ACW Series

Direct Drive Rotary Motor

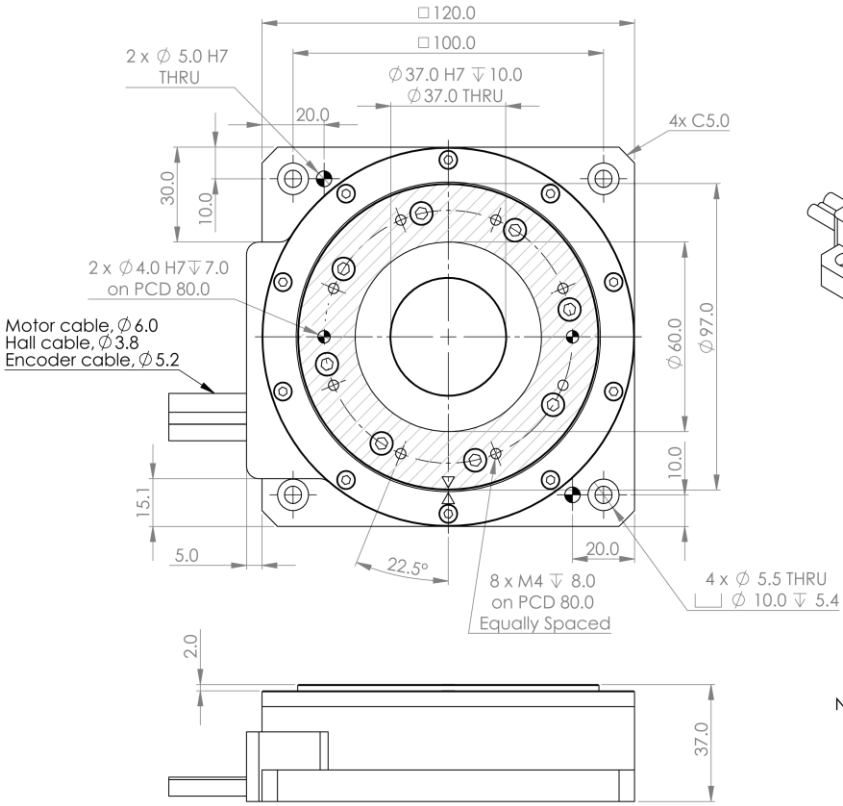
- **Direct drive, brushless motor fully integrated with encoder and bearing**
- **No cogging**
- **Precise homing through index pulse**
- **Large centre hole**
- **Low profile**

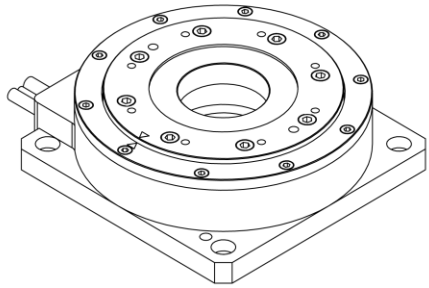
ACW Specifications		ACW 120	ACW 170	ACW 220
Model	Units			
Table diameter	mm	120	170	220
Table height	mm	37	37	42
Number of poles		16	16	16
Continuous torque	Nm	0.6	3.4	10.3
Peak torque	Nm	4.8	13.1	23.2
Cogging torque	Nm	0	0	0
Torque constant	Nm/Arms	0.12	0.68	2.05
Back EMF constant	V/rpm	0.015	0.082	0.248
Continuous current	Arms	5.0	5.0	5.0
Peak current	Arms	17.5	17.5	17.5
Resistance [2]	ohms	1.43	2.76	5.06
Inductance [2]	mH	0.47	1.65	4.72
Motor constant	Nm/SqRt(W)	0.1	0.41	0.91
Mass	Kg	2.0	3.7	7.0
Rotor Inertia	Kgm^2	0.000658	0.002020	0.008354
Rec. max speed	rpm	400	350	300
AM Digital encoder resolution(1000X)	Counts/rev	1200000	1672000	2260000
AM SINCOS encoder resolution	Lines/rev	7500	10450	14125
AM Accuracy	arc sec	+/-43	+/-34	+/-30
AM Repeatability	arc sec	+/-2.2	+/-1.7	+/-1.2
AB Digital encoder resolution (64X)	Counts/rev	251776	355840	480000
AB SINCOS encoder resolution	Lines/rev	3934	5560	7500
AB Accuracy	arc sec	+/-43	+/-34	+/-30
AB Repeatability	arc sec	+/-3.0	+/-2.5	+/-2.0
Axial load rating	N	150	230	300
Moment load rating	Nm	14.7	31.7	55.2
Radial run-out	um	15 (10,5) [1]	18 (10,5) [1]	18 (10,5) [1]
Axial run-out	um	15 (10,5) [1]	18 (10,5) [1]	18 (10,5) [1]

1. Optional.

2. Terminal to terminal, at 25 Deg C.

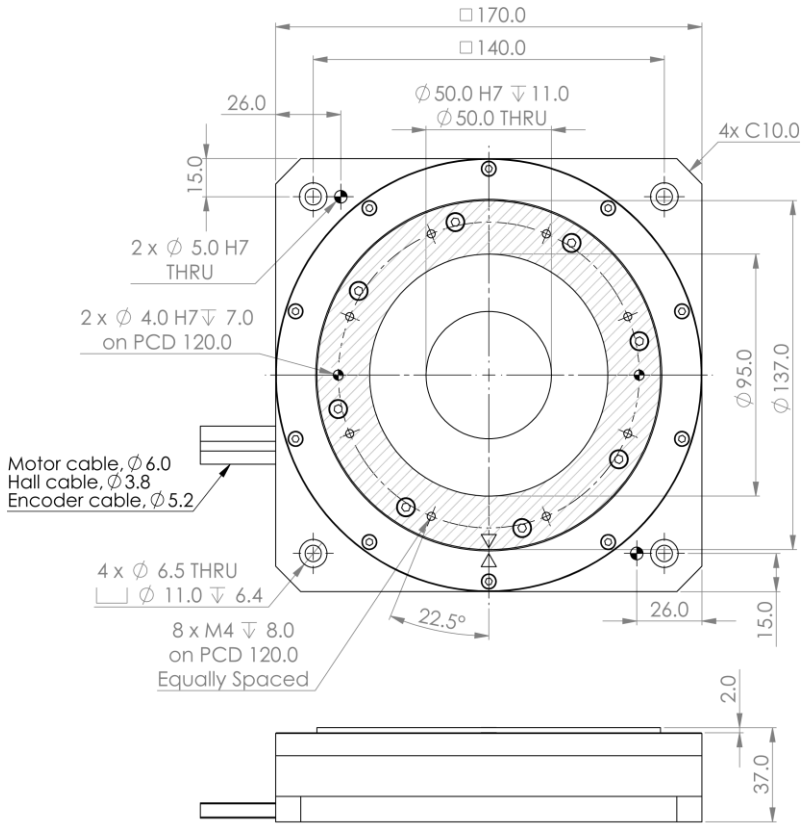
ACW120

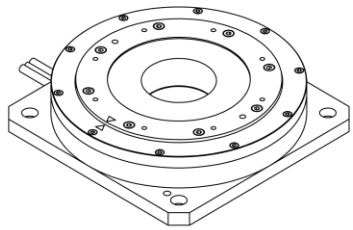




Note: 37mm diameter through hole
: Shaded area, mounting surface

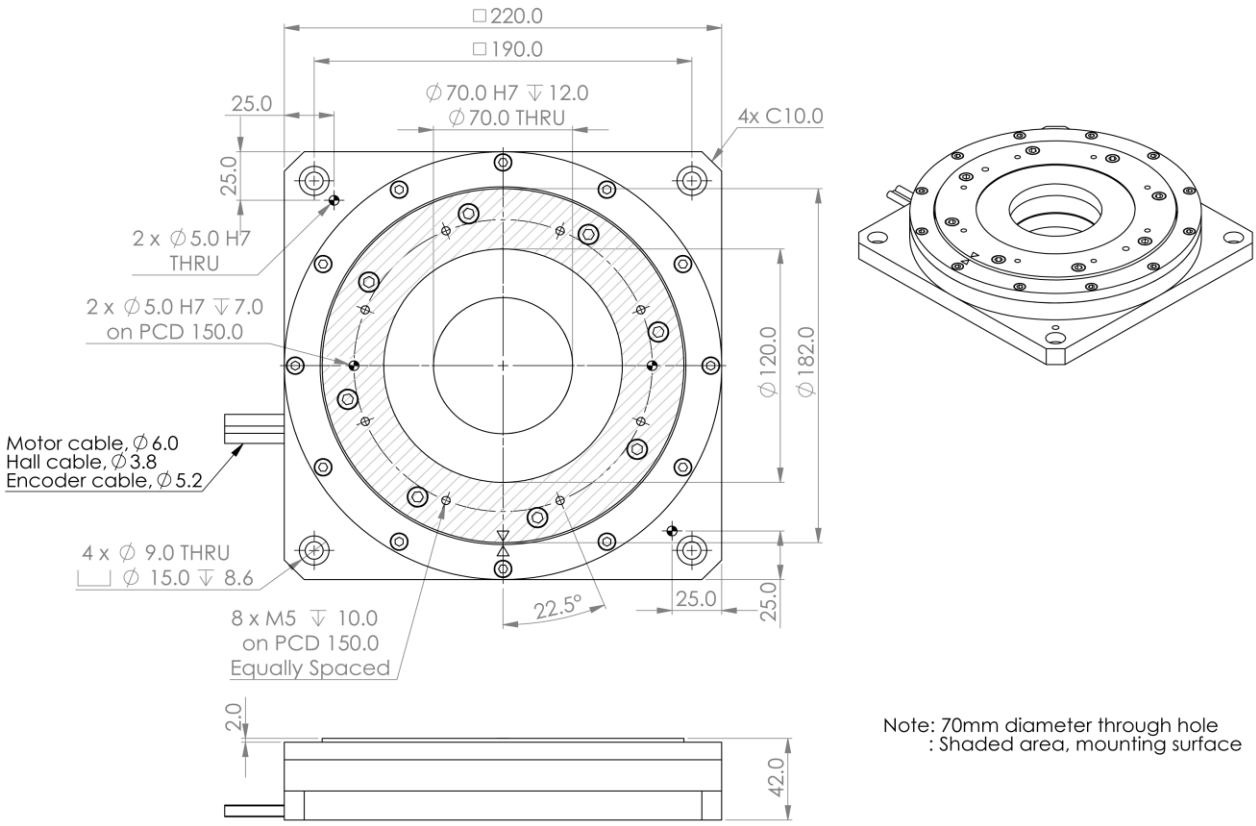
ACW170





Note: 50mm diameter through hole
: Shaded area, mounting surface

ACW220



Part Numbering

Motor	Height	Winding	Thermal Sensor	Cable Length	Encoder Option	Interpolation Option	Run-out Option
ACW 120	37	P	K/J7	3.0	AB-3934	64X (AB) 1000 X (AM) SINCOS	P15/P10/P5
					AM-300		
ACW 170	37				AB-5560		P18/P10/P5
					AM-418		
ACW 220	42				AB-7500		P18/P10/P5
					AM-565		

K = PT100 (RTD)

J7= Thermostat

P18 = Axial Runout 18um, Radial Runout is 18um

P10 = Axial Runout 10um, Radial Runout is 10um

P5 = Axial Runout 5um, Radial Runout is 5um

Example: ACW 170-37-P-K-3.0-AM-418-1000X-P10

ACW 170-37-P-K-3.0-AB-5560-64X-P10