

Extra-large harmonic platforms for high-load robotic joints and large-frame precision axes.

MODEL SELECTION

Model	Module Ø	Start/ Stop Peak Torque (Nm)	Reduction Ratio	Rated Power (W)	Weight — No Brake (kg)	Communication
AHM-142-267-R51	142 mm	267	51	720	3.96	CAN / EtherCAT
AHM-142-376-R81	142 mm	376	81	720	3.96	CAN / EtherCAT
AHM-142-411-R101	142 mm	411	101	720	3.96	CAN / EtherCAT
AHM-142-436-R121	142 mm	436	121	720	3.96	CAN / EtherCAT
AHM-142-459-R161	142 mm	459	161	720	3.96	CAN / EtherCAT
AHM-170-496-R51	170 mm	496	51	650	6.84	CAN / EtherCAT
AHM-170-641-R81	170 mm	641	81	650	6.84	CAN / EtherCAT
AHM-170-702-R101	170 mm	702	101	650	6.84	CAN / EtherCAT
AHM-170-762-R121	170 mm	762	121	650	6.84	CAN / EtherCAT
AHM-170-800-R161	170 mm	800	161	650	6.84	CAN / EtherCAT

MODEL CONFIGURATION

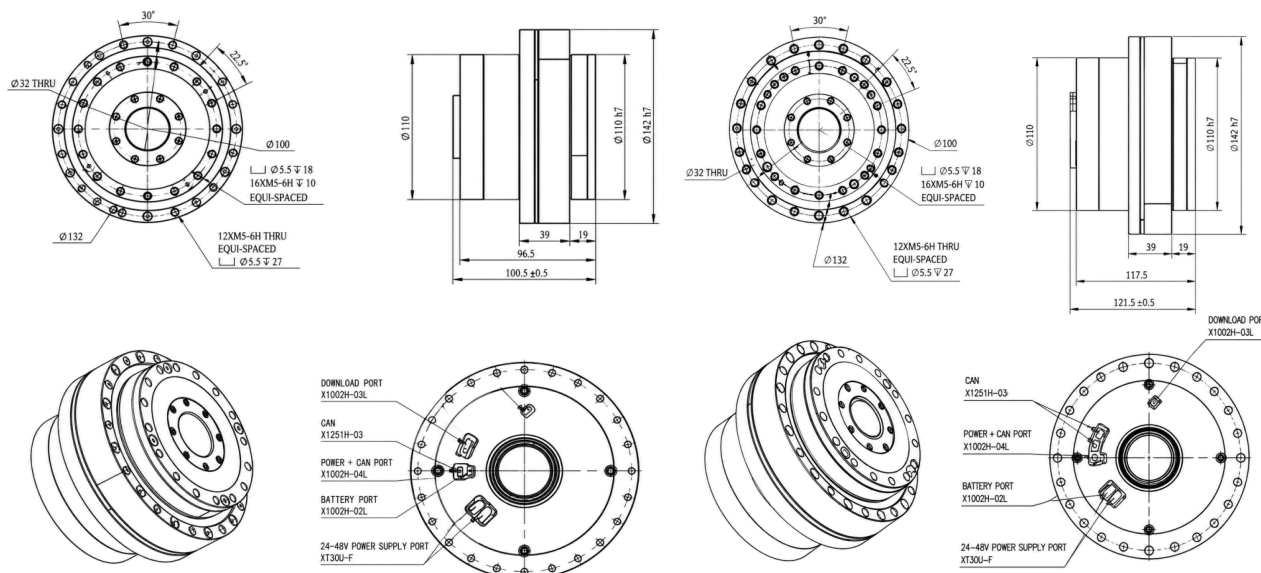
Base model: AHM-[module diameter]-[rounded peak torque]-R[ratio]. Add -B for brake, -E2 for dual encoder, and -EC for EtherCAT where required. Technical tables show actual values.

MECHANICAL PLATFORM Ø142 mm

5 RATIO OPTIONS | Ø142 mm MODULE | 267–459 Nm START / STOP PEAK TORQUE | CAN / EtherCAT

Parameter	Unit	AHM-142-267-R51	AHM-142-376-R81	AHM-142-411-R101	AHM-142-436-R121	AHM-142-459-R161
Reduction Ratio	:1	51	81	101	121	161
Start / Stop Peak Torque	Nm	267	376	411	436	459
Max. Average Load Torque — Robot	Nm	133	206	267	267	267
Rated Torque at 2000 rpm / Ratio — Industrial	Nm	94	146	169	169	169
Output Peak Speed	rpm	55	37	29	24	18
Rated Speed at 1/2 Rated Torque	rpm	44	29	22	18	12
Backlash	arcsec	20	20	10	10	10
Rated Power	W	720	720	720	720	720
Supply Voltage	VDC	24–48	24–48	24–48	24–48	24–48
Encoder Resolution	bit	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional
Communication	—	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT
Brake Torque — No Brake / Brake	Nm	0 / 4	0 / 4	0 / 4	0 / 4	0 / 4
Torsional Stiffness	10 ⁻⁴ N/rad	5.13	6.37	6.37	6.37	6.37
Allowable Radial Load	kN	65.4	65.4	65.4	65.4	65.4
Allowable Axial Load	kN	148.64	148.64	148.64	148.64	148.64
Allowable Bending Moment	Nm	580	580	580	580	580
Length — No Brake / Brake	mm	100.5±0.5 / 121.5±0.5	100.5±0.5 / 121.5±0.5	100.5±0.5 / 121.5±0.5	100.5±0.5 / 121.5±0.5	100.5±0.5 / 121.5±0.5
Through Bore	mm	32	32	32	32	32
Weight — No Brake / Brake	kg	3.96 / 4.38	3.96 / 4.38	3.96 / 4.38	3.96 / 4.38	3.96 / 4.38
Inertia — No Brake / Brake	g·cm ²	3910.2 / 4744.7	3910.2 / 4744.7	3910.2 / 4744.7	3910.2 / 4744.7	3910.2 / 4744.7

DIMENSIONAL DRAWINGS — Ø142 mm MECHANICAL PLATFORM — STANDARD / BRAKE CONFIGURATION



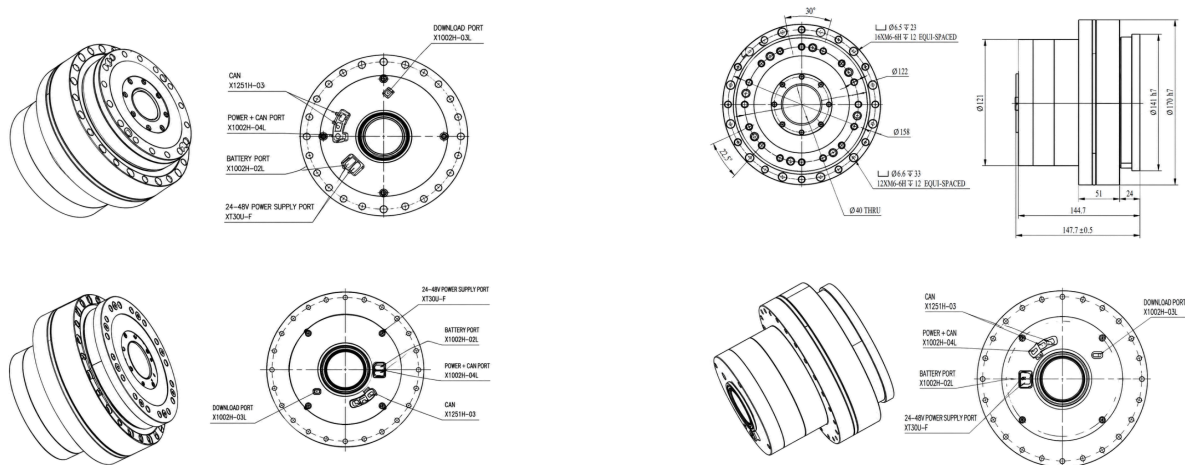
Operating environment: Standard operating range -10 to 45°C. Operation from -40 to -10°C or 46 to 70°C requires customization. Store at -30 to 60°C. Indoor use only; avoid condensation, dust, corrosive or flammable gas, oil mist, and direct sunlight.

MECHANICAL PLATFORM Ø170 mm

5 RATIO OPTIONS | Ø170 mm MODULE | 496–800 Nm START / STOP PEAK TORQUE | CAN / EtherCAT

Parameter	Unit	AHM-170-496-R51	AHM-170-641-R81	AHM-170-702-R101	AHM-170-762-R121	AHM-170-800-R161
Reduction Ratio	:1	51	81	101	121	161
Start / Stop Peak Torque	Nm	496	641	702	762	800
Max. Average Load Torque — Robot	Nm	242	351	460	555	555
Rated Torque at 2000 rpm / Ratio — Industrial	Nm	169	255	328	363	363
Output Peak Speed	rpm	33	21	16	14	10
Rated Speed at 1/2 Rated Torque	rpm	22	15	12	10	7
Backlash	arcsec	20	20	10	10	10
Rated Power	W	650	650	650	650	650
Supply Voltage	VDC	24–48	24–48	24–48	24–48	24–48
Encoder Resolution	bit	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional	16; dual encoder optional
Communication	—	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT	CAN / EtherCAT
Brake Torque — No Brake / Brake	Nm	0 / 6	0 / 6	0 / 6	0 / 6	0 / 6
Torsional Stiffness	10 ⁴ N/rad	10	13	13	13	13
Allowable Radial Load	kN	81.6	81.6	81.6	81.6	81.6
Allowable Axial Load	kN	185.45	185.45	185.45	185.45	185.45
Allowable Bending Moment	Nm	850	850	850	850	850
Length — No Brake / Brake	mm	121.7±0.5 / 147.7±0.5	121.7±0.5 / 147.7±0.5	121.7±0.5 / 147.7±0.5	121.7±0.5 / 147.7±0.5	121.7±0.5 / 147.7±0.5
Through Bore	mm	40	40	40	40	40
Weight — No Brake / Brake	kg	6.84 / 7.52	6.84 / 7.52	6.84 / 7.52	6.84 / 7.52	6.84 / 7.52
Inertia — No Brake / Brake	g·cm ²	8333.3 / 10709.2	8333.3 / 10709.2	8333.3 / 10709.2	8333.3 / 10709.2	8333.3 / 10709.2

DIMENSIONAL DRAWINGS — Ø170 mm MECHANICAL PLATFORM — STANDARD / BRAKE CONFIGURATION



Operating environment: Standard operating range -10 to 45°C. Operation from -40 to -10°C or 46 to 70°C requires customization. Store at -30 to 60°C. Indoor use only; avoid condensation, dust, corrosive or flammable gas, oil mist, and direct sunlight.