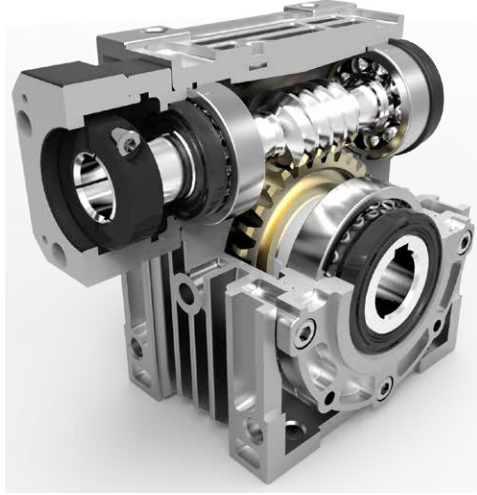


WE series

WE



■ Backlash ≤ 8 arcmin

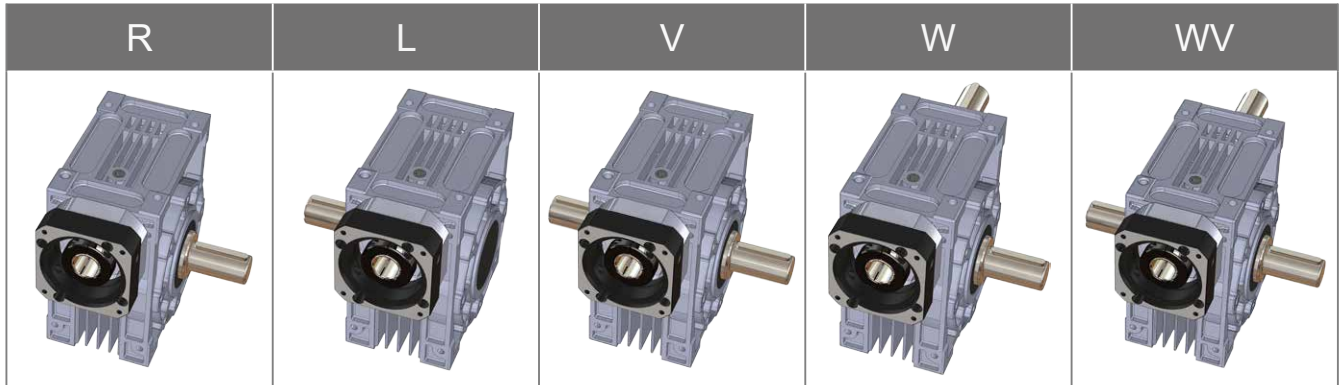
Suitable for indexing and positioning applications.

If using for continuous motion, ensure that the reducer case temperature does not exceed 50°C.

Indication of Model Numbers

WE	N		60	30	L	MOTOR
Type	Output Shaft	Output Flange	Model	Ratio	Shaft Direction	Motor Brand & Model, or output flange/shaft dimensions
WE	S: Solid O: Hollow N: Clamping	□ None F: Output Flange	30 40 50 60 70	5 10 15 20 30 40 50 60	R L	

Shaft Direction



R: Right Shaft (looking at the input shaft with foot down, output shaft is on the right)

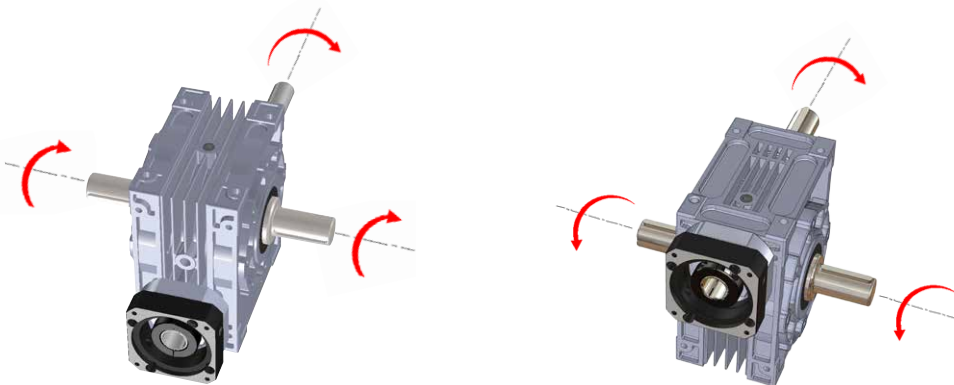
L: Left Shaft

W: Double Input Shaft & Single Output Shaft

WV: Double Input Shaft & Single Output Shaft

S: Custom / special design shaft can be produced

Rotation Direction



Characteristic of WE Series

WE



WES

○ Solid output shaft



WESF

○ Solid output shaft



WEO

○ Hollow output shaft



WEOF

○ Hollow output shaft



WEN

○ Clamping output shaft



WENF

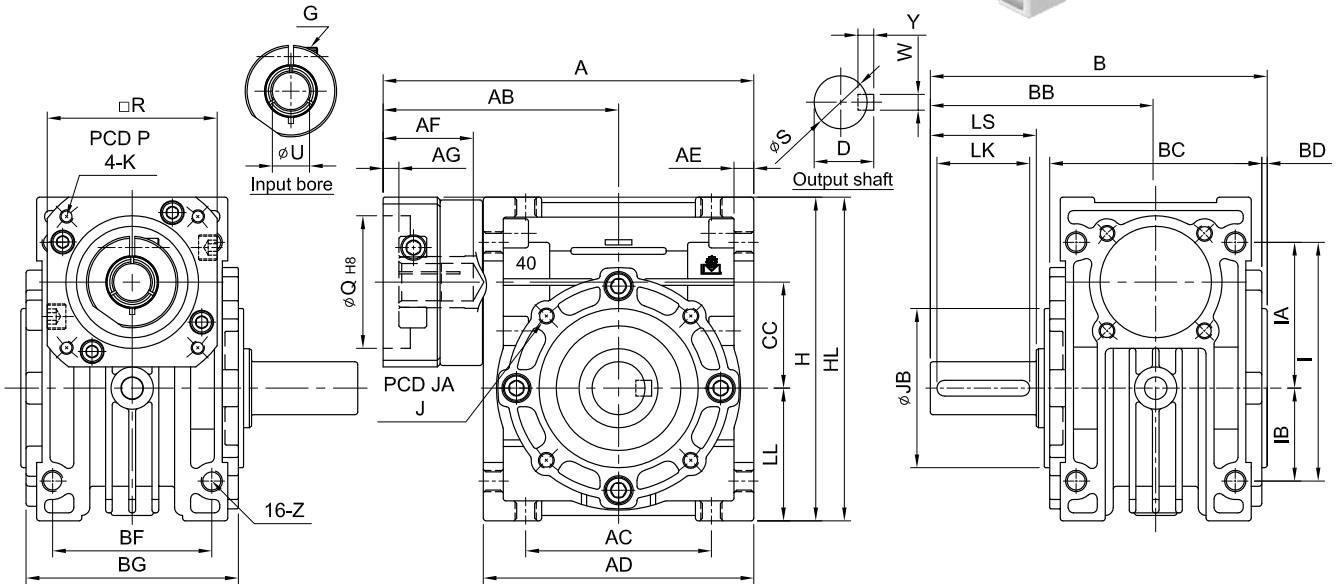
○ Clamping output shaft

WE Series Specifications

Size / Model No.	Sym	Unit	Ratio	30	40	50	60	70			
Rated Output Torque Efficiency	T_{2N} η	Nm %	5	8.3	22.3	30.6	41.2	70.6			
				90.3	92.3	92.6	92.6	93.6			
			10	8.8	20.7	41.9	65.9	92			
				83.7	86.6	89.6	90.1	90.5			
			15	11.4	26.2	40.9	64.5	90			
				81.9	83.7	85.3	86.1	86.6			
			20	9.52	22.6	40.7	63.5	106.1			
				72.3	76.6	81.7	82.4	85.1			
			30	12.1	27.4	43.2	67.9	95			
				69.6	72.3	74.5	75.9	76.7			
			40	9.2	24.3	43.8	69.1	111			
				56.8	66.3	69.2	70.3	74.3			
			50	10.4	24	43.6	69.2	105.6			
				58.7	64.6	67.7	68.9	71.2			
			60	9.6	20.5	36.1	58.3	100.5			
				54.6	56.8	59.3	61.3	68.8			
			Max. Output Torque Emergency Stop Torque	T_{2NOT}	Nm	5~60	2 Times of Rated Output Torque				
			Rated Input Speed	n_{1N}	rpm	5~60	2,000				
Max. Input Speed	n_{1B}	rpm	5~60	3,000							
Backlash Ps		arcmin	5~60	≤ 8							
Max. Radial Force	F_{2rB}	N	5~60	1,830	3,490	4,840	6,270	7,380			
Max. Axial Force	F_{2aB}	N	5~60	915	1,745	2,420	3,135	3,690			
Service Life	L_{IH}	hr	5~60	S5 Cycle Operation: >12,000 (S1 Continuous Operation: >6,000hrs)							
Operating Temperature		°C	5~60	-15° C ~ +45° C							
Lubrication			5~60	Synthetic Grease							
Protection Class			5~60	IP65							
Mounting Position			5~60	Any							

WES series

RATIO : 5.10.15.20.30.40.50.60



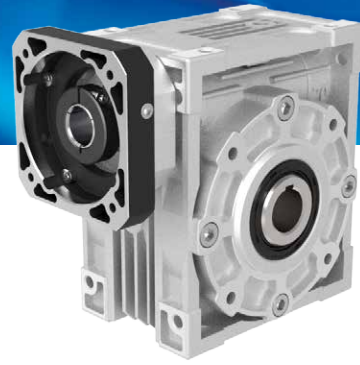
Model Code	A	AB	AC	AD	AE	AF	AG	B	BB	BC	BD	BF	BG	CC	LL	I	IA	IB	Z	H	Weight (KG)
30	108	68	55	80	6	32	5	99.5	67.5	60	2	45	58	30	40	72	45	27	M6	98	
40	140	89	70	102	7.5	34	6	127	85	80	2	60	72	40	50	90	55	35	M8	122	
50	158	98	80	120	8.5	41	6	150	100	94	3	70	85	50	60	105	65	40	M10	145	
60	195	122	100	146	10	59	9	159	105	102	3	85	103	60	75	136	83	53	M10	180	
70	219	134	120	170	12	59	9	187	125	118	3	90	110	70	85	150	90	60	M10	200	

unit : mm

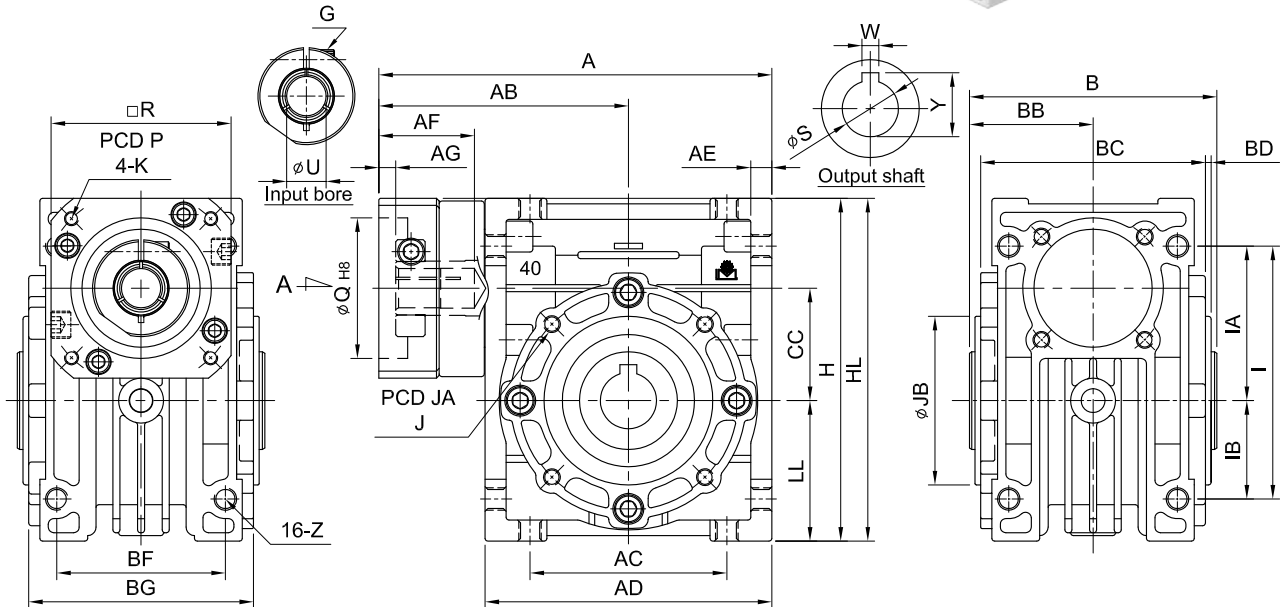
Model Code	30	40	50	60	70	
OUTPUT SHAFT	S	16	20	25	30	
	Y	5	6	7	7	
	W	5	6	8	8	
	D	18	22.5	28	28	
	LS	35	40	50	50	
	LK	30	35	45	45	
	J	8-M6 x P1.0	12-M6 x P1.0	12-M6 x P1.0	12-M8 x P1.25	12-M10 x P1.5
	JA	65	77	95	120	140
MOTOR FLANGE & INPUT BORE	JB	55	60	70	80	
	P	46, 60, 63	70, 75, 90	70, 75, 90	90, 100, 115, 145	90, 100, 115, 145
	K	M3 x P0.5 M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M4 x P0.7 M5 x P0.8 M6 x P1.0	M5 x P0.8 M6 x P1.0 M8 x P1.25	M5 x P0.8 M6 x P1.0 M8 x P1.25
	R	46, 55	64, 70, 80	64, 70, 80	92, 110, 130	92, 110, 130
	G	M3 x P0.5	M5 x P0.8	M5 x P0.8	M6 x P1.0	M6 x P1.0
	Q	30, 40, 50	50, 60, 70	50, 60, 70	70, 80, 95, 110	70, 80, 95, 110
	U	8	14	19	24	24
	HL	100	122, 125, 130	145, 150	181, 190, 200	210, 220

WEO series

RATIO : 5.10.15.20.30.40.50.60



WE



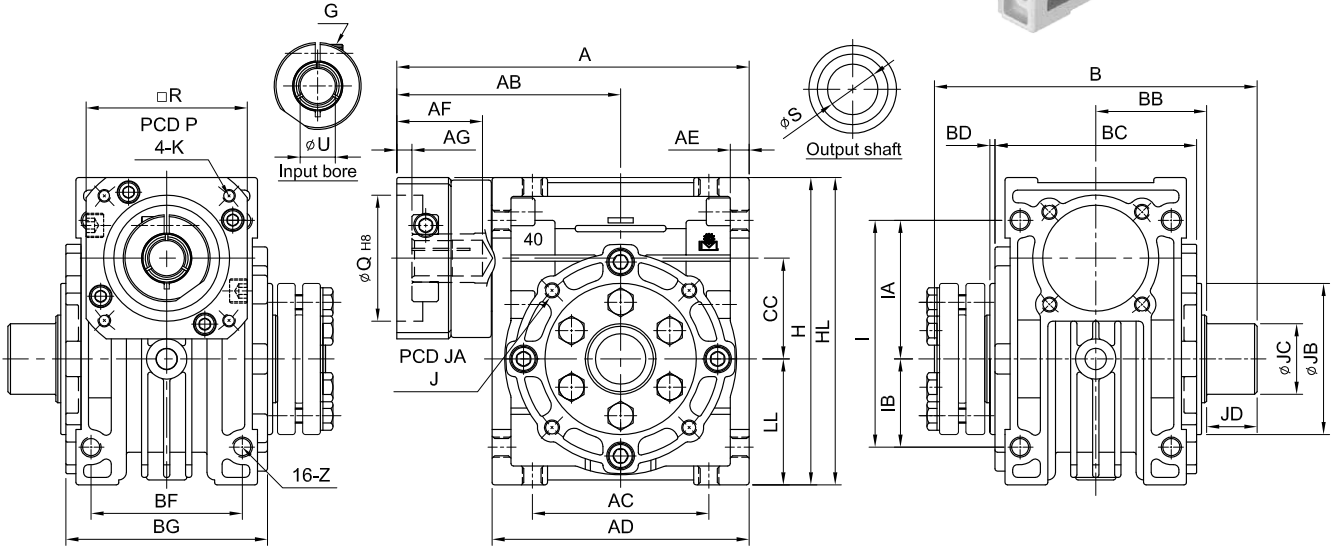
Model Code	A	AB	AC	AD	AE	AF	AG	B	BB	BC	BD	BF	BG	CC	LL	I	IA	IB	Z	H	Weight (KG)
30	108	68	55	80	6	32	5	65	32.5	60	2	45	58	30	40	72	45	27	M6	98	
40	140	89	70	102	7.5	34	6	88	44	80	2	60	72	40	50	90	55	35	M8	122	
50	158	98	80	120	8.5	41	6	98	50	94	3	70	85	50	60	105	65	40	M10	145	
60	195	122	100	146	10	59	9	108	54	102	3	85	103	60	75	136	83	53	M10	180	
70	219	134	120	170	12	59	9	128	64	118	3	90	110	70	85	150	90	60	M10	200	

unit : mm

Model Code	30	40	50	60	70	
OUTPUT SHAFT	S	14	20	25	30	
	Y	16.3	22.8	28.3	33.3	
	W	5	6	8	8	8
	J	8-M6 x P1.0	12-M6 x P1.0	12-M6 x P1.0	12-M8 x P1.25	12-M10 x P1.5
	JA	65	77	95	120	140
	JB	55	60	70	80	90
MOTOR FLANGE & INPUT BORE	P	46, 60, 63	70, 75, 90	70, 75, 90	90, 100, 115, 145	90, 100, 115, 145
	K	M3 x P0.5 M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M4 x P0.7 M5 x P0.8 M6 x P1.0	M5 x P0.8 M6 x P1.0 M8 x P1.25	M5 x P0.8 M6 x P1.0 M8 x P1.25
	R	46, 55	64, 70, 80	64, 70, 80	92, 110, 130	92, 110, 130
	G	M3 x P0.5	M5 x P0.8	M5 x P0.8	M6 x P1.0	M6 x P1.0
	Q	30, 40, 50	50, 60, 70	50, 60, 70	70, 80, 95, 110	70, 80, 95, 110
	U	8	14	19	24	24
	HL	100	122, 125, 130	145, 150	181, 190, 200	210, 220

WEN series

RATIO : 5.10.15.20.30.40.50.60



Model Code	A	AB	AC	AD	AE	AF	AG	B	BB	BC	BD	BF	BG	CC	LL	I	IA	IB	Z	H	Weight (KG)
30	108	68	55	80	6	32	5	108	36	60	2	45	58	30	40	72	45	27	M6	98	
40	140	89	70	102	7.5	34	6	128	46	80	2	60	72	40	50	90	55	35	M8	122	
50	158	98	80	120	8.5	41	6	146	53	94	3	70	85	50	60	105	65	40	M10	145	
60	195	122	100	146	10	59	9	154	57	102	3	85	103	60	75	136	83	53	M10	180	
70	219	134	120	170	12	59	9	172	65	118	3	90	110	70	85	150	90	60	M10	200	

unit : mm

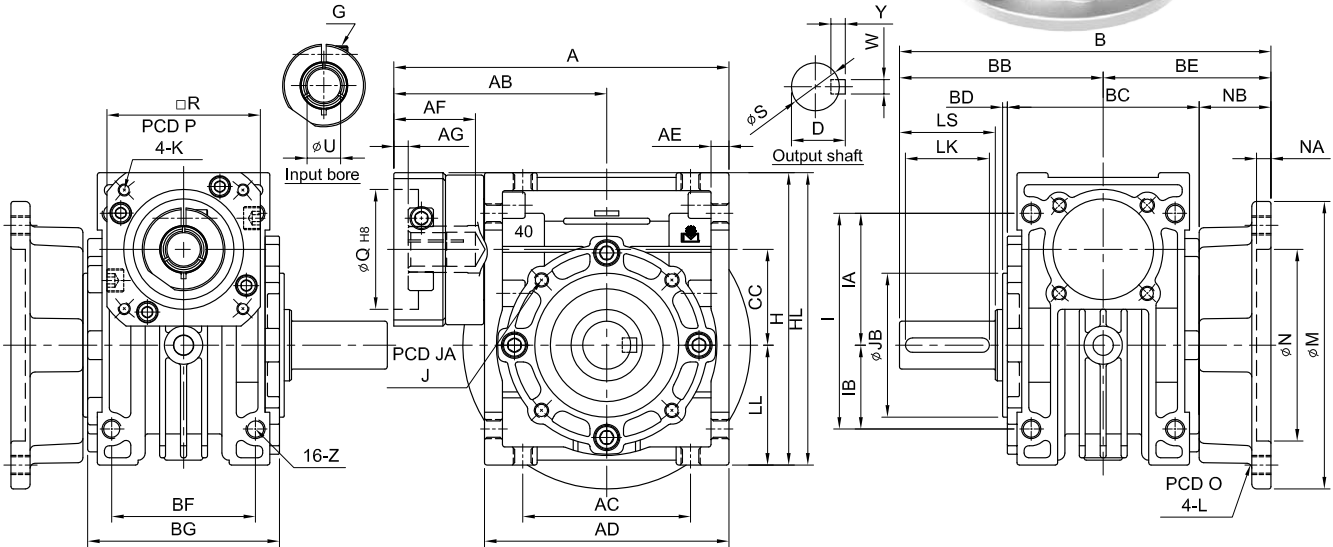
Code	Model	30	40	50	60	70
OUTPUT SHAFT	S	14	20	25	25	30
	J	8-M6 x P1.0	12-M6 x P1.0	12-M6 x P1.0	12-M8 x P1.25	12-M10 x P1.5
	JA	65	77	95	120	140
	JB	55	60	70	80	90
	JC	22	28	34	35	40
	JD	18	18	20	20	21
MOTOR FLANGE & INPUT BORE	P	46, 60, 63	70, 75, 90	70, 75, 90	90, 100, 115, 145	90, 100, 115, 145
	K	M3 x P0.5 M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M4 x P0.7 M5 x P0.8 M6 x P1.0	M5 x P0.8 M6 x P1.0 M8 x P1.25	M5 x P0.8 M6 x P1.0 M8 x P1.25
	R	46, 55	64, 70, 80	64, 70, 80	92, 110, 130	92, 110, 130
	G	M3 x P0.5	M5 x P0.8	M5 x P0.8	M6 x P1.0	M6 x P1.0
	Q	30, 40, 50	50, 60, 70	50, 60, 70	70, 80, 95, 110	70, 80, 95, 110
	U	8	14	19	24	24
	HL	100	122, 125, 130	145, 150	181, 190, 200	210, 220

WESF series

RATIO : 5.10.15.20.30.40.50.60



WE



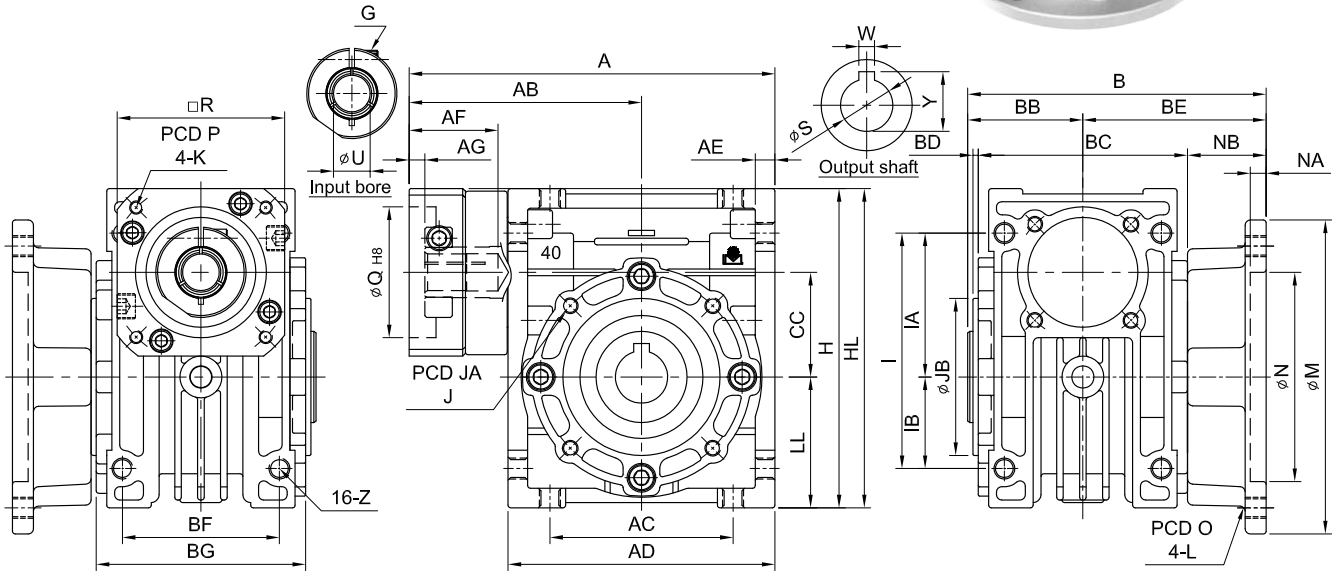
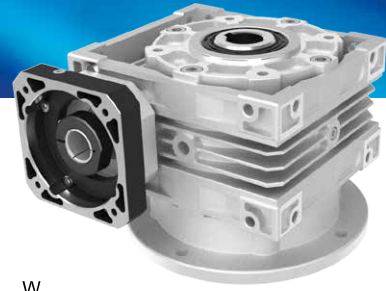
Model Code	A	AB	AC	AD	AE	AF	AG	B	BB	BC	BD	BE	BF	BG	NB	CC	LL	I	IA	IB	Z	H	Weight (KG)
30	108	68	55	80	6	32	5	127.5	67.5	60	2	60	45	58	30	30	40	72	45	27	M6	98	
40	140	89	70	102	7.5	34	6	155	85	80	2	70	60	72	30	40	50	90	55	35	M8	122	
50	158	98	80	120	8.5	41	6	180	100	94	3	80	70	85	33	50	60	105	65	40	M10	145	
60	195	122	100	146	10	59	9	205	105	102	3	100	85	103	49	60	75	136	83	53	M10	180	
70	219	134	120	170	12	59	9	225	125	118	3	100	90	110	41	70	85	150	90	60	M10	200	

unit : mm

Model Code		30	40	50	60	70
OUTPUT SHAFT	S	16	20	25	25	30
	Y	5	6	7	7	7
	W	5	6	8	8	8
	D	18	22.5	28	28	33
	LS	35	40	50	50	60
	LK	30	35	45	45	55
	J	8-M6 x P1.0	12-M6 x P1.0	12-M6 x P1.0	12-M8 x P1.25	12-M10 x P1.5
	JA	65	77	95	120	140
	JB	55	60	70	80	90
	N	70	80	95	130	150
	NA	5	6	6	7	7
	O	85	100	120	160	185
	L	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75
M	100	120	140	180	210	
MOTOR FLANGE & INPUT BORE	P	46, 60, 63	70, 75, 90	70, 75, 90	90, 100, 115, 145	90, 100, 115, 145
	K	M3 x P0.5 M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M4 x P0.7 M5 x P0.8 M6 x P1.0	M5 x P0.8 M6 x P1.0 M8 x P1.25	M5 x P0.8 M6 x P1.0 M8 x P1.25
	R	46, 55	64, 70, 80	64, 70, 80	92, 110, 130	92, 110, 130
	G	M3 x P0.5	M5 x P0.8	M5 x P0.8	M6 x P1.0	M6 x P1.0
	Q	30, 40, 50	50, 60, 70	50, 60, 70	70, 80, 95, 110	70, 80, 95, 110
	U	8	14	19	24	24
	HL	100	122, 125, 130	145, 150	181, 190, 200	210, 220

WEOF series

RATIO : 5.10.15.20.30.40.50.60



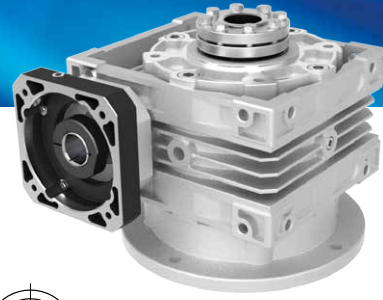
Model Code	A	AB	AC	AD	AE	AF	AG	B	BB	BC	BD	BE	BF	BG	NB	CC	LL	I	IA	IB	Z	H	Weight (KG)
30	108	68	55	80	6	32	5	92.5	32.5	60	2	60	45	58	30	30	40	72	45	27	M6	98	
40	140	89	70	102	7.5	34	6	114	44	80	2	70	60	72	30	40	50	90	55	35	M8	122	
50	158	98	80	120	8.5	41	6	130	49	94	3	80	70	85	33	50	60	105	65	40	M10	145	
60	195	122	100	146	10	59	9	154	54	102	3	100	85	103	49	60	75	136	83	53	M10	180	
70	219	134	120	170	12	59	9	164	64	118	3	100	90	110	41	70	85	150	90	60	M10	200	

unit : mm

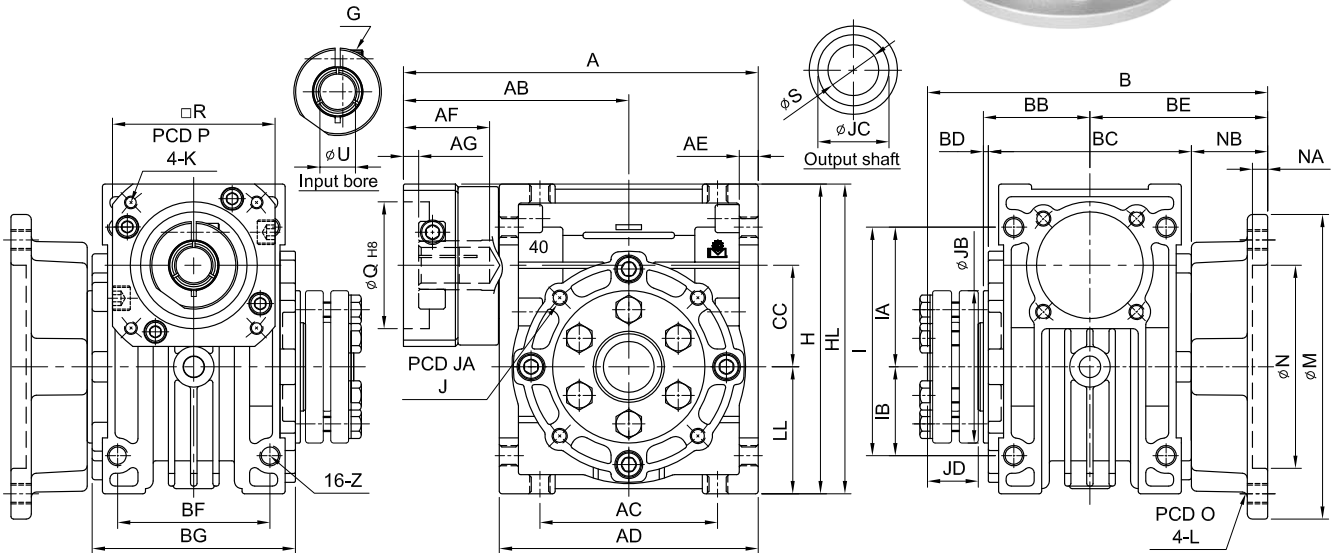
Code	Model	30	40	50	60	70
OUTPUT SHAFT	S	14	20	25	25	30
	Y	16.3	22.8	28.3	28.3	33.3
	W	5	6	8	8	8
	J	8-M6 x P1.0	12-M6 x P1.0	12-M6 x P1.0	12-M8 x P1.25	12-M10 x P1.5
	JA	65	77	95	120	140
	JB	55	60	70	80	90
	N	70	80	95	130	150
	NA	5	6	6	7	7
	O	85	100	120	160	185
	L	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75
MOTOR FLANGE & INPUT BORE	M	100	120	140	180	210
	P	46, 60, 63	70, 75, 90	70, 75, 90	90, 100, 115, 145	90, 100, 115, 145
	K	M3 x P0.5 M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M4 x P0.7 M5 x P0.8 M6 x P1.0	M5 x P0.8 M6 x P1.0 M8 x P1.25	M5 x P0.8 M6 x P1.0 M8 x P1.25
	R	46, 55	64, 70, 80	64, 70, 80	92, 110, 130	92, 110, 130
	G	M3 x P0.5	M5 x P0.8	M5 x P0.8	M6 x P1.0	M6 x P1.0
	Q	30, 40, 50	50, 60, 70	50, 60, 70	70, 80, 95, 110	70, 80, 95, 110
	U	8	14	19	24	24
	HL	100	122, 125, 130	145, 150	181, 190, 200	210, 220

WENF series

RATIO : 5.10.15.20.30.40.50.60



WE



Model Code	A	AB	AC	AD	AE	AF	AG	B	BB	BC	BD	BE	BF	BG	NB	CC	LL	I	IA	IB	Z	H	Weight (KG)
30	108	68	55	80	6	32	5	114	32.5	60	2	60	45	58	30	30	40	72	45	27	M6	98	
40	140	89	70	102	7.5	34	6	134	44	80	2	70	60	72	30	40	50	90	55	35	M8	122	
50	158	98	80	120	8.5	41	6	153	49	94	3	80	70	85	33	50	60	105	65	40	M10	145	
60	195	122	100	146	10	59	9	177	54	102	3	100	85	103	49	60	75	136	83	53	M10	180	
70	219	134	120	170	12	59	9	186	64	118	3	100	90	110	41	70	85	150	90	60	M10	200	

unit : mm

Code	Model	30	40	50	60	70
OUTPUT SHAFT	S	14	20	25	25	30
	J	8-M6 x P1.0	12-M6 x P1.0	12-M6 x P1.0	12-M8 x P1.25	12-M10 x P1.5
	JA	65	77	95	120	140
	JB	55	60	70	80	90
	JC	22	28	34	35	40
	JD	20	20	21	21	22
	N	70	80	95	130	150
	NA	5	6	6	7	7
	O	85	100	120	160	185
	L	M6 x P1.0	M8 x P1.25	M10 x P1.5	M10 x P1.5	M12 x P1.75
MOTOR FLANGE & INPUT BORE	M	100	120	140	180	210
	P	46, 60, 63	70, 75, 90	70, 75, 90	90, 100, 115, 145	90, 100, 115, 145
	K	M3 x P0.5 M4 x P0.7 M5 x P0.8	M4 x P0.7 M5 x P0.8 M6 x P1.0	M4 x P0.7 M5 x P0.8 M6 x P1.0	M5 x P0.8 M6 x P1.0 M8 x P1.25	M5 x P0.8 M6 x P1.0 M8 x P1.25
	R	46, 55	64, 70, 80	64, 70, 80	92, 110, 130	92, 110, 130
	G	M3 x P0.5	M5 x P0.8	M5 x P0.8	M6 x P1.0	M6 x P1.0
	Q	30, 40, 50	50, 60, 70	50, 60, 70	70, 80, 95, 110	70, 80, 95, 110
	U	8	14	19	24	24
	HL	100	122, 125, 130	145, 150	181, 190, 200	210, 220

Service factor

The service factor (f.s.) depends on the operating conditions for the reduction unit.

The parameters that need to be taken into consideration to select suitable service factor correctly include:

- type of load : A - B - C
- operating time : hours/day (Δ)
- start-up frequency : starts/hour (*)

TYPE OF LOAD : A -uniform	$f_a \leq 0.3$
B -moderate shocks	$f_a \leq 3$
C -heavy shocks	$f_a \leq 10$

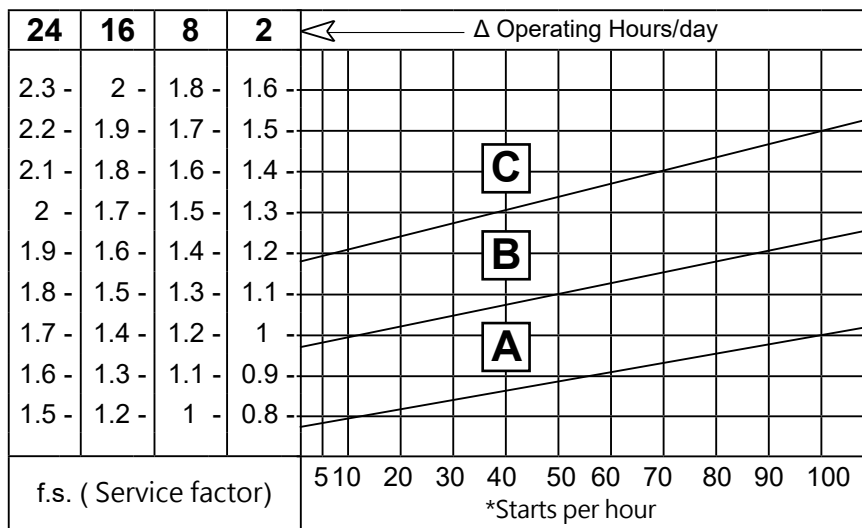
$$f_a = J_e/J_m$$

- f_a factor of inertia
 - J_e (kgm^2) moment of reduced external inertia at the drive-shaft
 - J_m (kgm^2) moment of inertia of motor
- If $f_a > 10$ call our Technical Service.

A -Screw feeders for light materials, fans, assembly lines, conveyor belts for light materials, small mixers, lifts, cleaning machines, fillers, control machines.

B -Winding devices, woodworking machine feeders, goods lifts, balancers, threading machines, medium mixers, conveyor belts for heavy materials, winches, sliding doors, fertilizer scrapers, packing machines, concrete mixers, crane mechanisms, milling cutters, folding machines, gear pumps.

C -Mixers for heavy materials, shears, presses, centrifuges, rotating supports, winches and lifts for heavy materials, grinding lathes, stone mills, bucket elevators, drilling machines, hammer mills, cam presses, folding machines, turntables, tumbling barrels, vibrators, shredders.



Low Backlash Worm Reducer and Motor Mounting Instructions



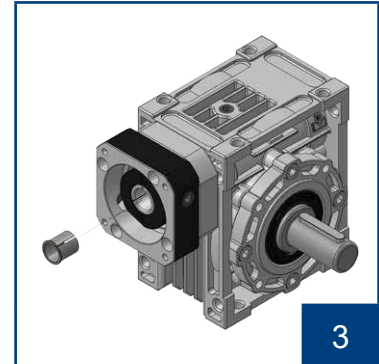
1

Check the motor, and gearbox size. Clean motor shaft and other mounting surfaces.



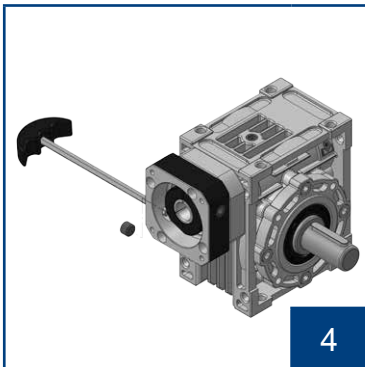
2

Remove the motor key if diameter of motor shaft is $< \varphi 35$.



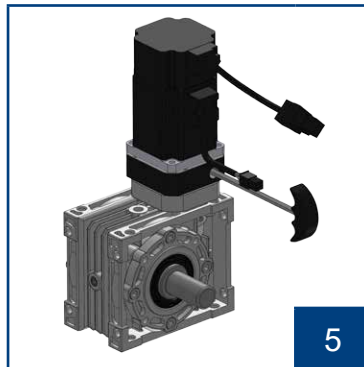
3

Check motor shaft size and insert bushing into input bore if necessary.



4

Remove the hole plug on the adapter plate. Rotate the set collar until inline with the bolt



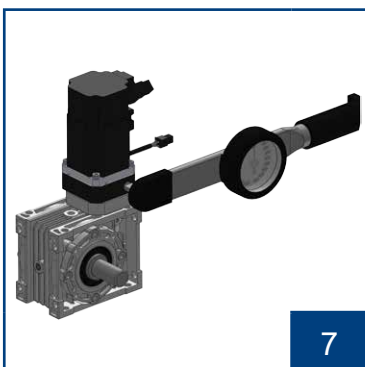
5

Position gearbox so that motor adapter faces up. Insert motor shaft into the gearbox collar, and line-up mounting bolt holes



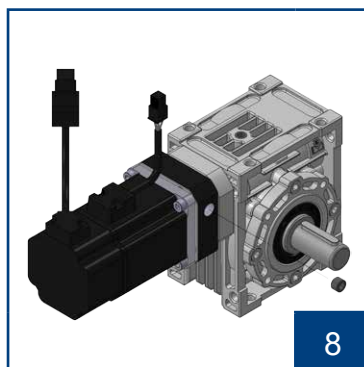
6

Tighten the mounting bolt in 1~4 order with torque wrench.



7

Tighten the set collar bolt with torque wrench.



8

Tighten back the screw plug.

1. Be sure to tighten motor first and then to tighten the set collar on motor shaft.

2. Please assembly in the recommended order, especially for steps 6 and 7.

