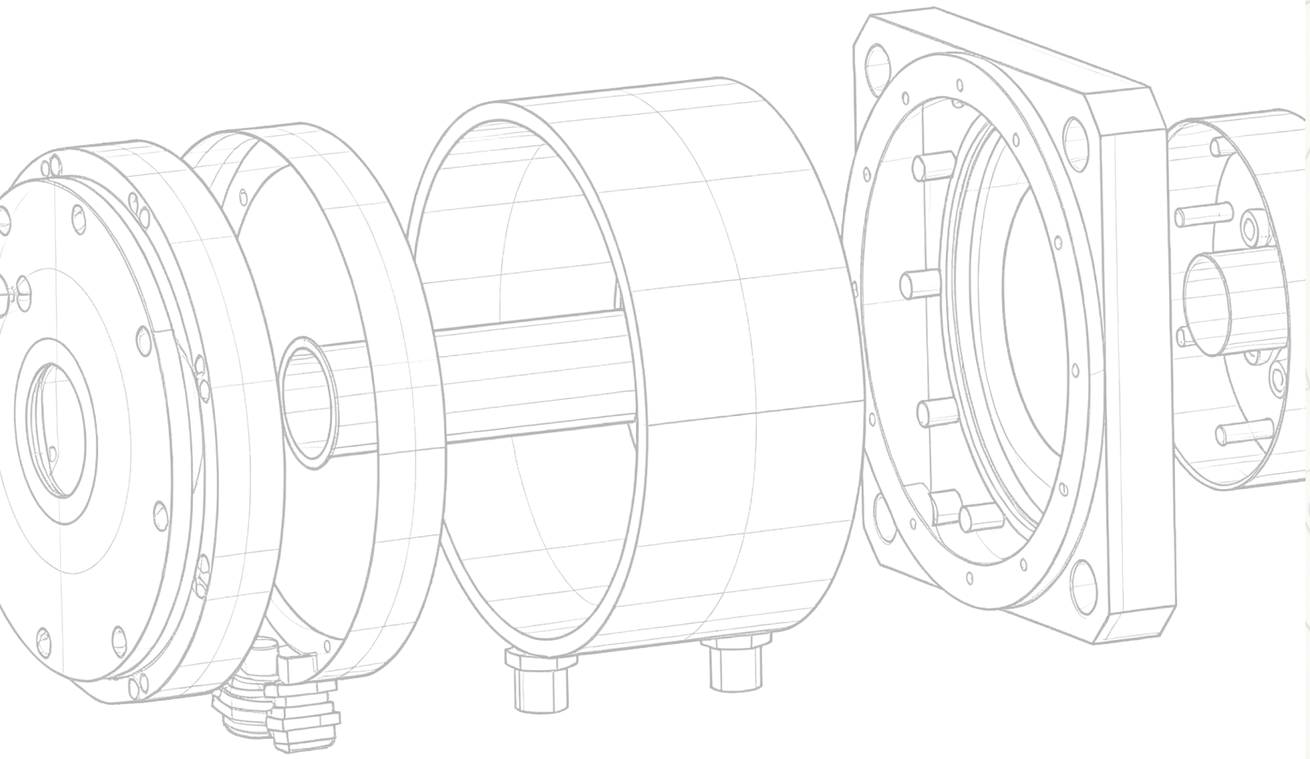
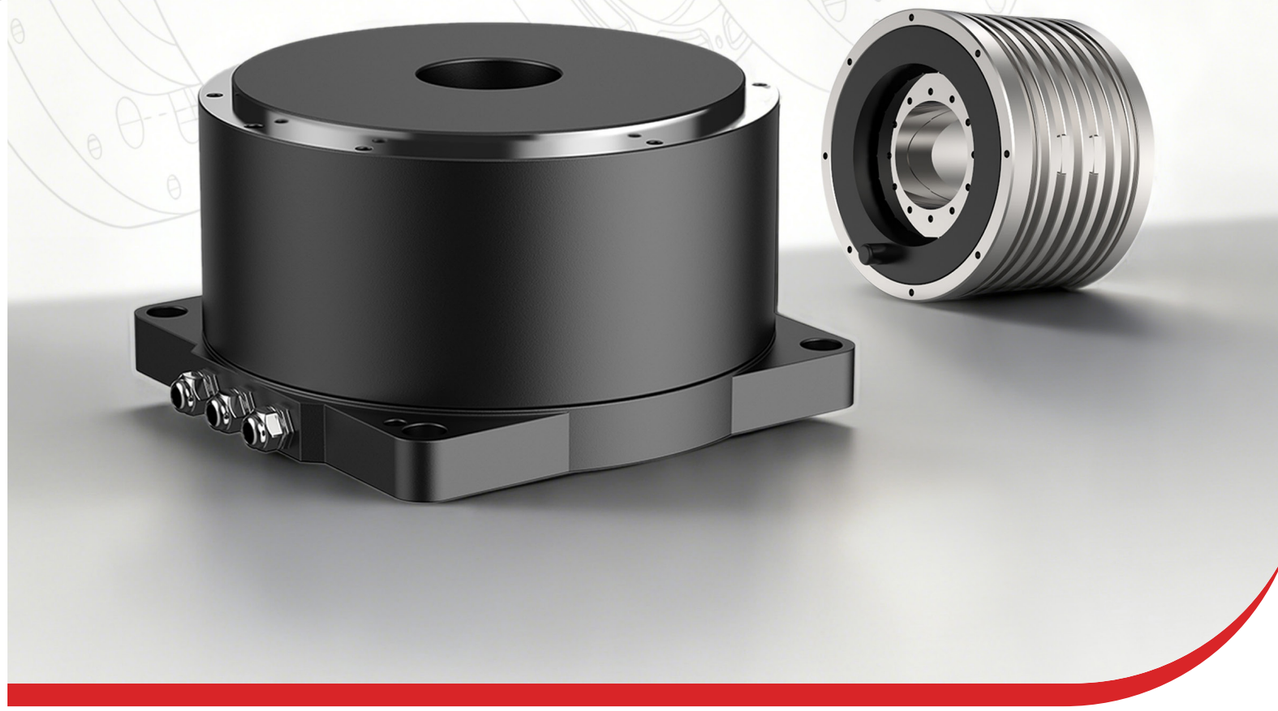


TKOOLLE
MOTION CONTROL

2026
CATALOG
ROTARY MOTOR



TKOOLLE MOTIONCONTROL INTERNATIONALCO.,LIMITED

Address I No. 16, Chezhan Road, Nancheng Subdistrict, Dongguan, Guangdong, China
Contact Name I Elvis Le
Phone Number I +86 139 2946 8187
Email I 8224959@qq.com

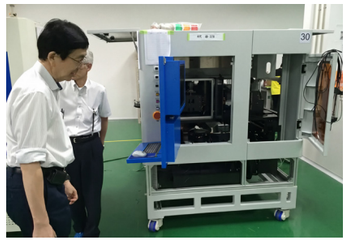
TKOOLLE
MOTION CONTROL

APPLICATIONS



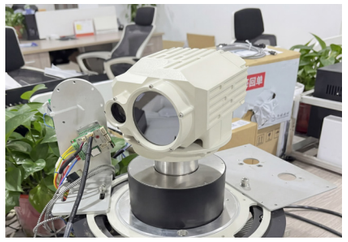
COG / FOG Equipment

COG/FOG Display Module Bonding Equipment
Enables fully automated processes including ACF bonding, IC alignment, and compression
Rotary motors are used for vision alignment and correction, achieving micron-level precision



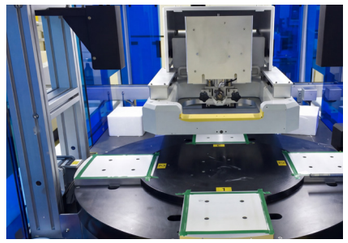
LED Wafer Dicing Equipment

LED Wafer Laser Dicing Equipment
Suitable for high-precision cutting of sapphire, SiC, and related materials
Rotary motors provide precise stage positioning and motion control, enhancing accuracy and stability



Outdoor Radar

Outdoor Radar Scanning Platform
Designed for stable operation in harsh environments and wide temperature conditions
Rotary motors ensure high-precision angular control and long-term reliability



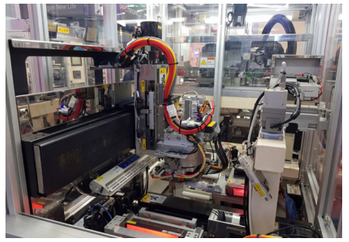
Photovoltaic Printing Machine

Photovoltaic Cell Printing Equipment
Used for high-throughput solar cell printing processes
Rotary motors enable high-precision synchronous motion, improving production efficiency



Winding Equipment

Precision Winding Equipment
Designed for high-accuracy coil winding applications
Rotary motors improve winding precision and consistency while extending service life



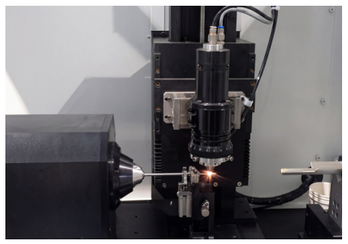
Polarizer Lamination Equipment

Polarizer Lamination Automation Equipment
Supports multi-station synchronous lamination with CCD vision inspection
Rotary motors enable multi-axis coordinated control, improving cycle time and accuracy



Photovoltaic Production Line

Photovoltaic Automation Production Line
Integrated with multi-axis coordinated control systems
Rotary motors serve as core actuators, delivering high responsiveness and stable operation



Medical Laser Equipment

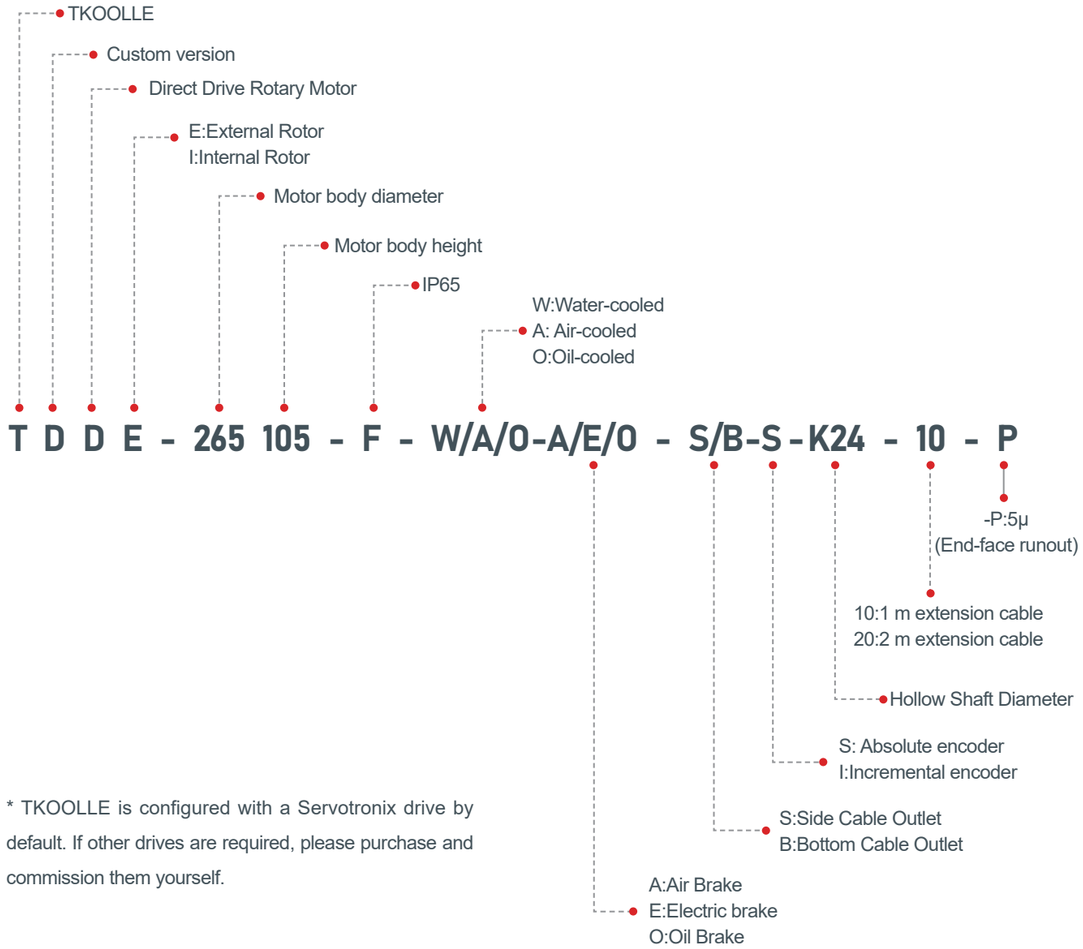
Medical Laser Processing Equipment
Suitable for high-precision medical device manufacturing
Rotary motors provide high dynamic response for complex trajectory control



IC Test Handler

Semiconductor Test & Sorting Equipment
Integrates testing, sorting, and marking functions
Rotary motors enable high-speed indexing and precise positioning, ensuring accuracy and efficiency

HOW TO ORDER



* TKOOLLE is configured with a Servotronix drive by default. If other drives are required, please purchase and commission them yourself.

Information required for Direct Drive Rotary Motor selection:

1.Load weight (to confirm loading and select an appropriate bearing)
2.Load geometry (to calculate the moving inertia)
3.Positioning accuracy (to select a suitable encoder; default repeatability: ±2 arcsec)
4.Motion profile (rotation angle and move time / cycle time, used to determine the required motor speed)
5.Dwell time (the interval between moves; shorter dwell time may increase temperature rise)
6.Mounting orientation (horizontal, side-mounted, inverted; significantly affects bearing loading)
7.Drive interface / control method (I/O, pulse, fieldbus)
8.Extension cable length (motor cable: 0.3 m standard)
9.Additional requirements (e.g., IP rating, high-temperature operation, hollow bore, external loads/forces, etc.)

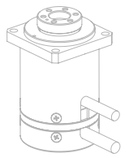
ROTARY MOTOR SPECIFICATIONS

Page	Model	Diameter (mm)	Height (mm)	Continuous Torque (NM)	Cooling	Brake	Large Hollow	High-Speed
1	TDI-030051	30	50	0.075				
3	TDI-040052	40	52	0.1				
5	TDI-050045	50	45	0.06				
5	TDI-055056	55	56	0.06				
9	TDI-060060-P	60	60	0.5				
11	TDE-065022	65	22	0.06				
11	TDI-065056	65	56	0.28				
79	TDDI-065056-E	65	56	0.28		√		
13	TDI-080050	80	50	1.1				
79	TDDI-080050-E	80	50	1.1		√		
13	TDE-080067	80	67	1.1				
13	TDE-080100	80	100	2.3				
17	TDE-110065	110	65	3				
17	TDE-110085	110	85	6				
19	TDI-120050	120	50	3.6				
19	TDI-120071	120	71	3.6				
21	TDI-140065	140	65	12.8				
21	TDI-140070	140	70	12.8				
21	TDI-140095	140	95	20.6				
75	TDI-140185	140	185	37				√
75	TDI-150195	150	195	35(42)	√			√
75	TDI-150235	150	235	46(55.4)	√			√
25	TDE-160093	160	93	9.1				
23	TDE-160095	160	95	10.5				
25	TDE-160118	160	118	22				
25	TDE-160143	160	143	35				
25	TDE-160168	160	168	47				
29	TDE-170050	170	50	5				
29	TDE-170095	170	95	28				
79	TDDE-170095-E	170	95	28		√		
29	TDE-170110-P	170	110	8				
29	TDE-170125	170	125	39				
29	TDE-170130-P	170	130	19				
33	TDI-180055	180	55	12.5				
33	TDI-180070	180	70	18.1				
33	TDI-180095	180	95	32.5				
33	TDI-180125	180	125	45.5				
37	TDI-220065-P	220	65	19				
37	TDI-220123-P	220	123	66				
37	TDI-220168-P	220	168	108				

Page	Model	Diameter (mm)	Height (mm)	Continuous Torque (NM)	Cooling	Brake	Large Hollow	High-Speed
41	TDI-224042	224	42	19				
41	TDI-224062	224	62	41				
79	TDDI-224062-E	224	62	41		√		
71	TDI-230250-W	230	250	156	√			
43	TDI-250055	250	55	29.5				
43	TDI-250070	250	70	46				
43	TDI-250095	250	95	79				
43	TDI-250138	250	128	112				
71	TDI-250168-W	250	168	179	√			
43	TDI-250180	250	180	186				
47	TDE-263138	263	138	108				
47	TDE-263163	263	163	150				
47	TDE-263188	263	188	200				
79	TDDE-263188-E	263	188	200		√		
49	TDE-264113	264	113	49.8				
49	TDE-264138	264	138	91				
49	TDE-264163	264	163	135				
49	TDE-264188	264	188	176				
49	TDE-264203	264	203	200				
51	TDI-280120-P	280	120	49.8				
67	TDI-280145-P	280	145	110			√	
51	TDI-280170-P	280	170	91				
51	TDI-280231-P	280	231	130				
67	TDI-348045	348	45	16			√	
67	TDI-348080	348	80	80			√	
55	TDI-360150	360	150	264				
55	TDI-360215	360	215	450				
71	TDI-385215-W	385	215	855	√			
57	TDI-400065	400	65	131				
57	TDI-400070	400	70	114				
67	TDI-400075	400	75	19			√	
59	TDI-400095	400	95	200				
67	TDI-400130	400	130	320			√	
59	TDI-400160	400	160	436				
59	TDI-400200	400	200	570				
59	TDI-400250	400	250	702				
63	TDI-630175	630	175	1330				
63	TDI-630225	630	225	1950				
63	TDI-630320	630	320	3050				

*The diameter and height listed in the table include only the motor body dimensions. For detailed dimensions, please refer to the drawings.

TDI-030 Internal rotor



- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

Rated Specification	Unit	TDI-030051
Flange-type	-	-
Continuous Torque	Nm	0.075
Peak Torque	Nm	0.24
Rated Speed	Rpm	500
Maximum Speed	Rpm	600
Continuous Current	Arms	2.5
Peak Current	Arms	8
Torque Constant	Nm/Arms	0.03
Back EMF Constant*	Vrms/rad/s	0.033
Resistance Phase to Phase at 25°C	Ω	1.4
Inductance Phase to Phase at 25°C	mH	0.38
Number of poles		14
Rotor Inertia	$kg \cdot m^2$	0.0000025
Incremental encoder resolution	ppr	600000
Absolute encoder resolution	ppr	-
Absolute Position Accuracy	arcsec	±50
Repeat Position Accuracy	arcsec	±5

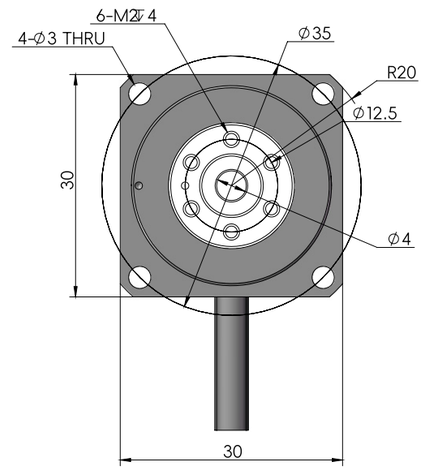
Mechanical	Unit	
Axial Load	N	200
Radial Load	Nm	5
Axial Run Out*2	um	10(optional)
Radial Run Out*3	um	10(optional)
Mass	kg	0.2

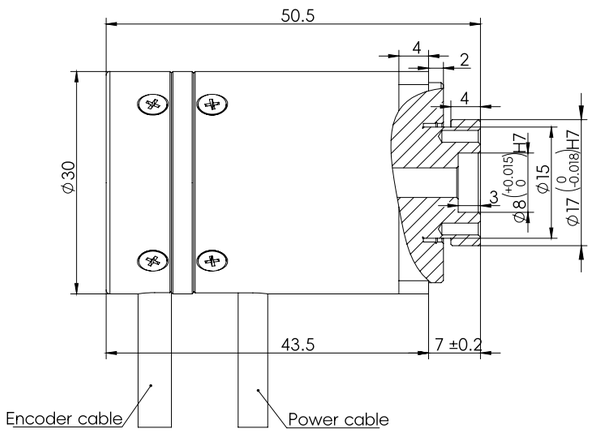
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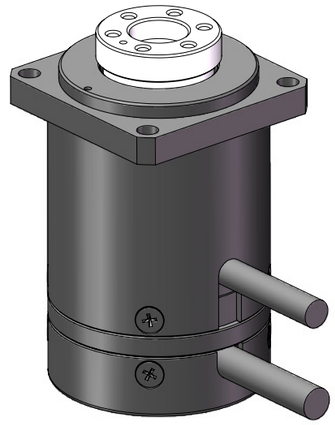
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

*2 *3 Please contact sales.

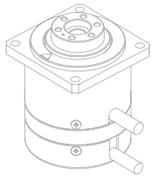
TDI-030051



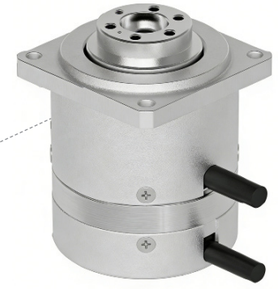




TDI-040 Internal rotor



- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

Rated Specification	Unit	TDI-040052
Flange-type	-	-
Continuous Torque	Nm	0.1
Peak Torque	Nm	0.3
Rated Speed	Rpm	500
Maximum Speed	Rpm	600
Continuous Current	Arms	3
Peak Current	Arms	9
Torque Constant	Nm/Arms	0.03
Back EMF Constant*	Vrms/rad/s	0.06
Resistance Phase to Phase at 25°C	Ω	2.2
Inductance Phase to Phase at 25°C	mH	1
Number of poles		14
Rotor Inertia	$kg \cdot m^2$	0.0000076
Incremental encoder resolution	ppr	1000000
Absolute encoder resolution	ppr	-
Absolute Position Accuracy	arcsec	±50
Repeat Position Accuracy	arcsec	±5

• MODEL

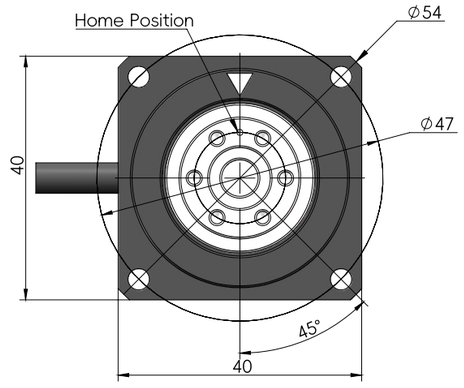
Mechanical	Unit	TDI-040052
Axial Load	N	600
Radial Load	Nm	5
Axial Run Out*2	um	10(optional)
Radial Run Out*3	um	10(optional)
Mass	kg	0.35

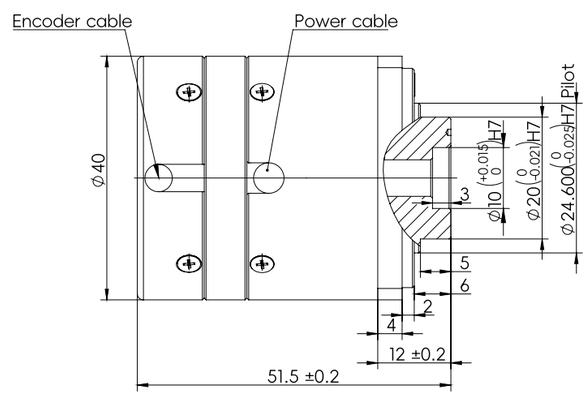
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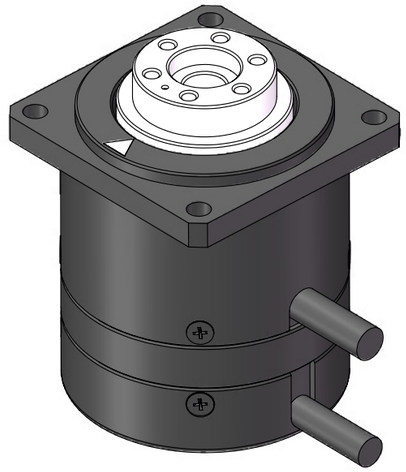
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

*2 *3 Please contact sales.

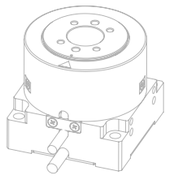
TDI-040052







TDI-050 Internal rotor



- Large Hollow Shaft
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

Rated Specification	Unit	TDI-050045	TDI-055056
Flange-type	-	-	-
Continuous Torque	Nm	0.06	0.06
Peak Torque	Nm	0.24	0.24
Rated Speed	Rpm	500	600
Maximum Speed	Rpm	600	900
Continuous Current	Arms	0.72	0.72
Peak Current	Arms	2.88	2.88
Torque Constant	Nm/Arms	0.08	0.08
Back EMF Constant*	Vrms/rad/s	0.07	0.06
Resistance Phase to Phase at 25°C	Ω	9.2	9.2
Inductance Phase to Phase at 25°C	mH	1.2	1.2
Number of poles		20	20
Rotor Inertia	$kg \cdot m^2$	0.000016	0.000024
Incremental encoder resolution	ppr	1000000	1800000
Absolute encoder resolution	ppr	-	-
Absolute Position Accuracy	arcsec	±50	±50
Repeat Position Accuracy	arcsec	±5	±5

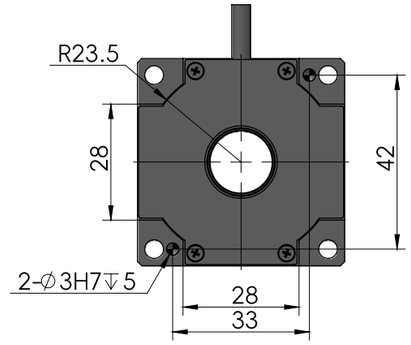
Mechanical	Unit		
Axial Load	N	600	600
Radial Load	Nm	5	5
Axial Run Out*2	um	10(optional)	10(optional)
Radial Run Out*3	um	10(optional)	10(optional)
Mass	kg	0.3	0.5

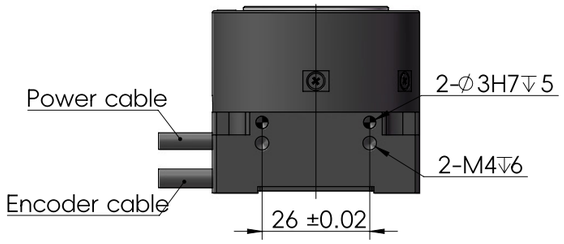
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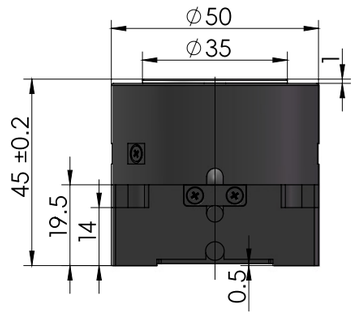
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

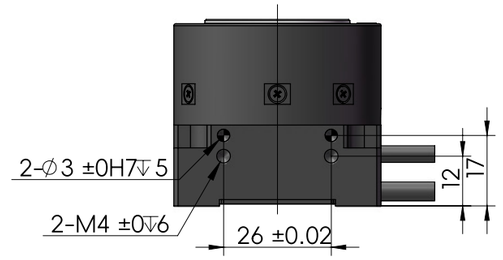
*2 *3 Please contact sales.

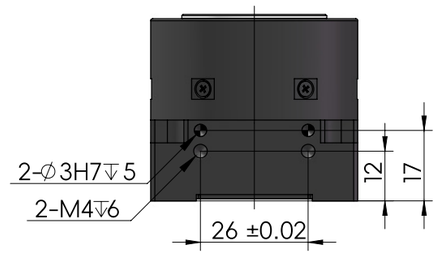
TDI-050045

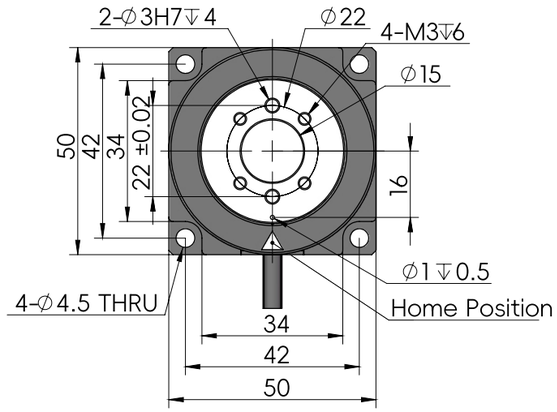


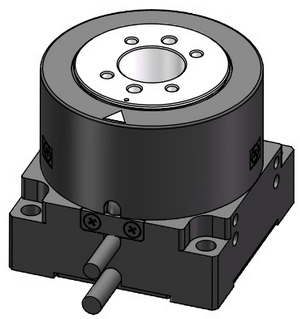




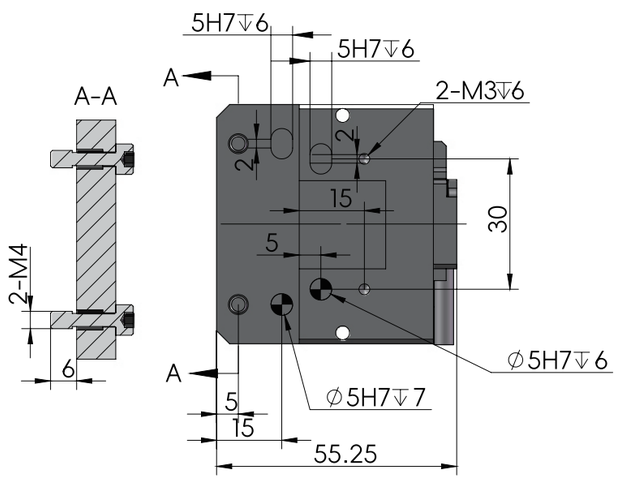


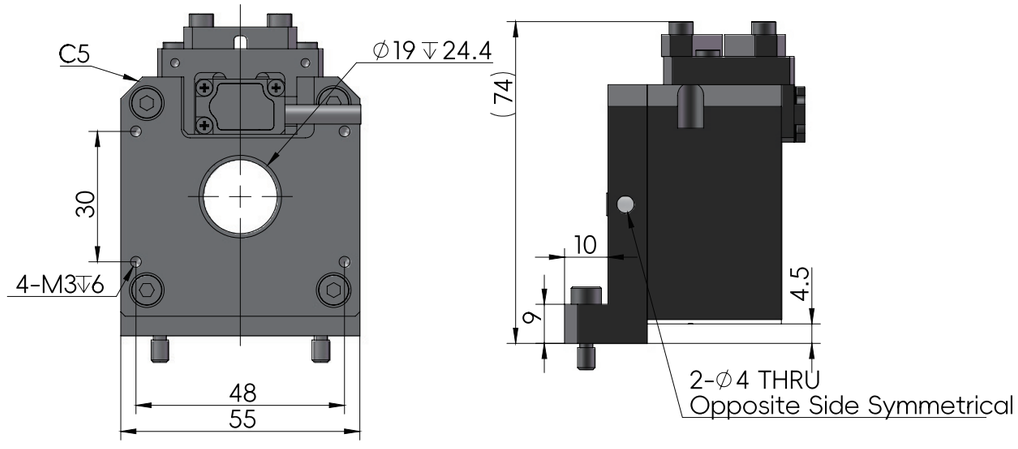


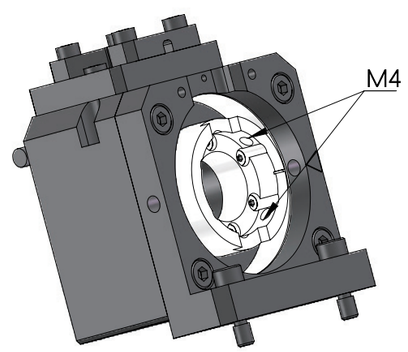


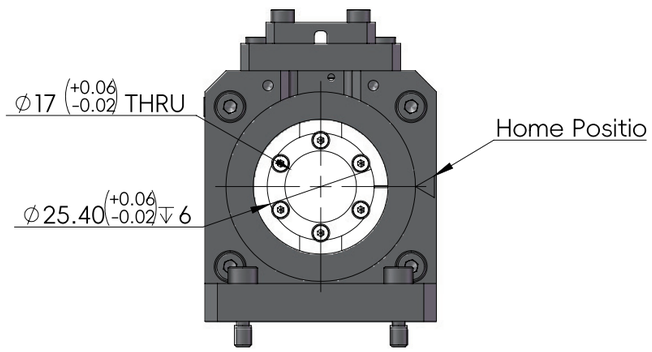


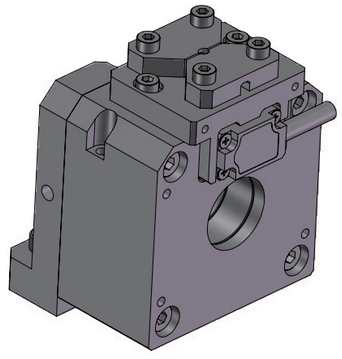
TDI-055056

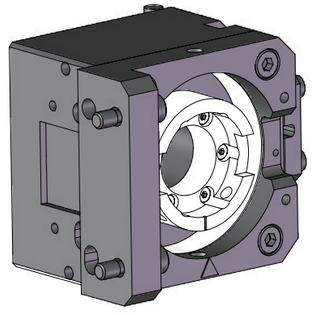

5H7↧6
5H7↧6
A
2-M3↧6
A-A
2
2
15
30
5
2-M4
6
∅5H7↧6
A
5
15
∅5H7↧7
55.25
50
29
2-⌴ 6↧10
∅3.2 THRU


C5
∅19↧24.4
(74)
30
10
4-M3↧6
9
4.5
48
55
2-∅4 THRU
Opposite Side Symmetrical


M4


∅17 (+0.06 -0.02) THRU
Home Positio
∅25.40 (+0.06 -0.02)↧6





TDI-060 Internal rotor



- Large Hollow Shaft
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-060060-P
Flange-type	-	√
Continuous Torque	Nm	0.5
Peak Torque	Nm	1.5
Rated Speed	Rpm	300
Maximum Speed	Rpm	500
Continuous Current	Arms	1.6
Peak Current	Arms	4.8
Torque Constant	Nm/Arms	0.31
Back EMF Constant*	Vrms/rad/s	0.19
Resistance Phase to Phase at 25°C	Ω	4.5
Inductance Phase to Phase at 25°C	mH	3.9
Number of poles		20
Rotor Inertia	$kg \cdot m^2$	0.00005
Incremental encoder resolution	ppr	1000000
Absolute encoder resolution	ppr	-
Absolute Position Accuracy	arcsec	±40
Repeat Position Accuracy	arcsec	±4

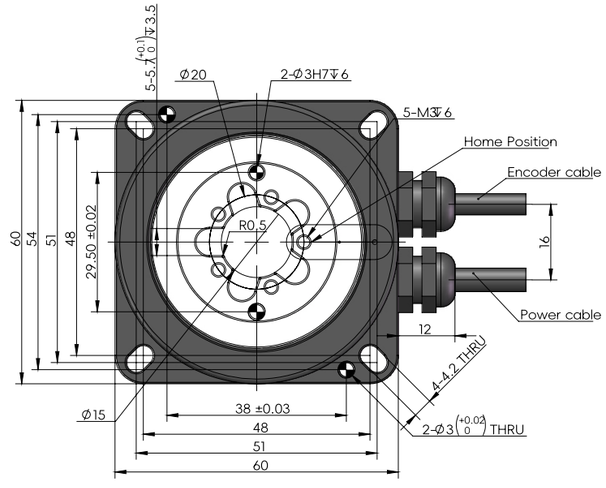
Rated Specification	Unit	
Axial Load	N	1200
Radial Load	Nm	8
Axial Run Out*2	um	5(optional)
Radial Run Out*3	um	5(optional)
Mass	kg	0.7

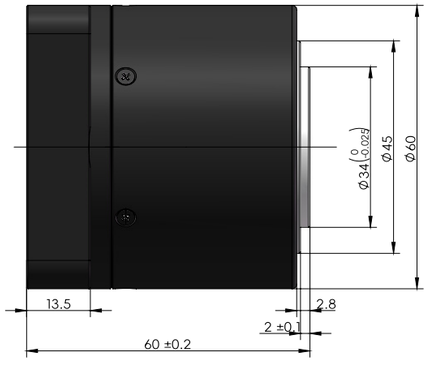
Notes:

*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

*2 *3 Please contact sales.

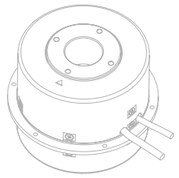
TDI-060060-P







TD-065 Internal rotor External rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor/External Rotor



• SPECIFICATION

Rated Specification	Unit	TDE-065022	TDI-065056
Flange-type	-	√	√
Continuous Torque	Nm	0.06	0.28
Peak Torque	Nm	0.24	1.1
Rated Speed	Rpm	60	600
Maximum Speed	Rpm	80	900
Continuous Current	Arms	0.9	1.6
Peak Current	Arms	3.6	6.4
Torque Constant	Nm/Arms	0.067	0.18
Back EMF Constant*	Vrms/rad/s	0.28	0.12
Resistance Phase to Phase at 25°C	Ω	7.2	4.1
Inductance Phase to Phase at 25°C	mH	1.5	3.2
Number of poles		12	20
Rotor Inertia	$kg \cdot m^2$	0.00011	0.000045
Incremental encoder resolution	ppr	2030320	720000
Absolute encoder resolution	ppr	-	24bit(16777216)
Absolute Position Accuracy	arcsec	-	±50
Repeat Position Accuracy	arcsec	±2	±5

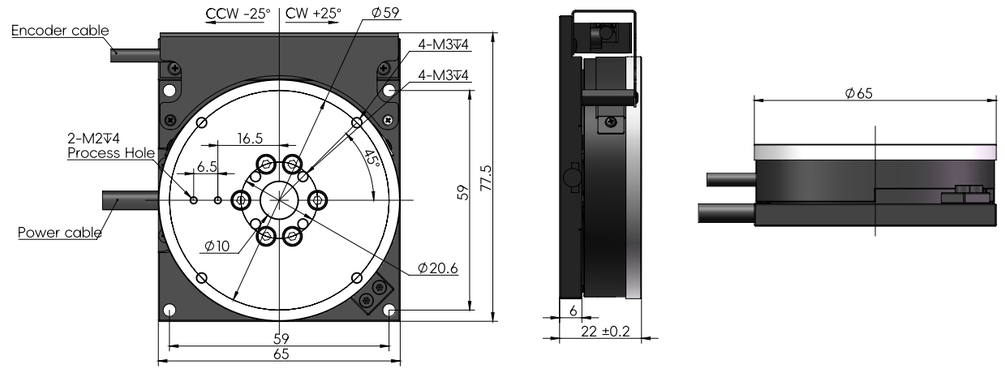
Mechanical	Unit		
Axial Load	N	200	1200
Radial Load	Nm	5	8
Axial Run Out*2	um	-	20/5
Radial Run Out*3	um	-	20
Mass	kg	0.55	0.8

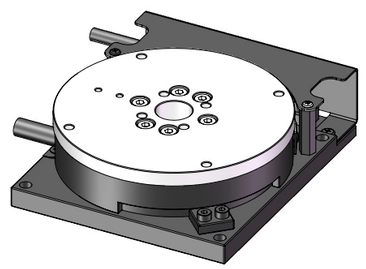
Notes:

*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

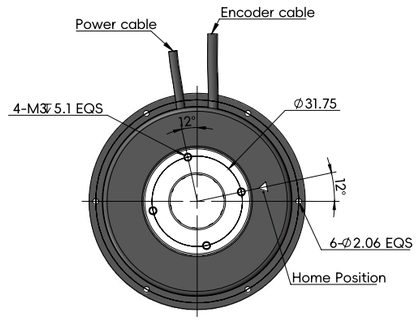
*2 *3 Please contact sales.

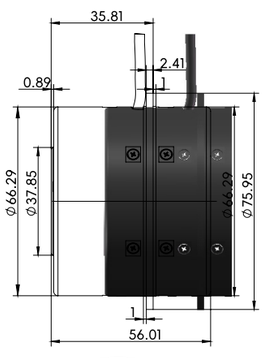
TDE-065022

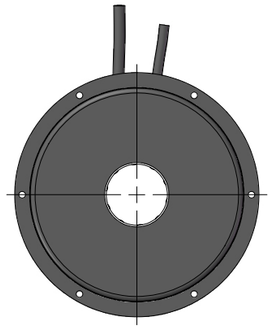


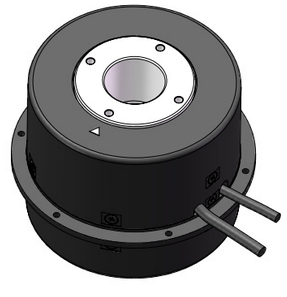


TDI-065056

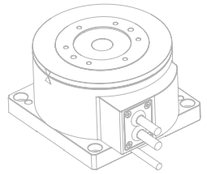








TD-080 Internal rotor External rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- External Rotor/Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-080050	TDE-080067	TDE-080100
Flange-type	-	√	-	-
Continuous Torque	Nm	1.1	1.1	2.3
Peak Torque	Nm	3.3	3.2	6.8
Rated Speed	Rpm	300	300	300
Maximum Speed	Rpm	500	300	300
Continuous Current	Arms	0.9	2	2
Peak Current	Arms	3.1	6	6
Torque Constant	Nm/Arms	1.2	0.55	1.1
Back EMF Constant*	Vrms/rad/s	0.82	0.37	0.81
Resistance Phase to Phase at 25°C	Ω	23.2	4.2	8.5
Inductance Phase to Phase at 25°C	mH	18.9	4.8	10
Number of poles		20	22	22
Rotor Inertia	$kg \cdot m^2$	0.00017	0.00082	0.0014
Incremental encoder resolution	ppr	1800000	1800000	1800000
Absolute encoder resolution	ppr	24bit	24bit	24bit
Absolute Position Accuracy	arcsec	±30	±15	±15
Repeat Position Accuracy	arcsec	±4	±2	±2

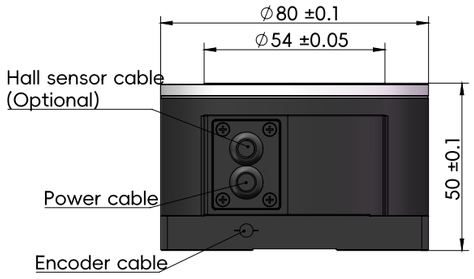
Mechanical	Unit			
Axial Load	N	800	1200	1200
Radial Load	Nm	9	10	10
Axial Run Out*2	um	20/5	20/5	20/5
Radial Run Out*3	um	20	20/5	20/5
Mass	kg	1.25	1.6	2.5

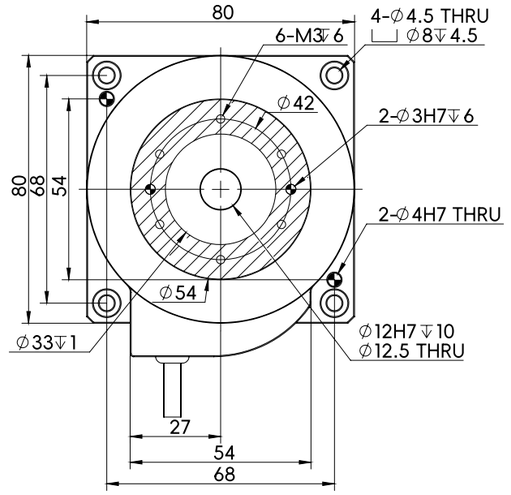
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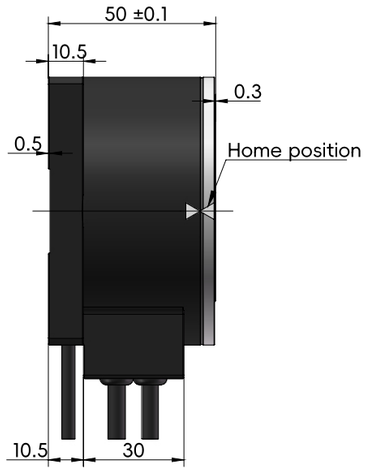
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

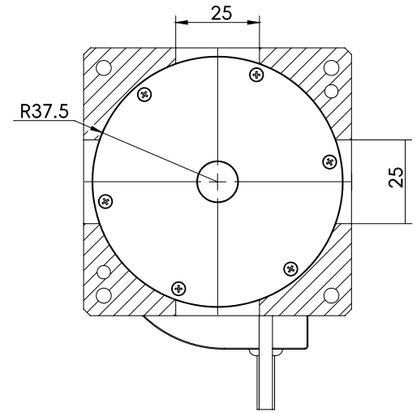
*2 *3 Please contact sales.

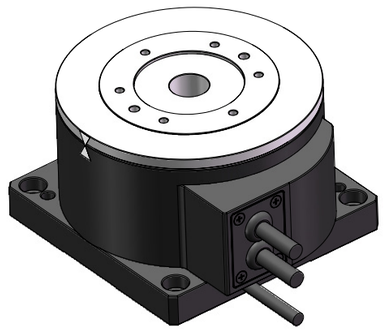
TDI-080050



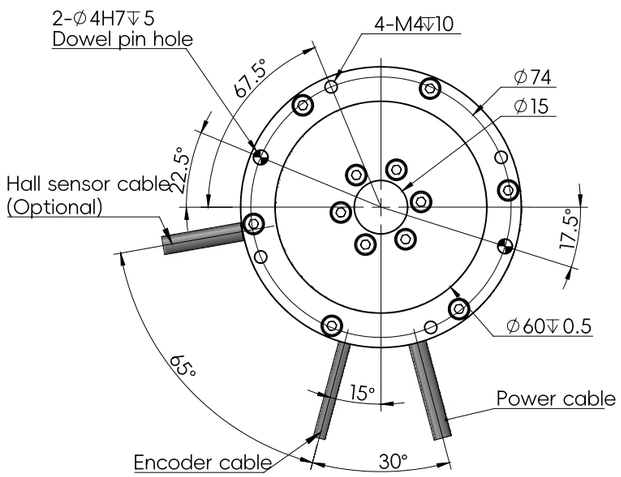


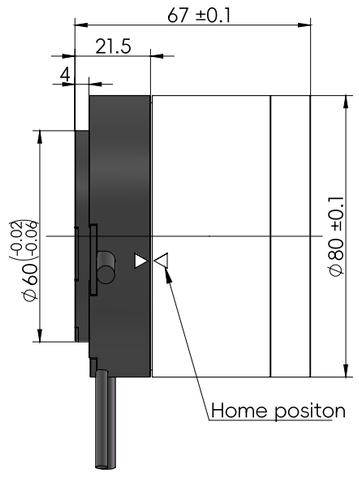


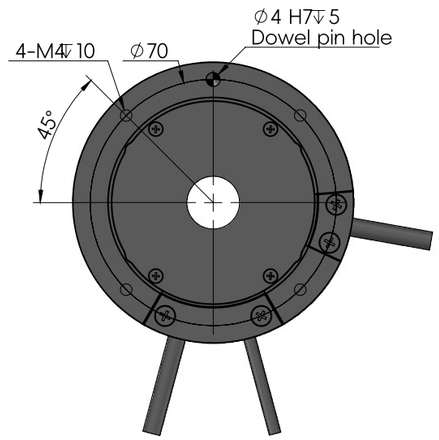


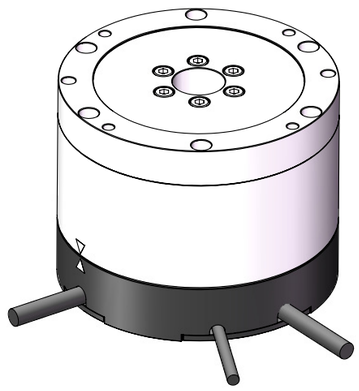


TDE-080067

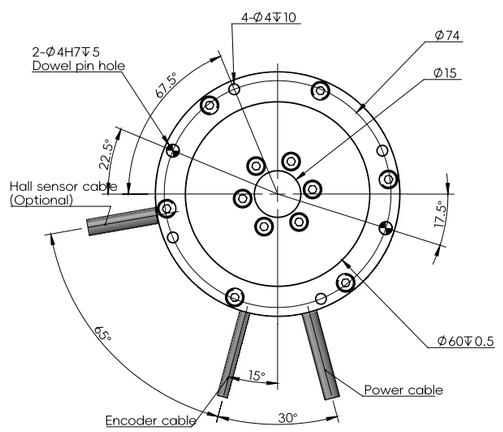


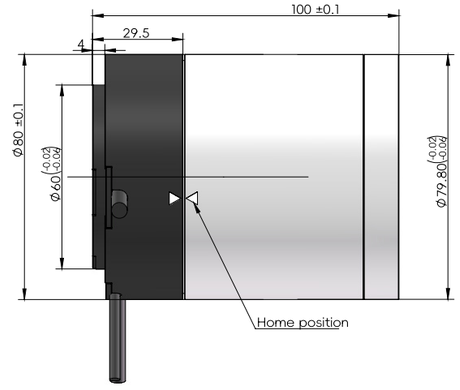


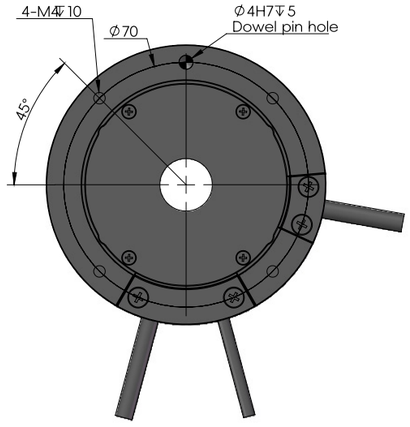


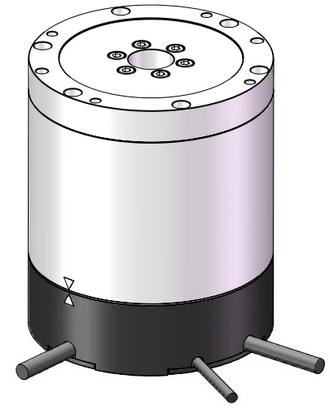


TDE-080100

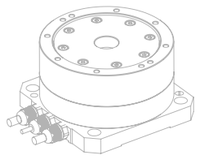








TDE-110 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- External Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDE-110065	TDE-110085
Flange-type	-	√	√
Continuous Torque	Nm	3	6
Peak Torque	Nm	9	18
Rated Speed	Rpm	200	200
Maximum Speed	Rpm	300	300
Continuous Current	Arms	1.6	1.6
Peak Current	Arms	4.8	4.8
Torque Constant	Nm/Arms	1.87	3.74
Back EMF Constant*	Vrms/rad/s	1	2.03
Resistance Phase to Phase at 25°C	Ω	10	17.7
Inductance Phase to Phase at 25°C	mH	9.5	18.4
Number of poles		22	22
Rotor Inertia	$kg \cdot m^2$	0.0026	0.0042
Incremental encoder resolution	ppr	1800000	1800000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15
Repeat Position Accuracy	arcsec	±2	±2

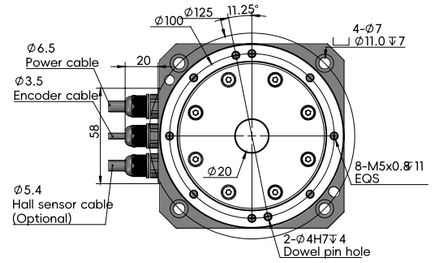
Mechanical	Unit		
Axial Load	N	9000	9000
Radial Load	Nm	50	50
Axial Run Out*2	um	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3
Mass	kg	3	4.5

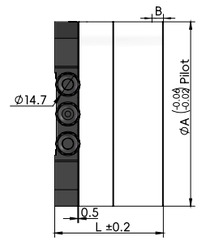
Notes:

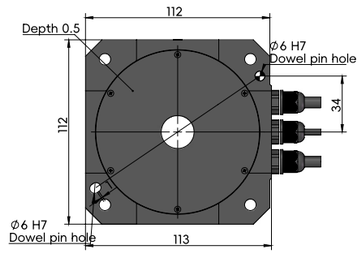
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

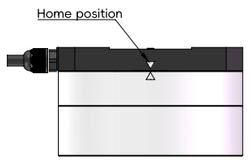
*2 *3 Please contact sales.

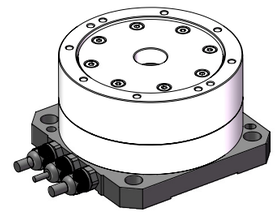
TDE-110065





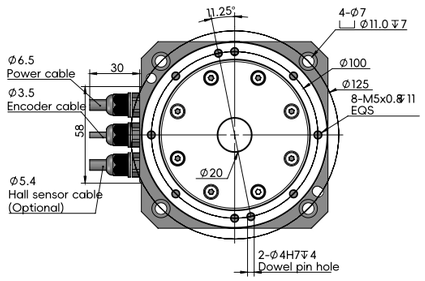


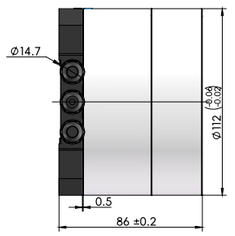


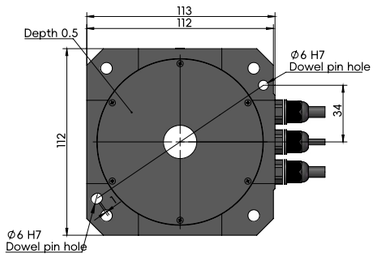


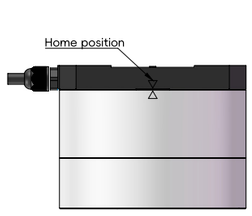
Model	Dimensional Variations		
	L	A	B
TDE-110065	66	112	\
TDE-110065-P	66	111.8	3

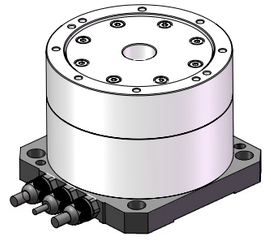
TDE-110085





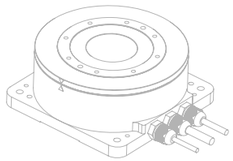






Model	Dimensional Variations		
	L	A	B
TDE-110085	86	112	\
TDE-110085-P	86	111.8	3

TDI-120 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-120050	TDI-120071
Flange-type	-	√	√
Continuous Torque	Nm	3.6	3.6
Peak Torque	Nm	10.8	10.8
Rated Speed	Rpm	300	300
Maximum Speed	Rpm	350	350
Continuous Current	Arms	1.8	1.8
Peak Current	Arms	5.4	5.4
Torque Constant	Nm/Arms	2	2
Back EMF Constant*	Vrms/rad/s	1.2	1.2
Resistance Phase to Phase at 25°C	Ω	13.1	13.1
Inductance Phase to Phase at 25°C	mH	29.8	29.8
Number of poles		20	20
Rotor Inertia	$kg \cdot m^2$	0.0013	0.0015
Incremental encoder resolution	ppr	3100000	3100000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15
Repeat Position Accuracy	arcsec	±2	±2

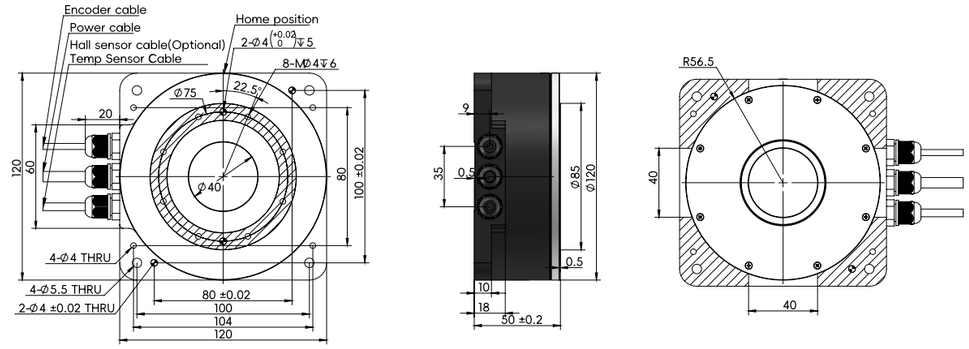
Mechanical	Unit		
Axial Load	N	1600	1600
Radial Load	Nm	15	15
Axial Run Out*2	um	20/5/3	20/5/3
Radial Run Out*3	um	20	20
Mass	kg	2.3	2.9

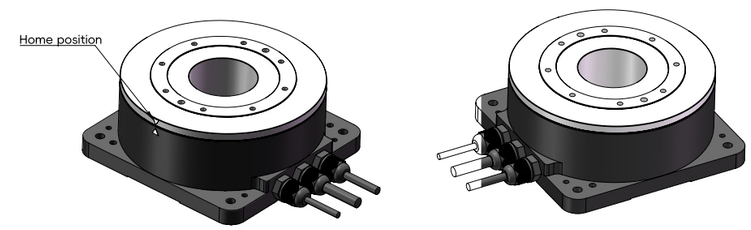
Notes:

*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

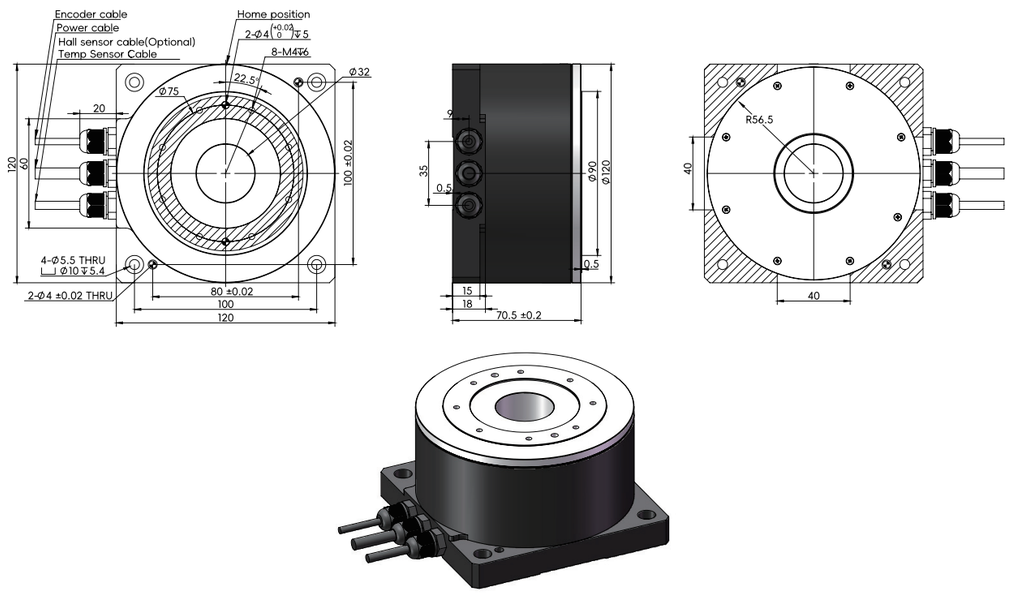
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TDI-120050

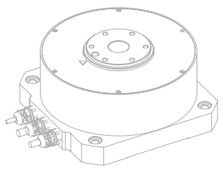




TDI-120071



TDI-140 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-140065	TDI-140070	TDI-140095
Flange-type	-	√	-	-
Continuous Torque	Nm	12.8	12.8	20.6
Peak Torque	Nm	37.2	37.2	60.8
Rated Speed	Rpm	200	200	200
Maximum Speed	Rpm	300	300	300
Continuous Current	Arms	3.2	3.2	3.2
Peak Current	Arms	9.6	9.6	9.6
Torque Constant	Nm/Arms	4	4	6.4
Back EMF Constant*	Vrms/rad/s	2.5	2.5	4
Resistance Phase to Phase at 25°C	Ω	6.4	6.4	9.5
Inductance Phase to Phase at 25°C	mH	26.5	26.5	42.6
Number of poles		20	20	20
Rotor Inertia	$kg \cdot m^2$	0.0013	0.0013	0.0018
Incremental encoder resolution	ppr	1800000	1800000	1800000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2

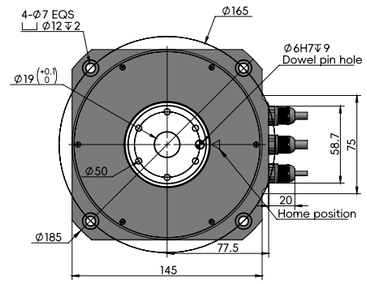
Mechanical	Unit			
Axial Load	N	3100	3100	3100
Radial Load	Nm	20	20	20
Axial Run Out*2	um	20/5/3	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3	20/5/3
Mass	kg	5.2	4.8	6.6

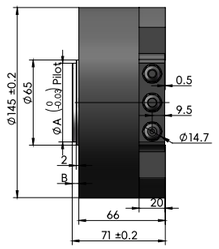
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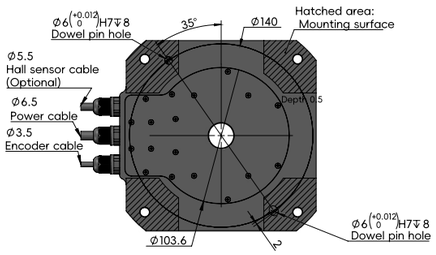
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

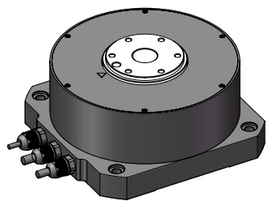
*2 *3 Please contact sales.

TDI-140065



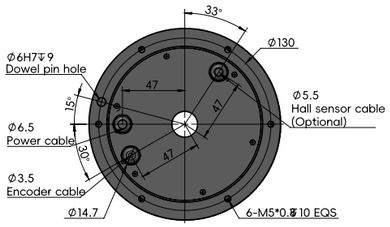


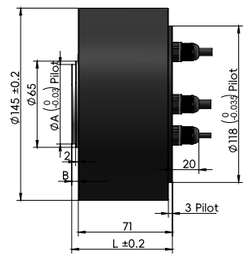


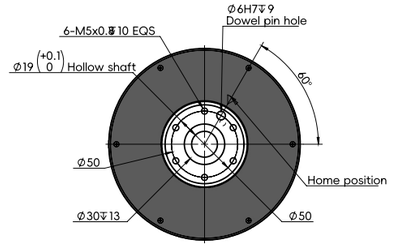


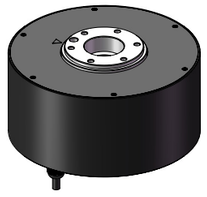
Model	Dimensional Variations	
	A	B
TDI-140065	60	3
TDI-140065-P	59.8	2.5

TDI-140070/140095



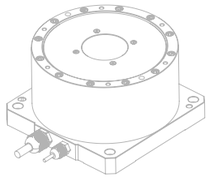




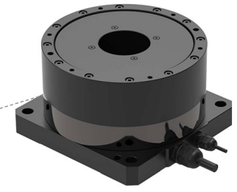


Model	Dimensional Variations		
	L	A	B
TDI-140070	73	60	3
TDI-140070-P	73	59.8	2.5
TDI-140095	98	60	3
TDI-140095-P	98	59.8	2.5

TDE-160 With Flange External Rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- External Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDE-160095
Flange-type	-	√
Continuous Torque	Nm	10.5
Peak Torque	Nm	30
Rated Speed	Rpm	100
Maximum Speed	Rpm	150
Continuous Current	Arms	2.8
Peak Current	Arms	8.4
Torque Constant	Nm/Arms	3.75
Back EMF Constant*	Vrms/rad/s	2.9
Resistance Phase to Phase at 25°C	Ω	8.6
Inductance Phase to Phase at 25°C	mH	16.2
Number of poles		22
Rotor Inertia	$kg \cdot m^2$	0.0143
Incremental encoder resolution	ppr	4350000
Absolute encoder resolution	ppr	24bit(16777216)
Absolute Position Accuracy	arcsec	±15
Repeat Position Accuracy	arcsec	±2

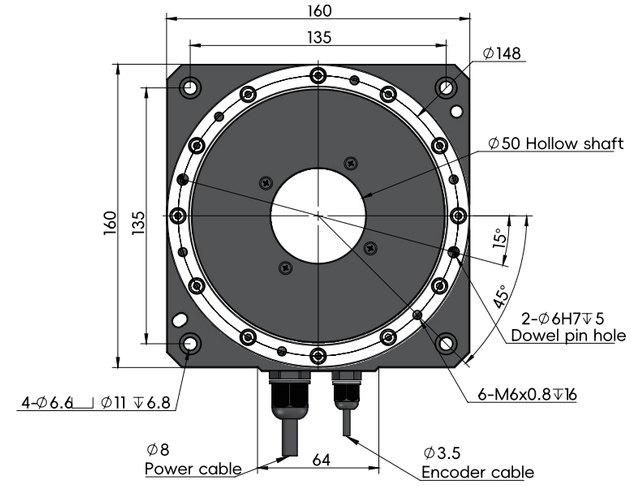
Mechanical	Unit	
Axial Load	N	16000
Radial Load	Nm	130
Axial Run Out*2	um	20/5/3
Radial Run Out*3	um	20/5/3
Mass	kg	9.3

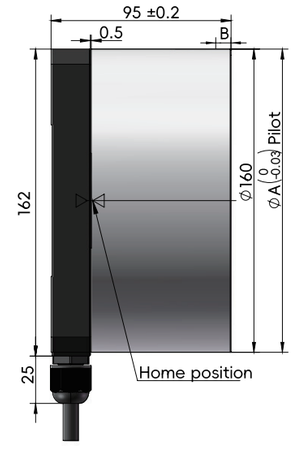
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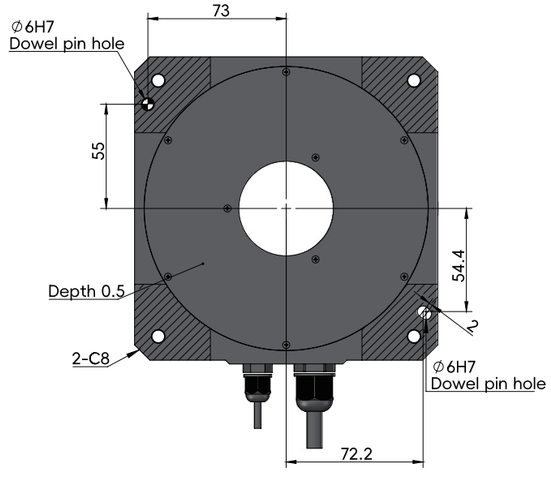
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

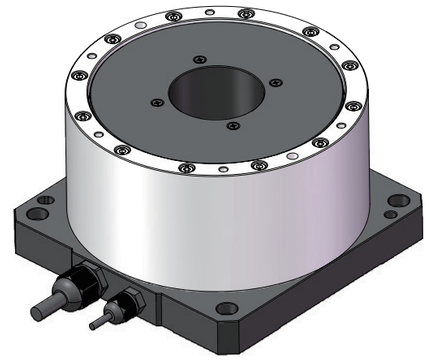
*2 *3 Please contact sales.

TDE-160095



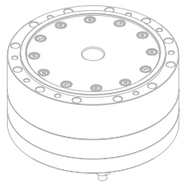




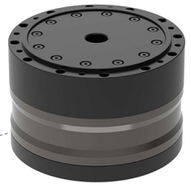


Model	Dimensional Variations	
	A	B
TDE-160095	160	3
TDE-160095-P	159.8	2.5

TDE-160 Without Flange External Rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- External Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDE-160093	TDE-160118	TDE-160143	TDE-160168
Flange-type	-	-	-	-	-
Continuous Torque	Nm	9.1	22	35	47
Peak Torque	Nm	26	65	104	140
Rated Speed	Rpm	150	150	150	100
Maximum Speed	Rpm	200	200	200	150
Continuous Current	Arms	2.8	2.8	2.8	2.8
Peak Current	Arms	8.4	8.4	8.4	8.4
Torque Constant	Nm/Arms	3.2	7.8	12.5	16.8
Back EMF Constant*	Vrms/rad/s	2.1	4.8	7.4	10.1
Resistance Phase to Phase at 25°C	Ω	8.1	13.2	18.1	23.1
Inductance Phase to Phase at 25°C	mH	11	24.1	37.5	49.3
Number of poles		22	22	22	22
Rotor Inertia	$kg \cdot m^2$	0.0126	0.0187	0.0244	0.0309
Incremental encoder resolution	ppr	1800000	1800000	1800000	1800000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2	±2

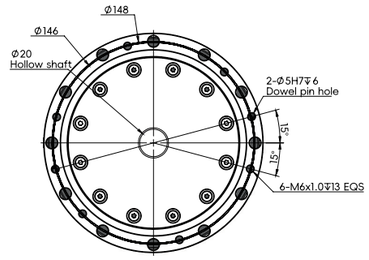
Mechanical	Unit				
Axial Load	N	16000	16000	16000	16000
Radial Load	Nm	130	130	130	130
Axial Run Out*2	um	20/5/3	20/5/3	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3	20/5/3	20/5/3
Mass	kg	6.9	9.7	12.4	15

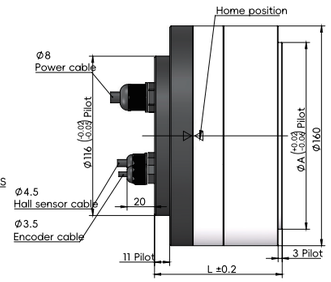
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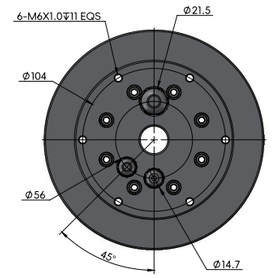
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

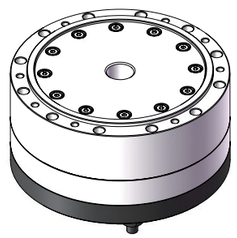
*2 *3 Please contact sales.

TDE-160093



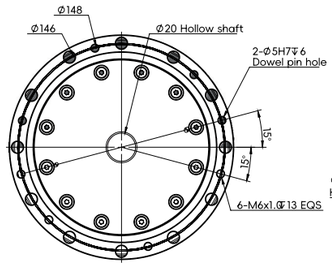


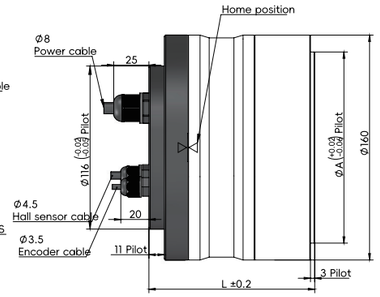


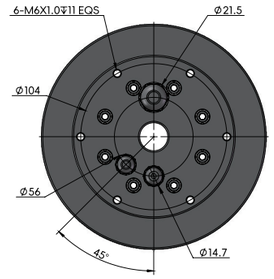


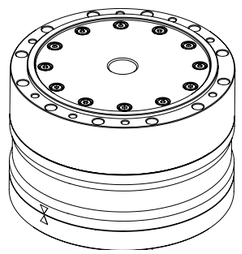
Model	Dimensional Variations	
	L	A
TDE-160093	93	136
TDE-160093-P	93	135.8

TDE-160118



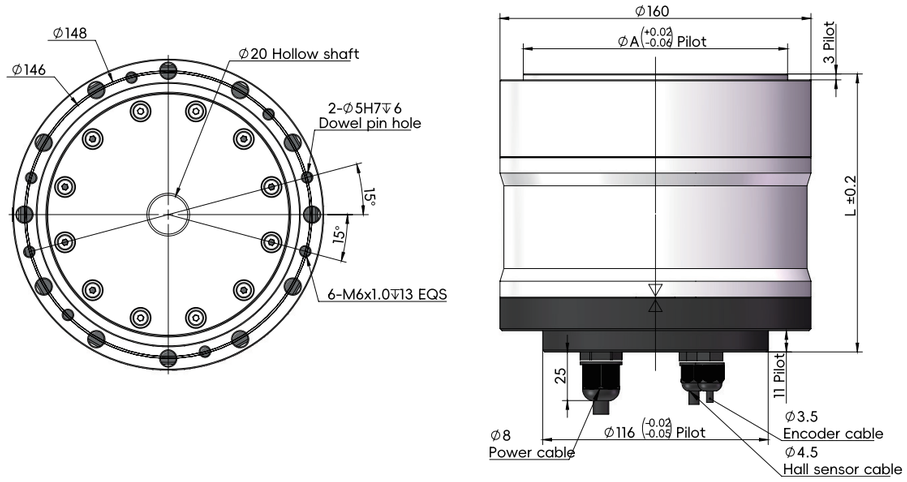


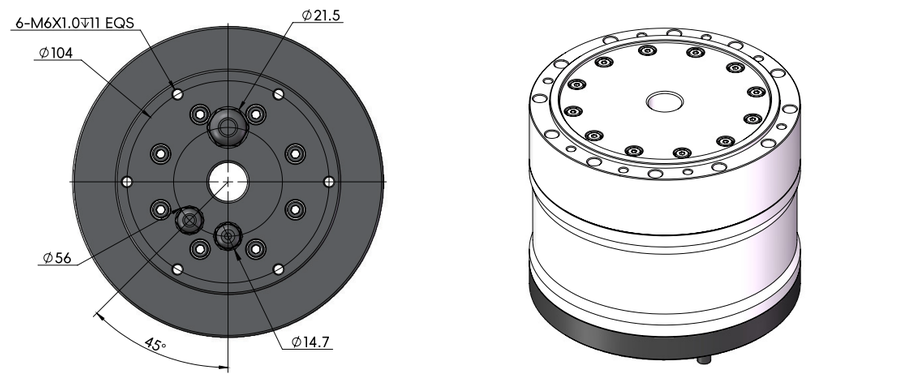




Model	Dimensional Variations	
	L	A
TDE-160118	118	136
TDE-160118-P	118	135.8

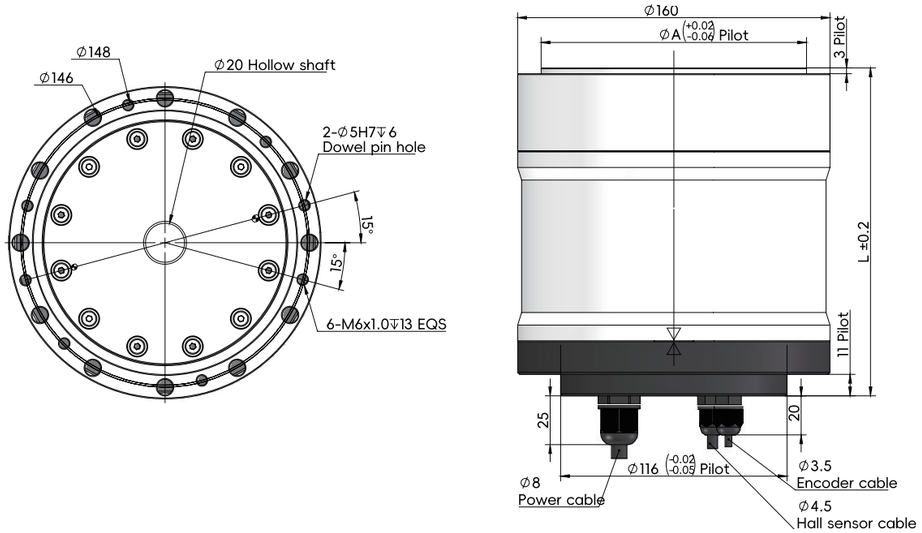
TDE-160143

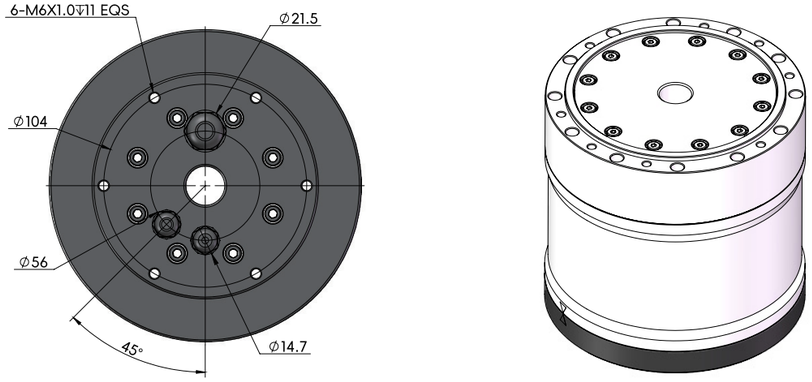




Model	Dimensional Variations	
	L	A
TDE-160143	143	136
TDE-160143-P	143	135.8

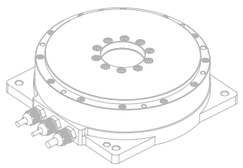
TDE-160168





Model	Dimensional Variations	
	L	A
TDE-160168	168	136
TDE-160168-P	168	135.8

TDE-170 External Rotor



- High Load Capacity
- High Rigidity
- High Precision
- Slim Design
- External Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDE-170050	TDE-170095	TDE-170110-P	TDE-170125	TDE-170130-P
Flange-type	-	√	√	-	√	-
Continuous Torque	Nm	5	28	8	39	19
Peak Torque	Nm	14	109	24	116	56
Rated Speed	Rpm	150	150	200	150	200
Maximum Speed	Rpm	200	200	260	200	260
Continuous Current	Arms	1.4	2.8	2.8	2.8	2.8
Peak Current	Arms	4.2	8.4	8.4	8.4	8.4
Torque Constant	Nm/Arms	3.4	10	2.8	13.9	6.8
Back EMF Constant*	Vrms/rad/s	1.75	6.14	1.9	9	4
Resistance Phase to Phase at 25°C	Ω	28	21.3	7.2	30.8	12.1
Inductance Phase to Phase at 25°C	mH	65	57.1	17.2	82.6	36.9
Number of poles		22	22	22	22	22
Rotor Inertia	$kg \cdot m^2$	0.0064	0.0167	0.03	0.0241	0.035
Incremental encoder resolution	ppr	3100000	3100000	4350000	3100000	4350000
Absolute encoder resolution	ppr	24bit(16777216)				
Absolute Position Accuracy	arcsec	±15	±15	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2	±2	±2

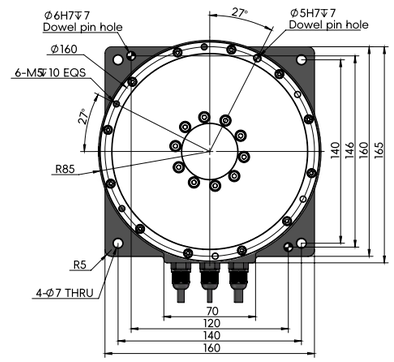
Mechanical	Unit					
Axial Load	N	9000	9000	16000	9000	16000
Radial Load	Nm	50	50	130	50	130
Axial Run Out*2	um	20/5/3	20/5/3	5	20/5/3	5(optional)
Radial Run Out*3	um	20/5/3	20/5/3	5	20/5/3	5(optional)
Mass	kg	4.1	8.7	11	12.1	13

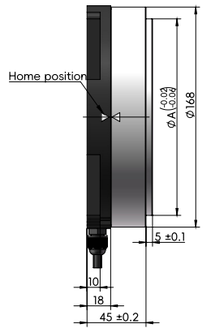
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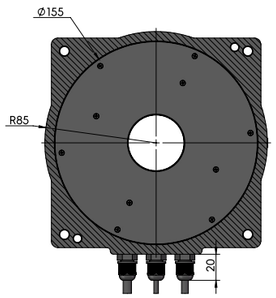
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

*2 *3 Please contact sales.

TDE-170050



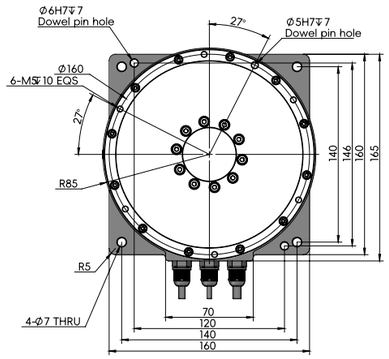


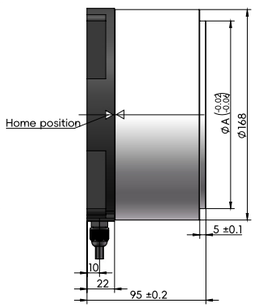


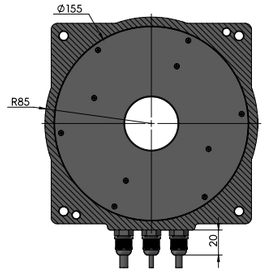


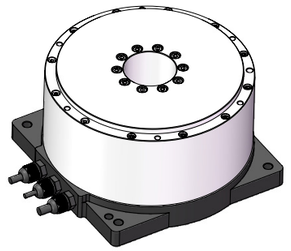
Model	Dimensional Variations
	A
TDE-170050	150
TDE-170050-P	149.8

TDE-170095



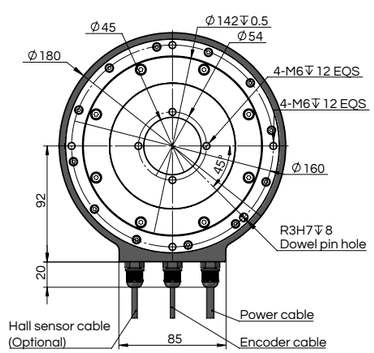


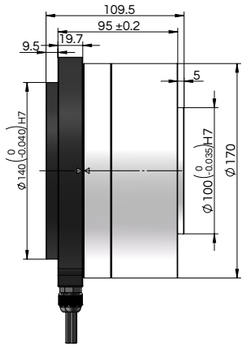


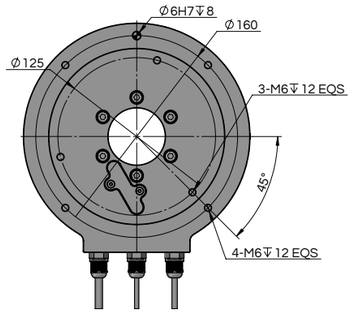


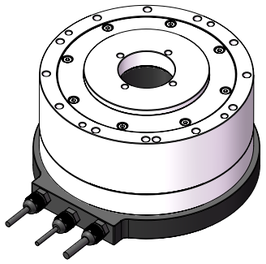
Model	Dimensional Variations
	A
TDE-170095	150
TDE-170095-P	149.8

TDE-170110-P

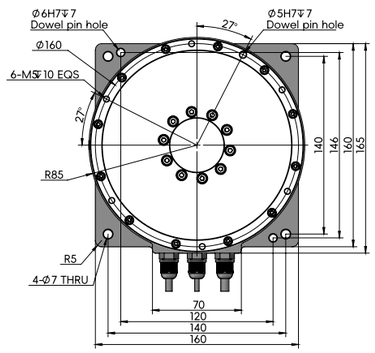


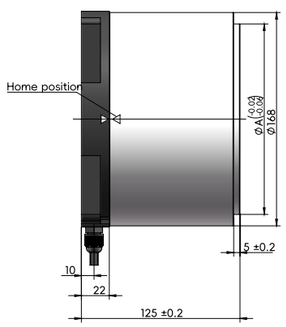


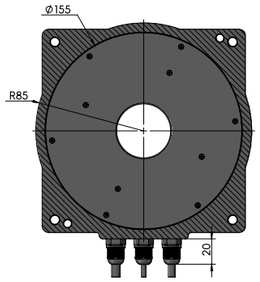


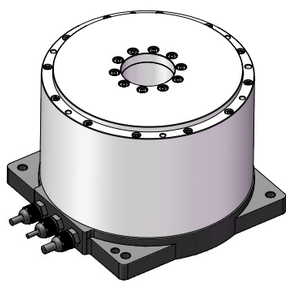


TDE-170125



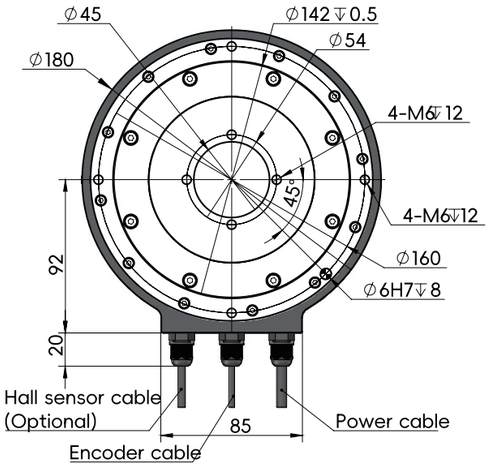


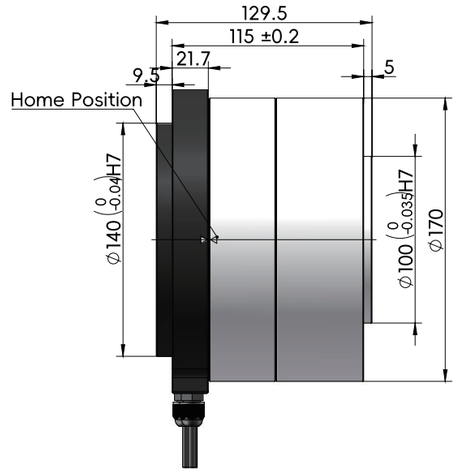


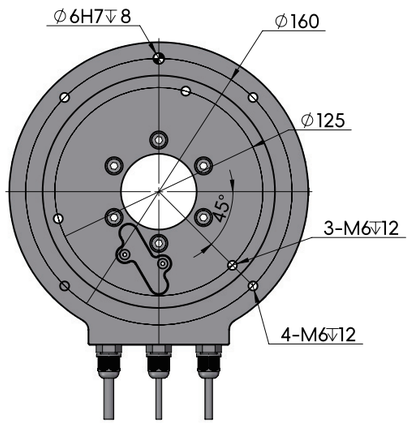


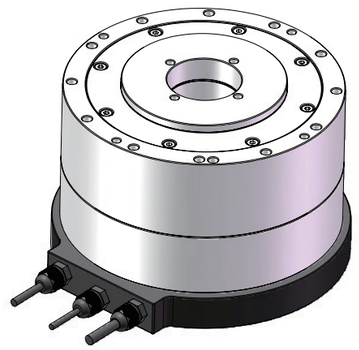
Model	Dimensional Variations
	A
TDE-170125	150
TDE-170125-P	149.8

TDE-170130-P

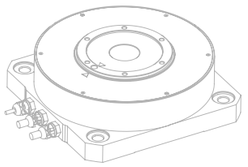








TDI-180 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-180055	TDI-180070	TDI-180095	TDI-180125
Flange-type	-	√	-	-	-
Continuous Torque	Nm	12.5	18.1	32.5	45.5
Peak Torque	Nm	36.8	53.9	96.8	135.9
Rated Speed	Rpm	200	200	200	200
Maximum Speed	Rpm	300	300	300	300
Continuous Current	Arms	6	6	6	6
Peak Current	Arms	18	18	18	18
Torque Constant	Nm/Arms	2.1	3	5.4	7.6
Back EMF Constant*	Vrms/rad/s	1.27	2	3.45	4.9
Resistance Phase to Phase at 25°C	Ω	1.6	2.1	3.2	4.3
Inductance Phase to Phase at 25°C	mH	5	7.4	12.7	18.4
Number of poles		30	30	30	30
Rotor Inertia	$kg \cdot m^2$	0.0029	0.0039	0.0057	0.0079
Incremental encoder resolution	ppr	3100000	3100000	3100000	3100000
Absolute encoder resolution	ppr	24bit(16777216)			
Absolute Position Accuracy	arcsec	±15	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2	±2

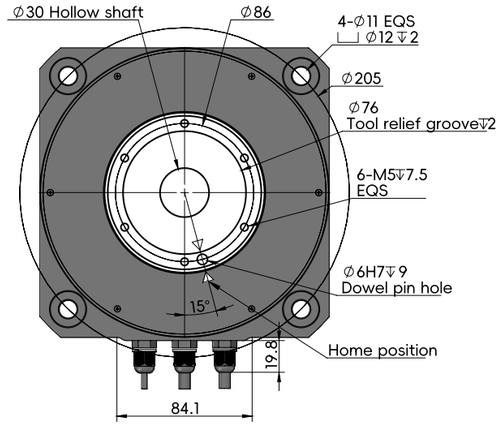
Mechanical	Unit				
Axial Load	N	6000	6000	6000	600
Radial Load	Nm	35	35	35	5
Axial Run Out*2	um	20/5/3	20/5/3	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3	20/5/3	20/5/3
Mass	kg	5.7	8.4	11.2	14.6

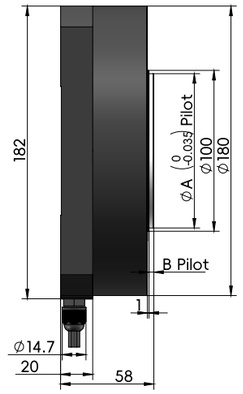
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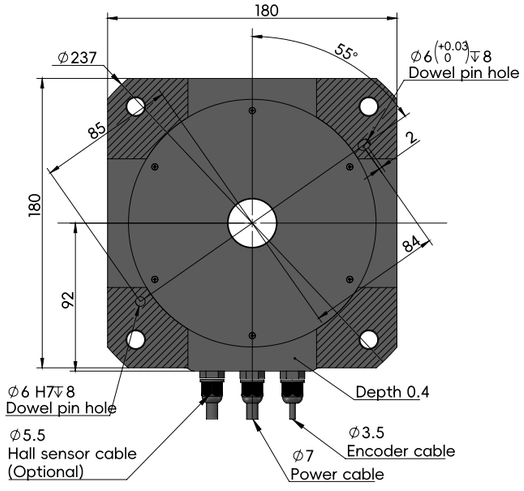
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

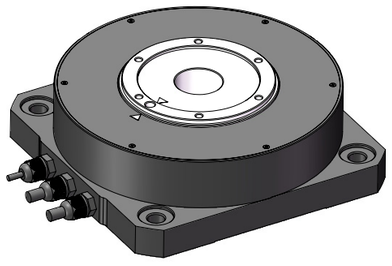
*2 *3 Please contact sales.

TDI-180055



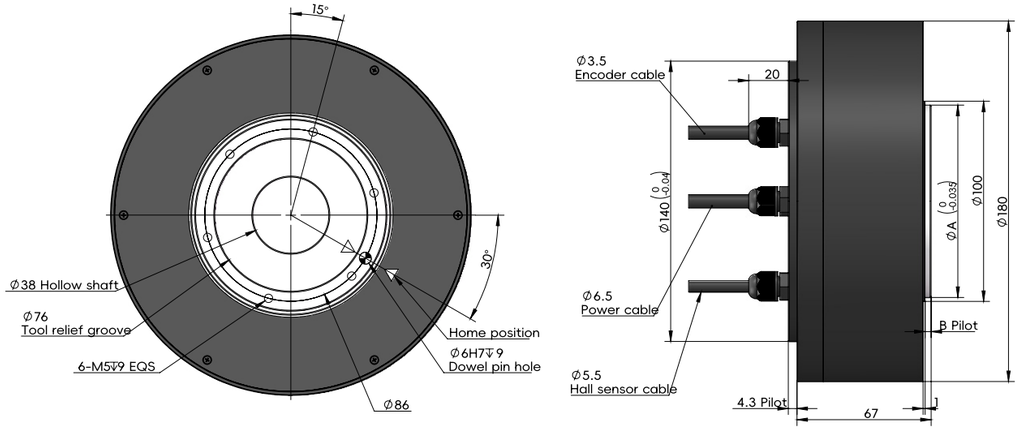


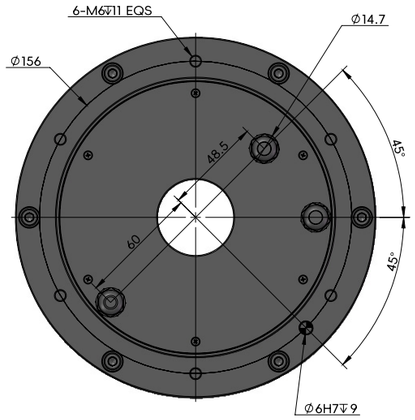


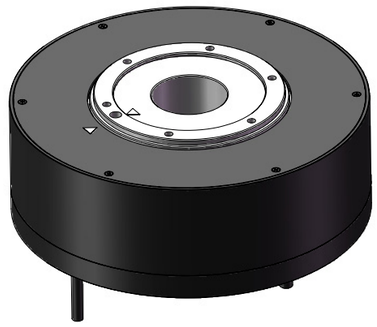


Model	Dimensional Variations	
	A	B
TDI-180055	96	3
TDI-180055-P	95.8	2.5

TDI-180070

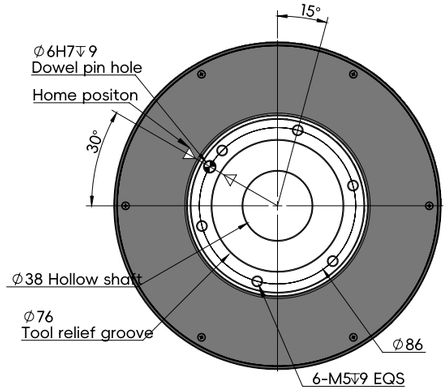


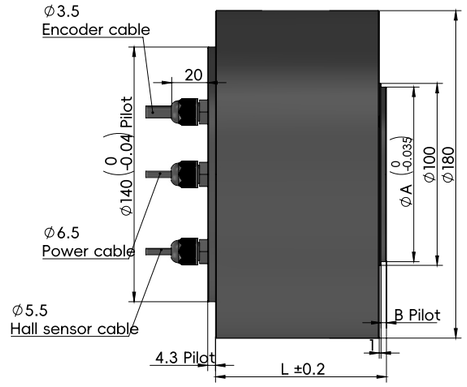


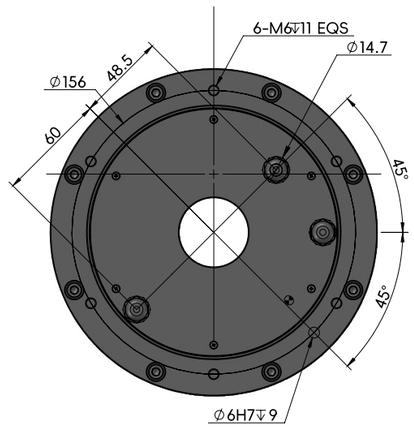


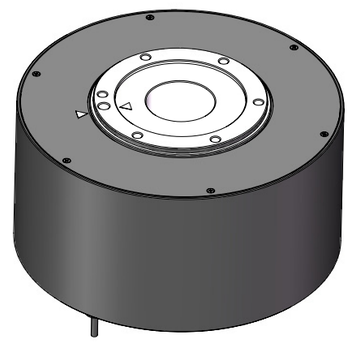
Model	Dimensional Variations	
	A	B
TDI-180070	96	3
TDI-180070-P	95.8	2.5

TDI-180095/180125



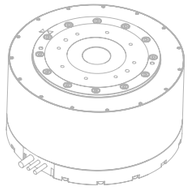






Model	Dimensional Variations		
	L	A	B
TDI-180095	94	96	3
TDI-180095-P	94	95.8	2.5
TDI-180125	124	96	3
TDI-180125-P	124	95.8	2.5

TDI-220 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Slim Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-220065-P	TDI-220123-P	TDI-220168-P
Flange-type	-	√	-	-
Continuous Torque	Nm	19	66	108
Peak Torque	Nm	55	165	272
Rated Speed	Rpm	100	200	200
Maximum Speed	Rpm	200	300	300
Continuous Current	Arms	3	10	10
Peak Current	Arms	9	25	25
Torque Constant	Nm/Arms	6.3	6.6	10.8
Back EMF Constant*	Vrms/rad/s	4.2	4.3	7.1
Resistance Phase to Phase at 25°C	Ω	7.5	1.4	2.1
Inductance Phase to Phase at 25°C	mH	23.5	5.6	9.2
Number of poles		40	40	40
Rotor Inertia	$kg \cdot m^2$	0.031	0.028	0.041
Incremental encoder resolution	ppr	4350000	3100000	3100000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2

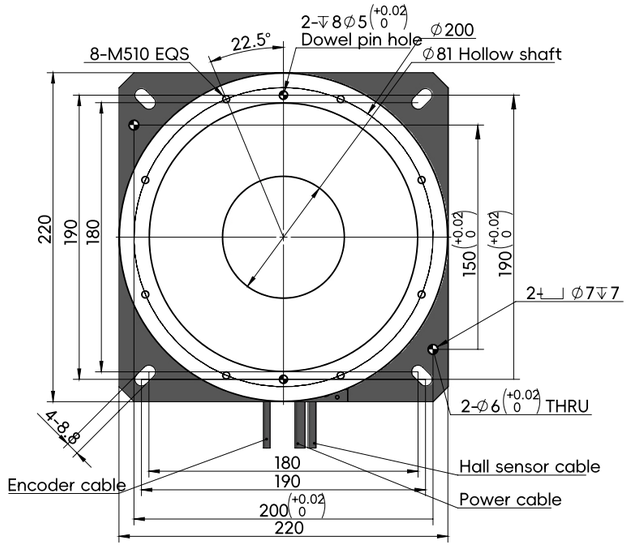
Mechanical	Unit			
Axial Load	N	16000	16000	16000
Radial Load	Nm	130	130	130
Axial Run Out*2	um	5	20/5/3	20/5/3(optional)
Radial Run Out*3	um	5	20/5/3	20/5/3(optional)
Mass	kg	10.5	20	27

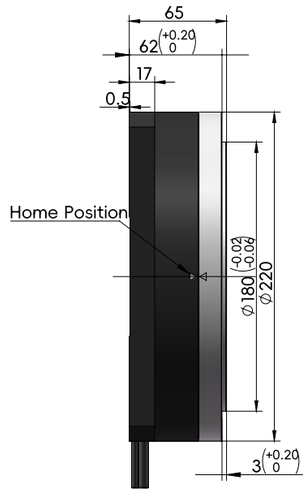
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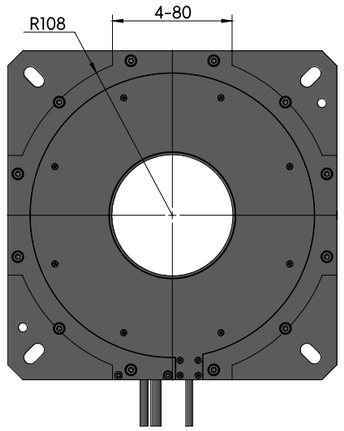
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

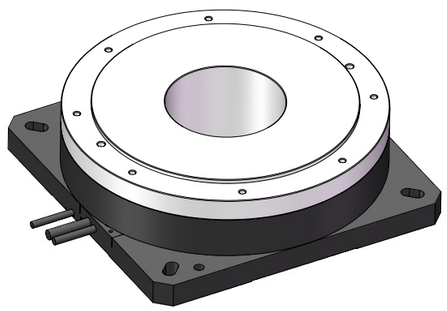
*2 *3 Please contact sales.

TDI-220065-P

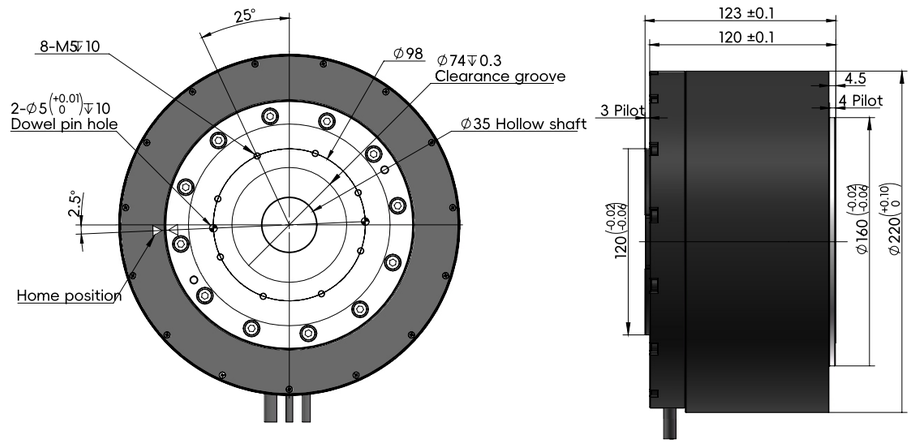


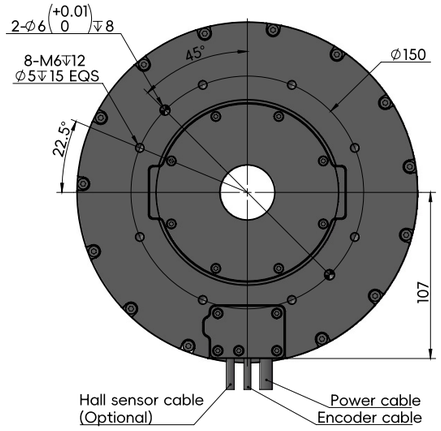


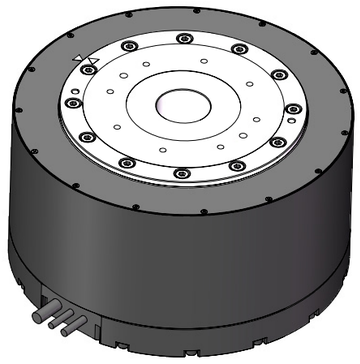




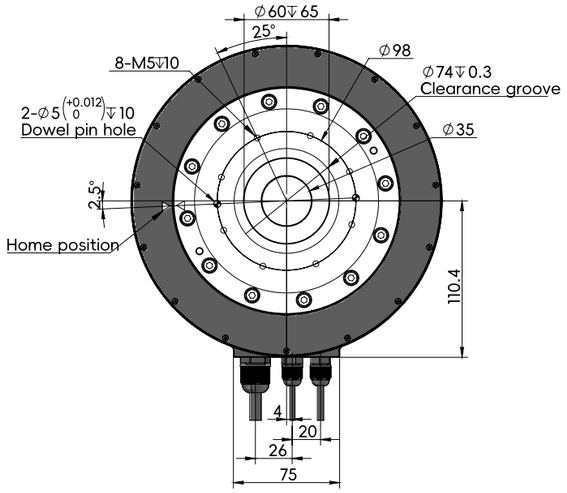
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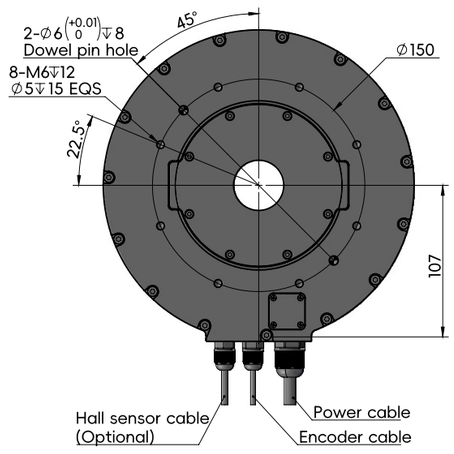


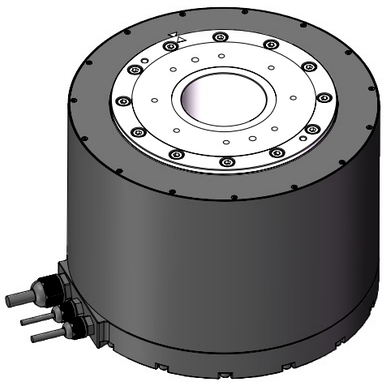




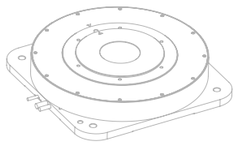
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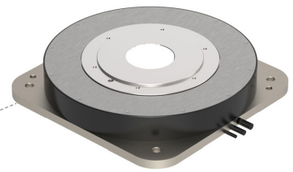




TDI-224 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Slim Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-224042	TDI-224062
Flange-type	-	√	√
Continuous Torque	Nm	19	41
Peak Torque	Nm	55	119
Rated Speed	Rpm	100	100
Maximum Speed	Rpm	200	200
Continuous Current	Arms	3	3
Peak Current	Arms	9	9
Torque Constant	Nm/Arms	6.3	6.3
Back EMF Constant*	Vrms/rad/s	1.8	3.8
Resistance Phase to Phase at 25°C	Ω	7.5	13.8
Inductance Phase to Phase at 25°C	mH	23.5	41.2
Number of poles		40	40
Rotor Inertia	$kg \cdot m^2$	0.012	0.019
Incremental encoder resolution	ppr	3100000	3100000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15
Repeat Position Accuracy	arcsec	±2	±2

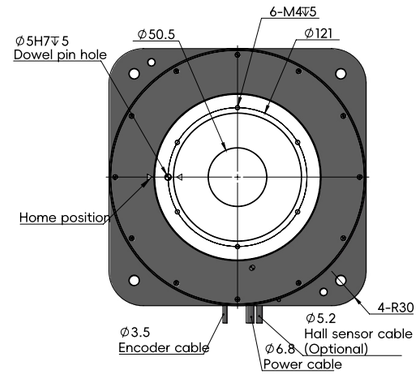
Mechanical	Unit		
Axial Load	N	16000	16000
Radial Load	Nm	130	130
Axial Run Out*2	um	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3
Mass	kg	9	14

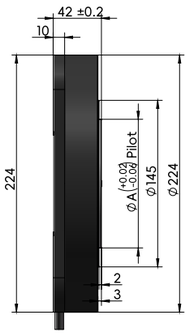
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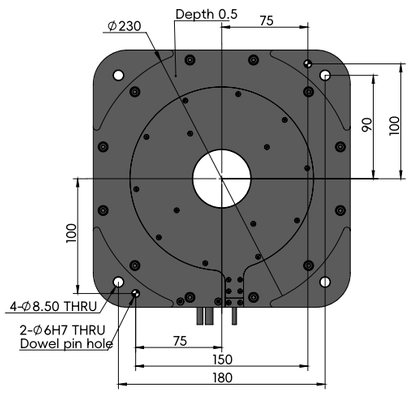
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

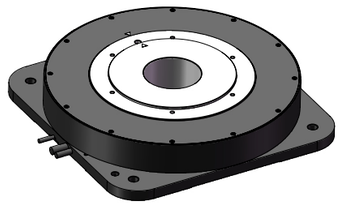
*2 *3 Please contact sales.

TDI-224042



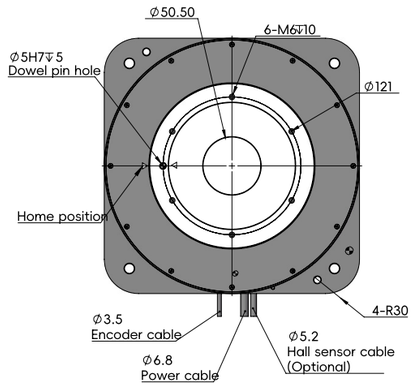


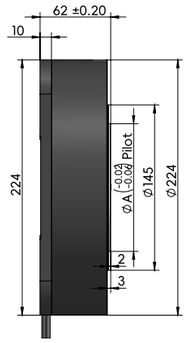


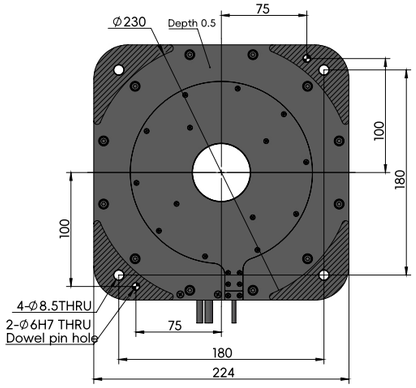


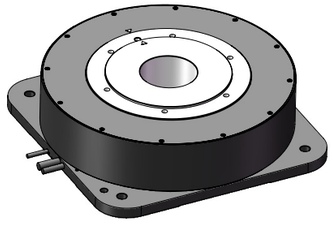
Model	Dimensional Variations
	A
TDI-224042	112
TDI-224042-P	111.8

TDI-224062



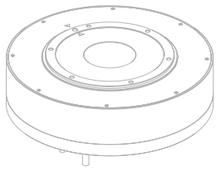




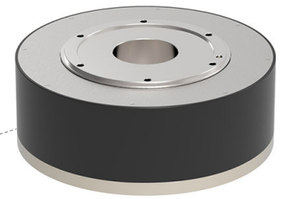


Model	Dimensional Variations
	A
TDI-224062	112
TDI-224062-P	111.8

TDI-250 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-250055	TDI-250070	TDI-250095	TDI-250138	TDI-250180
Flange-type	-	√	-	-	-	-
Continuous Torque	Nm	29.5	46	79	112	186
Peak Torque	Nm	88	137	236	331	550
Rated Speed	Rpm	150	150	100	150	200
Maximum Speed	Rpm	250	250	200	150	300
Continuous Current	Arms	7.6	7.6	7.6	10	10
Peak Current	Arms	22.8	22.8	22.8	30	30
Torque Constant	Nm/Arms	3.9	6.1	10.4	11.2	18.6
Back EMF Constant*	Vrms/rad/s	2.85	4.4	7.64	6.82	9.75
Resistance Phase to Phase at 25°C	Ω	1.6	2.1	3.2	2.8	3.4
Inductance Phase to Phase at 25°C	mH	4.8	7.4	12.8	9.1	15.8
Number of poles		40	40	40	40	40
Rotor Inertia	$kg \cdot m^2$	0.021	0.031	0.041	0.0754	0.086
Incremental encoder resolution	ppr	4350000	4350000	4350000	4350000	2227200
Absolute encoder resolution	ppr	24bit(16777216)				
Absolute Position Accuracy	arcsec	±15	±15	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2	±2	±2

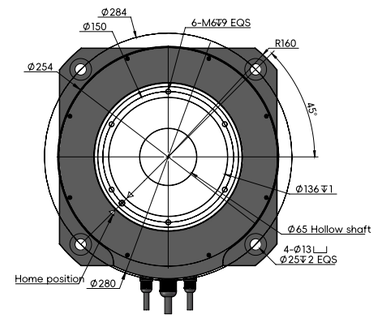
Mechanical	Unit					
Axial Load	N	16000	16000	16000	16000	16000
Radial Load	Nm	130	130	130	130	130
Axial Run Out*2	um	20/5/3	20/5/3	20/5/3	20/5/3	5/3(optional)
Radial Run Out*3	um	20/5/3	20/5/3	20/5/3	20/5/3	5/3(optional)
Mass	kg	11	21	26	42	46

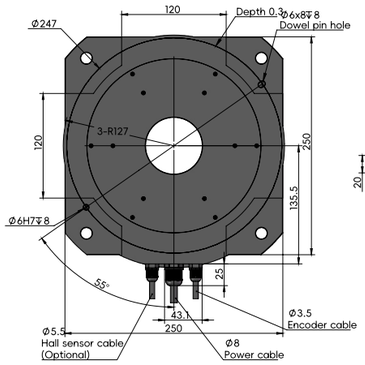
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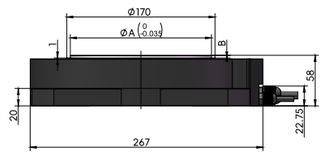
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

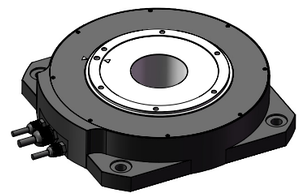
*2 *3 Please contact sales.

TDI-250055



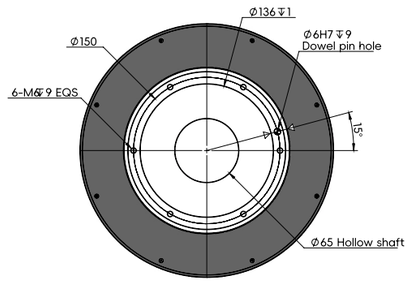


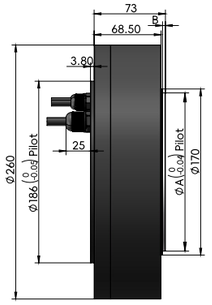


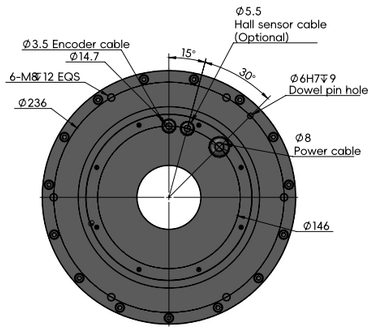


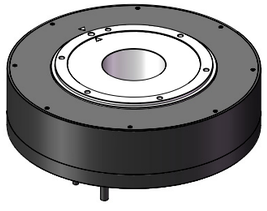
Model	Dimensional Variations	
	A	B
TDI-250055	162	3
TDI-250055-P	161.8	2.5

TDI-250070



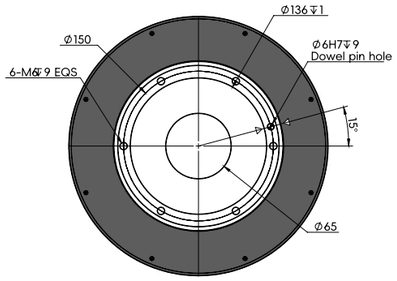


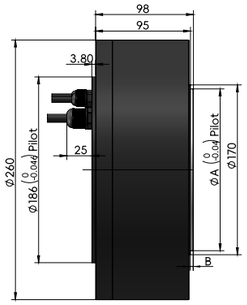


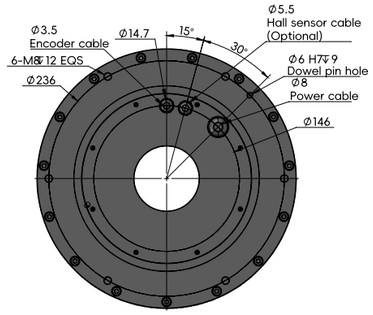


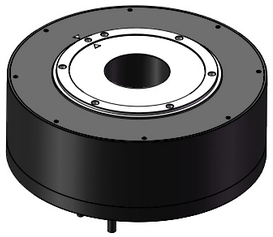
Model	Dimensional Variations	
	A	B
TDI-250070	162	3
TDI-250070-P	161.8	2.5

TDI-250095



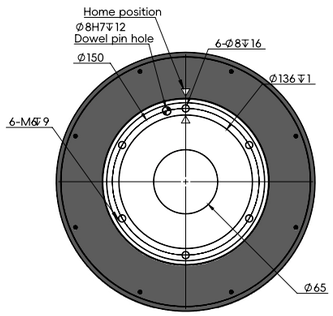


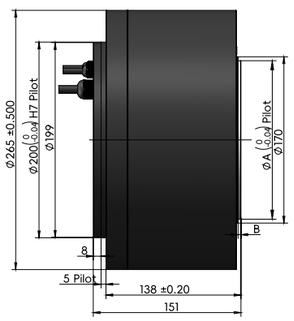


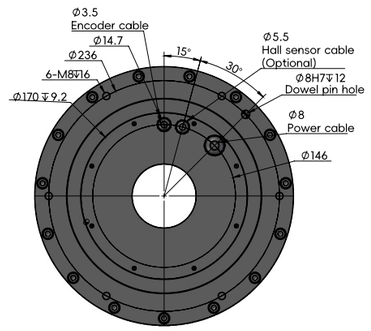


Model	Dimensional Variations	
	A	B
TDI-250090	162	3
TDI-250090-P	161.8	2.5

TDI-250138



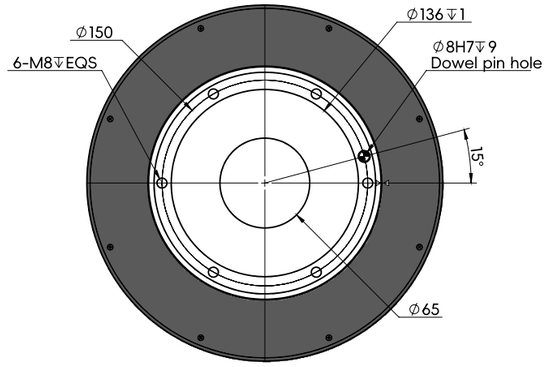


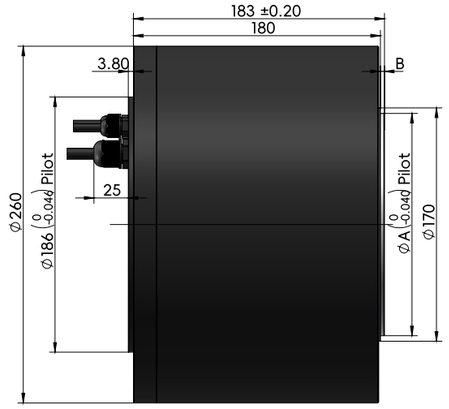


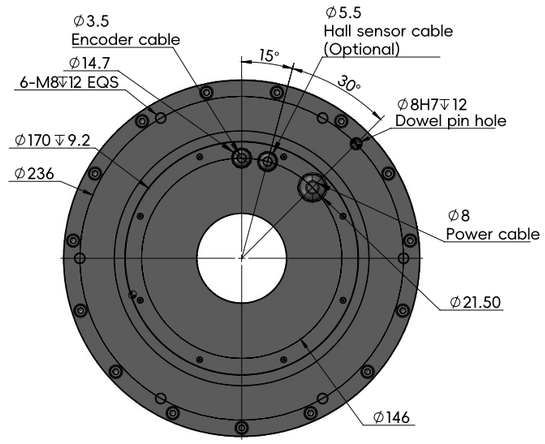


Model	Dimensional Variations	
	A	B
TDI-250138	162	3
TDI-250138-P	161.8	2.5

TDI-250180

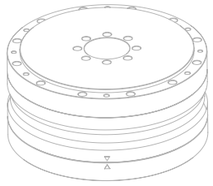






Model	Dimensional Variations	
	A	B
TDI-250180	162	3
TDI-250180-P	161.8	2.5

TDE-263 External Rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- External Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDE-263138	TDE-263163	TDE-263188
Flange-type	-	-	-	-
Continuous Torque	Nm	108	150	200
Peak Torque	Nm	310	440	560
Rated Speed	Rpm	80	100	80
Maximum Speed	Rpm	100	100	100
Continuous Current	Arms	5.4	8	8
Peak Current	Arms	16.2	24	24
Torque Constant	Nm/Arms	20	18.8	25
Back EMF Constant*	Vrms/rad/s	12	11.1	14.1
Resistance Phase to Phase at 25°C	Ω	8.4	5.3	6.3
Inductance Phase to Phase at 25°C	mH	22.4	19.5	24.8
Number of poles		44	44	44
Rotor Inertia	$kg \cdot m^2$	0.1428	0.1764	0.2093
Incremental encoder resolution	ppr	4350000	4350000	4350000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2

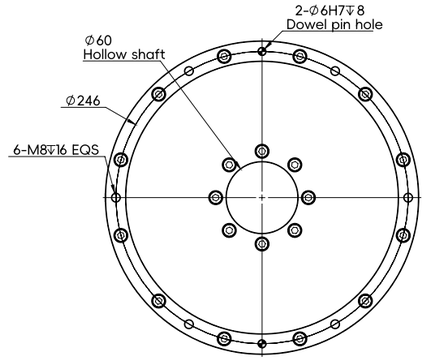
Mechanical	Unit			
Axial Load	N	25000	25000	25000
Radial Load	Nm	200	200	200
Axial Run Out*2	um	20/5/3	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3	20/5/3
Mass	kg	27.5	33.5	40

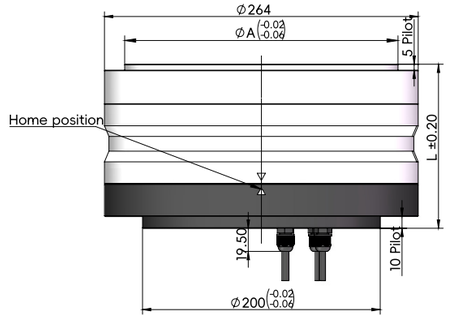
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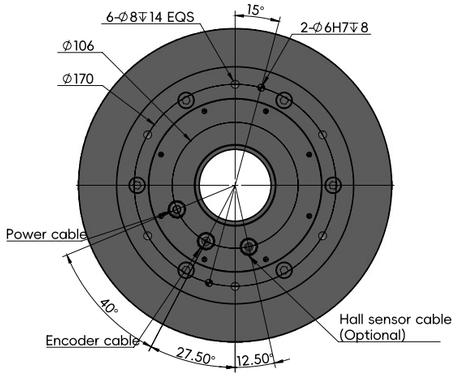
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

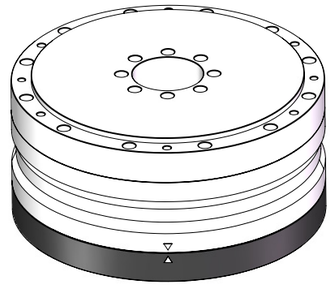
*2 *3 Please contact sales.

TDE-263138



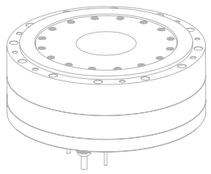




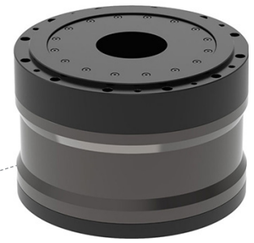


Model	Dimensional Variations	
	L	A
TDE-263138	138	230
TDE-263138-P	138	229.8
TDE-263163	163	230
TDE-263163-P	163	229.8
TDE-263188	188	230
TDE-263188-P	188	229.8

TDE-264 External Rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- External Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDE-264113	TDE-264138	TDE-264163	TDE-264188	TDE-264203
Flange-type	-	-	-	-	-	-
Continuous Torque	Nm	49.8	91	135	176	200
Peak Torque	Nm	149	271	403	526	597
Rated Speed	Rpm	60	60	60	60	60
Maximum Speed	Rpm	100	100	100	100	100
Continuous Current	Arms	5.4	5.4	5.4	5.4	8
Peak Current	Arms	16.2	16.2	16.2	16.2	24
Torque Constant	Nm/Arms	9.2	16.9	25	32.6	25
Back EMF Constant*	Vrms/rad/s	5.57	10.2	14.9	19.6	15.8
Resistance Phase to Phase at 25°C	Ω	4.7	7.5	10.1	13	6.5
Inductance Phase to Phase at 25°C	mH	10.8	18.9	27.6	36.2	26.3
Number of poles		44	44	44	44	44
Rotor Inertia	$kg \cdot m^2$	0.123	0.1515	0.1806	0.2097	0.231
Incremental encoder resolution	ppr	4350000	4350000	4350000	4350000	4350000
Absolute encoder resolution	ppr	24bit(16777216)				
Absolute Position Accuracy	arcsec	±15	±15	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2	±2	±2

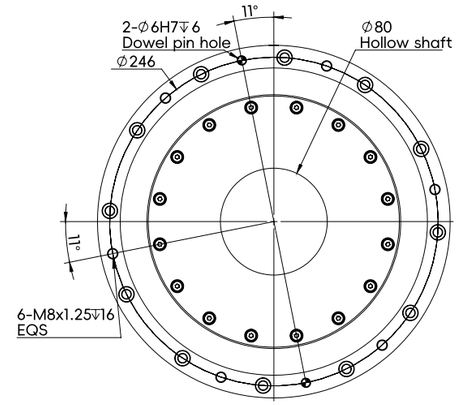
Mechanical	Unit					
Axial Load	N	42000	42000	42000	42000	42000
Radial Load	Nm	500	500	500	500	500
Axial Run Out*2	um	20/5/3	20/5/3	20/5/3	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3	20/5/3	20/5/3	20/5/3
Mass	kg	23.8	27.3	32.7	38.4	41.6

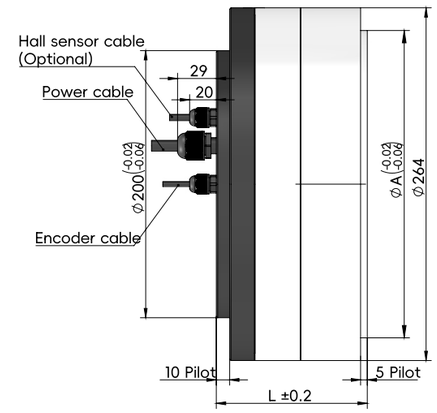
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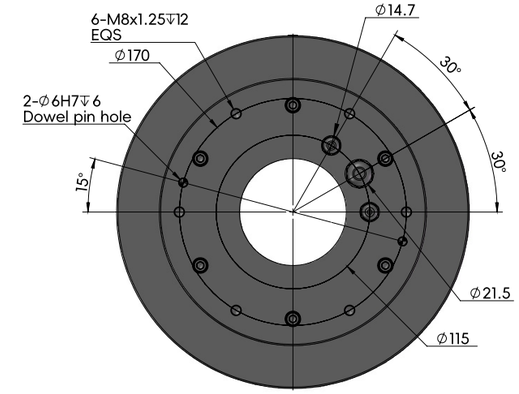
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

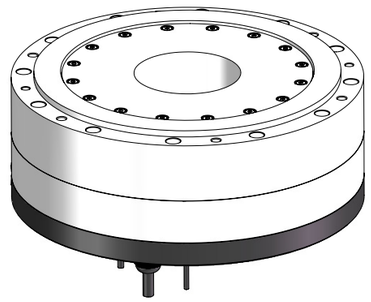
*2 *3 Please contact sales.

TDE-264113/264138/264163/264188/264203





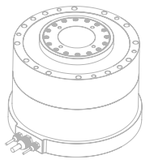




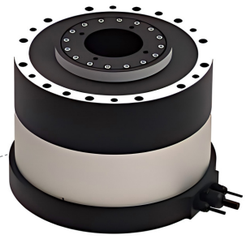
Model	Dimensional Variations	
	L	A
TDE-264113	113	230
TDE-264113-P	113	229.8
TDE-264138	138	230
TDE-264138-P	138	229.8

Model	Dimensional Variations	
	L	A
TDE-264163	163	230
TDE-264163-P	163	229.8
TDE-264188	188	230
TDE-264188-P	188	229.8
TDE-264203	203	230
TDE-264203-P	203	229.8

TDI-280 Internal rotor



- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-280120-P	TDI-280170-P	TDI-280231-P
Flange-type	-	-	-	-
Continuous Torque	Nm	49.8	91	130
Peak Torque	Nm	149	271	368
Rated Speed	Rpm	60	60	60
Maximum Speed	Rpm	100	100	100
Continuous Current	Arms	5.4	5.4	5.4
Peak Current	Arms	16.2	16.2	16.2
Torque Constant	Nm/Arms	9.2	16.9	24.1
Back EMF Constant*	Vrms/rad/s	5.57	10.2	14.9
Resistance Phase to Phase at 25°C	Ω	4.7	7.5	10.1
Inductance Phase to Phase at 25°C	mH	10.8	18.9	27.6
Number of poles		44	44	44
Rotor Inertia	$kg \cdot m^2$	0.143	0.194	0.29
Incremental encoder resolution	ppr	4350000	4350000	4350000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)	-
Absolute Position Accuracy	arcsec	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2

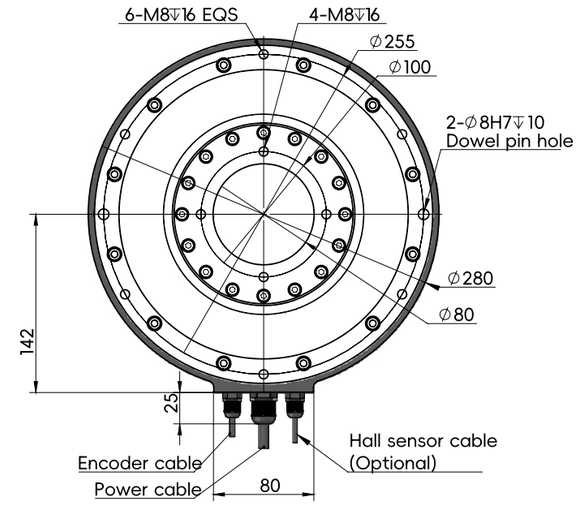
Mechanical	Unit			
Axial Load	N	42000	42000	42000
Radial Load	Nm	500	500	500
Axial Run Out*2	um	5	20/5/3	5(optional)
Radial Run Out*3	um	5	20/5/3	5(optional)
Mass	kg	27	33.5	47

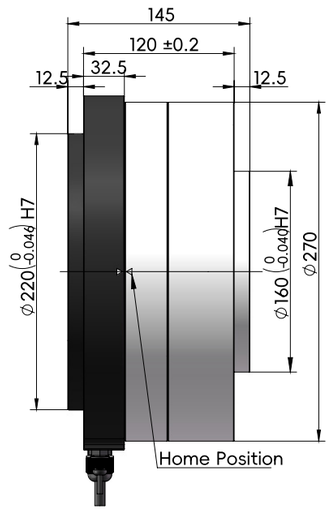
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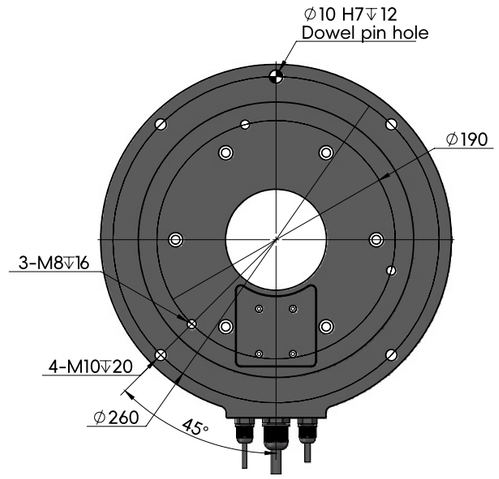
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

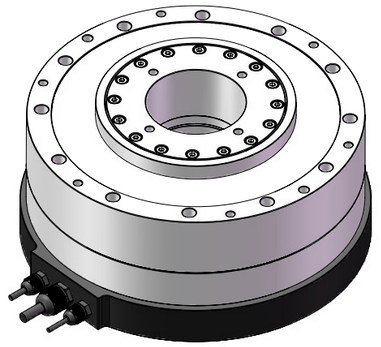
*2 *3 Please contact sales.

TDI-280120-P

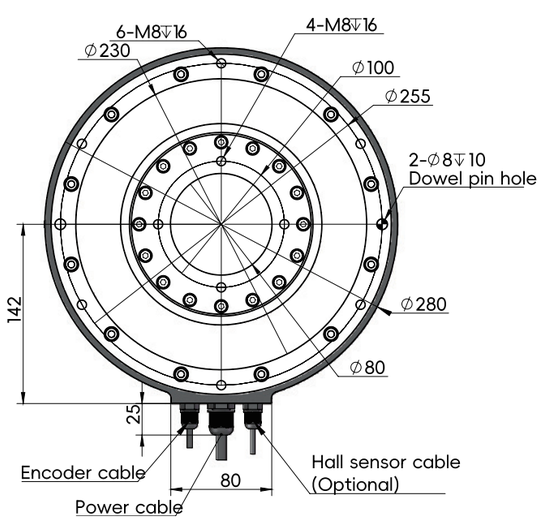


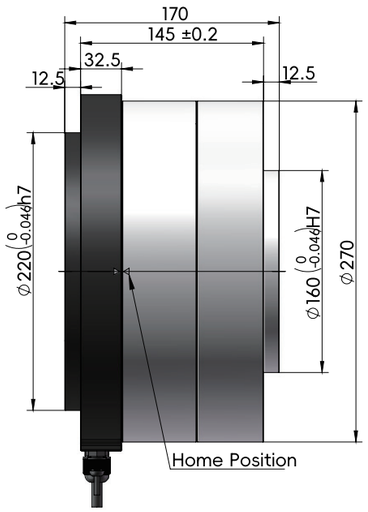


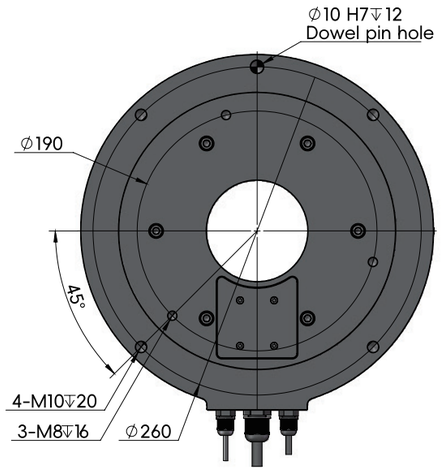


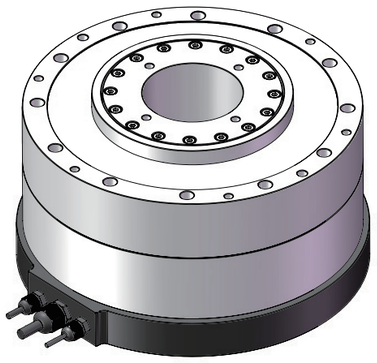


TDI-280170-P

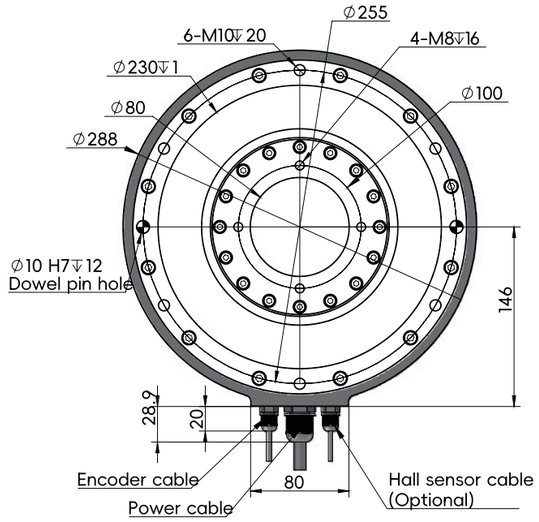


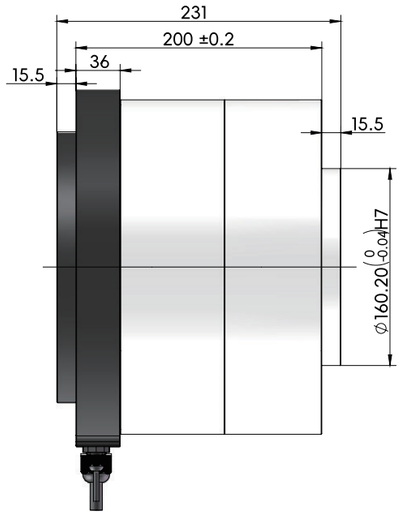


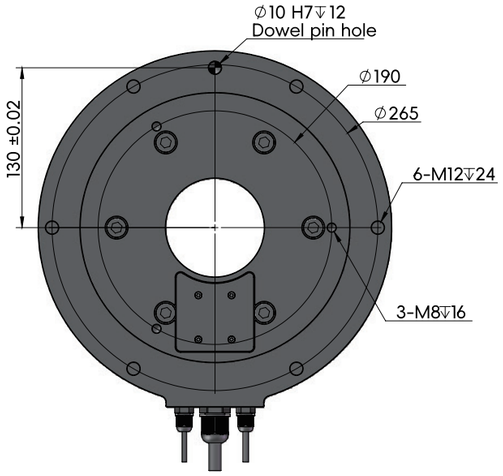


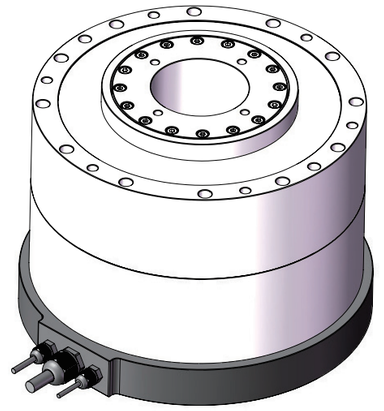


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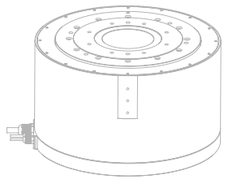




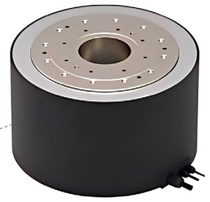




TDI-360 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- Compact Design
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-360150	TDI-360215
Flange-type	-	-	-
Continuous Torque	Nm	264	450
Peak Torque	Nm	721	1320
Rated Speed	Rpm	150	100
Maximum Speed	Rpm	200	150
Continuous Current	Arms	15	15
Peak Current	Arms	45	45
Torque Constant	Nm/Arms	17.6	30
Back EMF Constant*	Vrms/rad/s	11.4	19.5
Resistance Phase to Phase at 25°C	Ω	1.65	2.6
Inductance Phase to Phase at 25°C	mH	8.9	16.2
Number of poles		40	40
Rotor Inertia	$kg \cdot m^2$	0.24	0.37
Incremental encoder resolution	ppr	4350000	4350000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15
Repeat Position Accuracy	arcsec	±2	±2

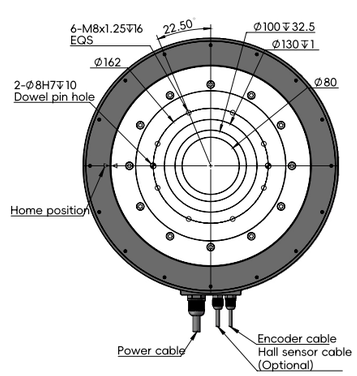
Mechanical	Unit		
Axial Load	N	30000	30000
Radial Load	Nm	360	360
Axial Run Out*2	um	5(optional)	5(optional)
Radial Run Out*3	um	5(optional)	5(optional)
Mass	kg	63	94

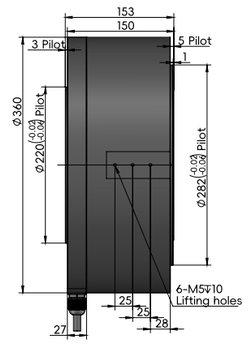
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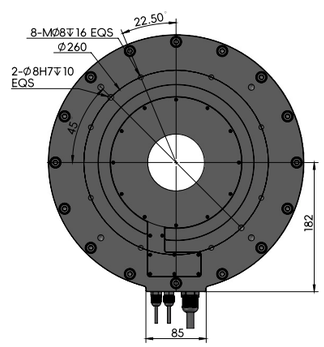
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

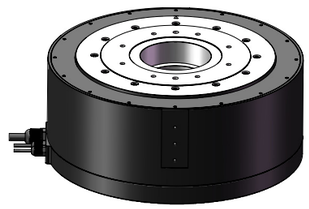
*2 *3 Please contact sales.

TDI-360150

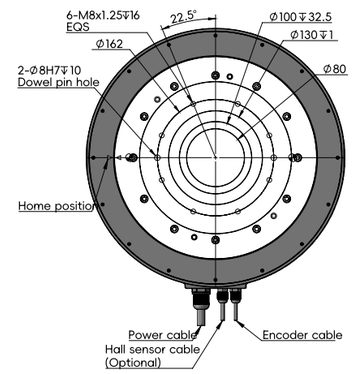


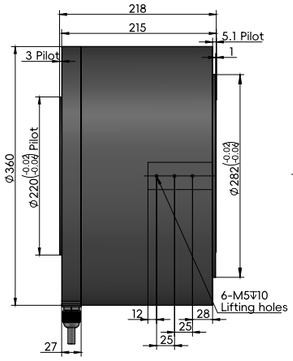


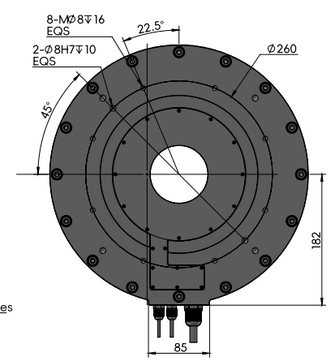


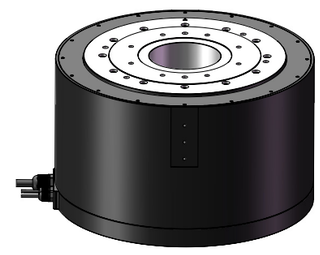


TDI-360215

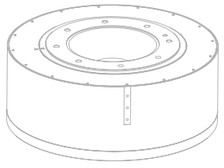




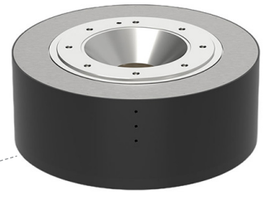




TDI-400 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- High Torque Large Hollow Shaft
- Internal Rotor



• SPECIFICATION

Rated Specification	Unit	TDI-400065 220V	TDI-400070 220V
Flange-type	-	√	-
Continuous Torque	Nm	131	114
Peak Torque	Nm	391	341
Rated Speed	Rpm	100	100
Maximum Speed	Rpm	150	150
Continuous Current	Arms	20	20
Peak Current	Arms	60	60
Torque Constant	Nm/Arms	6.55	5.7
Back EMF Constant*	Vrms/rad/s	3.9	3.4
Resistance Phase to Phase at 25°C	Ω	0.6	0.55
Inductance Phase to Phase at 25°C	mH	1.2	1.05
Number of poles		80	80
Rotor Inertia	$kg \cdot m^2$	0.23	0.22
Incremental encoder resolution	ppr	4350000	4350000
Absolute encoder resolution	ppr	24bit	24bit
Absolute Position Accuracy	arcsec	±15	±15
Repeat Position Accuracy	arcsec	±2	±2

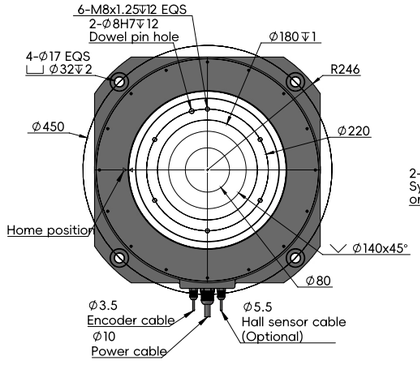
Mechanical	Unit		
Axial Load	N	42000	42000
Radial Load	Nm	500	500
Axial Run Out*2	um	20/5	20/5
Radial Run Out*3	um	20/5	20/5
Mass	kg	40	37.3

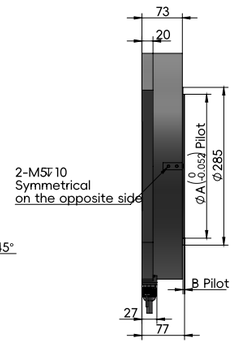
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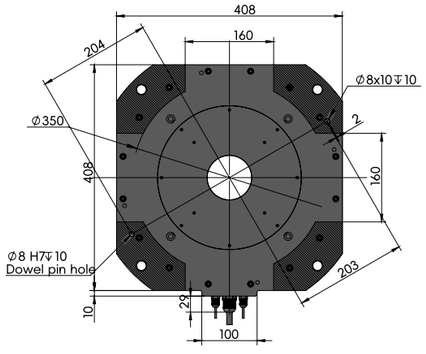
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

*2 *3 Please contact sales.

TDI-400065



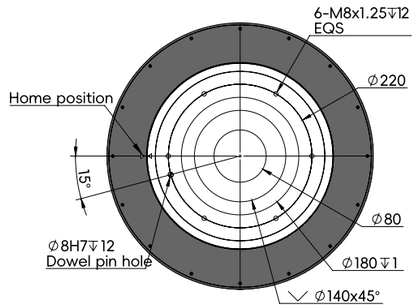


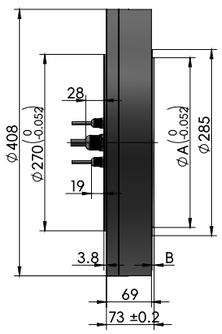


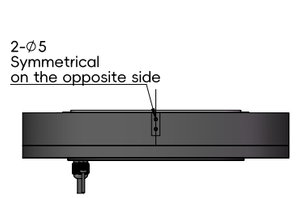


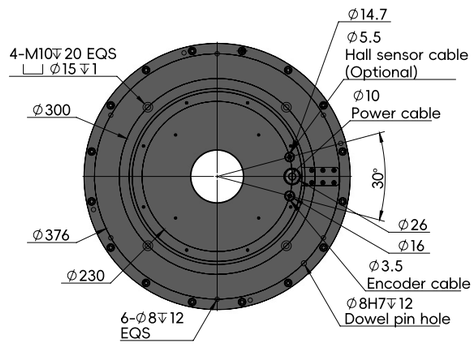
Model	Dimensional Variations	
	A	B
TDI-400065	260	3
TDI-400065-P	259.8	2.5

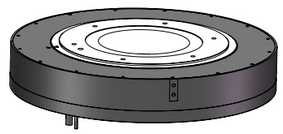
TDI-400070





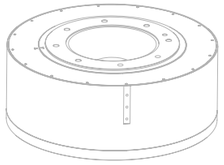




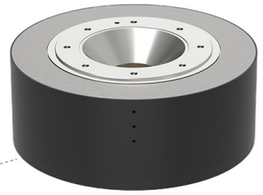


Model	Dimensional Variations	
	A	B
TDI-400070	260	3
TDI-400070-P	259.8	2.5

TDI-400 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- High Torque Large Hollow Shaft
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-400095 220V	TDI-400160 380V	TDI-400200 380V	TDI-400250 380V
Flange-type	-	-	-	-	-
Continuous Torque	Nm	200	436	570	702
Peak Torque	Nm	598	1306	1680	2067
Rated Speed	Rpm	100	100	100	60
Maximum Speed	Rpm	150	150	150	100
Continuous Current	Arms	20	20	20	20
Peak Current	Arms	60	60	60	60
Torque Constant	Nm/Arms	10	21.8	28.5	35.1
Back EMF Constant*	Vrms/rad/s	4.9	13	17	22.8
Resistance Phase to Phase at 25°C	Ω	0.8	1.45	1.7	2.4
Inductance Phase to Phase at 25°C	mH	1.8	3.8	5	7.3
Number of poles		80	80	80	80
Rotor Inertia	$kg \cdot m^2$	0.28	0.52	0.68	0.826
Incremental encoder resolution	ppr	4350000	4350000	4350000	4350000
Absolute encoder resolution	ppr	24bit	24bit	24bit	24bit
Absolute Position Accuracy	arcsec	±15	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2	±2

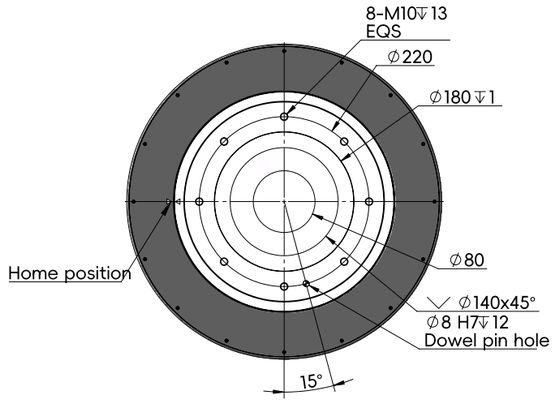
Mechanical	Unit				
Axial Load	N	42000	42000	42000	42000
Radial Load	Nm	500	500	500	500
Axial Run Out*2	um	20/5	20/5	20/5	20/5
Radial Run Out*3	um	20/5	20/5	20/5	20/5
Mass	kg	47.5	75.9	98	119

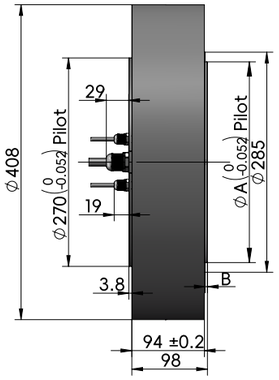
Notes:

*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

*2 *3 Please contact sales.

TDI-400095

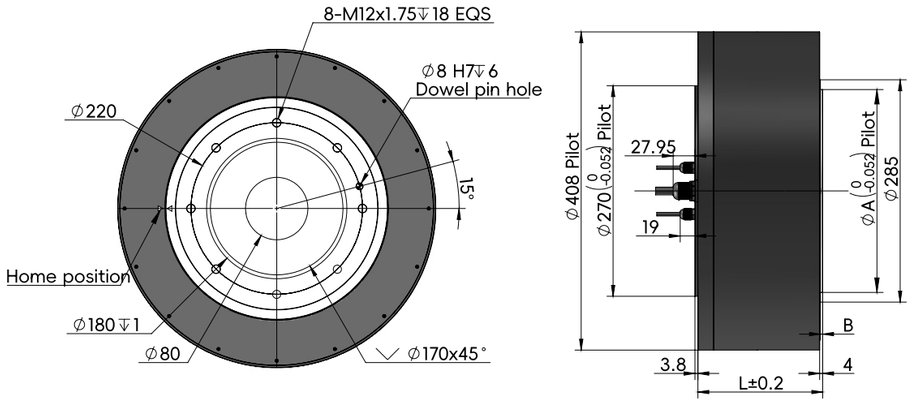


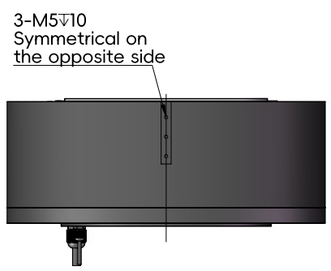


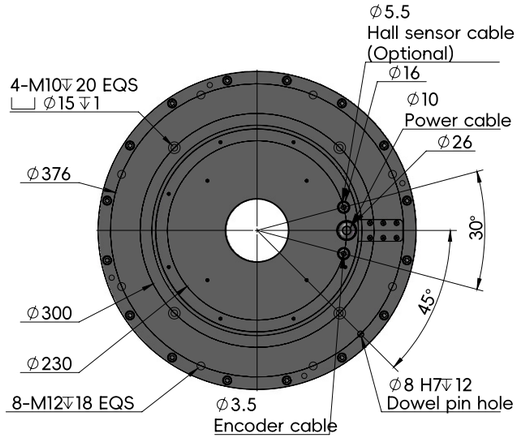


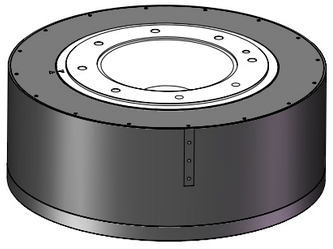
Model	Dimensional Variations	
	A	B
TDI-400095	260	3
TDI-400095-P	259.8	2.5

TDI-400160



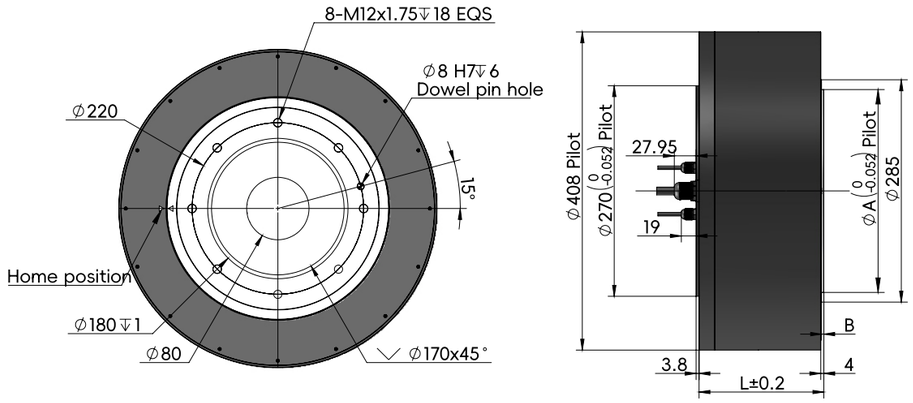


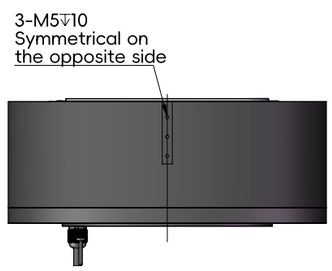


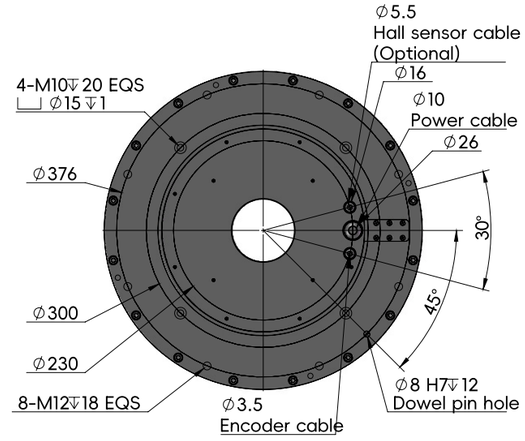


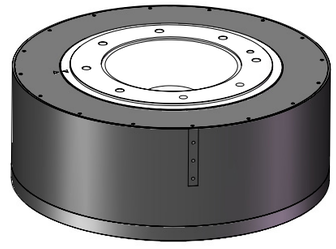
Model	Dimensional Variations		
	L	A	B
TDI-400160	160	260	3
TDI-400160-P	160	259.8	2.5

TDI-400200/400250



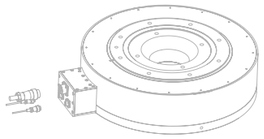




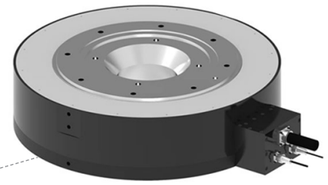


Model	Dimensional Variations		
	L	A	B
TDI-400200	200	260	3
TDI-400200-P	200	259.8	2.5
TDI-400250	250	260	3
TDI-400250-P	250	259.8	2.5

TDI-630 Internal rotor



- High Load Capacity
- High Rigidity
- High Precision
- High Torque Large Hollow Shaft
- Internal Rotor



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-630175 380V	TDI-630225 380V	TDI-630320 380V
Flange-type	-	-	-	-
Continuous Torque	Nm	1330	1950	3050
Peak Torque	Nm	2680	3700	5400
Rated Speed	Rpm	60	60	40
Maximum Speed	Rpm	80	60	40
Continuous Current	Arms	27	27	27
Peak Current	Arms	68	68	54
Torque Constant	Nm/Arms	49.2	64.9	113
Back EMF Constant*	Vrms/rad/s	31.8	47.7	116.9
Resistance Phase to Phase at 25°C	Ω	1.2	1.7	2.6
Inductance Phase to Phase at 25°C	mH	8.3	12.9	18.1
Number of poles		120	120	120
Rotor Inertia	$kg \cdot m^2$	4.014	5.1	7.49
Incremental encoder resolution	ppr	8400000	8400000	8400000
Absolute encoder resolution	ppr	/	/	/
Absolute Position Accuracy	arcsec	±15	±15	±15
Repeat Position Accuracy	arcsec	±1.5	±1.5	±1.5

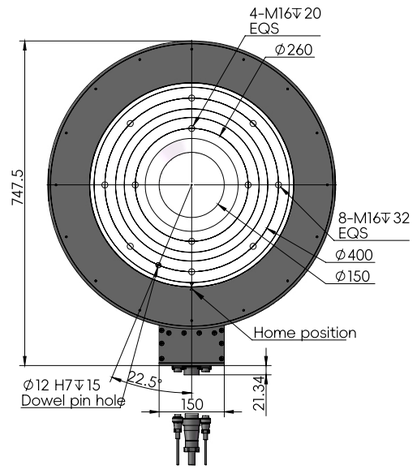
Mechanical	Unit			
Axial Load	N	130000	130000	130000
Radial Load	Nm	6000	6000	6000
Axial Run Out*2	um	20/5	20/5	20/5
Radial Run Out*3	um	20/5	20/5	20/5
Mass	kg	241	303	442

Notes:

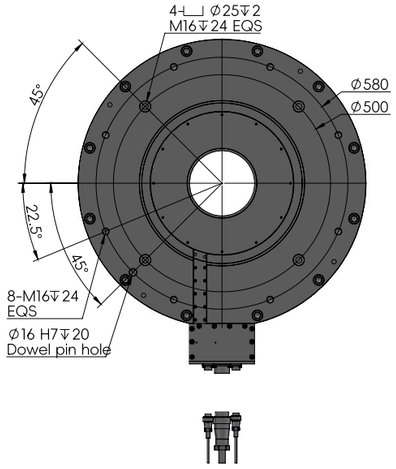
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

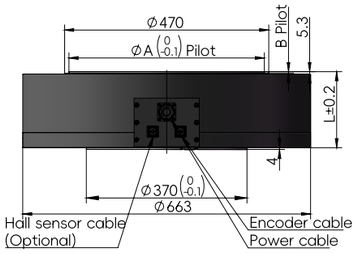
*2 *3 Please contact sales.

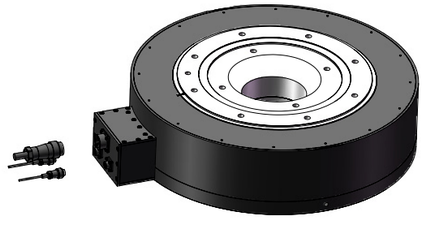
TDI-630175





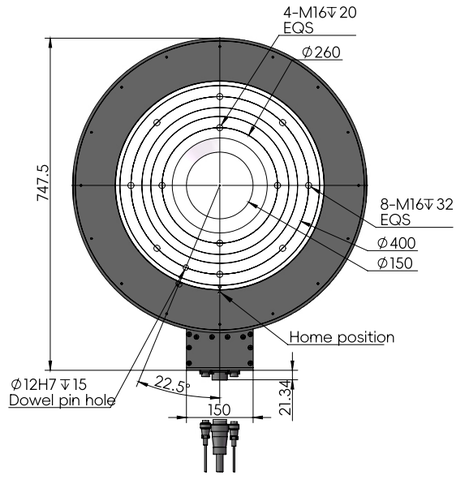




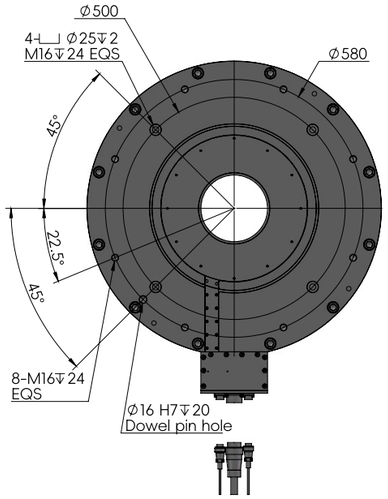


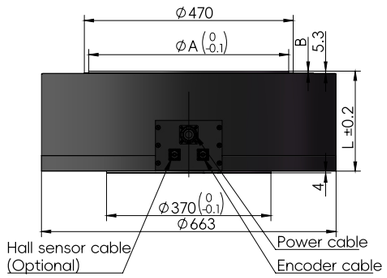
Model	Dimensional Variations		
	L	A	B
TDI-630175	175	450	4
TDI-630175-P	175	449.8	3.5

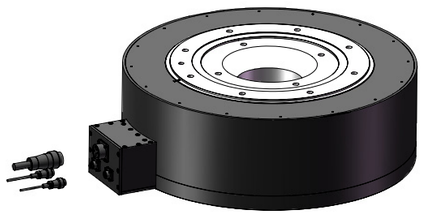
TDI-630225





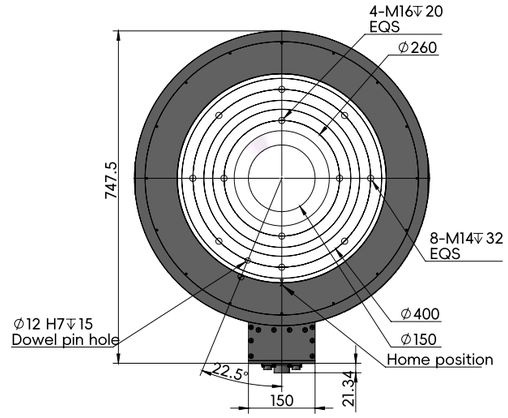


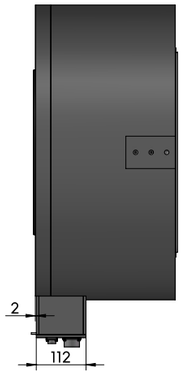


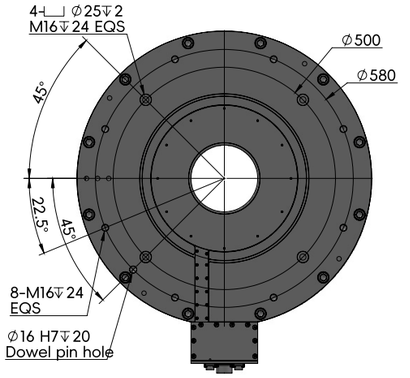


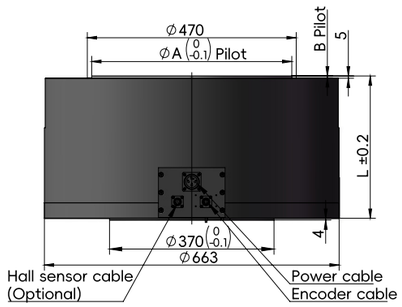
Model	Dimensional Variations		
	L	A	B
TDI-630225	225	450	4
TDI-630225-P	225	449.8	3.5

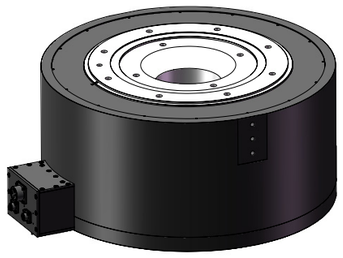
TDI-630320





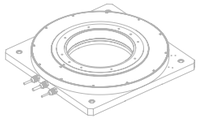






Model	Dimensional Variations		
	L	A	B
TDI-630320	320	450	4
TDI-630320-P	320	449.5	3.5

Large Hollow Series



- Large through-hole design, flexible structure
- Suitable for cable/shaft routing applications, such as rotary tables and semiconductor equipment



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDI-280145-P	TDI-348045	TDI-348080	TDI-400075	TDI-400130
Continuous Torque	Nm	110	16	80	19	320
Peak Torque	Nm	380	18	238	56.5	901
Rated Speed	Rpm	60	60	60	60	60
Maximum Speed	Rpm	80	100	60	60	100
Continuous Current	Arms	7.6	1.5	3	2.8	20
Peak Current	Arms	22.8	4.5	9	8.4	60
Torque Constant	Nm/Arms	14.5	10.7	26.7	6.8	16
Back EMF Constant*	Vrms/rad/s	10.9	6.3	19.5	2.48	9.6
Resistance Phase to Phase at 25°C	Ω	4.1	34.8	14.5	18.5	1.15
Inductance Phase to Phase at 25°C	mH	16.1	78.5	78	20	2.9
Number of poles		40	40	40	48	80
Rotor Inertia	$kg \cdot m^2$	0.0776	0.0455	0.12	0.18	0.52
Incremental encoder resolution	ppr	4720000	8400000	/	10701600	8400000
Absolute encoder resolution	ppr	/	/	26bit(BISS-C)	/	/
Absolute Position Accuracy	arcsec	±15	±15	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2	±2	±2

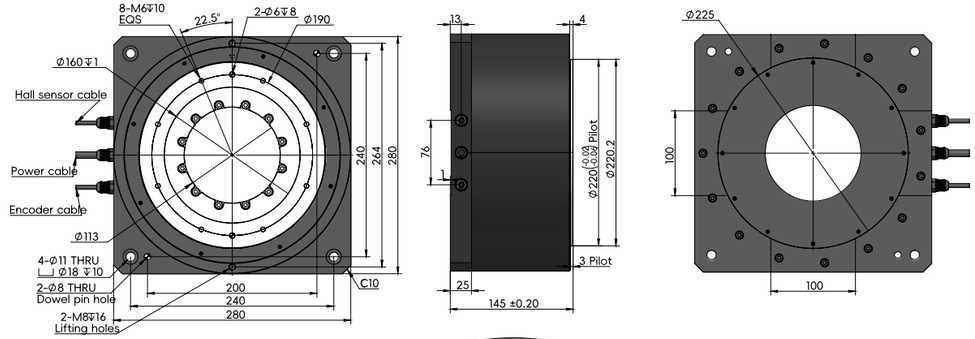
Mechanical	Unit					
Axial Load	N	6000	1000	6000	400000	60000
Radial Load	Nm	100	20	80	600	600
Axial Run Out*2	um	5(optional)	10	5	10	5(optional)
Radial Run Out*3	um	5(optional)	/	5	10	5(optional)
Mass	kg	42	13	28	22.5	71.5

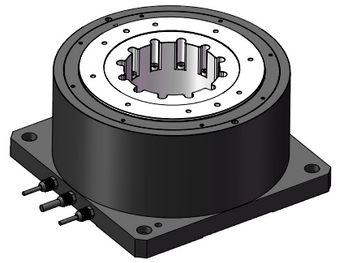
Notes:

*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

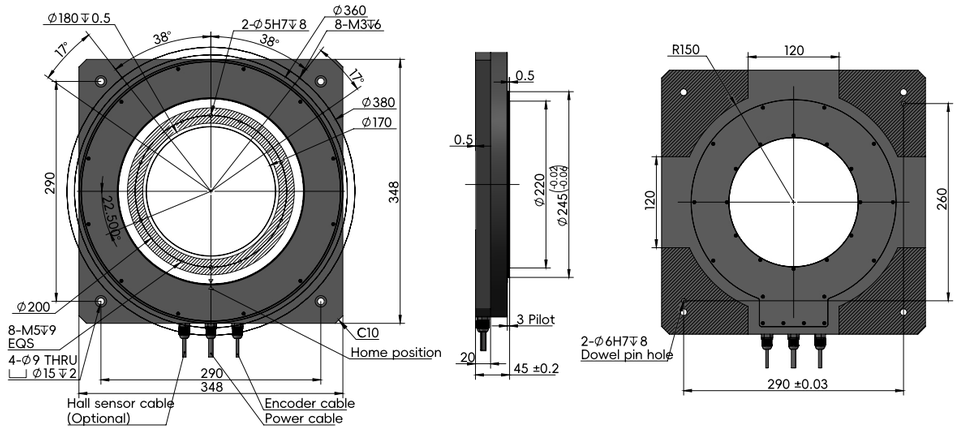
*2 *3 Please contact sales.

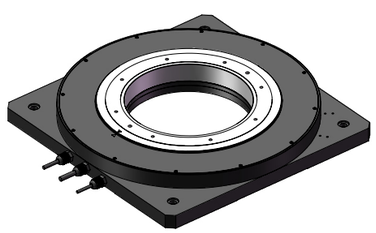
TDI-280145-P



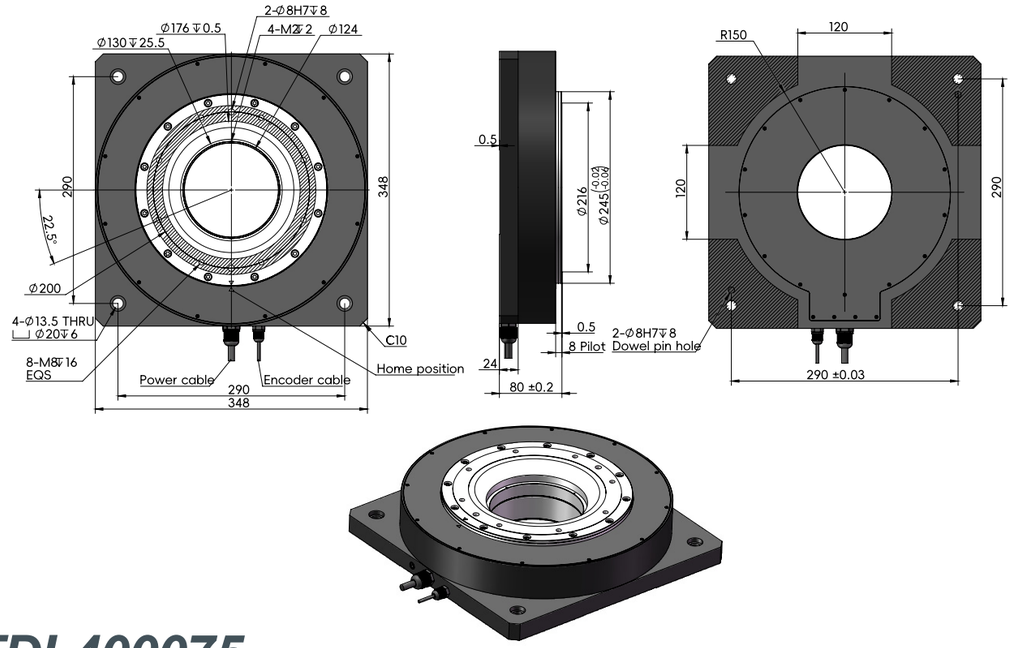


TDI-348045

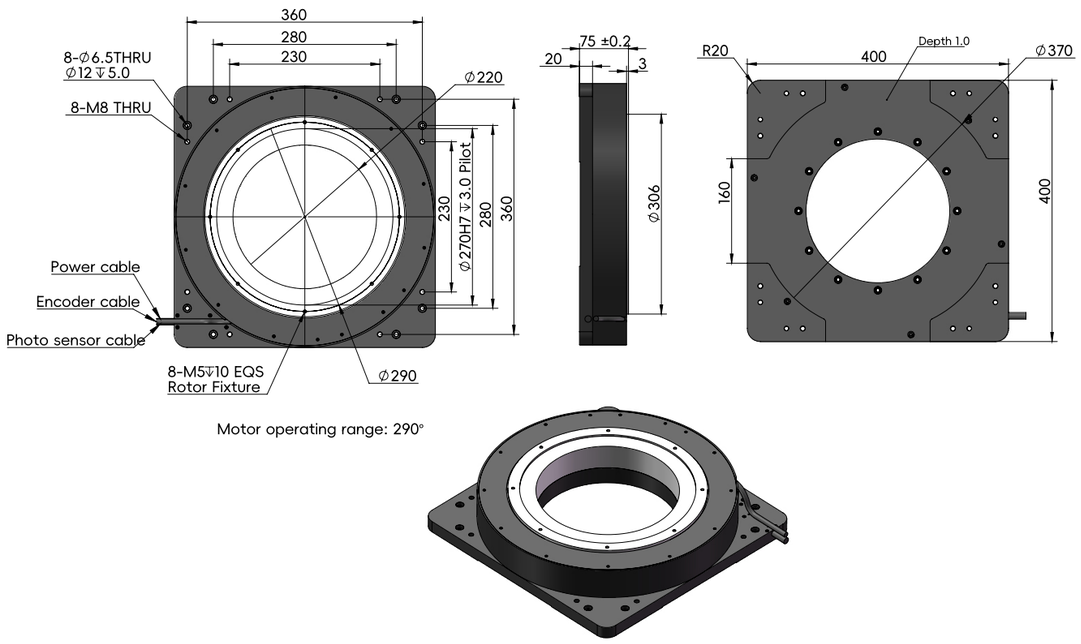




TDI-348080

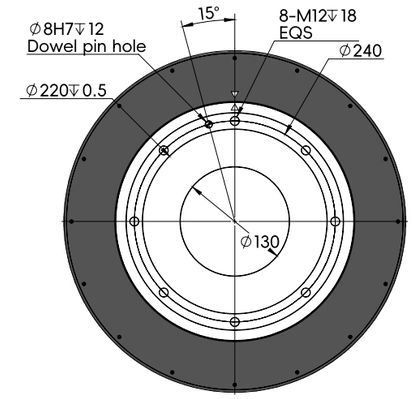


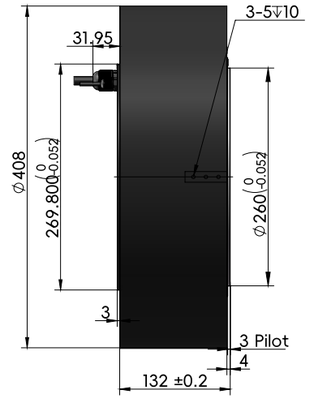
TDI-400075

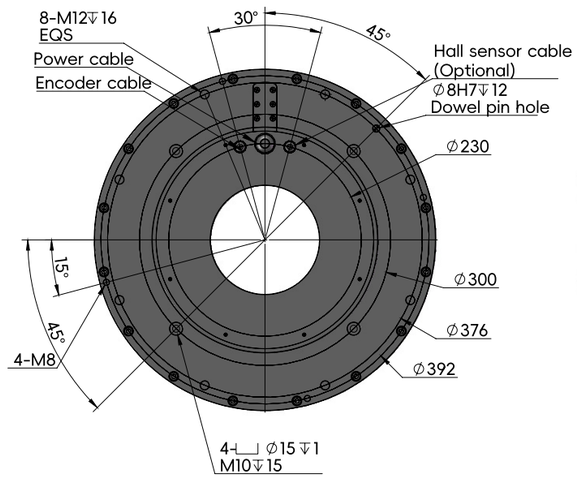


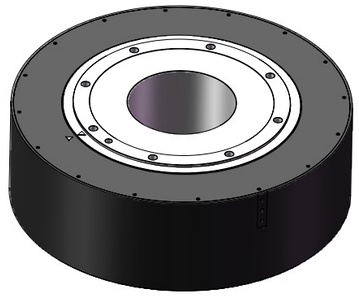
Motor operating range: 290°

TDI-400130

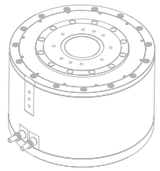




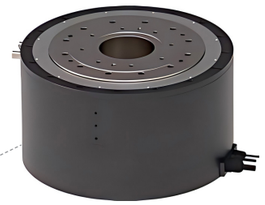




Water-Cooled Series



- High Speed、High Responsiveness
- Specialized for High-Cycle High-End Equipment, such as: Photovoltaic Industry



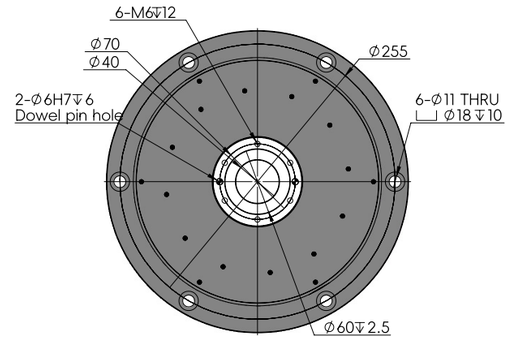
• SPECIFICATION

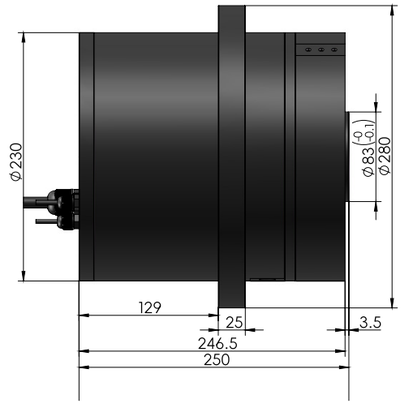
Rated Specification	Unit	TDI-230250-W 380V	TDI-250168-W 380V	TDI-385215-W 380V
Flange-type	-	-	-	-
Continuous Torque	Nm	156	179	855
Peak Torque	Nm	345	345	1517
Rated Speed	Rpm	300	300	200
Maximum Speed	Rpm	360	360	200
Continuous Current	Arms	21	20	30
Peak Current	Arms	63	50	60
Torque Constant	Nm/Arms	7.1	9	26.7
Back EMF Constant*	Vrms/rad/s	6.4	7	19.5
Resistance Phase to Phase at 25°C	Ω	2.6	2	2.6
Inductance Phase to Phase at 25°C	mH	8.8	8.9	16.2
Number of poles		30	40	40
Rotor Inertia	$kg \cdot m^2$	0.0163	0.034	0.366
Incremental encoder resolution	ppr	2227200	3100000	4350000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2

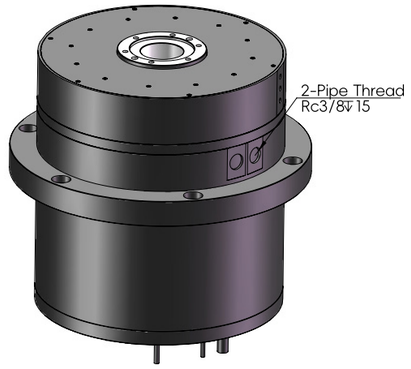
Mechanical	Unit			
Axial Load	N	16000	16000	30000
Radial Load	Nm	130	130	360
Axial Run Out*2	um	5(optional)	20/5	5
Radial Run Out*3	um	5(optional)	20/5	5
Minimum Water Flow	L/min	12	10	13
Mass	kg	40	35	96.5

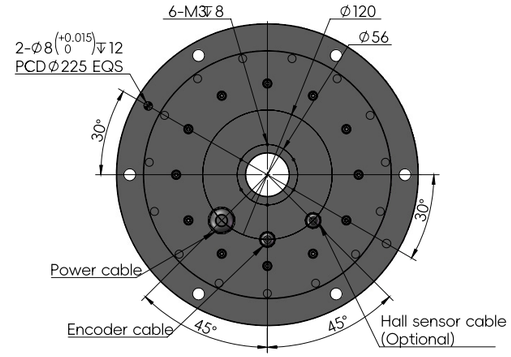
Notes:
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.
*2 *3 Please contact sales.

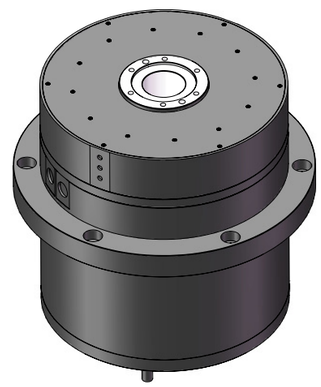
TDI-230250-W



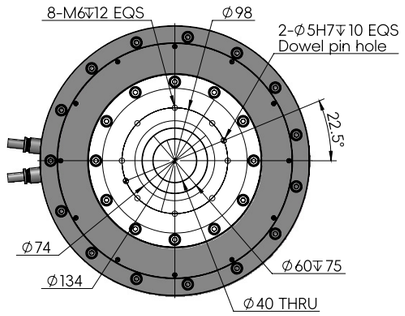


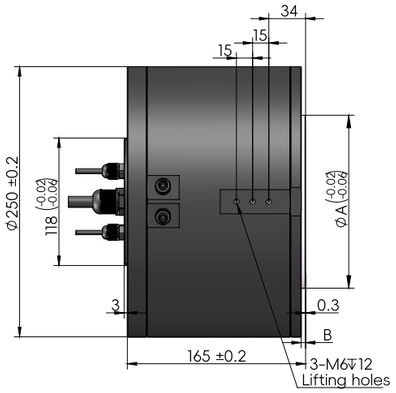


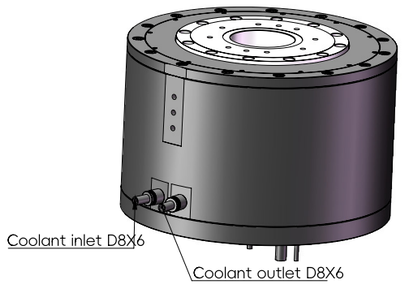


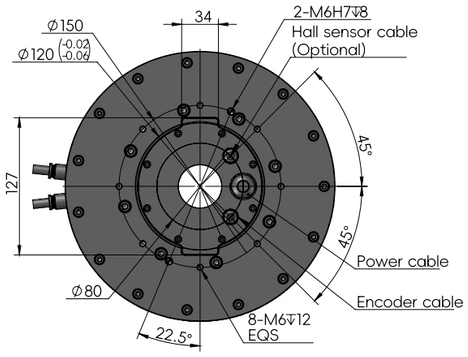


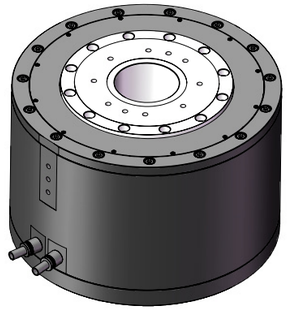
TDI-250168-W





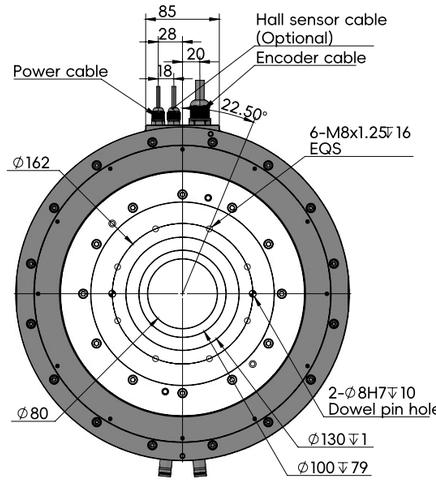


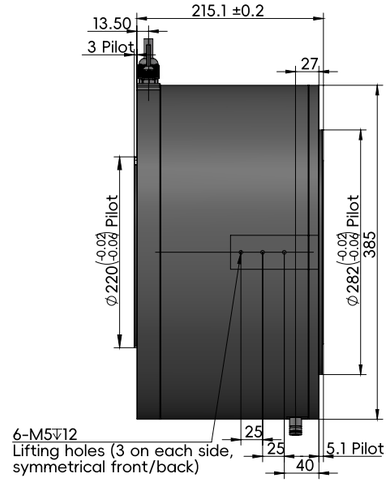


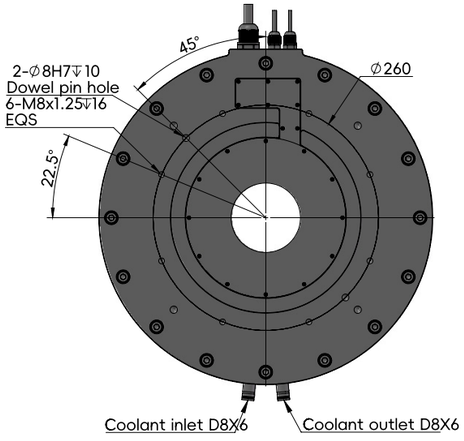


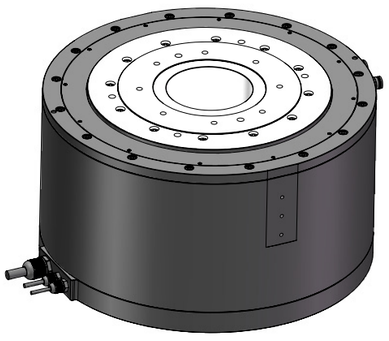
Model	Dimensional Variations	
	A	B
TDI-250168	160	4
TDI-250168-P	159.8	3.3

TDI-385215-W









High-Speed Series



- High Speed、High Responsiveness
- Specialized for High-Cycle High-End Equipment, such as: Chip Sorting Machines, etc.



• SPECIFICATION

Rated Specification	Unit	TDI-140185	TDI-150195 (Air-Cooled)	TDI-150235 (Air-Cooled)
Continuous Torque	Nm	37	35(42)	46(55.4)
Peak Torque	Nm	86	99(119)	137.5(165)
Rated Speed	Rpm	330	330	330
Maximum Speed	Rpm	360	340	340
Continuous Current	Arms	9	8(9.6)	8(9.6)
Peak Current	Arms	27	24(28.8)	24(28.8)
Torque Constant	Nm/Arms	4.1	4.4	5.8
Back EMF Constant*	Vrms/rad/s	2.5	2.7	3.6
Resistance Phase to Phase at 25°C	Ω	2.2	2.4	3
Inductance Phase to Phase at 25°C	mH	12.8	11	14.5
Number of poles		20	20	20
Rotor Inertia	$kg \cdot m^2$	0.0041	0.0041	0.0052
Incremental encoder resolution	ppr	3100000	3480000	3480000
Absolute encoder resolution	ppr	24bit	24bit	24bit
Absolute Position Accuracy	arcsec	±15	±15	±15
Repeat Position Accuracy	arcsec	±2	±2	±2

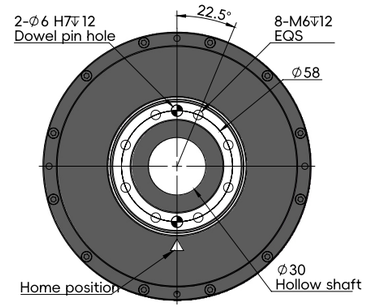
Mechanical	Unit			
Axial Load	N	5000	9000	9000
Radial Load	Nm	35	50	50
Axial Run Out*2	um	20/5/3	20/5/3	20/5/3
Radial Run Out*3	um	20/5/3	20/5/3	20/5/3
Minimum pressure	Mpa	/	0.5	0.5
Mass	kg	14	14.5	17.6

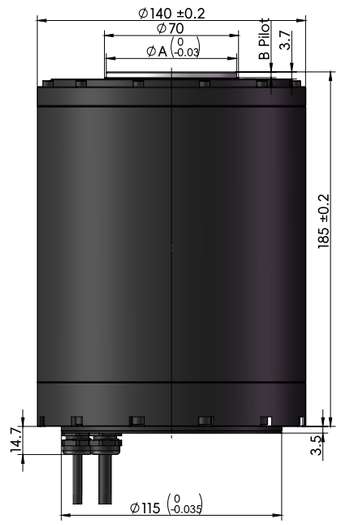
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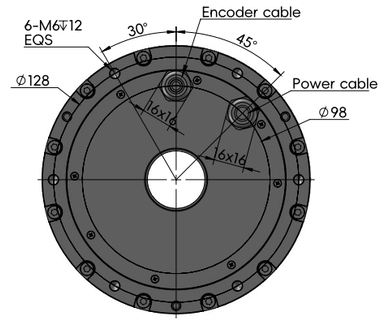
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

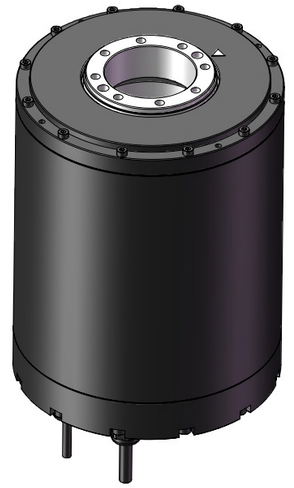
*2 *3 Please contact sales.

TDI-140185



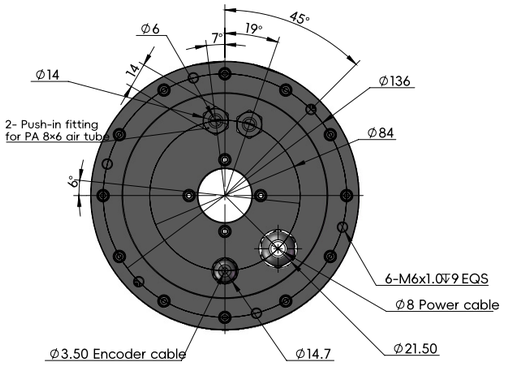


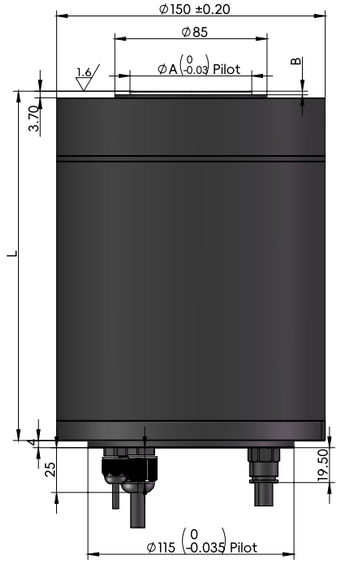


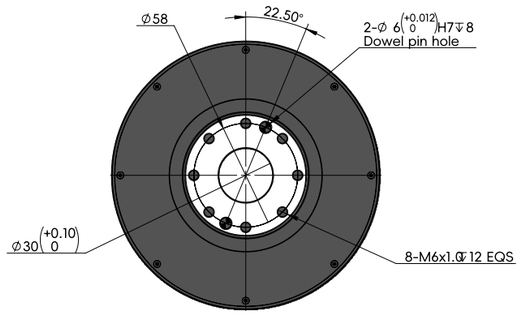


Model	Dimensional Variations	
	A	B
TDI-140185	68	3
TDI-140185-P	67.8	2.5

TDI-150195(Air-Cooled)



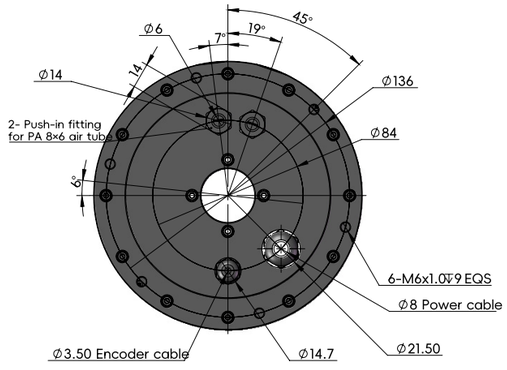


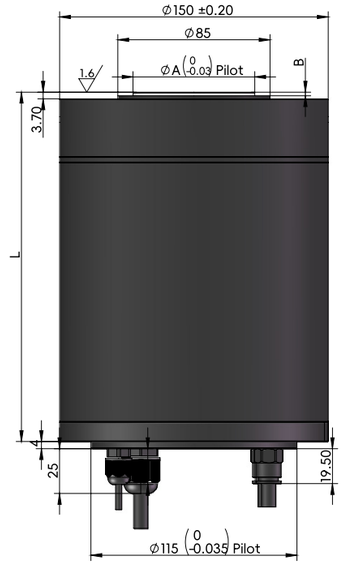


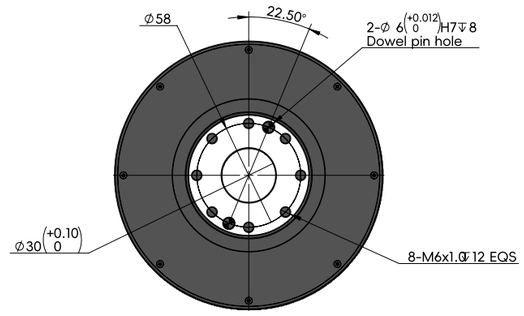


Model	Dimensional Variations		
	L	A	B
TDI-150195	195	68	2
TDI-150195-P	195	67.8	2

TDI-150235(Air-Cooled)



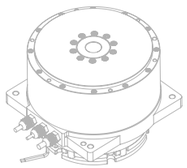






Model	Dimensional Variations		
	L	A	B
TDI-150235	235	68	2
TDI-150235-P	235	67.8	2

Brake Series



- Power-off holding, safe and reliable
- Suitable for vertical axes or anti-drop applications, such as loading/unloading and lifting mechanisms



• SPECIFICATION

• MODEL

Rated Specification	Unit	TDDI-065056-E	TDDI-080050-E	TDDE-170095-E	TDDI-224062-E	TDDE-263188-E
Continuous Torque	Nm	0.28	1.1	28	41	200
Peak Torque	Nm	1.1	3.3	83	119	560
Rated Speed	Rpm	300	300	150	100	80
Maximum Speed	Rpm	400	500	200	200	100
Continuous Current	Arms	1.6	0.9	2.8	3	8
Peak Current	Arms	6.4	3.1	8.4	9	24
Torque Constant	Nm/Arms	0.18	1.2	10	6.3	25
Back EMF Constant*	Vrms/rad/s	0.12	0.82	6.14	3.8	14.1
Resistance Phase to Phase at 25°C	Ω	4.1	23.2	21.3	13.8	6.3
Inductance Phase to Phase at 25°C	mH	3.2	18.9	57.1	41.2	24.8
Number of poles		20	20	22	40	44
Rotor Inertia	$kg \cdot m^2$	0.000044	0.0002	0.02	0.022	0.21
Incremental encoder resolution	ppr	1800000	1800000	3100000	3100000	4350000
Absolute encoder resolution	ppr	24bit(16777216)	24bit(16777216)	24bit(16777216)	24bit(16777216)	24bit(16777216)
Absolute Position Accuracy	arcsec	±25	±30	±15	±15	±15
Repeat Position Accuracy	arcsec	±3	±4	±2	±2	±2

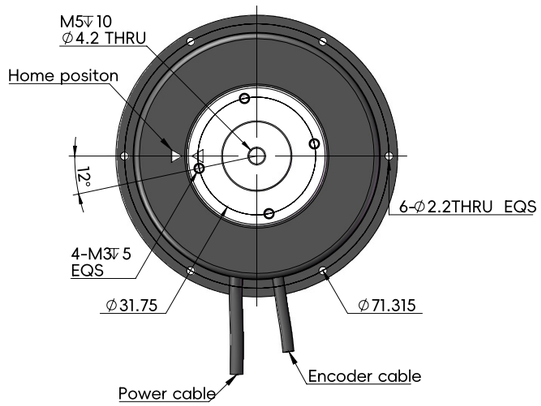
Mechanical	Unit					
Axial Load	N	1200	800	9000	16000	25000
Radial Load	Nm	8	9	50	130	200
Axial Run Out*2	um	5(optional)	20/5(optional)	20/5/3	20/5/3	20/5/3
Radial Run Out*3	um	10(optional)	20(optional)	20/5/3	20/5/3	20/5/3
Mass	kg	1.6	1.6	11	17	41

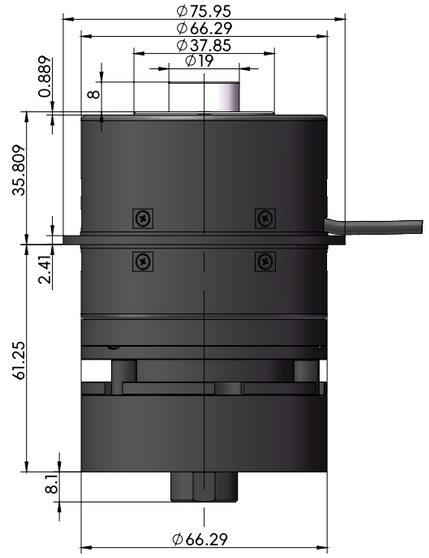
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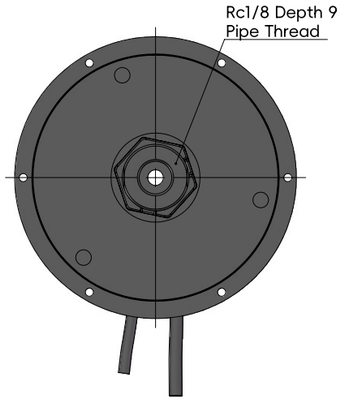
*1 The back electromotive force (back EMF) is the value measured between any two conductors when the motor is running at a constant speed.

*2 *3 Please contact sales.

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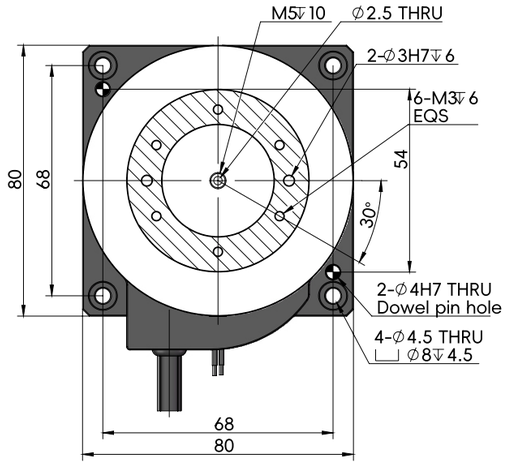


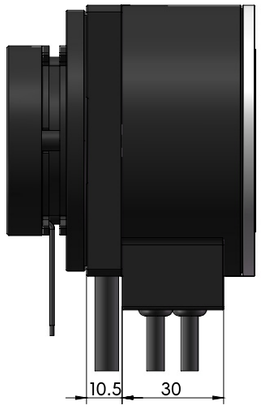


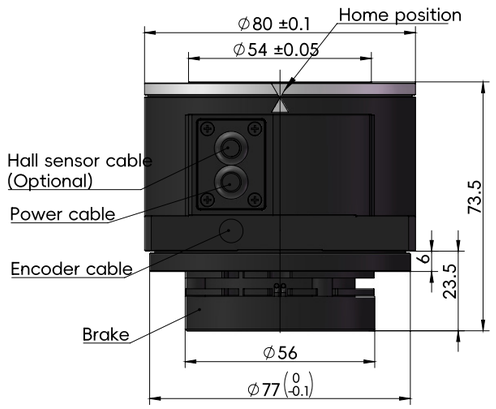


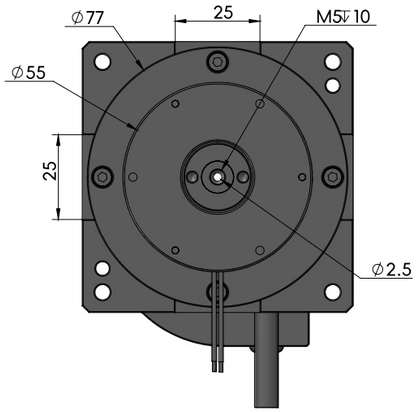


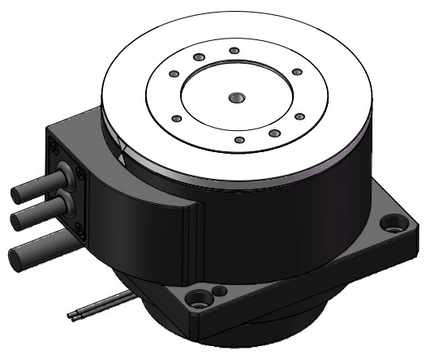
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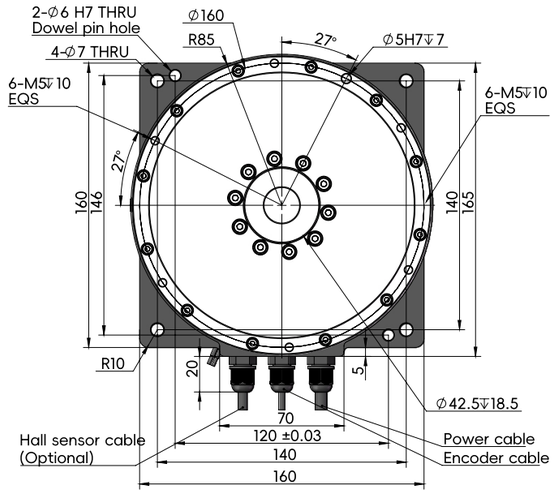


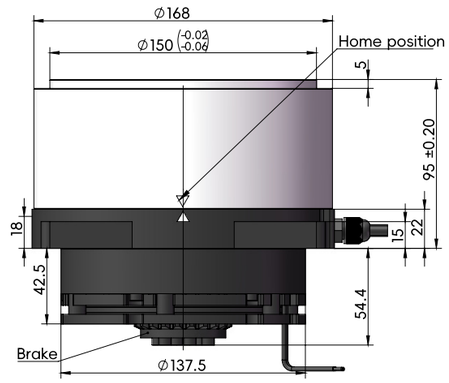


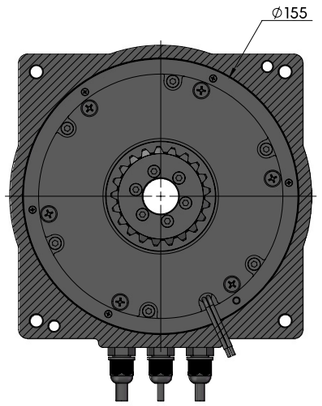


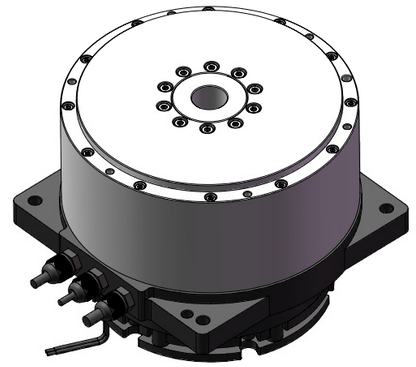


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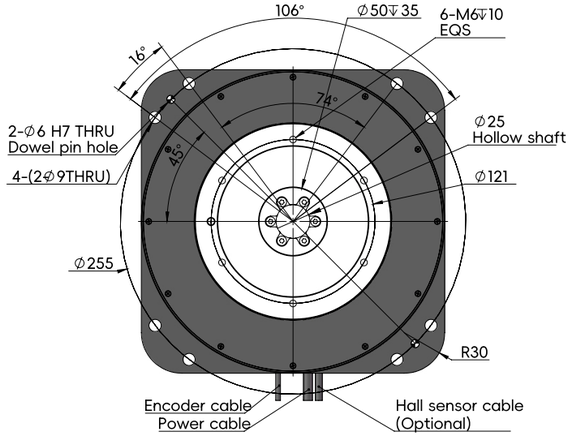


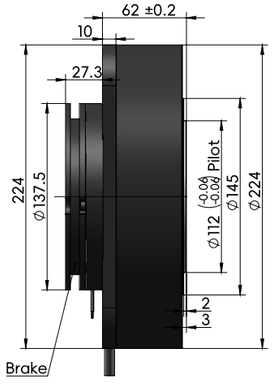


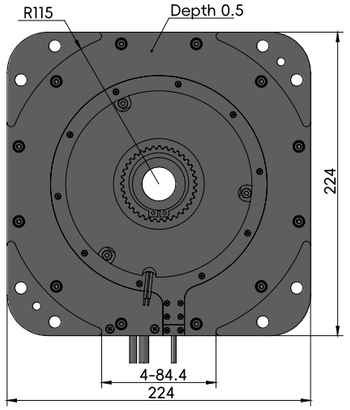


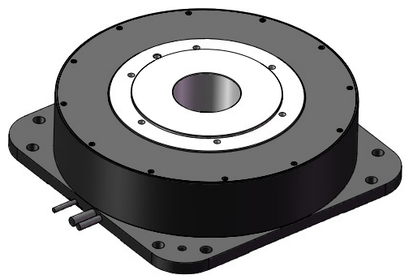


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