





 **DKM**

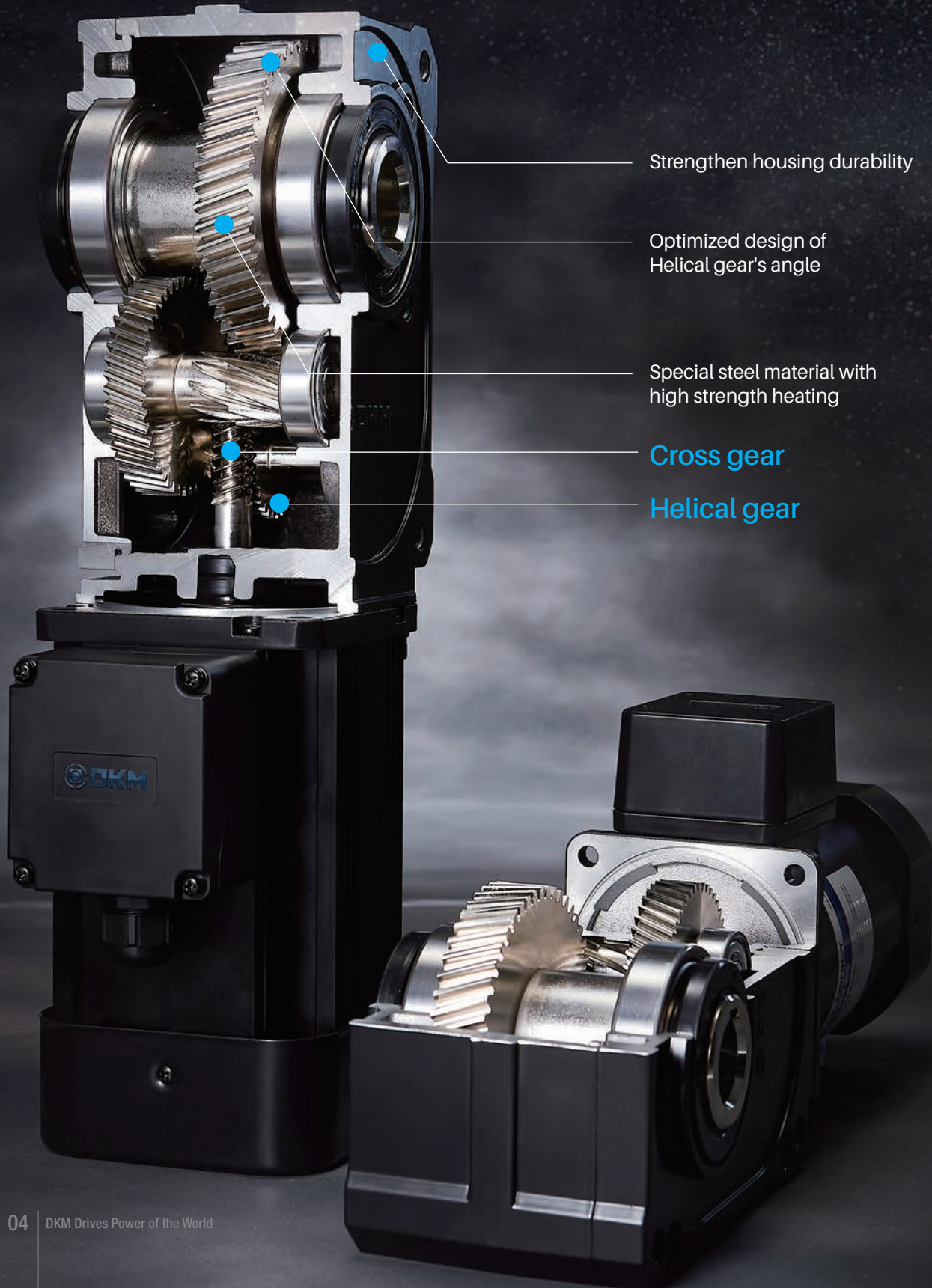


The power to move the world,  
there is DKM at the center.



### Helicross Gearbox

- Concentric and hollow structure right angle gearbox
- Made with patented technology in Korea



## High quality design

- Strong and high class design
- Strengthen housing durability

## High Durability

- Application of All Ball Bearing
- Realization of permission torque with max.294N.m
- Application of special steel with double-heating

## User-oriented design gearbox

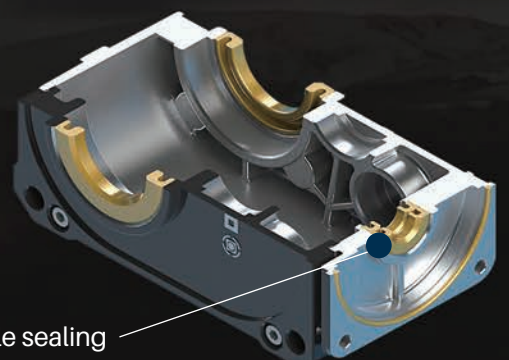
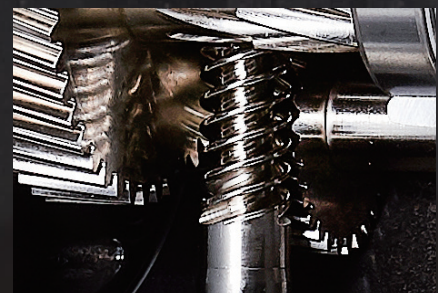
- Output shaft uses Stainless Steel(optional)
- Provide Worm solid type output shaft
- Processing HOLE and TAP
- Free style mounting type

## Low noise, low vibration gearbox

- Specialized processing input and first gear
- RSG(Round Super Grinding) gear processing

## Perfect preventing oil leakage

- Application of high quality oil seal to output area
- Double-sealing on input area



Double sealing

## Specifications

Patented	Helicross gear processing method, a design patents and trademark registration
High efficiency	Maximized transmit power efficiency through an optimal design torsion angle
High ratio	240:1 ratio (14 ratios)
High permission torque	Max. 294N.m (based on 10HC series)
Low noise and low vibration	Adopted high accuracy gear processing RSG (Round Super Grinding) method
Disassemble assemble type	Separate and assemble motor and gearbox (Interchangeable with motor or gearbox)
High durability	Enhanced housing durability with structure of load dispersion
Various mounting direction	Maximize the utilization of installation spaces by any mount structure based on output area





# 9HC type (90/120/150W)

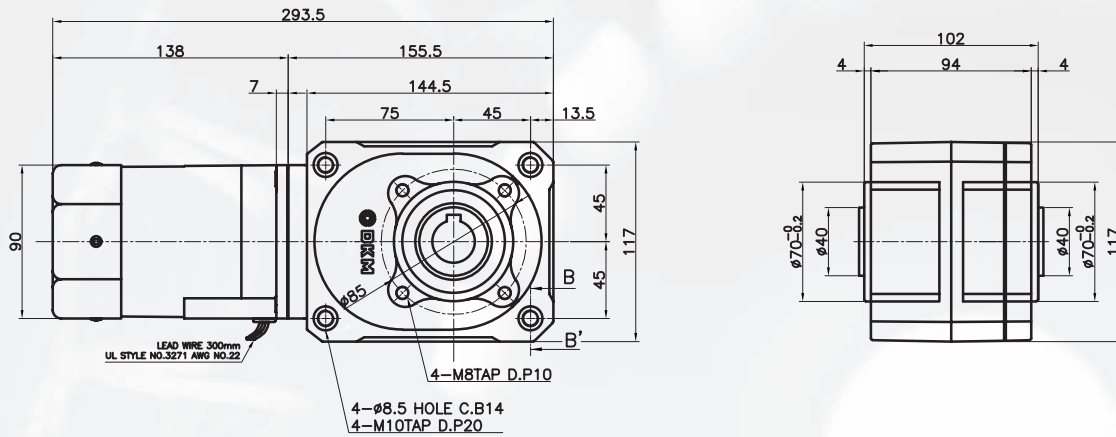
## 9HC □ □ Max. permission torque

Motor Model	Ratio		15	20	25	30	40	50	60	80	100	120	160	200	225	240
	r/min	60Hz	120	90	72	60	45	36	30	22.5	18	15	11.25	9	8	7.5
		50Hz	100	75	60	50	37.5	30	25	18.75	15	12.5	9.4	7.5	6.7	6.3
90W	60Hz	kgfcm	60	80	100	120	160	200	240	320	400	480	640	800	900	960
	50Hz		71.1	94.8	119	142	190	237	284	379	474	569	758	948	1067	1138
120W	60Hz		80	107	133	160	213	267	320	427	533	640	853	1067	1200	1280
	50Hz		94.8	126	158	190	253	316	379	506	632	758	1011	1264	1422	1517
150W	60Hz		103	138	172	296	275	344	413	550	688	826	1101	1376	1548	1651
	50Hz		123	164	205	246	328	410	492	656	820	984	1313	1641	1800	1800

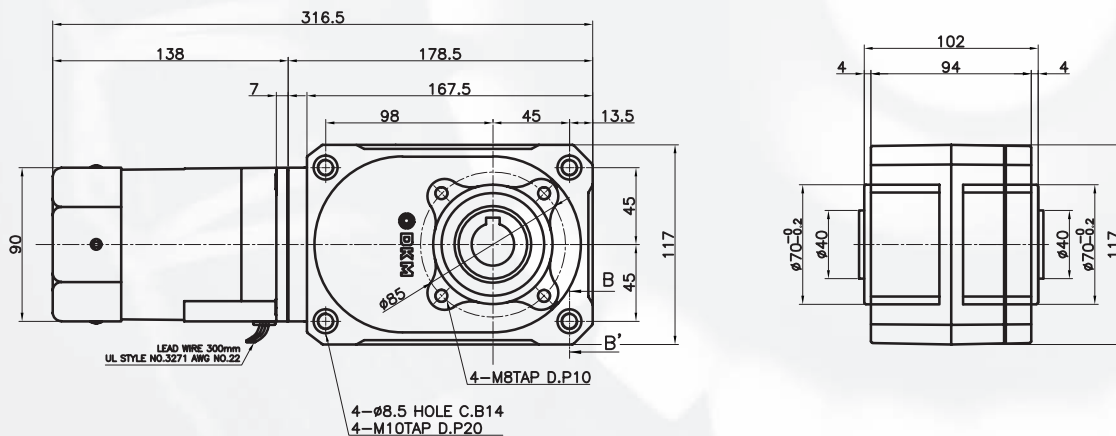
The direction of rotation of gearbox output shaft colored ■ and □ is opposite direction.

## Dimensions (Motor & Gearbox)

·9HC(15~60) □ + 90mm Induction motor (90 ~ 150W)



·9HC(80~240) □ + 90mm Induction motor (90 ~ 150W)



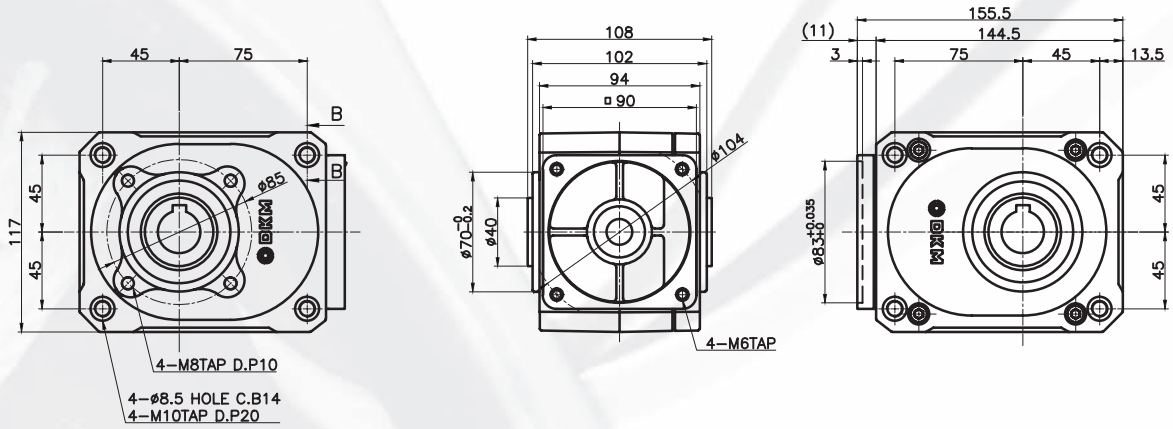
※ This is a drawing that attaching with Induction motor.

※ If you need drawings that attaching other type of motors(Speed, Brake), please visit our website and refer to our catalog.

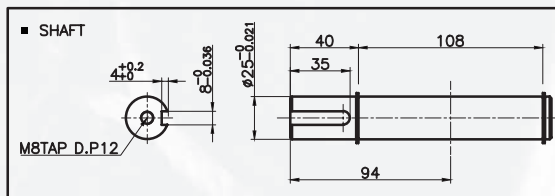
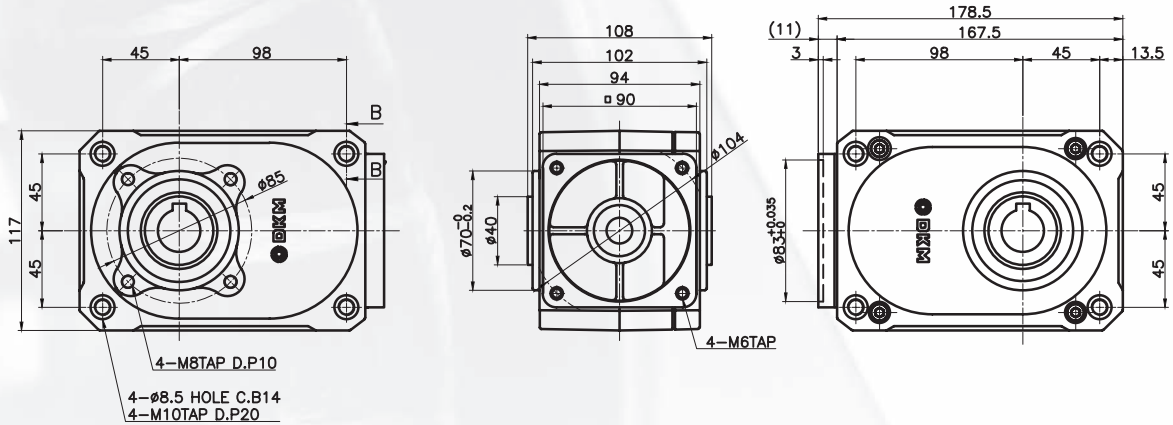


## Dimensions (Helicross Gearbox)

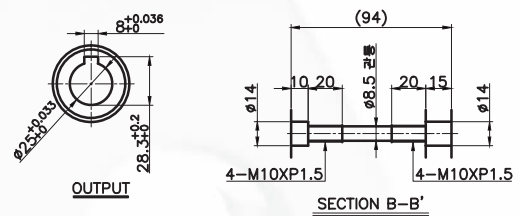
Ratio 1/15~1/60



Ratio 1/80 ~ 1/240



SHAFT is sold separately.



# 9HC type (180W / 200W)

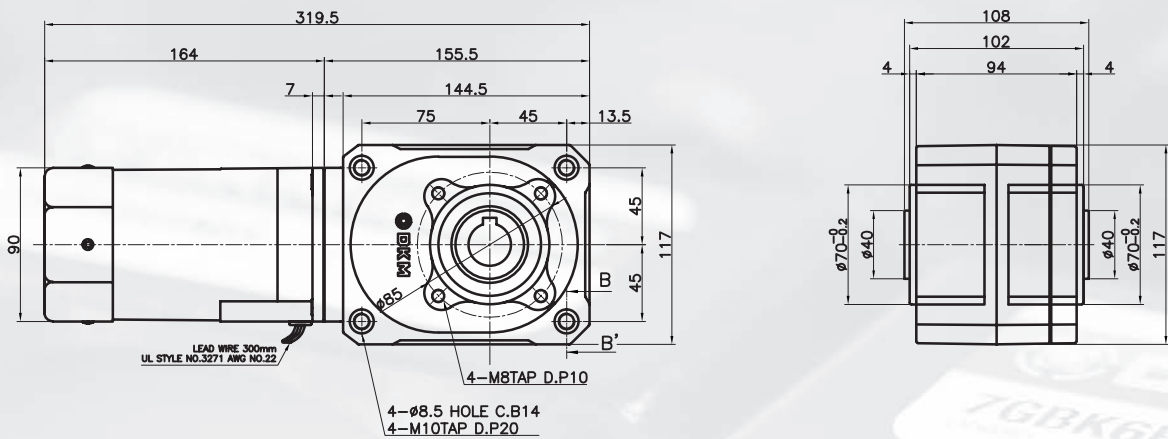
## 9HC □ □ Max. permission torque

Motor Model	감속비		15	20	25	30	40	50	60	80	100	120	160	200	225	240
	r/min	60Hz	120	90	72	60	45	36	30	22.5	18	15	11.25	9	8	7.5
		50Hz	100	75	60	50	37.5	30	25	18.75	15	12.5	9.4	7.5	6.7	6.3
180W	60Hz	kgfcm	120	160	200	240	320	400	480	640	800	960	1280	1600	1800	1800
	50Hz		148	197	246	295	394	492	591	788	984	1181	1575	1800	1800	1800
200W	60Hz		138	183	229	275	367	459	550	734	917	1101	1468	1800	1800	1800
	50Hz		164	219	273	328	438	547	656	875	1094	1313	1750	1800	1800	1800

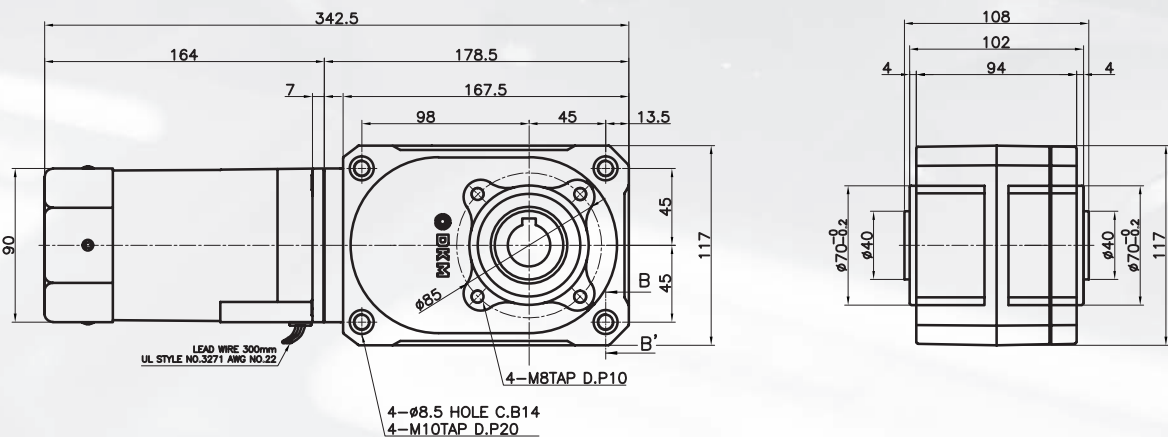
·The direction of rotation of gearbox output shaft colored ■ and □ is opposite direction.

## Dimensions (Motor & Gearbox)

·9HC(15~60) □ + 90mm Induction motor (180 ~ 200W)



·9HC(80~240) □ + 90mm Induction motor (180 ~ 200W)

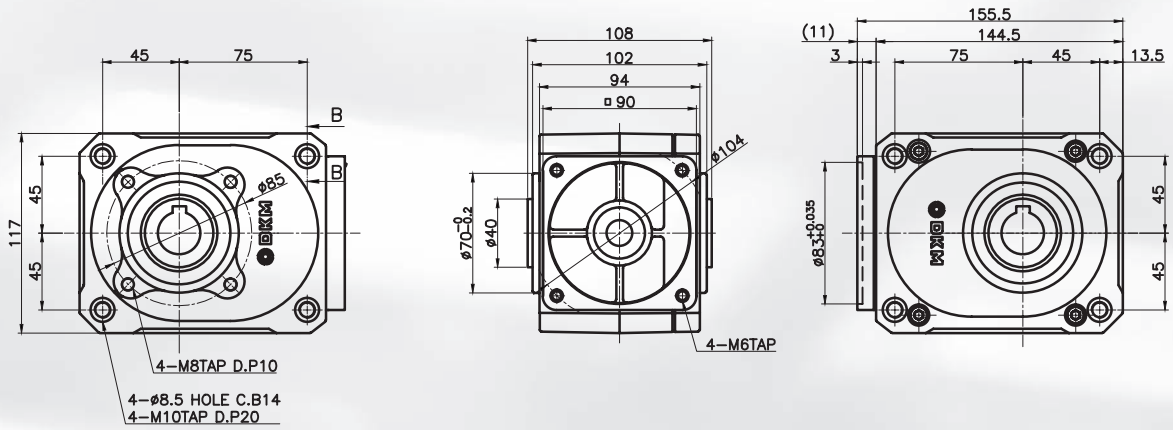


※ This is a drawing that attaching with Induction motor.

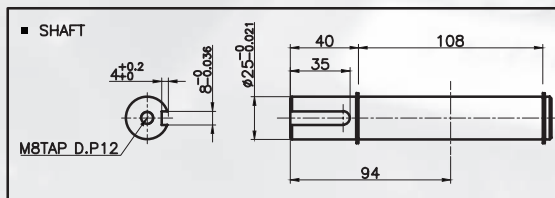
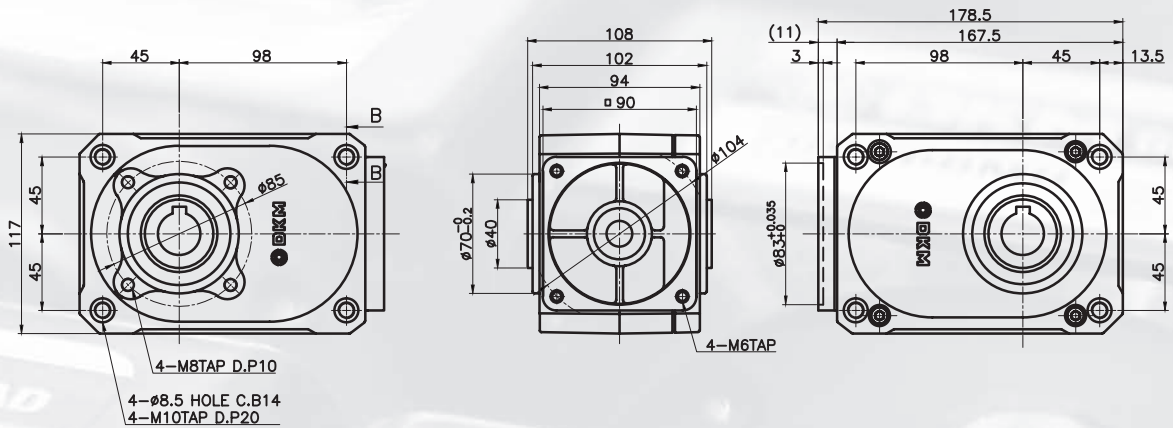
※ If you need drawings that attaching other type of motors(Speed, Brake), please visit our website and refer to our catalog.

## Dimensions (Helicross Gearbox)

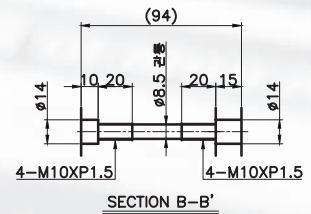
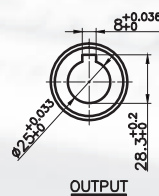
· Ratio 1/15~1/60



· Ratio 1/80 ~ 1/240



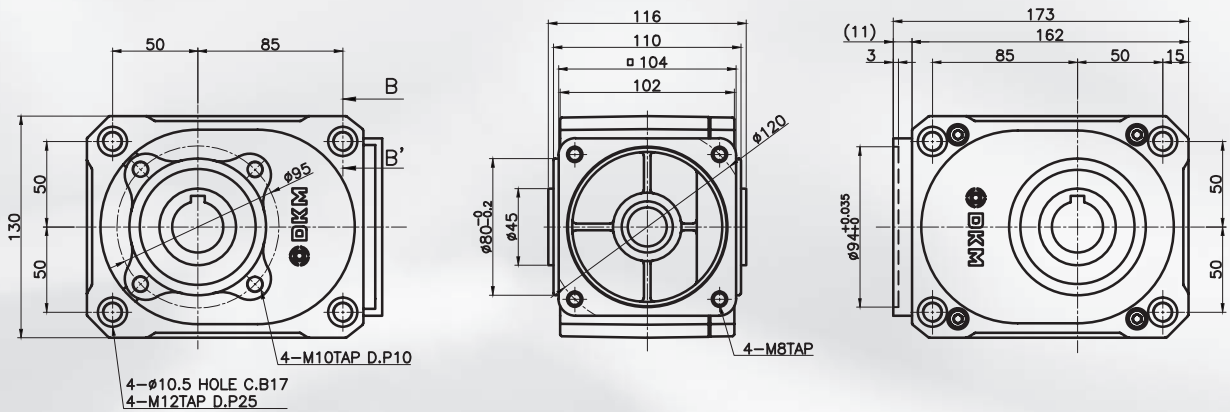
SHAFT is sold separately.



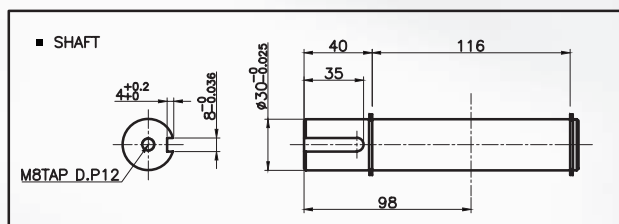
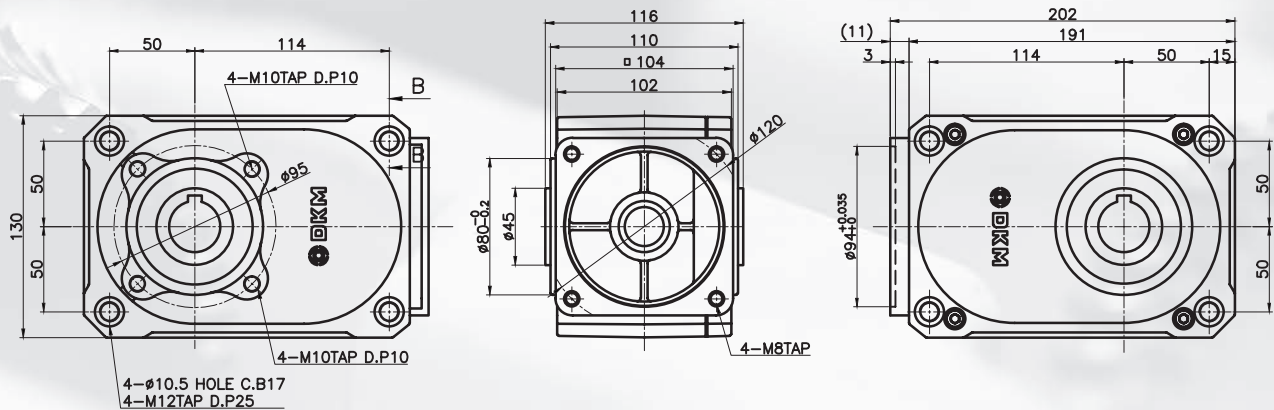


## Dimensions (Helicross Gearbox)

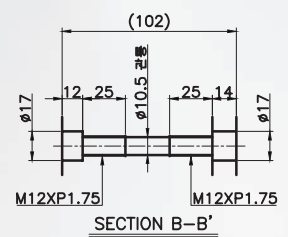
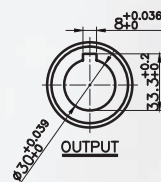
· Ratio 1/15~1/60



· Ratio 1/80 ~ 1/240



SHAFT is sold separately.



High efficiency

Helicross gearbox

68~75%



Worm Hollow gearbox

30~60%



Worm gearbox

30~60%



High ratio

Helicross gearbox

15:1 ~ 240:1



Worm Hollow gearbox

7.5:1 ~ 100:1



Worm gearbox

10:1 ~ 60:1



High torque

Helicross gearbox **294N.m**



Parallel gearbox

Max. 40N.m

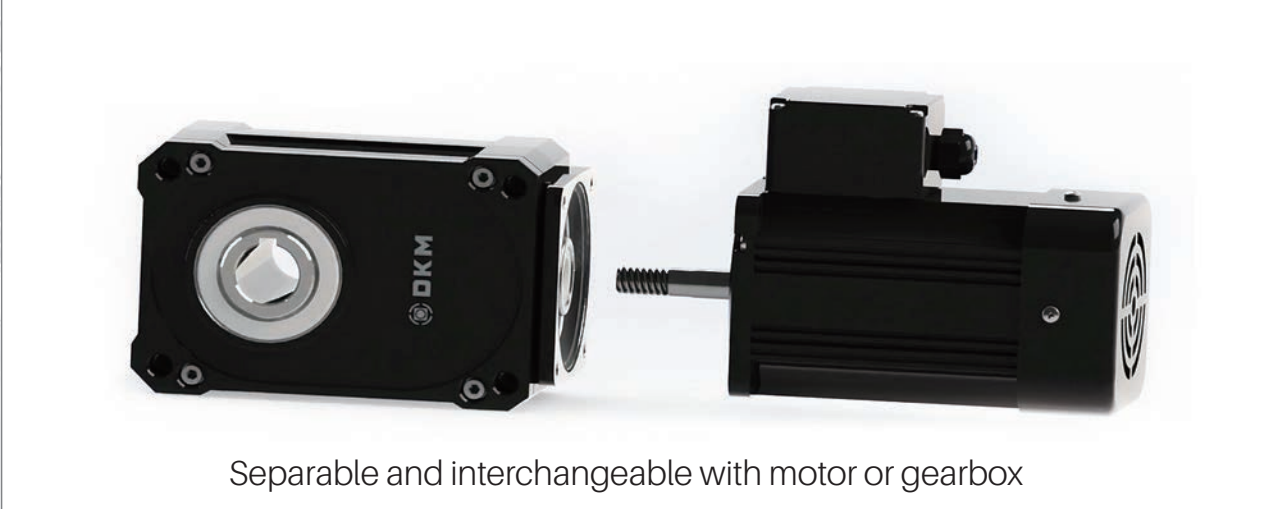


Worm Hollow gearbox

Max. 36N.m

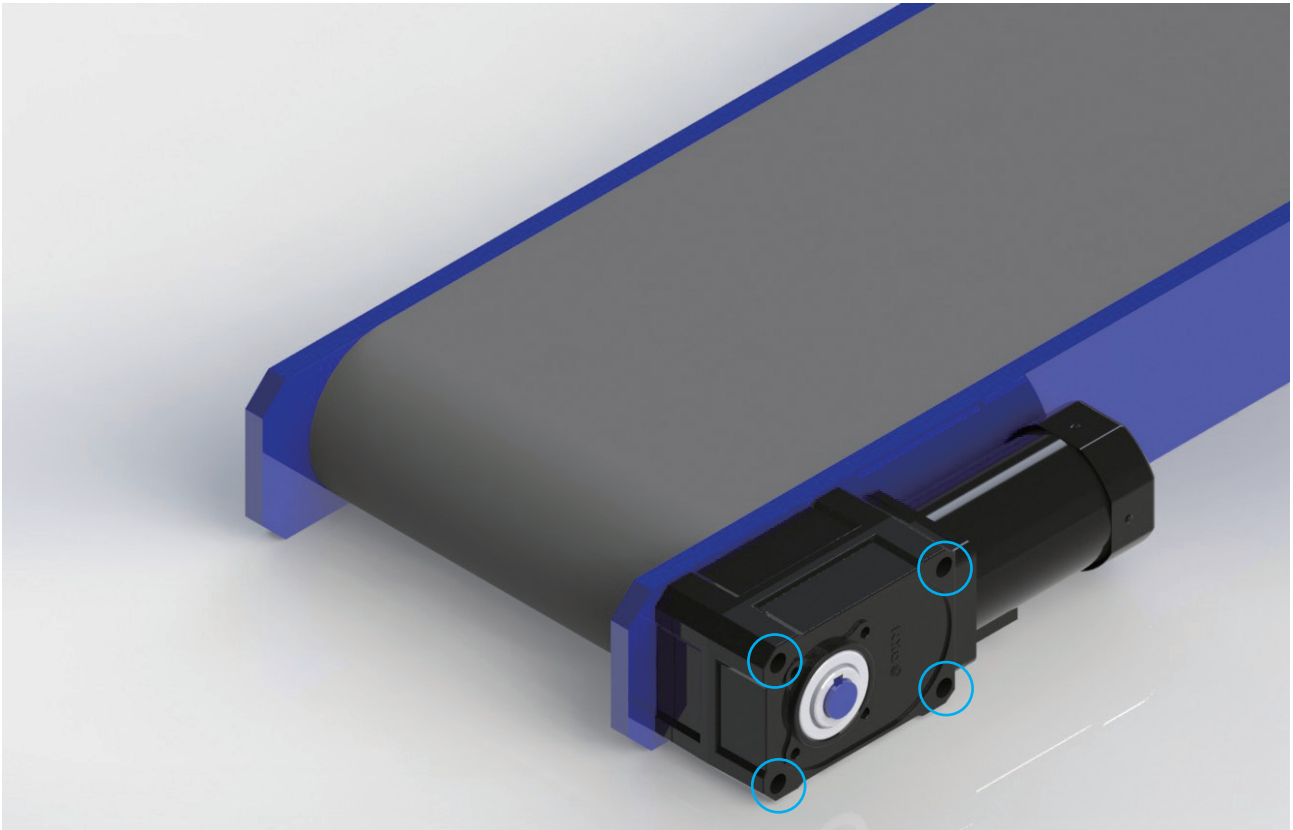


12N.m



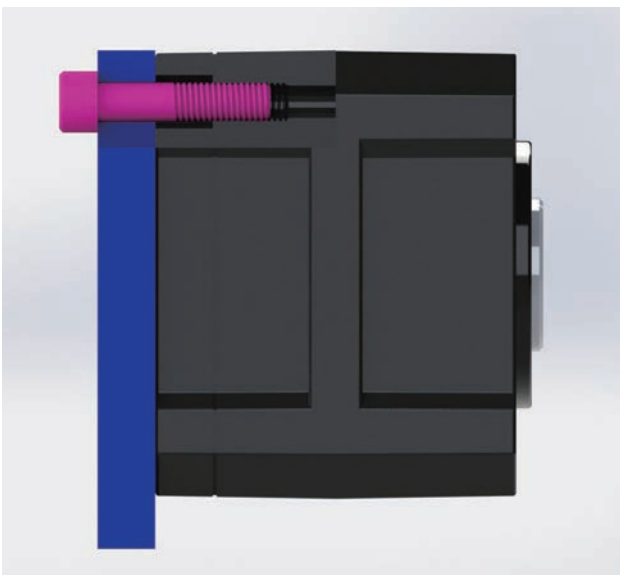
Separable and interchangeable with motor or gearbox

☐ User-oriented gearbox attachment



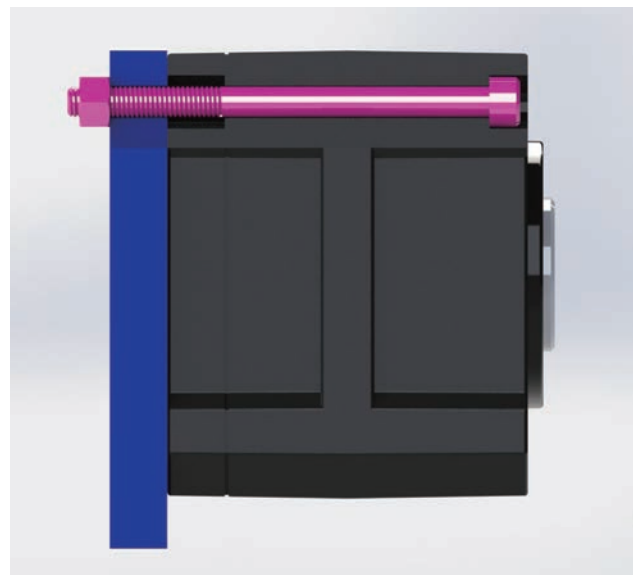
- Provide 2 types of attaching ways without limitation to attach the equipment due to tap and hole are all processed in gearbox.

☐ Attaching way using TAP



- 9HC type : M10XP1.5XDP20 TAP processing
- 10HC type : M12XP1.75XDP25 TAP processing

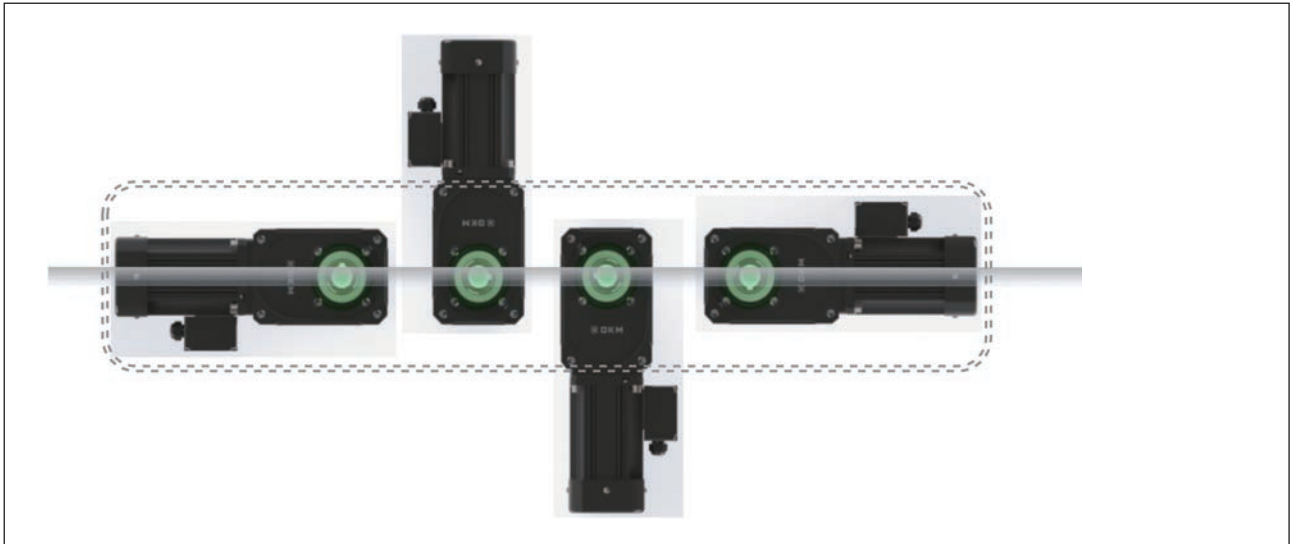
☐ Attaching way using HOLE



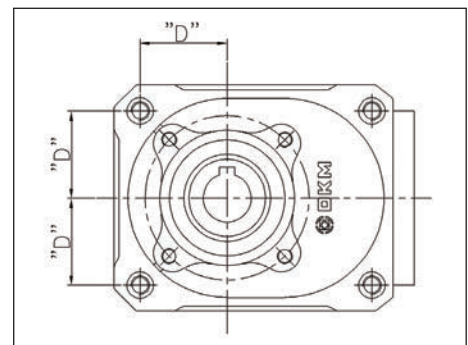
- 9HC type :  $\varnothing 8.5$  hole penetration
- 10HC type :  $\varnothing 10.5$  hole penetration



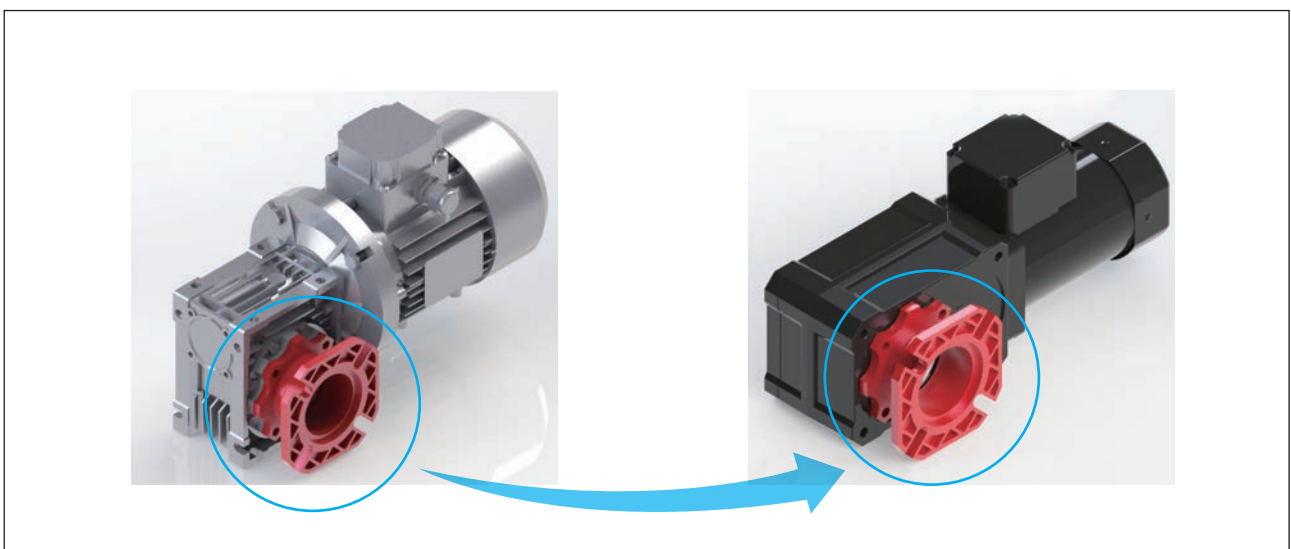
Free direction mounting



- 'D' on the right dimension is all same for any directions' mounting.



Output flange of worm gearbox is available for Helicross Gearbox.  
(corresponding high ratio and high efficiency)

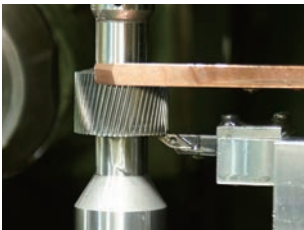


- 9HC type : Available to attaching NMRV 050 output flange
- 10HC type : Available to attaching NMRV 063 output flange



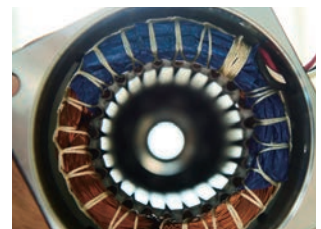
## Metal Processing

DKM Motor has a long worth of know-how since its foundation in manufacturing metal processing components. We are making all metal cutting processes: turning with single or multi-spindle machines, gearing by hobbing machine, heat treatments and hardening processes.



## Assembly and Test

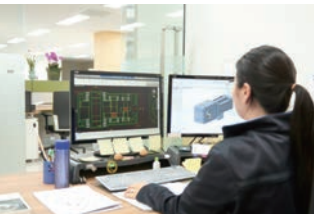
By using the precision assembly machines DKM Motor is making assembly of the selected components by the internal quality standard. We are making total 3 times test ; the test of the components before assembly, the test after assembly and the final shipping test after assembly of motor and gearbox.





## R&D

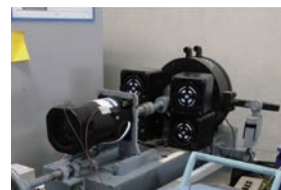
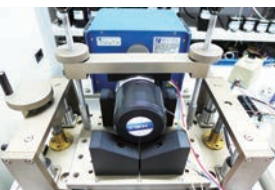
The design department of DKM Motor is connected to the development of all products and our R&D team is on stand-by for comprehensive and fast adaptations to match your specific requirements and specifications.



## Laboratories

DKM carries out stress, wear, tear and life tests with the test machines.

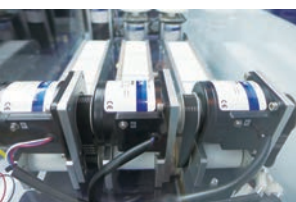
Through this test process in our own test laboratory we can get the permissible torque and other limit values of each products will meet the required demands.



## Quality Assurance

We always carry out the reliability test for sampling products from all manufactured products.

By this test we can handle any faulty in advance.



 AC MOTORS

<p><b>Induction Motor</b></p>	<p><b>For continuous operating</b></p> <ul style="list-style-type: none"> <li>- Constant speed with continuous operation</li> <li>- Stop in 2 sec. when switched off (Overrun: 30-40 times)</li> <li>- Possible for reverse rotation</li> </ul>	
<p><b>2 Pole Motor</b></p>	<p><b>For high speed rotation</b></p> <ul style="list-style-type: none"> <li>- High speed rotation</li> <li>- 3,600r/min (60Hz) 3,000r/min (50Hz)</li> <li>- Used without Gearbox</li> <li>- Possible for reverse rotation</li> </ul>	<p>Lead Wire type</p> 
<p><b>Reversible Motor</b></p>	<p><b>For forward and reverse operation</b></p> <ul style="list-style-type: none"> <li>- Suitable for frequent reverse operation</li> <li>- Stop in 0.5 sec. when switched off (Overrun: 5-6 times)</li> <li>- Possible for reverse rotation</li> </ul>	<p>Terminal Box type</p> 
<p><b>Brake Motor</b></p>	<p><b>For maintaining loading</b></p> <ul style="list-style-type: none"> <li>- Suitable for operation where load should be maintained</li> <li>- Stop in 0.2 sec. when switched off (Overrun: 2-3 times)</li> <li>- Possible for reverse rotation</li> </ul>	
<p><b>Clutch &amp; Brake Motor</b></p>	<p><b>For frequent driving/stopping</b></p> <ul style="list-style-type: none"> <li>- Suitable for high frequent start and stop operation</li> <li>- Stop in 0.1 sec. when switched off (Overrun: 1 time)</li> <li>- Used always with Gearbox</li> <li>- Possible for reverse rotation</li> </ul>	
<p><b>Torque Motor</b></p>	<p><b>Possible to control torque</b></p> <ul style="list-style-type: none"> <li>- Suitable for controlling tension and pushing in winding operations</li> <li>- Easy control of motor torque by using torque controller</li> <li>- Possible for reverse rotation</li> </ul>	 <p><b>FX3000</b></p> <ul style="list-style-type: none"> <li>- Internal Volume(Digital system)</li> <li>- Capacitor built-in</li> <li>- Speed and Torque control</li> </ul> <p><b>DX3000</b></p> <ul style="list-style-type: none"> <li>- RS485 Communication control</li> <li>- PLC I/O control</li> <li>- Speed and Torque control</li> <li>- DIN Rail type</li> </ul>
<p><b>Speed Control Induction Motor</b> <b>Speed Control Reversible Motor</b> <b>Speed Control Brake Motor</b> <b>Speed Control Clutch&amp;Brake Motor</b></p>	<ul style="list-style-type: none"> <li>- Speed control motor allows you to set and adjust the speed of the motor easily by using speed controller.</li> <li>- Speed Controller: FX3000, DX3000, DSA, DSKM</li> </ul>	 <p><b>FX3000</b></p> <ul style="list-style-type: none"> <li>- Internal Volume (Digital system)</li> <li>- Capacitor built-in</li> <li>- Speed and Torque control</li> </ul> <p><b>DX3000</b></p> <ul style="list-style-type: none"> <li>- RS485 Communication control</li> <li>- PLC I/O control</li> <li>- Speed and Torque control</li> <li>- DIN Rail type</li> </ul> <p><b>DSA</b></p> <ul style="list-style-type: none"> <li>- Internal Volume (Analog system)</li> <li>- Unit type (Connecting the motor with using connector)</li> <li>-Capacitor built-in</li> </ul> <p><b>DSKM</b></p> <ul style="list-style-type: none"> <li>- Internal volume (External volume usable)</li> <li>- Socket type (Wiring a motor to a socket)</li> </ul>

## Parallel gearbox

• Frame size : 60/70/80/90/104mm

General Box type  
(GB type)



Powerful Box type  
(PB type)



Powerful Flange type  
(PF type)



High Powerful Box type  
(HB type)



High Powerful Flange type  
(HF type)



Ultra Powerful Box type  
(UB type)



## Right angle gearbox

The flange mounting types of right angle gearboxes allow the motor to be installed at the right or left axis of equipment such as conveyor belts.

Worm solid (W type), worm hollow (WH type) and Helicross (HC type) gearboxes are available.

• Frame size

Worm Solid type : 80/90mm

Worm Hollow type : 90/104mm (Gear center distance : 30/40mm)

Helicross type : 90/104mm



Worm Solid type  
(W type, Left output shaft)



Worm Solid type  
(W type, Right output shaft)



Worm Solid type  
(W type, Bi-directional output shaft)



Worm Hollow type  
(WH type : 90/104mm)



Helicross gearbox, 90mm



Helicross gearbox, 104mm

# The leading motor company in Korea



AC/DC Geared Motor and Gearbox

- \* Global sales network from over 50 countries around the world, including Germany and US
- \* Fast response and delivery within 2 days after the order

