

HIWIN®

DATORKER® Strain Wave Gear System



HIWIN Support

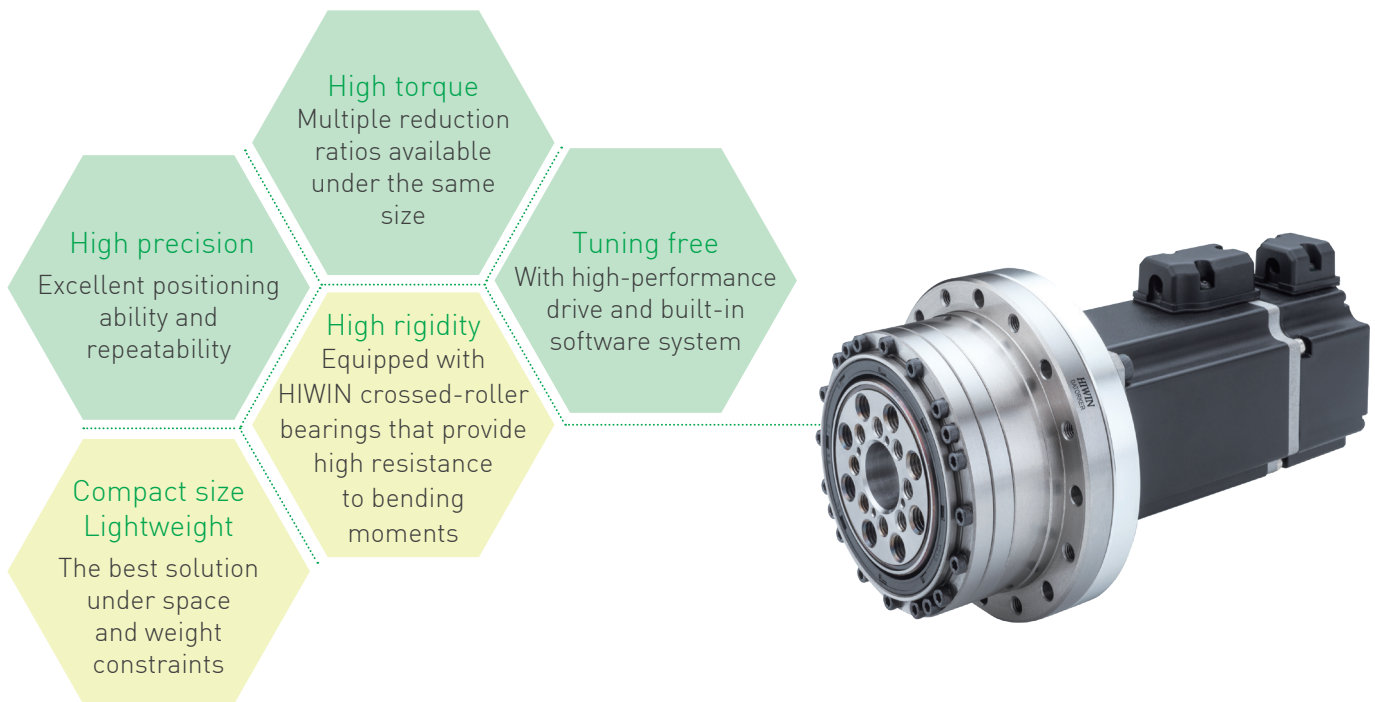


About HIWIN

DATORKER® Strain Wave Gear System

New generation DATORKER® Strain Wave Gear System is the best solution for rotary applications. DATORKER® Strain Wave Gear System is suitable for wide range of applications like: semiconductor, precision laser cutting, 3C electronic automation, PCB industry, sustainable industry, automobile industry or any rotary related applications.

Feature /



High torque	Maximum output torque > 600 Nm
Compact structure	More than 50% reduction in volume and weight compared to other reducer types.
High precision	Positioning accuracy < 60 arc-sec ; Repeatability < ± 6 arc-sec
Easy installation	Can be installed in any direction / Can be programmed to any angle
Total solution	Matching drives with absolute encoder / Built-in editable PDL program Support multiple control (I/O, Pulse, EtherCAT)

Product Specifications /

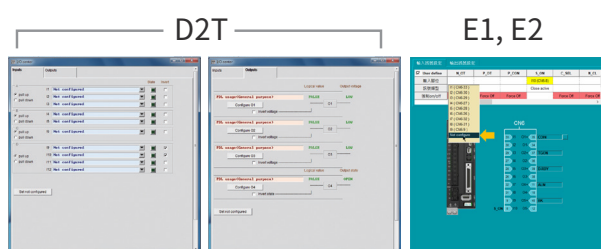
DRA	25	050	–	U	B	D
Product Series	Model	Reduction Ratio		Structure	Brake	Drive
DATORKER® Strain Wave Gear System	14 / 17 / 20 / 25 / 32 / 40	50 / 80 / 100 / 120 / 160		U- Solid Shaft	N- Without Brake B- With Brake	D- D2 Series E- E Series

Matching Drives /



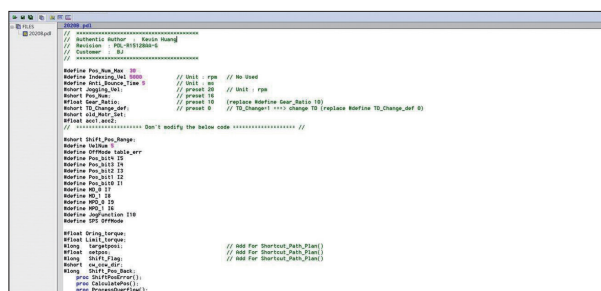
- Variety of I / O functions

To support a wide range of functions, the I/O pins can be freely configured to accommodate different hardware interface requirements. This flexibility allows compatibility with various motion controllers and their specific pin assignments and interfaces.



- PDL (Process Description Language)

Easy-use process description language is provided. Complex motions can be designated via PDL, such as extrusion process, point-to-point motion, fixed speed control, homing process and so on. PDL gains the advantages of flexibility and programmability. For quick learning, a number of sample programs are provided in the PDL manual.

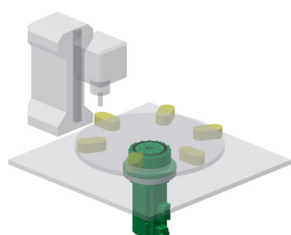


- Built-in safe torque off function (STO) **available in E series only*

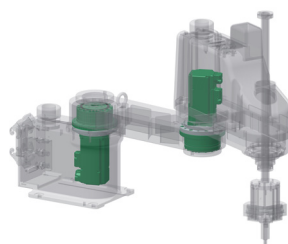
When STO is triggered, motor power will be cut off immediately providing safety function.

Product application and installation /

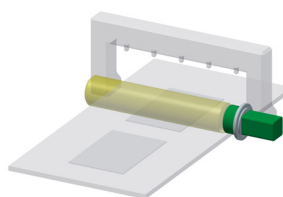
Indexing equipment,
Inspection equipment
(vertical)



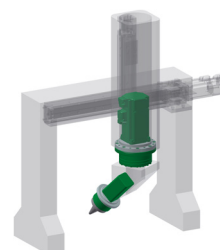
Robot
(vertical up/vertical down)



Printing automation
(horizontal)



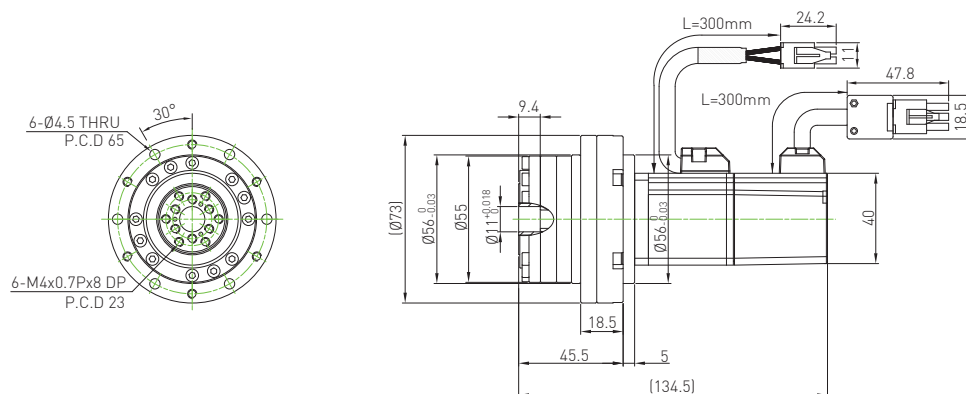
Multi-Axis applications
(any angle)



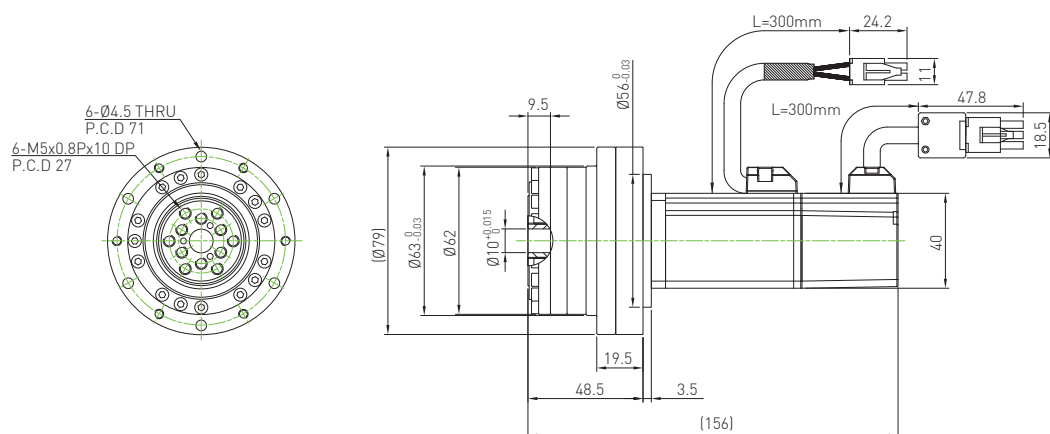
Specification Sheet /

Model	Reduction Ratio	Power Supply: AC 220V						Control Mode	Encoder		Permissible Moment Load	Moment Rigidity	Weight		Output Resolution	Positioning Accuracy (uni-direction)	Repeatability
		Rated Torque	Max Torque	Max Speed	Rated Speed	Max Current	Rated Current		Encoder Type	Encoder Resolution (One Rotation of Output Shaft)			Without Brake	With Brake			
		Nm	Nm	rpm	rpm	A	A					Nm	× 10 ⁴ Nm/rad	kg	kg	pulse/rev	arc-sec
DRA14-D	50	5.4	18	90	60	2.7	0.9	Position control (Pulse), EtherCAT(CoE)	17bit Absolute	2 ¹⁷ (131,072)	41	4.38	1.3	1.5	6,553,600	<60	<± 6
	80	7.8	23	56	37										10,485,760		
	100	7.8	28	45	30										13,107,200		
DRA17-D	50	16	34	90	60	2.7	0.9				64	7.75	1.6	1.8	6,553,600		
	80	22	43	56	37										10,485,760		
	100	24	54	45	30										13,107,200		
DRA20-D	120	24	54	37	25	5.1	1.7				91	12.8	2.4	3.0	15,728,640		
	160	40	82	45	30										10,485,760		
	120	40	87	37	25										13,107,200		
	160	40	92	28	18										15,728,640		
	160	40	92	28	18										20,971,520		
DRA25-D	50	39	98	90	60	7.8	2.6				156	24.2	3.3	3.9	6,553,600		
	80	63	137	56	37										10,485,760		
	100	67	157	45	30										13,107,200		
	120	67	167	37	25										15,728,640		
	160	67	176	28	18										20,971,520		
DRA32-D	50	76	216	90	60	15.3	5.1				313	53.9	6.8	7.5	6,553,600		
	80	118	304	56	37										10,485,760		
	100	137	333	45	30				13,107,200								
	120	137	353	37	25				15,728,640								
	160	137	372	28	18				20,971,520								
DRA40-D	50	137	402	60	40	15.3	5.1		450	91	13.2	14	6,553,600				
	80	206	519	37	25								10,485,760				
	100	265	568	30	20								13,107,200				
	120	294	617	25	16								15,728,640				
	160	294	647	18	12								20,971,520				
DRA14-E	50	5.4	18	120	60	2.8	0.64		41	4.38	1.2	1.4	419,430,400				
	80	7.8	23	75	37								671,088,640				
	100	7.8	28	60	30								838,860,800				
DRA17-E	50	16	34	120	60	3.45	0.78		64	7.75	1.5	1.7	419,430,400				
	80	22	43	75	37								671,088,640				
	100	24	54	60	30								838,860,800				
	120	24	54	50	25								1,006,632,960				
DRA20-E	50	25	56	120	60	6.4	1.6		91	12.8	2.3	2.6	419,430,400				
	80	34	74	75	37								671,088,640				
	100	40	82	60	30								838,860,800				
	120	40	87	50	25								1,006,632,960				
	160	40	92	37	18								1,342,177,280				
DRA25-E	50	39	98	112	60	10	2.5		156	24.2	3.3	3.9	419,430,400				
	80	63	137	70	37								671,088,640				
	100	67	157	56	30								838,860,800				
	120	67	167	46	25								1,006,632,960				
	160	67	176	35	18								1,342,177,280				
DRA32-E	50	76	216	96	60	18.6	4.65		313	53.9	6.9	7.6	419,430,400				
	80	118	304	60	37								671,088,640				
	100	137	333	48	30								838,860,800				
	120	137	353	40	25								1,006,632,960				
	160	137	372	30	18								1,342,177,280				
DRA40-E	50	137	402	60	40	15.3	5.1		450	91	13.2	14	419,430,400				
	80	206	519	37	25								671,088,640				
	100	265	568	30	20								838,860,800				
	120	294	617	25	16								1,006,632,960				
	160	294	647	18	12								1,342,177,280				

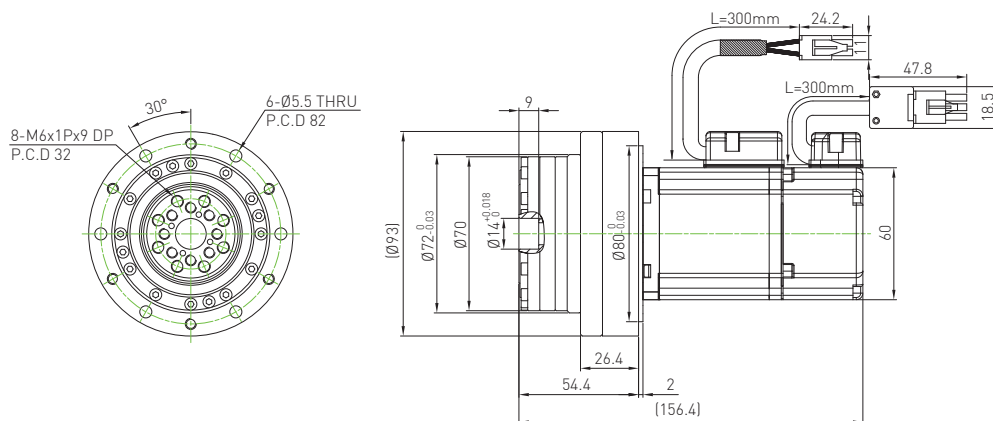
DRA14 -UND

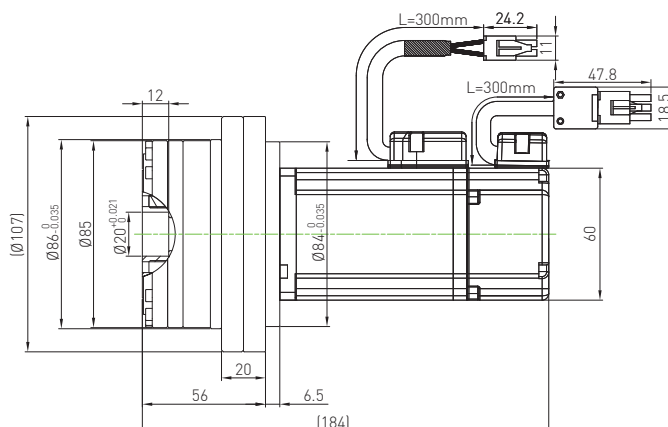
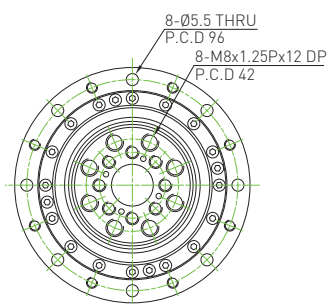
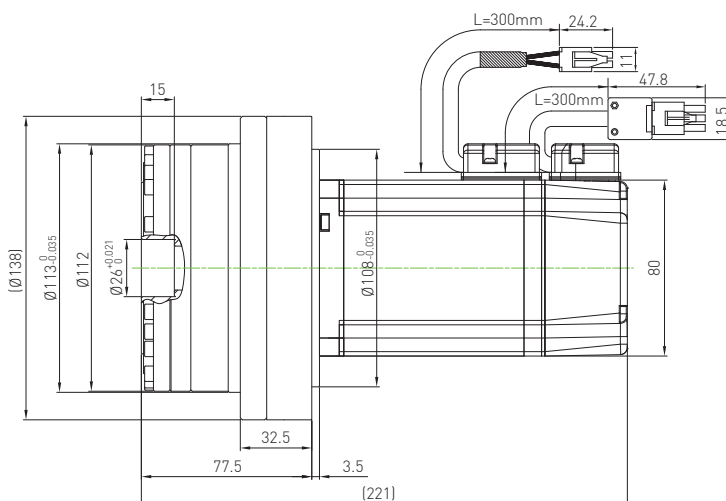
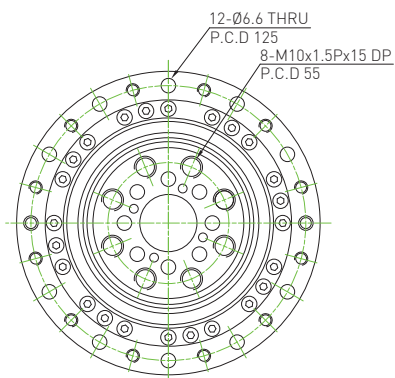
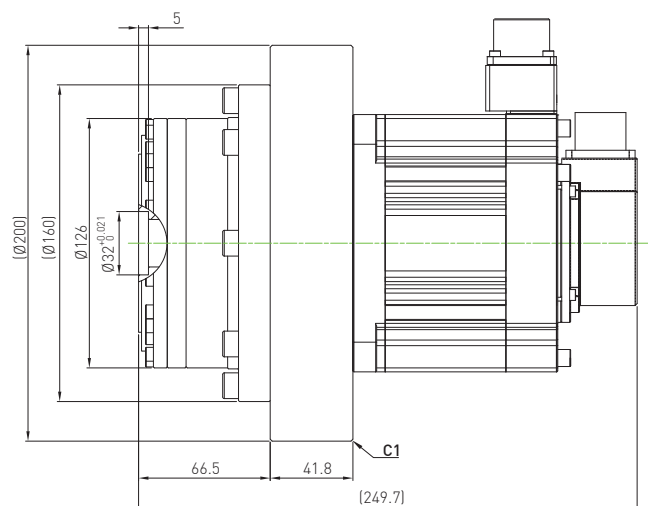
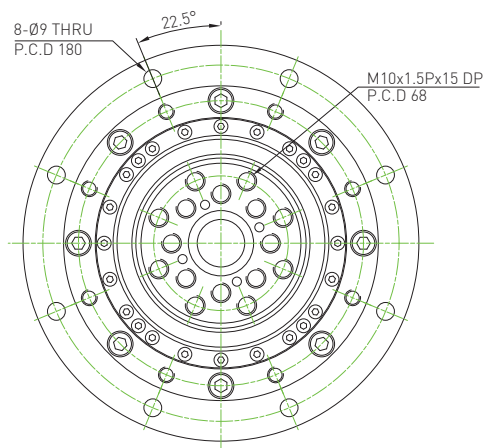


DRA17 -UND

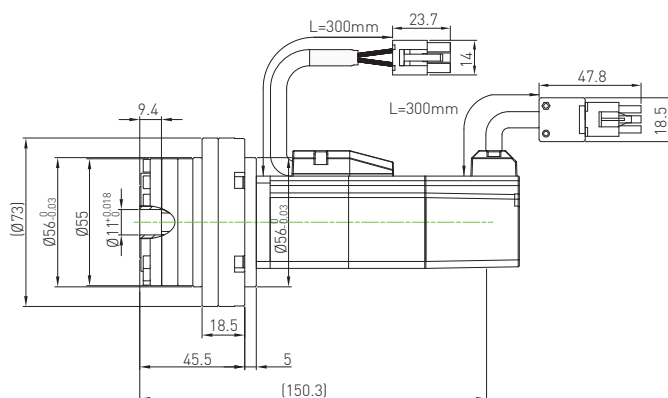
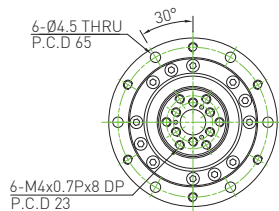


DRA20 -UND

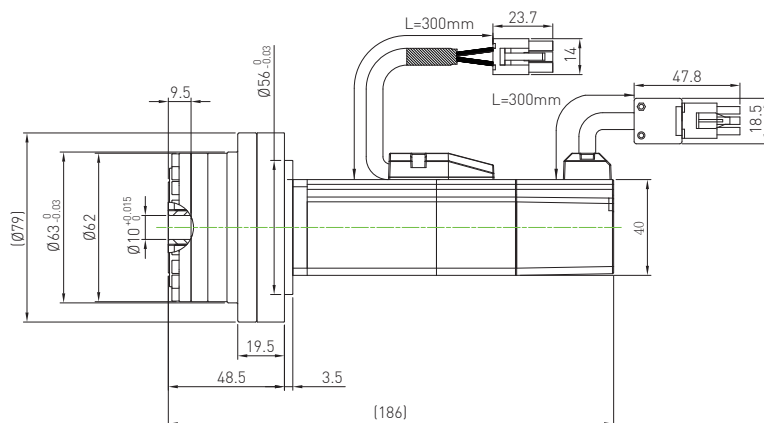
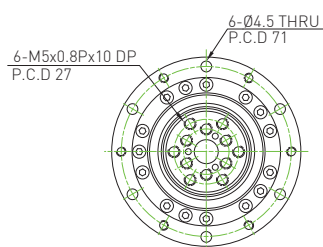


DRA25 -UND

DRA32 -UND

DRA40 -UND


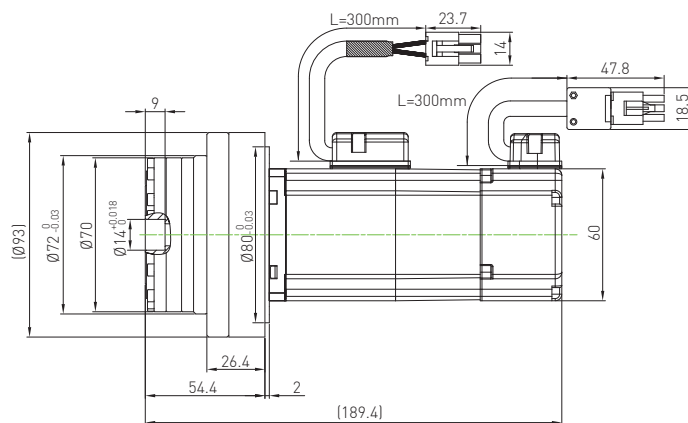
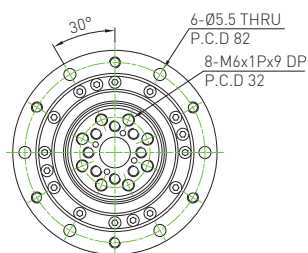
DRA14 -UBD



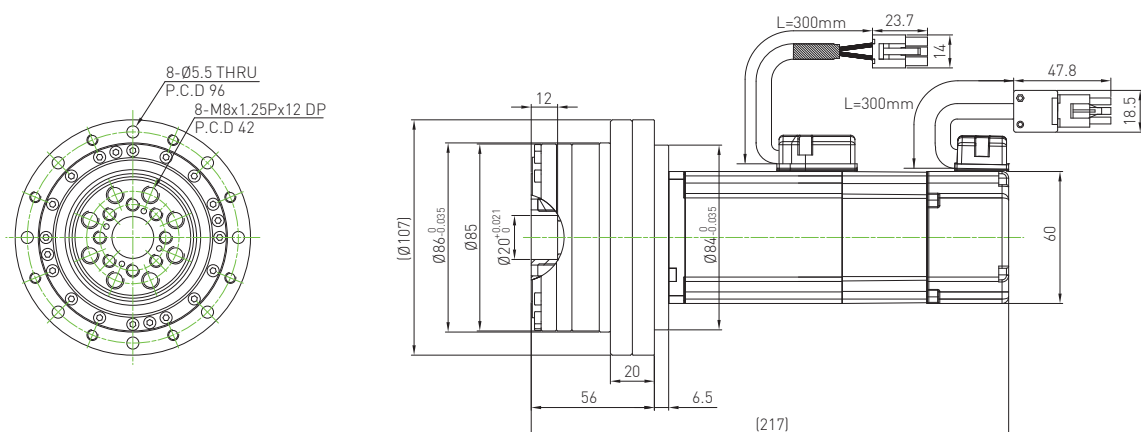
DRA17 -UBD



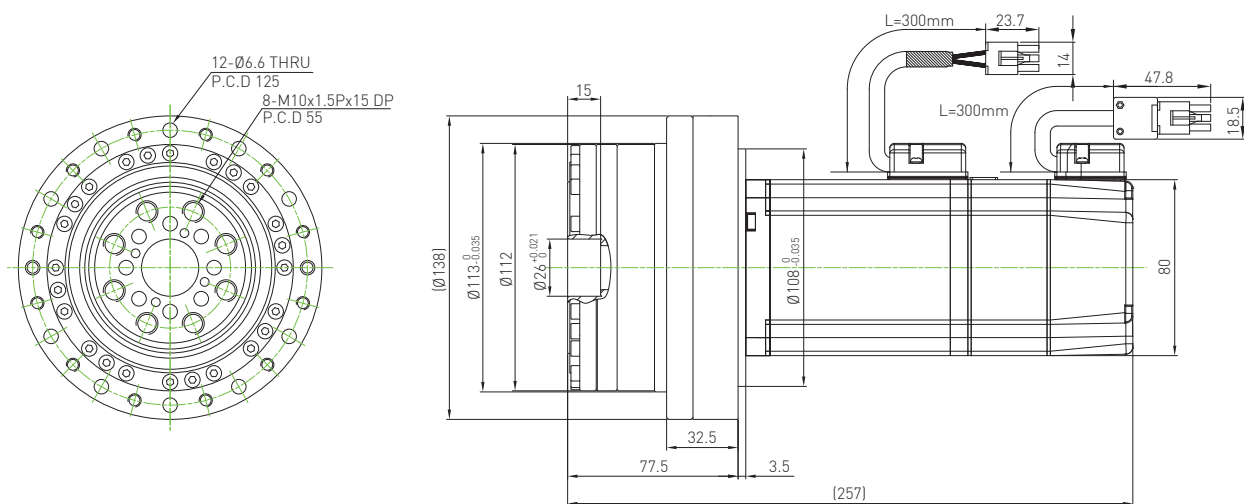
DRA20 -UBD



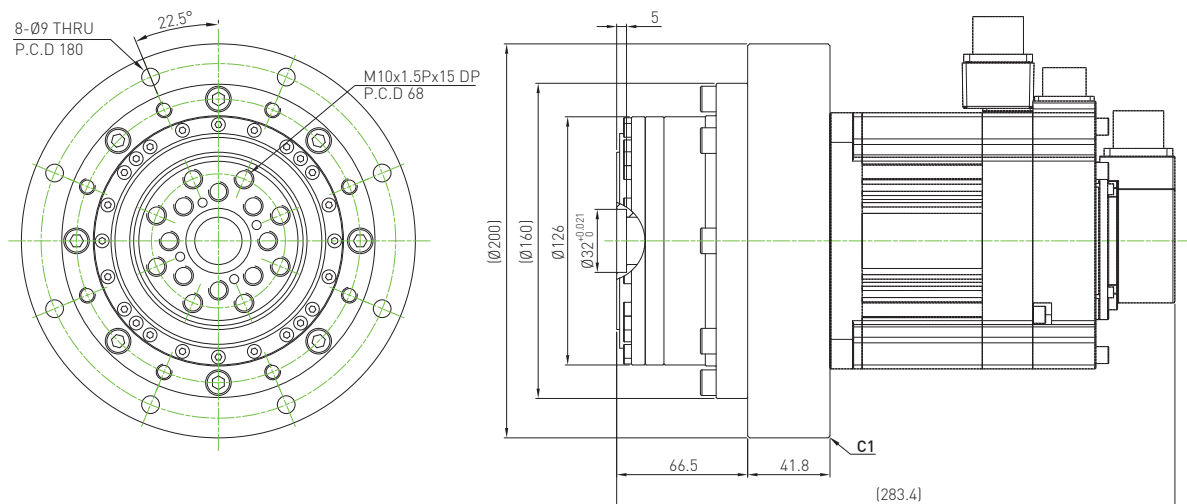
DRA25 -UBD



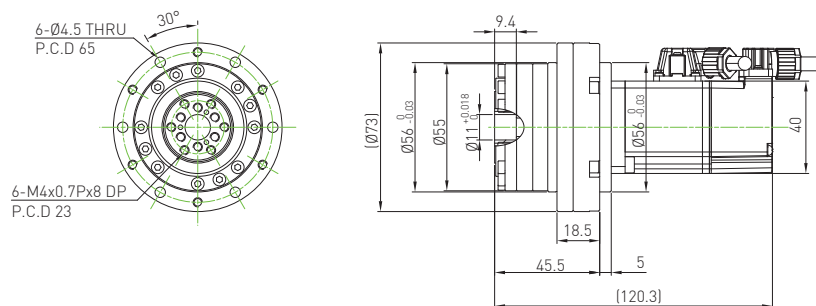
DRA32 -UBD



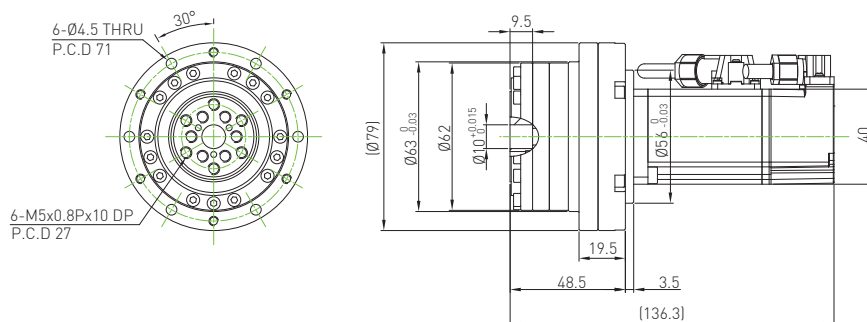
DRA40 -UBD



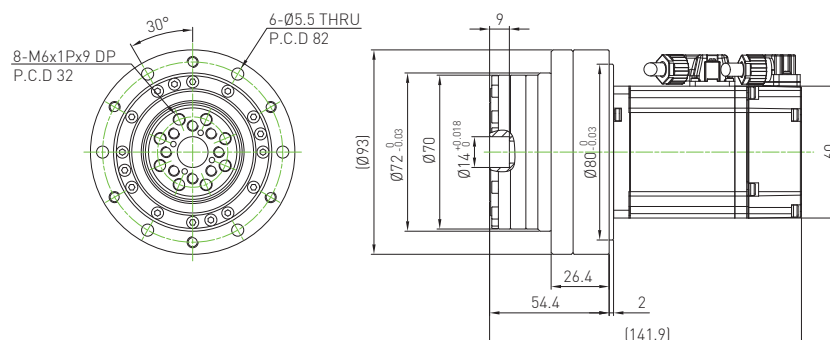
DRA14 ☐ ☐ ☐ -UNE



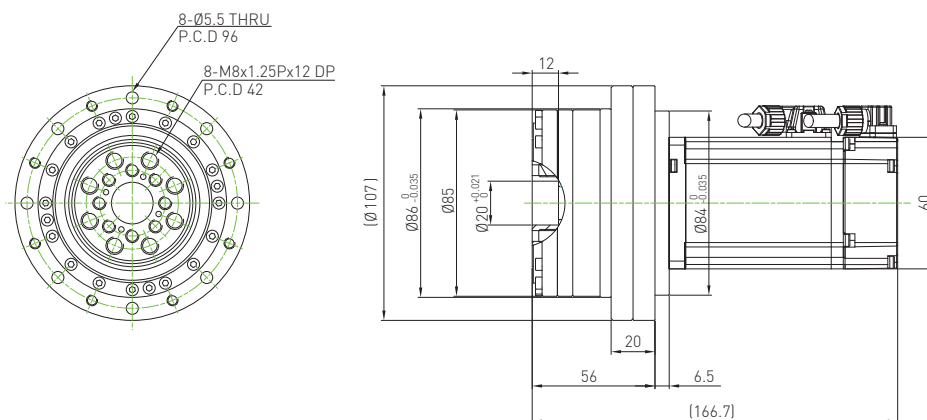
DRA17 ☐ ☐ ☐ -UNE



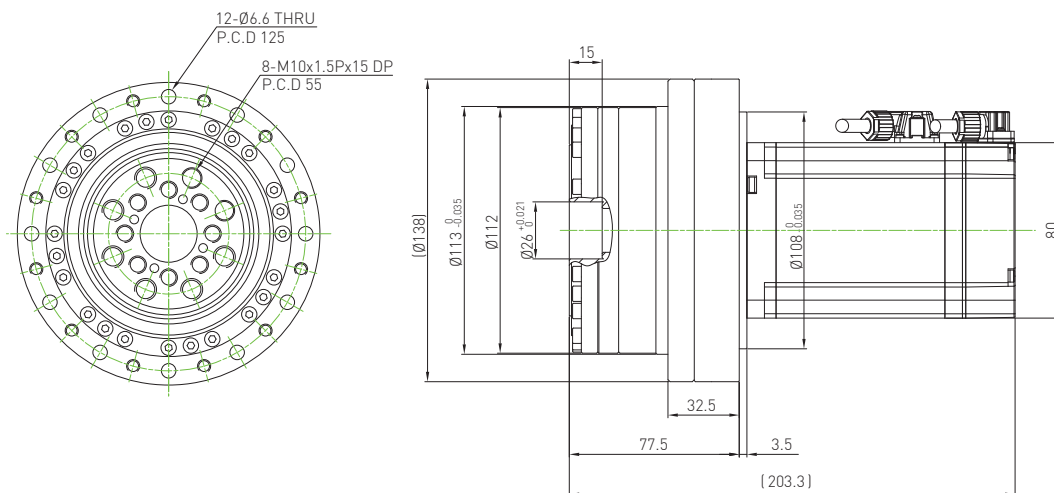
DRA20 ☐ ☐ ☐ -UNE



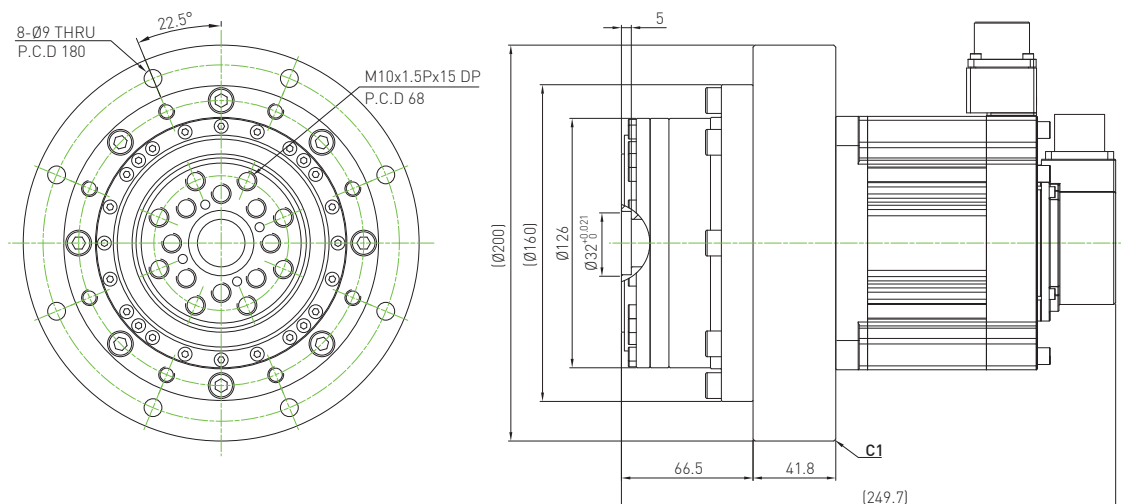
DRA25 ☐ ☐ ☐ -UNE



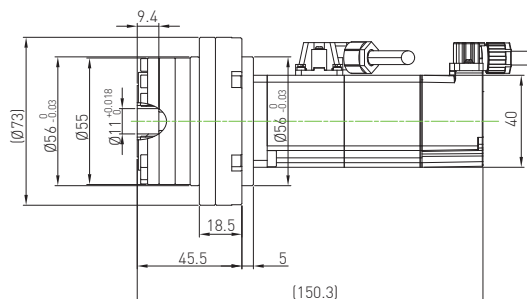
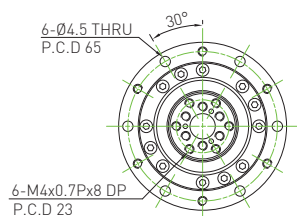
DRA32 ☐ ☐ ☐ -UNE



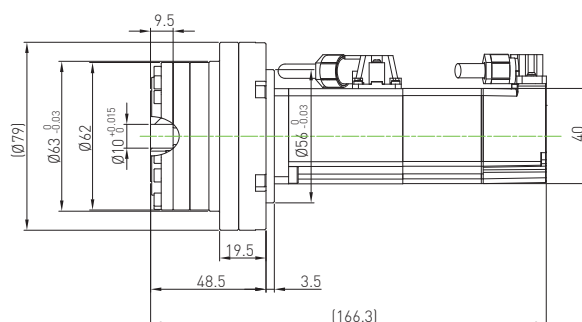
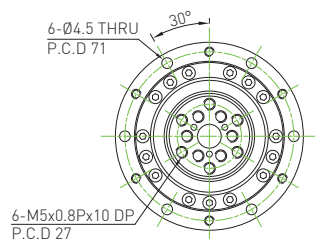
DRA40 ☐ ☐ ☐ -UNE



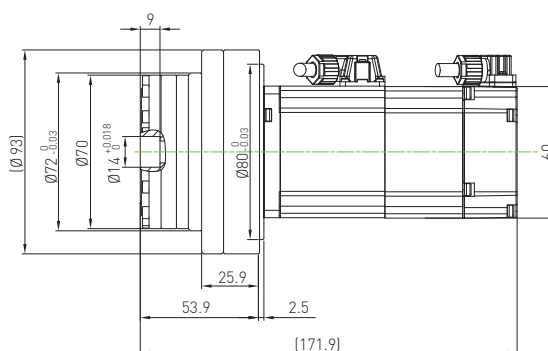
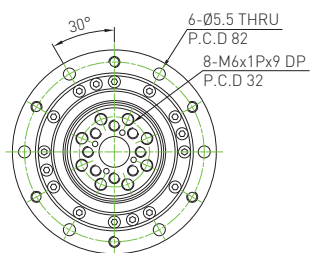
DRA14 ☐ ☐ ☐ -UBE

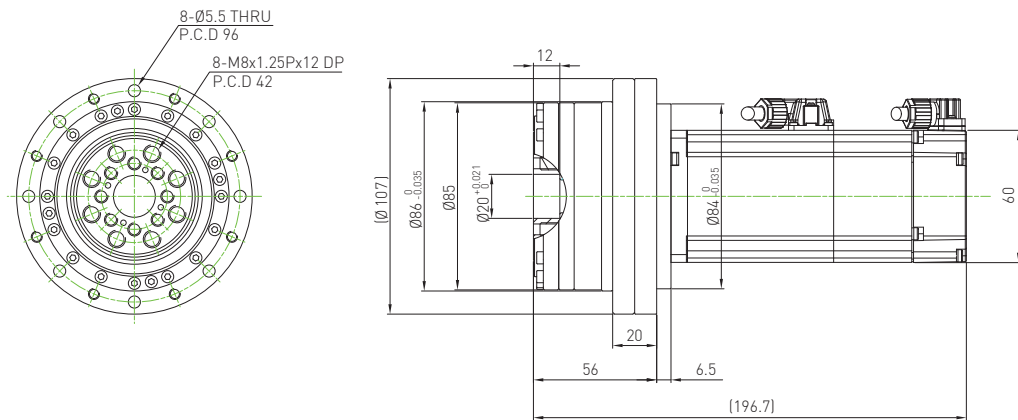
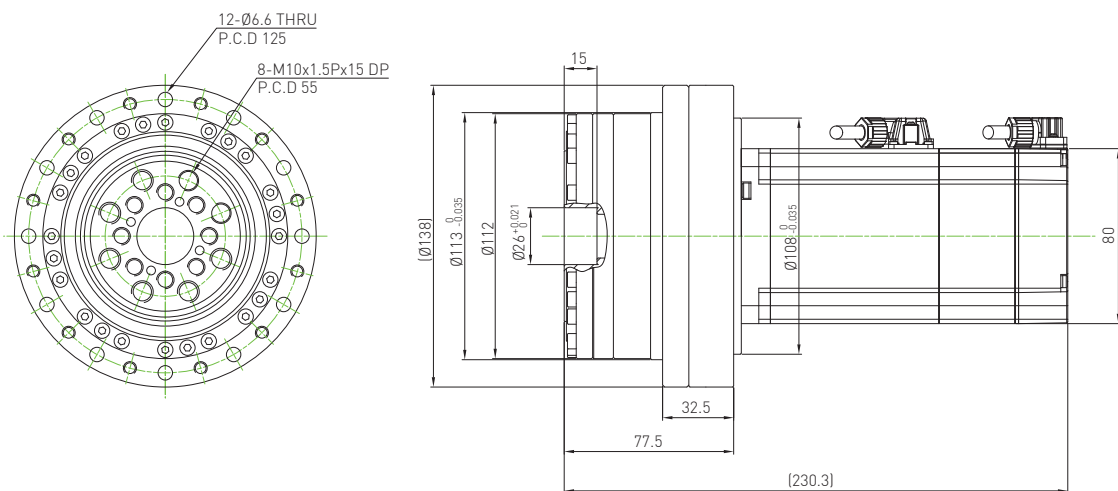
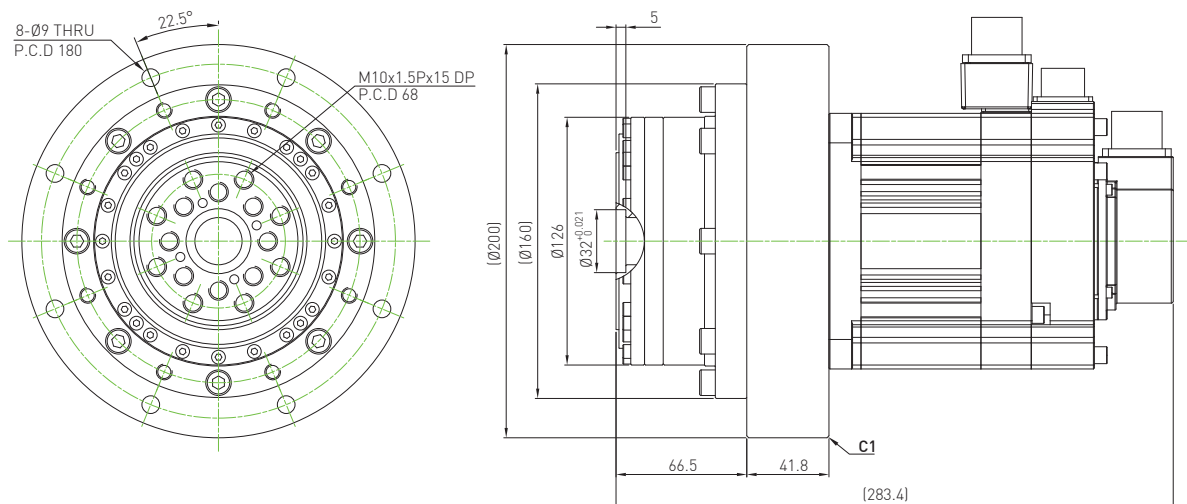


DRA17 ☐ ☐ ☐ -UBE

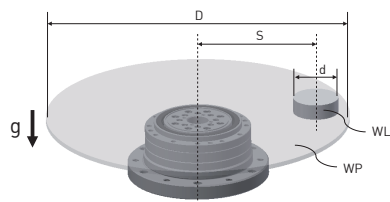
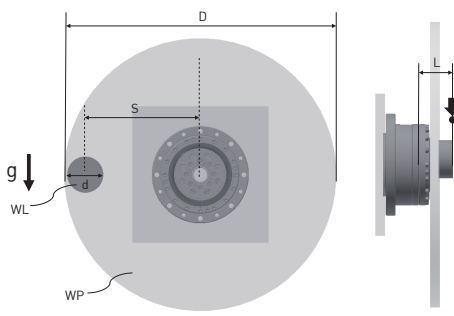
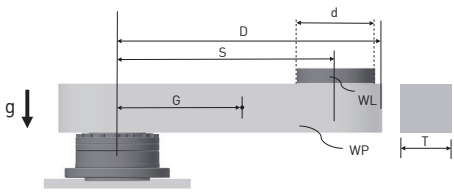


DRA20 ☐ ☐ ☐ -UBE



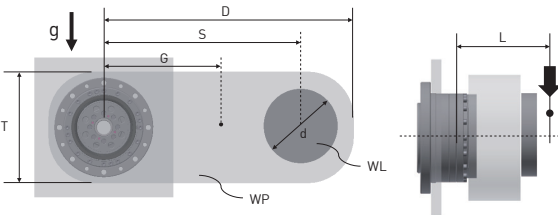
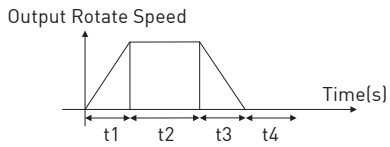
DRA25 -UBE

DRA32 -UBE

DRA40 -UBE


DATORKER® Inquiry Form (1/2)

Customer Name		Date		/	/
Application		☐ Robot _____ ☐ Semi-conductor equipment _____ ☐ Machine tool _____ ☐ Automation equipment _____ ☐ Inspection equipment _____ ☐ Medical related equipment _____ ☐ Others _____			
Type of Reducer Currently Used		☐ Harmonic reducer, Maker _____; Spec _____ ☐ Others, Maker _____; Spec _____			
Environments		☐ Normal working conditions (ambient temperature 0°C- 40°C, humidity under 80% RH) ☐ Special ambient temperature: _____ °C ☐ Harsh environment (Dusty, Cutting fluid, Dirty, etc) ☐ Other special conditions: _____			
Special Requirements		☐ Sealed and Dustproof ☐ Anti-rust Treatment ☐ Custom Dimensions ☐ High/Low Temperature Lubricant ☐ Output Support Bearing ☐ Other _____ ※If you have special requirements, please contact HIWIN.			
Selection	Load Condition*	● Mounting type I: Plate (Horizontal) Table diameter (D): _____ (mm) Table weight (WP): _____ (kg) Load diameter (d): _____ (mm) Load weight (WL): _____ (kg) Distance between load center of rotation axis (S): _____ (mm) Ratio (R): _____ 			
		● Mounting type II: Plate (Perpendicular) Table diameter (D): _____ (mm) Table weight (WP): _____ (kg) Load diameter (d): _____ (mm) Load weight (WL): _____ (kg) Distance between load center of rotation axis (S): _____ (mm) Distance between outputface and loading gravity center (L): _____ (mm) Ratio (R): _____ 			
		● Mounting type III : Square (Horizontal) Arm length (D): _____ (mm) Load diameter (d): _____ (mm) Arm width (T): _____ (mm) Load weight (WL): _____ (kg) Arm weight (WP): _____ (kg) Ratio (R): _____ Distance of arm's gravity center (G): _____ (mm) Distance between load center of rotation axis (S): _____ (mm) 			

* The values are for reference only. The lower limit is 20% under the value in this table.

DATORKER® Inquiry Form (2/2)

Selection	Load Condition	- Mounting type IV: Square (Perpendicular) - Arm length (D): _____ (mm) Load diameter (d): _____ (mm) - Arm width (T): _____ (mm) Load weight (WL): _____ (kg) - Arm weight (WP): _____ (kg) Ratio (R): _____ - Distance of arm's gravity center (G): _____ (mm) - Distance between outputface and loading gravity center (L): _____ (mm) - Distance between load center of rotation axis (S): _____ (mm) 
	Operation Condition	Acceleration time (t1): _____ (s) Steady operating time (t2): _____ (s) Decelerating time (t3): _____ (s) Stop time (t4): _____ (s) Equipment operation time (Tr): _____ (hour) Equipment operation day (Ty): _____ (day) Rotate angle (θ): _____ (degree) Reciprocating rotate angle (θ): _____ (degree) 

DATORKER® Strain Wave Gear System Inquiry Form (Optional)

Brake	☐ No ☐ Yes
Input Voltage(V)	☐ 220V Single Phase ☐ 220V Three Phase ☐ Others
Encoder	☐ 17bit (Absolute) ☐ 23bit (Absolute)
Control Interface	☐ Voltage command and Pulse (Standard) ☐ EtherCAT (CoE) ☐ Others
Cable	Power Extension Cable (Flexure Resistance) Cable Length : ☐ 3M (Standard) ☐ 5M ☐ 7M ☐ 10M Encoder Extension Cable (Flexure Resistance) Cable Length : ☐ 3M (Standard) ☐ 5M ☐ 7M ☐ 10M
Optional Accessories	☐ Control Cable (Including Pulse + I/O Pins) ☐ USB Transfer Cable ☐ Single Phase Filters ☐ Three Phase Filters
Host	☐ None ☐ PLC/Brand: _____ Model: _____ ☐ Motion control card/Brand: _____ Model: _____
Other Requirements	

Below to be filled in by HIWIN or Distributor
Suggested Model & Specification:

Global Sales and Customer Service Site

HIWIN GmbH

OFFENBURG, GERMANY
www.hiwin.de
www.hiwin.eu
info@hiwin.de

HIWIN USA

CHICAGO, U.S.A.
www.hiwin.com
info@hiwin.com

HIWIN JAPAN

KOBE • NAGOYA • TOKYO • TOHOKU •
NAGANO • SHIZUOKA • HOKURIKU •
HIROSHIMA • FUKUOKA • KUMAMOTO,
JAPAN
www.hiwin.co.jp
info@hiwin.co.jp

HIWIN Srl

BRUGHERIO, ITALY
www.hiwin.it
info@hiwin.it

HIWIN Schweiz GmbH

JONA, SWITZERLAND
www.hiwin.ch
info@hiwin.ch

HIWIN s.r.o.

BRNO, CZECH REPUBLIC
www.hiwin.cz
info@hiwin.cz

HIWIN FRANCE

STRASBOURG, FRANCE
www.hiwin.fr
info@hiwin.de

HIWIN SINGAPORE

SINGAPORE
www.hiwin.sg
info@hiwin.sg

HIWIN KOREA

SUWON • CHANGWON, KOREA
www.hiwin.kr
info@hiwin.kr

HIWIN CHINA

SUZHOU, CHINA
www.hiwin.cn
info@hiwin.cn

HIWIN BULGARIA

SOFIA, BULGARIEN
www.hiwin.bg
info@hiwin.bg

HIWIN®

HIWIN TECHNOLOGIES CORP.

No. 7, Jingke Road,
Taichung Precision Machinery Park,
Taichung 408208, Taiwan
Tel: +886-4-23594510
Fax: +886-4-23594420
www.hiwin.tw
www.hiwinsupport.com
business@hiwin.tw

- HIWIN is a registered trademark of HIWIN Technologies Corp.. For your protection, avoid buying counterfeit products from unknown sources.
- Actual products may differ from specifications and photos provided in this catalog. These differences may be the result of various factors including product improvements.
- HIWIN website for patented product directory: http://www.hiwin.tw/Products/Products_patents.aspx
- HIWIN will not sell or export products or processes restricted under the "Foreign Trade Act" or related regulations. Export of restricted products should be approved by proper authorities in accordance with relevant laws and shall not be used to manufacture or develop nuclear, biochemical, missiles or other weapons.

The specifications in this catalog are subject to change without notification.

Copyright © HIWIN Technologies Corp.

©2026 FORM T03DE03-2601 (PRINTED IN TAIWAN)