

Elfin-Pro

Collaborative Robot



E03-Pro

E05-Pro

E05L-Pro

E10-Pro

E10L-Pro

E15-Pro

E12-Pro



Elfin-Pro collaborative robot is developed on the basis of elfin collaborative robot. It not only has all the advantages of the elfin collaborative robot such as a variety models, easy deployment, high precision, high flexibility, double-joint module design and modular design, but also has upgraded the product capability through the integration of cutting-edge AI technology, end force control integration, end vision integration. In addition, it adopts a new elegant and practical surface treatment process which is more stable and reliable. With all these advantages, Elfin Pro offers a better human-robot collaboration experience and could support wider application scenarios.



Force control integration



Camera system



Internal wiring



High sensitivity, much safer



Higher protection, more applications

Configuration Details

Configuration Instructions	Robot	Control Box	Teach Pendant	IP Classification
Force control integration		Standard control box	Standard teach pendant	IP54 or IP66
Camera system integration		Standard control box (External WiFi for wireless commissioning (optional))	Standard teach pendant	IP54

Industry

Automotive Consumer Renewable energy Medical experiment Physiotherapy Precision machining

Application

Welding Massage Polishing Grinding Assembly Screen inspection

Parameters

Elfin-Pro

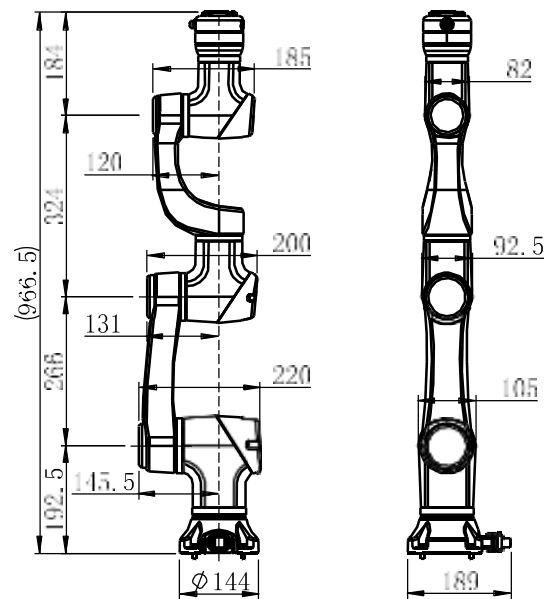
Model	E03-Pro	E05-Pro	E05L-Pro	E10-Pro	E10L-Pro	E12-Pro	E15-Pro
Weight(kg)	18kg	25kg	26kg	43kg	45kg	70kg	60kg
Payload(kg)	3kg	5kg	3.5kg	10kg	8kg	12kg	15kg
Reach(mm)	590mm	800mm	950mm	1000mm	1300mm	1800mm	1300mm
Power consumption	100W typical application					600W typical application	
Joint range	J1, J4, J6: $\pm 360^{\circ}$; J2 $\pm 135^{\circ}$; J3 $\pm 150^{\circ}$; J5 $\pm 147^{\circ}$	J1, J4, J6 $\pm 360^{\circ}$; J2 $\pm 135^{\circ}$; J3 $\pm 153^{\circ}$; J5 $\pm 180^{\circ}$					
Joint speed	J1-J4 180° /S; J5-J6 200° /S			J1-J2 100° /S; J3-J4 150° /S; J5-J6 180° /S		J1-J2 80° /S; J3-J4 120° /S ; J5-J6 150° /S	
Tool speed (Effective payload status)	2m/s	3m/s	3m/s	2m/s	2.5m/s	2.5m/s	2m/s
Repeatability (Effective payload, rated speed status)	± 0.02 mm			± 0.03 mm		± 0.05 mm	
Degree of freedom	6						
End I/O port	Digital input: 3, digital output: 3, analog input: 2						
Control box I/O port	Digital input: 16, digital output: 16, analogue input: 2, analogue output: 2						
I/O Source	24V / 2A						
Communication	TCP/IP, ModbusTCP, Profinet(Optional), Ethernet/IP(Optional)						
Programming	Graphical programming, remote calling interface						
IP Classification	IP54						
Collaborative operation	10 advanced security configuration functions						
Main material	Aluminum alloy						
Working temperature	0-50° C						
Power input	100-240V AC, 50-60Hz						
Cable	Cable to control box: 5m, cable to teach pendant: 5m						

Force control parameters (optional)		Vision parameters (optional)	
Force control, tool flange	Force x-y-z, Torque Rx-Ry-Rz	Focus height	100mm~500mm
Range	200N, 10Nm	Application accuracy	± 0.2 mm
Precision	2N, 0.1Nm	Hardware size	93.78mm x 54.45mm x146.24mm
Accuracy	4N, 0.2Nm	Camera pixels	6 million pixels
IP classification	IP54 or IP66	Communication interface	WIFI, network port
		IP classification	IP54
		Optional lens	8mm

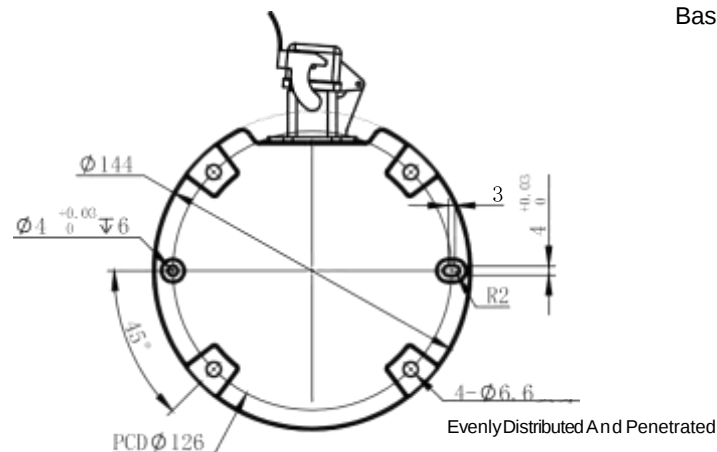


Standard Control Box		Mini Control Box (Optional)		Teach pendant	
Dimensions	445.2mm x237mm x (330+90)mm	Dimensions	387x246x85(mm)	Dimensions	290x234x108(mm)
Stand height	90mm	Power input	DC30~60V	Weight	2.5kg
Weight	18.3KG (1KW) / 17.5KG(2KW)	I/O source	DC24V	Display	11"
Power output	48V DC	I/O port	Inputs 8, outputs 8	Resolution	1920x1200
Working temperature	0~50°C	IP classification	IP20	E-stop button	1
Working humidity	90% relative humidity (non-condensing)	Communication	TCP/IP Modbus		
IP classification	IP20				
Communication frequency	1000Hz				

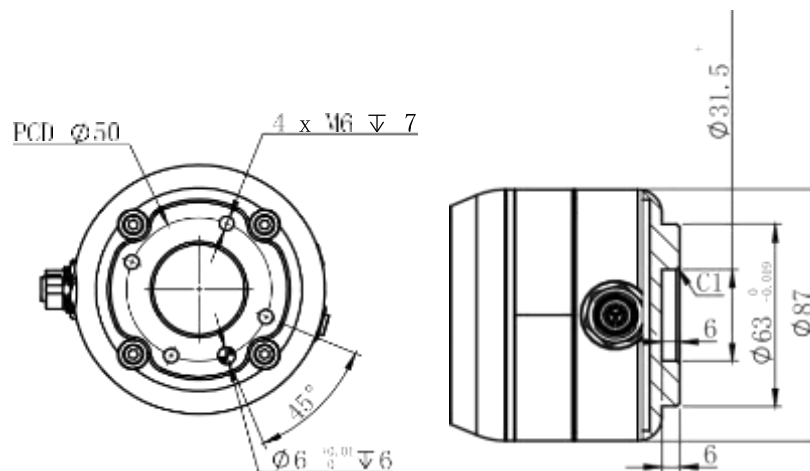
Size Specification



Base Installation Dimensions



End Tool Installation Dimensions



Note: the above dimensional drawings are applicable to E03-Pro.
Drawings for other models are available upon request