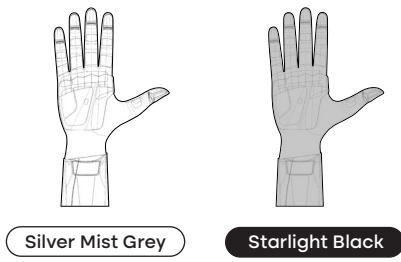


Dexterous Hands

Bionic Versatility, Intelligent Stability.
World's first fully in-house developed, high-DOF hybrid-drive (tendon+direct) dexterous hand.

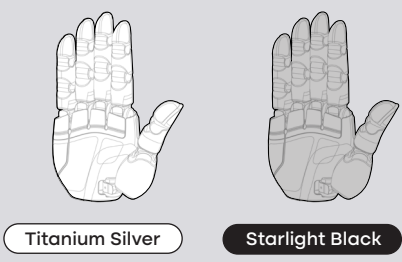


Xynova Flex 2			
Electrical Parameters	Rated Voltage	V	48
	Rated Current	A	3
Structural Characteristics	Degrees of Freedom	--	23
	Transmission Mode	--	Hybrid-drive (tendon+direct)
	Hand Weight	g	400
	Hand Size	mm	204 × 82.5 × 42
	Integrated Arm-Hand Length	mm	406
	Max. Arm Circumference	mm	Φ82.5
Performance Parameters	Grip Time	s/times	0.25
	Max. Fingertip Force	N	20
	Grip Vertical Payload ¹	kg	20
	Grip Horizontal Payload ²	kg	10
	Repeatability	mm	±0.2
	Tactile Sensor Type	--	Piezoresistive Fingertip, Palm (3D), Finger Pad
	Min. Trigger Force	N	0.1
	Tactile Sensor Resolution	N	0.1
Range of Motion	Thumb Pitch/ Rotation Angle	°	0~90/ 0~100
	Non-thumb Pitch/ Yaw Angle	°	0~90/ -20~20
	Wrist Pitch/ Yaw Angle	°	-70~50/ -40~40
Control and Communication	Communication Mode	--	CAN FD/ EtherCAT
	Control Mode	--	Multimodal perception intelligent control
Software Support	Secondary Development	--	SDK provided, compatible with ROS 1 & ROS 2, URDF models included
	Simulation Environment	--	Supports MuJoCo and Isaac Lab
	Operational Support	--	Built-in kinematics library and reinforcement learning examples
	OTA Update	--	Supported

¹ With vertical wrist and bent fingers
² With horizontal wrist and straight fingers

Dexterous Hands

Direct-Drive Transparency, Perceptive Infinity.
Mass-produced fully self-developed 22-DOF pure direct-drive dexterous hand.

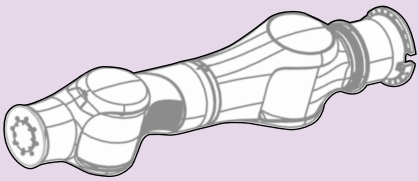


Xynova Prima 1			
Electrical Parameters	Rated Voltage	V	24
	Rated Current	A	5
Structural Characteristics	Degrees of Freedom	--	22
	Transmission Mode	--	Direct-drive
	Hand Weight	g	850
	Hand Size	mm	190 × 90.5 × 44
	Grip Diameter Range	mm	Φ10~220
Performance Parameters	Grip Time	s/times	0.08
	Max. Fingertip Force	N	15
	Grip Vertical Payload ¹	kg	20
	Grip Horizontal Payload ²	kg	10
	Force Control Accuracy	N	0.5
	Repeatability	mm	0.5
	Min. Back driving Force	N	0.2
	Tactile Sensor Type	--	Visuo-tactile (fingertip-3D)
	Min. Trigger Force	N	0.1
	Tactile Sensor Resolution	N	0.1
Range of Motion	Thumb Pitch/ Rotation Angle	°	-10~90/ 0~100
	Non-thumb Pitch/ Yaw Angle	°	-30~105/ -20~20
Control and Communication	Communication Mode	--	CAN FD/ EtherCAT
	Control Mode	--	Multimodal perception intelligent control
Software Support	Secondary Development	--	SDK provided, compatible with ROS 1 & ROS 2, URDF models included
	Simulation Environment	--	Supports MuJoCo and Isaac Lab
	Operational Support	--	Built-in kinematics library and reinforcement learning examples
	OTA Update	--	Supported

¹ With vertical wrist and bent fingers
² With horizontal wrist and straight fingers

Robotic Arm

From Arm to Finger, Force Transparency.
High-Precision Force-Controlled Robotic Arm for Humanoid Robots.



Xynova XR5-10-LFS/ XR5-10-RFS			
Electrical Parameters	Input Voltage	V	DC48±10%
Structural Characteristics	Degrees of Freedom	--	5
	Max. Payload (per arm)	kg	10
	Operation Radius	mm	472
	Arm Weight (per arm)	kg	9
	Camera Cable	--	Can be routed internally to the end-effector
	Brake	--	Each joint equipped with a brake
Joint Range of Motion	J1	°	±178
	J2	°	±120
	J3	°	±178
	J4	°	-60~145
	J5	°	±178
Performance Parameters	Max. Joint Speed	--	J1-J5: 3.14rad/s, 180°/s
	Max. TCP Speed	m/s	1
	Repeatability	mm	±0.03
	Joint Torque Sensors	--	Standard on each axis
	Force Repeatability	--	≤0.15N, ≤0.05N.m
Control and Communication	Communication	--	EtherCAT
	Communication Cycle	ms	≤1
	Encoder Type	--	Double Encoder
Software Support	Protection Rating	--	IP54
	Operating Temperature	°C	0~45
	Operating Humidity	--	20-80% RH (non-condensing)

Micro Linear Actuators

Fast, Precise, Incredibly Powerful.
Linear actuators and micro actuators designed specifically for humanoid robots.

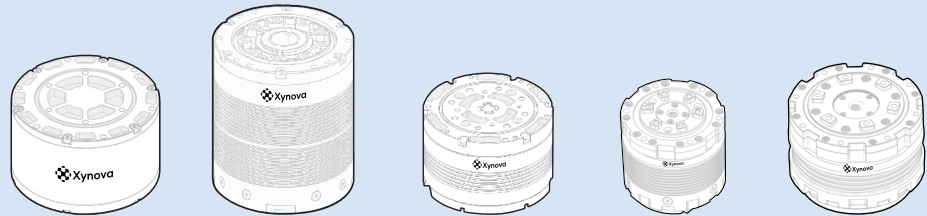


Micro Planetary Roller Screw Linear Actuator					
		PRM 10-20-34-150-F	PRM 10-20-64-75-F	PRM 18-36-80-360-F	
Electrical Parameters	Input Voltage	V	DC12±10%	DC12±10%	DC24±10%
	No-load Current	A	0.4	0.5	0.5
	Peak Current	A	1.2	1.2	3.0
	Quiescent Current	A	0.05	0.05	0.06
Mechanical Parameters	Effective Stroke	mm	≥19	≥19	≥35
	Max. No-Load Speed	mm/s	≥34	≥64	≥80
	Full-Load Speed	mm/s	≥9	≥25	≥15
	Max. Thrust	N	≥150	≥75	≥360
	IP Rating	--	IP54	IP54	--
	Mechanical Interface	--	Standard Interface	Standard Interface	Standard Interface
	Motor Type	--	Coreless Brushless DC Motors	Coreless Brushless DC Motors	Coreless Brushless DC Motors
Sensor Parameters	Force Sensor Range	N	-200~200	-100~100	-500~500
	Force Sensor Resolution	N	2.0	1.0	5.0
Structural Characteristics	Weight	g	≤34	≤34	≤ 90
	Size	mm	10 × 13.5 × 81	10 × 13.5 × 81	Φ18 × 85 (w/ Pressure Sensor)
Environmental Adaptability	Operating Temperature	°C	-15~60	-15~60	-15~60
	Noise	dB	<55	<55	<60
Control and Communication	Repeatability	mm	±0.04	±0.04	±0.05
	Communication	--	LVTTTL Serial Port	LVTTTL Serial Port	LVTTTL Serial Port

*Contact us for more detailed models.
*All models can be customized without force sensors.

Rotary Actuators
Planetary Reducer Series

More Powerful, More Compact.
High burst, reliability, and lightweight actuators for all scenarios.

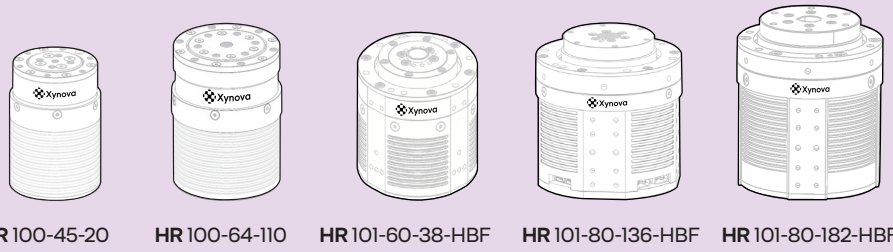


		PR 64-110-500		PR 43-120-600-HB		PR 20-102-130-HS		PR 19-57-25-HS		PR 21-100-140-HS	
Electrical Parameters	Rated Voltage	V	48	48	48	48	48	48	48	48	48
	Rated Current	A	23	19	18	3	15.7	15.7	15.7	15.7	15.7
	Peak Current	A	70	65	61.5	9.6	50	50	50	50	50
	Power Rating	W	672	1078	867	109	369	369	369	369	369
	Rated Speed	r/min	30	30	120	130	80	80	80	80	80
	No-load Speed	r/min	45	32	150	156	130	130	130	130	130
	Rated Torque	Nm	150	200	40	8	44	44	44	44	44
	Peak Torque	Nm	500	600	130	25	140	140	140	140	140
	Torque Density	Nm/kg	323	140	113	63	117	117	117	117	117
Structural Characteristics	Gear Ratio	--	64	43	20	19	21	21	21	21	21
	Backlash	Arcmin	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12
	Weight	kg	1.6	3.8	1.2	0.4	1.2	1.2	1.2	1.2	1.2
	Size	mm	Φ110 × 64.3	Φ120 × 110	Φ102 × 59	Φ57 × 57	Φ100 × 61.7	Φ100 × 61.7	Φ100 × 61.7	Φ100 × 61.7	Φ100 × 61.7
	Inner Diameter	mm	0	24	10	4.5	10	10	10	10	10
	Brake	--	No	Standard, removable	No	No	No	No	No	No	No
Sensor Parameters	Encoder Resolution	bit	14	17	17	16	16	16	16	16	16
Environmental Adaptability	Operating Temperature	°C	-20~55	-20~55	-20~55	-20~55	-20~55	-20~55	-20~55	-20~55	-20~55
	Noise	dB	≤70	≤60	≤70	≤60	≤60	≤60	≤60	≤60	≤60
	Protection Rating	--	IP54	IP54	IP54	IP20	IP20	IP20	IP20	IP20	IP20
Control and Communication	Repeatability	°	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1	≤0.1
	Communication	--	CAN/ EtherCAT	CAN/ EtherCAT	CAN/ EtherCAT	CAN	CAN/ EtherCAT	CAN/ EtherCAT	CAN/ EtherCAT	CAN/ EtherCAT	CAN/ EtherCAT
	Working Mode	--	Intelligent parameter tuning for torque, speed, and position under full operating conditions.				MIT	MIT	MIT	MIT	MIT

*Contact us for more detailed models.

Rotary Actuators
Harmonic Reducer Series

More Powerful, More Compact.
High burst, reliability, and lightweight actuators for all scenarios.



			HR 100-45-20	HR 100-64-110	HR 101-60-38-HBF	HR 101-80-136-HBF	HR 101-80-182-HBF
Electrical Parameters	Rated Voltage	V	48	48	48	48	48
	Rated Current	A	1.7	6.2	1.2	4.9	7.9
	Peak Current	A	5	18.7	4.9	17.6	24.9
	Power Rating	W	32	170	49	198	310
	Rated Speed	r/min	30	30	30	30	30
	No-load Speed	r/min	45	45	45	45	45
	Rated Torque	Nm	6.7	36	10	40	60
	Peak Torque	Nm	20	110	38	136	182
Torque Density	Nm/kg	82	173	45	97	114	
Structural Characteristics	Gear Ratio	--	100	100	101	101	101
	Backlash	Arcsec	≤10	≤10	≤10	≤10	≤10
	Weight	kg	0.24	0.64	0.85	1.4	1.6
	Size	mm	Φ45 × 63	Φ64 × 80	Φ60 × 70	Φ80 × 85	Φ80 × 95
	Inner Diameter	mm	4.7	7	12	15	15
	Torque Sensor	--	No	No	Standard, removable		
	Brake	--	No	No	Standard, removable		
Sensor Parameters	Encoder Resolution	bit	14	14	≥19	≥19	≥19
	Encoder Type	--	Double Encoder	Double Encoder	Double Encoder	Double Encoder	Double Encoder
	Temperature Sensor Accuracy	°C	0.1	0.1	0.1	0.1	0.1
Environmental Adaptability	Operating Temperature	°C	-20-55	-20-55	-20-55	-20-55	-20-55
	Noise	dB	≤68	≤68	≤60	≤60	≤60
	Protection Grade	--	IP54	IP54	IP54	IP54	IP54
Control and Communication	Repeatability	°	≤0.1	≤0.1	≤0.01	≤0.01	≤0.01
	Communication	--	CAN/ EtherCAT	CAN/ EtherCAT	CAN/ EtherCAT	CAN/ EtherCAT	CAN/ EtherCAT
	Working Mode	--	Intelligent parameter tuning for torque, speed, and position under full operating conditions.			MIT	MIT

Xynova

www.xynova.com.cn
contact-us@xynova.tech

Building 19, 2 Yongtai Road,
Yuhang District, HangZhou,
Zhejiang Province, China

Hangzhou Xynova Technology Co., Ltd. is a world-leading full-stack provider of general dexterous manipulation solutions. We focus on high-sensitivity perception, intelligent control, and high-precision execution, delivering the master key that unlocks dexterous manipulation for embodied intelligence. Our core products include high-DoF dexterous hands, high-torque density rotary and linear actuators.

Xynova is backed by a team of top-tier talents from both industry and academia. Our core team currently consists of nearly 300 members, including more than 120 R&D staff.

Xynova not only has the capability to independently develop full-stack core technologies but also operates a fully integrated production line, encompassing everything from mechanical processing and motor winding to module and dexterous hand assembly. We are one of the few domestic suppliers capable of self-developing and manufacturing the complete range of components, including motors, servo controller and drivers, reducers, roller screws, and control algorithms for dexterous hands and actuators.

Xynova
Harmony in motion,
evolving with every move.

Product Data Sheet

