

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

PLATFORM SELECTION

Platform	Motor Ø (mm)	Module Ø (mm)	Available Ratios	Peak Torque Range (Nm)	Rated Power (W)	Weight — No Brake (kg)	Communication
AHM-100-142	100	142	51 / 81 / 101 / 121 / 161	267 — 459	720	3.96	CAN / EtherCAT
AHM-100-170	100	170	51 / 81 / 101 / 121 / 161	496 — 800	650	6.84	CAN / EtherCAT

MODEL CONFIGURATION

Base model: AHM-[motor diameter]-[module diameter]-R[ratio]. Add B for brake, 2E for dual encoder, and EC for EtherCAT where required. Final suffixes are confirmed against the project configuration before ordering.



HARMONIC ROBOT JOINT MODULES

AHM-100-142 | Harmonic Joint Module Specification

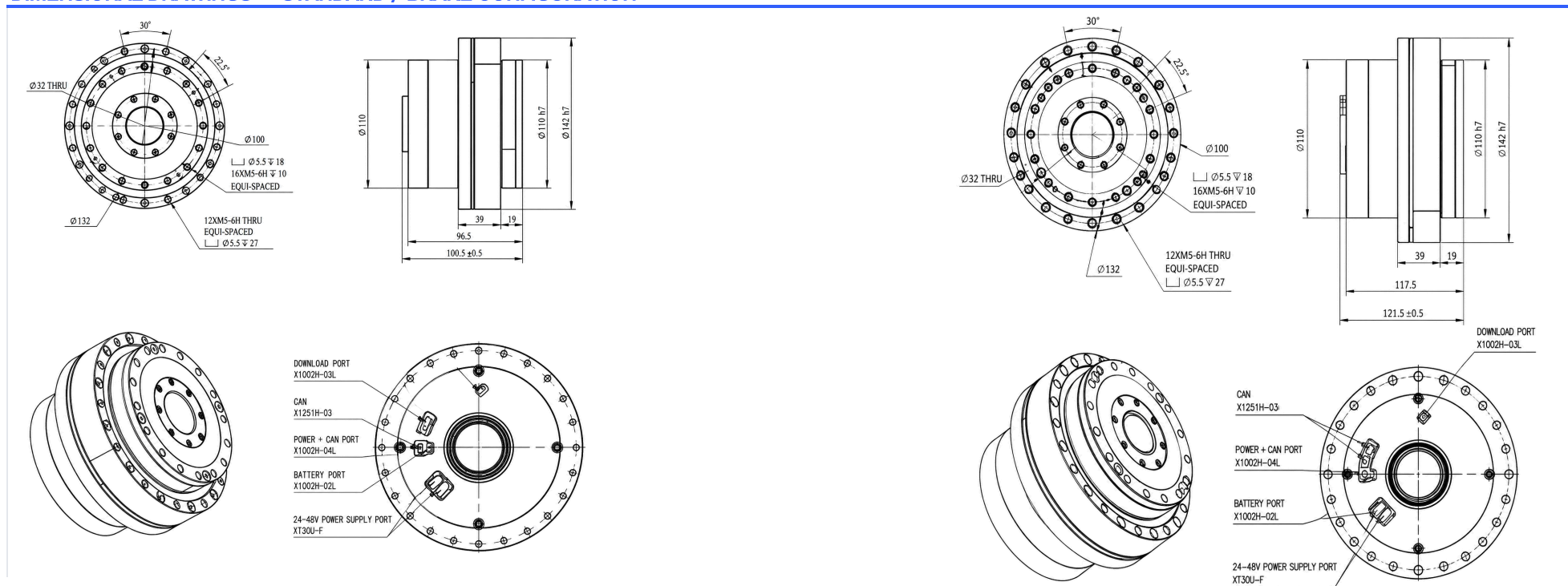
PRODUCT PLATFORM

ARTUS PLATFORM	AHM-100-142
5 RATIO OPTIONS	Ø142 mm 267–459 Nm PEAK TORQUE CAN / EtherCAT

Parameter	Unit	AHM-100-142-R51	AHM-100-142-R81	AHM-100-142-R101	AHM-100-142-R121	AHM-100-142-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 — STANDARD / BRAKE CONFIGURATION



Operating environment: -40 to 70°C extreme working range; -10 to 45°C general use; -30 to 60°C storage. Indoor use, no condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.



HARMONIC ROBOT JOINT MODULES

AHM-100-170 | Harmonic Joint Module Specification

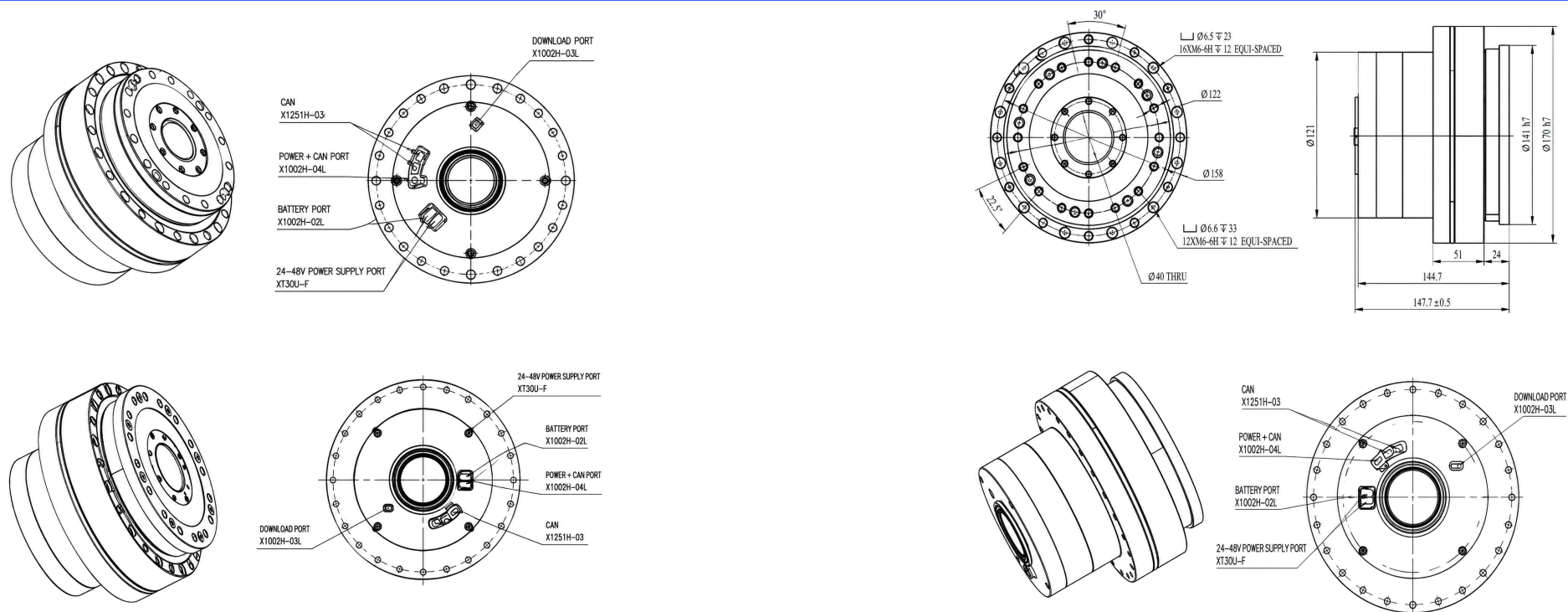
PRODUCT PLATFORM

ARTUS PLATFORM	AHM-100-170
5 RATIO OPTIONS	Ø170 mm 496–800 Nm PEAK TORQUE CAN / EtherCAT

Parameter	Unit	AHM-100-170-R51	AHM-100-170-R81	AHM-100-170-R101	AHM-100-170-R121	AHM-100-170-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 — STANDARD / BRAKE CONFIGURATION



Operating environment: -40 to 70°C extreme working range; -10 to 45°C general use; -30 to 60°C storage. Indoor use, no condensation, dust, corrosive or flammable gas, oil mist, or direct sunlight.