8	121	109.2	4548	0.8			
	20.5	91	68.25	5083	1.8			
	17.1	100	81.9	5401	2.0			
	12.8	125	109.2	5945	1.5			
	10.3	143	136.5	6270	1.2	63	HW071	7.8
	8.5	163	163.8	6270	1.0			
	6.4	192	218.4	6270	0.7			
	5.1	215	273	6270	0.6			
	10.3	151	136.5	7380	1.7			
	8.5	172	163.8	7380	1.4	75	HW071	10.6
	6.4	201	218.4	7380	1.1			
	5.1	230	273	7380	0.9			
0.37	20.5	134	68.25	5083	1.2			
(0.5HP)	17.1	148	81.9	5401	1.4	63	HW071	7.8
	12.8	185	109.2	5945	1.0			

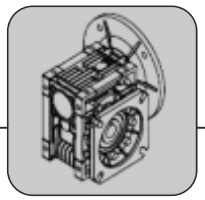


Aluminium Worm Gear Reducers

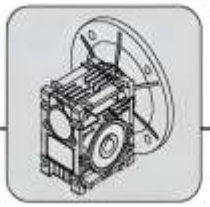
Selection Tables [kW] FW

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	10.3	212	136.5	6270	0.8			
	20.5	138	68.25	6000	1.8			
	17.1	154	81.9	6375	1.9			
	12.8	191	109.2	7017	1.5	75	HW071	10.6
	10.3	223	136.5	7380	1.1			
	8.5	254	163.8	7380	0.9			
	8.5	268	163.8	8180	1.5			
	6.4	321	218.4	8180	1.1	90	HW071	14.6
	5.1	371	273	8180	0.9			
0.55	20.5	200	68.25	5083	0.8	63	HW071	7.8
(0.75HP)	17.1	219	81.9	5401	0.9			
	20.5	205	68.25	6000	1.2			
	17.1	230	81.9	6375	1.3	75	HW071	10.6
	12.8	284	109.2	7017	1.0			
	20	205	70	6000	1.2			
	16.7	230	84	6375	1.3	75	HW080	12.4
	12.5	284	112	7017	1.0			
	10	332	140	7380	0.8			
	16.7	240	84	7054	2.3			
	12.5	297	112	7764	1.6	90	HW080	16.4
	10	355	140	8180	1.3			
	8.3	398	168	8180	1.0			
	8.3	425	168	10320	1.8			
	6.3	513	224	10320	1.3	110	HW080	38.4
	5	597	280	10320	1.0			
0.75	20	280	70	6000	0.9	75	HW080	12.4
(1HP)	16.7	313	84	6375	1.0			
	16.7	327	84	7054	1.7			
	12.5	405	112	7764	1.2	90	HW080	16.4
	10	483	140	8180	0.9			
	8.3	543	168	8180	0.7			
	12.5	430	112	9811	2.2			
	10	506	140	10320	1.7	110	HW080	38.4
	8.3	580	168	10320	1.3			
	6.3	700	224	10320	0.9			
	6.3	712	224	13500	1.4	130	HW080	51.4
	5	813	280	13500	1.1			
0.92	20	344	70	6000	0.7	75	HW080	12.4
(1.24HP)	16.7	384	84	6375	0.8			
	16.7	401	84	7054	1.4			
	12.5	497	112	7764	1.0	90	HW080	16.4
	10	593	140	8180	0.8			
	20	367	70	8388	2.5			
	12.5	527	112	9811	1.8	110	HW080	38.4
	10	621	140	10320	1.4			
	8.3	712	168	10320	1.1			

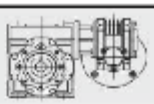
Aluminium Worm Gear Reducers
Selection Tables [kW] FW



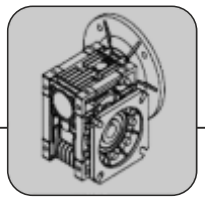
Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	8.3	712	168	13500	1.5			
	6.3	874	224	13500	1.1	130	HW080	51.4
	5	998	280	13500	0.9			
1.1	19	392	73.5	8298	2.5			
(1.5HP)	14.3	508	98	9133	1.8			
	11.4	599	122.5	9838	1.5	110	HW090	38.4
	9.5	686	147	10320	1.1			
	7.1	828	196	10320	0.8			
	19	398	73.5	10853	3.5			
	14.3	508	98	11945	2.6			
	11.4	608	122.5	12868	2.0	130	HW090	51.4
	9.5	686	147	13500	1.6			
	7.1	843	196	13500	1.2			
	5.7	962	245	13500	0.9			
1.5	19	535	73.5	8298	1.9			
(2HP)	14.3	693	98	9133	1.3	110	HW090	38.4
	11.4	817	122.5	9838	1.1			
	9.5	936	147	10320	0.8			
	19	542	73.5	10853	2.6			
	14.3	693	98	11945	1.9			
	11.4	830	122.5	12868	1.5	130	HW090	51.4
	9.5	936	147	13500	1.1			
	7.1	1149	196	13500	0.8			
1.84	19	656	73.5	8298	1.5			
(2.48HP)	14.3	850	98	9133	1.1	110	HW090	38.4
	11.4	1002	122.5	9838	0.9			
	19	665	73.5	10853	2.1			
	14.3	850	98	11945	1.5	130	HW090	51.4
	11.4	1018	122.5	12868	1.2			
	9.5	1148	147	13500	0.9			

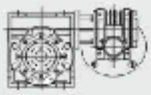


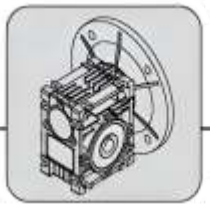
3.1.3 Double Reduction+Motor Input Flange Type (Double Reduction)

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
0.06	14	27	100	2769	2.7			
(0.08HP)	9.3	36	150	3169	2.0			
	7	49	200	3488	1.3	30-40	56	3,5
	5.6	52	250	3490	1.2			
	4.7	63	300	3490	1.2			
	3.5	78	400	3490	0.8			
	7	48	200	4788	2.5			
	5.6	55	250	4840	2.0			
	4.7	62	300	4840	2.3			
	3.5	74	400	4840	1.7			
	2.8	90	500	4840	1.3	30-50	56	4.7
	2.3	109	600	4840	1.3			
	1.9	124	750	4840	1.2			
	1.6	145	900	4840	1.0			
	1.2	174	1200	4840	0.8			
	0.9	218	1500	4840	0.7			
	3.5	77	400	6270	3.3			
	2.8	89	500	6270	2.7			
	2.3	108	600	6270	2.5			
	1.9	125	750	6270	2.2			
	1.6	148	900	6270	1.8	30-63	56	7.4
	1.2	181	1200	6270	1.5			
	0.9	203	1500	6270	1.3			
	0.8	232	1800	6270	1.2			
	0.6	306	2400	6270	0.8			
	0.5	354	3000	6270	0.7			
	2.8	103	500	3800	1.3			
	2.3	124	600	4840	1.2	40-50	56	5.8
	1.9	145	750	4840	1.0			
	1.6	162	900	4350	0.8			
	0.9	232	1500	6270	1.2			
	0.8	271	1800	6270	1.0	40-63	56	8.5
	0.6	306	2400	6270	0.8			
	0.9	242	1500	7380	1.8			
	0.8	266	1800	7380	1.7			
	0.6	355	2400	7380	1.2	40-75	56	11.3
	0.5	368	3000	7380	1.0			
	0.4	442	4000	7380	0.8			
	0.3	552	5000	7380	0.7			
	0.9	263	1500	8180	2.7			
	0.8	300	1800	8180	2.3			
	0.6	366	2400	8180	1.7	40-90	56	15.3
	0.5	420	3000	8180	1.3			
	0.4	480	4000	8180	1.2			
	0.3	560	5000	8180	1.0			
0.09	14	40	100	2769	1.8			
(0.12HP)	9.3	54	150	3169	1.3			
	7	73	200	3488	0.9	30-40	56	3.5
	5.6	78	250	3490	0.8			
	4.7	94	300	3490	0.8			
	14	40	100	3800	3.4			
	9.3	55	150	4350	2.4			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW



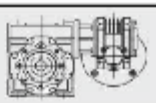
Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	7	72	200	4788	1.7			
	5.6	83	250	4840	1.3			
	4.7	93	300	4840	1.6	30-50	56	4.7
	3.5	112	400	4840	1.1			
	2.8	135	500	4840	0.9			
	2.3	163	600	4840	0.9			
	1.9	186	750	4840	0.8			
	1.6	218	900	4840	0.7			
	5.6	87	250	6270	2.7			
	4.7	88	300	6270	2.9			
	3.5	115	400	6270	2.2			
	2.8	133	500	6270	1.8			
	2.3	163	600	6270	1.7	30-63	56	7.4
	1.9	188	750	6270	1.4			
	1.6	222	900	6270	1.2			
	1.2	271	1200	6270	1.0			
	0.9	305	1500	6270	0.9			
	0.8	348	1800	6270	0,8			
	2.8	154	500	3800	0.9	40-50	56	5.8
	0.9	348	1500	6270	0.8	40-63	56	8.5
	0.9	363	1500	7380	1.2			
	0.8	400	1800	7380	1.1	40-75	56	11.3
	0.6	532	2400	7380	0.8			
	0.5	630	3000	8180	0.9	40-90	56	15.3
	0.4	720	4000	8180	0.8			
0.12	14	53	100	3800	2.6			
(0.16HP)	9.3	74	150	4350	1.8			
	7	96	200	4788	1.3			
	5.6	110	250	4840	1.0	30-50	63	4.7
	4.7	124	300	4840	1.2			
	3.5	149	400	4840	0.8			
	2.8	180	500	4840	0.7			
	14	53	100	4967	2.8			
	9.3	74	150	5686	2.8			
	7	95	200	6259	2.7			
	5.6	116	250	6270	2.0			
	4.7	118	300	6270	2.2			
	3.5	153	400	6270	1.7	30-63	63	7.4
	28	177	500	6270	1.3			
	2.3	217	600	6270	1.3			
	1.9	250	750	6270	1.1			
	1.6	296	900	6270	0.9			
	1.2	361	1200	6270	0.8			
	14	55	100	3800	2.5			
	9.3	77	150	4350	1.8			
	7	96	200	4788	1.3	40-50	63	5.8
	5.6	110	250	4840	1.0			
	4.7	124	300	4840	1.2			
	3.5	149	400	4840	0.8			



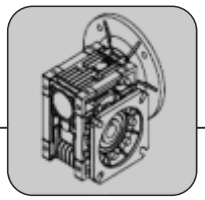
Aluminium Worm Gear Reducers

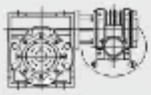
Selection Tables [kW] FW

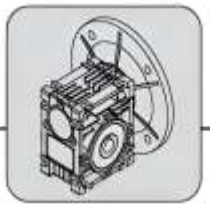
1400 Input Rpm

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	9.3	78	150	5686	3.3			
	7	98	200	6259	2.6			
	5.6	116	250	6270	2.0			
	4.7	125	300	6270	2.2			
	3.5	153	400	6270	1.7	40-63	63	8.5
	2.8	213	500	6270	1.1			
	2.3	232	600	6270	1.2			
	1.9	296	750	6270	0.9			
	1.6	325	900	6270	0.8			
	5.6	120	250	7380	3.2			
	4.7	133	300	7380	3.3			
	3.5	166	400	7380	2.5			
	2.8	184	500	7380	2.0			
	2.3	254	600	7380	1.8	40-75	63	11.3
	1.9	296	750	7380	1.5			
	1.6	333	900	7380	1.3			
	1.2	410	1200	7380	1.1			
	0.9	484	1500	7380	0.9			
	0.8	533	1800	7380	0.8			
	2.8	204	500	8180	2.8			
	2.3	263	600	8180	2.7			
	1.9	311	750	8180	2.3			
	1.6	350	900	8180	2.0	40-90	63	15.3
	1.2	442	1200	8180	1.6			
	0.9	525	1500	8180	1.3			
	0.8	600	1800	8180	1.2			
	0.6	732	2400	8180	0.8			
	1.2	442	1200	8180	1.6			
	0.9	525	1500	8180	1.3	50-90	63	16,5
	0.8	600	1800	8180	1.2			
	0.6	732	2400	8180	0.8			
	1.2	446	1200	10320	2.8			
	0.9	523	1500	10320	2.4			
	0.8	584	1800	10320	2.2			
	0.6	748	2400	10320	1.6	50-110	63	38.5
	0.5	943	3000	10320	1.2			
	0.4	1100	4000	10320	1.0			
	0.3	1320	5000	10320	0.8			
0.18	14	80	100	2769	0.9	30-40	63	3.5
(0.25HP)	14	80	100	3800	1.7			
	9.3	110	150	4350	1.2			
	7	144	200	4788	0.8	30-50	63	4.7
	5.6	165	250	4840	0.7			
	4.7	186	300	4840	0.8			
	14	79	100	4967	1.9			
	9.3	112	150	5686	1.9			
	7	142	200	6259	1.8	30-63	63	7.4
	5.6	173	250	6270	1.3			
	4.7	177	300	6270	1.4			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW

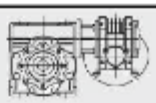


Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	3.5	230	400	6270	1.1			
	2.8	266	500	6270	0.9			
	2.3	325	600	6270	0.8			
	14	82	100	3800	1.7			
	9.3	116	150	4350	1.2			
	7	144	200	4788	0.8	40-50	63	5.8
	5.6	165	250	4840	0.7			
	4.7	186	300	4840	0.8			
	14	83	100	4967	3.1			
	9.3	117	150	5686	2.2			
	7	147	200	6259	1.7			
	5.6	173	250	6270	1.3	40-63	63	8.5
	4.7	188	300	6270	1.4			
	3.5	230	400	6270	1.1			
	2.8	320	500	6270	0.7			
	2.3	348	600	6270	0.8			
	7	151	200	7380	2.8			
	5.6	180	250	7380	2.1			
	4.7	200	300	7380	2.2			
	3.5	248	400	7380	1.7			
	2.8	276	500	7380	1.3	40-75	63	11.3
	2.3	381	600	7380	1.2			
	1.9	444	750	7380	1.0			
	1.6	500	900	7380	0.9			
	1.2	615	1200	7380	0.7			
	5.6	187	250	8180	3.1			
	4.7	210	300	8180	3.3			
	3.5	261	400	8180	2.3			
	2.8	305	500	8180	1.8			
	2.3	394	600	8180	1.8	40-90	63	15.3
	1.9	467	750	8180	1.5			
	1.6	525	900	8180	1.3			
	1.2	663	1200	8180	1.1			
	0.9	788	1500	8180	0.9			
	0.8	900	1800	8180	0.8			
	1.2	663	1200	8180	1.1			
	0.9	788	1500	8180	0.9	50-90	63	16.5
	0.8	900	1800	8180	0.8			
	1.2	670	1200	10320	1.9			
	0.9	785	1500	10320	1.6			
	0.8	876	1800	10320	1.4	50-110	63	38.5
	0.6	1123	2400	10320	1.1			
	0.5	1414	3000	10320	0.8			
0.25	14	114	100	3800	1.2	40-50	71	5.8
(0.34HP)	9.3	161	150	4350	0.8			
	14	115	100	4967	2.2			
	9.3	163	150	5686	1.6			
	7	204	200	6259	1.2	40-63	71	8.5
	5.6	241	250	6270	1.0			

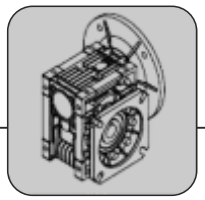


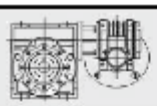
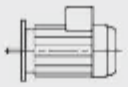
Aluminium Worm Gear Reducers

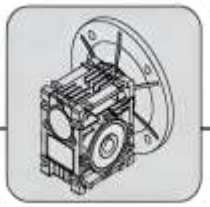
Selection Tables [kW] FW

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	4.7	261	300	6270	1.0			
	3.5	319	400	6270	0.8			
	14	116	100	5863	3.0			
	9.3	166	150	6712	2.6			
	7	210	200	7380	2.0			
	5.6	250	250	7380	1.5			
	4.7	278	300	7380	1.6	40-75	71	11.3
	3.5	345	400	7380	1.2			
	28	383	500	7380	1.0			
	2.3	529	600	7380	0.8			
	1.9	617	750	7380	0.7			
	14	119	100	6487	3.0			
	9.3	169	150	7426	3.0			
	7	218	200	8174	2.8			
	56	259	250	8180	2.2			
	4.7	292	300	8180	2.4			
	3.5	363	400	8180	1.7	40-90	71	15.3
	28	424	500	8180	1.3			
	23	547	600	8180	1.3			
	1.9	648	750	8180	1.1			
	1.6	729	900	8180	1.0			
	1.2	921	1200	8180	0.8			
	7	221	200	8174	2.8			
	56	269	250	8180	2.1			
	4.7	297	300	8180	2.4			
	3.5	372	400	8180	1.6			
	2.8	491	500	8180	1.2	50-90	71	16.5
	2.3	547	600	8180	1.3			
	1.9	648	750	8180	1.1			
	1.6	761	900	8180	0.9			
	1.2	921	1200	8180	0.8			
	3.5	385	400	10320	3.1			
	28	514	500	10320	2.3			
	2.3	545	600	10320	2.3			
	1.9	659	750	10320	1.9			
	1.6	753	900	10320	1.7	50-110	71	38.5
	1.2	930	1200	10320	1.4			
	0.9	1091	1500	10320	1.2			
	08	1216	1800	10320	1.0			
	06	1559	2400	10320	0.8			
	3.5	385	400	10320	3.1			
	2.8	524	500	10320	2.2			
	2.3	565	600	10320	2.2			
	1.9	673	750	10320	1.9			
	16	771	900	10320	1.6	63-110	71	4.2
	1.2	988	1200	10320	1.3			
	0.9	1129	1500	10320	1.1			
	08	1318	1800	10320	1.0			
	0.6	1646	2400	10320	0.7			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW

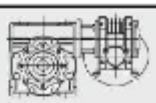


Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	2.8	461	500	13500	3.4			
	2.3	571	600	13500	3.1			
	1.9	688	750	13500	2.6			
	t6	786	900	13500	2.2			
	12	978	1200	13500	1.8			
	0.9	1158	1500	13500	1.5	63-130	71	54.2
	0.8	1333	1800	13500	1.3			
	0.6	1650	2400	13500	1.0			
	0.5	2039	3000	13500	0.8			
	0.4	2422	4000	13500	0.6			
	0.3	2768	5000	13500	0.6			
	1.9	670	750	18000	3.5			
	1.6	847	900	18000	2.5			
	12	1011	1200	18000	2.6			
	0.9	1189	1500	18000	2.0			
	0.8	1419	1800	18000	1.5	63-150	71	90.2
	0.6	1712	2400	18000	1.6			
	0.5	2009	3000	18000	1.2			
	0.4	2427	4000	18000	1.0			
	0.3	2774	5000	18000	0.8			
0.37	14	169	100	3800	0.8	40-50	71	5.8
(0.5HP)	14	170	100	4967	1.5			
	9.3	241	150	5686	1.1	40-63	71	8.5
	7	302	200	6259	0.8			
	14	171	100	5863	2.1			
	9.3	246	150	6712	1.7			
	7	311	200	7380	1.4	40-75	71	11.3
	5.6	370	250	7380	1.0			
	4.7	411	300	7380	1.1			
	3.5	511	400	7380	0.8			
	14	176	100	6487	2.1			
	9.3	251	150	7426	2.1			
	7	322	200	8174	1.9			
	5.6	383	250	8180	1.5	40-90	71	15.3
	4.7	432	300	8180	1.6			
	3.5	537	400	8180	1.1			
	2.8	628	500	8180	0.9			
	2.3	809	600	8180	0.9			
	14	180	100	6487	3.3			
	9.3	257	150	7426	2.6			
	7	327	200	8174	1.9			
	5.6	398	250	8180	1.4			
	4.7	439	300	8180	1.6	50-90	71	16.5
	3.5	550	400	8180	1.1			
	2.8	727	500	8180	0.8			
	2.3	809	600	8180	0.9			
	1.9	959	750	8180	0.7			
	7	337	200	10320	3.4			
	5.6	413	250	10320	2.8			

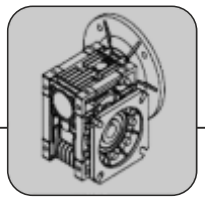


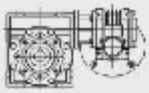
Aluminium Worm Gear Reducers

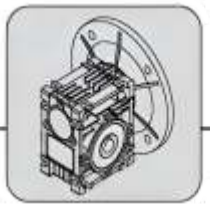
Selection Tables [kW] FW

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	4.7	442	300	10320	2.9			
	3.5	569	400	10320	2.1			
	2.8	761	500	10320	1.5	50-110	71	38.5
	2.3	807	600	10320	1.6			
	1.9	975	750	10320	1.3			
	1.6	1114	900	10320	1.1			
	1.2	1377	1200	10320	0.9			
	0.9	1614	1500	10320	0.8			
	7	337	200	10320	3.4			
	5.6	413	250	10320	2.8			
	4.7	442	300	10320	2.9			
	3.5	569	400	10320	2.1			
	2.8	775	500	10320	1.5	63-110	71	41.2
	2.3	836	600	10320	1.5			
	1.9	996	750	10320	1.3			
	1.6	1142	900	10320	1.1			
	1.2	1463	1200	10320	0.9			
	0.9	1672	1500	10320	0.8			
	3.5	571	400	13500	2.9			
	2.8	683	500	13500	2.3			
	2.3	846	600	13500	2.1			
	1.9	1018	750	13500	1.7	63-130	71	54,2
	1.6	1163	900	13500	1.5			
	1.2	1447	1200	13500	1.2			
	0.9	1714	1500	13500	1.0			
	0.8	1973	1800	13500	0.9			
	2.8	679	500	18000	3.4			
	2.3	837	600	18000	3.2			
	1.9	991	750	18000	2.4			
	1.6	1253	900	18000	1.7			
	1.2	1497	1200	18000	1.8	63-150	71	90.2
	0.9	1759	1500	18000	1.3			
	0.8	2100	1800	18000	1.0			
	0.6	2533	2400	18000	1.1			
	0.5	2973	3000	18000	0.8			
0.55	14	268	100	6487	2.2			
(0.74HP)	9.3	382	150	7426	1.7			
	7	486	200	8174	1.3	50-90	80	16.5
	5.6	592	250	8180	1.0			
	4.7	653	300	8180	1.1			
	3.5	818	400	8180	0.7			
	14	268	100	8198	2.4			
	9.3	387	150	9384	2.4			
	7	501	200	10320	2.3			
	5.6	614	250	10320	1.9			
	4.7	656	300	10320	1.9	50-110	80	38.5
	3.5	846	400	10320	1.4			
	2.8	1132	500	10320	1.0			
	2.3	1200	600	10320	1.1			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW

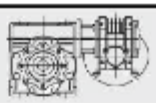
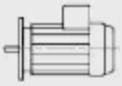


Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	1.9	1449	750	10320	0.9			
	1.6	1657	900	10320	0.8			
	9.3	387	150	9384	3.1			
	7	501	200	10320	2.3			
	5.6	614	250	10320	1.9			
	4.7	656	300	10320	1.9			
	3.5	846	400	10320	1.4	63-110	80	41.2
	2.8	1152	500	10320	1.0			
	2.3	1242	600	10320	1.0			
	1.9	1480	750	10320	0.9			
	1.6	1697	900	10320	0.7			
	7	503	200	13500	3.2			
	5.6	614	250	13500	2.5			
	4.7	668	300	13500	2.6			
	3.5	848	400	13500	1.9			
	2.8	1015	500	13500	1.5	63-130	80	54.2
	2.3	1257	600	13500	1.4			
	1.9	1513	750	13500	1.2			
	1.6	1729	900	13500	1.0			
	1.2	2151	1200	13500	0.8			
	5.6	613	250	18000	3.3			
	4.7	727	300	18000	3.2			
	3.5	864	400	18000	3.1			
	2.8	1009	500	18000	2.3			
	2.3	1244	600	18000	2.1			
	1.9	1473	750	18000	1.6	63-150	80	90.2
	1.6	1863	900	18000	1.1			
	1.2	2225	1200	18000	1.2			
	0.9	2615	1500	18000	0.9			
	0.8	3122	1800	18000	0.7			
	0.6	3765	2400	18000	0.7			
0.75	14	366	100	6487	1.6			
(1 HP)	9.3	521	150	7426	1.3			
	7	663	200	8174	0.9	50-90	80	16.5
	5.6	807	250	8180	0.7			
	4.7	890	300	8180	0.8			
	14	365	100	8198	1.8			
	9.3	528	150	9384	1.8			
	7	683	200	10320	1.7			
	5.6	838	250	10320	1.4	50-110	80	38.5
	4.7	895	300	10320	1.4			
	3.5	1154	400	10320	1.0			
	2.8	1543	500	10320	0.8			
	2.3	1636	600	10320	0.8			
	14	365	100	8198	3.0			
	9.3	528	150	9384	2.3			
	7	683	200	10320	1.7			
	5.6	838	250	10320	1.4	63-110	80	41.2
	4.7	895	300	10320	1.4			

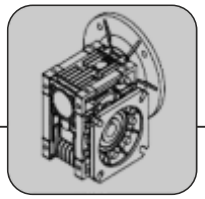


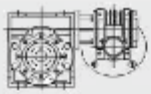
Aluminium Worm Gear Reducers

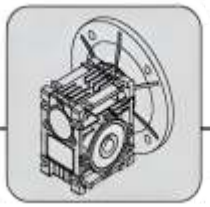
Selection Tables [kW] FW

Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	3.5	1154	400	10320	1.0			
	2.8	1571	500	10320	0.7			
	2.3	1694	600	10320	0.7			
	14	369	100	10722	3.0			
	9.3	521	150	12274	3.0			
	7	686	200	13500	2.3			
	5.6	838	250	13500	1.8			
	4.7	910	300	13500	1.9	63-130	80	54.2
	3.5	1157	400	13500	1.4			
	2.8	1384	500	13500	1.1			
	2.3	1714	600	13500	1.0			
	1.9	2063	750	13500	0.9			
	1.6	2357	900	13500	0.7			
	7	686	200	18000	3.0			
	5.6	836	250	18000	2.5			
	4.7	991	300	18000	2,3			
	3.5	1178	400	18000	2.3			
	2.8	1376	500	18000	1.7	63-150	80	90.2
	2.3	1697	600	18000	1.6			
	1.9	2009	750	18000	1.2			
	1.6	2540	900	18000	0.8			
	1.2	3034	1200	18000	0.9			
1.1	14	536	100	8198	2.1			
(1 .5HP)	9.3	774	150	9384	1.5			
	7	1002	200	10320	1.1	63-110	90	41.2
	5.6	1229	250	10320	1.0			
	4.7	1313	300	10320	1.0			
	14	542	100	10722	2.1			
	9.3	764	150	12274	2.1			
	7	1006	200	13500	1.6			
	5.6	1228	250	13500	1.2	63-130	90	54.2
	4.7	1335	300	13500	1.3			
	3.5	1696	400	13500	1.0			
	2.8	2030	500	13500	0.8			
	2.3	2514	600	13500	0.7			
	9.3	772	150	18000	2.6			
	7	1005	200	18000	2.1			
	5.6	1226	250	18000	1.7			
	4.7	1453	300	18000	1.6	63-150	90	90.2
	3.5	1728	400	18000	1.5			
	2.8	2018	500	18000	1.2			
	2.3	2489	600	18000	1.1			
	1.9	2946	750	18000	0.8			
1.5	14	730	100	8198	1.5			
(2 HP)	9.3	1055	150	9384	1.1			
	7	1367	200	10320	0.8	63-110	90	41.2
	5.6	1676	250	10320	0.7			
	4.7	1790	300	10320	0.7			
	14	739	100	10722	1.5			

Aluminium Worm Gear Reducers
Selection Tables [kW] FW



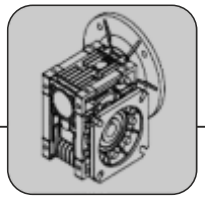
Pm [kW]	na [1/min]	Ma [Nm]	i	FRa [N]	fs			m [kg]
	9.3	1042	150	12274	1.5			
	7	1371	200	13500	1.2			
	5.6	1675	250	13500	0.9	63-130	90	54.2
	4.7	1821	300	13500	1.0			
	3.5	2313	400	13500	0.7			
	2.8	2768	500	13500	0.6			
	9.3	1052	150	18000	1.9			
	7	1371	200	18000	1.5			
	5.6	1671	250	18000	1.2	63-150	90	90.2
	4.7	1982	300	18000	1.2			
	3.5	2356	400	18000	1.1			
	2.8	2752	500	18000	0.8			
	2.3	3394	600	18000	0.8			



3.1.4 Solid Input Type

i	na [1/min]	Ma max [Nm]	Pe [kW]	FRa [N]	FRe [N]			m [kg]
30								22 Nm
5	280	19	0.6	597	150			
7.5	187	19	0.4	683	150			
10	140	19	0.3	752	169			
15	93	19	0.2	861	169			
20	70	18	0.2	948	180			
25	56	22	0.2	1021	210	30	∅9	1
30	47	21	0.2	1085	210			
40	35	19	0.1	1194	210			
50	28	18	0.1	1286	210			
60	23	16	0.1	1367	210			
80	18	13	0.1	1504	210			
40								48 Nm
5	280	36	1.2	1149	250			
7.5	187	42	0.9	1315	292			
10	140	44	0.8	1447	344			
15	93	44	0.5	1657	344			
20	70	43	0.4	1824	350			
25	56	39	0.3	1964	350	40	∅11	2
30	47	48	0.3	2087	350			
40	35	45	0.3	2298	350			
50	28	42	0.2	2475	350			
60	23	39	0.2	2630	350			
80	18	33	0.1	2895	350			
100	14	29	0.1	3118	350			
50								88 Nm
5	280	68	2.2	1577	350			
7.5	187	77	1.7	1805	396			
10	140	79	1.3	1987	490			
15	93	81	1.0	2274	490			
20	70	78	0.7	2503	490			
25	56	71	0.5	2696	490	50	∅14	3.3
30	47	88	0.6	2865	490			
40	35	82	0.4	3153	490			
50	28	77	0.4	3397	490			
60	23	72	0.3	3610	490			
80	18	65	0.2	3973	490			
100	14	55	0.2	4280	490			
63								160 Nm
5	280	102	3.3	1980	430			
7.5	187	128	2.8	2359	500			
10	140	130	2.2	2597	571			
15	93	140	1.6	2973	615			
20	70	135	1.2	3272	667			
25	56	130	1.0	3524	700	63	∅19	5.8
30	47	160	1.0	3745	700			
40	35	145	0.8	4122	700			
50	28	135	0.6	4440	700			
60	23	130	0.5	4719	700			
80	18	122	0.4	5193	700			
100	14	118	0.3	5595	700			
75								230 Nm
7.5	187	185	4.1	2785	700			
10	140	195	3.3	3065	830			
15	93	200	2	3509	851			
20	70	210	2	3862	980			

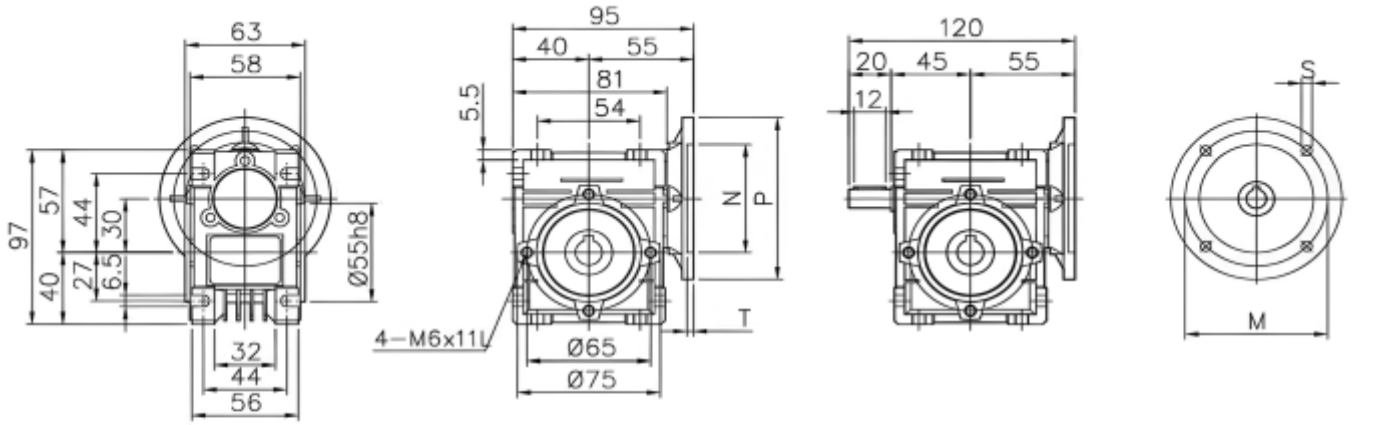
Aluminium Worm Gear Reducers
Selection Tables [kW] FW



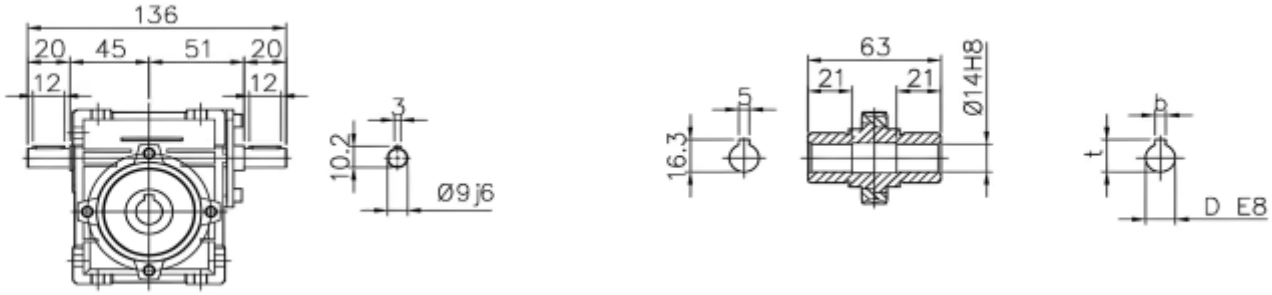
i	na [1/min]	Ma max [Nm]	Pe [kW]	FRa [N]	FRe [N]			m [kg]
25	56	200	1	4160	980			
30	47	230	1	4421	980	75	∅24	8.8
40	35	220	1	4865	980			
50	28	210	1	5241	980			
60	23	200	1	5569	980			
80	18	190	1	6130	980			
100	14	180	0	6603	980			
90								432 Nm
7.5	187	319	6.9	3081	900			
10	140	341	5.6	3391	1082			
15	93	396	4	3882	1257			
20	70	391	3	4273	1270			
25	56	374	3	4603	1270			
30	47	432	3	4891	1270	90	∅24	13
40	35	396	2	5383	1270			
50	28	374	2	5799	1270			
60	23	352	1	6163	1270			
80	18	285	1	6783	1270			
100	14	270	1	7306	1270			
110								725 Nm
7.5	187	552	11.99	3893	1200			
10	140	598	9.85	4285	1463			
15	93	656	7.37	4905	1604			
20	70	644	5.49	5399	1700			
25	56	679	4.68	5816	1700			
30	47	725	4.43	6181	1700	110	∅28	21
40	35	702	3.26	6803	1700			
50	28	660	2.25	7328	1700			
60	23	616	2.0	7787	1700			
80	18	515	1.4	8571	1700			
100	14	483	1.1	9232	1700			
130								1050 Nm
7.5	187	750	16.11	5092	1500			
10	140	820	13.51	5605	1845			
15	93	920	10.33	6416	2070			
20	70	910	7.67	7062	2100			
25	56	930	6.42	7607	2100			
30	47	1040	6.27	8084	2100	130	∅30	43.5
40	35	1050	4.87	8897	2100			
50	28	980	3.78	9584	2100			
60	23	900	3.01	10185	2100			
80	18	840	2.23	11210	2100			
100	14	740	1.67	12076	2100			
150								1550 Nm
7.5	187	1200	25.78	6962	1950			
10	140	1240	20.20	7663	2267			
15	93	1250	13.88	8771	2285			
20	70	1300	10.95	9654	2674			
25	56	1200	8.28	10400	2800			
30	47	1200	6.98	11051	2800	150	∅30	77
40	35	1550	7.19	12163	2800			
50	28	1400	5.33	13103	2800			
60	23	1260	4.16	13924	2800			
80	18	1150	3.05	15325	2800			
100	14	1000	2.26	16508	2800			

3.2 Dimension Sheets

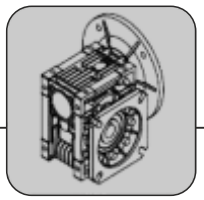
FW30



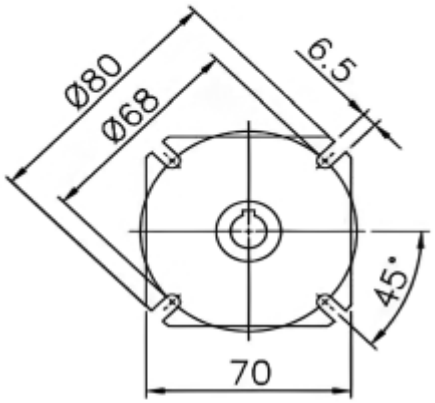
FWSI30

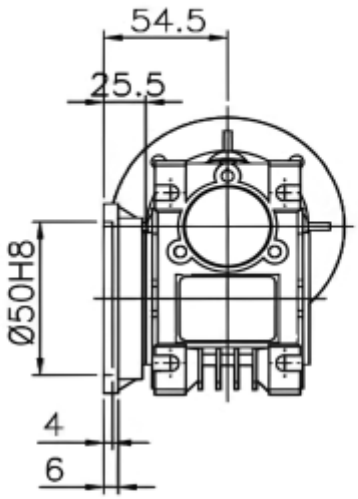


IEC	D	b	t	P	M	N	T	S
56B5	9	3	10.4	120	100	80	4	6.6
56B14	9	3	10.4	80	65	50	3.5	5.5
63B5	11	4	12.8	140	115	95	4	9
63B14	11	4	12.8	90	75	60	3	5.5

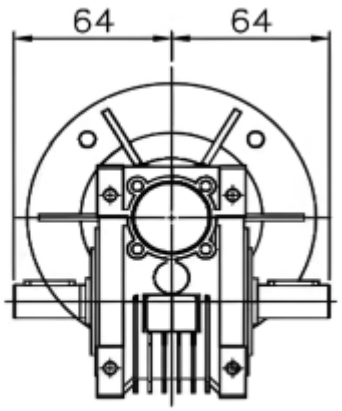


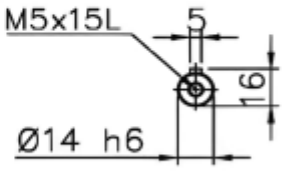
FWOF 30-FA

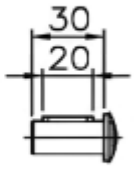


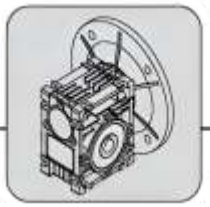


FWS30





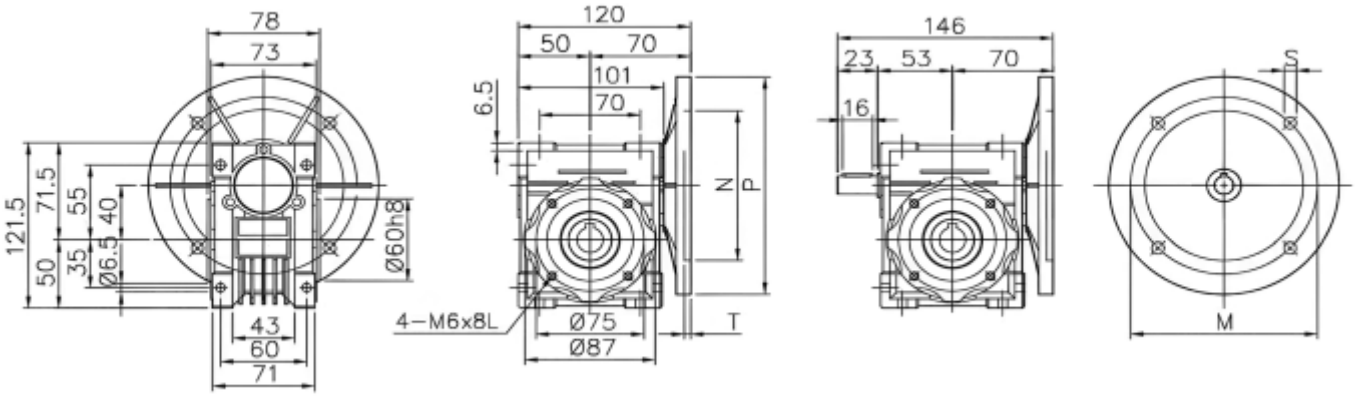




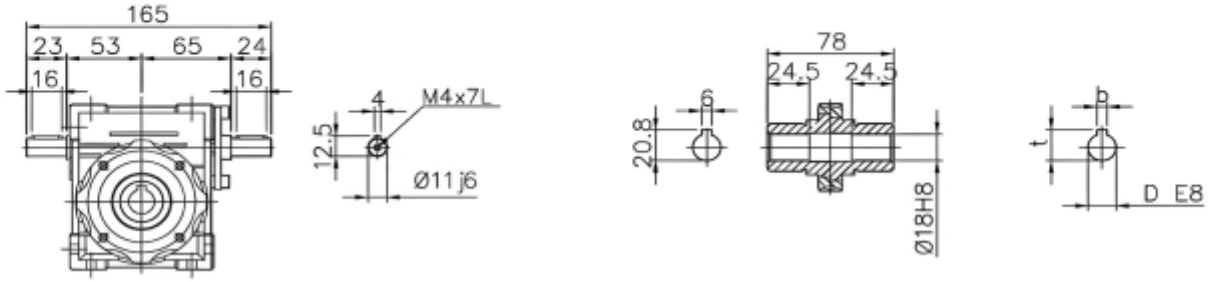
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

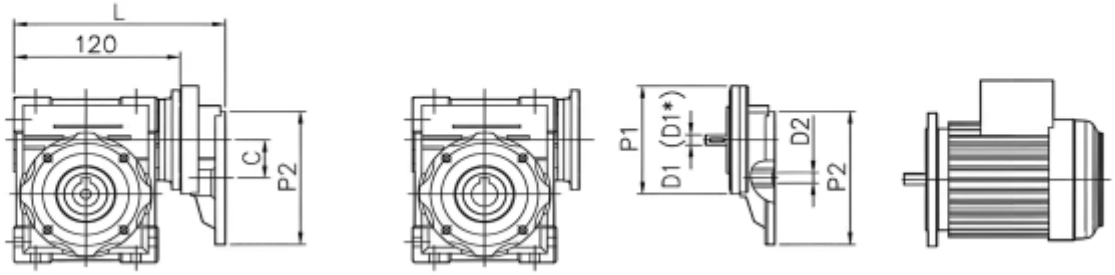
FW40



FWSI 40

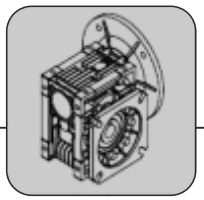


HW063

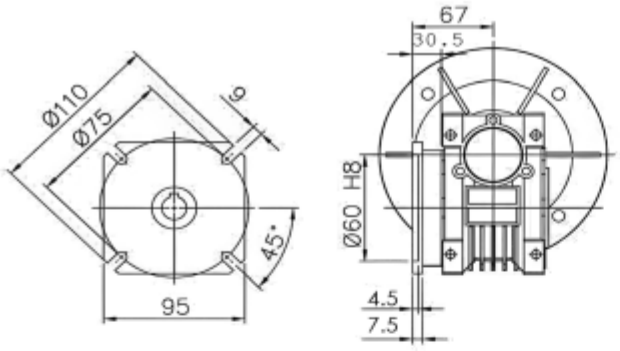


IEC	D	b	t	P	M	N	T	S
56B5	9	3	10.4	120	100	80	4	7
63B5	11	4	12.8	140	115	95	3.5	9
63B14	11	4	12.8	90	75	60	4	5.5
71B35	14	5	16.3	160	130	110	4	9
71B14	14	5	16.3	105	85	70	3.5	6.6

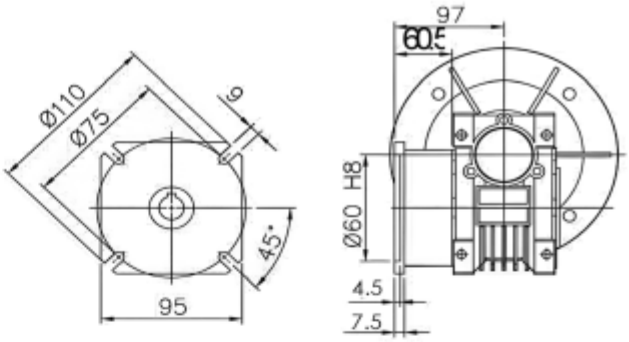
HW	P1	D1	D1*	P2	D2	C	L
063	105	11	14	140(63B5)	11	40	165



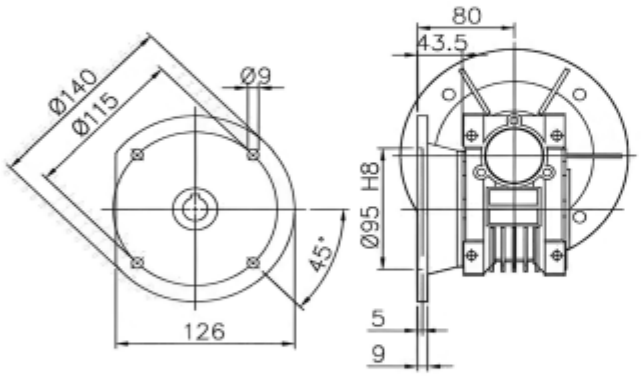
FWOF 40-FA



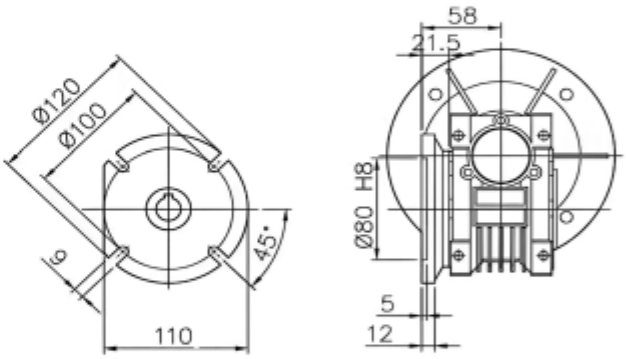
FWOF 40-FB



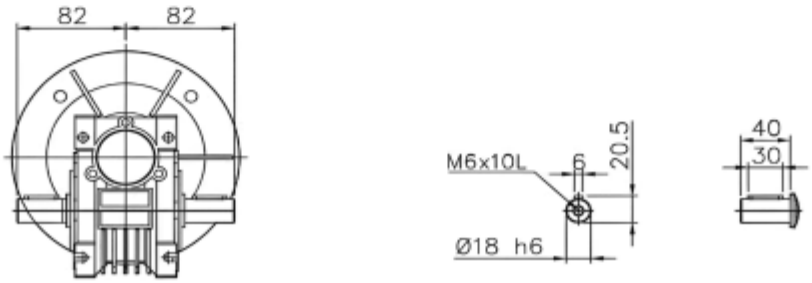
FWOF 40-FC



FWOF 40-FD



FWSO 40

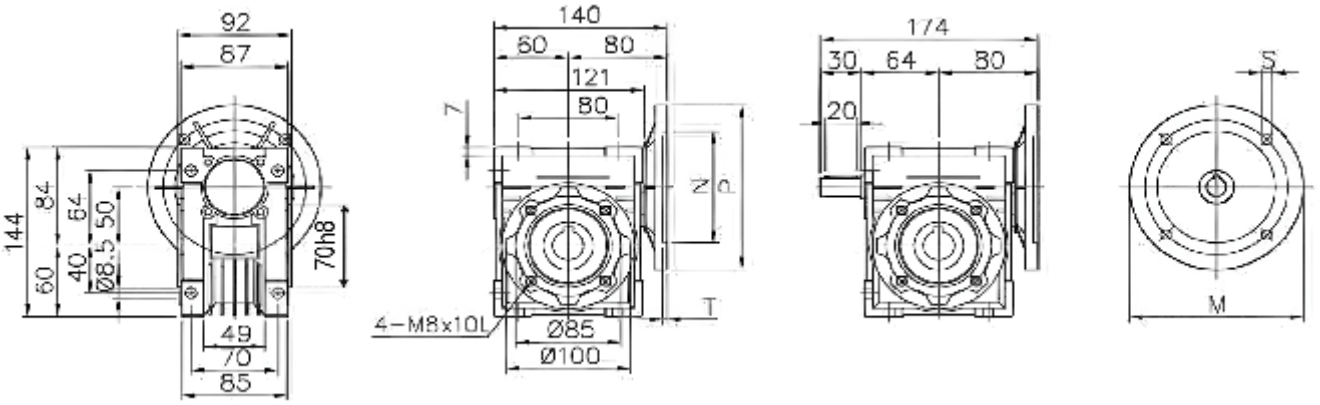




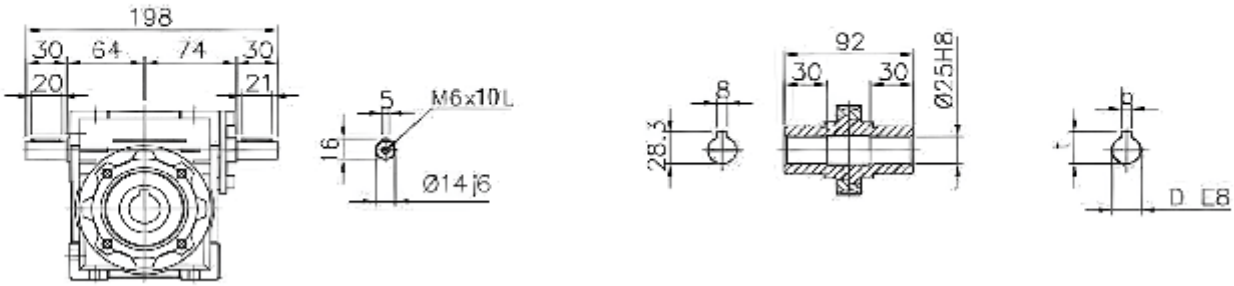
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

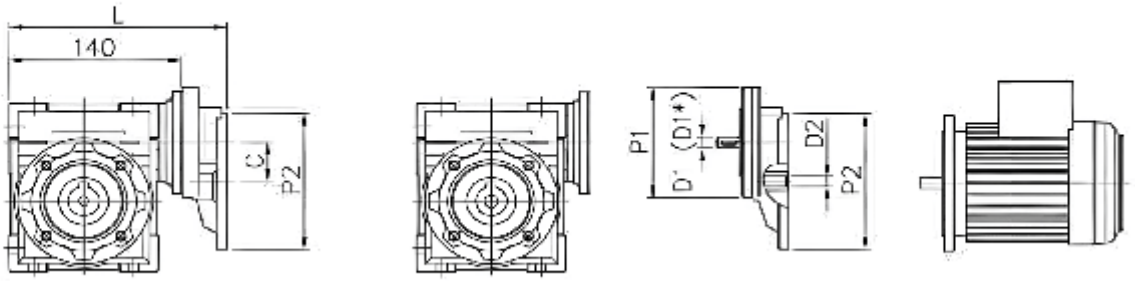
FW50



FWSI50

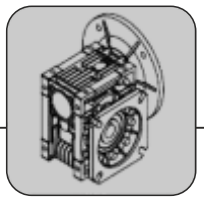


HW 063/071

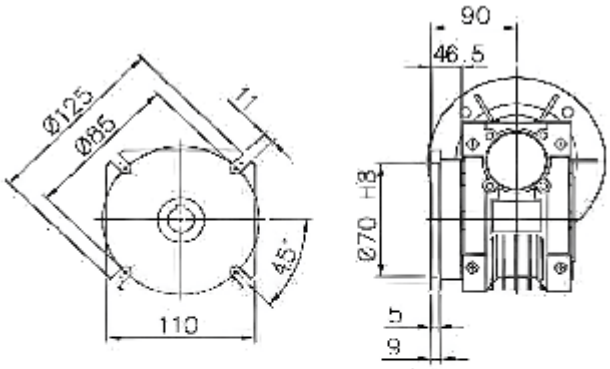


IEC	D	b	t	P	M	N	T	S
63B5	11	4	12.8	140	115	95	4	10
71B5	14	5	16.3	160	130	110	4	9
71B14	14	5	16.3	105	85	70	4	6.6
80B5	19	6	21.8	200	165	130	6	11
80B14	19	6	21.8	120	100	80	4	6.6

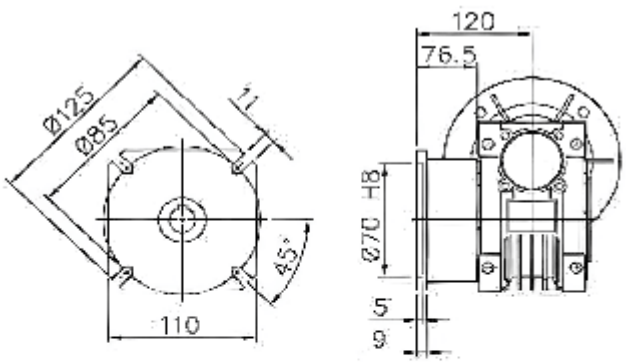
HW	P1	D1	D1*	P2	D2	C	L
063	105	11	14	140(63B5)	11	40	165
071	120	14	19	160(71B5)	14	48	193



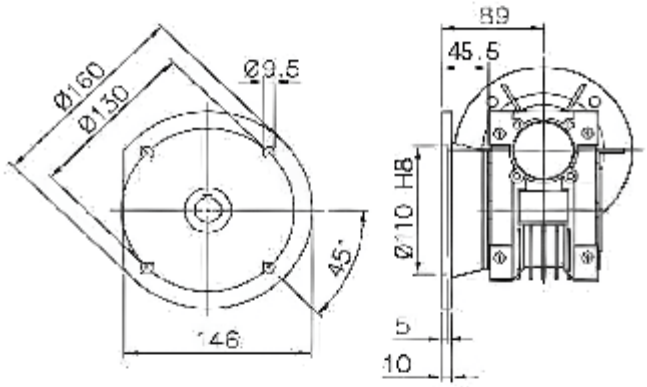
FWOF 50-FA



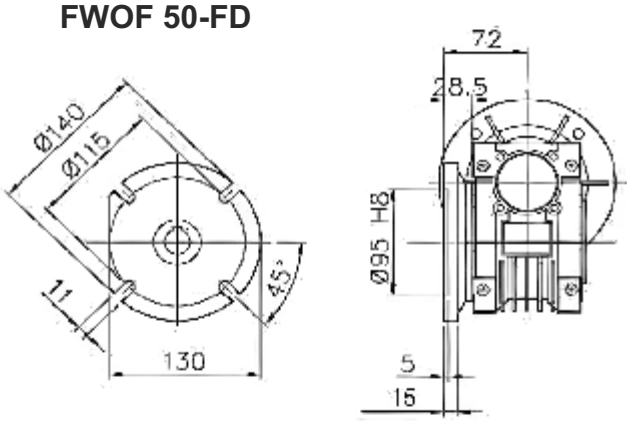
FWOF 50-FB



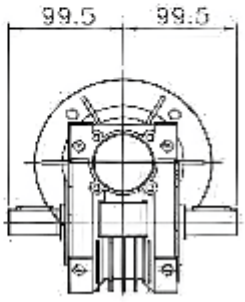
FWOF 50-FC

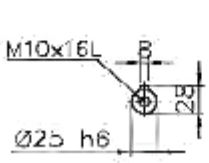


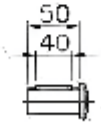
FWOF 50-FD

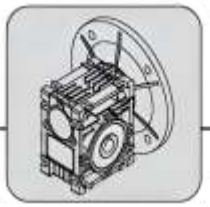


FWSO 50





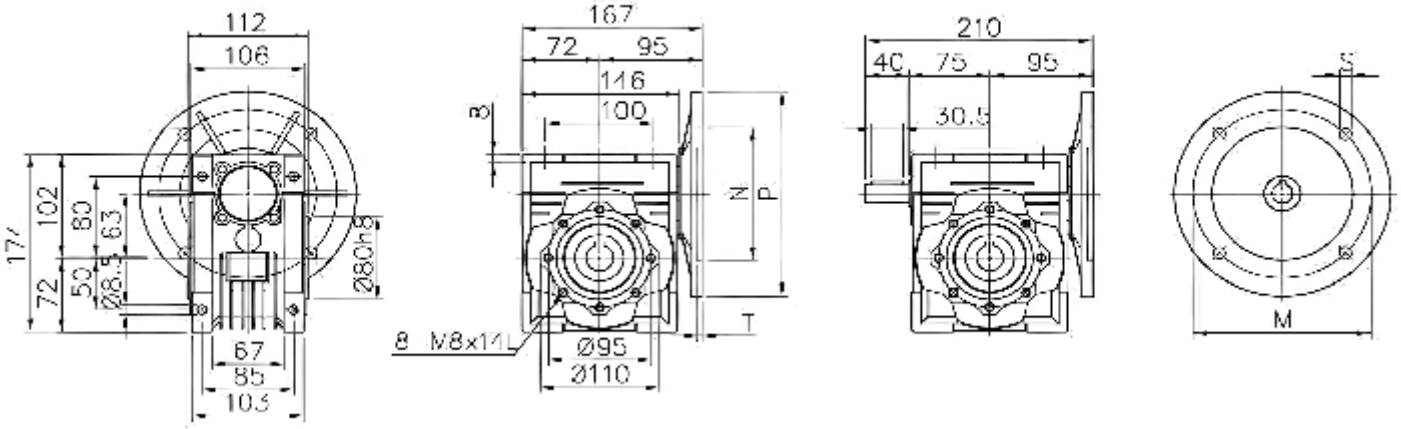




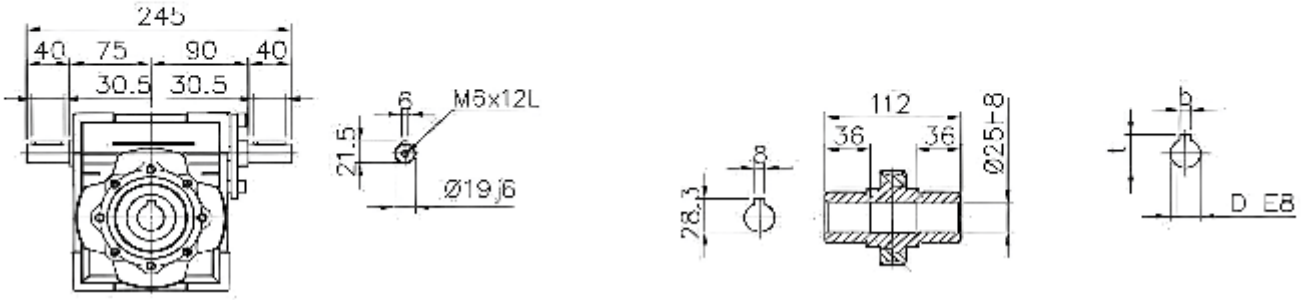
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

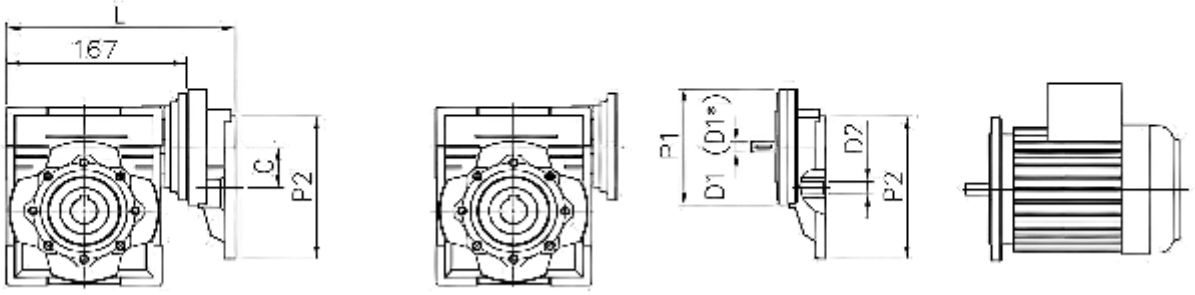
FW 63



FWSI63

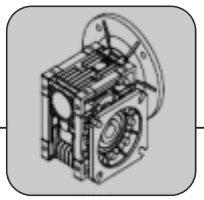


HW063/071

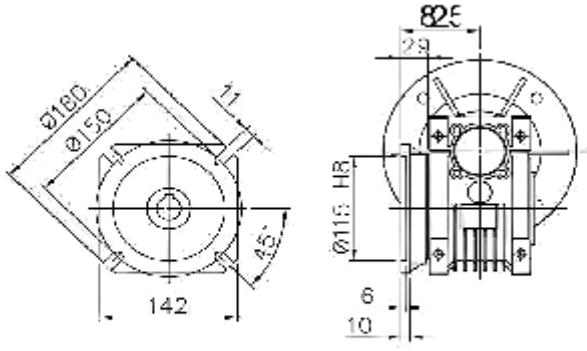


IEC	D	b	t	P	M	N	T	S
71B5	14	5	16.3	160	130	110	4	9
71B14	14	5	16.3	105	85	70	4	6.6
80B5	19	6	21.8	200	165	130	4	11
80B14	19	6	21.8	120	100	80	3.5	6.6
90B5	24	8	27.3	200	165	130	4	11
90B14	24	8	27.3	140	115	95	3.5	9

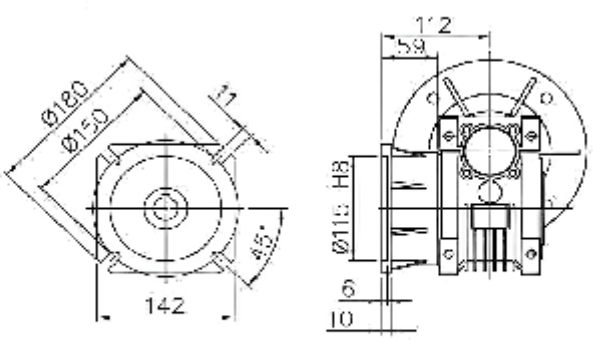
HW	P1	D1	D1*	P2	D2	C	L
063	105	11	14	140(63B5)	11	40	212
071	120	14	19	160(71B5)	14	48	220



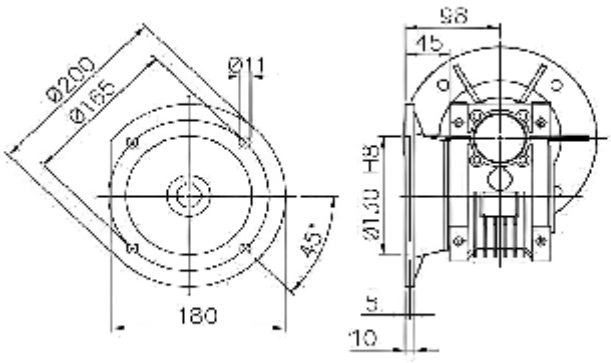
FWOF 63-FA



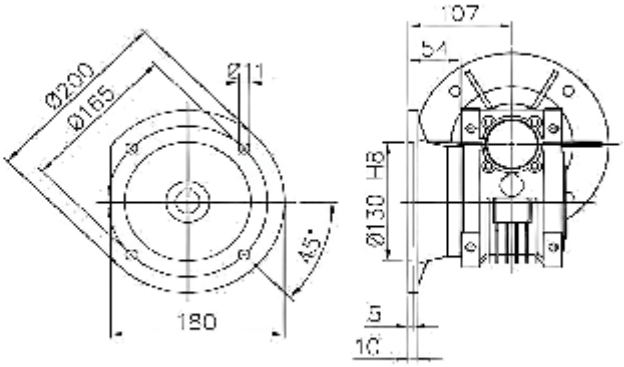
FWOF 63-FB



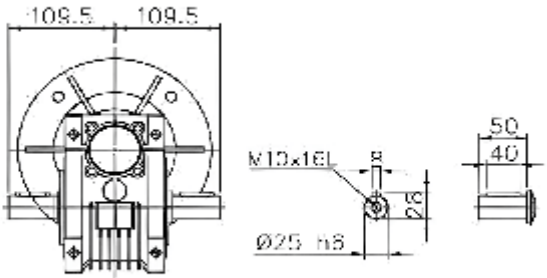
FWOF 63-FC



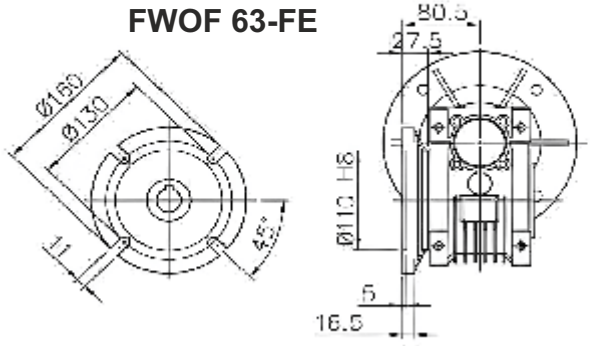
FWOF 63-FD

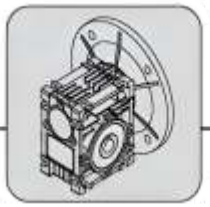


FWSO 63



FWOF 63-FE

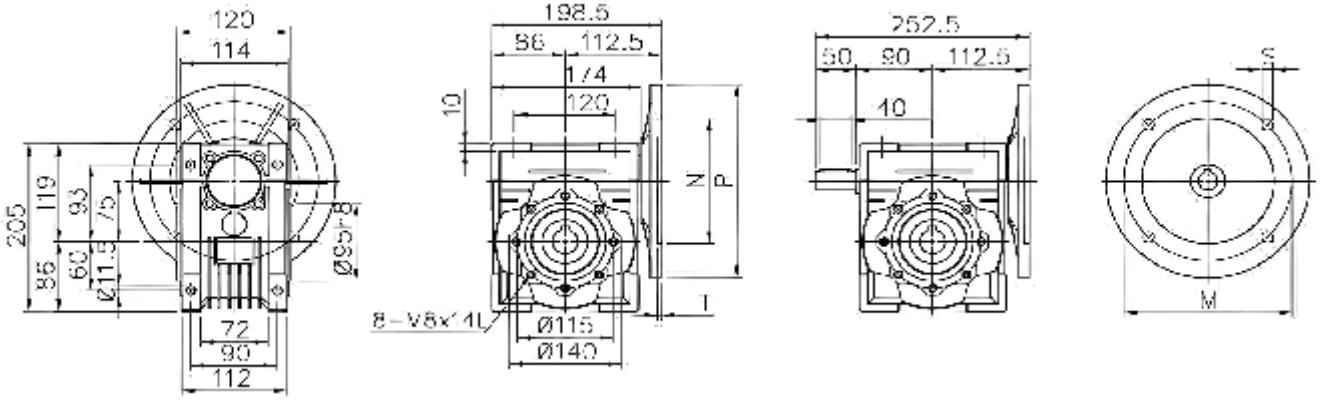




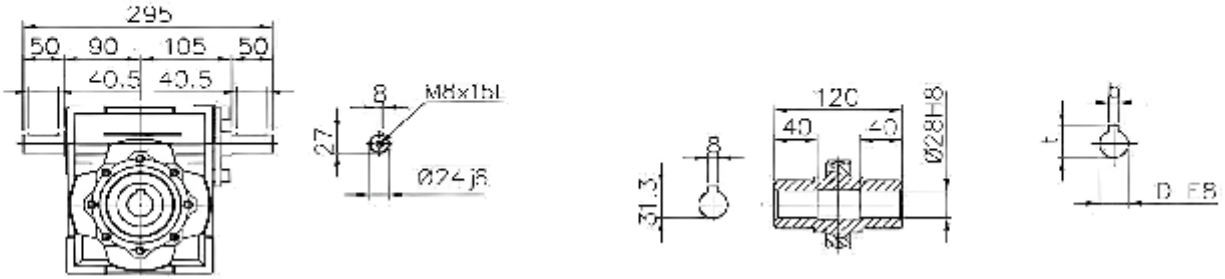
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

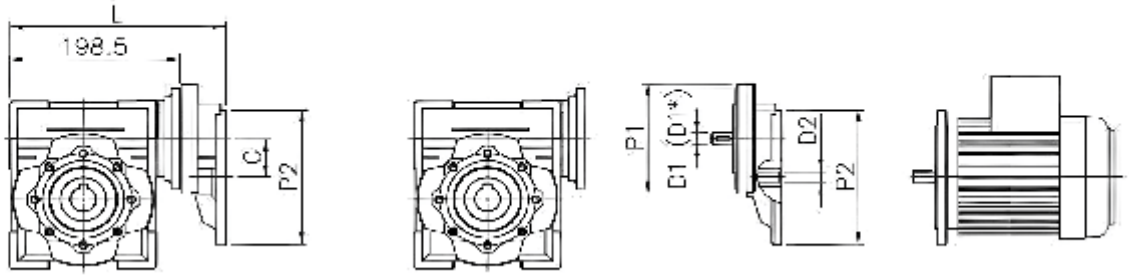
FW 75



FWSI 75

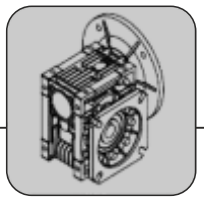


HW 071/080

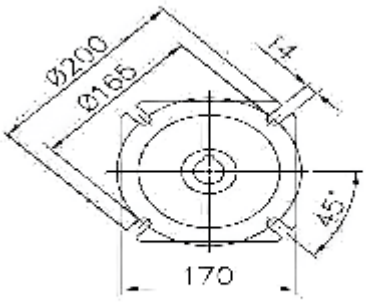


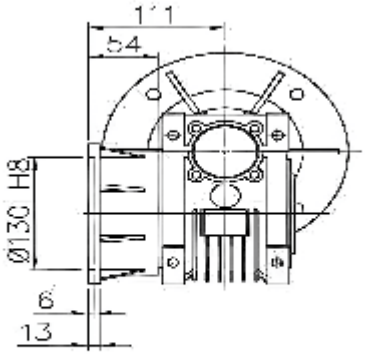
IEC	D	b	t	P	M	N	T	S
71B5	14	5	16.3	160	130	110	4	9
80B5	19	6	21.8	200	165	130	4	11
80B14	19	6	21.8	120	100	80	5	6.6
90B5	24	8	27.3	200	165	130	4	11
90B14	24	8	27.3	140	115	95	3.5	9
100/112B5	28	8	31.3	250	215	180	4	13.5
100/112B14	28	8	31.3	160	130	110	4	9

HW	P1	D1	D1*	P2	D2	C	L
071	120	14	19	160(71B5)	14	48	251.5
080	160	19	19/24	200(80B5)	19	66	273.5

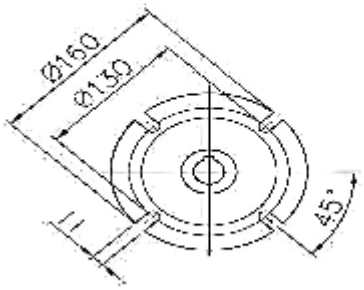


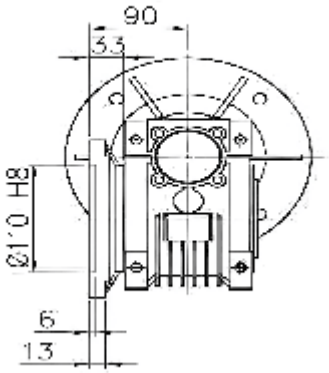
FWOF 75-FA



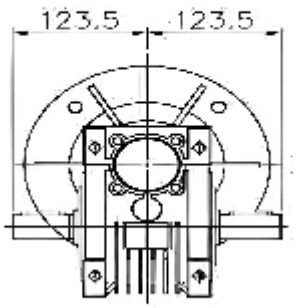


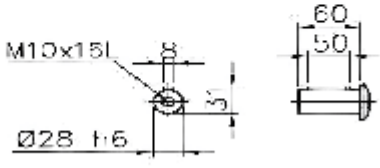
FWOF 75-FB

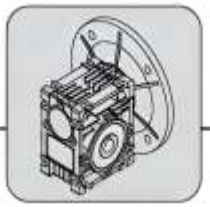




FWSO 75



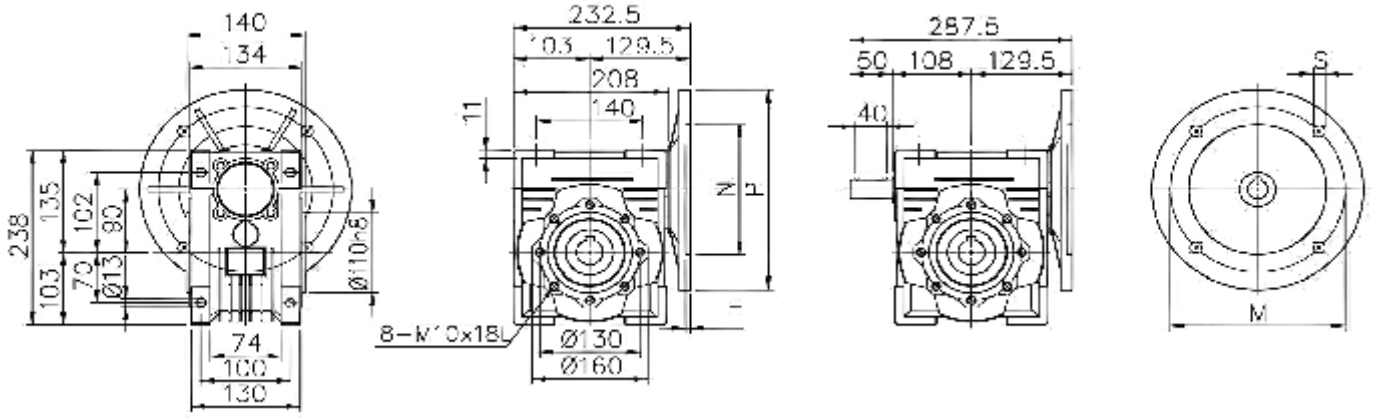




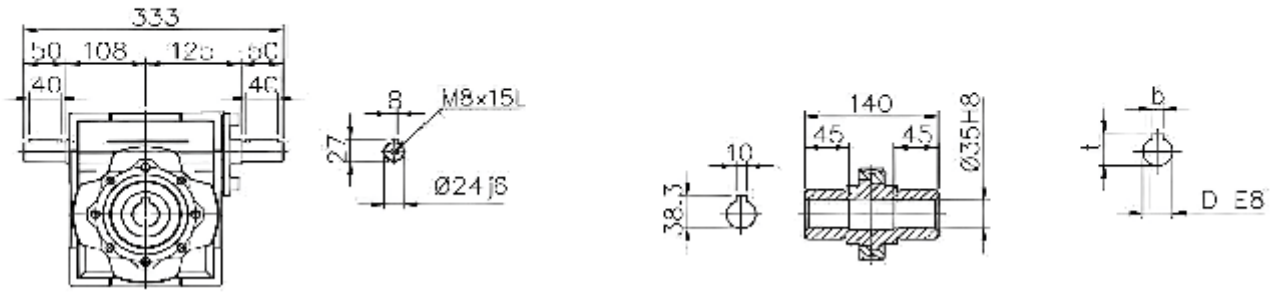
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

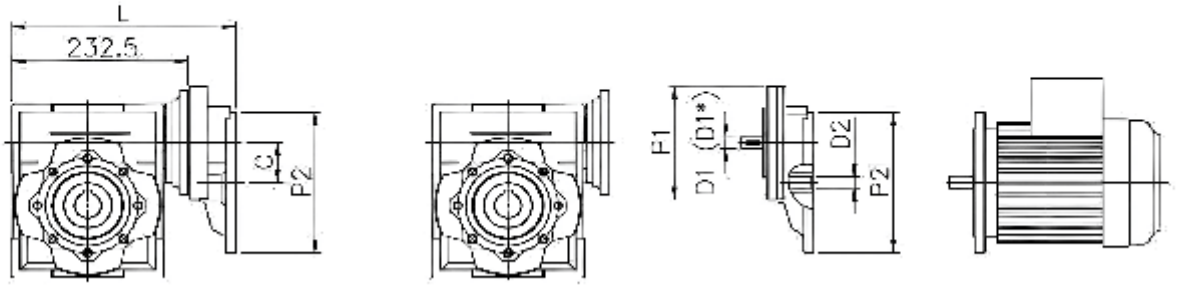
FW 90



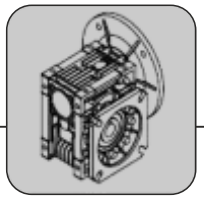
FWSI 90



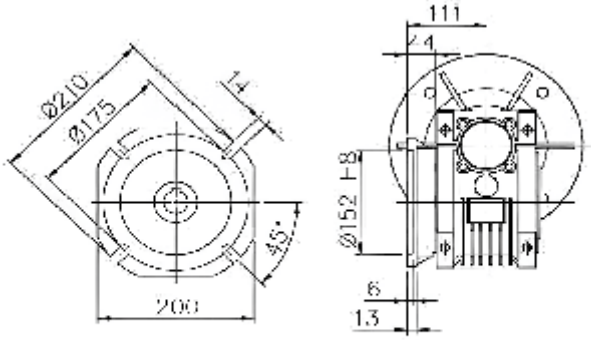
HW 071/080



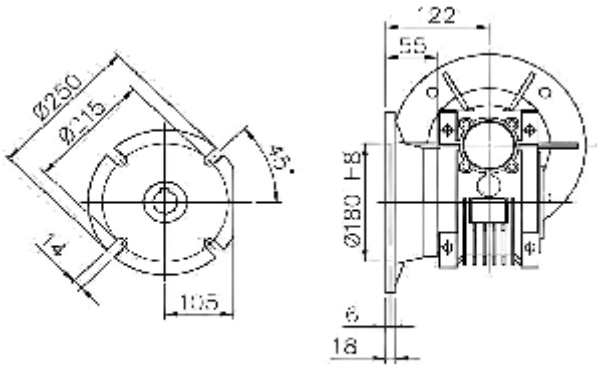
IEC	D	b	t	P	M	N	T	S	HW	P1	D1	D1*	P2	D2	C	L
80B5	19	6	21.8	200	165	130	4	11	071	120	14	19	160(71135)	14	48	285.5
80B14	19	6	21.8	120	100	80	6	6.6	080	160	19	24/28	200(8085)	19	66	307.5
9035	24	8	27.3	200	165	130	4	11								
90B14	24	8	27.3	140	115	95	3.5	9								
100/112B5	28	8	31.3	250	215	180	4	13.5								
100/112B14	28	8	31.3	160	130	110	4	9								



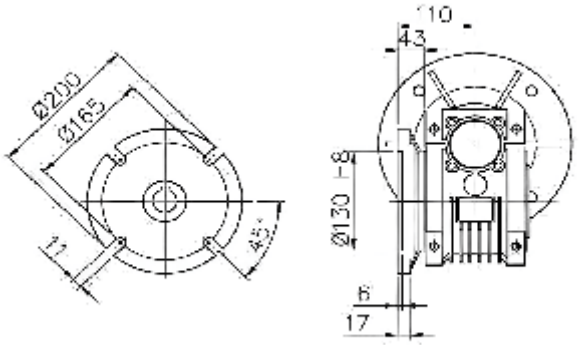
FWOF 90-FA



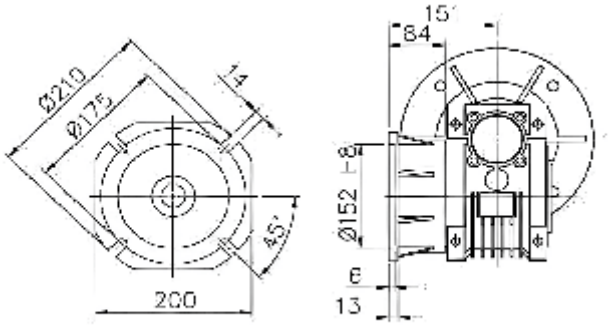
FWOF 90-FB



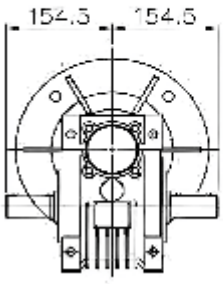
FWOF 90-FC

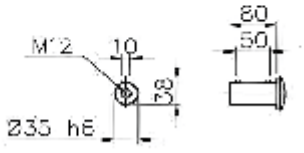


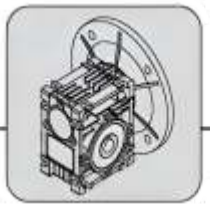
FWOF 90-FD



FWSM 90



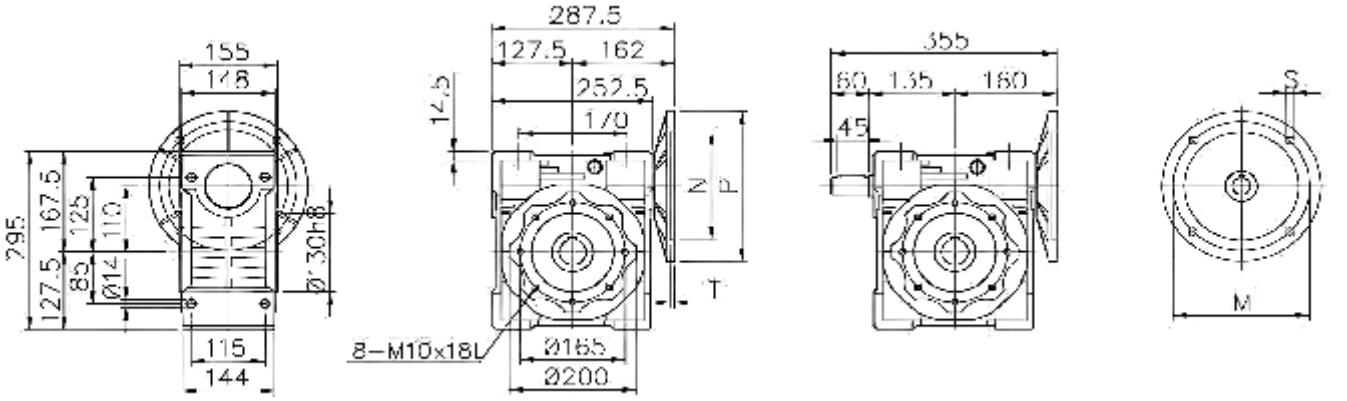




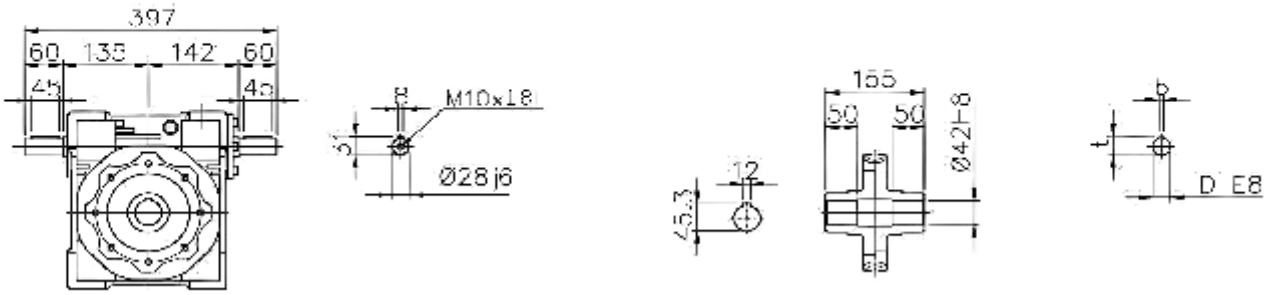
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

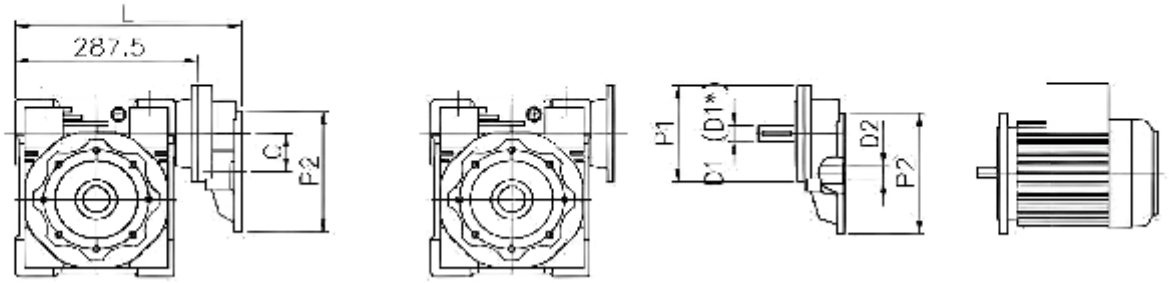
FW 110



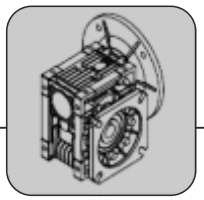
FWSI 110



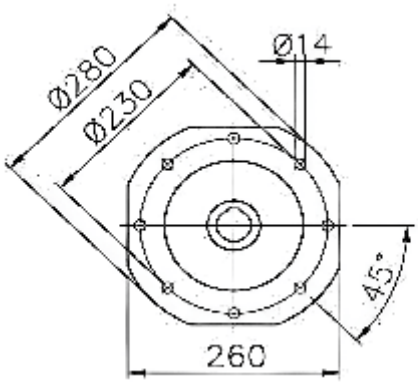
HW 080/090

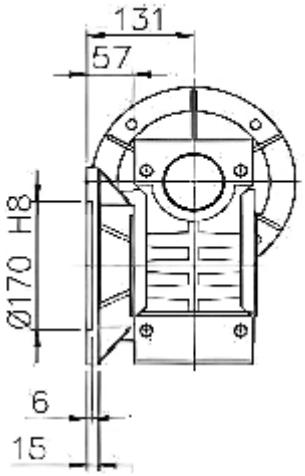


IEC	D	b	t	P	M	N	T	S	HW	P1	D1	D1*	P2	D2	C	L
80B5	19	6	21.8	200	165	130	4.5	M11	080	160	19	24/28	200(80B5)	19	66	362.5
90B5	24	8	27.3	200	165	130	4.5	M11	090	160	24	19/28	200(90B5)	24	66	362.5
100B5	28	8	31.3	250	215	180	5.5	M12								
112B5	28	8	31.3	250	215	180	5.5	M12								
112B14	28	8	31.3	160	130	110	4.5	M9								
132B5	38	10	41.3	300	265	230	5.5	M12								
132B14	38	10	41.3	200	165	130	4.5	M11								

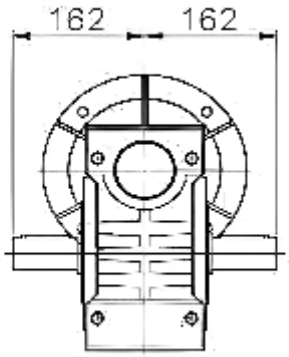


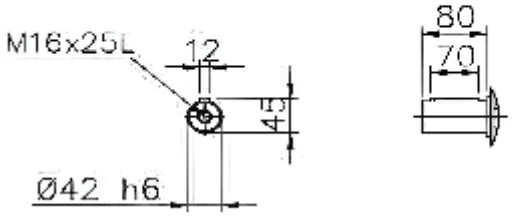
FWOF 110-FA

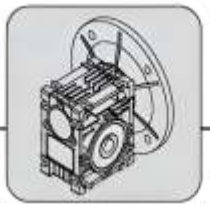




FWSO 110



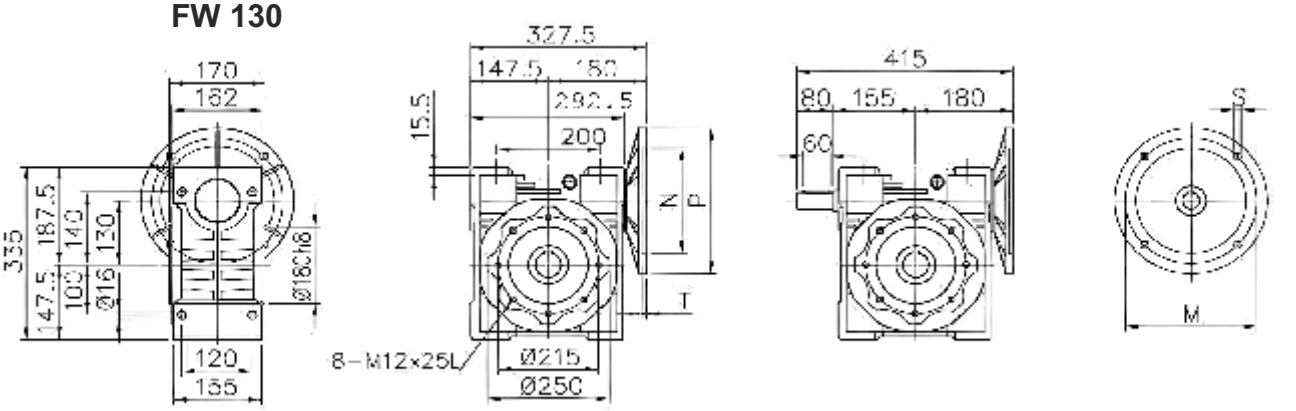




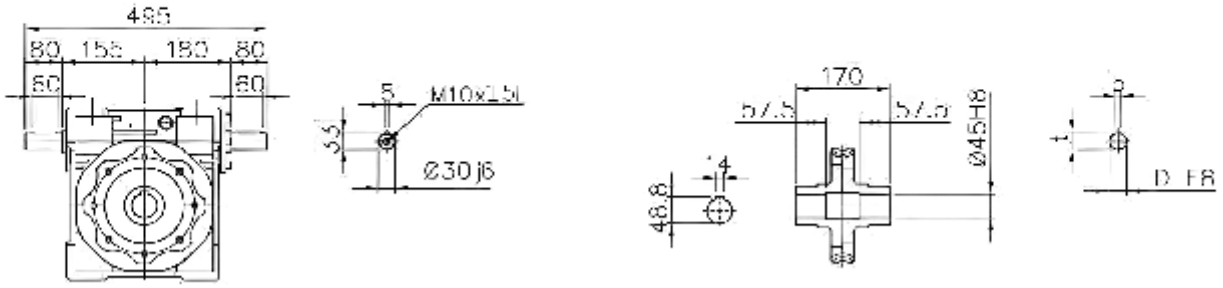
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

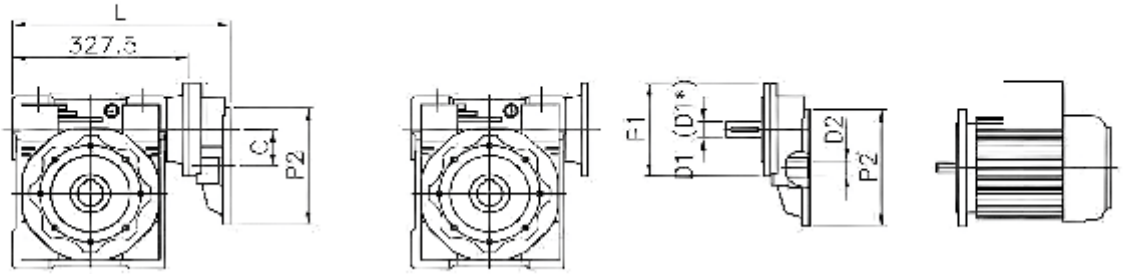
FW 130



FWSI 130

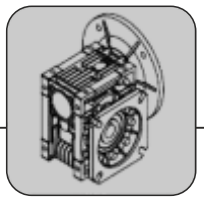


HW 080/090

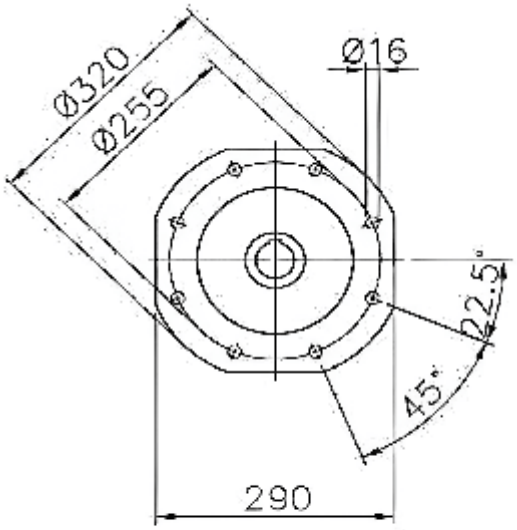


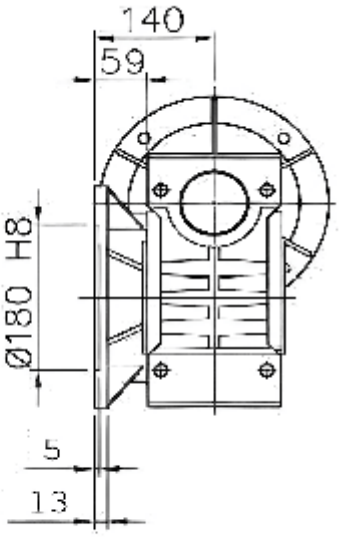
IEC	D	b	t	P	M	N	T	S
90B5	24	8	27.3	200	165	130	4	M12
90B14	24	8	27.3	140	115	95	4	M9
100B5	28	8	31.3	250	215	180	4.5	M12
112B5	28	8	31.3	250	215	180	5.5	M12
112B14	28	8	31.3	160	130	110	4.5	M12
132B5	38	10	41.3	300	265	230	4.5	M12
132B14	38	10	41.3	200	165	130	4.5	M12

HW	P1	D1	D1*	P2	D2	C	L
080	160	19	24/28	200(80B5)	19	66	402.5
090	160	24	19/28	200(90B5)	24	66	402.5

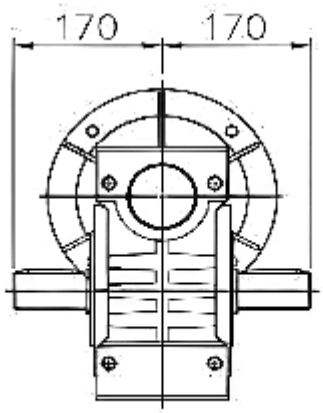


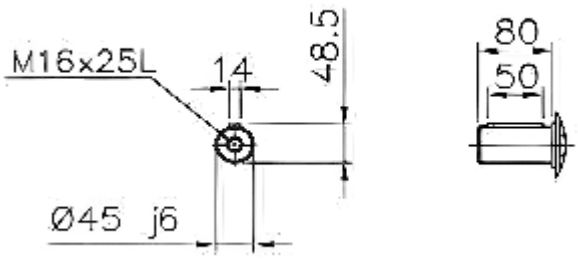
FWOF 130-FA

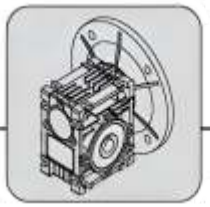




FWSO 130



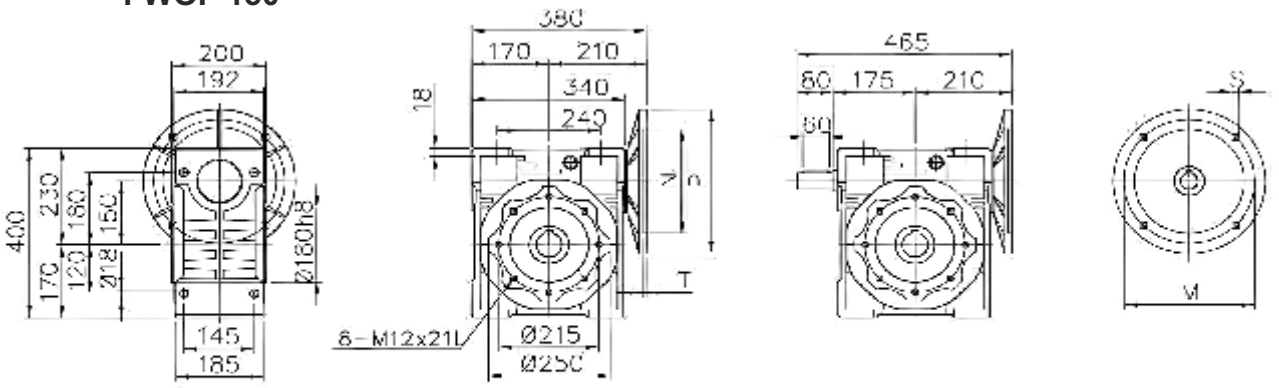




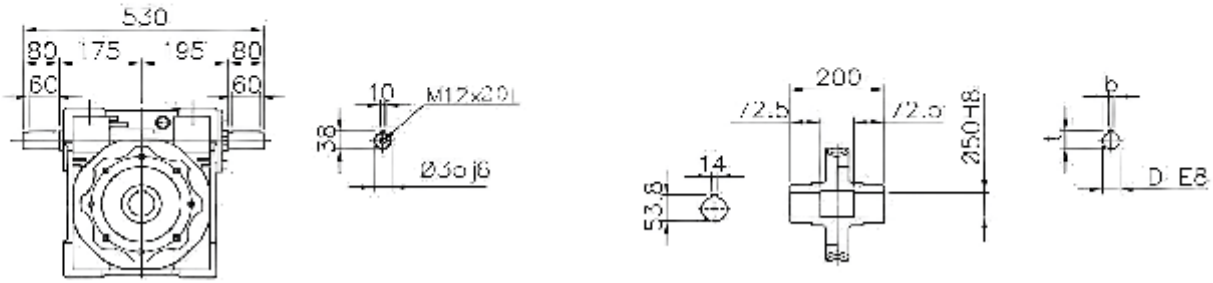
Aluminium Worm Gear Reducers

Dimension Sheets (mm)

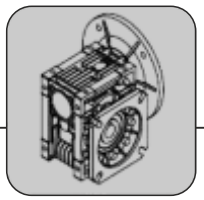
FWOF 150



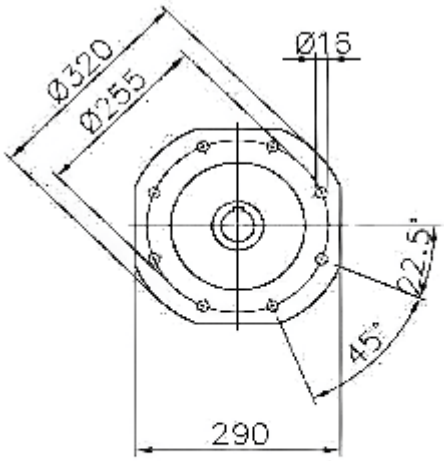
FWSI 150

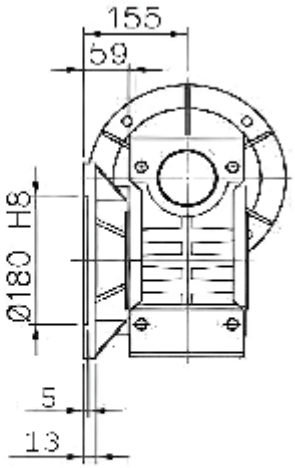


IEC	D	b	t	P	M	N	T	S
100B5	28	8	31.3	250	215	180	6	M12
112B5	28	8	31.3	250	215	180	6	M12
132B5	38	10	41.3	300	265	230	6	M12
132B14	38	10	41.3	200	165	130	5	M11
160B5	42	12	45.3	350	300	250	7	M19

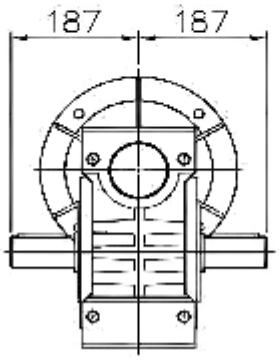


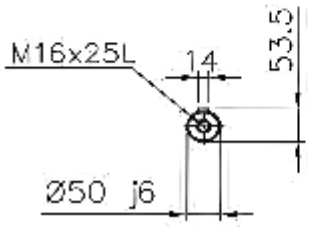
FWOF 150-FA

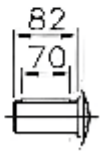




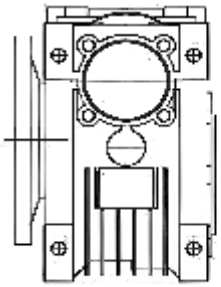
FWSO 150

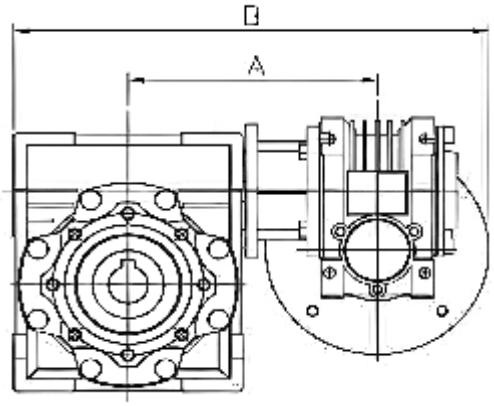






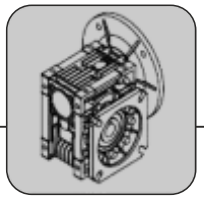
3.3 Dimension sheets-Double Reduction



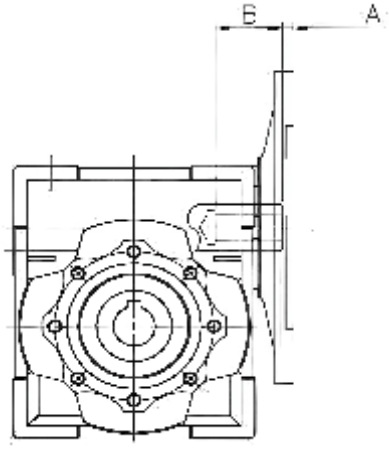


SIZE	IEC	A	B
030/040	56B5	120	230
	56B14		210
030/050	56B5	130	250
	56B14		230
	63B5		260
	63B14		235
030/063	56B5	145	277
	56B14		257
	63B5		287
	63B14		262
040/050	56B5	137.5	257.5
	63B5		257.5
	63B14		242.5
	71B5		277.5
	71B14		250
040/063	56B5	151	283
	63B5		293
	63B14		268
	71B5		303
	71B14		275.5
040/075	56B5	170	316
	63B5		325
	63B14		301
	71B5		336
	71B14		308.5
040/090	56B5	184.5	347.5
	63B5		357.5
	63B14		332.5
	71B5		367.5
	71B14		340

SIZE	IEC	A	B
050/090	63B5	191.5	364.5
	71B5		374.5
	71B14		347
	80B5		394.5
	80B14		354.5
050/110	63B5	217	414.5
	71B5		424.5
	71B14		397
	80B5		444.5
	80B14		404.5
063/110	71B5	225	432.5
	71B14		405
	80B5		452.5
	80B14		412.5
	90B5		452.5
	90B14		422.5
063/130	71B5	246	473.5
	71B14		446
	80B5		493.5
	80B14		453.5
	90B5		493.5
	90B14		463.5
063/150	71B5	275	524
	71B14		496.5
	80B5		544
	80B14		504
	90B5		544
	90B14		514



3.4 Dimension sheets-Input Quill Depth

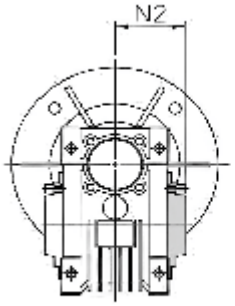


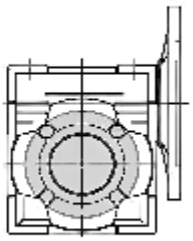
SIZE	IEC	A	B
030	63B5	5	24
	63B14	5	24
	56B5	5	21
	56B14	5	21
040	71B5	5	27
	71B14	5	27
	63B5	5	24
	63B14	5	24
	56B5	5	21
050	80135	5	38
	80B14	5	38
	71B5	5	27
	71B14	5	27
	63B5	5	24
063	90B5	5	48
	90B14	5	48
	80B5	5	38
	80B14	5	38
	71B5	5	27
	71B14	5	27
075	100/112B5	5	58
	100/112B14	5	58
	90B5	5	48
	90B14	5	48
	80B5	5	38
	80B14	5	38
	7135	5	27
090	100/112B5	5	58
	100/112B14	5	58
	90B5	5	48
	90B14	5	48
	80B5	5	38
	80B14	5	38

SIZE	IEC	A	B
110	132B5	5	78
	132B14	5	78
	100/112B5	5	58
	100/112B14	5	58
	90B5	5	48
	90B14	5	48
	80B5	5	38
130	132B5	5	78
	132B14	5	78
	100/112B5	5	58
	100/112B14	5	58
	90B5	5	48
	90B14	5	48
150	160B5	5	109
	132B5	5	78
	132B14	5	78
	100/112B5	5	58

3.6 Accessories

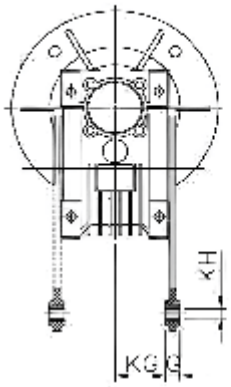
Protection Cover

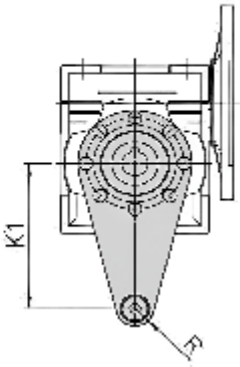




Size	N2	Size	N2
30	42	090	86
40	50	110	94
50	58	130	103
63	68	150	113
75	74		

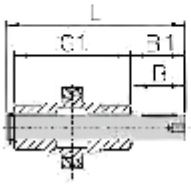
Torque Arm

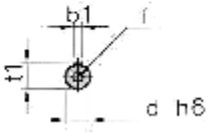


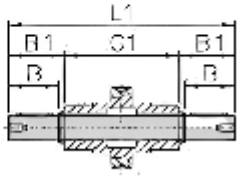


Size	K1	R	KG	G	KH
30	85	15	24	14	8
40	100	18	31.5	14	10
50	100	18	38.5	14	10
63	150	18	49	14	10
75	200	30	47.5	25	20
90	200	30	57.5	25	20
110	250	35	62	30	25
130	250	35	69	30	25
150	250	35	84	30	25

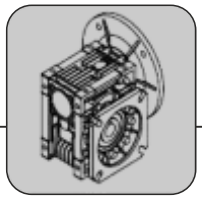
Output Shaft



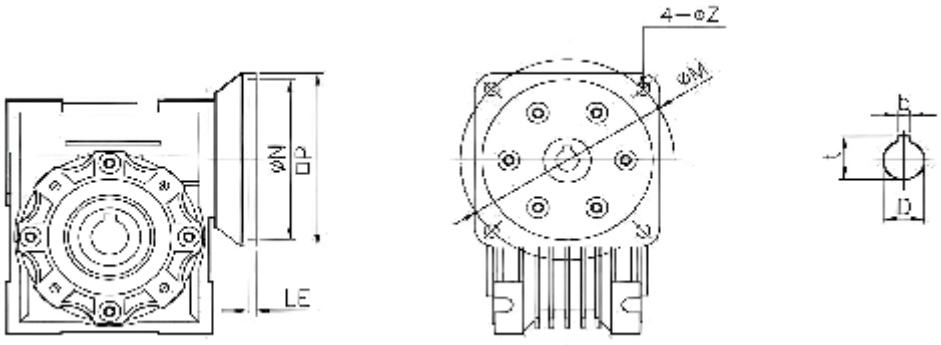




Size	d	B	B1	61	L	Li	f	b1	t1
30	14	30	32.5	63	102	128	M5x1	5	16
40	18	40	43	78	128	164	M6x1	6	20.5
50	25	50	53.5	92	153	199	M10	8	28
63	25	50	53.5	112	173	219	M10	8	28
75	28	60	63.5	120	192	247	M10	8	31
90	35	80	84.5	140	234	309	M12	10	38
110	42	80	84.5	155	249	324	M16	12	45
130	45	80	85	170	265	340	M16	14	48.5
150	50	82	87	200	297	374	M16	14	53.5

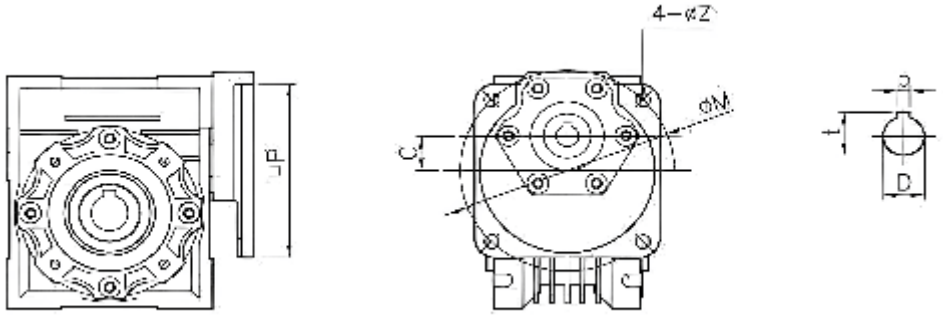


3.6 Small Motor



Size	Motor Frame	P	N	M	Z	LE	D	b	t
030	□90	□90	83	104	6.6	3	9	3	10.5
	□90	□90	83	104	6.6	3	11	4	13
040	□90	□90	83	104	6.6	3	11	4	13

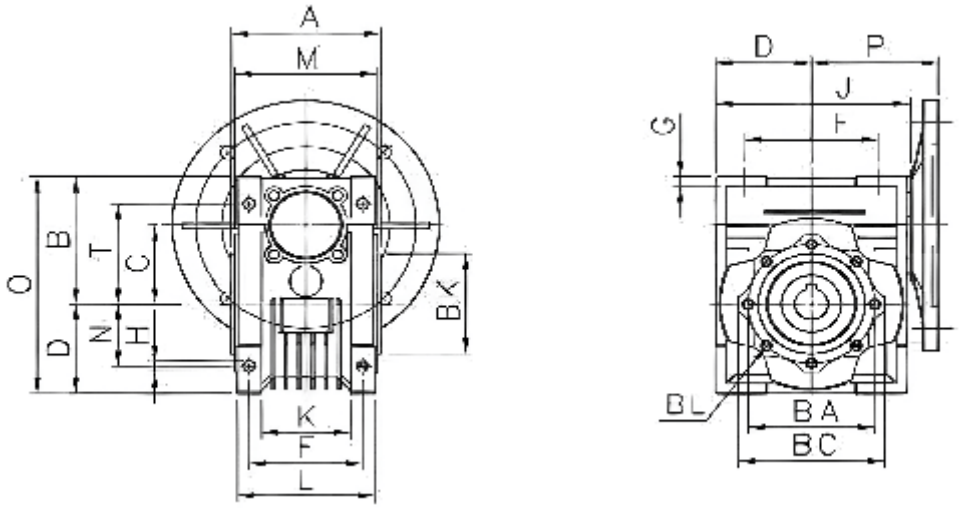
FWG Small Geared Motor



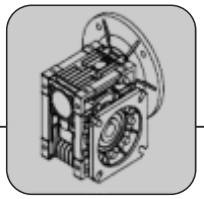
Size	Motor Frame	P	N	M	Z	D	b	t
030	□80	□80	15	94	6	9	3	10.5
	□90	□90	18	104	7	11	4	13
040	□90	□90	18	104	7	11	4	13
	□90	□90	18	104	7	14	5	16.3

3.7 Dimension Sheets [Inch]

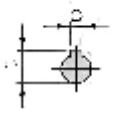
FW / FWOF (Inch)

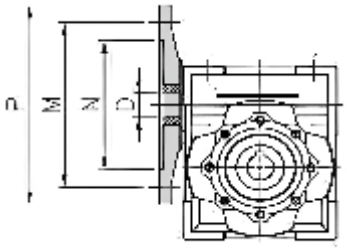


Size Dimension	30	40	50	63	75	90	110	130	150
A	2.48	3.07	3.62	4.41	4.72	5.51	6.10	6.69	7.87
B	2.24	2.81	3.31	4.02	4.69	5.31	6.59	7.38	9.06
BA	2.56	2.95	3.35	3.74	4.5.3	5.12	6.50	8_46	8.46
BC	2.95	3.43	3.94	4.33	5.51	6.30	7.87	9.84	9.84
BH	90°	45°	45°	45°	45°	45°	45°	45°	45°
BK	2.165-0.0018 0	2.362-0.0018 0	2.756-0.0018 0	3.150-0.0021 0	3.740-0.0021 0	4.331-0.0021 0	5.118-0.0025 0	7.087-0.0025 0	7.087-0.0025 0
BL	M6 x11	M6x10	M8x10	M8x14	M8x14	M10x18	M10x18	M12x21	M12x21
C	1.18	1.57	1.97	2.48	2.95	3.54	4.33	5.12	5.91
D	1.57	1.97	2.36	2.53	3.39	4.06	5.02	5.81	6.69
E	2.13	2.76	3.15	3.94	4.72	5.51	6.69	7.87	9.45
F	1.73	2.36	2.76	3.35	3.54	3.94	4.53	4.72	5.71
G	0.22	0.26	0.28	0.31	0.39	0.43	0.57	0.61	0.71
H	0.26	0.26	0.33	0.33	0.45	0.51	0.55	0.63	0.71
J	3.15	3.98	4.76	5.75	6.85	8.19	9.94	11.52	13.39
K	1.26	t69	1.93	2.54	2.83	2.91	-	-	-
L	2.20	2.80	3.35	4.06	4.41	5.12	5.67	6.10	7.28
M	2.28	2.87	3.43	4.17	4.49	5.28	5.83	6.38	7.56
N	1.06	1.38	1.57	1.97	2.36	2.76	3.35	3.94	4.72
0	3.82	4.78	5.67	6.85	8.07	9.37	11.61	13.19	15.75
P	2.64	3.386	3.70	4.13	4.96	5.63	6.61	7.40	8.46
T	1.73	2.17	2.52	3.15	3.65	4.02	4.92	5.51	7.09
Z	2.91	3.63	3.92	4.71	5.25	6.09	6.77	7.09	8.07



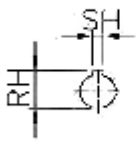
Input Flange-Input Bore-Perdisposition

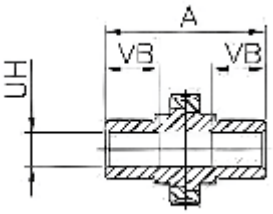




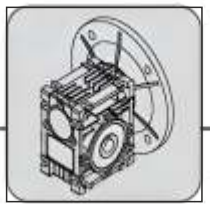
Size	NEMA	N	M	P	D	b	t	l											
								5	7.5	10	15	20	25	30	40	50	60	80	100
								D											
30	48C	3.00	3.75	5.625	0.500	0.188	0.594	•	•	•	•	•	•	•	•	•	•	•	-
	56C	4.50	5.88	6.500	0.525	0.186	0.719	•	•	•	•	•	•	•	•	•	•	•	-
40	56C	4.50	5.88	6.500	0.625	0.168	0.719	•	•	•	•	•	•	•	•	•	•	•	•
50	56C	4.50	5.88	6.500	0.625	0.188	0.719	•	•	•	•	•	•	•	•	•	•	•	•
63	56C	4.50	5.88	6.500	0.625	0.188	0.719	-	-	-	-	•	•	•	•	•	•	•	•
	140TC	4.50	5.88	6.500	0.875	0.188	0.969	•	•	•	•	•	•	•	•	-	-	-	-
75	56C	4.50	5.88	6.500	0.625	0.168	0.719	-	-	-	-	-	-	-	-	•	•	•	•
	140TC	4.50	5.86	6.500	0.575	0.188	0.969	-	-	-	•	•	•	•	•	•	-	-	-
	180TC	8.50	7.25	9.000	1.125	0.250	1.246	-	•	•	•	-	-	-	-	-	-	-	-
90	56C	4.50	5.88	6.500	0.625	0.168	0.719	-	-	-	-	-	-	-	-	-	-	•	•
	140TC	4.50	5.88	6.500	0.875	0.188	0.969	-	-	-	-	-	•	•	•	•	•	-	-
	180TC	8.50	7.25	9.000	1.125	0.250	1.246	-	•	•	•	•	•	•	•	-	-	-	-
110	140TC	4.50	5.88	6.500	0.875	0.188	0.969	-	-	-	-	-	-	-	-	•	•	•	•
	180TC	6.50	7.25	9.000	1.125	0.250	1.246	-	-	-	-	•	•	•	•	•	•	-	-
	210TC	8.50	7.25	9.000	1.375	0.312	1.523	-	•	•	•	•	-	-	-	-	-	-	-
130	140TC	4.50	5.88	6.500	0.875	0.188	0.969	-	-	-	-	-	-	-	-	-	-	•	•
	150TC	8.50	7.25	9.000	1.125	0.250	1.246	-	-	-	-	-	-	•	•	•	•	•	-
	210TC	8.50	7.25	9.000	1.375	0.312	1.523	-	•	•	•	•	•	•	•	-	-	-	-
150	150TC	8.50	7.25	9.000	1.125	0.250	1.246	-	-	-	-	-	-	•	•	•	•	•	•
	210TC	8.50	7.25	9.000	1.375	0.312	1.523	-	-	-	•	•	•	•	•	-	-	-	-
	250TC	8.50	7.25	9.000	1.625	0.375	1.800	•	•	•	•	-	-	-	-	-	-	-	-

Output Bore





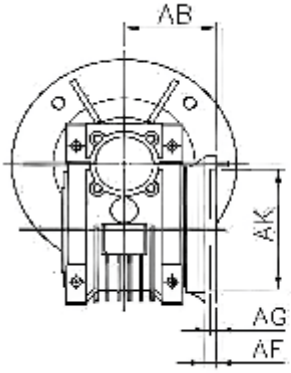
Size Dimension	30	40	50	63	75	90	110	130	150
A	2.48	3.07	3_62	4.41	4.72	5.51	6.10	6.69	7.87
VB	0.8.3	1.14	1.28	1.42	1.56	1.77	1.97	2.24	2.85
UH	0.625+0.001 0	0.750+0.001 0	1.000+0.001 0	1.125+0.001 0	1.250+0.001 0	1.375+0.001 0	1.625+0.001 0	1.750+0.001 0	2,000+0.001 0
SH	0.1875	0.1875	0_2500	0.2500	0.2500	0.3125	0.3750	0.3750	0.5000
RH	0.71	0.84	1.12	1.24	1.37	1.52	1.50	1.93	2.22

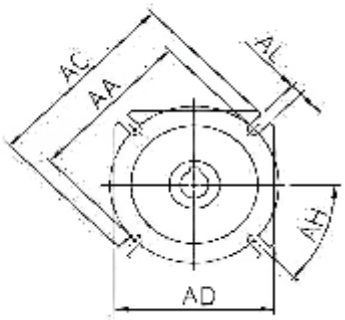


Aluminium Worm Gear Reducers

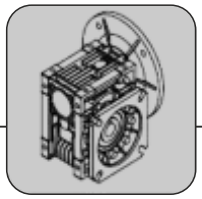
Dimension Sheets (Inch)

Output Flange

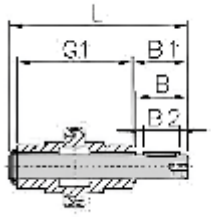


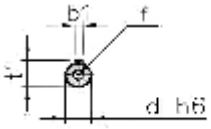


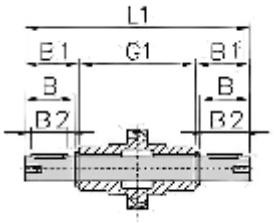
Dimension Size	Output Flange	AA	AB	AC	AD	AF	AG	AH	AK	AL
30	FA	2.68	2.15	3.15	2.76	0.24	0.16	45°	1.969+0.0015 0	0.26
40	FA	2.95	2,64	4.33	3.74	0.28	0.15	45°	2.362+0.0018 0	0.35
	FB	2.95	3.82	4.33	3.74	0.28	0.16	45°	2.362+0.0018 0	0.35
	FC	4.53	3.15	5.51		0.35	0.20	45°	3.740+0.0021 0	0.37
	FD	3.94	2.28	4.72		0.47	0.20	45°	3.150+0.0018 0	0.35
50	FA	3.35	3,54	4.92	4.33	0,35	0.20	45°	2.765+0.0018 0	0.43
	FB	3.35	4.72	4.92	4.33	0.35	0.20	45°	2.765+0.0018 0	0.43
	Fe	5.12	3.50	6.30		0.39	0.20	45°	4.331+0.0021 0	0.37
	ED	4.53	2.83	5.51		0.57	0.20	45°	3.543+0.0021 0	0.43
63.	EA	4.13	3.23	7.09	5.59	0.39	0.24	45°	4.528+0.0021 0	0.43
	FB	5.91	4.41	7.09	5.59	0.39	0.24	45.	4.528+0.0021 0	0.43
	EC	6.50	3.86	7.87		0.39	0.20	45°	5.118+0.0025 0	0.43
	ED	6,50	4.21	7.87	-	0.39	0.20	45°	5.118+0.0025 0	0.43
	FE	5.12	3.17	6.30		0.65	0.20	45°	4.341+0.0021 0	0.43
75	FA	6.50	4.37	7.87	6.69	0.51	0.24	45°	5.118 +0.0025 0	0.55
	ED	5.12	3.54	6.30		0.51	0.24	45°	4.341+0.0021 0	0.55
90	FA	5.89	4.37	8.27	8.27	0.51	0.24	45.	5.984+0.0025 0	0.55
	FB	8.46	4.80	9.84		0.71	0.24	45°	7.087+0.0025 0	0.55
	FC	6.50	4.33	7.87		0.67	0.24	45°	5.118 +0.0025 0	0.43
	FD	6.89	5.94	8.27		0.51	0.24	45°	5.984+0.0025 0	0.55
110	FA	9.06	5.16	11.02	10.24	0.59	0.24	45°	6.693+0.0025 0	0,55
130	FA	10.4	5.51	12.6	11.42	0.59	0.24	45°	7.087+0.0025 0	0.63
150	EA	10.4	6.10	12.6	11.42	0.59	0.24	45°	7.087+0.0025 0	0.63



Output Shaft

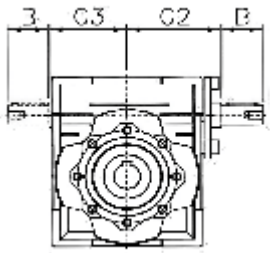


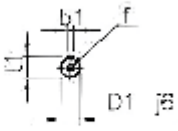




Size Dimension	30	40	50	63	75	90	110	130	150
d	0.625-0.0005 0	0.750-0.0005 0	1.000-0.0005 0	1.125-0.0005 0	1.250.-0.0005 0	1.375-0.0005 0	1.625-0.0005 0	1.750-0.0005 0	2.000-8.0005 0
b1	0.1875	0.1875	0.2500	0.2500	0.2500	0.3125	0.3750	0_3750	0.5000
t1	0.70	0.83	1.11	1.23	1.36	1.51	1.79	1.92	2.22
f	1/4-20	1/4-20	3/8-16	3/8-16	1/2-13	1/2-13	5/8-11	5/8-11	3/4-10
B	1.57	1.97	1.97	2.36	2.76	3.15	3.54	3_54	3.94
B1	1.67	2.09	2.11	2.50	2.89	3.33	3.72	3.74	4.13
B2	1.125	1.500	1.500	1.875	2.250	2.500	2.750	2.750	3.500
G1	2.48	3.07	3.62	4.41	4.72	.	5.51	6.10	6.697.87
L	4.41	5.43	6.02	7.20	7.55	9.21	9.60	10.43	11.69
Ll	5.82	7.25	7.84	9.41	10.50	12.17	13.54	14.17	16.13

Input Shaft





Size Dimension	30	40	50	63	75	90	110	130	150
Dl	0.375-0.0005 0	0.500-0.0005 0	0.625-0.0005 0	0.750-0.0005 0	0.875-0.0005 0	0.875-0.0005 0	1.125-0.0005 0	1.125-0.0005 0	1.375-0.0005 0
b1	0.094	0.125	0.188	0.188	0.188	0.188	0.250	0.250	0.315
t1	0.42	0.55	0.70	0.83	0.96	0.96	1.24	1.36	1.51
f	1/4-20	1/4-20	1/4-20	1/4-20	1/4-20	1/4-20	3/5-16	1/2-13	1/2-13
B	1.18	1.18	1.56	1.97	2.35	2.36	2.76	3.15	3.15
G2	2.01	2.36	2.91	3.54	4.13	4.92	5.59	6.38	7.68
G3	1.77	2.09	2.52	2.95	3.54	4.25	5.31	6.10	5.89

NOTES

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NOTES

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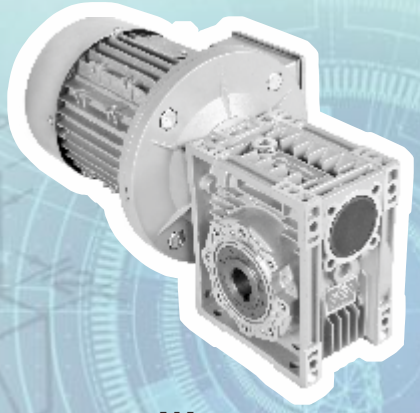
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