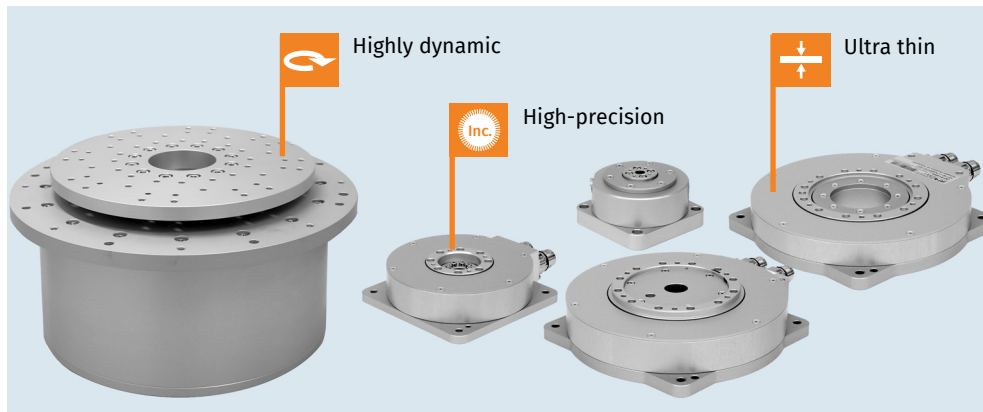


Rotary Table System HRT-65, HRT-105, HRT-160, HRT-290

Innovative design for highest dynamic and precision



Compact design

Example HRT-160: Ultra thin – build height 30 mm



Highest torque density

Smaller packing means lowering footprint



Low cogging value

Smooth motion and positioning accuracy



No backlash

Highest stiffness



Integrated measuring system

Incremental encoder, different types

Rotary table - ready to install

Mechanically & electrically ready for connection

Direct drive

Precise & no backlash

Innovative design

Reduced moving mass for low inertia

Low cogging value

Smooth running characteristics

Customer specific modifications possible

Use with:

Servo amplifier ECOMODUL, ECOVARIO® 114, ECOVARIO® 214, ECOVARIO® 414, ECOVARIO® 616

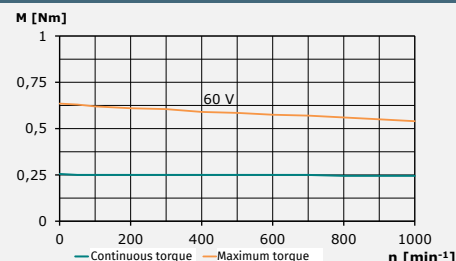
Field bus interfaces:

CANopen, EtherCAT, Ethernet, Profibus, Profinet, RS232, RS485

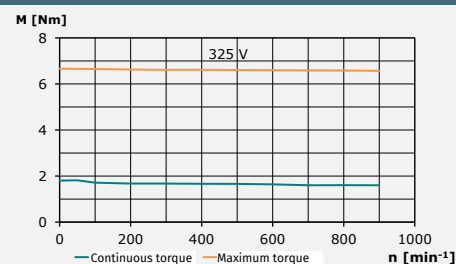
Rotary Table System HRT-65, HRT-105, HRT-160, HRT-290

		Series HRT-65-17	Series HRT-105-25	Series HRT-160-17	Series HRT-160-25	Series HRT-290-85
→ Technical Data						
Peak torque (c.d.f. 5%) ¹⁾	[Nm]	0,63	6,6	8,8	21,4	430
Rated torque ¹⁾	[Nm]	0,25	1,6	2,5	3,4	80
Max. current (per phase, c.d.f. 5%) ¹⁾	[A _{RMS}]	14	14	14	14	16
Rated current (per phase) ¹⁾	[A _{RMS}]	4,3	2,9	2,9	2,3	2,8
Maximum speed ²⁾	[min ⁻¹]	1000	900	500	500	150
Repeatability ²⁾	[arcsec]	±3	±3	±3	±3	±0,35
Radial eccentricity	[µm]	< 10	< 15	t.b.d.	< 30	< 20
Axial eccentricity	[µm]	< 20	< 10	t.b.d.	< 15	< 60
Torque constant	[Nm/A]	0,06	0,55	0,85	1,5	25
Voltage constant	[V/1000min ⁻¹]	3,69	37,5	59,3	122,8	2053
Winding resistance	[Ω]	1,4	4,1	5,4	7,4	17,7
Winding inductivity	[mH]	1,6	7,6	8,9	14,2	122
Number of pole pairs	[2p]	4	10	18	18	19
Motor inertia	[kgm ² x10 ⁻³]	0,02	0,22	1,19	2,3	150
Max. axial load	[N]	100 ³⁾	100 ³⁾	400 ³⁾	750 ³⁾	4000 ⁴⁾
Max. radial load	[N]	75 ³⁾	100 ³⁾	250 ³⁾	500 ³⁾	3000 ⁴⁾
Topple torque	[Nm]	5	5	10	50	250
Resolution (standard) ²⁾	[inc/rev]	435.000	532.000	532.000	532.000	4.030.464
Resolution (maximum) ²⁾	[inc/rev]	445.440	972.800	1.945.600	1.945.600	8.060.928
Holding brake	[Nm]	-	-	-	2 (Option)	18
→ Electrical supply						
Max. DC link voltage	[V _{DC}]	60	325	325	325	560
→ Environmental conditions						
Ambient temperature	[°C]	0 ... +40				
Temperature switch-off sensor		-	PTC , 105 °C			
Temperature supervision sensor		-	KTY183-122 (optional)			
Protection class		IP40				
→ Dimensions and Weight						
Outer diameter	[mm]	80	120	180	180	380
Flange		80	120	160	160	320
Height	[mm]	47	37	30	41	210
Weight	[kg]	0,8	1,4	2,2	3,3	40
→ Cable lengths and connectors						
Encoder (incl. PTC)	[cm]	50 + M17	M17 conn.	M17 conn.	M17 conn.	M17 conn.
Motor	[cm]	50 + M17	M17 conn.	M17 conn.	M17 conn.	M17 conn.
¹⁾ Mounting flange 250 mm x 250 mm / thickness 20 mm ²⁾ Depends on the measuring system ³⁾ speed: 300 min ⁻¹ , a higher individual load leads to a limitation of the bearing life ⁴⁾ speed: 100 min ⁻¹ , a higher individual load leads to a limitation of the bearing life						

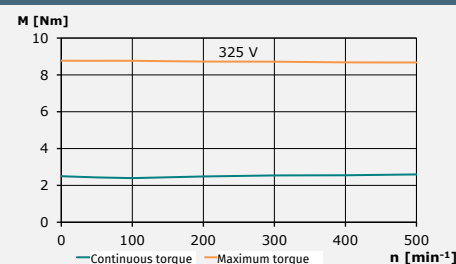
→ Characteristics HRT-65-17 with ECOVARIO® 114d (60 V)



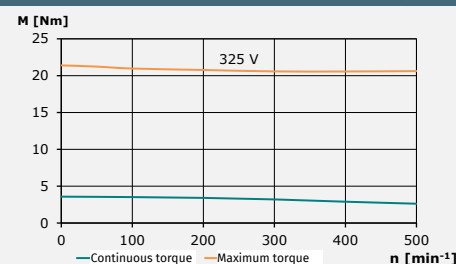
→ Characteristics HRT-105-25 with ECOVARIO® 414 (325 V)



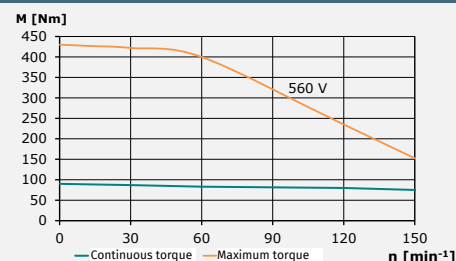
→ Characteristics HRT-160-17 with ECOVARIO® 414 (325 V)



→ Characteristics HRT-160-25 with ECOVARIO® 414 (325 V)

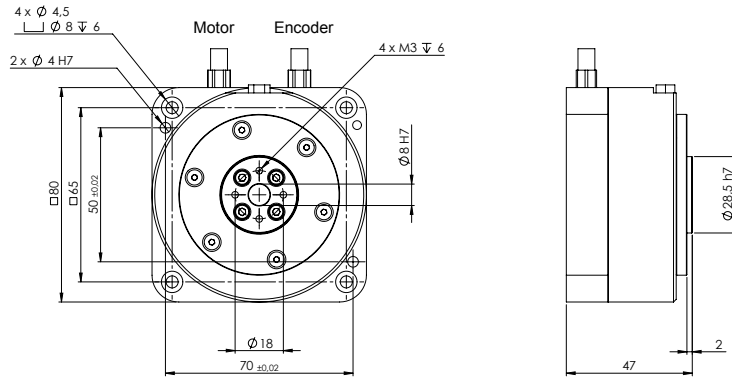


→ Characteristics HRT-290-85 with ECOVARIO® 616 (560 V)

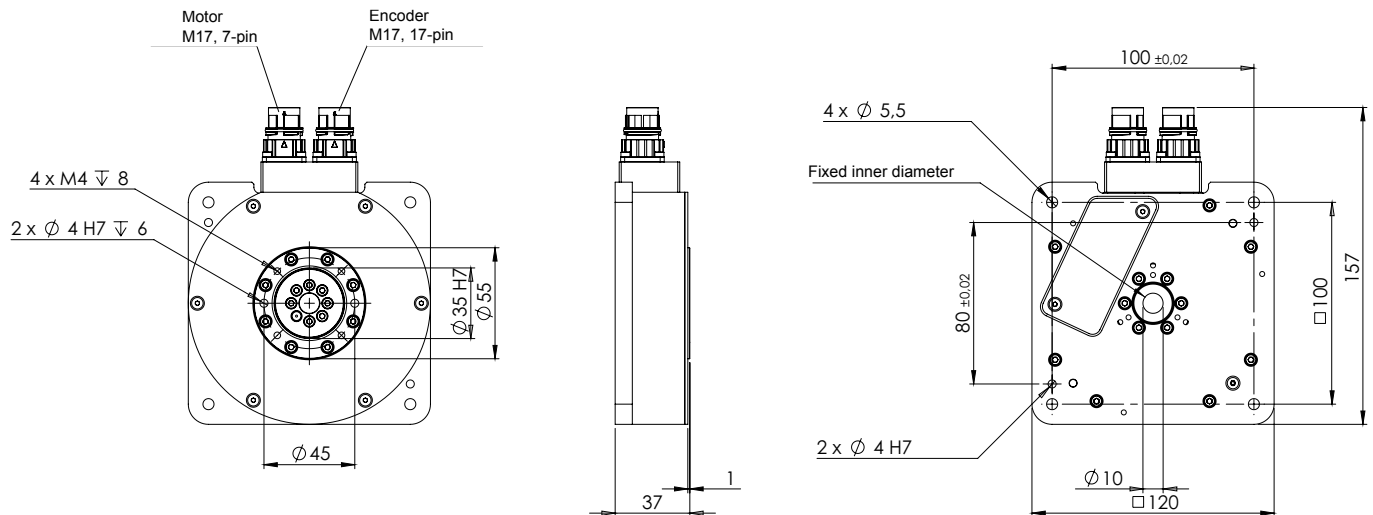


Rotary Table System HRT-65, HRT-105, HRT-160, HRT-290

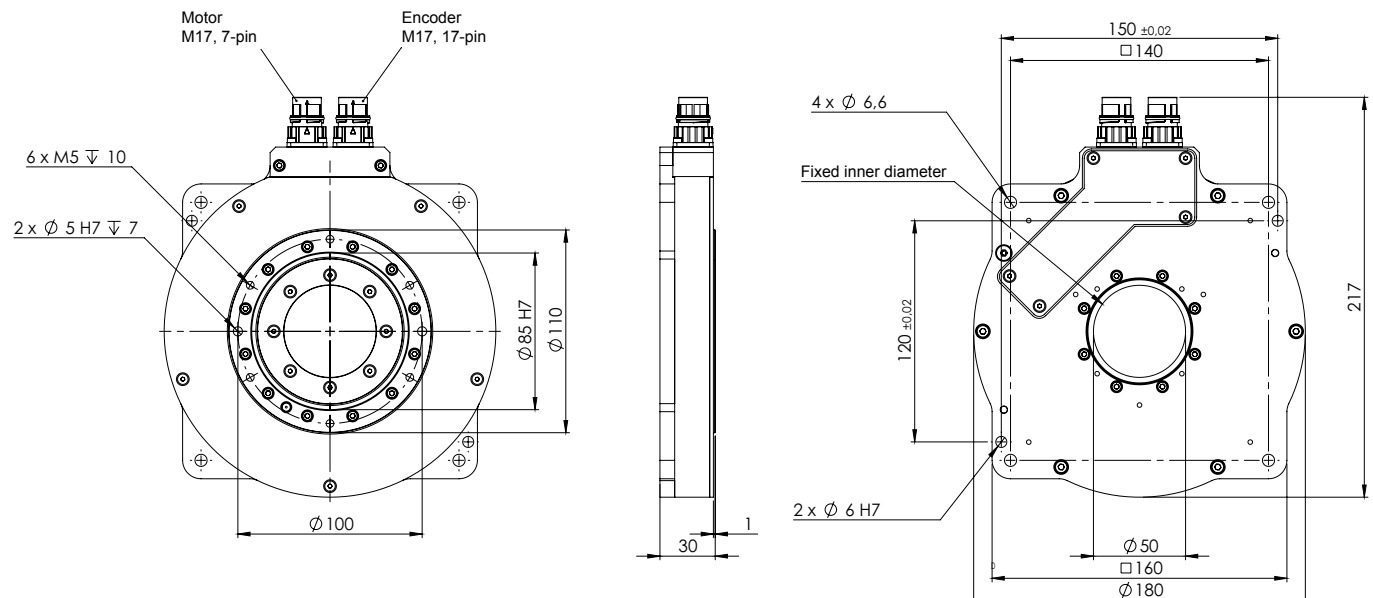
→ Drawing HRT-65-17



→ Drawing HRT-105-25

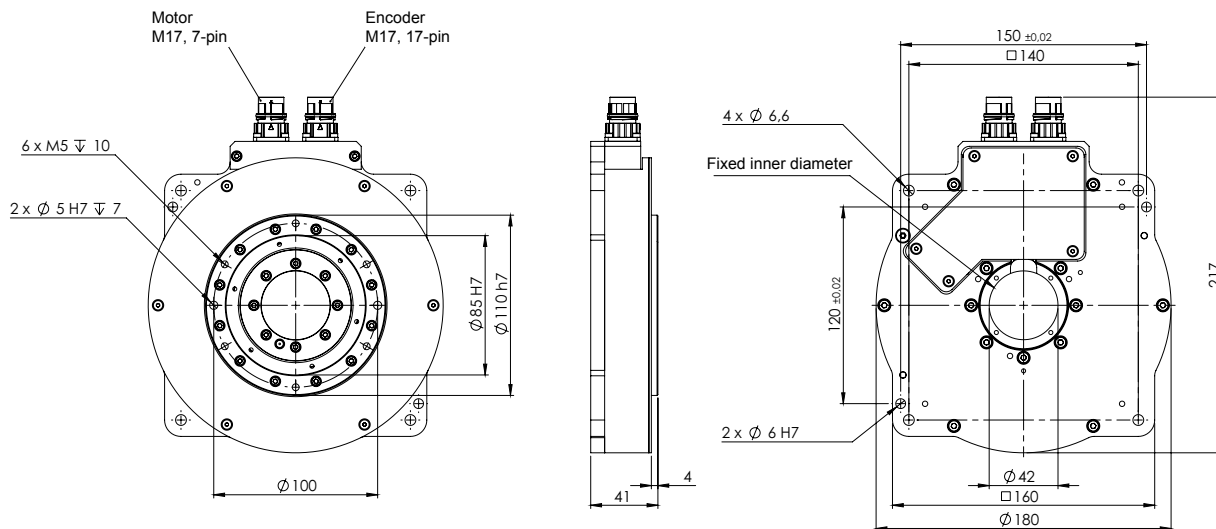


→ Drawing HRT-160-17

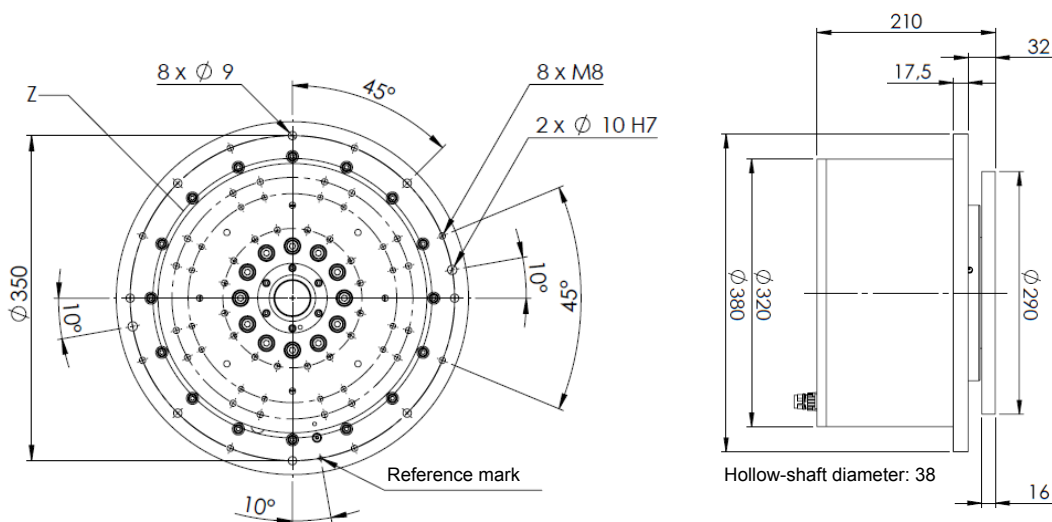


Rotary Table System HRT-65, HRT-105, HRT-160, HRT-290

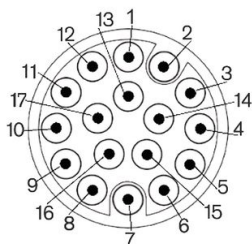
→ Drawing HRT-160-25



→ Drawing HRT-290-85



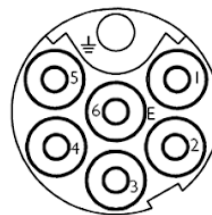
→ Interface assignment



Encoder connector M17 assignment

Pin	Signal	Pin	Signal
1	Sin+ / A+	10	-
2	Sin- / A-	11	-
3	Cos+ / B+	12	-
4	Cos- / B-	13	-
5	Z+	14	-
6	Z-	15	+5 V
7	PTC*	16	GND
8	PTC*	17	-
9	-		

*) not 2nd measuring system connector



Motor connector M17 assignment

Pin	Signal
1	Phase U
2	-
3	Brake + (option)
4	Phase V
5	Phase W
6	Brake - (option)
7	PE