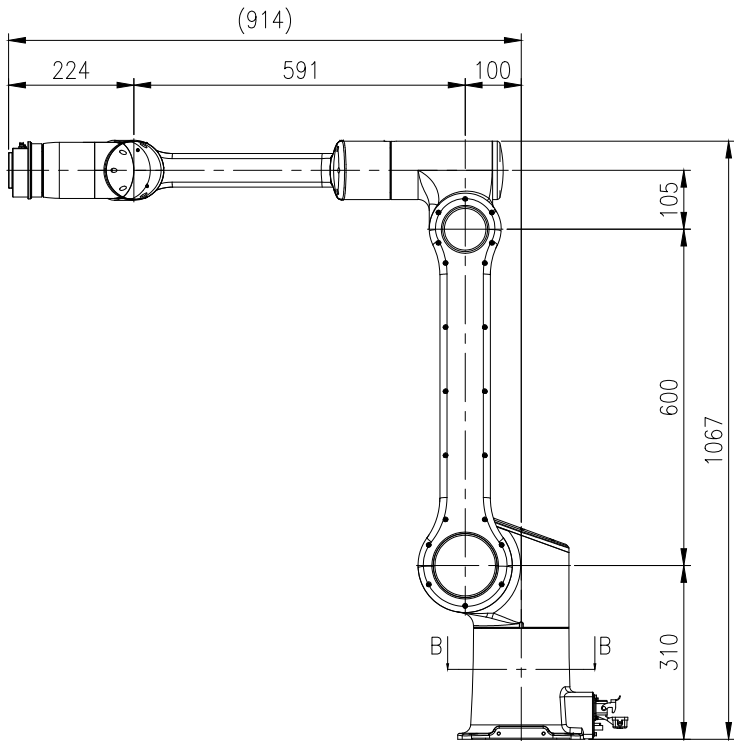
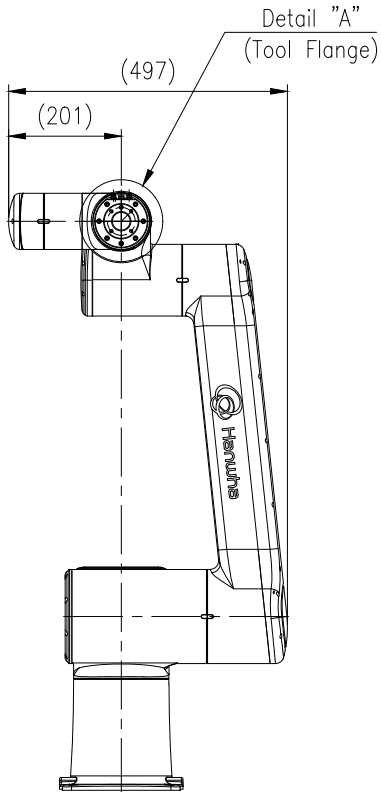


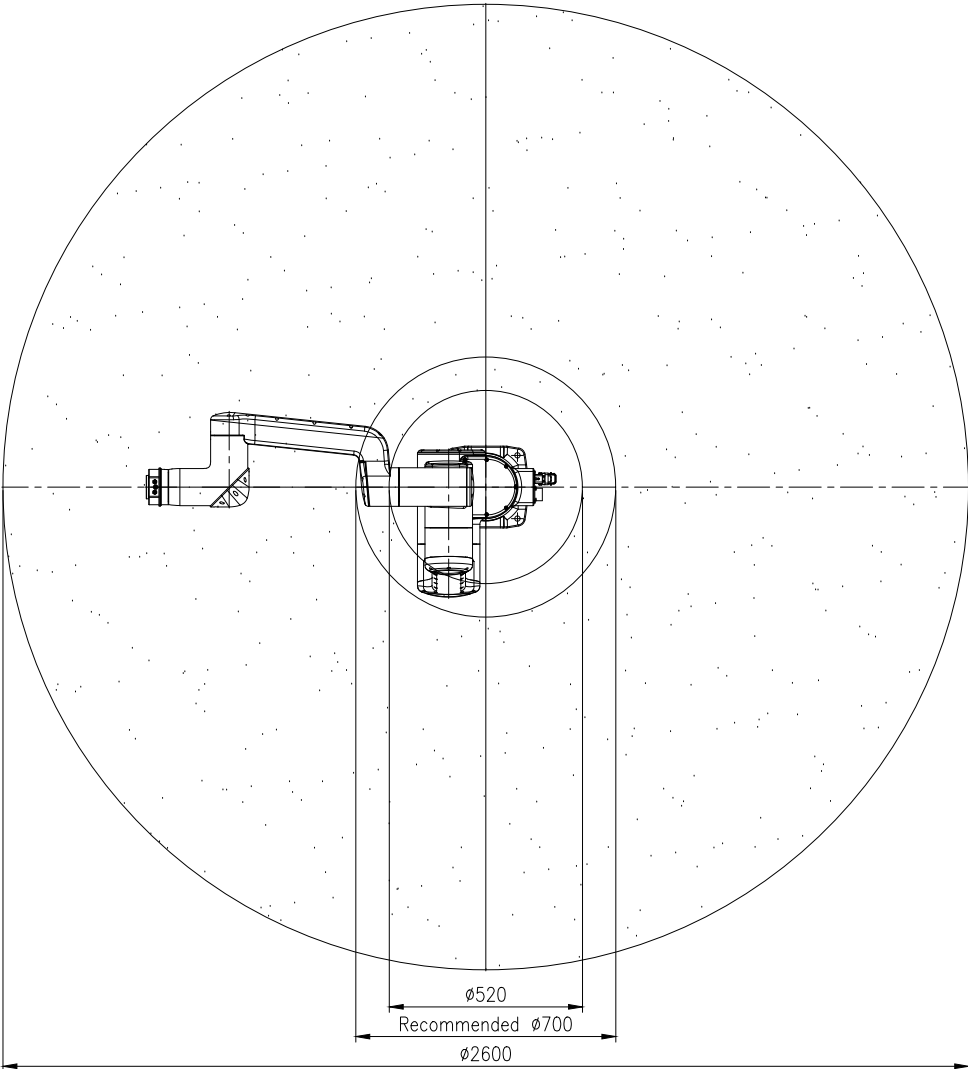
HCR Advanced

Hanuwa Collaborative Robot



		HCR-3A	HCR-5A	HCR-12A	
Robot Body	DOF	6 rotating joints	6 rotating joints	6 rotating joints	
	Payload	3 kg	5 kg	12 kg	
	Reach	630 mm	915 mm	1,300 mm	
	Speed (Tool)	1 m/s	1 m/s (Max. 1.5m/s)	1 m/s (Max. 1.2 m/s)	
	Repeatability	±0.05 mm	±0.05 mm	±0.07 mm	
	Weight	13 kg	21 kg	53 kg	
	Tool/IO 1	Connector	M8, 8pin, A Coding (Standard)	M8, 8pin, A Coding	M8, 8pin, A Coding
		Power	DC24V (set on GUI) 1.5A Max	DC24V (set on GUI) 3A Max (1.5A/pin)	DC24V (set on GUI) 3A Max (1.5A/pin)
		Digital In (Type)	2 (PNP)	2 (PNP)	2 (PNP)
		Digital Out (Type)	2 (NPN)	2 (NPN)	2 (NPN)
		Analog In	2	2	2
	Tool/IO 2	Connector		M8, 8 pin, A Coding	M8, 8 pin, A Coding
		Power		DC 24V (1.5A max)	DC 24V (1.5A max)
		Digital In (Type)		D-in 2 (PNP)	D-in 2 (PNP)
		Digital Out (Type)		D-out 2 (NPN)	D-out 2 (NPN)
	EtherCAT	Connector	M8, 6 pin	M8, 6 pin	M8, 6 pin
		DC	TX+, TX-, RX+, RX-DC 24V	TX+, TX-, RX+, RX-DC 24V	TX+, TX-, RX+, RX-DC 24V
	Sound Level		Less than 60 dBA	Less than 65 dBA	Less than 70 dBA
	Motion Range, Speed	J1	± 360°, Max 180°/sec	± 360°, Max 178°/sec	±180°, Max 130°/sec
		J2	± 360°, Max 180°/sec	± 360°, Max 178°/sec	±150°, Max 130°/sec
		J3	± 160°, Max 180°/sec	± 165°, Max 178°/sec	±165°, Max 200°/sec
J4		± 360°, Max 360°/sec	± 360°, Max 180°/sec	± 190°, Max 200°/sec	
J5		± 360°, Max 360°/sec	± 360°, Max 180°/sec	± 170°, Max 200°/sec	
J6		Infinite, Max 360°/sec	± 360°, Max 180°/sec	± 360°, Max 200°/sec	
IP protection		IP64	IP54	IP54	
Controller	Size	450 x 470 x 223 mm	450 x 470 x 223 mm	450 x 470 x 223 mm	
	Weight	17.6 kg	17.6 kg	19.8 kg	
	Power	100-240 VAC, 50-60Hz (1kW)	100-240 VAC, 50-60Hz (1kW)	100-240 VAC, 50-60Hz (1kW)	
	Internal I/O Ports	Emergency	2ch (4 ports)	2ch (4 ports)	2ch (4 ports)
		Safety	2ch (4 ports)	2ch (4 ports)	2ch (4 ports)
		Remote Power On/Off	Yes / Yes	Yes / Yes	Yes / Yes
		Digital In	Flexible In 8 ch (SINK) General In 8 ch (SINK)	Flexible In 8 ch (SINK) General In 8 ch (SINK)	Flexible In 8 ch (SINK) General In 8 ch (SINK)
		Digital Out	Flexible Out 8 ch (Source) General Out 8 ch (Source) * <1.2A / channel	Flexible Out 8 ch (Source) General Out 8 ch (Source) * <1.2A / channel	Flexible Out 8 ch (Source) General Out 8 ch (Source) * <1.2A / channel
	Incremental Encoder In	2 ch	2 ch	2 ch	
	Communication Protocols	TCP/IP and Modbus TCP (Profinet and EthernetIP with Gateway, DIN Rail for Gateway available)			
T/P	Size	343 x 270 x 81 mm			
	Weight	1.8 kg			
	Monitor	Display Size	12.1 inch		
		Resolution	1,024 x 768		
		Touch Tech	Resistive		
	User Interface	Power Switch	1 EA		
		Emergency Switch	1 EA		
	I/O Port	USB 2.0 1 EA			
	Accessory	T/P Holder 1 EA			





HCR-12A Working area, top view