

机器人夹持技术
GRIPPING TECHNOLOGY
适用于所有的搬运和装配系统
FOR ALL LOADING AND ASSEMBLY SYSTEMS

Driven by technology

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ENTERPRISE SPIRIT

企业概念 ▶▶ 比你想像的更强大!

ANT科技是中国首批从事高性能精密机器人末端执行器研发制造的专业品牌，也是国家级高新技术企业。公司凭借十余年技术积累和持续的研发投入，成功突破了多项关键核心技术，实现了100%国产化。

随着中国自动化产业的蓬勃发展，ANT凭借其快速的响应速度、丰富的产品序列和可靠的专业产品，与众多行业建立了发展伙伴关系，并始终秉持匠心精神，为客户提供定制化的零件夹持解决方案，助力客户实现更高效率和更高品质。

ANT对品质的追求从原材料开始，我们采用军用航空铝合金生产企业的定制原材料，经过专用的加工中心制造，再利用ANT独有的涂层技术进行表面处理，确保产品达到军工级表面机械性能。对生产过程的严格控制保证了我们的产品精度稳定、寿命长久。

ANT Technology is one of the first professional brands engaged in the R&D and manufacturing of high-performance precision robot end-effector in China, and also a national high-tech enterprise. With more than ten years of technology accumulation and continuous R&D investment, the company has successfully broken through a number of key core technologies and achieved 100% localization.

With the booming development of China's automation industry, ANT has established development partnerships with many industries by virtue of its fast response time, rich product lineup and reliable professional products. ANT always adheres to the spirit of craftsmanship to provide customers with customized part clamping solutions and help them achieve higher efficiency and quality.

ANT's pursuit of quality begins with raw materials. We use customized raw materials from military aviation aluminum alloy producers, manufacture them in dedicated machining centers, and then use ANT's unique coating technology for surface treatment to ensure that our products reach military-grade surface mechanical properties. Strict control of the production process ensures that our products have stable precision and long life.



在亚洲工业迅速发展和转型的背景下，工厂自动化已成为必然趋势。客户不仅需要专业的产品，更期待创新与创造的思维。ANT深入了解客户需求，针对不同客户群提供相应的解决方案，助力客户实现更高效率和更高品质。

Against the backdrop of rapid industrial development and transformation in Asia, factory automation has become an inevitable trend. Customers not only need professional products, but also expect innovative and creative thinking. ANT deeply understands customers' needs and provides appropriate solutions for different customer groups, helping customers realize higher efficiency and quality.

解决方案/THE SOLUTION

ANT技术团队多年来一直专注于高性能夹持系统应用解决方案的研发。我们每年为各行业提供数以千计的卓越夹持解决方案。

The ANT technical team has been specializing in the development of high performance clamping system application solutions for many years. We provide thousands of superior clamping solutions to a variety of industries each year.

AGN/AZN——

关节机器人自动化搬运、电机行业自动化装配解决方案

Joint robot automated handling, automated assembly solutions for the motor industry

ALH/ALE——

汽车加工行业解决方案

Solutions for the automotive processing industry

SRH-P-AZN/AWM-AZN——

针对桁架机器人，金属加工领域解决方案

Metalworking solutions for truss robots

AGN——

双单元轴类夹持解决方案

Two-cell shaft clamping solutions

SRP——

旋转单元变装大行程夹爪解决方案

Rotary unit variant with large stroke jaw solution

FB-SZ8——

医疗行业专用解决方案

Specialized solutions for the medical industry

ACM——

精度补偿解决方案，Z向补偿安全可靠

Precision compensation solution with safe and reliable Z-direction compensation

AGF/AZF——

打磨行业防尘防松动解决方案

Dustproof and anti-loosening solutions for the grinding industry

AGY/AWG——

热锻行业解决方案

Solutions for the hot forging industry

SKE——

桁架机器人轴类装载解决方案

Axis loading solutions for truss robots

SRP&SRH-P——

升级多功能换位解决方案

Upgraded multifunctional transposition solutions

AGDK——

大尺寸大负载搬运解决方案

Large-Size, Large-Load Handling Solutions

BYF——

双向断气保压解决方案，保压周期超过一周

Bi-directional break pressure solution with more than one week of pressure retention cycles

AFC——

精度补偿解决方案，XY向补偿灵活多变

Accuracy compensation solutions with flexible XY compensation





行业应用 / INDUSTRY APPLICATIONS

用我们的专业能力
成就您的竞争优势

With our professional competence Achieve your competitive advantage

技术创新与丰富的经验是我们在工程设计、产品制造和服务支持方面取得成功的关键。我们不仅能提供个性化的解决方案，还能为特定行业量身打造专业方案

Technological innovation and extensive experience are the keys to our success in engineering, product manufacturing and service support. We offer not only individual solutions, but also specialized solutions tailored to specific industries.

大品牌 · 高质量 · 中国造

CHINESE BRAND



医药医疗行业
Medical care



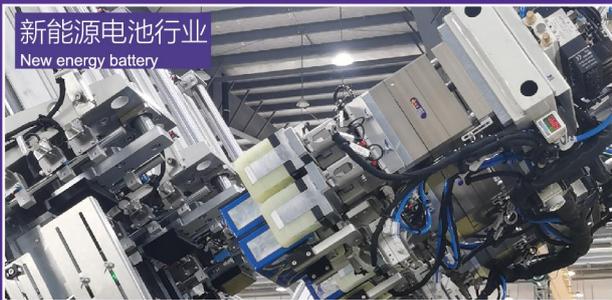
机床自动化行业
Machine tool automation



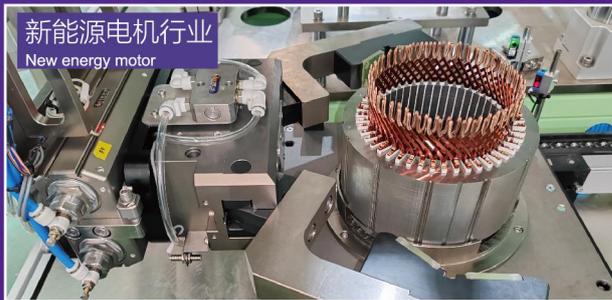
汽车制造行业
Automobile manufacturing



铸造和锻造行业
Casting and forging



新能源电池行业
New energy battery



新能源电机行业
New energy motor

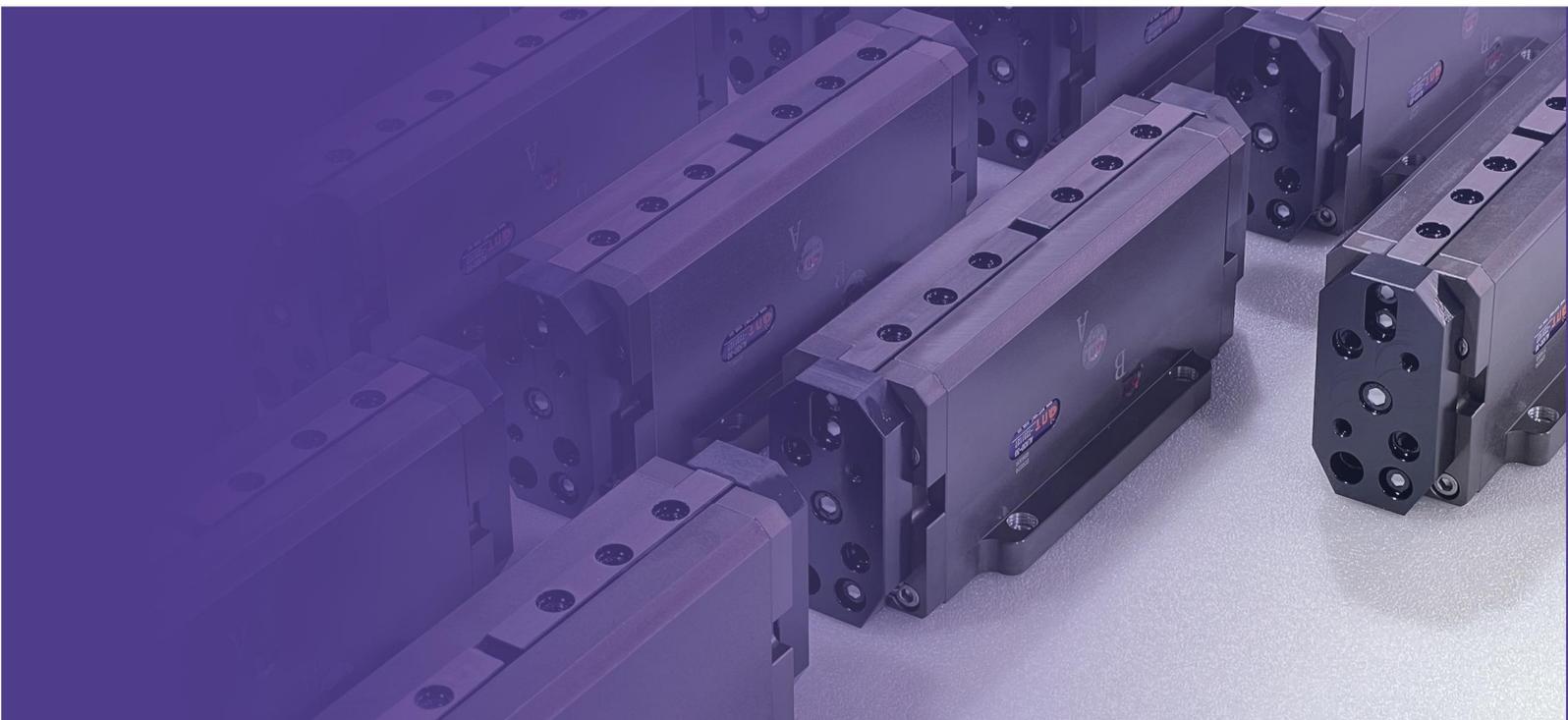
典型客户/TYPICAL CUSTOMERS

我们持续的研发投入伴随着中国自动化产业的腾飞硕果累累，ANT通过高性能产品以及快速的客户服务，稳固了在科技浪潮中的地位。客户的认可让我们深感自豪，也激励我们不断追求卓越。

Our continuous investment in R&D has been fruitful along with the take-off of China's automation industry, and ANT has solidified its position in the technological wave through high-performance products and fast customer service. The recognition of our customers makes us proud and motivates us to pursue excellence.



注：排名不分先后

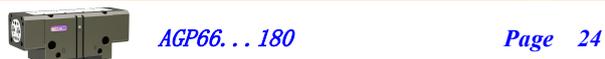


精密末端执行器/Precision End Executor

2 指平动抓取手爪 / 2-Finger Parallel Gripper series



2 指平动密封型手爪 / 2-Finger Parallel seal Gripper



长行程二指平动手爪 / Long Stroke 2-jaw parallel Gripper



2 指长行程重型手爪 / 2-Finger Heavy-load Gripper series



2 指张角手爪 / 2-Jaw Angular Gripper



2 指张角液压手爪 / 2-Jaw Angular Hydraulic Gripper



3 指定心手爪 / 3-Finger Concentric Gripper series



3 指定心密封手爪 / 3-Finger Concentric Seals Gripper series



4 指定心手爪 / 4-Finger Concentric Gripper series



O 型圈装配手爪 / O-Ring Assembly Gripper series



O 型圈装配手爪 / O-Ring Assembly Gripper series



旋转摆台 / Swivel Unit



旋转手腕 / Swivel Head



精度补偿模块 / Compensation Unit

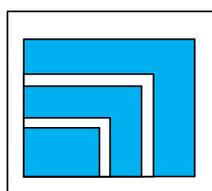


快换模块/ Quick-change Unit

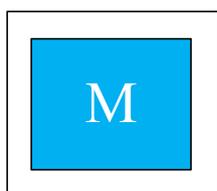


附件 / Accessories

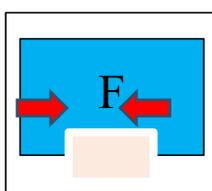




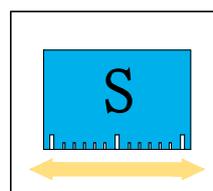
Sizes
50.....380



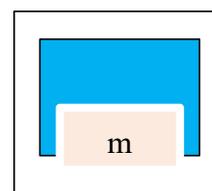
Weight
0.15...51.6Kg



Gripping Force
170...19110N



Stroke per finger
4...45mm



Workpiece weight
0.85...100Kg

应用案例 / Application example



- ① SRH-P30 旋转手腕
- ② AGN100 2指平动手爪

SRH-P30 Swivel Head
AGN100 2-Finger Gripper series

2 指平动抓取手爪 / 2-Finger Parallel Gripper

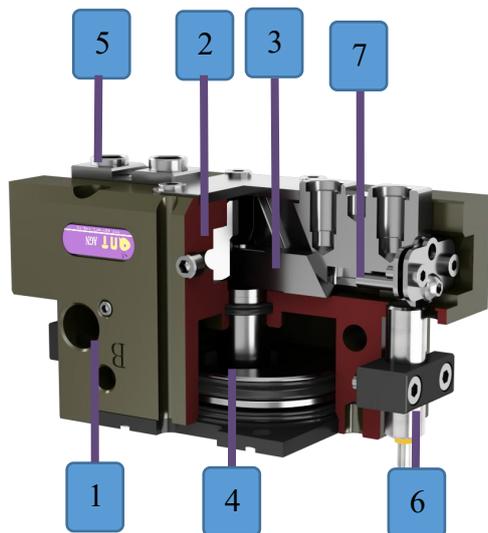
原理

- 压缩空气推动椭圆形活塞上下运动
- 楔形将驱动力转化为夹持力
- 滑块同步运动

Principle

- The oval piston is moved up or down by means of compressed air
- High gripping force as a result of optimal direction change of driving force into gripping force
- Synchronous gripping movement of both base jaws

剖视图 / Sectional diagram



- 1 本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 T 型导轨 T-slot guidance**
重负载导轨：负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 3 传动方式 Transmission Model**
高动力传输
High power transmission
- 4 驱动部分 Energy supply**
大型椭圆形活塞，提供更大的夹持力
Large oval piston: can have greater force
- 5 滑块 Jaw**
连接工件手指
For the connection of the workpiece-specific gripper fingers
- 6 传感系统 Sensor system**
接近式传感器
Of gripper jaw via proximity switch
- 7 可调感应块 Adjustable induction block**
便捷可调感应凸台
Convenience, adjustable switch cam

传感系统 Sensor system

磁性传感器 / Magnetic Sensor (选购/Order)



适用规格(NO.)	所有规格
NPN	WMS-M9T
PNP	WMS-M9T

● 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80°C 下使用 / The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80°C.

接近开关 / Proximity switch (选购/Order)



适用规格(NO.)	AGN50/66/80/100/125	AGN160/180/260/300/380
NPN	WPS-8GM18N	WPS-8GM35N
PNP	WPS-8GM18P	WPS-8GM35P

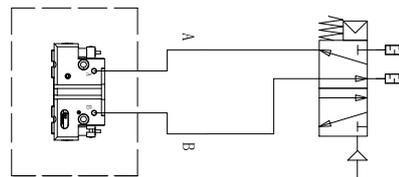
-F 系列接近开关 / Proximity switch (选购/Order)



适用规格(NO.)	AGN50/66/80/100/125-F	AGN160/180/260/300/380-F
NPN	WPS-8GM18N	WPS-8GM35N
PNP	WPS-8GM18P	WPS-8GM35P

注：规格为 50-125-F 系列手爪接近感应螺钉须安装在手指上

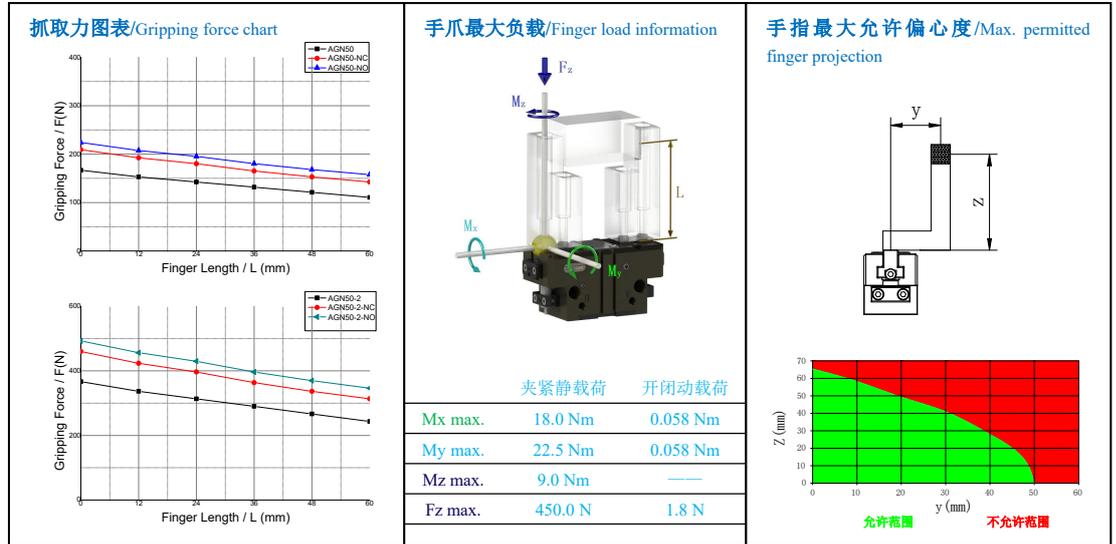
手爪气动连接原理图



手爪适配气管及电磁阀有效截面积建议值

型号	AGN			
	50/66/80	100/125	160/260	300~380
气管直径 (mm)	≥4	≥6	≥8	≥10
电磁阀有效截面积 (Cv/mm ²)	≥17.0	≥17.0	≥28.0	≥48.0

AGN50



❖所有参数为气压 6bar 下测试/All data measured at 6bar

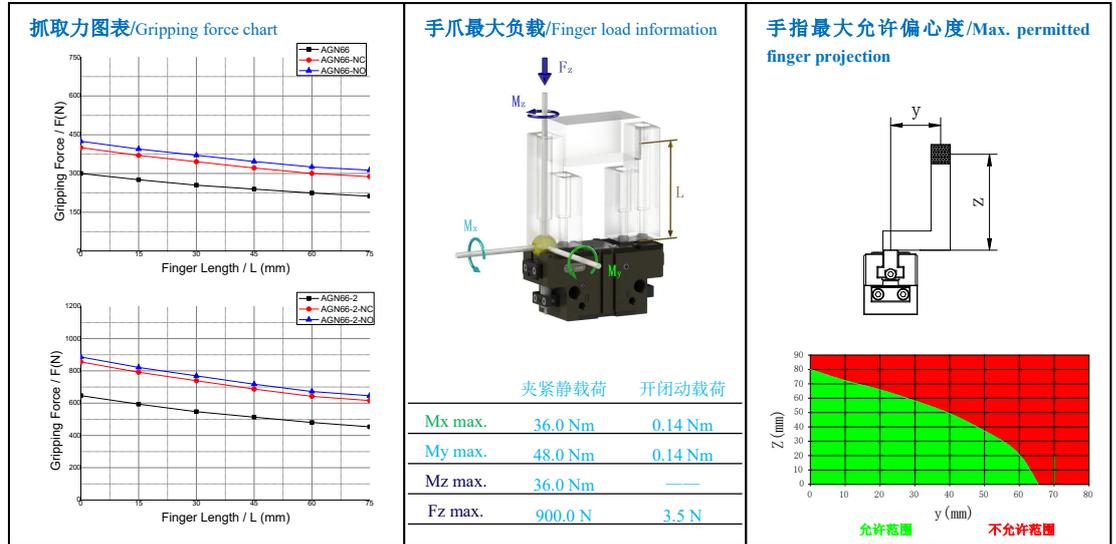
技术资料/Technical data

Description	AGN50	AGN50-NC	AGN50-NO	AGN50-2	AGN50-2-NC	AGN50-2-NO
手指单边行程 Stroke per finger	mm	4	4	4	2	2
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	28*P	35*P	62.5*P	75*P
	6bar 气压下夹持力	N	168	210	375	450
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	30*P	37.5*P	68*P	80.5*P
	6bar 气压下夹持力	N	180	225	408	483
断气最小夹持力 Min. gripping force without pressure air	N		40	40	90	90
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	0.14	0.17	0.18	0.14	0.17
空气消耗量/周期 Air consumption per double stroke	cm ³	4.1	18.27	18.27	4.1	18.27
开/闭时间 Closing/opening time	s	0.02/0.02	0.025/0.15	0.15/0.025	0.02/0.02	0.03/0.15
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	64	58	58	58	55
单个手指最大重量 Max. permitted weight per finger	Kg	0.18	0.18	0.18	0.18	0.18
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

AGN66



❖所有参数为气压 6bar 下测试/All data measured at 6bar

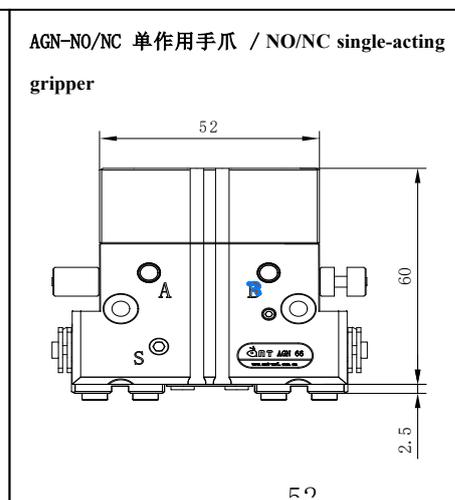
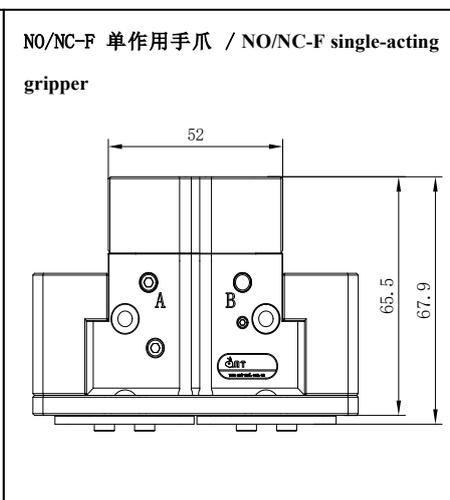
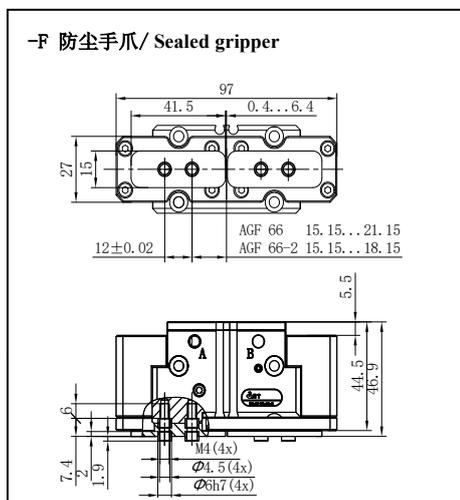
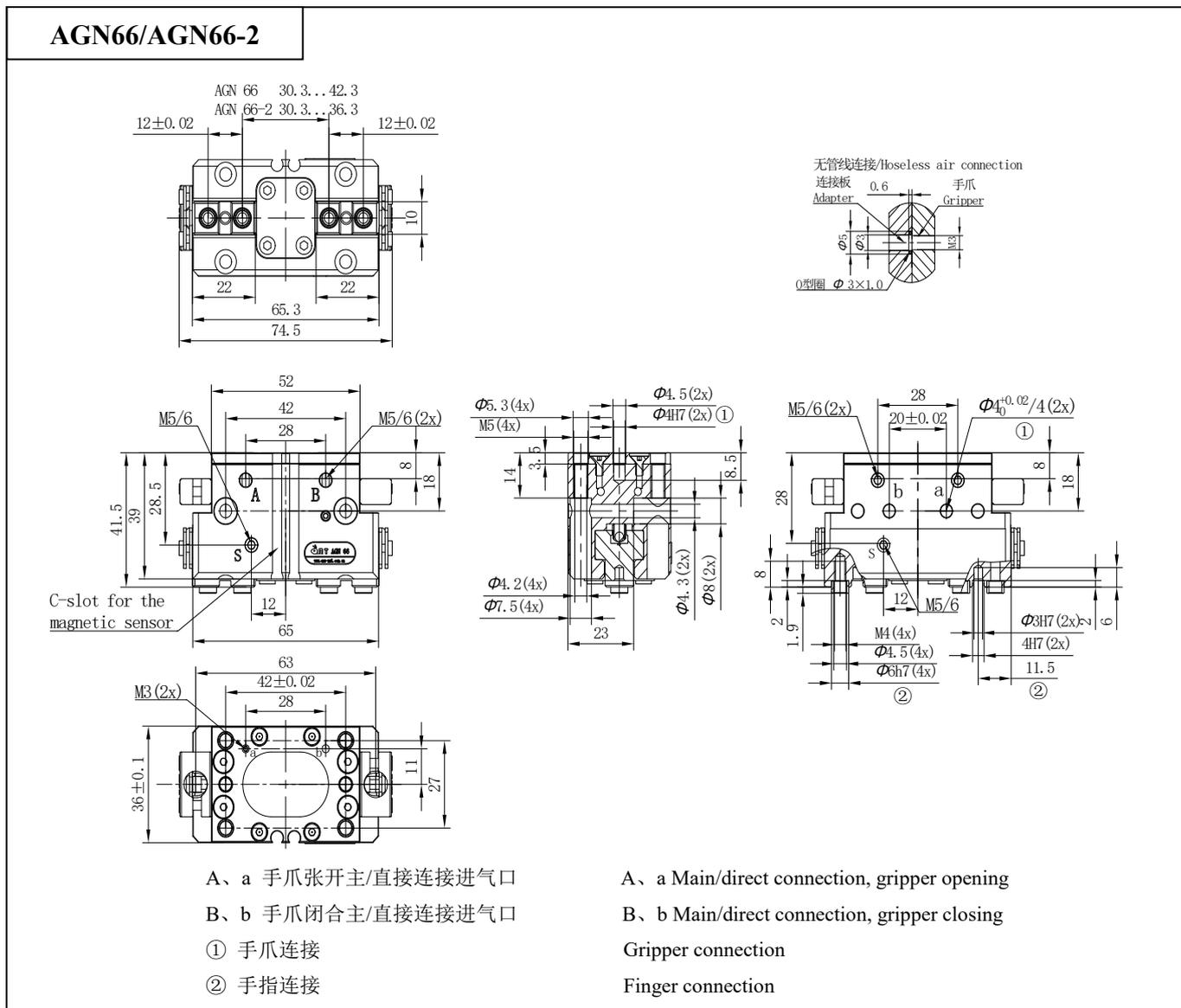
技术资料/Technical data

Description	AGN66	AGN66-NC	AGN66-NO	AGN66-2	AGN66-2-NC	AGN66-2-NO
手指单边行程 Stroke per finger	mm	6	6	6	3	3
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	50*P	66*P	110*P	150*P
	6bar 气压下夹持力	N	300	396	660	900
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	54*P	70*P	120*P	158*P
	6bar 气压下夹持力	N	324	420	720	948
断气最小夹持力 Min. gripping force without pressure air	N		100	100	240	240
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	0.27	0.33	0.33	0.27	0.33
空气消耗量/周期 Air consumption per double stroke	cm ³	10.2	36	36	10.2	36
开/闭时间 Closing/opening time	s	0.03/0.03	0.04/0.025	0.025/0.04	0.03/0.03	0.05/0.03
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	80	72	72	72	72
单个手指最大重量 Max. permitted weight per finger	Kg	0.35	0.35	0.35	0.35	0.35
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

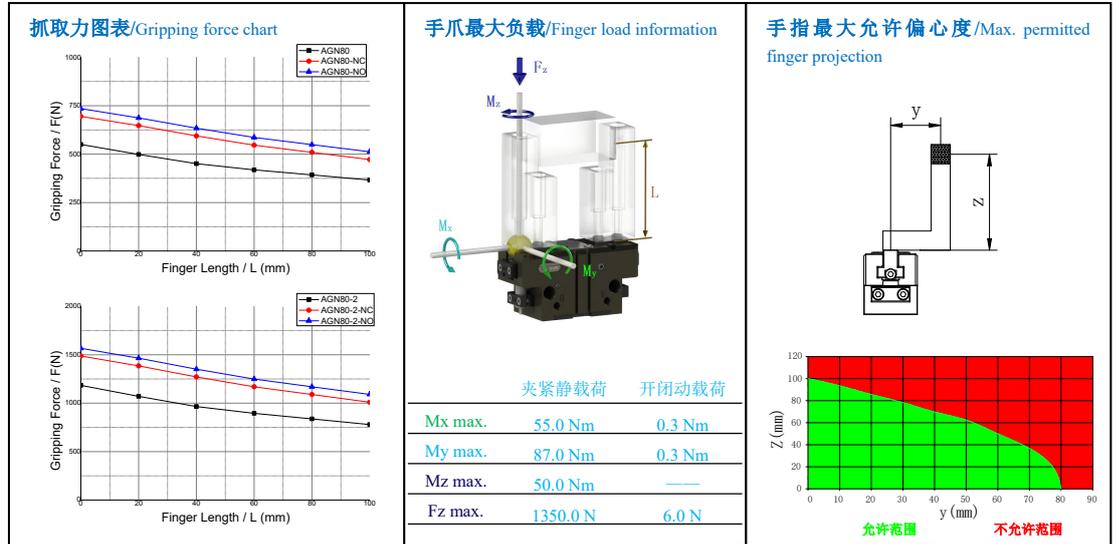
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AGN80



❖所有参数为气压 6bar 下测试/All data measured at 6bar

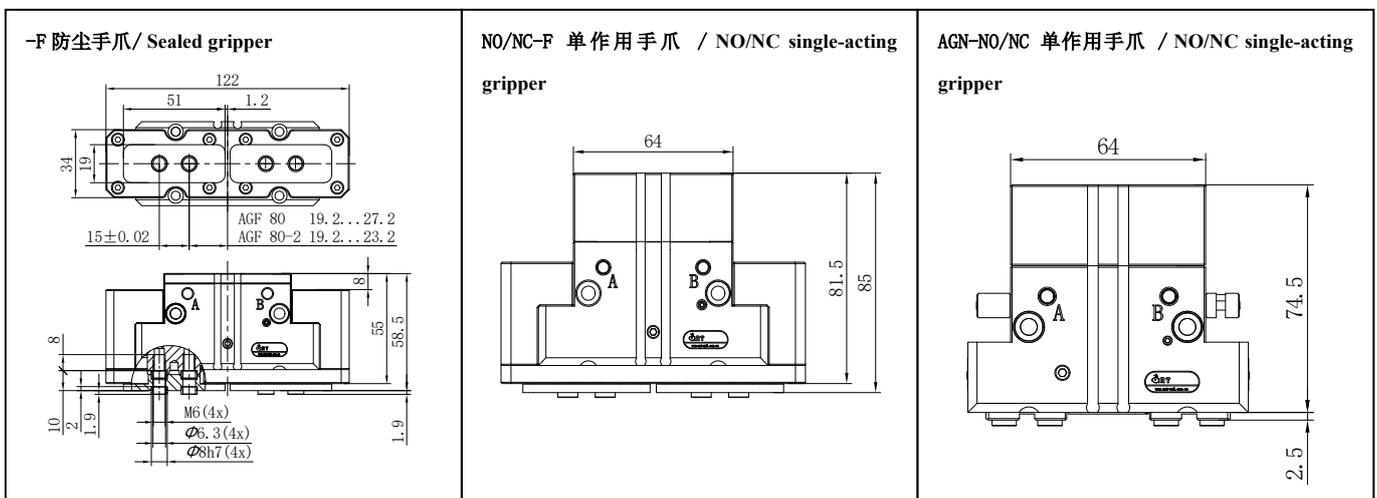
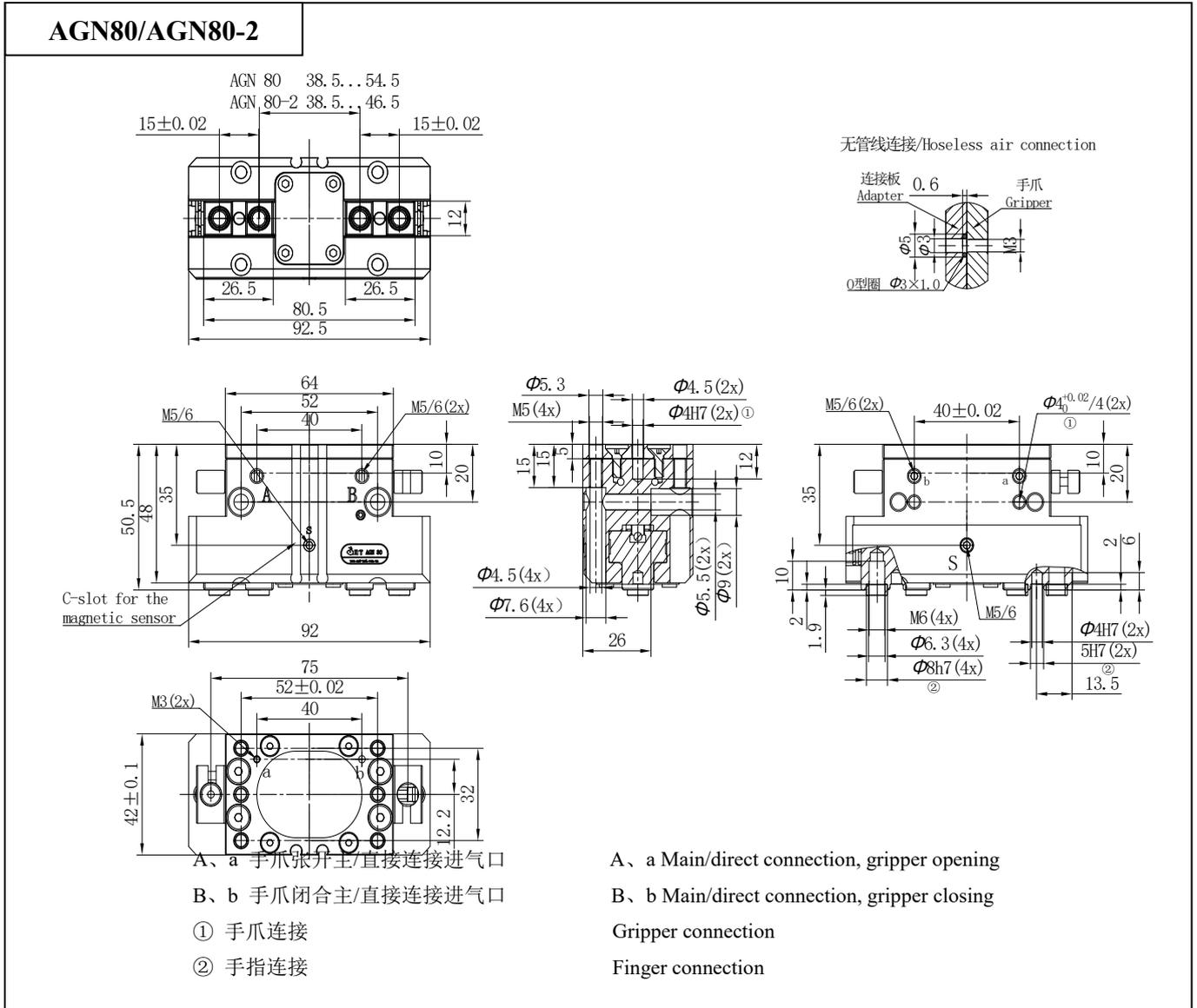
技术资料/Technical data

Description	AGN80	AGN80-NC	AGN80-NO	AGN80-2	AGN80-2-NC	AGN80-2-NO
手指单边行程 Stroke per finger	mm	8	8	8	4	4
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	92*P	117*P	205*P	260*P
	6bar 气压下夹持力	N	552	706	1230	1560
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	100*P	120*P	220*P	276*P
	6bar 气压下夹持力	N	600	750	1320	1656
断气最小夹持力 Min. gripping force without pressure air	N		155	155	330	330
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	0.49	0.62	0.62	0.49	0.62
空气消耗量/周期 Air consumption per double stroke	cm ³	25.2	44.5	44.5	25.2	44.5
开/闭时间 Closing/opening time	s	0.04/0.04	0.05/0.03	0.03/0.05	0.03/0.03	0.05/0.03
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	100	90	90	90	90
单个手指最大重量 Max. permitted weight per finger	Kg	0.6	0.6	0.6	0.6	0.6
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

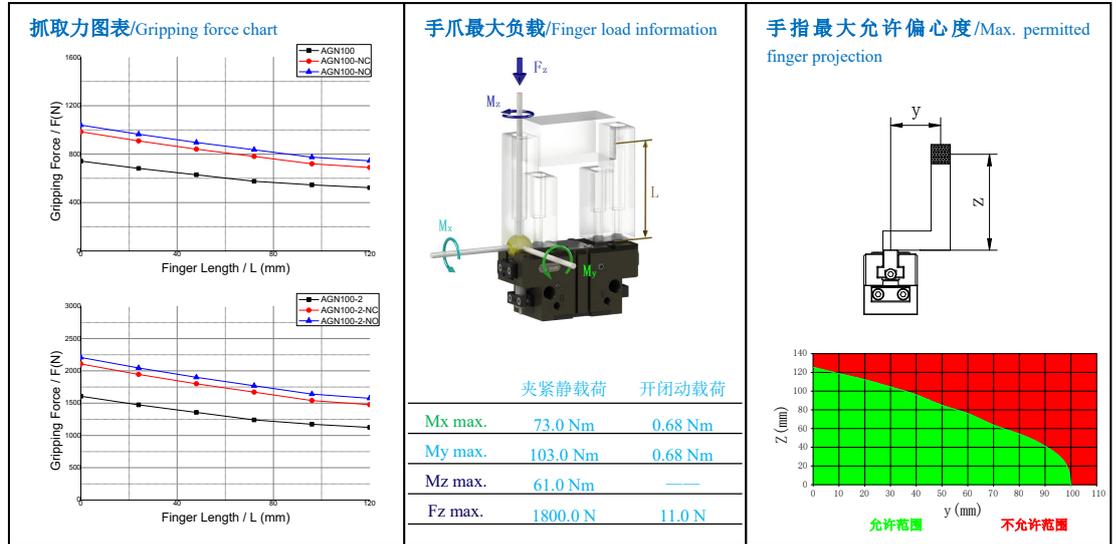
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AGN100



❖所有参数为气压 6bar 下测试/All data measured at 6bar

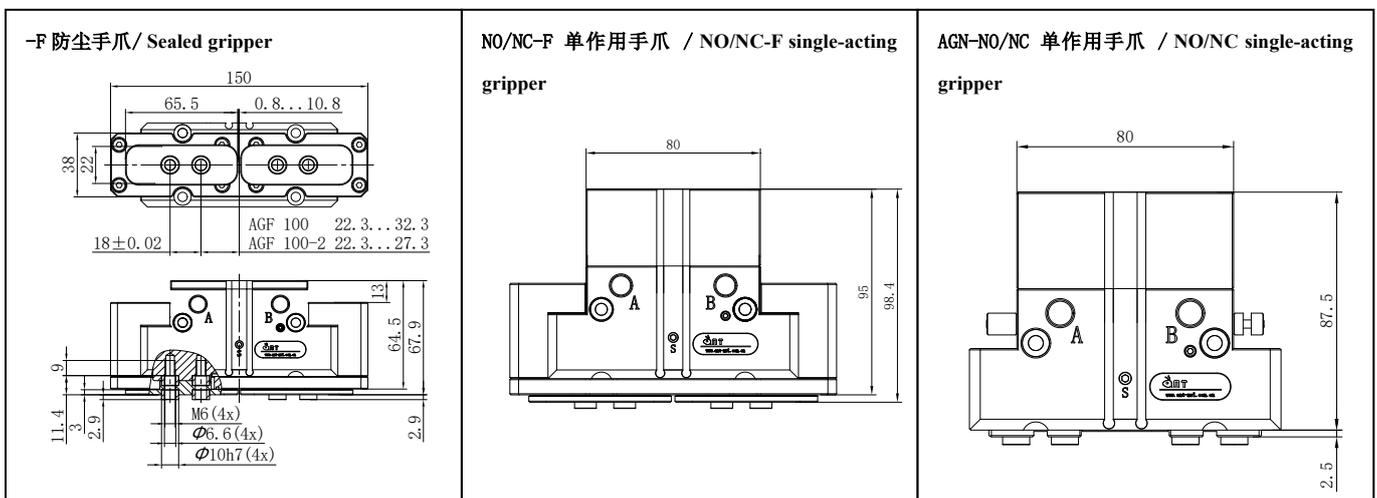
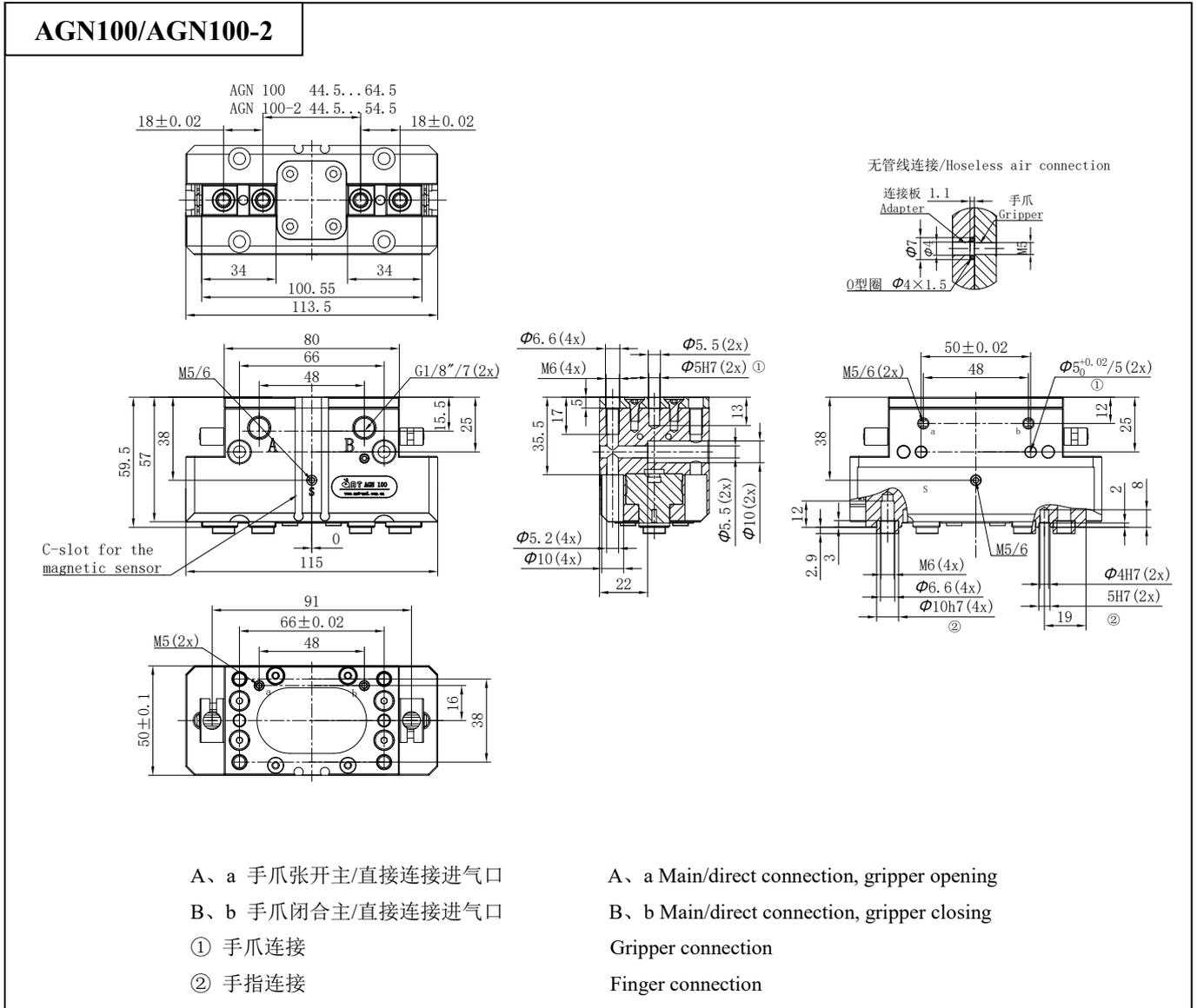
技术资料/Technical data

Description	AGN100	AGN100-NC	AGN100-NO	AGN100-2	AGN100-2-NC	AGN100-2-NO
手指单边行程 Stroke per finger	mm	10	10	10	5	5
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	128*P	169*P	275*P	366*P
	6bar 气压下夹持力	N	768	1014	1650	2200
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	136*P	177*P	295*P	390*P
	6bar 气压下夹持力	N	816	1062	1770	2340
断气最小夹持力 Min. gripping force without pressure air	N		250	250	570	570
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	0.85	1.2	1.2	0.85	1.2
空气消耗量/周期 Air consumption per double stroke	cm ³	40	68	68	40	68
开/闭时间 Closing/opening time	s	0.07/0.07	0.09/0.06	0.06/0.09	0.06/0.06	0.1/0.07
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	160	115	115	115	115
单个手指最大重量 Max. permitted weight per finger	Kg	1.1	1.1	1.1	1.1	1.1
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

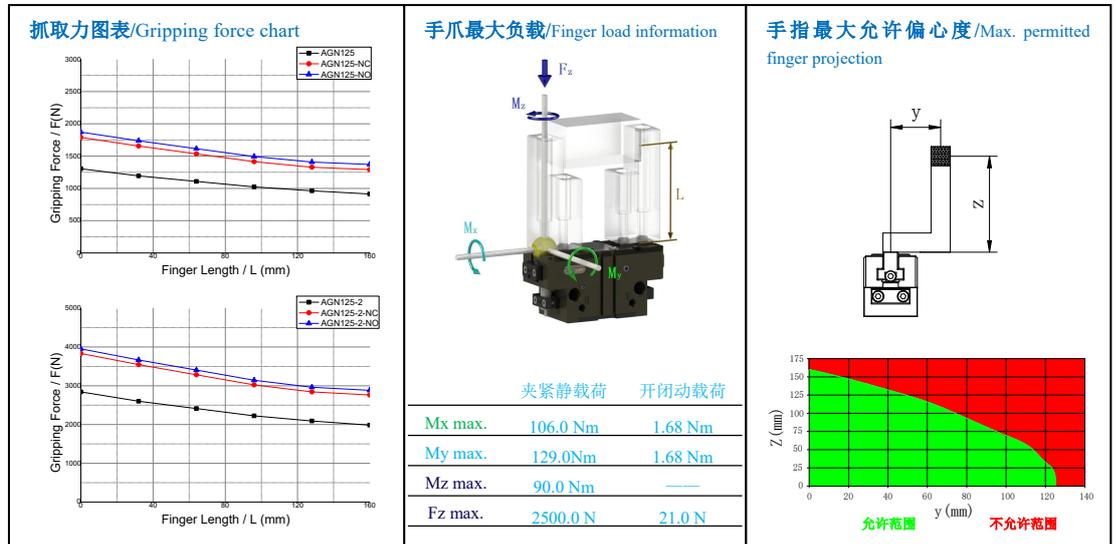
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AGN125



❖所有参数为气压 6bar 下测试/All data measured at 6bar

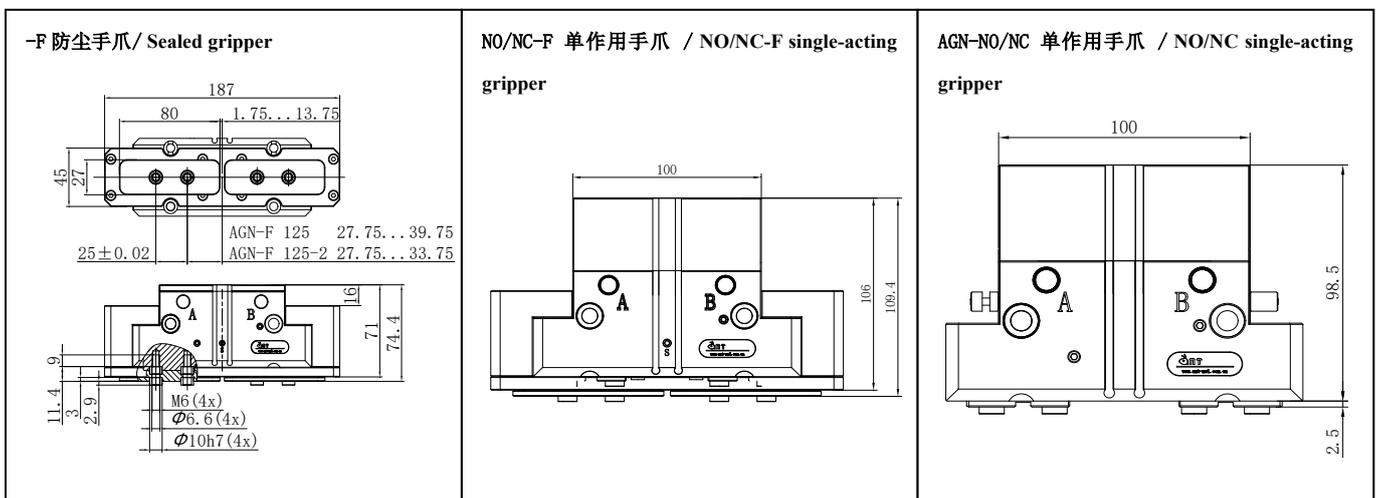
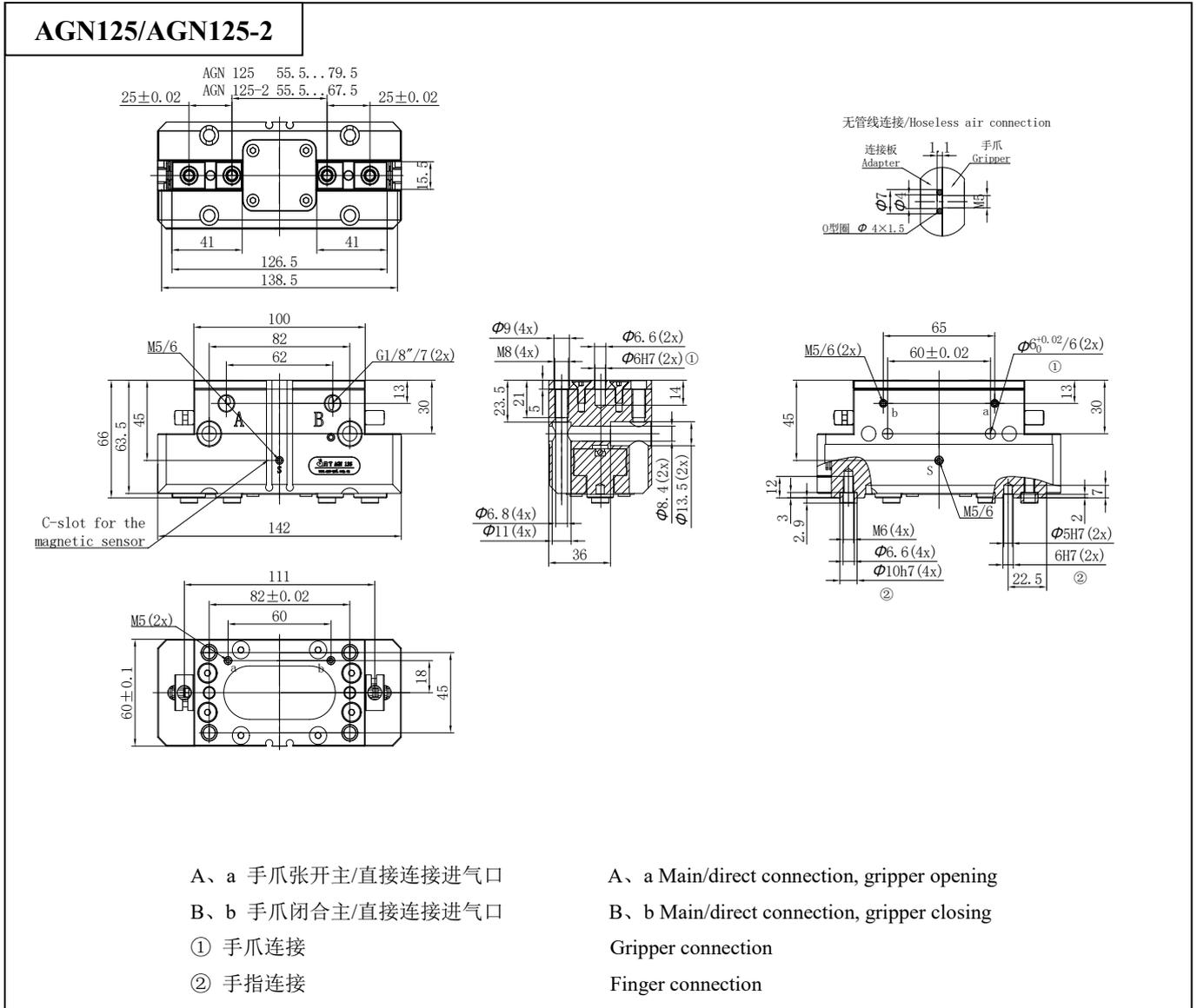
技术资料/Technical data

Description	AGN125	AGN125-NC	AGN125-NO	AGN125-2	AGN125-2-NC	AGN125-2-NO
手指单边行程 Stroke per finger	mm	12	12	12	6	6
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	203*P	284*P	480*P	645*P
	6bar 气压下夹持力	N	1218	1704	2880	3870
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	216*P	297*P	505*P	688*P
	6bar 气压下夹持力	N	1296	1782	3030	4128
断气最小夹持力 Min. gripping force without pressure air	N		490	490	1100	1100
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	1.5	1.9	1.8	1.5	1.9
空气消耗量/周期 Air consumption per double stroke	cm ³	80	148	148	80	148
开/闭时间 Closing/opening time	s	0.1/0.1	0.12/0.08	0.08/0.12	0.08/0.08	0.12/0.08
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	160	145	145	145	145
单个手指最大重量 Max. permitted weight per finger	Kg	2.1	2.1	2.1	2.1	2.1
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

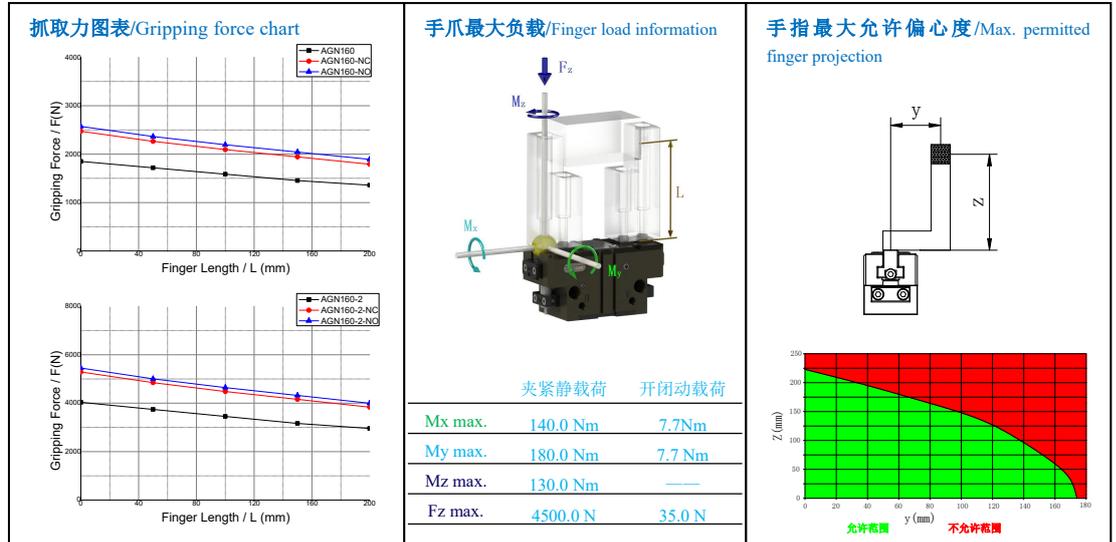
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AGN160



❖所有参数为气压 6bar 下测试/All data measured at 6bar

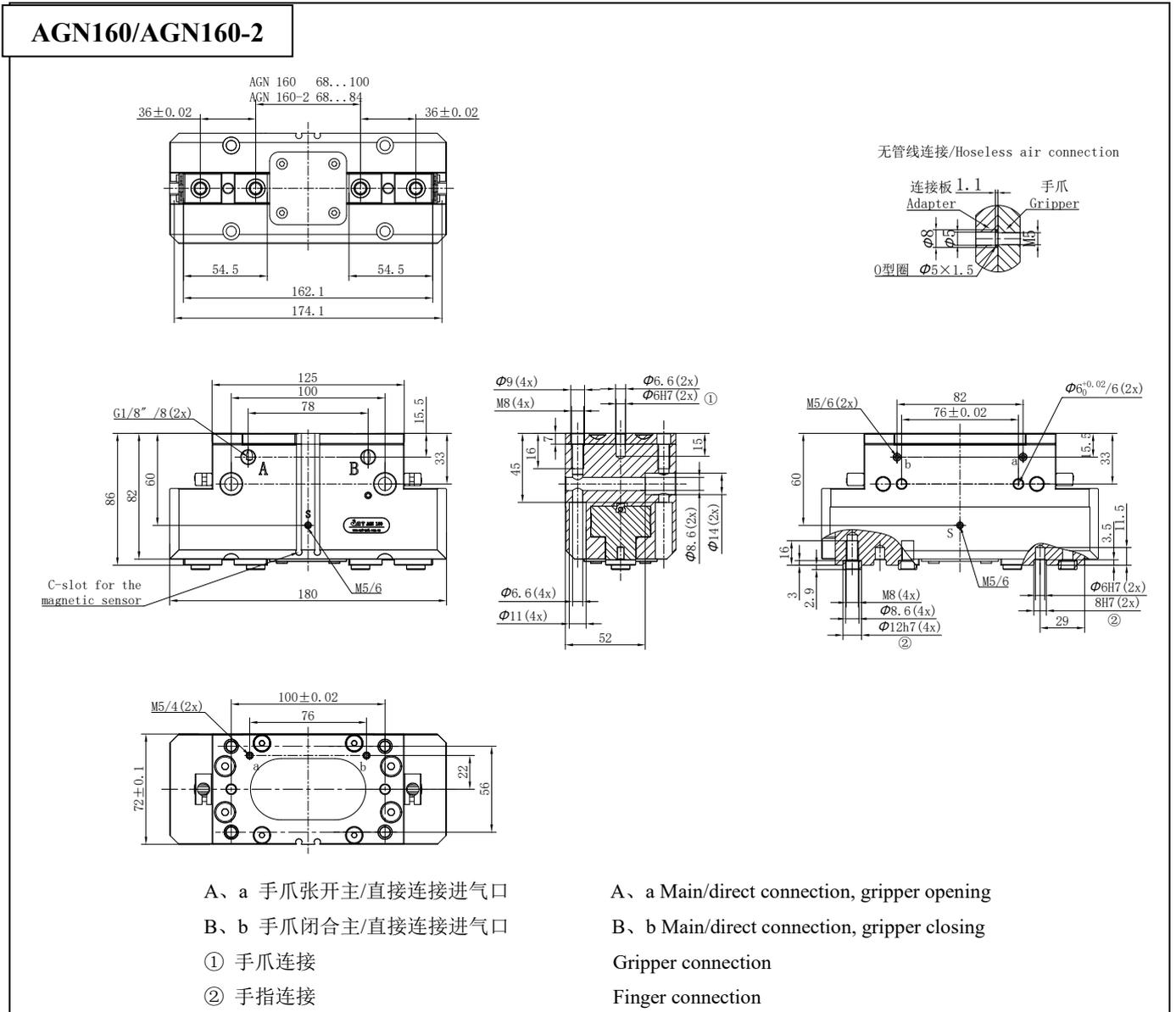
技术资料/Technical data

Description	AGN160	AGN160-NC	AGN160-NO	AGN160-2	AGN160-2-NC	AGN160-2-NO
手指单边行程 Stroke per finger	mm	16	16	16	8	8
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	310*P	415*P	690*P	925*P
	6bar 气压下夹持力	N	1860	2490	4140	5380
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	325*P	430*P	720*P	960*P
	6bar 气压下夹持力	N	1950	2580	4320	5760
断气最小夹持力 Min. gripping force without pressure air	N		650	650	1400	1400
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	2.9	3.4	3.3	2.9	3.4
空气消耗量/周期 Air consumption per double stroke	cm ³	268	477	477	268	477
开/闭时间 Closing/opening time	s	0.2/0.2	0.15/0.25	0.25/0.15	0.2/0.2	0.15/0.25
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	220	210	210	210	210
单个手指最大重量 Max. permitted weight per finger	Kg	3.5	3.5	3.5	3.5	3.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

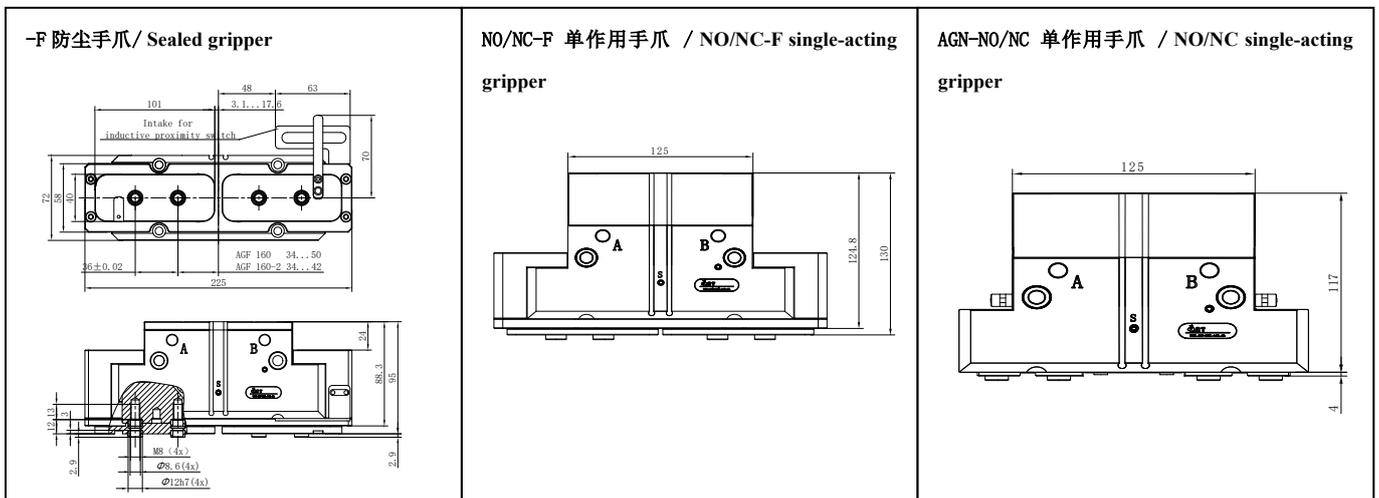
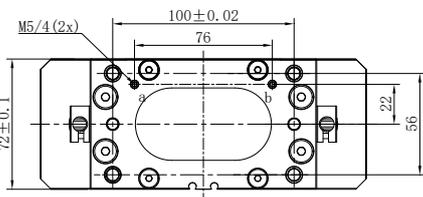
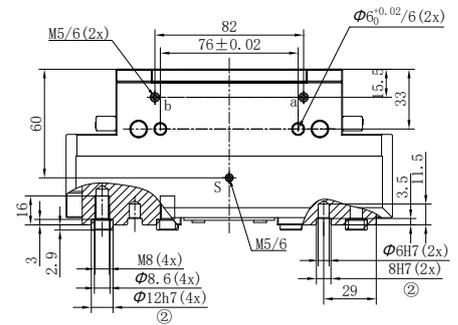
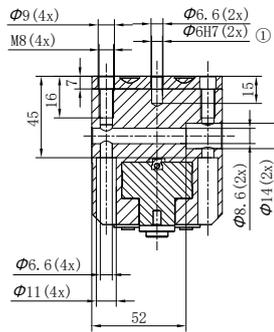
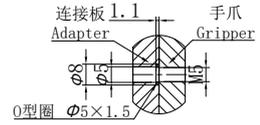
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

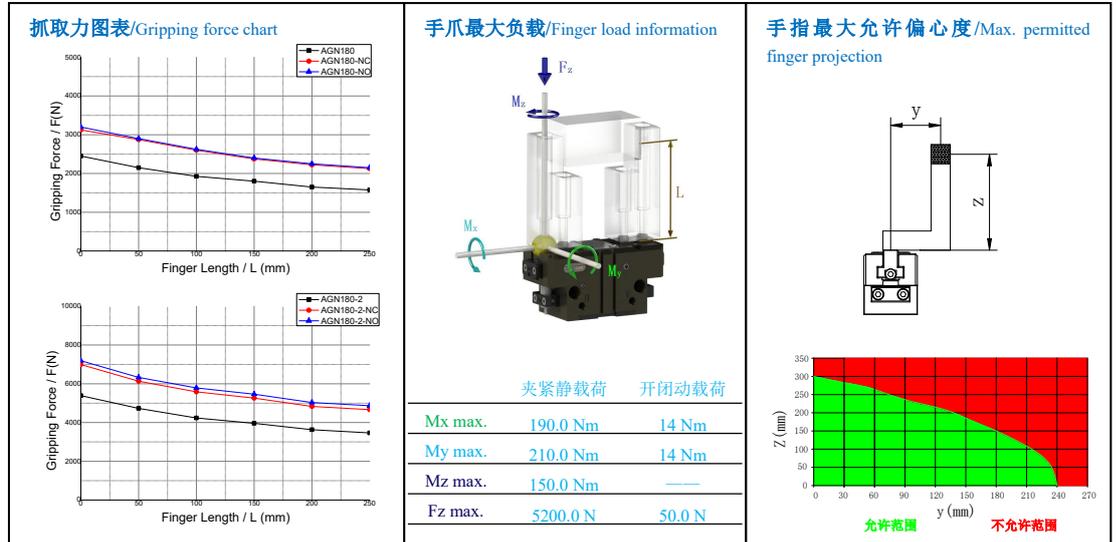
尺寸图/Dimensions



无管线连接/Hoseless air connection



AGN180



❖所有参数为气压 6bar 下测试/All data measured at 6bar

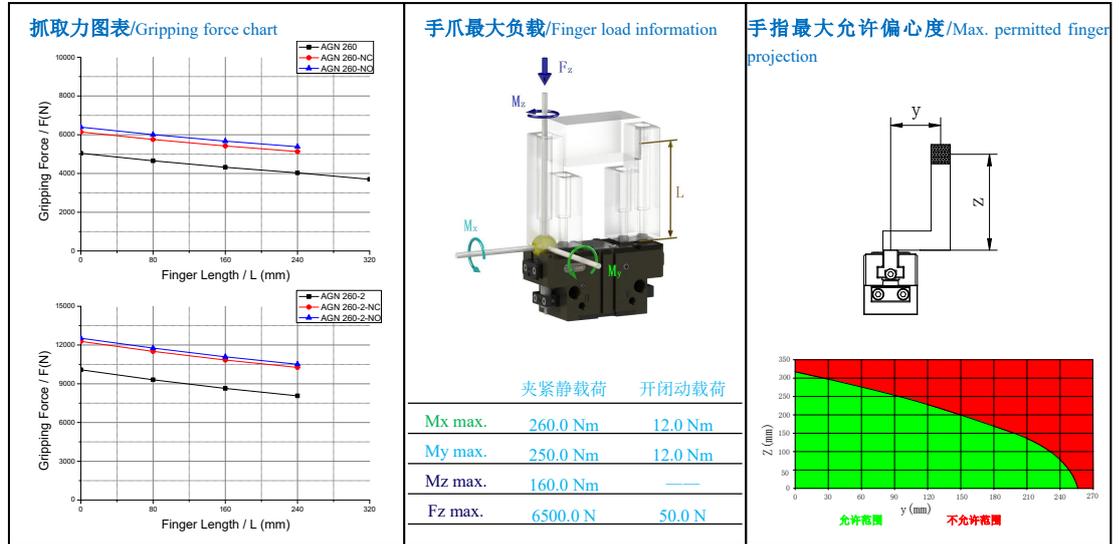
技术资料/Technical data

Description		AGN180	AGN180-NC	AGN180-NO	AGN180-2	AGN180-2-NC	AGN180-2-NO
手指单边行程 Stroke per finger	mm	18	18	18	9	9	9
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	417*P	520*P	845*P	1110*P	
	6bar 气压下夹持力	N	2502	3120	5070	6660	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	445*P		558*P	910*P	1170*P
	6bar 气压下夹持力	N	2670		3348	5460	7020
断气最小夹持力 Min. gripping force without pressure air	N		850	850		1600	1600
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	5.4	6.6	6.4	5.4	6.6	6.4
空气消耗量/周期 Air consumption per double stroke	cm ³	360	714	704	360	714	704
开/闭时间 Closing/opening time	s	0.5/0.5	0.7/0.5	0.5/0.7	0.4/0.4	0.7/0.5	0.5/0.7
重复精度 Repeat accuracy	mm				0.02		
最大手指长度 Max. permitted finger length	mm	280	250	250	250	250	250
单个手指最大重量 Max. permitted weight per finger	Kg	5	5	5	5	5	5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

AGN260



❖所有参数为气压 6bar 下测试/All data measured at 6bar

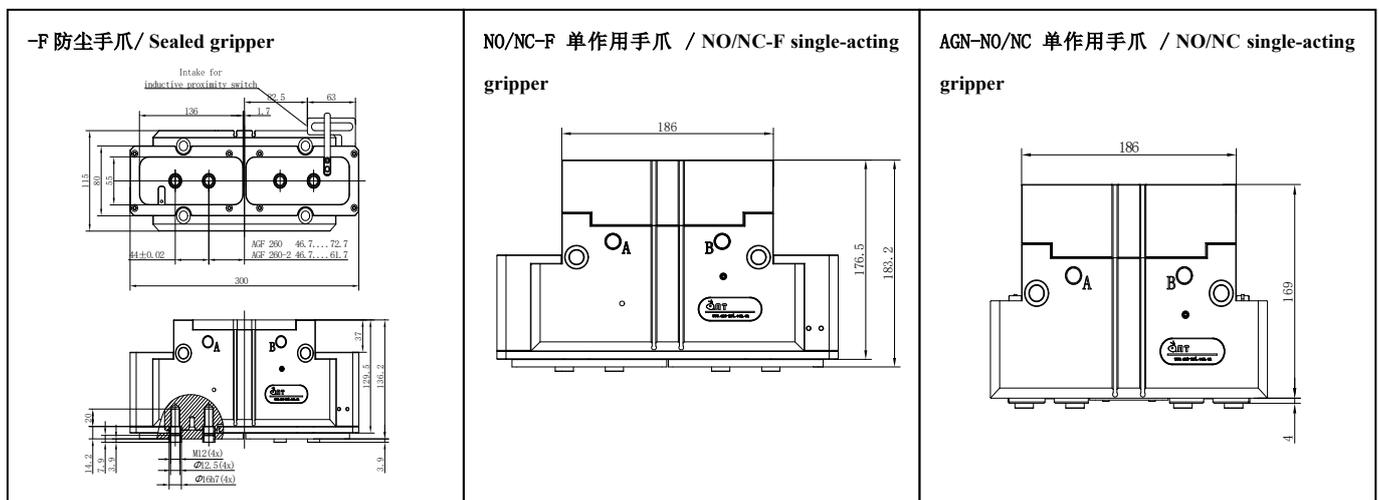
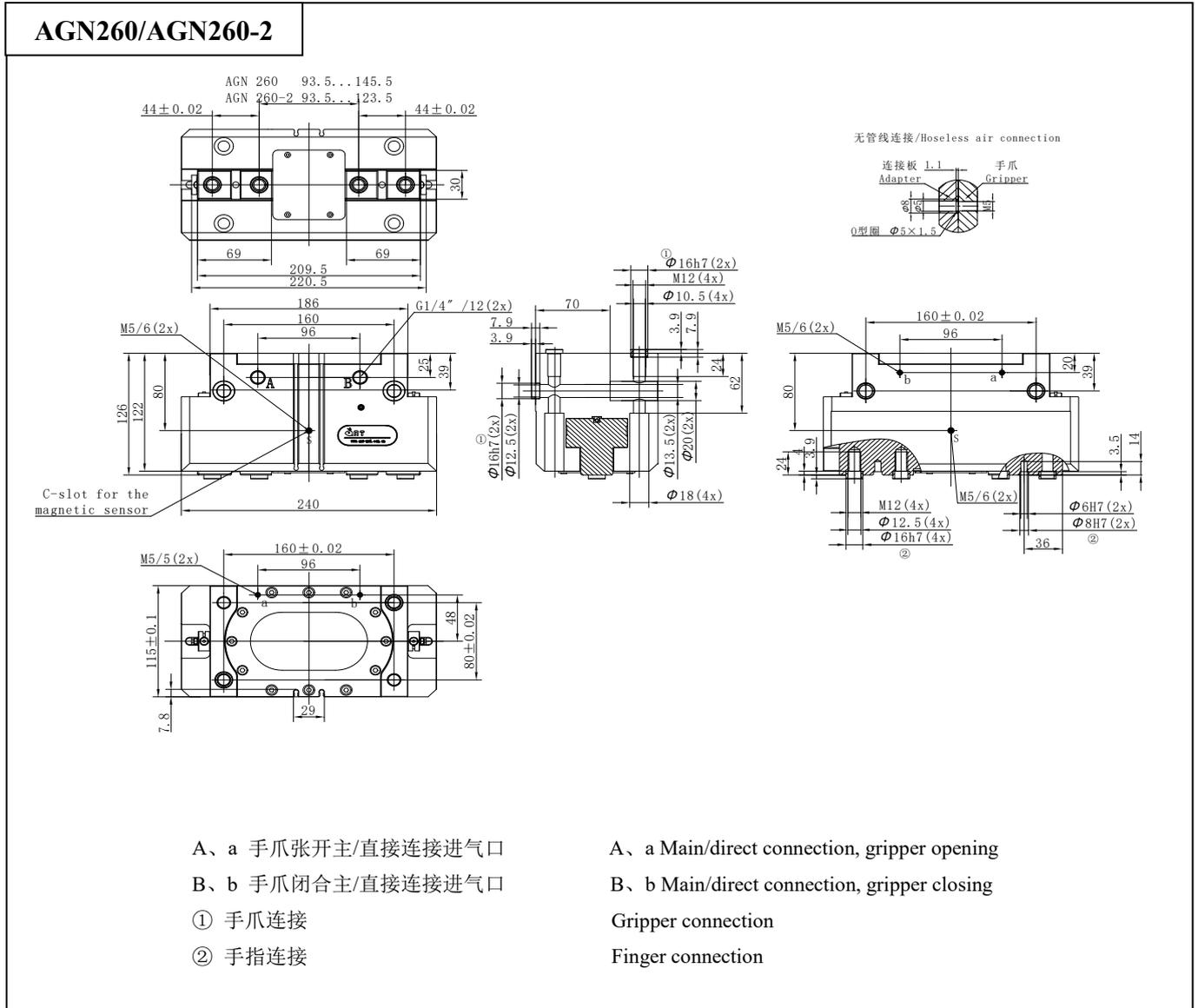
技术资料/Technical data

Description	AGN260	AGN260-NC	AGN260-NO	AGN260-2	AGN260-2-NC	AGN260-2--NO
手指单边行程 Stroke per finger	mm	26	26	26	15	15
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	810*P	990*P	1455*P	1830*P
	6bar 气压下夹持力	N	4860	5940	8730	10920
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	861*P	1025*P	1548*P	1923*P
	6bar 气压下夹持力	N	5166	6150	9288	11500
断气最小夹持力 Min. gripping force without pressure air	N		1100	1100	2200	2200
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	9.5	11.5	11.5	9.5	11.5
空气消耗量/周期 Air consumption per double stroke	cm ³	603	1510	1510	603	1510
开/闭时间 Closing/opening time	s	0.5/0.5	0.7/0.5	0.5/0.7	0.4/0.4	0.7/0.5
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	320	280	280	280	280
单个手指最大重量 Max. permitted weight per finger	Kg	8.5	8.5	8.5	8.5	8.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

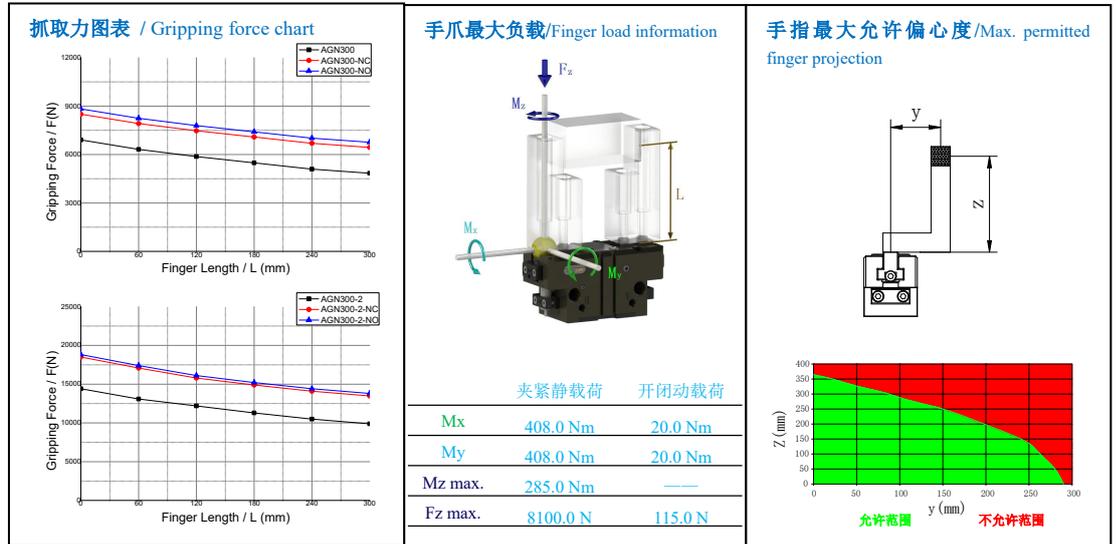
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AGN300



❖所有参数为气压 6bar 下测试/All data measured at 6bar

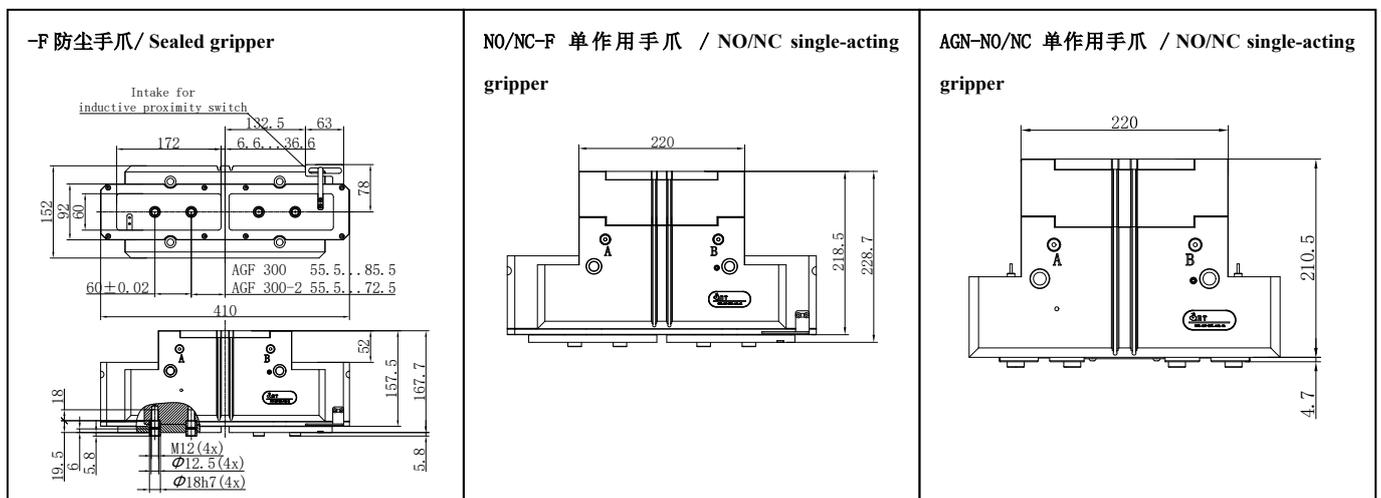
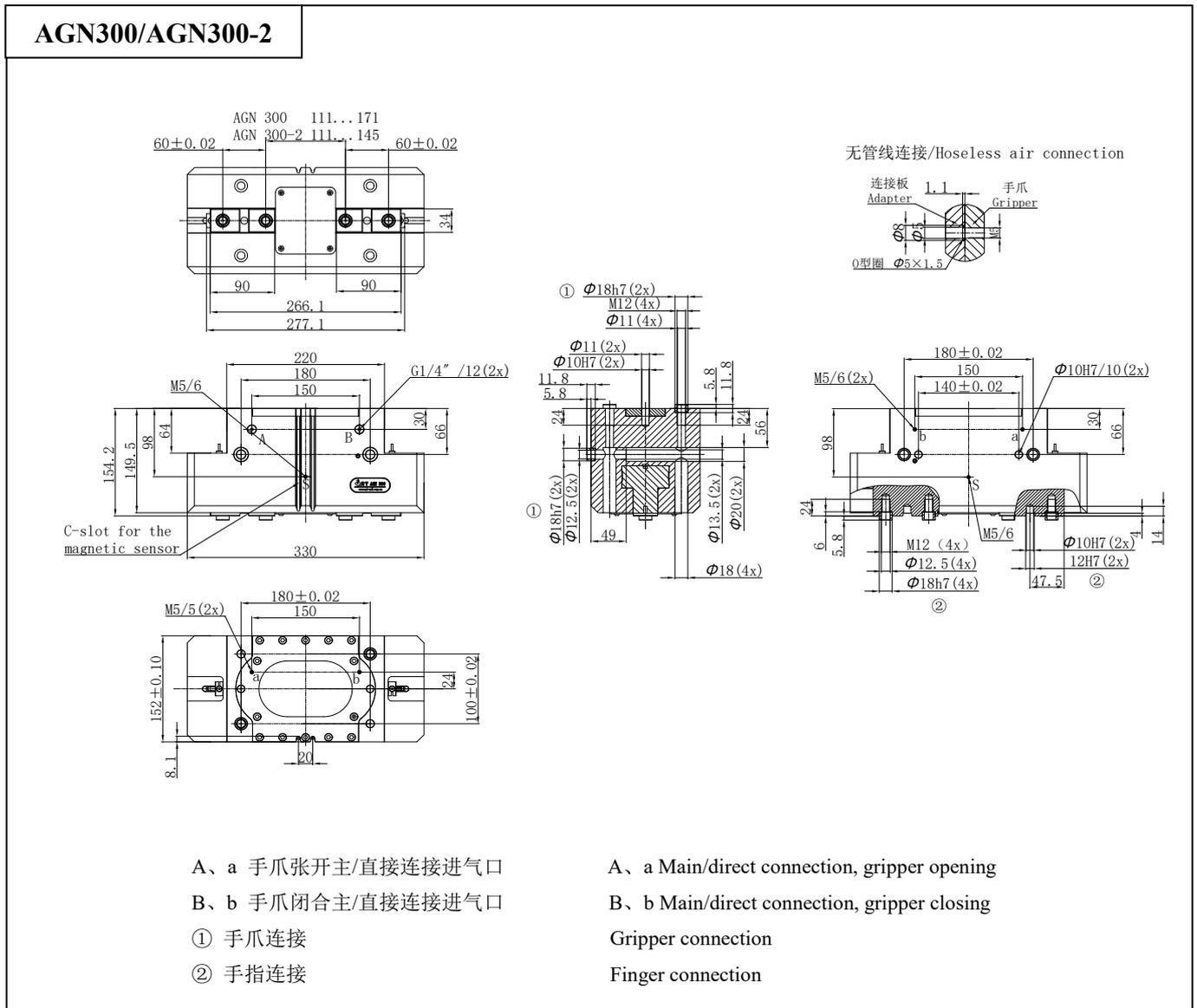
技术资料/Technical data

Description		AGN300	AGN300-NC	AGN300-NO	AGN300-2	AGN300-2-NC	AGN300-2-NO
手指单边行程 Stroke per finger	mm	30	30	30	17	17	17
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1045*P	1272*P	2350*P	2920*P	
	6bar 气压下夹持力	N	6270	7632	14100	17520	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1088*P	1313*P	2450*P		3020*P
	6bar 气压下夹持力	N	6526	7878	14700		18120
断气最小夹持力 Min. gripping force without pressure air	N		1600	1600		3600	3600
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	18	22.8	22	18	22.8	22
空气消耗量/周期 Air consumption per double stroke	cm ³	1047	2620	2520	1047	2620	2520
开/闭时间 Closing/opening time	s	0.55/0.55	1.0/0.5	0.5/1.0	0.5/0.5	1.0/0.5	0.5/1.0
重复精度 Repeat accuracy	mm			0.06			
最大手指长度 Max. permitted finger length	mm	350	310	310	310	310	310
单个手指最大重量 Max. permitted weight per finger	Kg	11.5	11.5	11.5	11.5	11.5	11.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200			
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66			

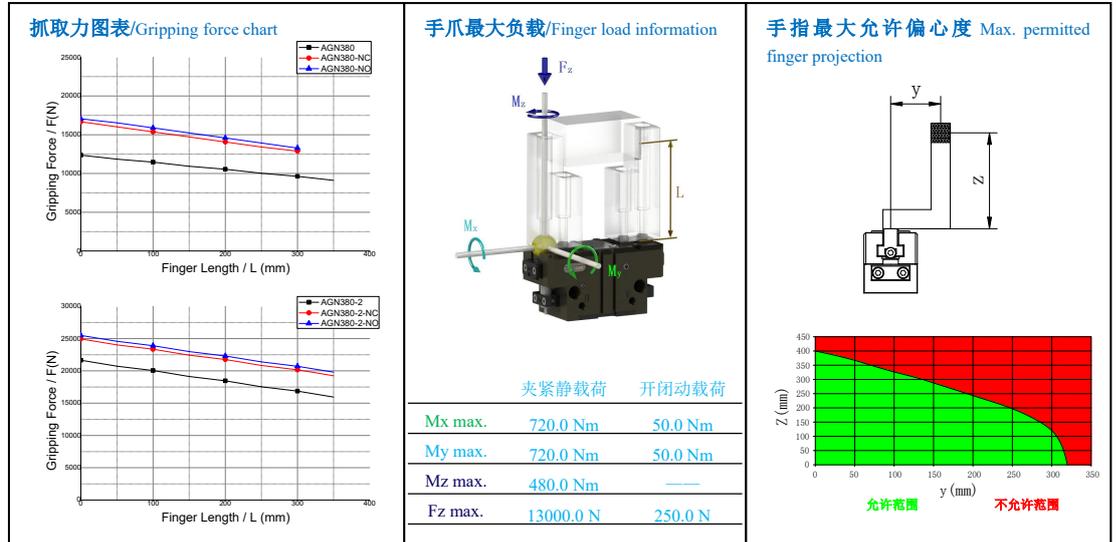
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AGN380



❖所有参数为气压 6bar 下测试/All data measured at 6bar

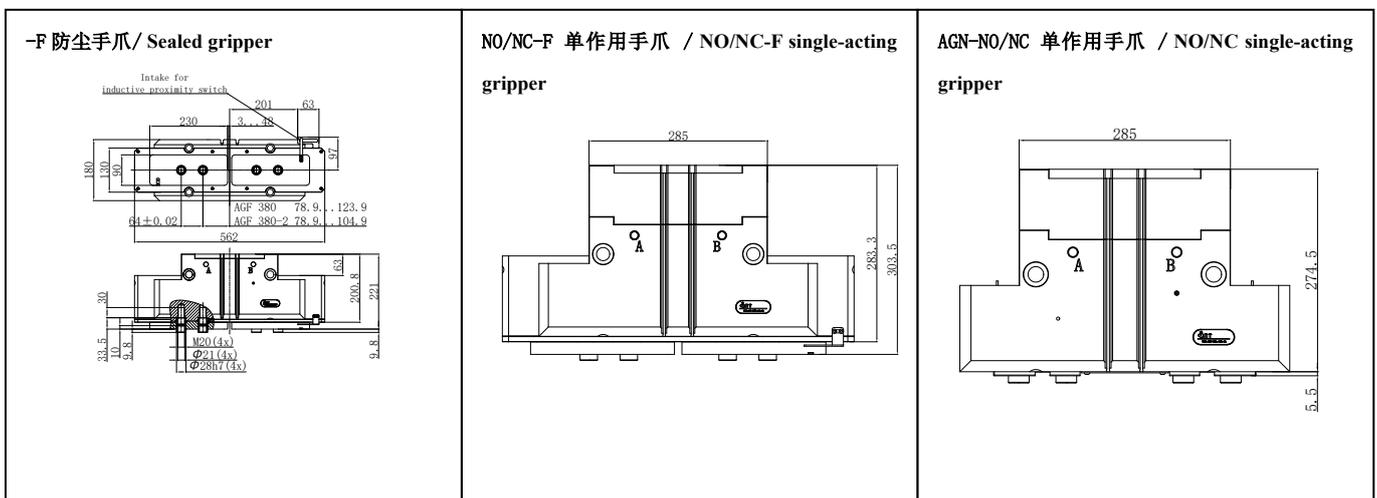
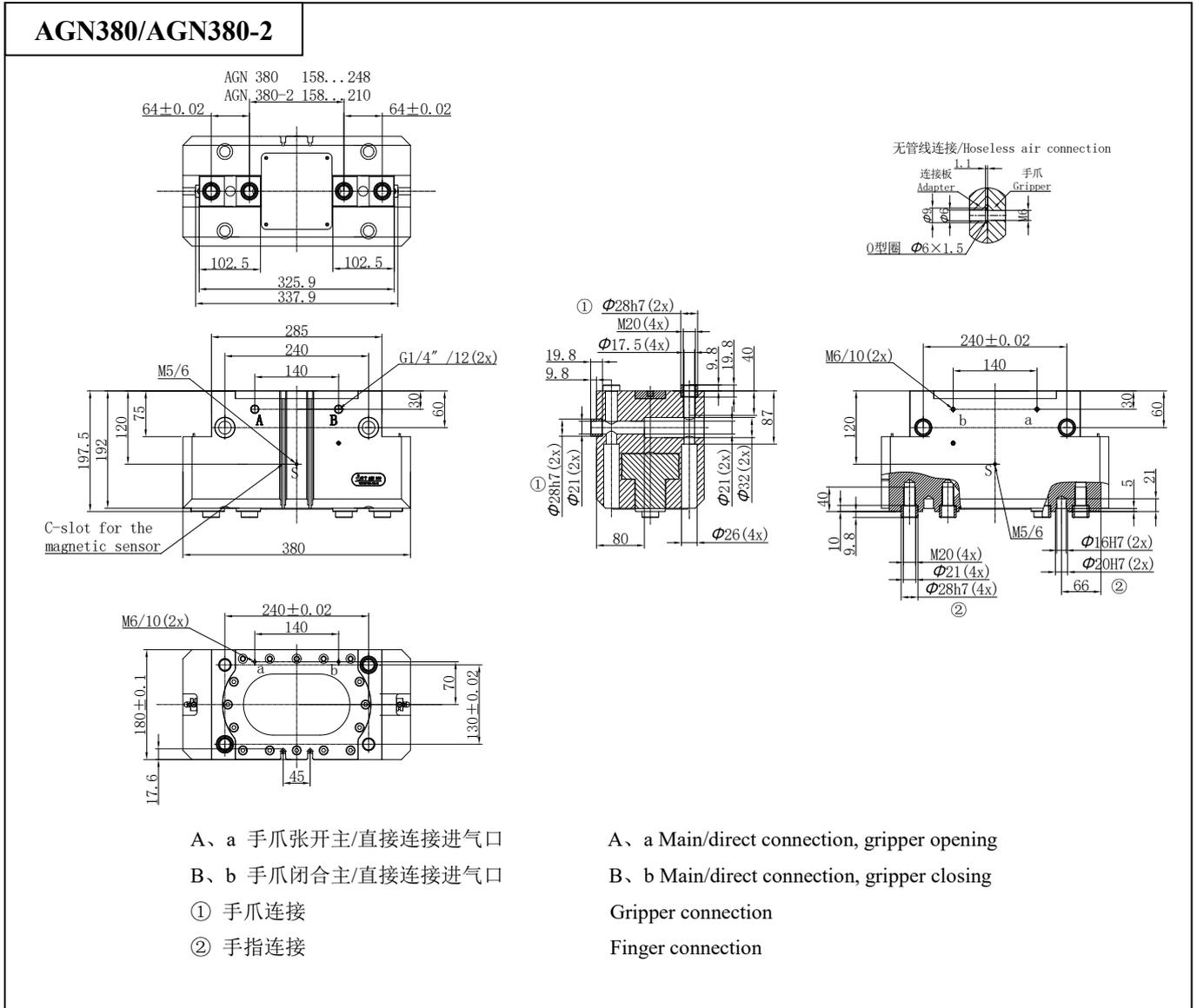
技术资料/Technical data

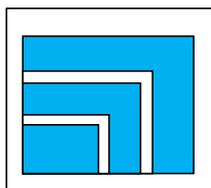
Description	AGN380	AGN380-NC	AGN380-NO	AGN380-2	AGN380-2-NC	AGN380-2-NO
手指单边行程 Stroke per finger	mm	45	45	45	26	26
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	2106*P	2656*P	3190*P	4150*P
	6bar 气压下夹持力	N	12636	15936	19140	24900
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	2200*P	2750*P	3320*P	4280*P
	6bar 气压下夹持力	N	13200	16500	19920	25680
断气最小夹持力 Min. gripping force without pressure air	N		3300	3300	5800	5800
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	32.5	40.5	39.1	32.5	40.5
空气消耗量/周期 Air consumption per double stroke	cm ³	1850	3801	3650	1850	3810
开/闭时间 Closing/opening time	s	1.0/1.0	1.5/0.8	0.8/1.5	0.8/0.8	1.5/0.8
重复精度 Repeat accuracy	mm			0.08		
最大手指长度 Max. permitted finger length	mm	400	350	350	350	350
单个手指最大重量 Max. permitted weight per finger	Kg	25	25	25	25	25
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				标准型 (无) : IP 45 密封型 (-F) : IP 66		

◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

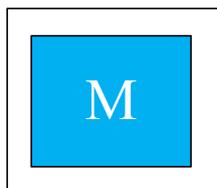
◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

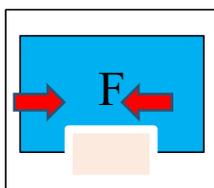




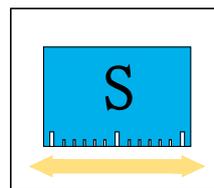
Sizes
66.....180



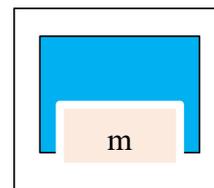
Weight
0.27...6.4Kg



Gripping Force
300...7020N



Stroke per finger
6...18mm



Workpiece weight
0.85...20Kg

应用案例 / Application example



① AGP160-NC 2 指平动密封型手爪 AGP160-NC 2-Finger Parallel seal Gripper series

2 指平动密封型手爪 / 2-Finger Parallel Seal Gripper

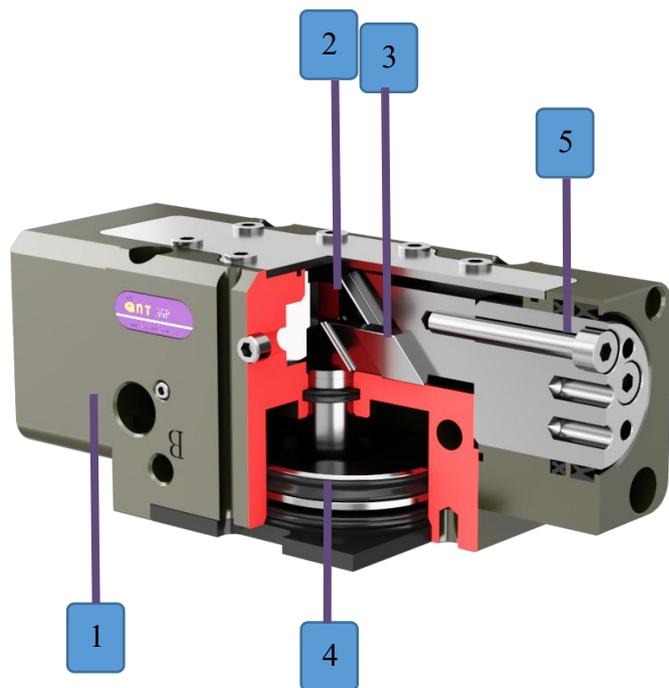
原理

- 压缩空气推动椭圆形活塞上下运动
- 楔形将驱动力转化为夹持力
- 完全密封结构

Principle

- The oval piston is moved up or down by means of compressed air
- High gripping force as a result of optimal direction change of driving force into gripping force
- Completely Sealed

剖视图 / Sectional diagram



- 1 本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 T 型导轨 T-slot guidance**
重负载导轨：负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 3 传动方式 Transmission Model**
高动力传输
High power transmission
- 4 驱动部分 Energy supply**
大型椭圆形活塞，提供更大的夹持力
Large oval piston: can have greater force
- 5 密封结构**
防尘防水密封
Completely Sealed

传感系统 Sensor system

磁性传感器 / Magnetic Sensor (选购/Order)



适用规格(NO.)	所有规格
NPN	WMS-M9T
PNP	WMS-M9T

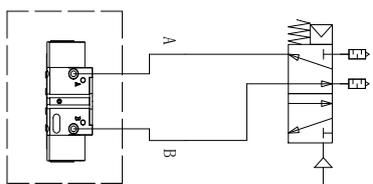
● 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80°C 下使用 / The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80°C.

接近开关 / Proximity switch (选购/Order)



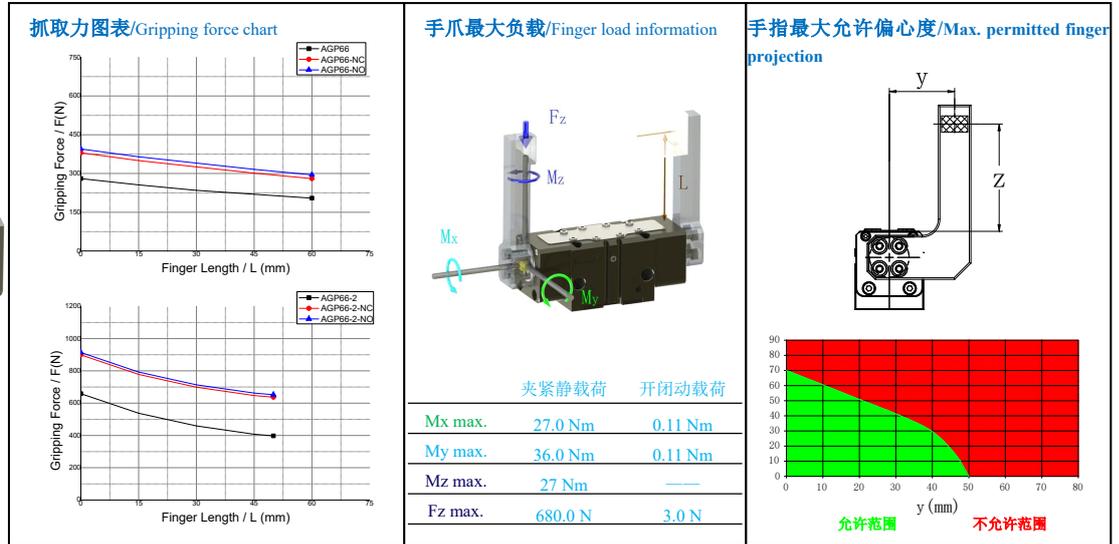
适用规格(NO.)	AGP 66/80/100/125	AGP 160/180
NPN	WPS-8GM18N	WPS-8GM35N
PNP	WPS-8GM18P	WPS-8GM35P

手爪气动连接原理



型号	AGP		
	66/80	100/125	160/180
气管直径 (mm)	≥4	≥6	≥8
电磁阀有效截面积 (Cv/mm ²)	≥17.0	≥17.0	≥28.0

AGP66



❖所有参数为气压 6bar 下测试/All data measured at 6bar

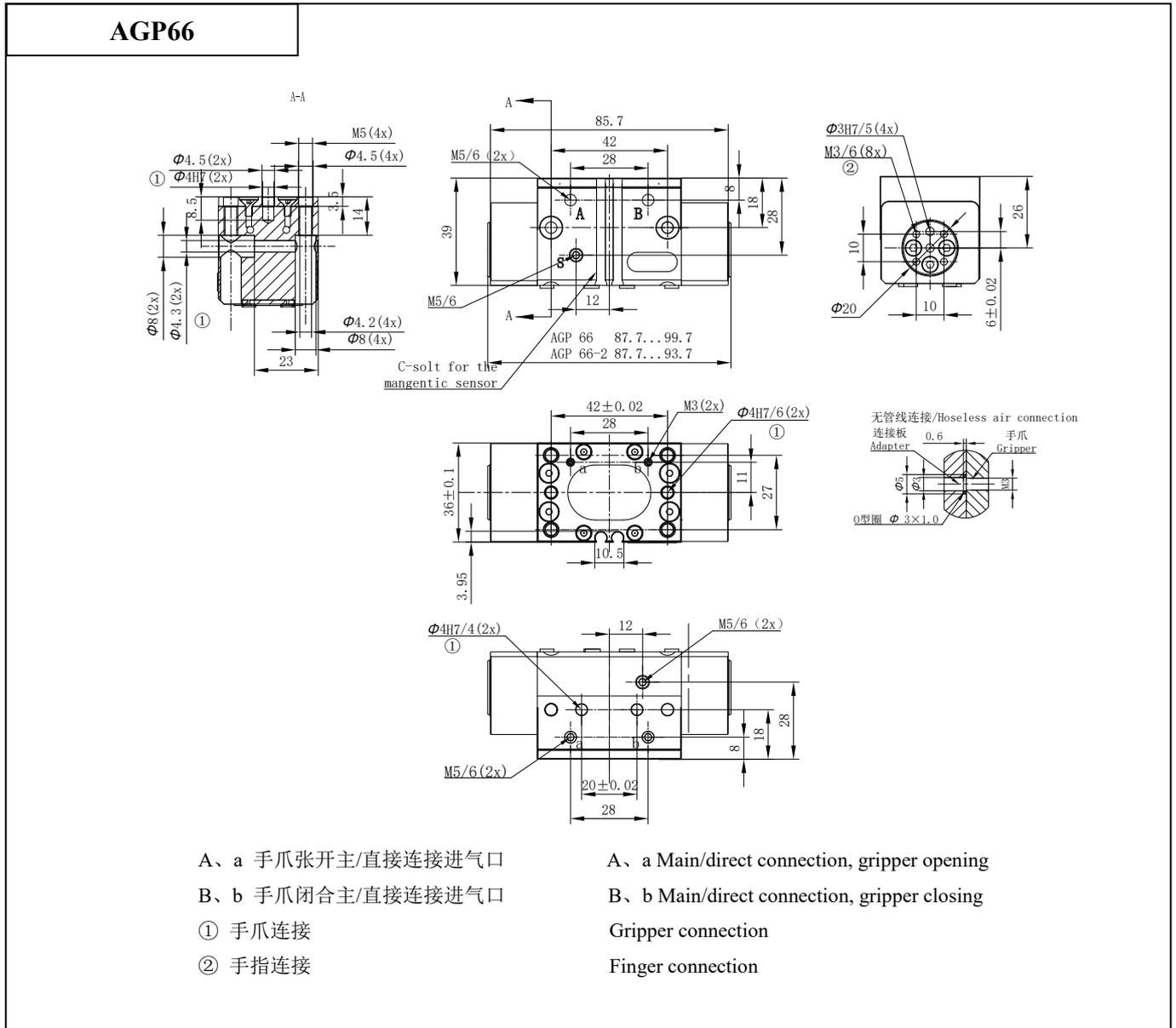
技术资料/Technical data

Description	AGP66	AGP66-NC	AGP66-NO	AGP66-2	AGP66-2-NC	AGP66-2-NO
手指单边行程 Stroke per finger	mm	6	6	6	3	3
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	50*P	66*P	110*P	150*P
	6bar 气压下夹持力	N	300	396	660	900
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	54*P	70*P	120*P	158*P
	6bar 气压下夹持力	N	324	420	720	948
断气最小夹持力 Min. gripping force without pressure air	N		100	100	240	240
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	0.32	0.38	0.38	0.32	0.38
空气消耗量/周期 Air consumption per double stroke	cm ³	10.2	36	36	10.2	36
开/闭时间 Closing/opening time	s	0.04/0.04	0.03/0.06	0.06/0.03	0.04/0.04	0.03/0.06
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	60	60	60	50	50
单个手指最大重量 Max. permitted weight per finger	Kg	0.3	0.3	0.3	0.3	0.3
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200	
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class						IP 67

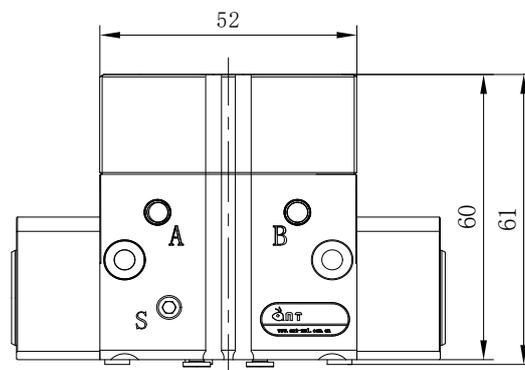
◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

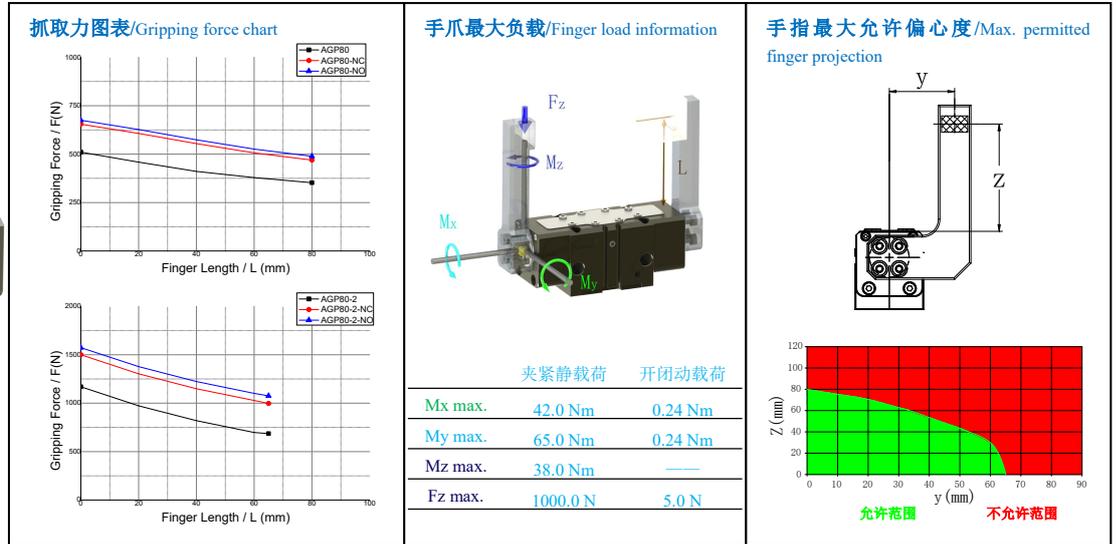
尺寸图/Dimensions



NO/NC 单作用手爪 / NO/NC single-acting gripper



AGP80



❖所有参数为气压 6bar 下测试/All data measured at 6bar

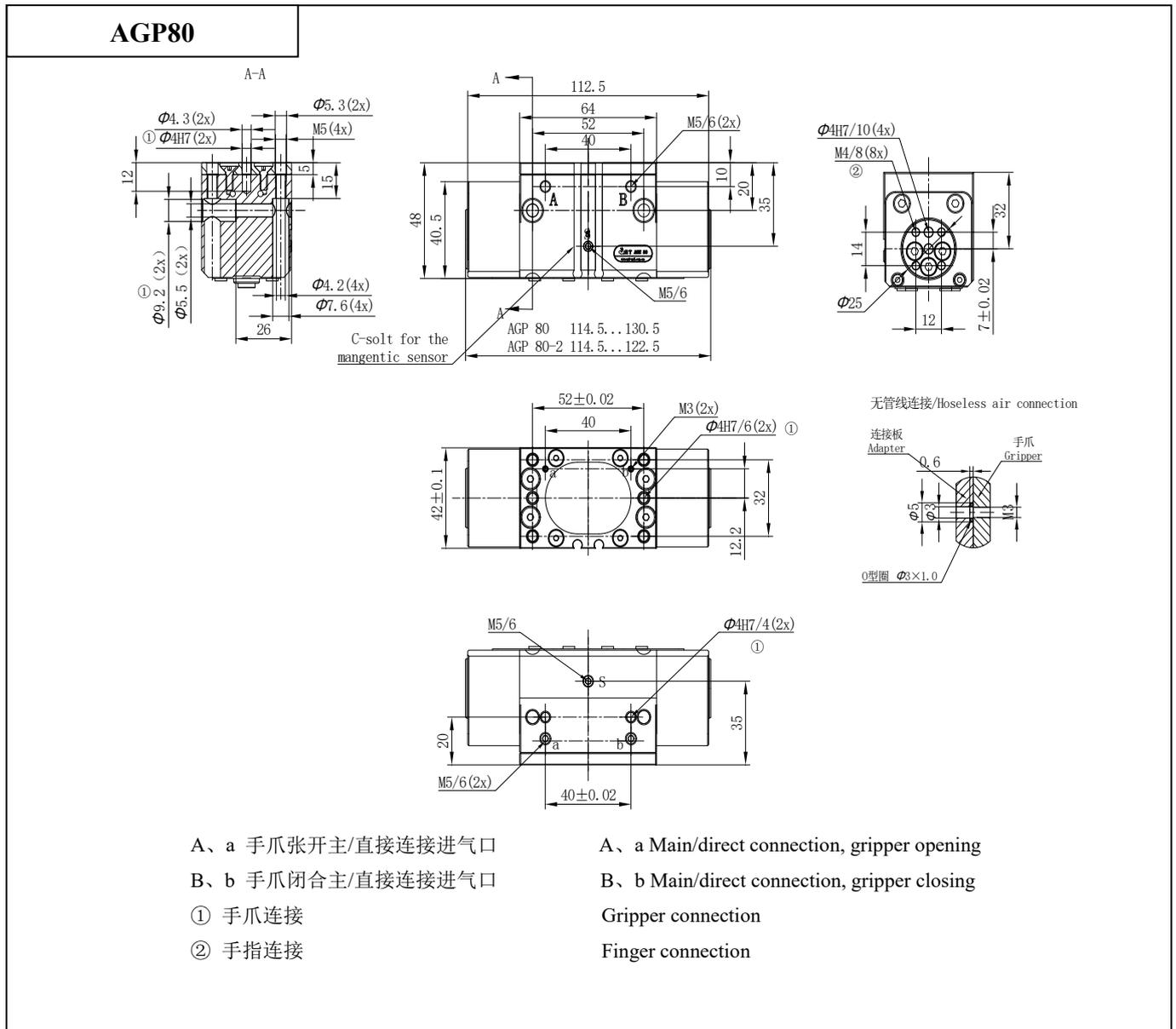
技术资料/Technical data

Description		AGP80	AGP80-NC	AGP80-NO	AGP80-2	AGP80-2-NC	AGP80-2-NO
手指单边行程 Stroke per finger	mm	8	8	8	4	4	4
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	92*P	117*P	205*P	260*P	
	6bar 气压下夹持力	N	552	706	1230	1560	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	100*P		120*P	220*P	276*P
	6bar 气压下夹持力	N	600		750	1320	1656
断气最小夹持力 Min. gripping force without pressure air	N		155	155		330	330
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	0.6	0.73	0.72	0.6	0.73	0.72
空气消耗量/周期 Air consumption per double stroke	cm ³	25.2	44.5	44.5	25.2	44.5	44.5
开/闭时间 Closing/opening time	s	0.04/0.04	0.05/0.03	0.03/0.05	0.03/0.03	0.05/0.03	0.03/0.05
重复精度 Repeat accuracy	mm				0.02		
最大手指长度 Max. permitted finger length	mm	80	80	80	65	65	65
单个手指最大重量 Max. permitted weight per finger	Kg	0.5	0.5	0.5	0.5	0.5	0.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					IP 67		

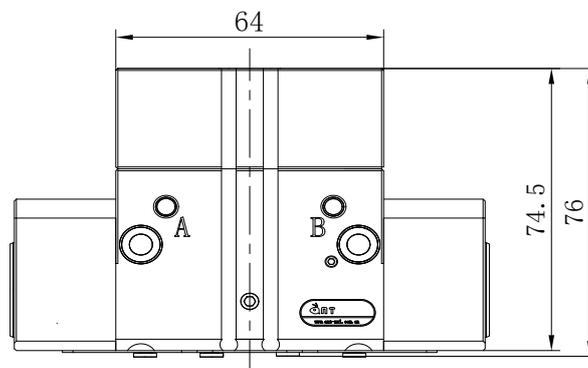
◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

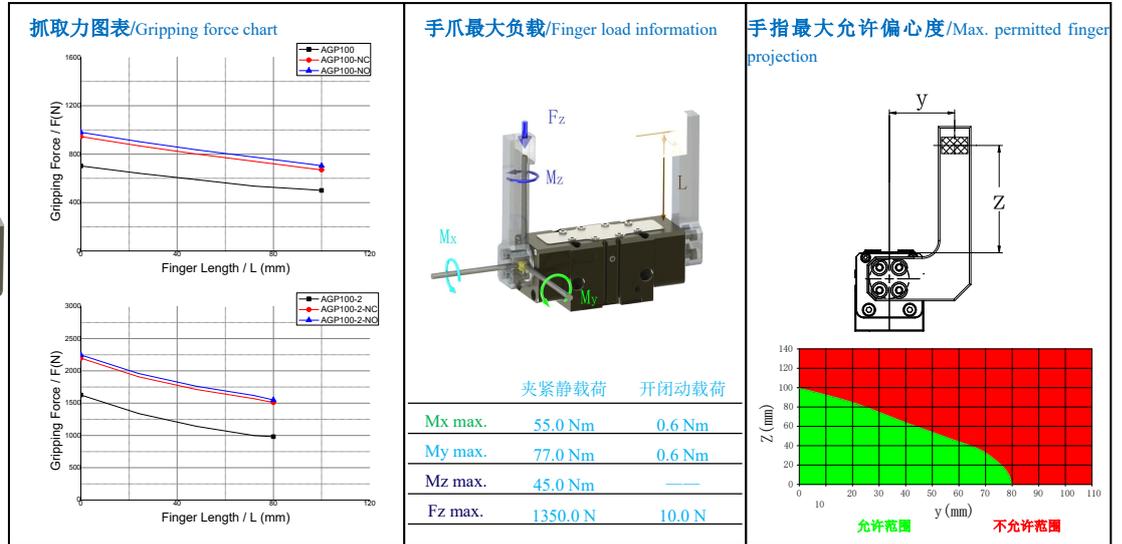
尺寸图/Dimensions



NO/NC 单作用手爪 / NO/NC single-acting gripper



AGP100



❖所有参数为气压 6bar 下测试/All data measured at 6bar

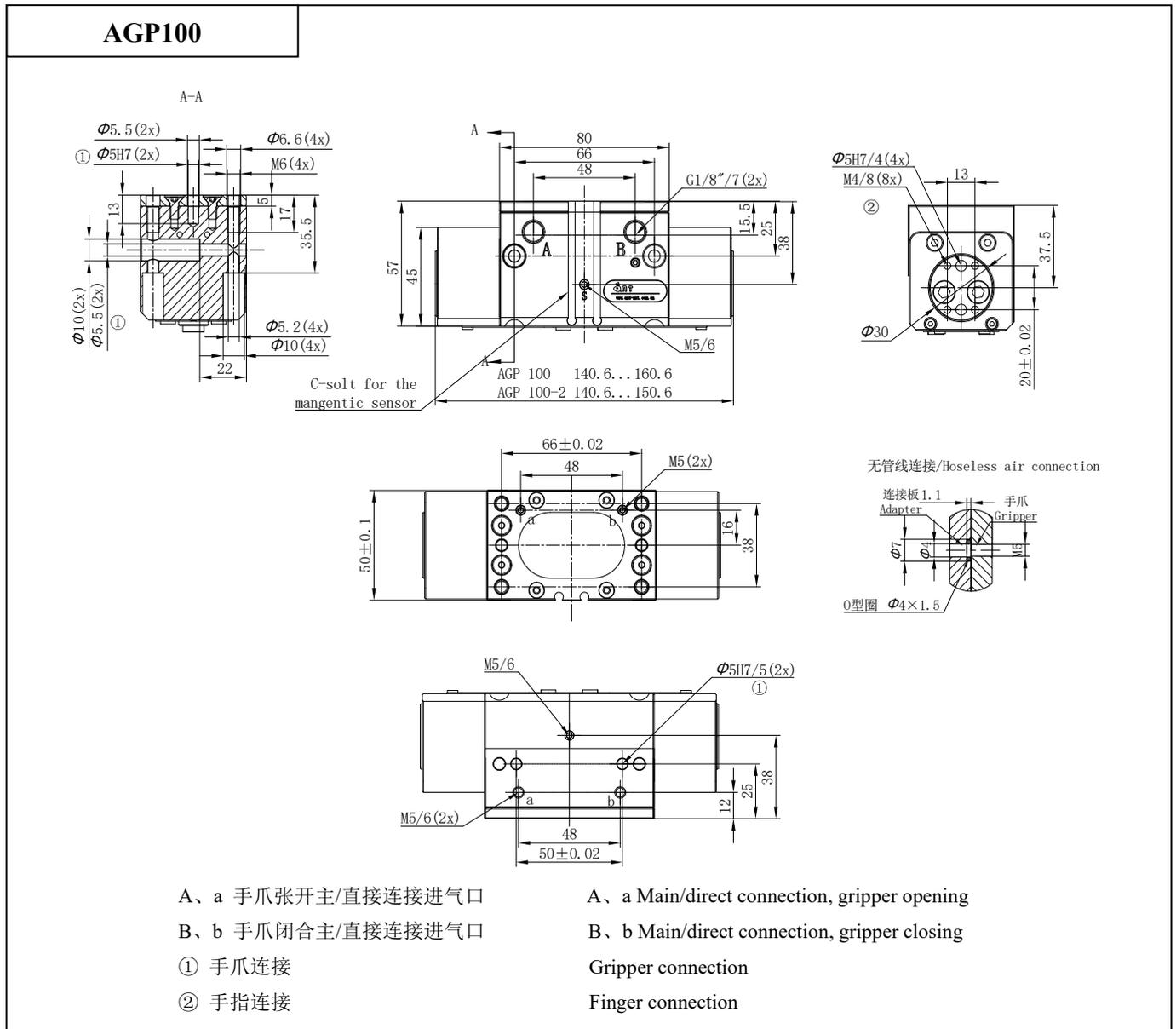
技术资料/Technical data

Description	AGP100	AGP100-NC	AGP100-NO	AGP100-2	AGP100-2-NC	AGP100-2-NO
手指单边行程 Stroke per finger	mm	10	10	10	5	5
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	128*P	169*P	275*P	366*P
	6bar 气压下夹持力	N	768	1014	1650	2200
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	136*P	177*P	295*P	390*P
	6bar 气压下夹持力	N	816	1062	1770	2340
断气最小夹持力 Min. gripping force without pressure air	N		250	250	570	570
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	1.1	1.48	1.48	1.1	1.48
空气消耗量/周期 Air consumption per double stroke	cm ³	40	68	68	40	68
开/闭时间 Closing/opening time	s	0.09/0.09	0.12/0.07	0.07/0.12	0.09/0.09	0.12/0.07
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	100	100	100	80	80
单个手指最大重量 Max. permitted weight per finger	Kg	0.9	0.9	0.9	0.9	0.9
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				IP 67		

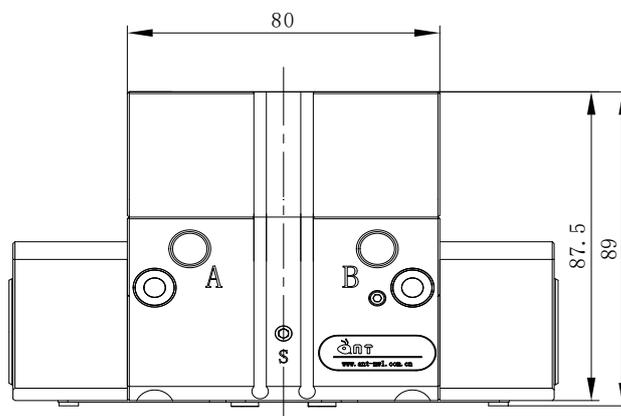
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

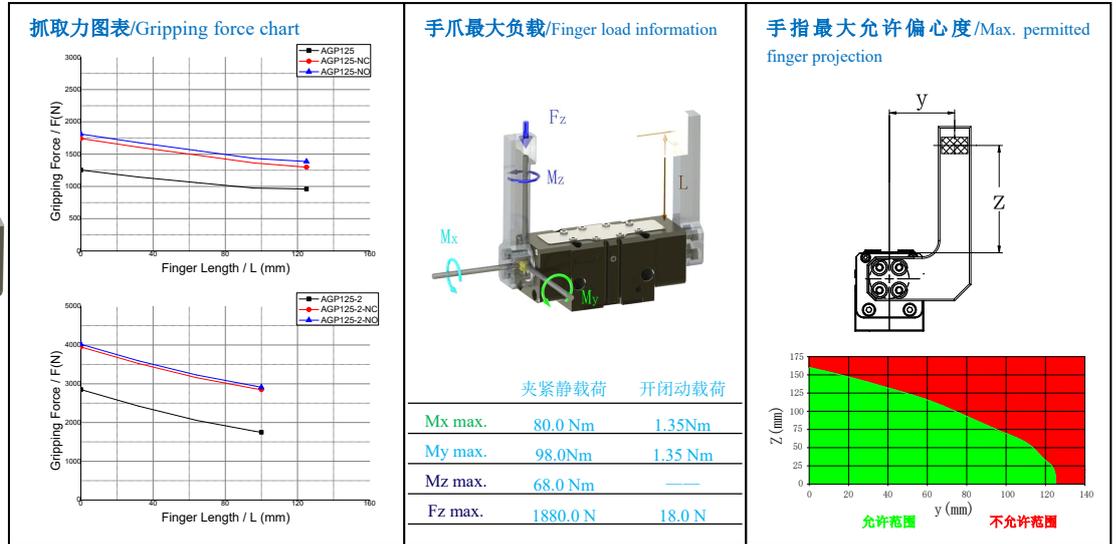
尺寸图/Dimensions



NO/NC 单作用手爪 / NO/NC single-acting gripper



AGP125



❖所有参数为气压 6bar 下测试/All data measured at 6bar

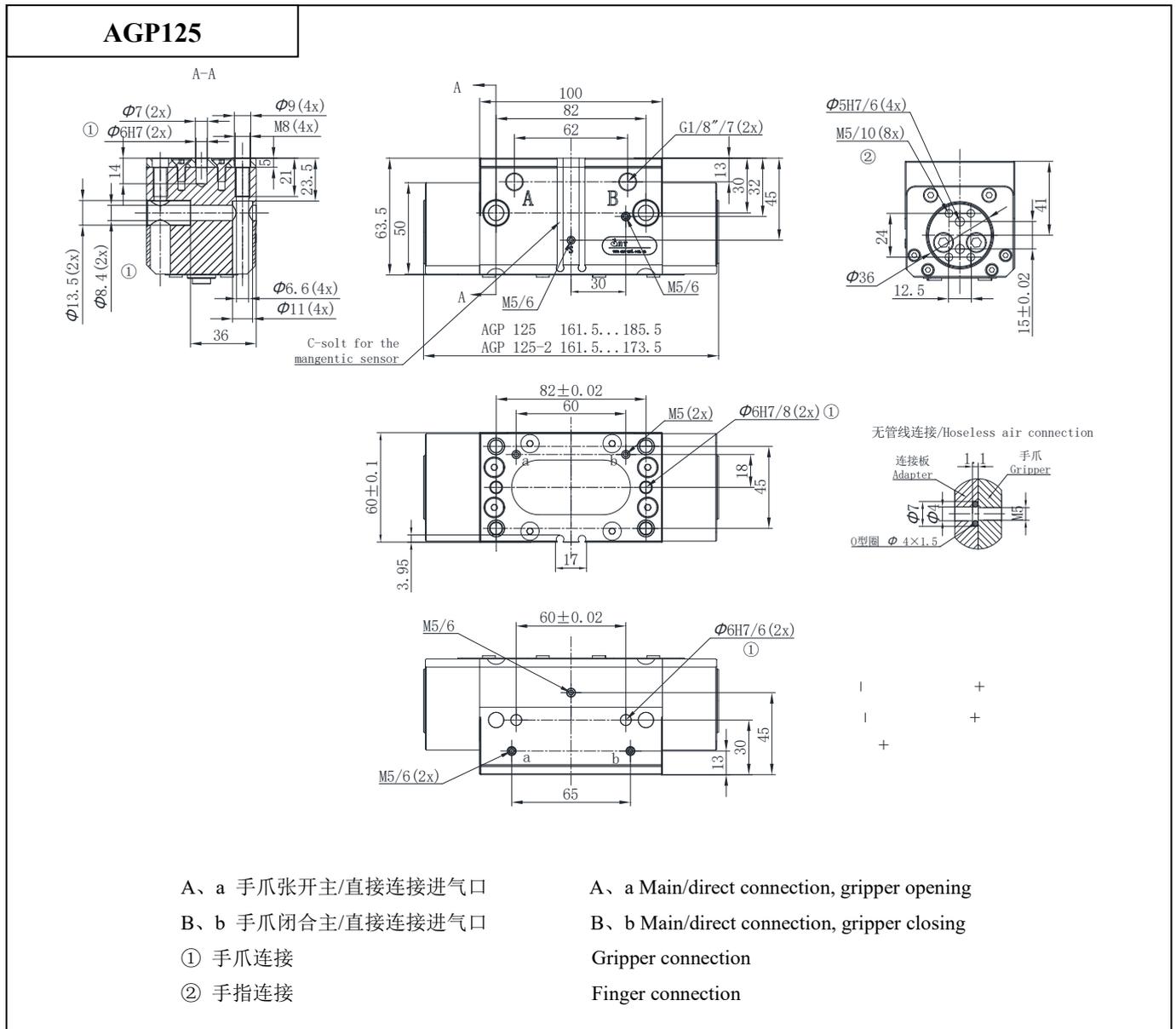
技术资料/Technical data

Description	AGP125	AGP125-NC	AGP125-NO	AGP125-2	AGP125-2-NC	AGP125-2-NO
手指单边行程 Stroke per finger	mm	12	12	12	6	6
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	203*P	284*P	480*P	645*P
	6bar 气压下夹持力	N	1218	1704	2880	3870
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	216*P	297*P	505*P	688*P
	6bar 气压下夹持力	N	1296	1782	3030	4128
断气最小夹持力 Min. gripping force without pressure air	N		490	490	1100	1100
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	1.65	2.15	2.05	1.65	2.05
空气消耗量/周期 Air consumption per double stroke	cm ³	80	148	148	80	148
开/闭时间 Closing/opening time	s	0.12/0.12	0.16/0.11	0.11/0.16	0.12/0.12	0.16/0.11
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	125	125	125	100	100
单个手指最大重量 Max. permitted weight per finger	Kg	1.75	1.75	1.75	1.75	1.75
适应最小/最大环境温度 Min./Max. ambient temperature	°C			标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class				IP 67		

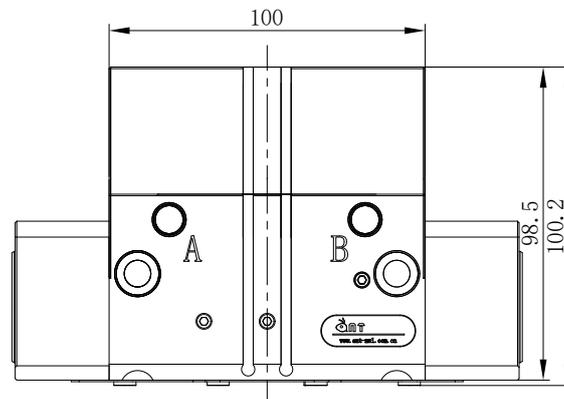
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

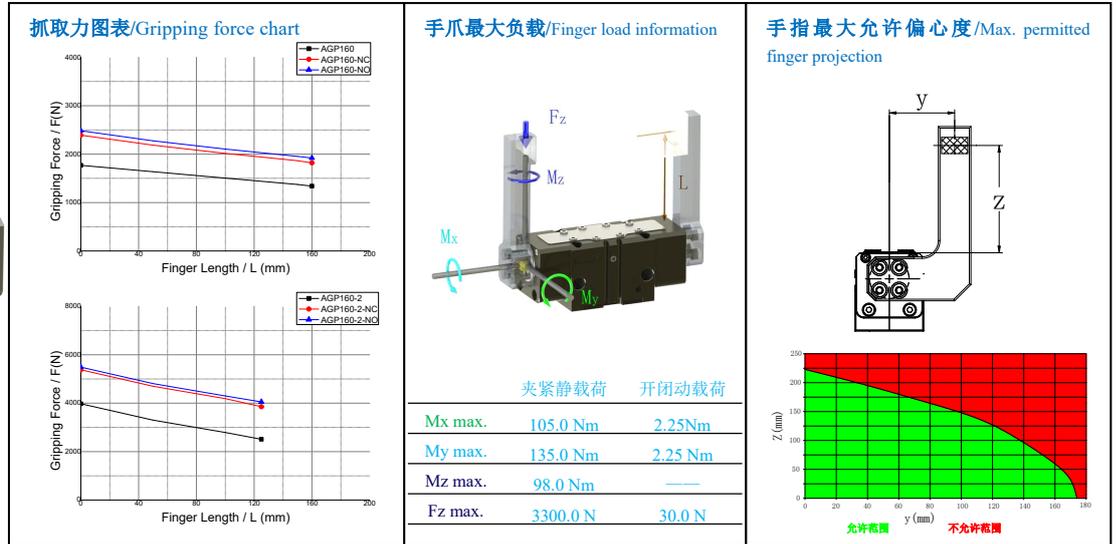
尺寸图/Dimensions



NO/NC 单作用手爪 / NO/NC single-acting gripper



AGP160



❖所有参数为气压 6bar 下测试/All data measured at 6bar

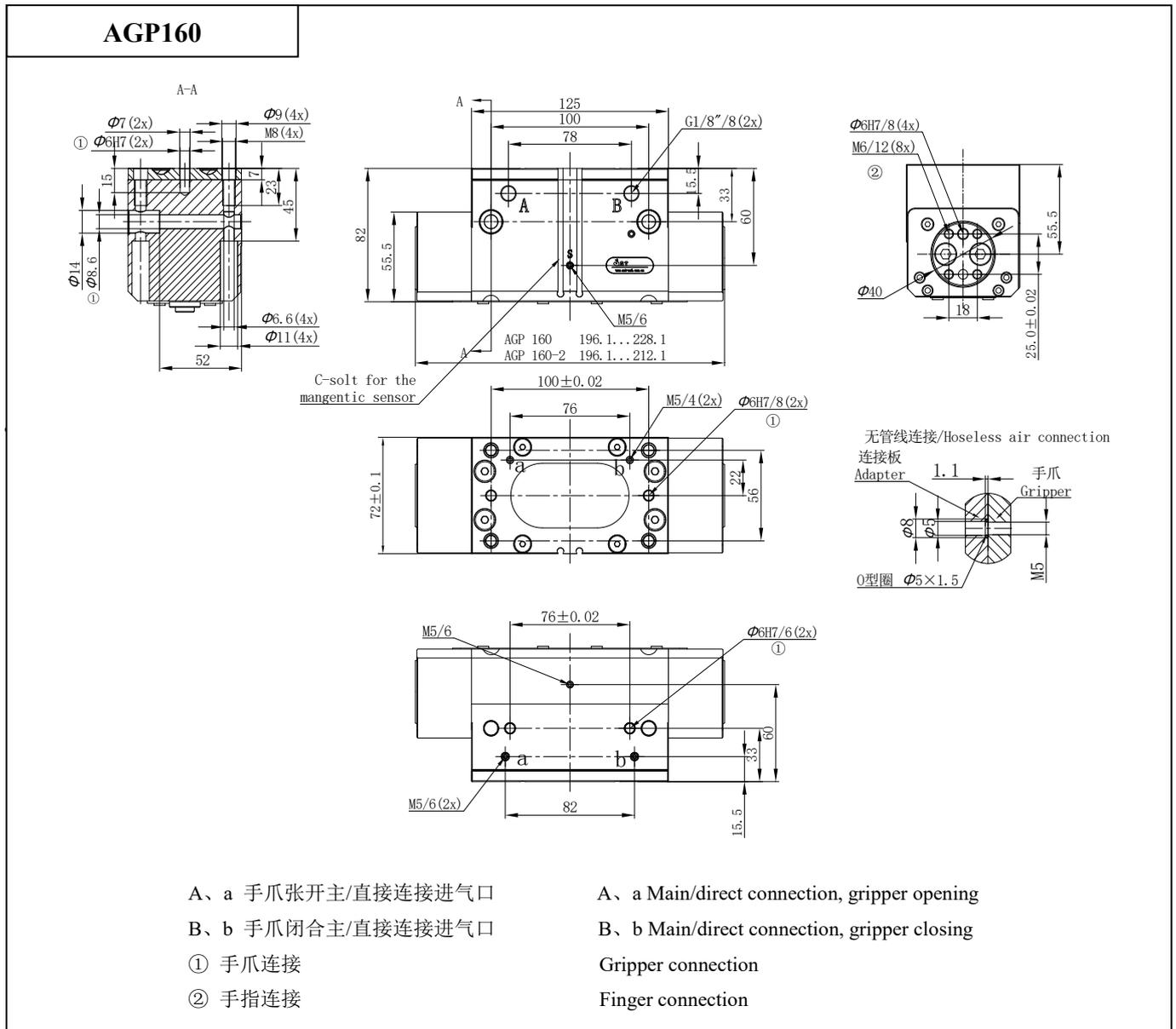
技术资料/Technical data

Description	AGP160	AGP160-NC	AGP160-NO	AGP160-2	AGP160-2-NC	AGP160-2-NO
手指单边行程 Stroke per finger	mm	16	16	16	8	8
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	310*P	415*P	690*P	925*P
	6bar 气压下夹持力	N	1860	2490	4140	5380
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	325*P	430*P	720*P	960*P
	6bar 气压下夹持力	N	1950	2580	4320	5760
断气最小夹持力 Min. gripping force without pressure air	N		650	650	1400	1400
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	3.0	3.5	3.4	3.0	3.4
空气消耗量/周期 Air consumption per double stroke	cm ³	268	477	477	268	477
开/闭时间 Closing/opening time	s	0.2/0.2	0.32/0.16	0.32/0.16	0.2/0.2	0.32/0.16
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	160	160	160	125	125
单个手指最大重量 Max. permitted weight per finger	Kg	3	3	3	3	3
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200	
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class						IP 67

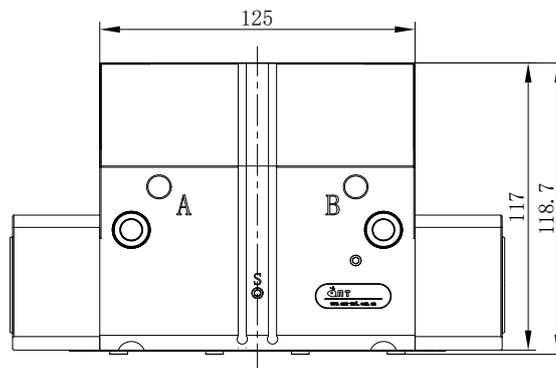
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

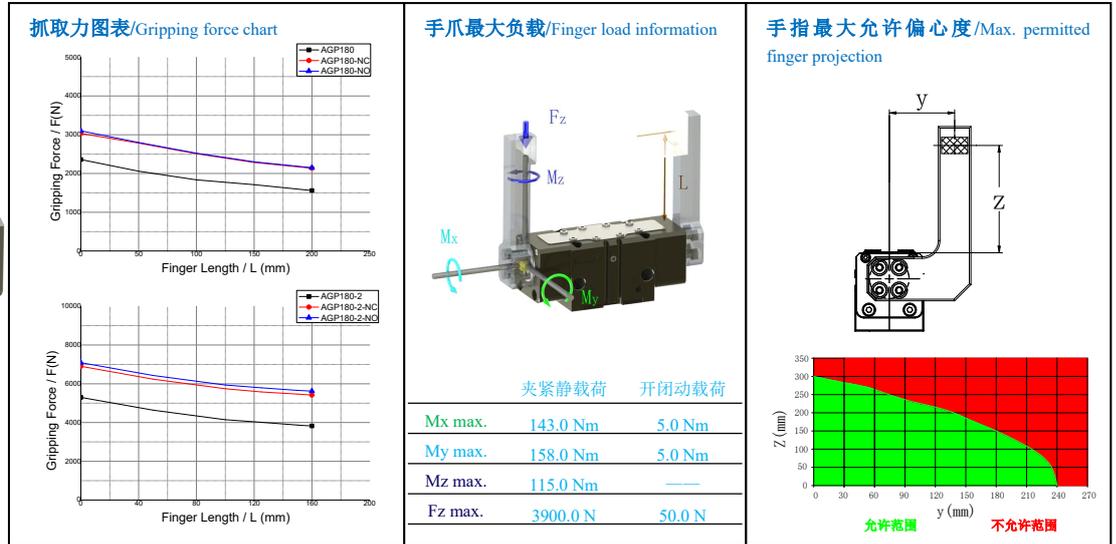
尺寸图/Dimensions



NO/NC 单作用手爪 / NO/NC single-acting gripper



AGP180



❖所有参数为气压 6bar 下测试/All data measured at 6bar

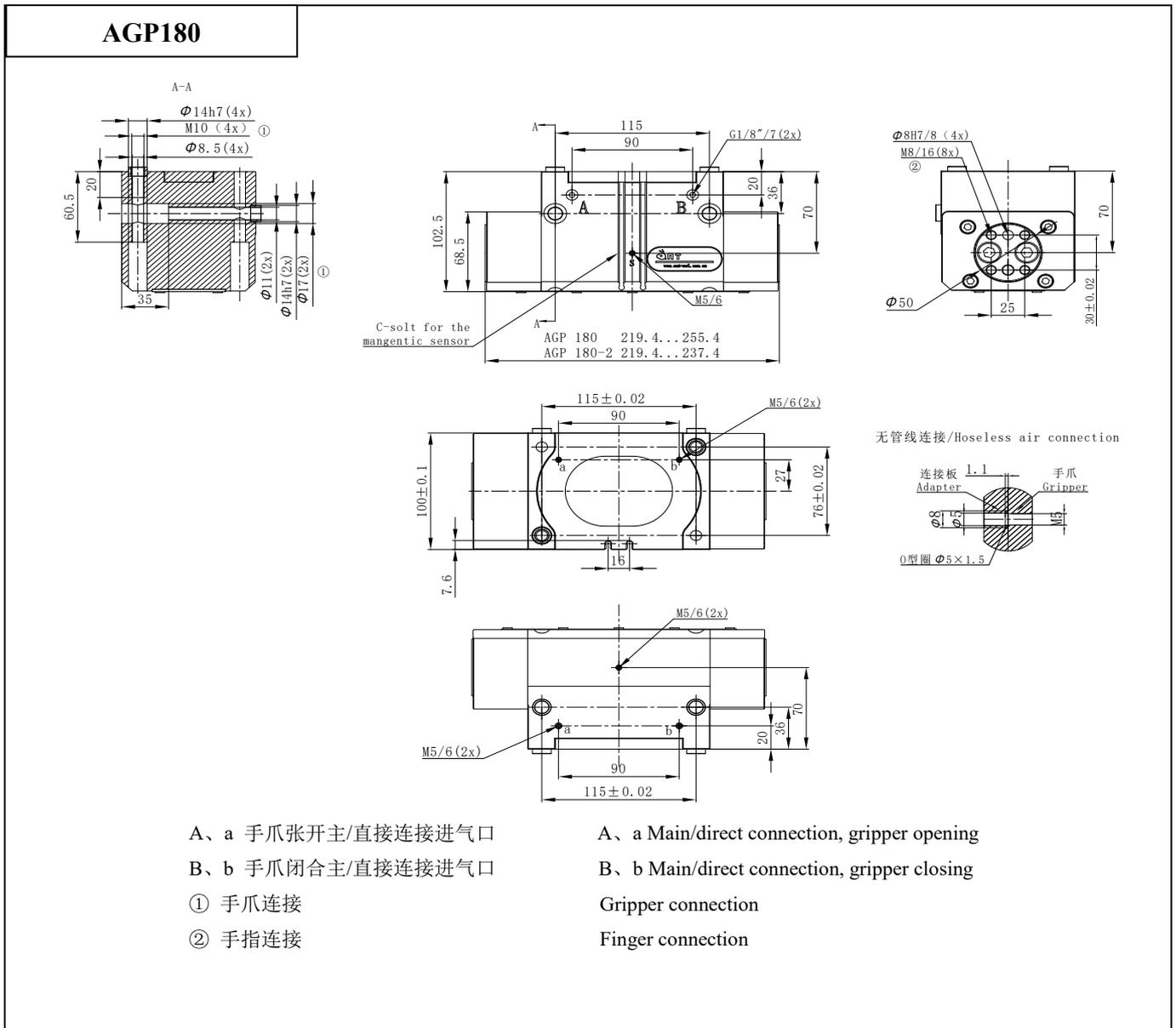
技术资料/Technical data

Description	AGP180	AGP180-NC	AGP180-NO	AGP180-2	AGP180-2-NC	AGP180-2-NO
手指单边行程 Stroke per finger	mm	18	18	18	9	9
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	417*P	520*P	845*P	1110*P
	6bar 气压下夹持力	N	2502	3120	5070	6660
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	445*P	558*P	910*P	1170*P
	6bar 气压下夹持力	N	2670	3348	5460	7020
断气最小夹持力 Min. gripping force without pressure air	N		850	850	1600	1600
使用压力范围 Max./Min. operating pressure	bar			3/8		
自重 Self weight	Kg	6.2	7.4	7.2	6.2	7.4
空气消耗量/周期 Air consumption per double stroke	cm ³	360	714	704	360	714
开/闭时间 Closing/opening time	s	0.4/0.4	0.75/0.4	0.4/0.75	0.4/0.4	0.75/0.4
重复精度 Repeat accuracy	mm			0.02		
最大手指长度 Max. permitted finger length	mm	200	200	200	160	160
单个手指最大重量 Max. permitted weight per finger	Kg	5	5	5	5	5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200	
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近
IP 等级 IP class						IP 67

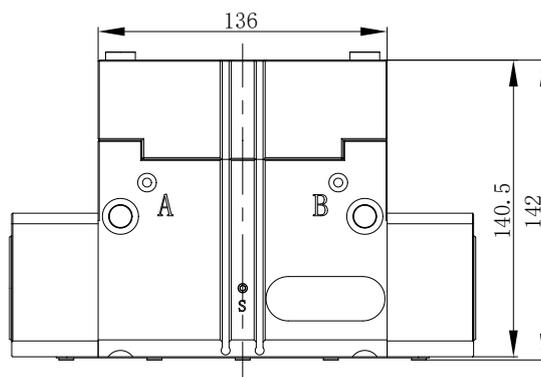
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

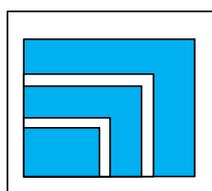
❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

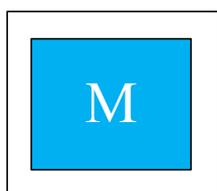


NO/NC 单作用手爪 / NO/NC single-acting gripper

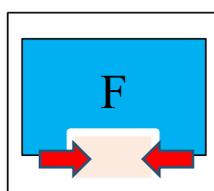




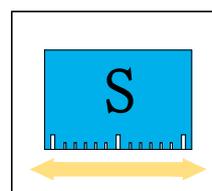
Sizes
125.....160



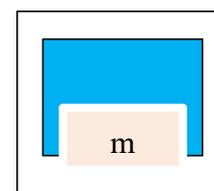
Weight
2.1...3.8Kg



Gripping Force
1104...1800N

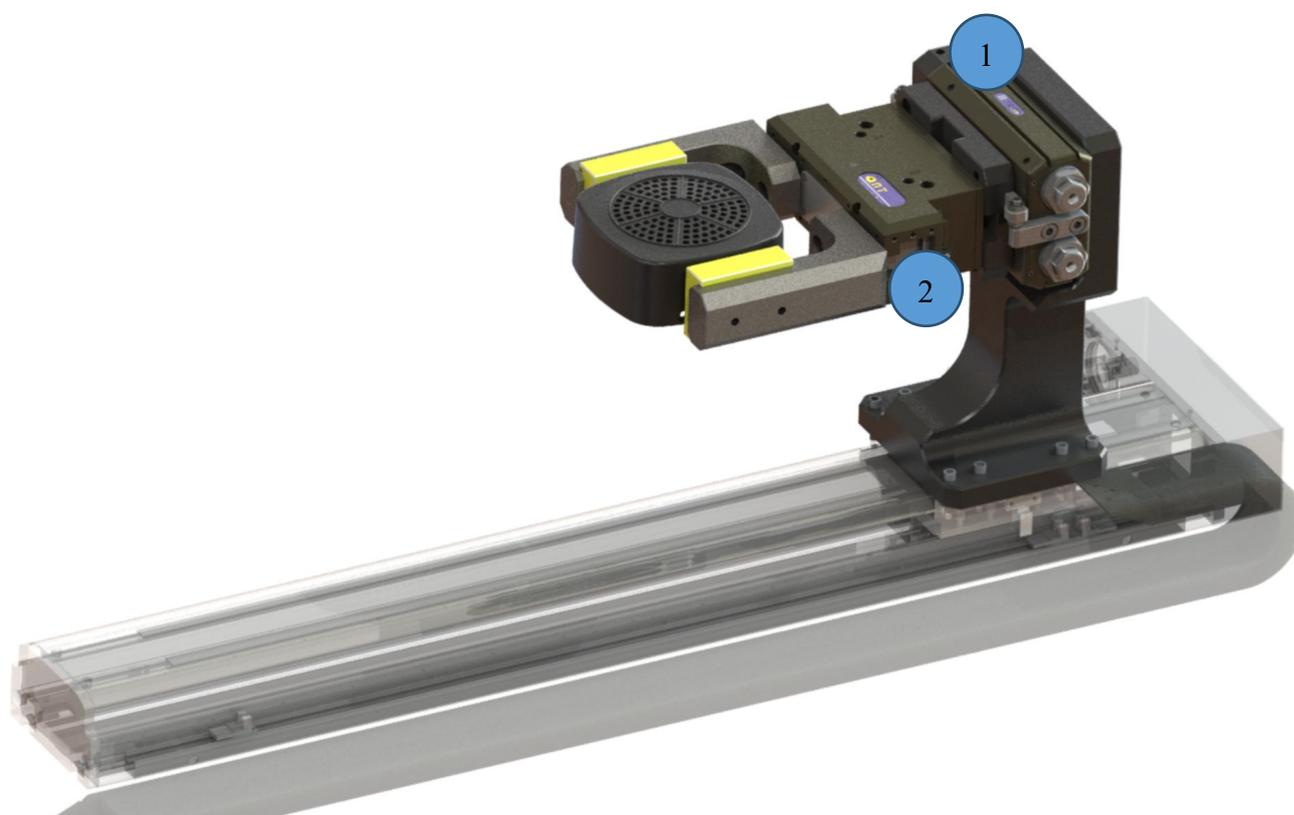


Stroke per finger
24...32mm



Workpiece weight
5.5..9Kg

应用案例 / Application example



- ③ SRP40 旋转手腕
- ④ AGL160 2 指平动手爪

- SRP40 Swivel Head
- AGL160 2-Finger Gripper series

2 指平动抓取手爪 / 2-Finger Parallel Gripper

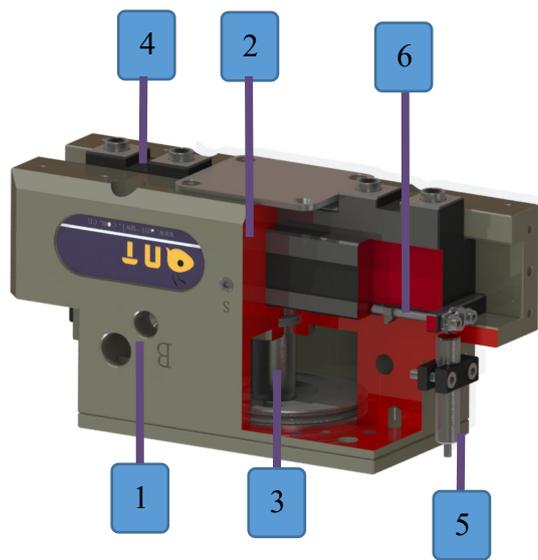
原理

- 压缩空气推动椭圆形活塞上下运动
- 楔形将驱动力转化为夹持力
- 滑块同步运动

Principle

- The oval piston is moved up or down by means of compressed air
- High gripping force as a result of optimal direction change of driving force into gripping force
- Synchronous gripping movement of both base jaws

剖视图 / Sectional diagram



- 1 本体 Housing
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 T 型导轨 T-slot guidance
重负载导轨：负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 3 驱动部分 Energy supply
大型椭圆形活塞，提供更大的夹持力
Large oval piston: can have greater force
- 4 滑块 Jaw
连接工件手指
For the connection of the workpiece-specific gripper fingers
- 5 传感系统 Sensor system
接近式传感器
Of gripper jaw via proximity switch
- 6 可调感应块 Adjustable induction block
便捷可调感应凸台
Convenience, adjustable switch cam

传感系统 Sensor system

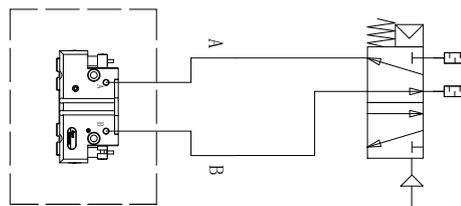
接近开关 / Proximity switch (选购/Order)



适用规格(NO.)

NPN	WPS-8GM35N
PNP	WPS-8GM35P

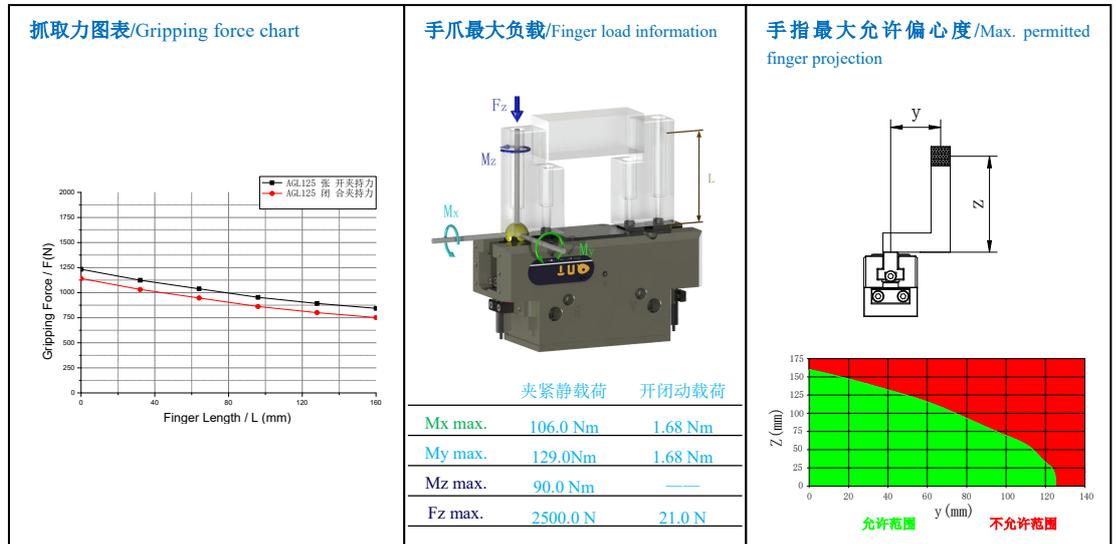
手爪气动连接原理图



手爪适配气管及电磁阀有效截面积建议值

气管直径 (mm)	≥6
电磁阀 有效截面积 (Cv/mm ²)	≥17.0

AGL125



◇所有参数为气压 6bar 下测试/All data measured at 6bar

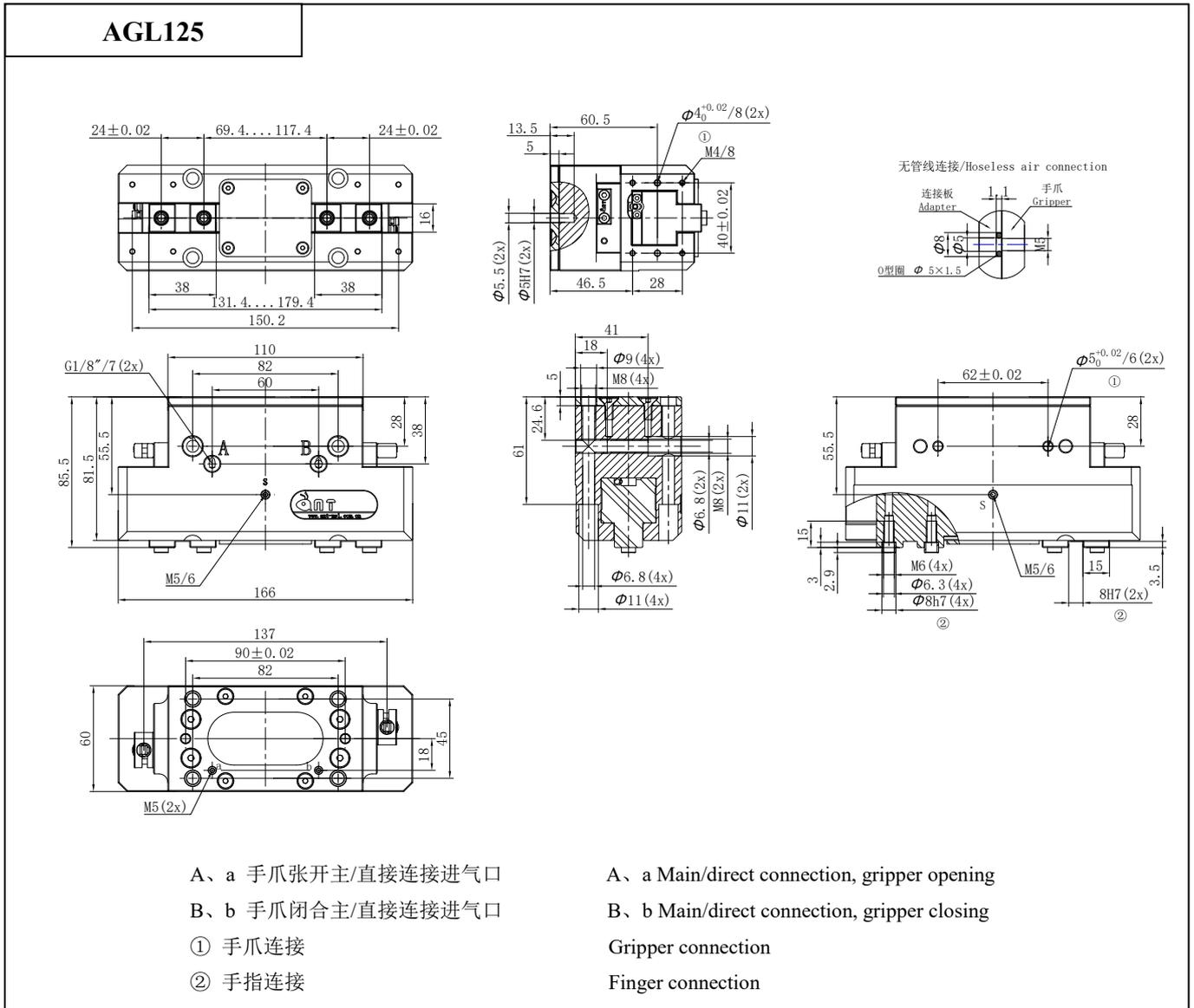
技术资料/Technical data

Description		AGL125
手指单边行程 Stroke per finger	mm	24
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N
	6bar 气压下夹持力	N
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N
	6bar 气压下夹持力	N
使用压力范围 Max./Min. operating pressure	bar	3/8
自重 Self weight	Kg	2.1
空气消耗量/周期 Air consumption per double stroke	cm ³	80
开/闭时间 Closing/opening time	s	0.1/0.1
重复精度 Repeat accuracy	mm	0.02
最大手指长度 Max. permitted finger length	mm	160
单个手指最大重量 Max. permitted weight per finger	Kg	2.1
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 (无) : 5/80 高温型 (-R) : 5/200
适配传感器类型 Adapted sensor type		接近
IP 等级 IP class		标准型 (无) : IP 45

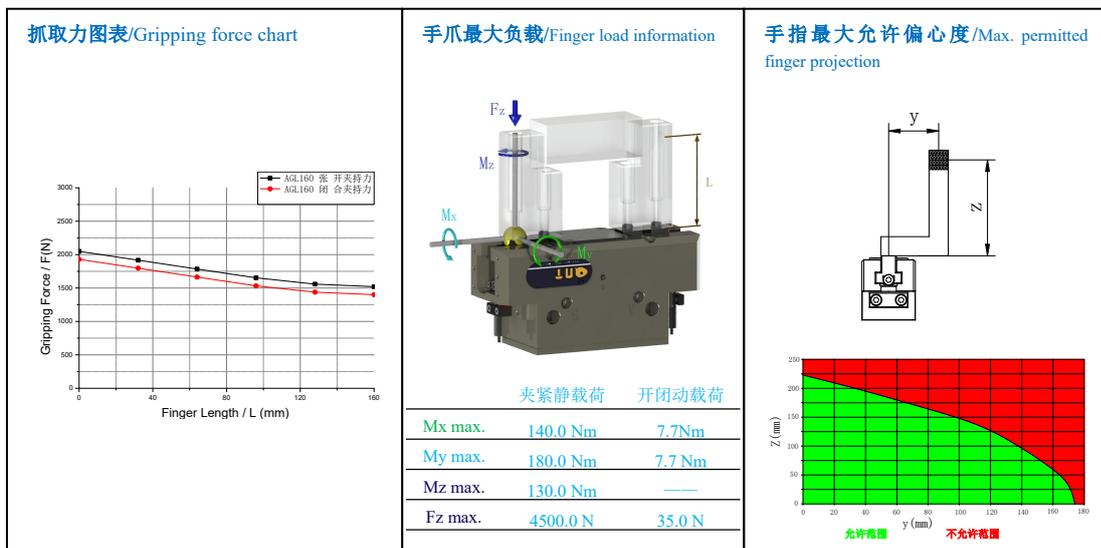
◇空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AGL160



❖所有参数为气压 6bar 下测试/All data measured at 6bar

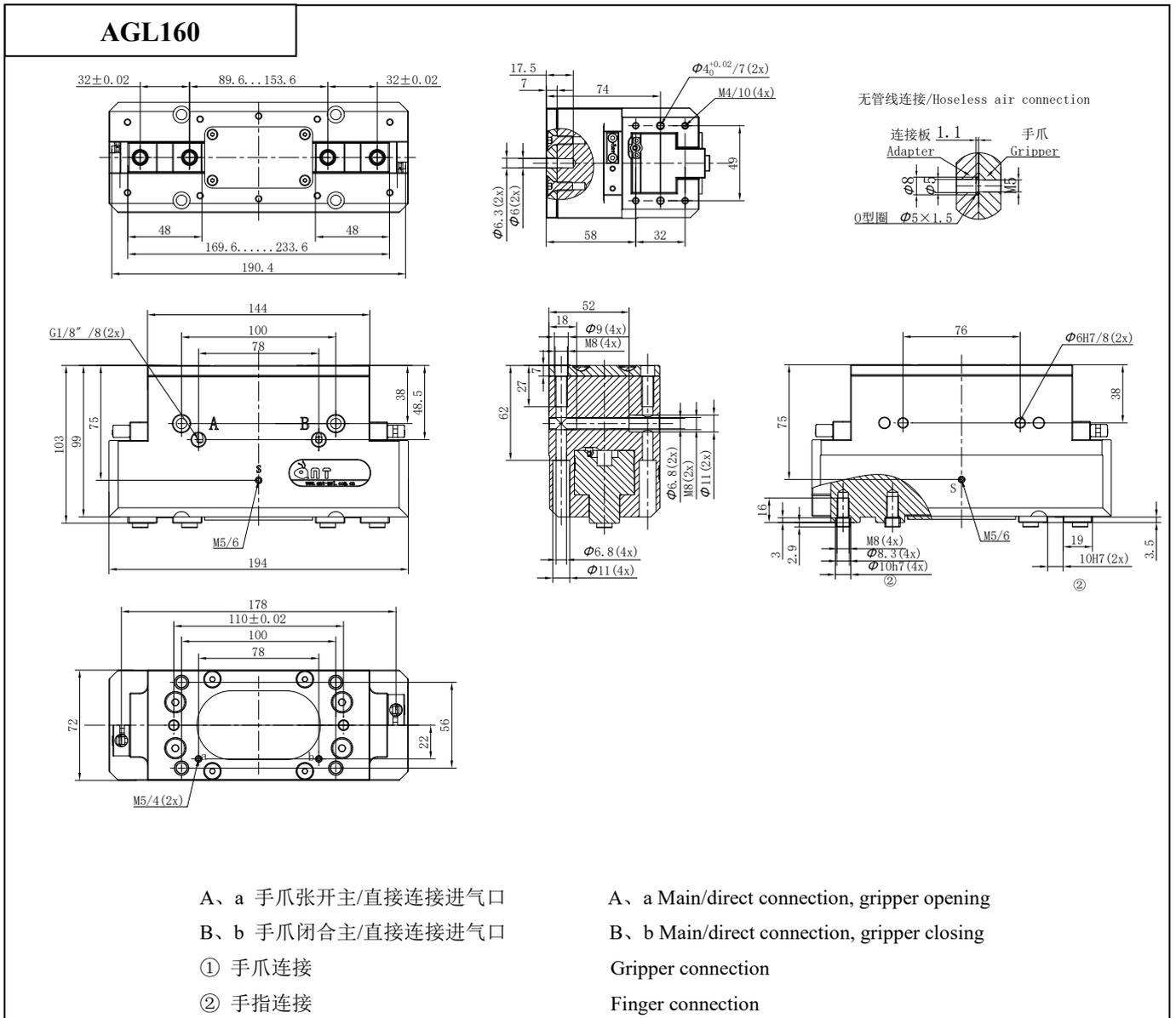
技术资料/Technical data

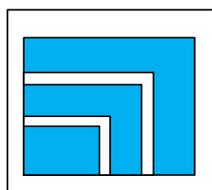
Description		AGL160
手指单边行程 Stroke per finger	mm	32
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	300*P
	6bar 气压下夹持力	1800
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	326*P
	6bar 气压下夹持力	1956
使用压力范围 Max./Min. operating pressure	bar	3/8
自重 Self weight	Kg	3.8
空气消耗量/周期 Air consumption per double stroke	cm ³	268
开/闭时间 Closing/opening time	s	0.2/0.2
重复精度 Repeat accuracy	mm	0.02
最大手指长度 Max. permitted finger length	mm	180
单个手指最大重量 Max. permitted weight per finger	Kg	3.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 (无) : 5/80 高温型 (-R) : 5/200
适配传感器类型 Adapted sensor type		接近
IP 等级 IP class		标准型 (无) : IP 45

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

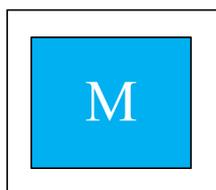
❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

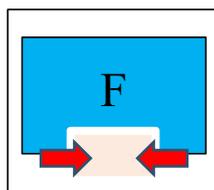




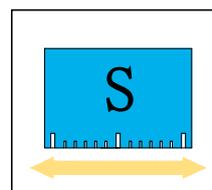
Sizes
30...63



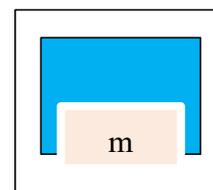
Weight
3.7...16Kg



Gripping Force
850...3045 N

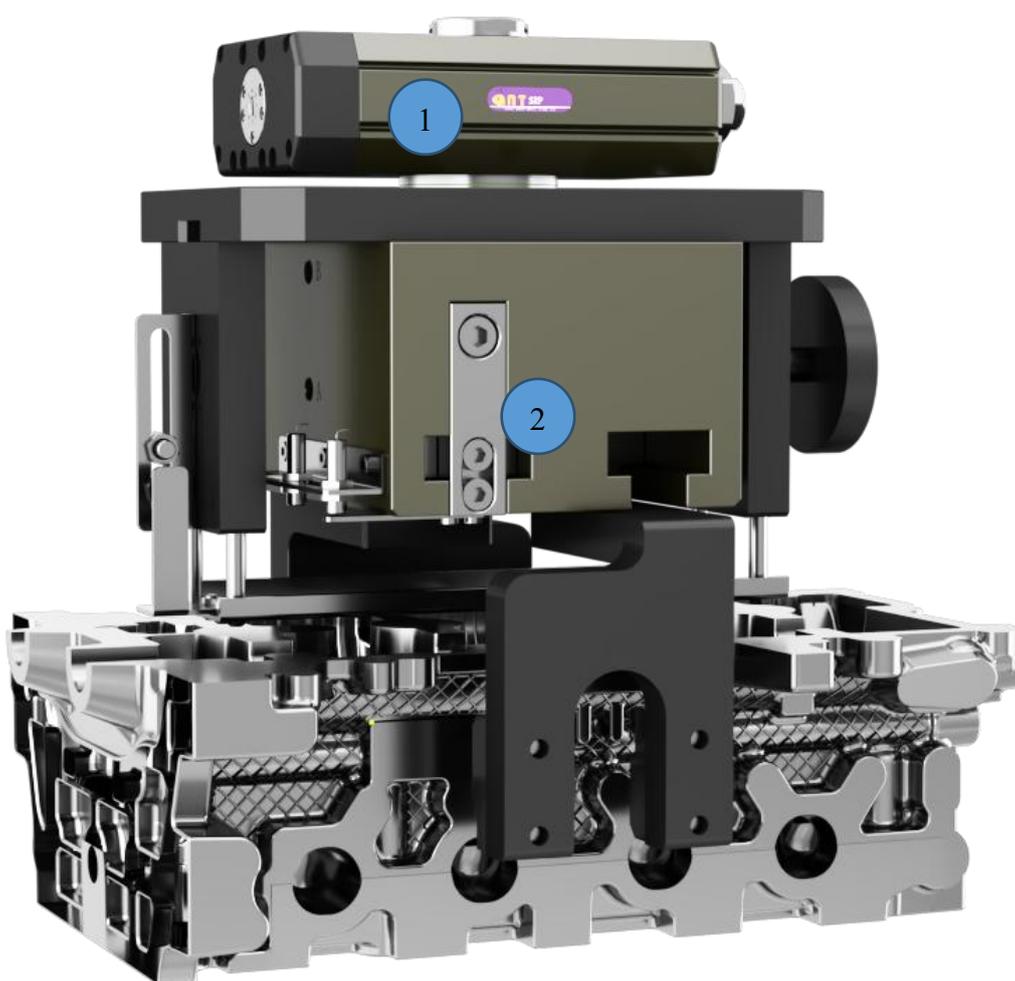


Stroke finger
50...100



Workpiece weight
4...15Kg

应用案例 / Application example



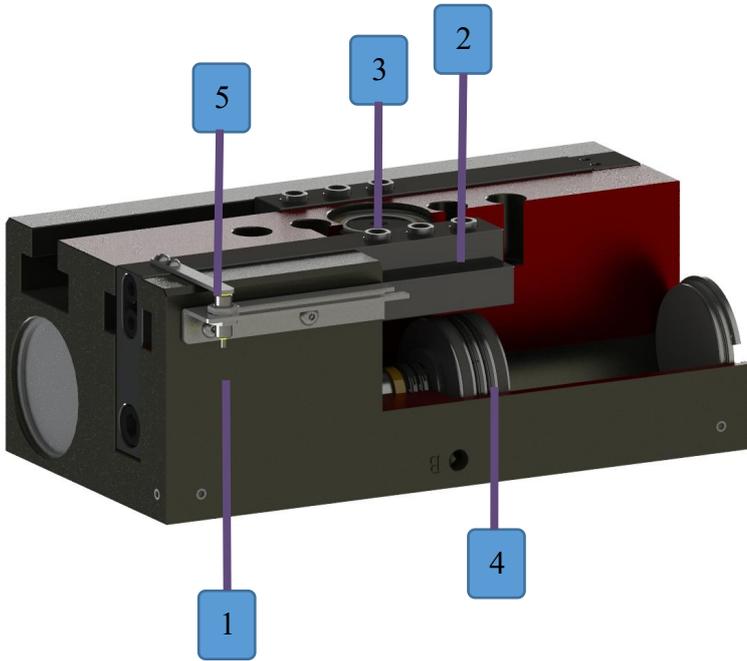
① SRP40-90 旋转模块

SRP40-90 Swivel Head

② ALE63-100 长行程二指平动手爪

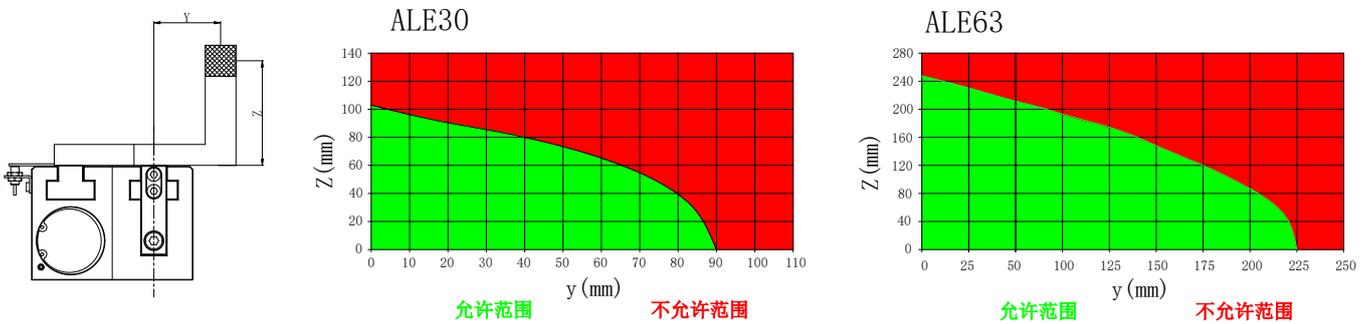
ALE63-100 Long Stroke 2-jaw parallel Gripper

剖视图 / Sectional diagram



- 1 本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 T 型导轨 T-slot guidance**
重负载导轨: 负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 3 传动方式 Transmission Model**
高动力传输
High power transmission
- 4 驱动部分 Energy supply**
圆形活塞, 提供更大的夹持力
Large Circular piston: can have greater force
- 5 传感系统 Sensor system**
接近式传感器
Of gripper jaw via proximity switch

静态力和力矩/Static forces and torques



传感系统 Sensor system

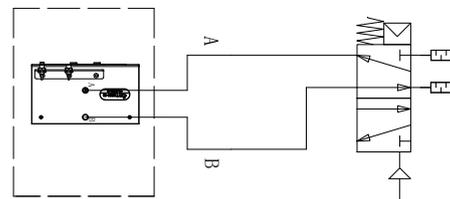
接近开关 / Proximity switch (选购/Order)



型号(NO.)	
NPN	WPS-8GM35N
PNP	WPS-8GM35P

- 传感器成对使用
- Two sensors (NO contacts) are required for each swivel unit.

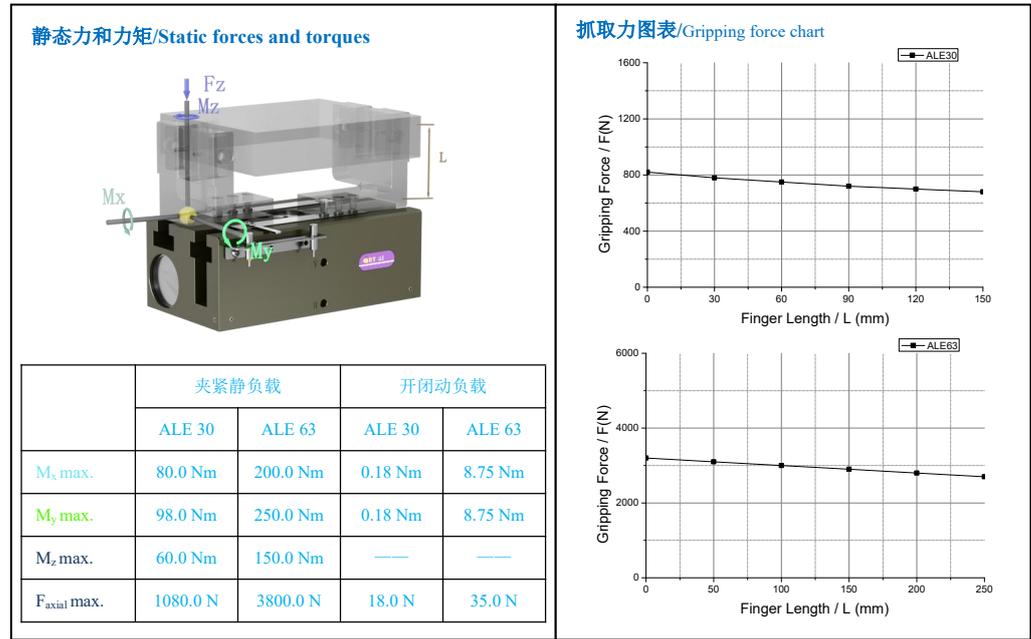
手爪气动连接原理图



手爪适配气管及电磁阀有效截面积建议值

型号	ALE			
	30-50	30-100	63-50	63-100
气管直径 (mm)	≥6	≥6	≥8	≥8
电磁阀有效截面积 (Cv/mm ²)	≥17	≥28	≥28	≥28

ALE



所有参数为气压 6bar 下测试/All data measured at 6bar

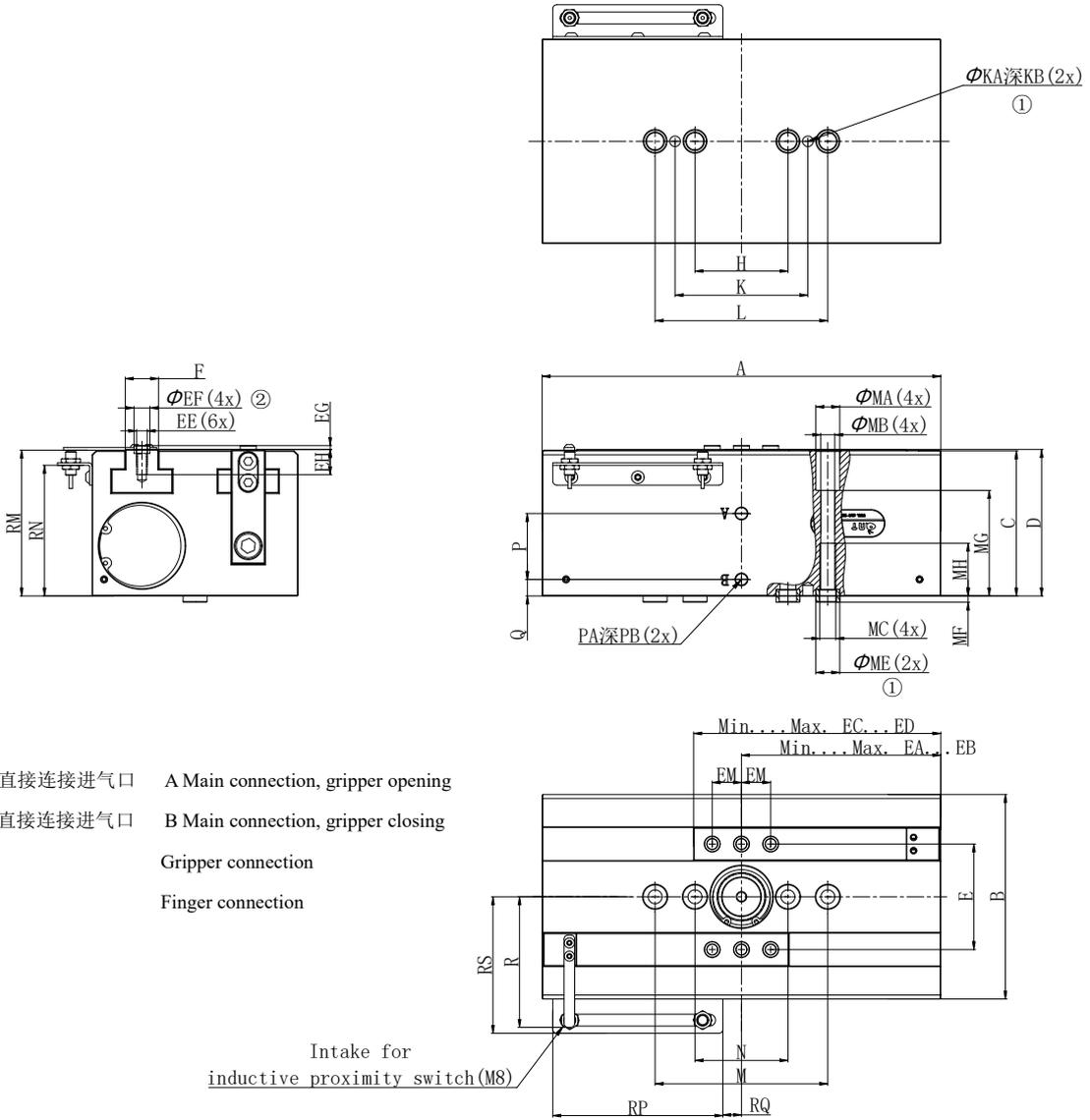
技术资料 Technical data

Description		ALE30-50	ALE30-100	ALE63-50	ALE63-100	
手指单边行程 Stroke per finger	mm	50	100	50	100	
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	136*P	136*P	516*P	516*P
	6bar 气压下夹持力	N	816	816	3096	3096
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	120*P	120*P	507.5*P	507.5*P
	6bar 气压下夹持力	N	720	720	3045	3045
使用压力范围 Max./Min. operating pressure	bar	3/8				
自重 Self weight	Kg	3.7	5.5	10	16	
空气消耗量/周期 Air consumption per double stroke	cm ³	172	350	600	1200	
开/闭时间 Closing/opening time	s	0.5/0.5	0.8/0.8	0.5/0.5	1.0/1.0	
重复精度 Repeat accuracy	mm	0.05	0.05	0.05	0.05	
最大手指长度 Max. permitted finger length	mm	100	100	250	250	
单个手指最大重量 Max. permitted weight per finger	Kg	1.8	1.8	3.5	3.5	
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 : 5/80 高温型 (-R) : 5/200				
IP 等级 IP class		46				

◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



A 手爪张开主/直接连接进气口 A Main connection, gripper opening

B 手爪闭合主/直接连接进气口 B Main connection, gripper closing

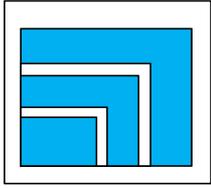
① 手爪连接 Gripper connection

② 手指连接 Finger connection

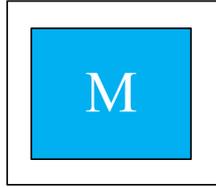
Intake for inductive proximity switch (M8)

	A	B	C	D	E	EA	EB	EC	ED	EE	EF	EG	EH	EM	F	H	K	KA	KB
ALE30-50	190	95	70	71	46	95	145	120	170	M6	10h7	2.9	12	15±0.02	13.5	70±0.02	100±0.02	6H7	8
ALE30-100	290	95	70	71	46	145	245	170	270	M6	10h7	2.9	12	15±0.02	13.5	70±0.02	100±0.02	6H7	8
ALE63-50	200	155	110	111	80	100	150	135	185	M8	12h7	2.9	16	22±0.02	24	70±0.02	100±0.02	8H7	8
ALE63-100	300	155	110	111	80	150	250	185	285	M8	12h7	2.9	16	22±0.02	24	70±0.02	100±0.02	8H7	8

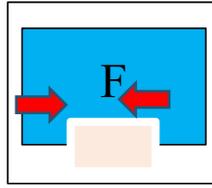
	L	M	MA	MB	MC	ME	MF	MH	MG	N	P	PA	PB	Q	R	RM	RN	RP	RQ	RS
ALE30-50	130±0.02	130	11	6.6	M8	12h7	2.9	20	50	70	29	G1/8	7	8.5	82	71	63	128	34	73.5
ALE30-100	130±0.02	130	11	6.6	M8	12h7	2.9	20	50	70	29	G1/8	7	8.5	82	71	63	128	16	73.5
ALE63-50	130±0.02	130	18	10.5	M12	18h7	4.8	25	80	70	50	G1/8	7	12.5	99	110.5	99	128	34	103.5
ALE63-100	130±0.02	130	18	10.5	M12	18h7	4.8	25	80	70	50	G1/8	7	12.5	99	110.5	99	128	14	103.5



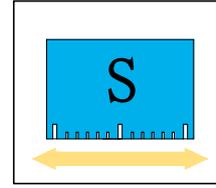
Sizes
63.....80



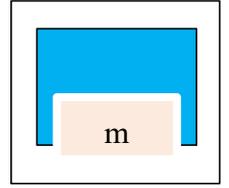
Weight
22...25Kg



Gripping Force
3300...5574N

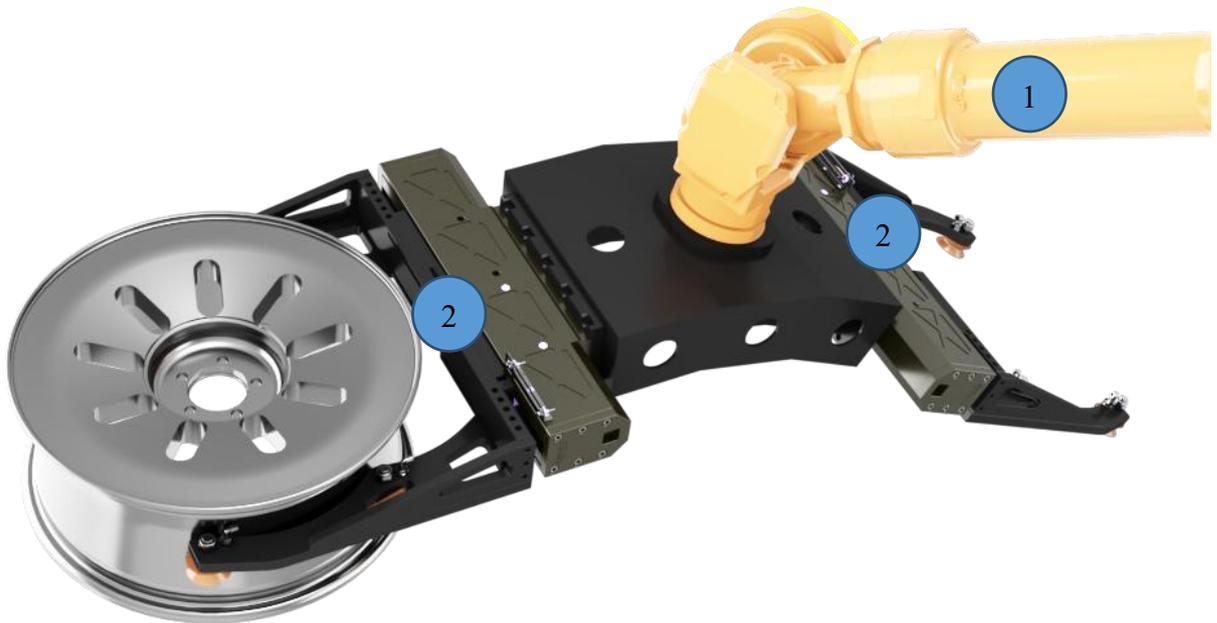


Stroke per finger
100mm



Workpiece weight
30..50Kg

应用案例 / Application example



- ① 机器人
- ② ALH63-100 2 指长行程重型手爪

Robot
ALH63-100 2-Finger Heavy-load Gripper

2 指长行程重型手爪 / 2-Finger Heavy-load Gripper

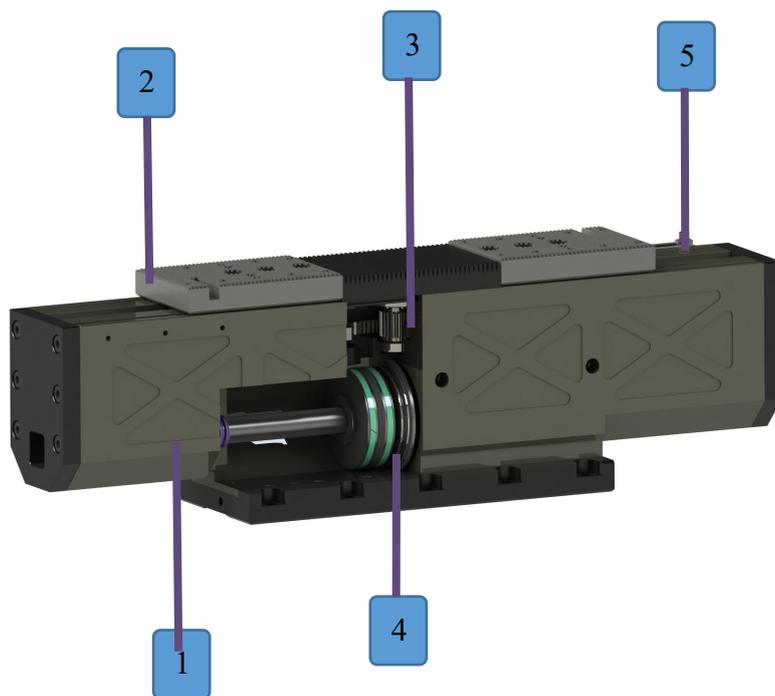
原理

- 压缩空气推动圆形活塞上下运动
- 驱动力直接转化为夹持力
- 滑块同步运动

Principle

- The Circular piston is moved up or down by means of compressed air
- The driving force is directly converted into clamping force
- Synchronous gripping movement of both base jaws

剖视图 / Sectional diagram



- 1 本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 T 型导轨 T-slot guidance**
重负载导轨：负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 3 传动方式 Transmission Model**
高动力传输
High power transmission
- 4 驱动部分 Energy supply**
圆形活塞，提供更大的夹持力
Large Circular piston: can have greater force
- 5 传感系统 Sensor system**
接近式传感器
Of gripper jaw via proximity switch

传感系统 Sensor system

接近开关 / Proximity switch (选购/Order)

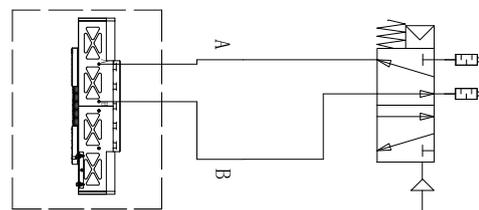


型号(NO.)	
NPN	WPS-8GM35N
PNP	WPS-8GM35P

● 传感器成对使用

● Two sensors (NO contacts) are required for each swivel unit.

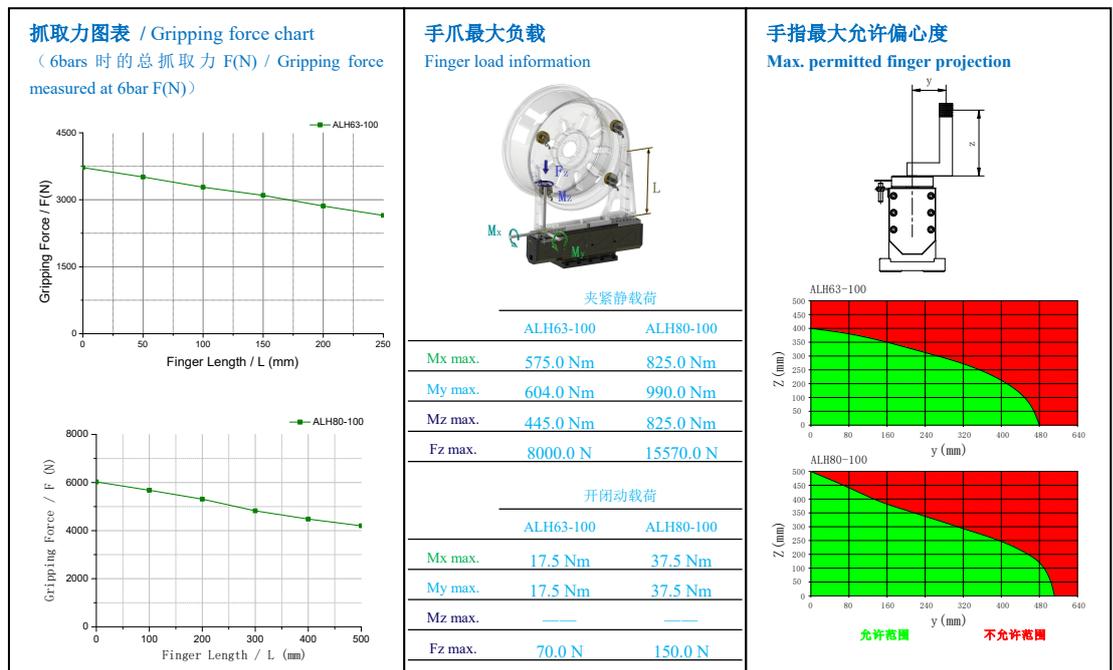
手爪气动连接原理图



手爪适配气管及电磁阀有效截面积建议值

型号	ALH	
	63-100	80-100
气管直径 (mm)	≥8	≥8
电磁阀有效截面积 (Cv/mm ²)	≥48	≥48

ALH



❖所有参数为气压 6bar 下测试/All data measured at 6bar

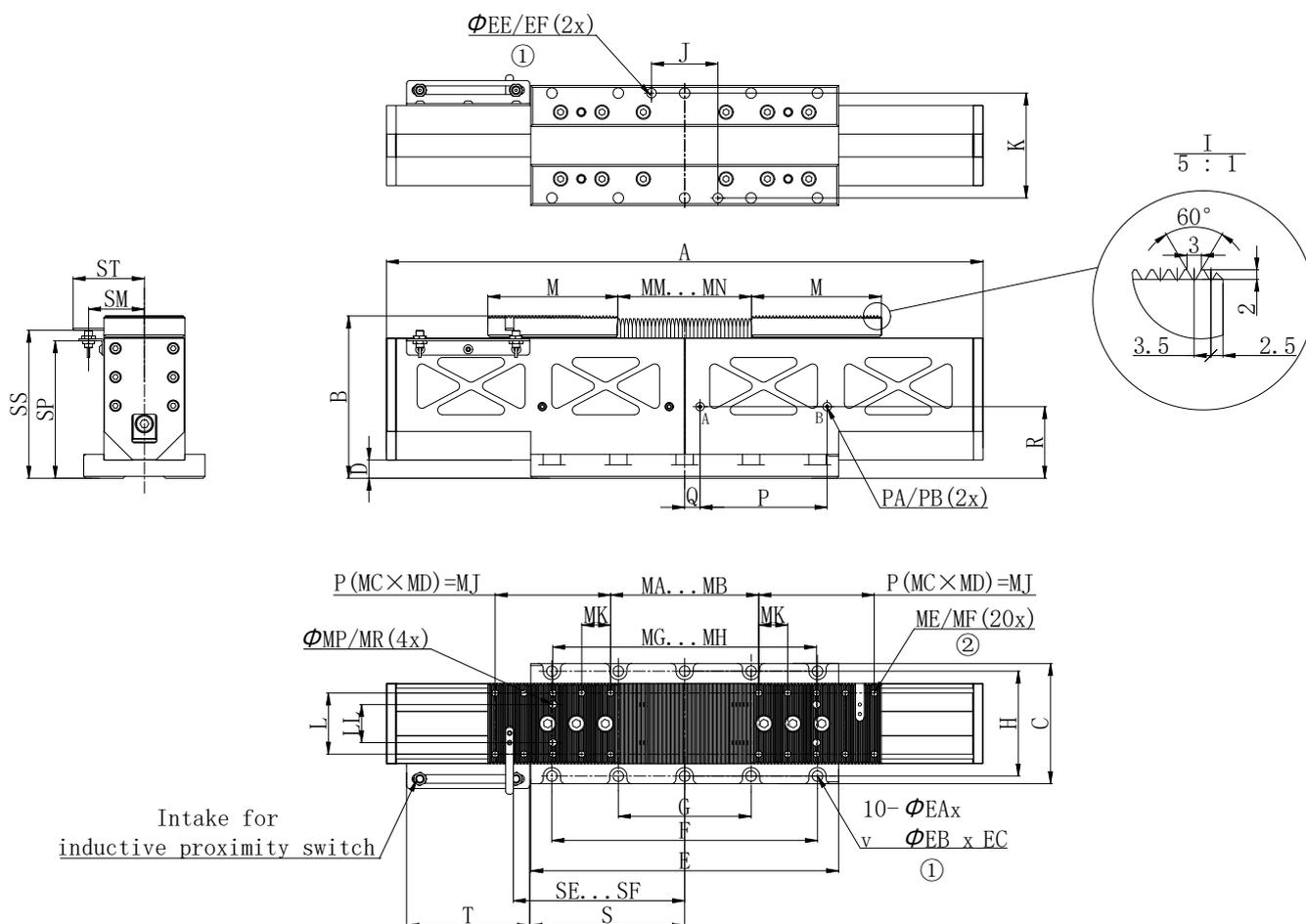
技术资料/Technical data

Description		ALH63-100	ALH80-100	
手指单边行程 Stroke per finger	mm	100	100	
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	555*P	929*P
	6bar 气压下夹持力	N	3330	5574
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	598*P	964*P
	6bar 气压下夹持力	N	3588	5784
使用压力范围 Max./Min. operating pressure	bar	3/8	3/8	
自重 Self weight	Kg	22	25	
空气消耗量/周期 Air consumption per double stroke	cm ³	1246	1055	
开/闭时间 Closing/opening time	s	0.8/0.8	1.0/1.0	
重复精度 Repeat accuracy	mm	0.1	0.1	
最大手指长度 Max. permitted finger length	mm	400	500	
单个手指最大重量 Max. permitted weight per finger	Kg	7	15	
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 : 5/80 高温型 (-R) : 5/200	标准型 : 5/80 高温型 (-R) : 5/200	
IP 等级 IP class		46	46	

◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

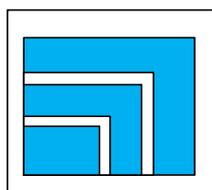
尺寸图/Dimensions



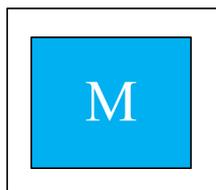
- A、手爪张开主/直接连接进气口 A Main/direct connection, gripper opening
 B 手爪闭合主/直接连接进气口 B Main/direct connection, gripper closing
 ① 手爪连接 Gripper connection
 ② 手指连接 Finger connection

型号	A	B	C	D	E	EA	EB	EC	EE	EF	F	G	H	J	K	L	LL	M	MA	MB	MC
ALH63-100	620	170	126	19	320	11	18	11	10H7	15	276	138	110	69±0.02	110±0.02	64	40±0.02	135	154	354	30
ALH80-100	630	192	126	33	320	11	18	11	10H7	15	276	138	110	69±0.02	110±0.02	64	40±0.02	135	154	354	30

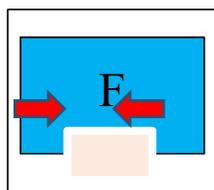
型号	MD	ME	MF	MG	MH	MJ	MK	MM	MN	MP	MR	P	PA	PB	Q	R	S	SE	SF	SM	SP	SS	ST	T
ALH63-100	4	M8	15	274	474	120	30	139	339	8H7	12	132	G1/8	8	17	75	161	178	278	58	144	155	74	128
ALH80-100	4	M8	15	274	474	120	30	139	339	8H7	12	132	G1/4	12	17	99	166	178	278	63.5	166	177	74	128



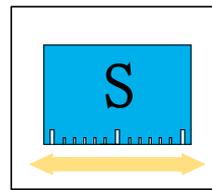
Sizes
80...380



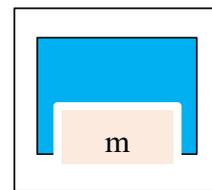
Weight
0.5...38Kg



Gripping Force
240...12000N

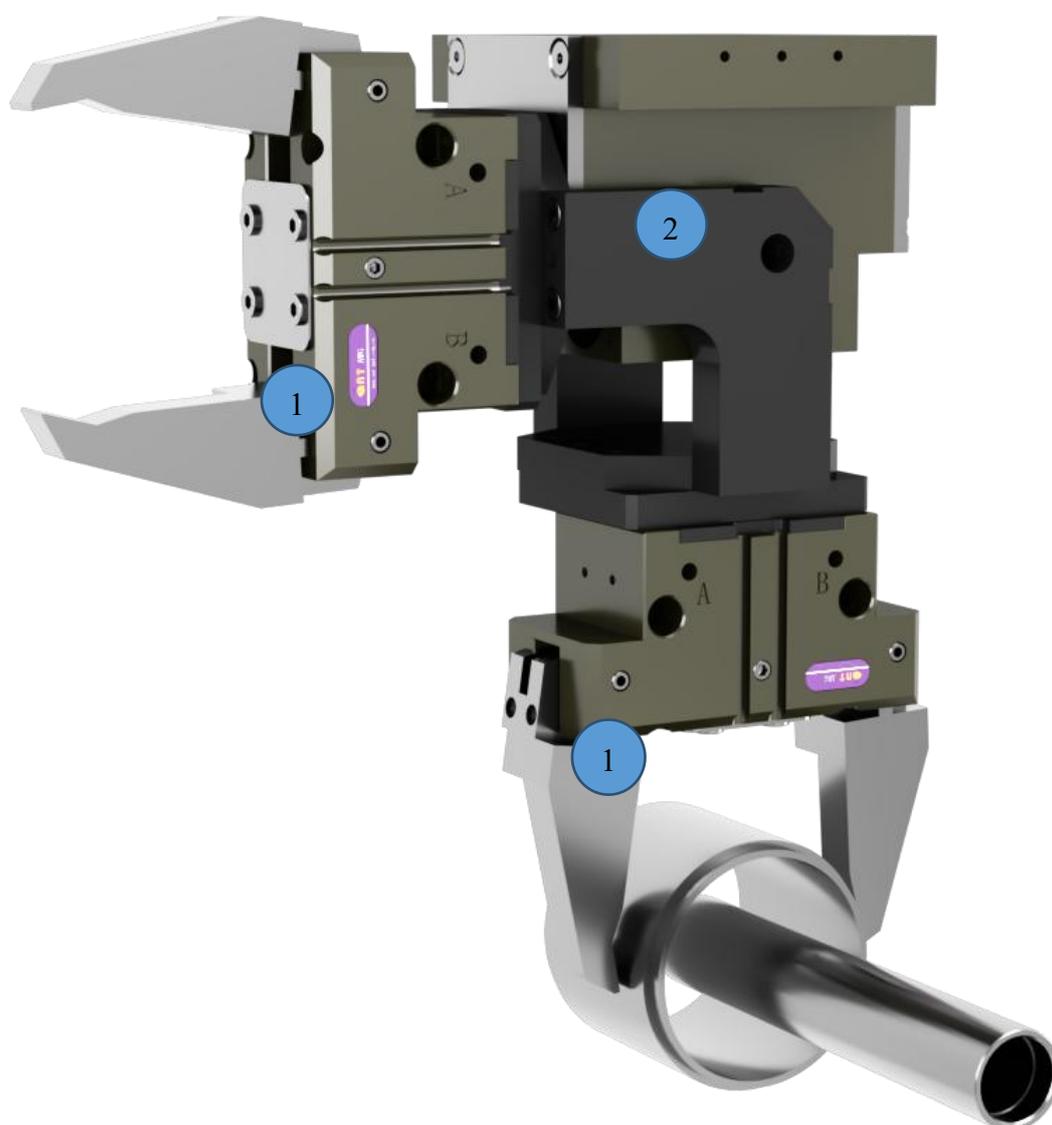


Stroke per jaw
20°



Workpiece weight
1.2...59Kg

应用案例 / Application example



- ① AWG80 张角式二指手爪
- ② SKE40 旋转模块

AWG80 2-Jaw Angular Gripper
SKE40 Swivel unit

2 指张角手爪 / 2-Finger Angular Gripper

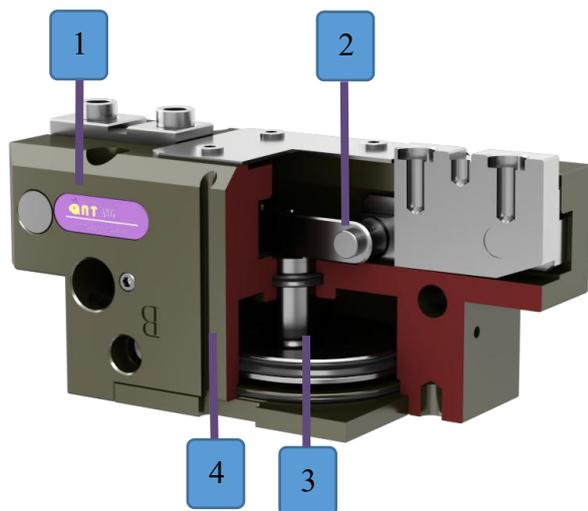
原理

- 压缩空气推动椭圆形活塞上下运动
- 连杆式原理将驱动力转化为夹持力
- 滑块同步运动

Principle

- The oval piston is moved up or down by means of compressed air
- High gripping force as a result of optimal direction change of driving force into gripping force
- Synchronous gripping movement of both base jaws

剖视图 / Sectional diagram



- 1 本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 传动方式 Transmission Model**
连杆原理
Rod element design principle
- 3 驱动部分 Energy supply**
大型椭圆形活塞, 提供更大的夹持力
Large oval piston: can have greater force
- 4 传感系统 Sensor system**
磁性传感器
Of gripper jaw via magnetic sensor

传感系统 Sensor system

接近传感器 / Proximity switch (选购/Order)



适用型号(NO.) **AWG-160/180/260/300/380**

NPN WPS-8GM35N

PNP WPS-8GM35P

磁性传感器 / Magnetic Sensor (选购/Order)



型号(NO.)

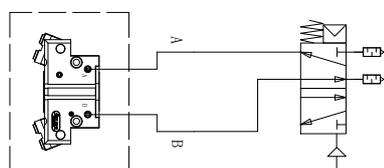
NPN WMS-M9T

PNP WMS-M9T

● 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80℃ 下使用

● The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80℃.

手爪气路连接原理图



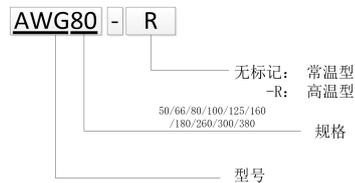
手爪适配气管及电磁阀有效截面积建议值

型号	AWG			
	50/66/80	100/125	180/260	300~380
气管直径 (mm)	≥4	≥6	≥8	≥10
电磁阀有效截面积	≥17.0	≥17.0	≥28.0	≥48.0

AWG



型号表示方法



技术资料/Technical data

Description		AWG50	AWG66	AWG80	AWG100	AWG125
手指单边张开角度 Stroke per finger	°	20				
开闭夹持力 Closing moment	N	$\frac{0.52 \times P}{L+11} \times 1000$	$\frac{1.2 \times P}{L+13} \times 1000$	$\frac{2.7 \times P}{L+17.5} \times 1000$	$\frac{5 \times P}{L+19.5} \times 1000$	$\frac{9.3 \times P}{L+21} \times 1000$
使用压力范围 Max./Min. operating pressure	bar	3/8				
产品重量 Weight	Kg	0.13	0.25	0.5	0.8	1.38
空气消耗量/周期 Air consumption per double stroke	cm ³	4.1	10	25.2	40	1850
开/闭时间 Closing/opening time	s	0.02/0.04	0.05/0.1	0.2/0.3	0.2/0.3	0.3/0.4
重复精度 Repeat accuracy	°	0.1	0.1	0.1	0.1	0.1
最大手指长度 Max. permitted finger length	mm	50	60	80	100	125
单个手指最大重量 Max. permitted weight per finger	Kg	0.1	0.2	0.5	1	1.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 : 5/80 高温型 (-R) : 5/200				
IP 等级 IP class		40				

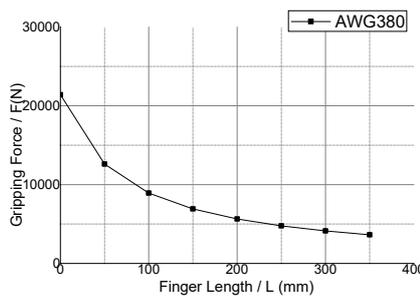
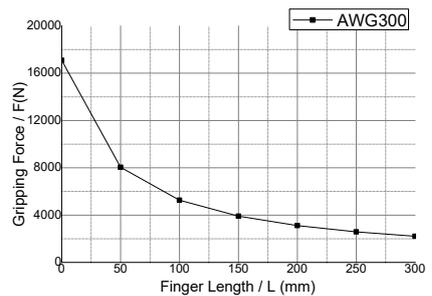
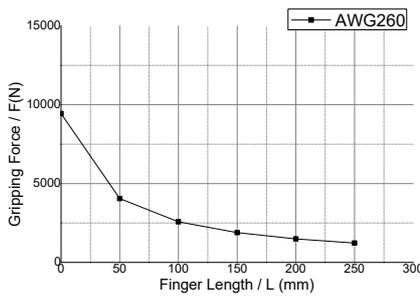
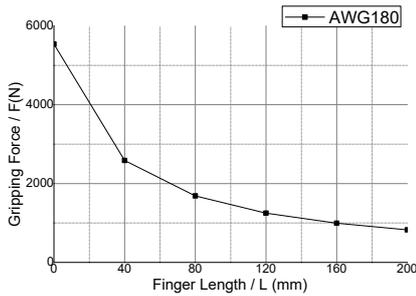
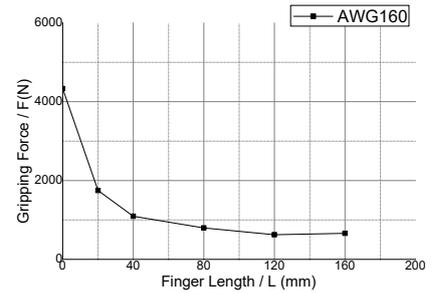
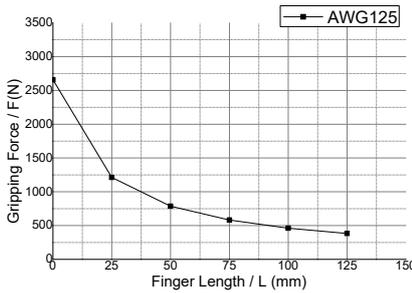
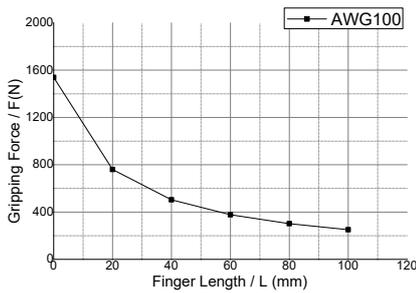
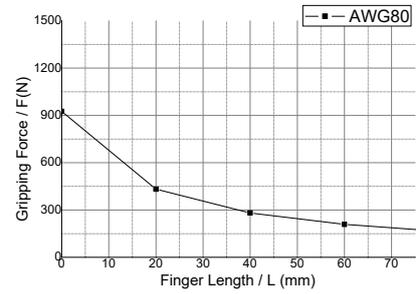
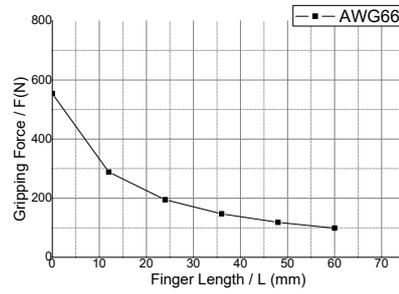
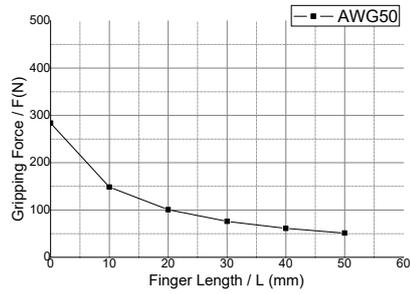
Description		AWG160	AWG180	AWG260	AWG300	AWG380
手指单边张开角度 Stroke per finger	°	20				
开闭夹持力 Closing moment	N	$\frac{19.5 \times P}{L+27} \times 1000$	$\frac{32.3 \times P}{L+35} \times 1000$	$\frac{59 \times P}{L+37.5} \times 1000$	$\frac{126.7 \times P}{L+44.5} \times 1000$	$\frac{255.2 \times P}{L+71.5} \times 1000$
使用压力范围 Max./Min. operating pressure	bar	3/8				
产品重量 Weight	Kg	2.9	5.5	9.5	19	38
空气消耗量/周期 Air consumption per double stroke	cm ³	268	360	603	1047	1850
开/闭时间 Closing/opening time	s	0.3/0.4	0.4/0.5	0.5/0.6	0.5/0.6	1.0/1.0
重复精度 Repeat accuracy	°	0.2	0.2	0.4	0.5	0.5
最大手指长度 Max. permitted finger length	mm	160	200	250	300	350
单个手指最大重量 Max. permitted weight per finger	Kg	2	3	5	11	15
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 : 5/80 高温型 (-R) : 5/200				
IP 等级 IP class		40				

◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

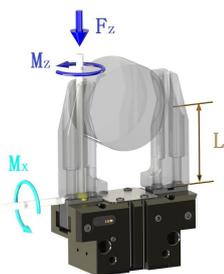
抓取力图表/Gripping force chart

◆所有参数为气压 6bar 下测试/All data measured at 6bar



手爪最大负载

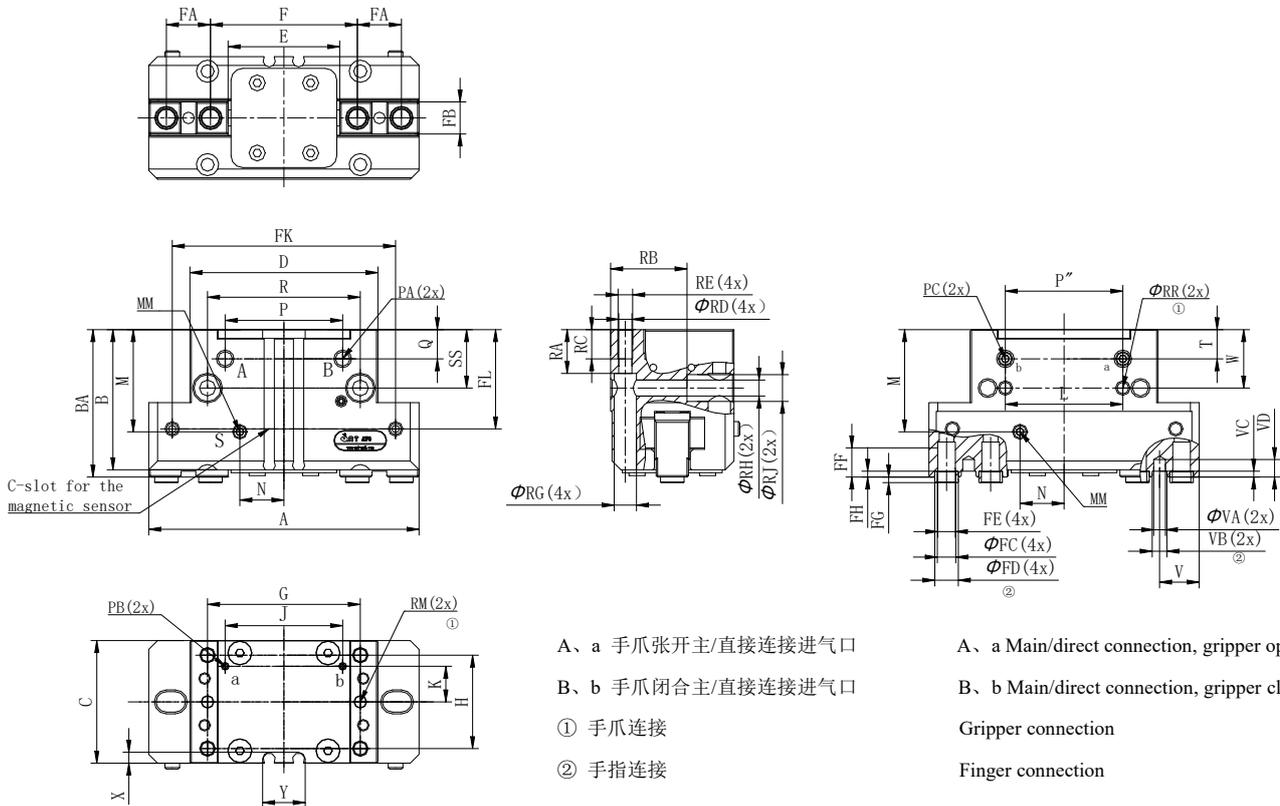
Finger load information



夹紧静载荷	AWG50	AWG66	AWG80	AWG100	AWG125	AWG160	AWG180	AWG260	AWG300	AWG380
Mx max.(Nm)	10	13.5	18	36	45	110	150	186	225	360
Mz max.(Nm)	3.5	5	12	28	36	100	135	160	180	240
Fz max.(N)	320	350	620	850	1350	1760	2210	3050	6050	8700

尺寸图/Dimensions

AWG80~160

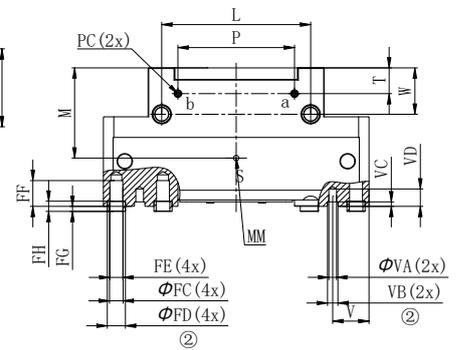
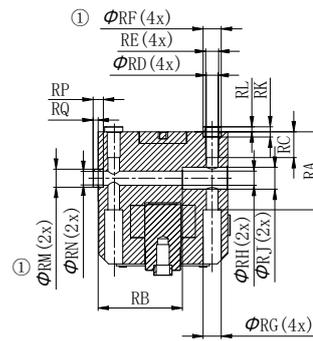
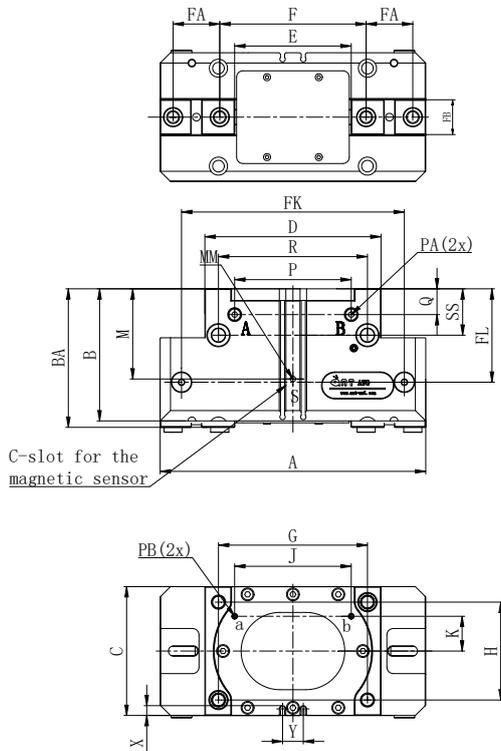


型号	A	B	BA	C	D	E	F	FA	FB	FC	FD	FE	FF	FG	FH	FK	FL	G	H	J	K	L	M	MM	N	P	P''
AWG50	55	31.5	34.5	27.8	42	19	25	12±0.02	6.6	3.4	5h7	M3	7	1.9	2	45	23.5	35±0.02	20	25	8	25±0.02	22.5	M3 深 4	10	25	25
AWG66	65	39	41.5	36	52	25	32	12±0.02	9	4.5	6h7	M4	8	1.9	2	56	28.5	42±0.02	27	28	11	20±0.02	28	M5 深 6	12	28	28
AWG80	92	48	51.5	42	64	38	50	15±0.02	11	6.3	8h7	M6	12	1.9	2	76	34	52±0.02	32	40	12.2	40±0.02	35	M5 深 6	—	40	40
AWG100	115	57	60.5	50	80	47	59	18±0.02	13	6.6	10h7	M6	12	2.9	3	100	41	66±0.02	38	48	16	50±0.02	38	M5 深 6	—	48	48
AWG125	142	63.5	68	60	100	60	72	25±0.02	17	6.6	10h7	M6	12	2.9	3	118	47	82±0.02	45	60	18	60±0.02	45	M5 深 6	—	62	65
AWG160	180	82	86	72	125	71	88	36±0.02	18.5	8.6	12h7	M8	16	2.9	3	152	59	100±0.02	56	76	22	76±0.02	60	M5 深 6	—	78	78

型号	PA	PB	PC	Q	R	RA	RB	RC	RD	RE	RG	RH	RJ	RM	RR	SS	T	W	V	VA	VB	VC	VD	X	Y
AWG50	M5 深 6	M2.5	M5 深 5	8	35	28	19.3	8	3.3	M4	6.5	3.4	6	3H7 深 5	3H7 深 3	15	8	15	9	4H7	5H7	2	7	3.9	9.5
AWG66	M5 深 6	M3	M5 深 5	8	42	14	23	10	4.2	M5	8	4.2	8	4H7 深 4	4H7 深 4	18	8	18	10.5	3H7	4H7	2	6	3.95	10.5
AWG80	M5 深 6	M3	M5 深 5	10	52	15	26	10	4.2	M5	7.6	5.2	9.2	4H7 深 6	4H7 深 4	20	10	20	13.5	4H7	5H7	2	6	3.75	14.5
AWG100	G1/8 深 7	M5	M5 深 5	15.5	66	35.5	22	12	5.2	M6	10	5.2	10	5H7 深 8	5H7 深 5	25	12	25	19	4H7	5H7	2	8	3.75	16.5
AWG125	G1/8 深 7	M5	M5 深 5	13	82	23.5	36	16	6.6	M8	11	8.6	13.5	6H7 深 8	6H7 深 6	30	13	30	22.5	5H7	6H7	2	7	3.95	17
AWG160	G1/8 深 7	M5	M5 深 5	15.5	100	45	52	20	6.6	M8	11	8.6	14	6H7 深 8	6H7 深 6	33	15.5	33	29	6H7	8H7	3.5	11.5	3.9	17

尺寸图/Dimensions

AWG180~380



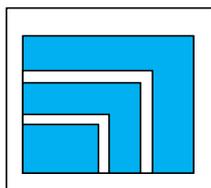
A、a 手爪张开主/直接连接进气口
B、b 手爪闭合主/直接连接进气口
① 手爪连接
② 手指连接

A、a Main/direct connection, gripper opening
B、b Main/direct connection, gripper closing
Gripper connection
Finger connection

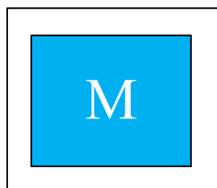
型号	A	B	BA	C	D	E	F	FA	FB	FC	FD	FE	FF	FG	FH	FK	FL	G	H	J	K	L	M	MM	P
AWG180	205	102.5	107.5	100	136	90	113	36±0.02	27	10.5	14h7	M10	20	3.9	4	172	72.5	115±0.02	76±0.02	90	27	115±0.02	70	M5 深 6	90
AWG260	240	122	127.5	115	186	104	124	44±0.02	30.5	12.5	16h7	M12	24	3.9	4	204	88.5	160±0.02	80±0.02	96	48	160±0.02	80	M5 深 6	96
AWG300	330	149.5	157	152	220	146	175	60±0.02	39	12.5	18h7	M12	24	5.8	6	280	111.5	180±0.02	100±0.02	150	24	180±0.02	98	M5 深 6	150
AWG380	380	192	200	180	285	130	184	64±0.02	57	21	28h7	M20	40	9.8	10	315	127	240±0.02	130±0.02	140	70	240±0.02	120	M5 深 6	140

型号	PA	PB	PC	Q	R	RA	RB	RC	RD	RE	RF	RG	RH	RJ	RK	RL	RM	RN	RP	RQ
AWG180	G1/8 深 7	M5	M5 深 5	20	115	60.5	65	20	8.6	M10	14h7	14	11	17	7.9	3.9	14h7	10.5	7.9	3.9
AWG260	G1/4 深 12	M5	M5 深 5	25	160	62	70	24	10.2	M12	16h7	18	13.5	20	7.9	3.9	16h7	12.5	7.9	3.9
AWG300	G1/4 深 12	M5	M5 深 5	30	180	56	49	24	10.2	M12	18h7	18	13.5	20	11.8	5.8	18h7	12.5	11.8	5.8
AWG380	G1/4 深 12	M5	M5 深 5	30	240	87	80	40	17.5	M20	28h7	26	21	32	19.8	9.8	28h7	21	19.8	9.8

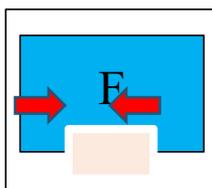
型号	SS	T	W	V	VA	VB	VC	VD	X	Y
AWG180	36	20	36	28	6H7	8H7	3.5	14	7.6	16
AWG260	39	20	39	36	6H7	8H7	3.5	14	7.8	29
AWG300	66	30	66	47.5	10H7	12H7	4	14	8.1	20
AWG380	60	30	60	66	16H7	20H7	5	21	17.6	45



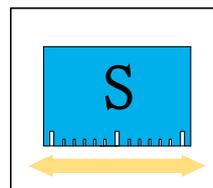
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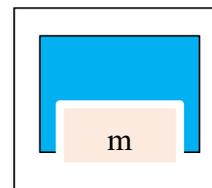
Weight
50Kg



Gripping Force
10000 N



Stroke finger
15°



Workpiece weight
50Kg

应用案例 / Application example



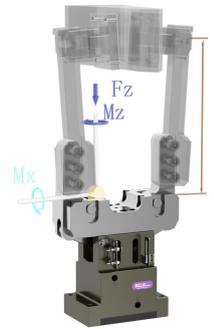
- ① 机器人
- ② AGY100 液压手爪

Robot
AGY100 Hydraulic Gripper

AGY100



静态力和力矩/Static forces and torques



- M_x max. 560Nm
- M_z max. 380Nm
- F_{axial} max. 8000N

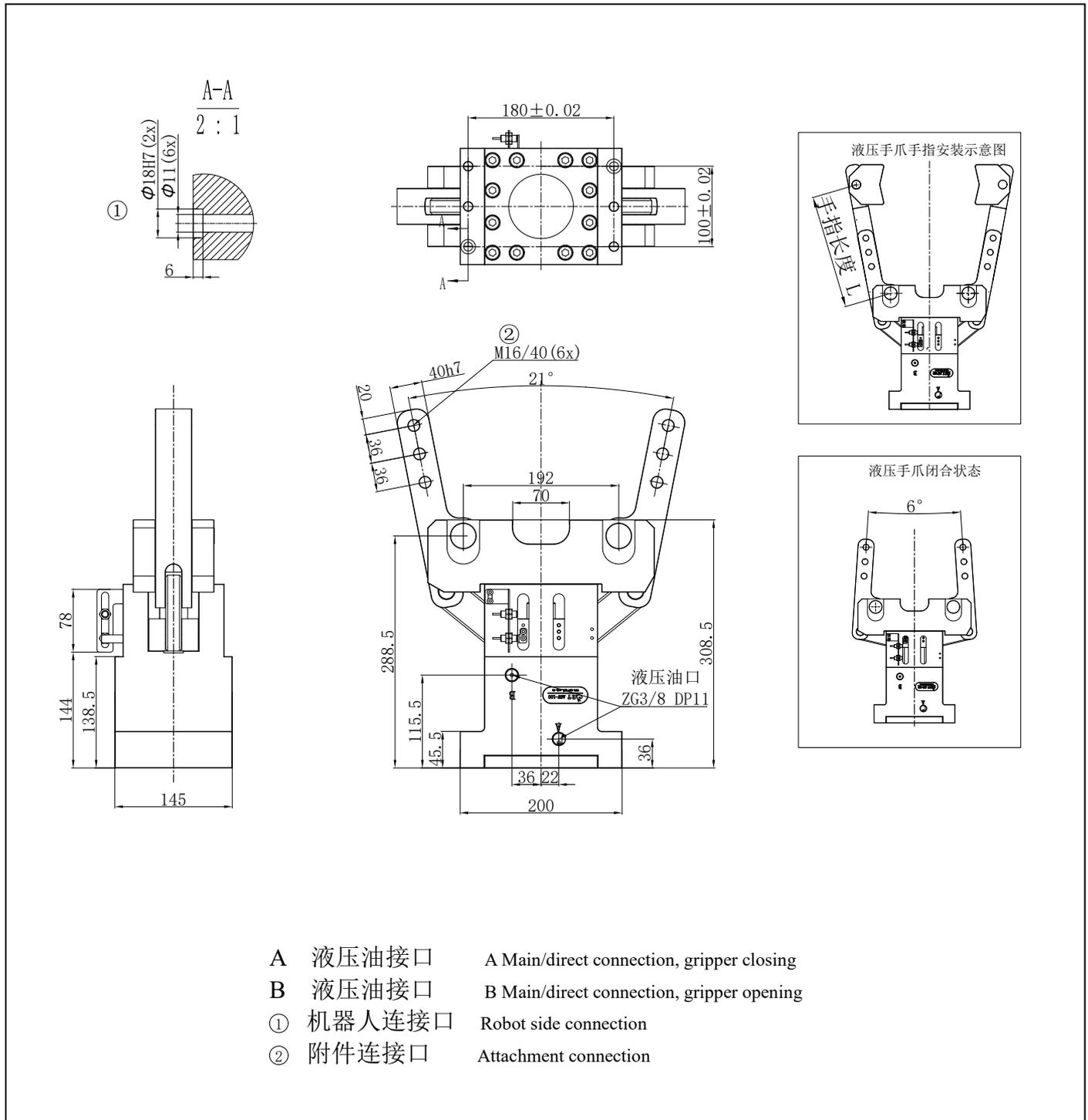
技术资料 Technical data

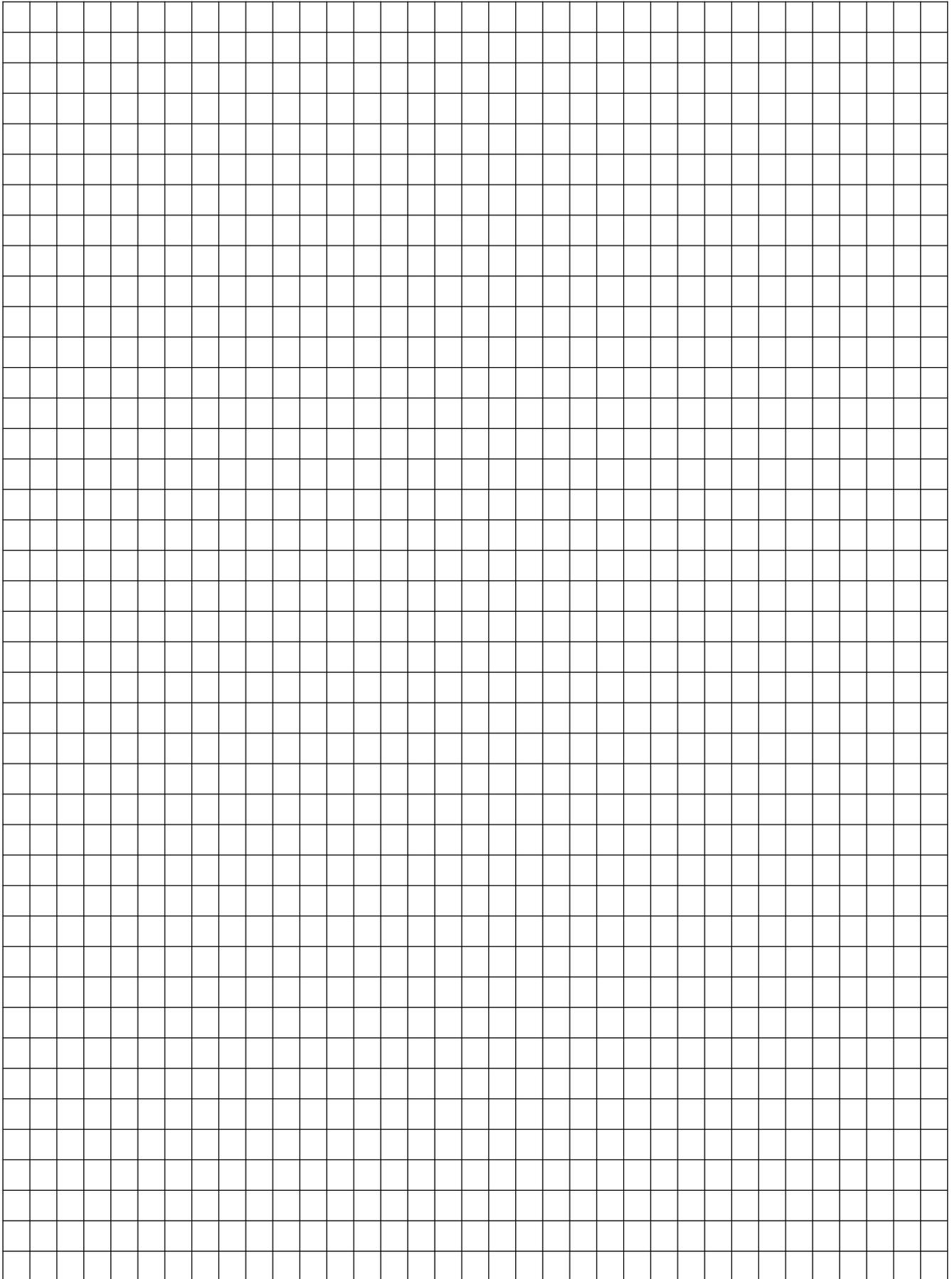
Description		AGY100
旋转角度 Stroke jaw	°	15
理论最大夹持力-闭 Closing force	N	$\frac{41 * P}{L} \times 1000$
使用流体 Fluid		已滤清之标准液压油
使用压力范围 Max./Min. operating pressure	Mpa	3/10
最大耐压力 Max.operation pressure	Mpa	10
产品重量 Weight	Kg	34.5
液压油消耗量/周期 Oil consumption per double stroke	cm3	942
重复精度 Repeat accuracy	°	1
最大手指长度 Max. permitted finger length	mm	500
单个手指最大重量 Max. permitted weight per finger	Kg	20
最小/最大温度 Min./Max. temperature	°C	-20 / 200
IP 等级 IP class		64

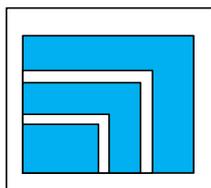
◇P: 液压油压力[bar], 手指夹持工件作用点到手指安装面距离 L[mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

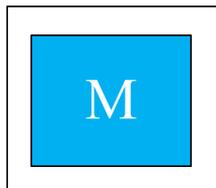
尺寸图/Dimensions



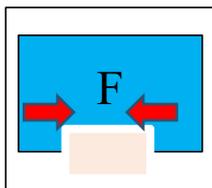




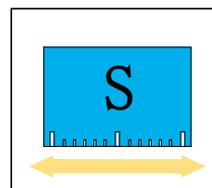
Sizes
50.....300



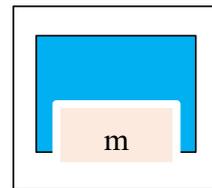
Weight
0.22...39.9Kg



Gripping Force
450...19630N

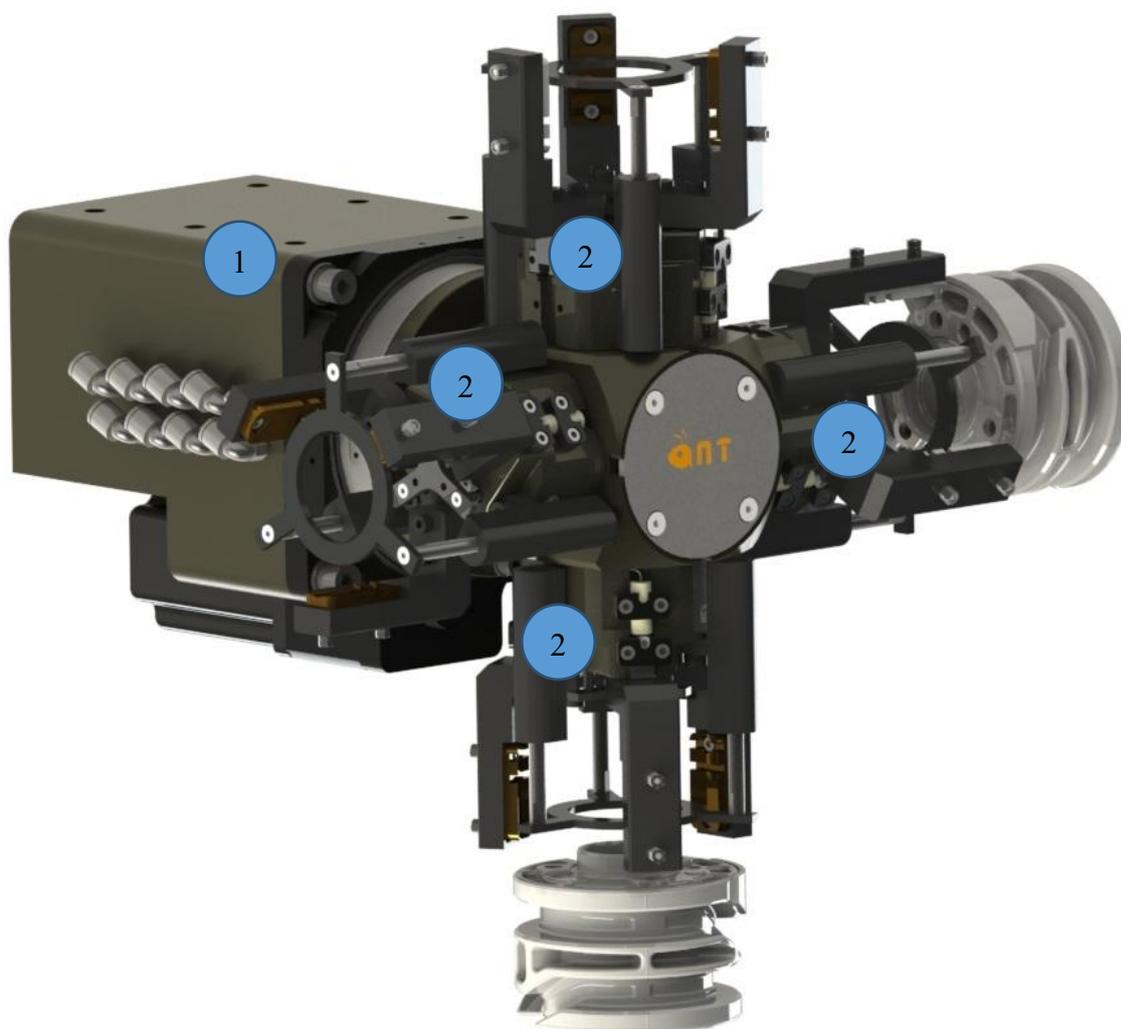


Stroke per finger
4...30mm



Workpiece weight
2.2...98Kg

应用案例 / Application example



- ① SDK-XZ-360-4 360°电控旋转手腕
- ② AZN66 3 指定心手爪

- SDK-XZ-360-4 360°Electronic Controlled Wrist
- AZN66 3-Finger Concentric Gripper

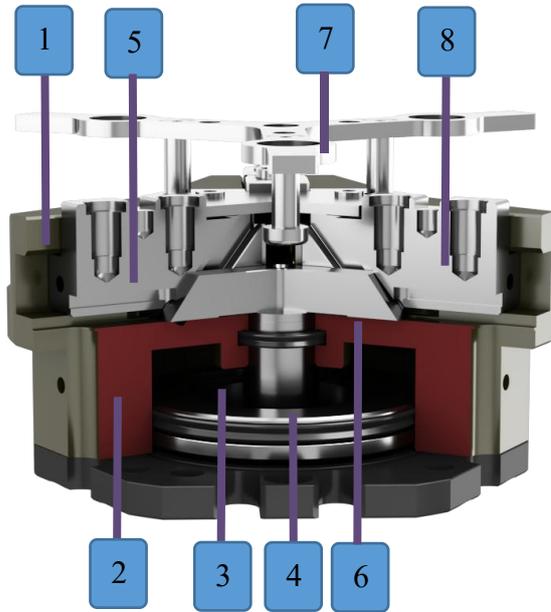
3 指定心手爪 / 3-Finger Concentric Gripper 原理

- 压缩空气推动圆形活塞上下运动
- 楔形将驱动力转化为夹持力
- 滑块同步运动

Principle

- The Circular piston is moved up or down by means of compressed air
- High gripping force as a result of optimal direction change of driving force into gripping force
- Synchronous gripping movement of both base jaws

剖视图 / Sectional diagram



- 1 **本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 **T 型导轨 T-slot guidance**
重负载导轨：负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 3 **传动方式 Transmission Model**
高动力传输
High power transmission
- 4 **驱动部分 Energy supply**
圆形活塞，提供更大的夹持力
Large Circular piston: can have greater force
- 5 **滑块 Jaw**
连接工件手指
For the connection of the workpiece-specific gripper fingers
- 6 **传感系统 Sensor system**
接近式传感器
Of gripper jaw via proximity switch
- 7 **弹簧顶料装置 Spring ejector device**
在手爪打开时弹簧提供推力保持负载
For Spring-supported positioning of the workpiece against a stop after the gripper has opened.
- 8 **可调感应块 Adjustable induction block**
便捷可调感应凸块
Convenience, adjustable switch cam

传感系统 Sensor system

磁性传感器 / Magnetic Sensor (选购/Order)



型号(NO.)

NPN	WMS-M9T
PNP	WMS-M9T

● 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80°C 下使用/The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80°C.

接近开关 / Proximity switch (选购/Order)



适用型号(NO.) AZN50/66/80/100 AZN125/160/180/260/300/380

NPN WPS-8GM18N WPS-8GM35N

PNP WPS-8GM18P WPS-8GM35P

-F 系列接近开关 / Proximity switch (选购/Order)



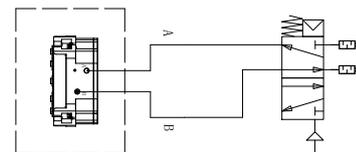
适用规格(NO.) AZN50/66/80/100-F AZN125/160/180/260/300/380-F

NPN WPS-8GM18N WPS-8GM35N

PNP WPS-8GM18P WPS-8GM35P

注：规格为 50-125-F 系列手爪接近感应螺钉须安装在手指上

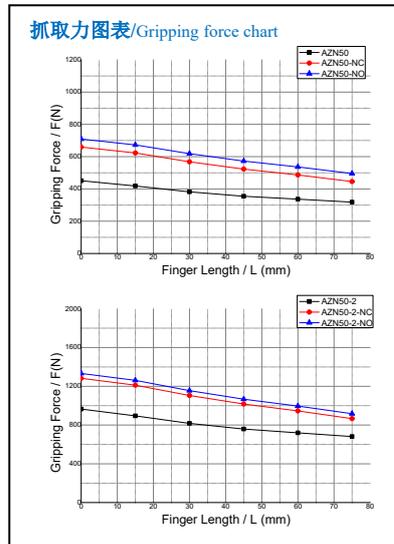
手爪气路连接原理图



手爪适配气管及电磁阀有效截面积建议值

型号	AZN			
	50/66/80	100/125	160/180	260/300/380
气管直径 (mm)	≥6	≥8	≥10	≥12
电磁阀有效截面积 (mm ²)	≥17.0	≥28.0	≥48.0	≥48.0

AZN50



❖所有参数为气压 6bar 下测试/All data measured at 6bar

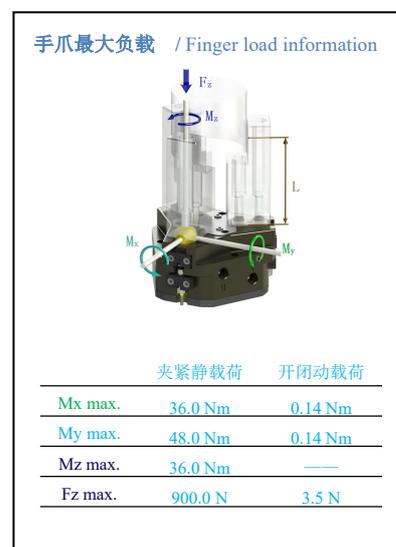
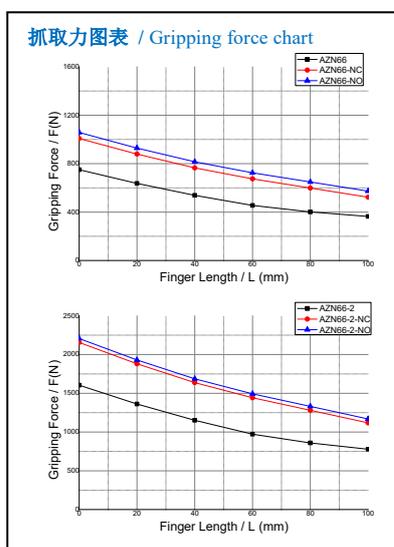
技术资料/Technical data

Description		AZN50	AZN50-NC	AZN50-NO	AZN50-2	AZN50-2-NC	AZN50-2-NO
手指单边行程 Stroke per finger	mm	4	4	4	2	2	2
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	80*P	113*P	160*P	226*P	
	6bar 气压下夹持力	N	480	678	960	1356	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	85*P		170*P		236*P
	6bar 气压下夹持力	N	510	708	1020		1416
断气最小夹持力 Min. gripping force without pressure air	N		200	200		400	400
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	0.22	0.32	0.32	0.22	0.32	0.32
空气消耗量/周期 Air consumption per double stroke	cm ³	9.2	19.2	19.2	9.2	19.2	19.2
开/闭时间 Closing/opening time	s	0.03/0.03	0.04/0.025	0.025/0.04	0.03/0.03	0.04/0.025	0.025/0.04
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	64	58	58	58	58	58
单个手指最大重量 Max. permitted weight per finger	Kg	0.18	0.18	0.18	0.18	0.18	0.18
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

AZN66



❖所有参数为气压 6bar 下测试/All data measured at 6bar

技术资料/Technical data

Description		AZN66	AZN66-NC	AZN66-NO	AZN66-2	AZN66-2-NC	AZN66-2-NO
手指单边行程 Stroke per finger	mm	6	6	6	3	3	3
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	119*P	160*P	251*P	338*P	
	6bar 气压下夹持力	N	714	960	1506	2028	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	127*P		168*P	270*P	355*P
	6bar 气压下夹持力	N	762		1008	1620	2130
断气最小夹持力 Min. gripping force without pressure air	N		250	250		530	530
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	0.5	0.68	0.66	0.58	0.68	0.66
空气消耗量/周期 Air consumption per double stroke	cm ³	21.5	48	48	21.5	48	48
开/闭时间 Closing/opening time	s	0.03/0.03	0.05/0.03	0.03/0.05	0.03/0.03	0.05/0.03	0.03/0.05
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	80	72	72	72	72	72
单个手指最大重量 Max. permitted weight per finger	Kg	0.35	0.35	0.35	0.35	0.35	0.35
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

AZN66/AZN66-2

① 手爪连接
② 手指连接

A、a 手爪张开主/直接连接进气口
B、b 手爪闭合主/直接连接进气口

AZN-NO/NC 单作用手爪 / NO/NC single-acting gripper

弹簧顶料装置 / Spring ejector device

订购号 (Order No.)	行程 (Stroke)	最小弹簧力 (Min. force)
SED-N66	6mm	12 N

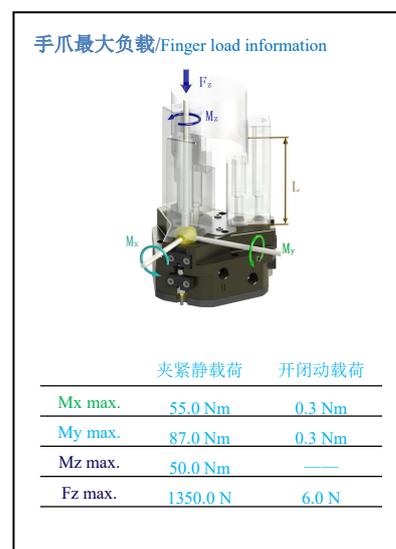
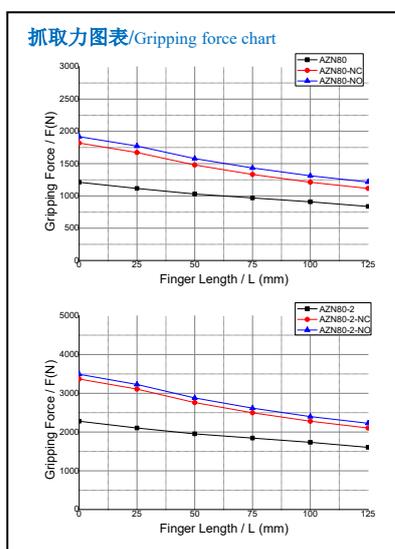
-F 防尘手爪 / Sealed Gripper

NO/NC-F 单作用手爪 / NO/NC single-acting gripper

-F 弹簧顶料装置 / Spring ejector device

订购号 (Order No.)	行程 (Stroke)	最小弹簧力 (Min. force)
SED-F66	6mm	12 N

AZN80



❖所有参数为气压 6bar 下测试/All data measured at 6bar

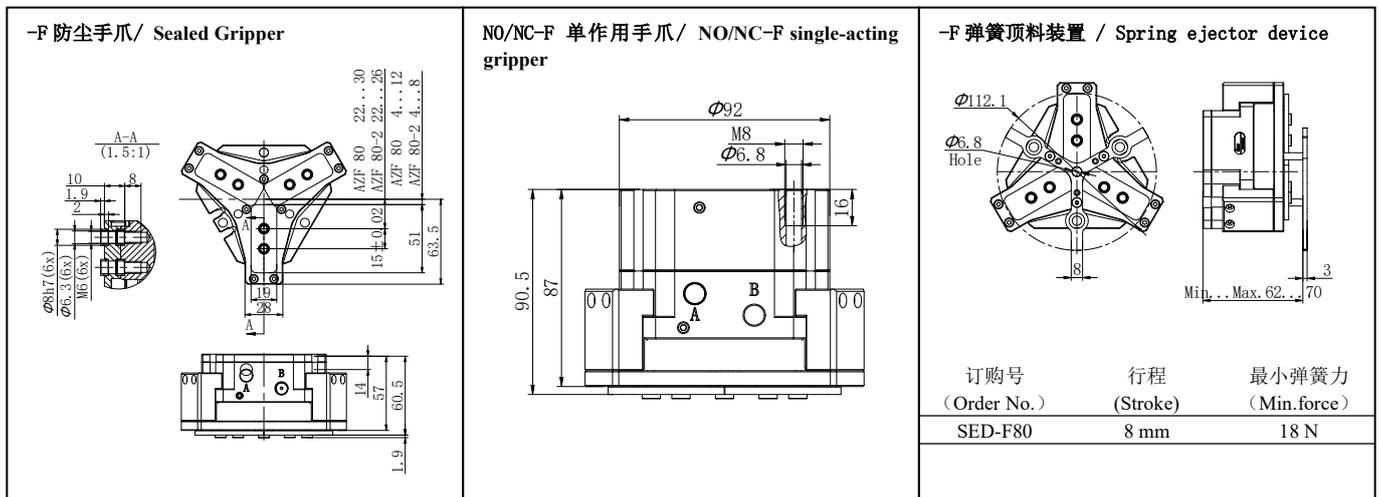
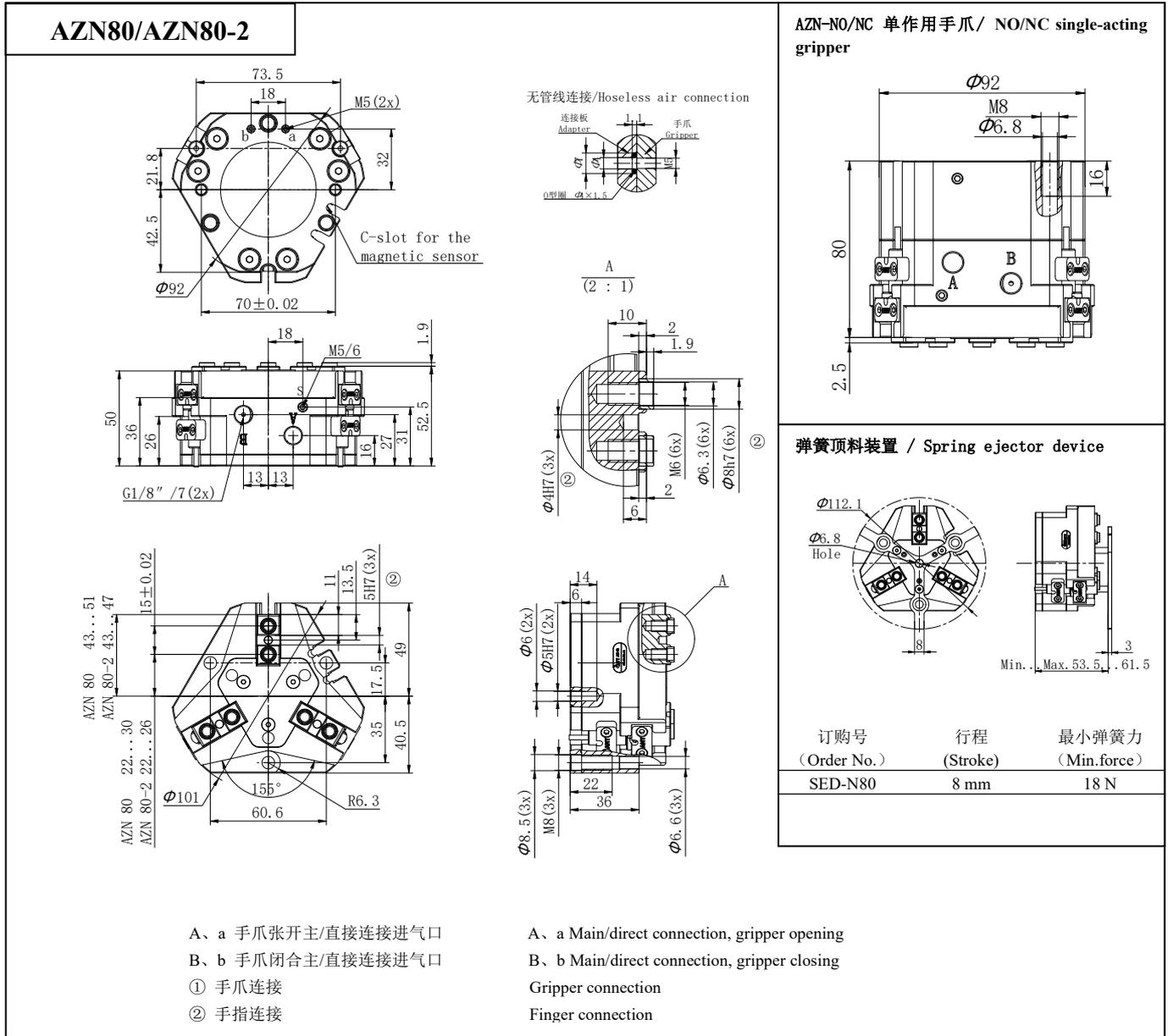
技术资料/Technical data

Description		AZN80	AZN80-NC	AZN80-NO	AZN80-2	AZN80-2-NC	AZN80-2-NO
手指单边行程 Stroke per finger	mm	8	8	8	4	4	4
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	186*P	286*P	390*P	580*P	
	6bar 气压下夹持力	N	1116	1716	2340	3480	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	199*P	299*P	405*P		595*P
	6bar 气压下夹持力	N	1194	1794	2430		3570
断气最小夹持力 Min. gripping force without pressure air	N		600	600		1200	1200
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	0.85	1.25	1.16	0.88	1.25	1.16
空气消耗量/周期 Air consumption per double stroke	cm ³	46	112	112	46	112	112
开/闭时间 Closing/opening time	s	0.05/0.05	0.06/0.04	0.04/0.06	0.05/0.05	0.06/0.04	0.04/0.06
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	100	90	90	90	90	90
单个手指最大重量 Max. permitted weight per finger	Kg	0.6	0.6	0.6	0.6	0.6	0.6
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型(无) : 5/80 高温型(-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型(无) : IP 45 密封型(-F) : IP 66		

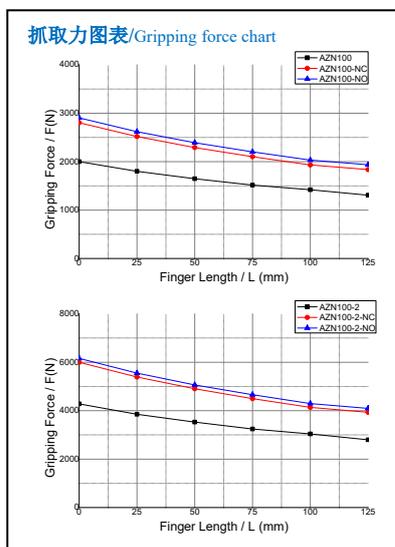
◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZN100



❖所有参数为气压 6bar 下测试/All data measured at 6bar

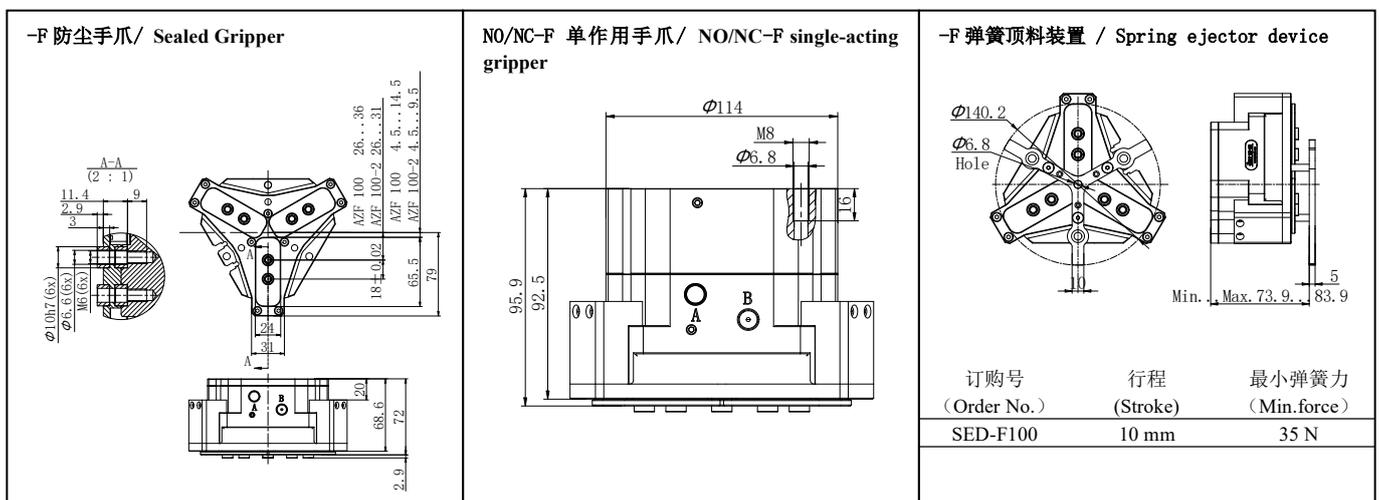
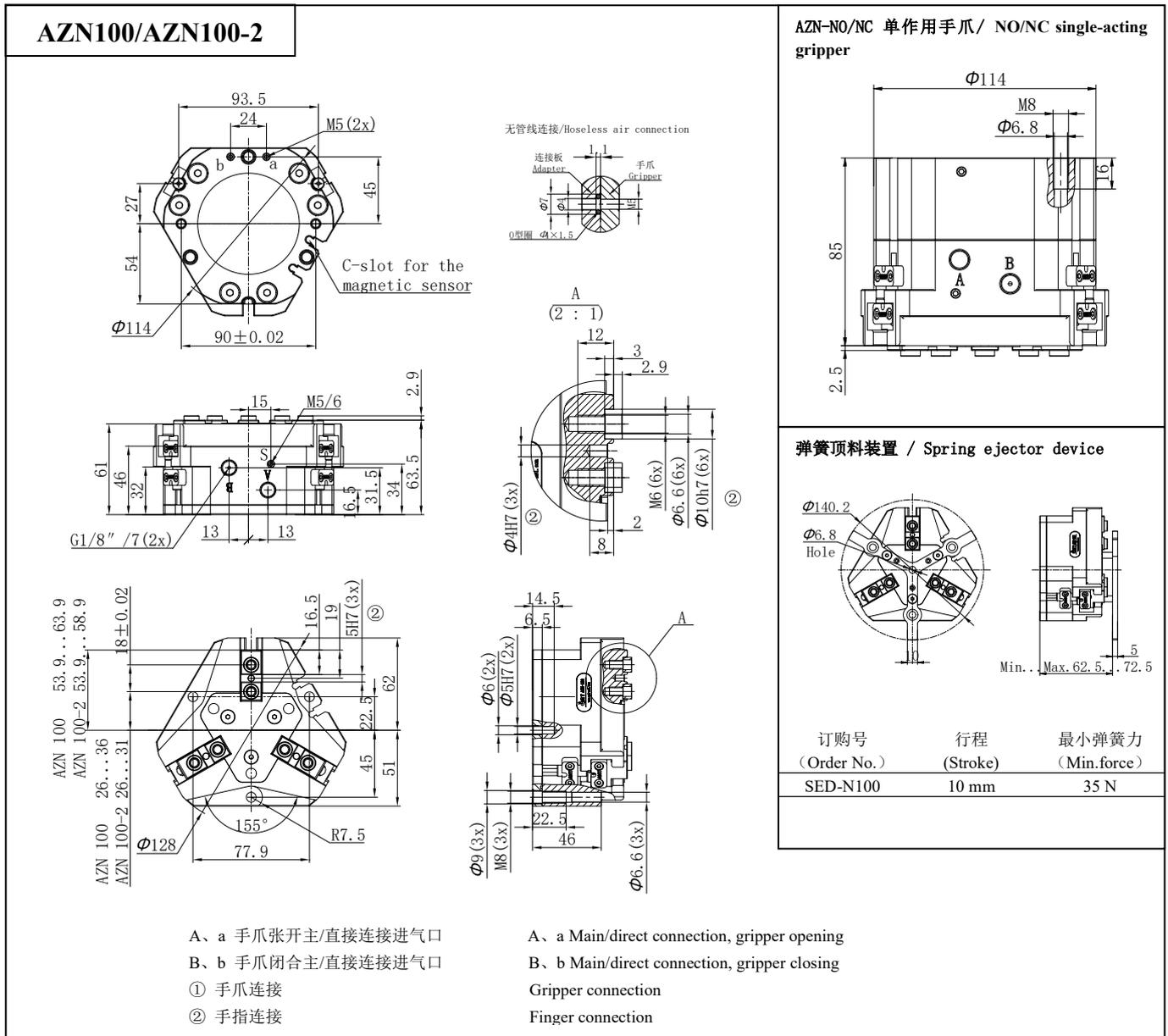
技术资料/Technical data

Description		AZN100	AZN100-NC	AZN100-NO	AZN100-2	AZN100-2-NC	AZN100-2-NO
手指单边行程 Stroke per finger	mm	10	10	10	5	5	5
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	334*P	467*P	698*P	1009*P	
	6bar 气压下夹持力	N	2004	2802	4188	6054	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	351*P	484*P	712*P		1029*P
	6bar 气压下夹持力	N	2106	2904	4272		6174
断气最小夹持力 Min. gripping force without pressure air	N		800	800		1700	1700
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	1.6	2.45	2.34	1.6	2.45	2.34
空气消耗量/周期 Air consumption per double stroke	cm ³	100	227	227	100	227	227
开/闭时间 Closing/opening time	s	0.1/0.1	0.2/0.01	0.01/0.2	0.1/0.1	0.2/0.01	0.01/0.2
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	160	115	115	115	115	115
单个手指最大重量 Max. permitted weight per finger	Kg	1.1	1.1	1.1	1.1	1.1	1.1
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

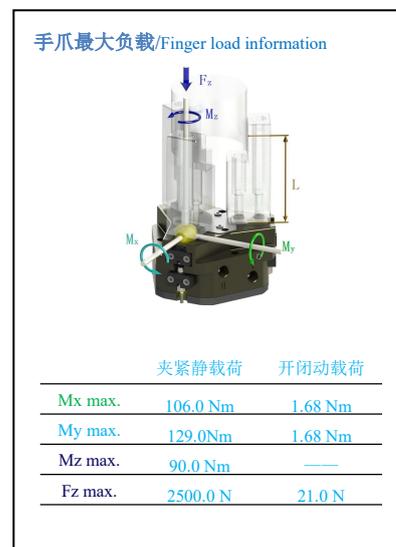
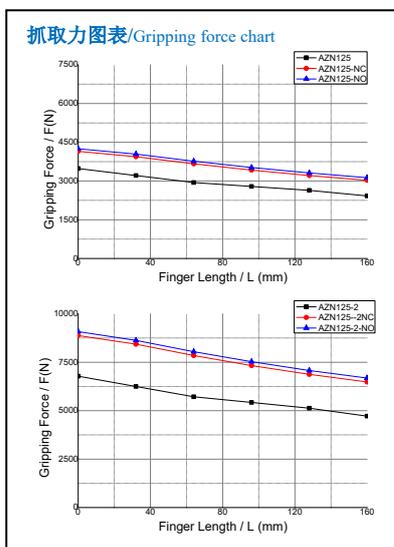
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZN125



❖所有参数为气压 6bar 下测试/All data measured at 6bar

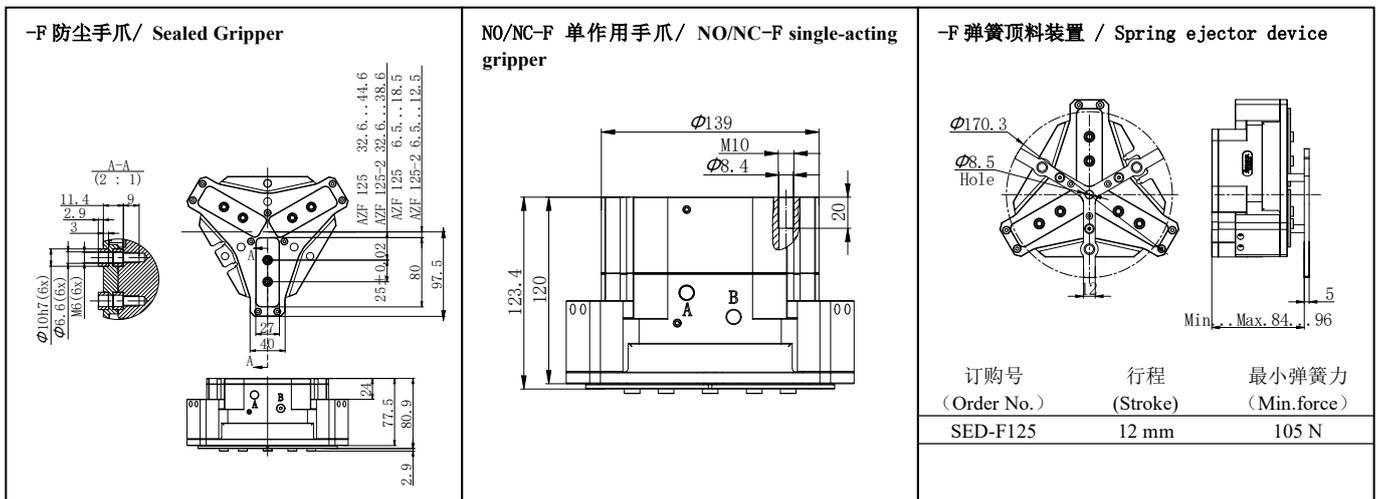
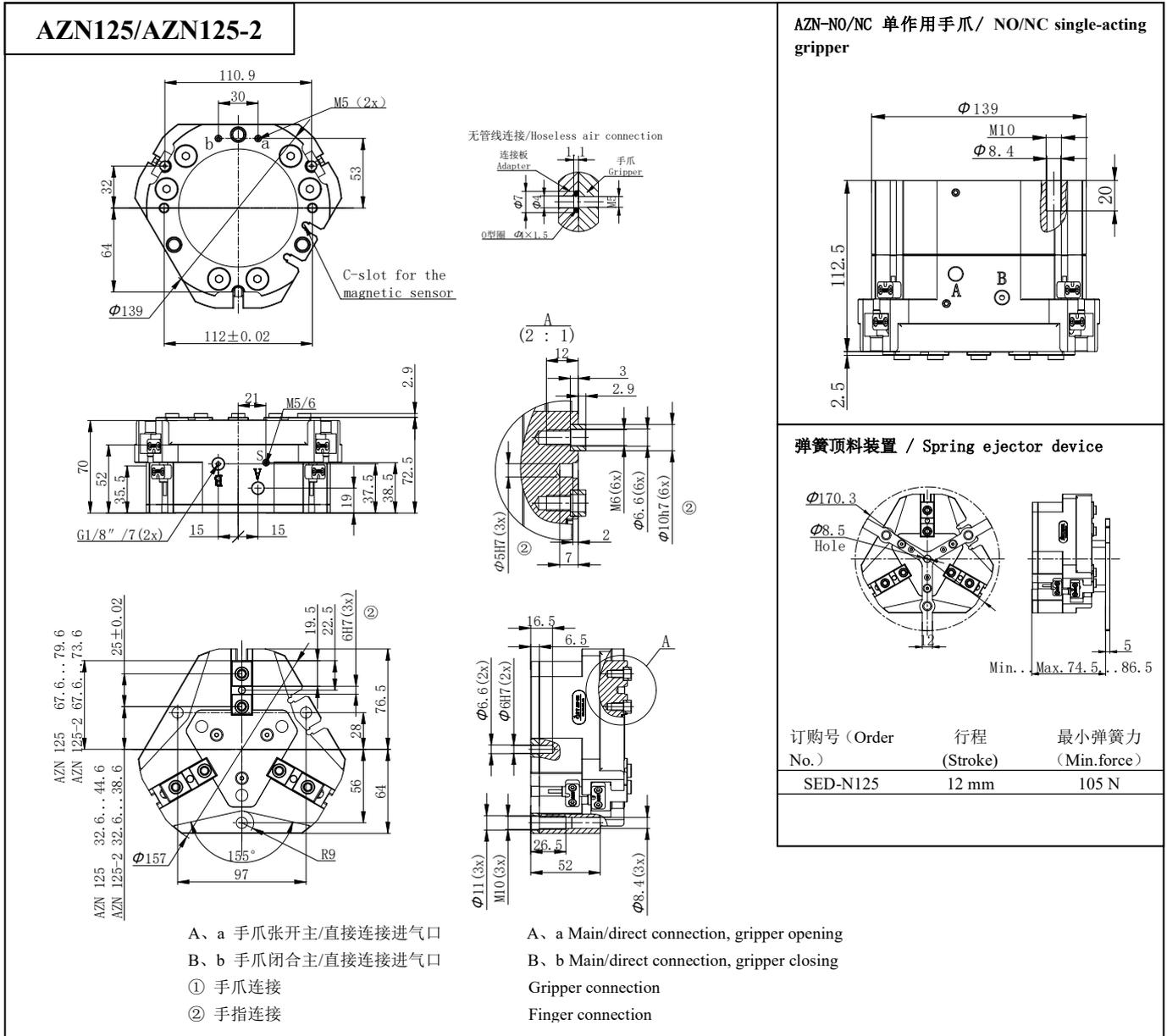
技术资料/Technical data

Description		AZN125	AZN125-NC	AZN125-NO	AZN125-2	AZN125-2-NC	AZN125--2NO
手指单边行程 Stroke per finger	mm	12	12	12	6	6	6
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	541*P	716*P	1044*P	1370	
	6bar 气压下夹持力	N	3246	4296	6264	8220	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	558*P	733*P	1085*P		1410*P
	6bar 气压下夹持力	N	3348	4398	6510		8460
断气最小夹持力 Min. gripping force without pressure air	N		1050	1050		2000	2000
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	2.8	4.18	4.14	2.9	4.18	4.14
空气消耗量/周期 Air consumption per double stroke	cm ³	190	433	433	190	433	433
开/闭时间 Closing/opening time	s	0.2/0.2	0.3/0.2	0.2/0.3	0.2/0.2	0.3/0.2	0.2/0.3
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	160	145	145	145	145	145
单个手指最大重量 Max. permitted weight per finger	Kg	2.1	2.1	2.1	2.1	2.1	2.1
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型(无) : 5/80 高温型(-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型(无) : IP 45 密封型(-F) : IP 66		

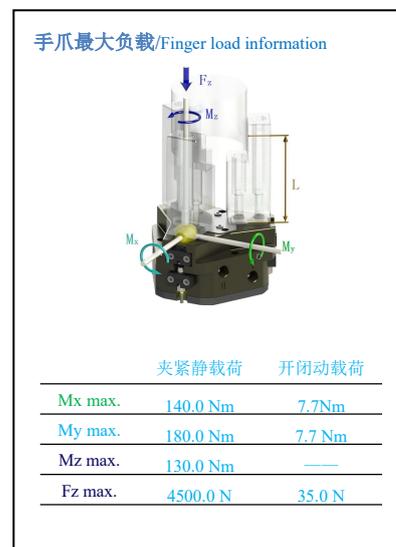
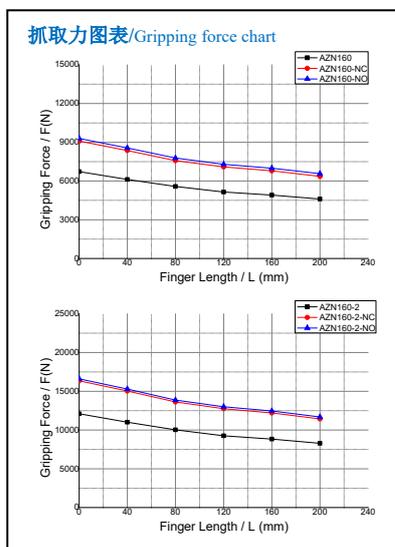
◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZN160



❖所有参数为气压 6bar 下测试/All data measured at 6bar

技术资料/Technical data

Description		AZN160	AZN160-NC	AZN160-NO	AZN160-2	AZN160-2-NC	AZN160-2-NO
手指单边行程 Stroke per finger	mm	16	16	16	8	8	8
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1080*P	1380*P	1941*P	2510*P	
	6bar 气压下夹持力	N	6480	8280	11646	15060	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1100*P	1400*P	2008*P		2630*P
	6bar 气压下夹持力	N	6600	8400	12048		15780
断气最小夹持力 Min. gripping force without pressure air	N		2100	2100		4000	4000
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	6	7.8	7.6	6	7.8	7.6
空气消耗量/周期 Air consumption per double stroke	cm ³	485	1226	1226	485	1226	1226
开/闭时间 Closing/opening time	s	0.5/0.5	0.4/0.8	0.8/0.4	0.5/0.5	0.4/0.8	0.8/0.4
重复精度 Repeat accuracy	mm				0.02		
最大手指长度 Max. permitted finger length	mm	220	210	210	210	210	210
单个手指最大重量 Max. permitted weight per finger	Kg	3.5	3.5	3.5	3.5	3.5	3.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

AZN160/AZN160-2

无管线连接/Hoseless air connection

连接板 1.1 Adapter 手爪 Gripper

0型圈 $\varnothing 1.5$

1
(2 : 1)

16 3 2.9

$\varnothing 6H7 (3x)$ $\varnothing 8.6 (6x)$ $\varnothing 12H7 (6x)$

3.5 11.5

28 28

$\varnothing 6.6 (2x)$ $\varnothing 6H7 (2x)$

$\varnothing 11.5 (3x)$ $M10 (3x)$ $\varnothing 8.6 (3x)$

AZN-NO/NC 单作用手爪 / NO/NC single-acting gripper

176

125.5

A B

弹簧顶料装置 / Spring ejector device

$\varnothing 200.4$

$\varnothing 5.5$ Hole

Min...Max. 94...116

订购号 (Order No.)	行程 (Stroke)	最小弹簧力 (Min.force)
SED-N160	12 mm	160 N

A、a 手爪张开主/直接连接进气口
B、b 手爪闭合主/直接连接进气口
① 手爪连接
② 手指连接

A、a Main/direct connection, gripper opening
B、b Main/direct connection, gripper closing
Gripper connection
Finger connection

-F 防尘手爪 / Sealed Gripper

A-A
2 : 1

12 3 13

2.9

118 101

AZF 160 9...25
AZF 160-2 9...17
AZF 160-2 10...18
AZF 160-2 10...18

25±0.02

70

Intake for inductive proximity switch

33.5

94.3

2.4

NO/NC-F 单作用手爪 / NO/NC-F single-acting gripper

176

138.5

131.8

A B

-F 弹簧顶料装置 / Spring ejector device

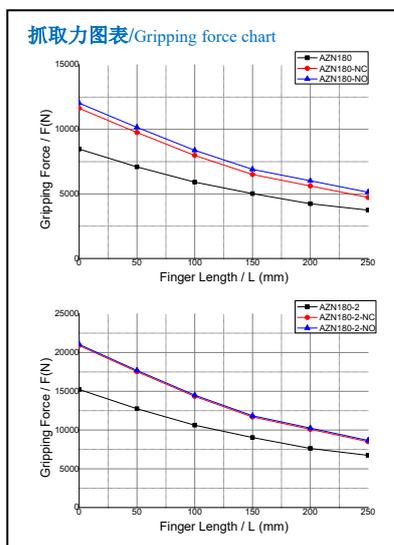
$\varnothing 200.4$

$\varnothing 5.5$ Hole

Min...Max. 104...116

订购号 (Order No.)	行程 (Stroke)	最小弹簧力 (Min.force)
SED-F160	12 mm	160 N

AZN180



❖所有参数为气压 6bar 下测试/All data measured at 6bar

技术资料/Technical data

Description		AZN180	AZN180-NC	AZN180-NO	AZN180-2	AZN180-2-NC	AZN180-2-NO
手指单边行程 Stroke per finger	mm	18	18	18	9	9	9
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1370*P	1700*P	2750*P	3435*P	
	6bar 气压下夹持力	N	8220	10200	16500	20610	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1420*P	1750*P	2860*P		3430*P
	6bar 气压下夹持力	N	8520	10500	17160		21180
断气最小夹持力 Min. gripping force without pressure air	N		2700	2700		4800	4800
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	11.2	15.5	14.9	11.4	15.5	14.9
空气消耗量/周期 Air consumption per double stroke	cm ³	855	1520	1520	855	1520	1520
开/闭时间 Closing/opening time	s	0.5/0.5	1.0/1.5	1.5/1.0	0.5/0.5	1.0/1.5	1.5/1.0
重复精度 Repeat accuracy	mm				0.02		
最大手指长度 Max. permitted finger length	mm	280	250	250	250	250	250
单个手指最大重量 Max. permitted weight per finger	Kg	5	5	5	5	5	5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

AZN180/AZN180-2

161.9, 54, M6/8 (2x), 46.8, 106, 75, $\Phi 220$, 180 ± 0.02, C-slot for the magnetic sensor, 27.9, M5/6, 112.5, 81, 56, 27, 27, 28, 57, 58, 116.5, G1/4" / 12 (2x), 3.9, 24, 28, 8H7 (3x), 110, 45, 90, 100, 155°, R12, 155.9, $\Phi 232$, 36 ± 0.02, 24, 28, 8H7 (3x), 110, 45, 90, 100, 155°, R12, 155.9, $\Phi 232$

A, a 手爪张开主/直接连接进气口
B, b 手爪闭合主/直接连接进气口
① 手爪连接
② 手指连接

AZN-NO/NC 单作用手爪 / NO/NC single-acting gripper

$\Phi 220$, M12, $\Phi 10.5$, 159.5, 24, 4

弹簧顶料装置 / Spring ejector device

$\Phi 270.5$, $\Phi 8.5$, 6, Min... Max. 122.5, 137.5

订购号 (Order No.)	行程 (Stroke)	最小弹簧力 (Min. force)
SED-N180	12 mm	240 N

-F 防尘手爪 / Sealed Gripper

$\Phi 1.4H7 (6x)$, $\Phi 10.5 (6x)$, $\Phi 10 (6x)$, 135, 107, 16, 118.8, 123.5, 3.9, 44, 77, 84.8, Intake for inductive proximity sensor

NO/NC-F 单作用手爪 / NO/NC-F single-acting gripper

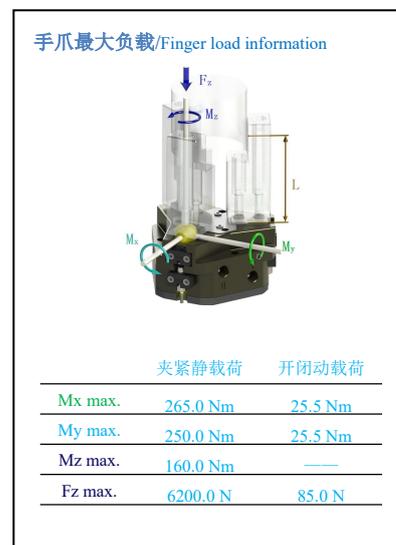
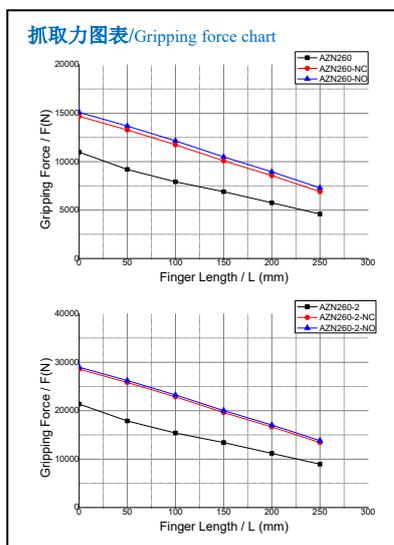
$\Phi 220$, M12, $\Phi 10.5$, 24, 172.5, 165.8, A, B

-F 弹簧顶料装置 / Spring ejector device

$\Phi 270.5$, $\Phi 8.5$ Hole, 6, Min... Max. 135.5, 147.5

订购号 (Order No.)	行程 (Stroke)	最小弹簧力 (Min. force)
SED-F180	12 mm	240 N

AZN260



❖所有参数为气压 6bar 下测试/All data measured at 6bar

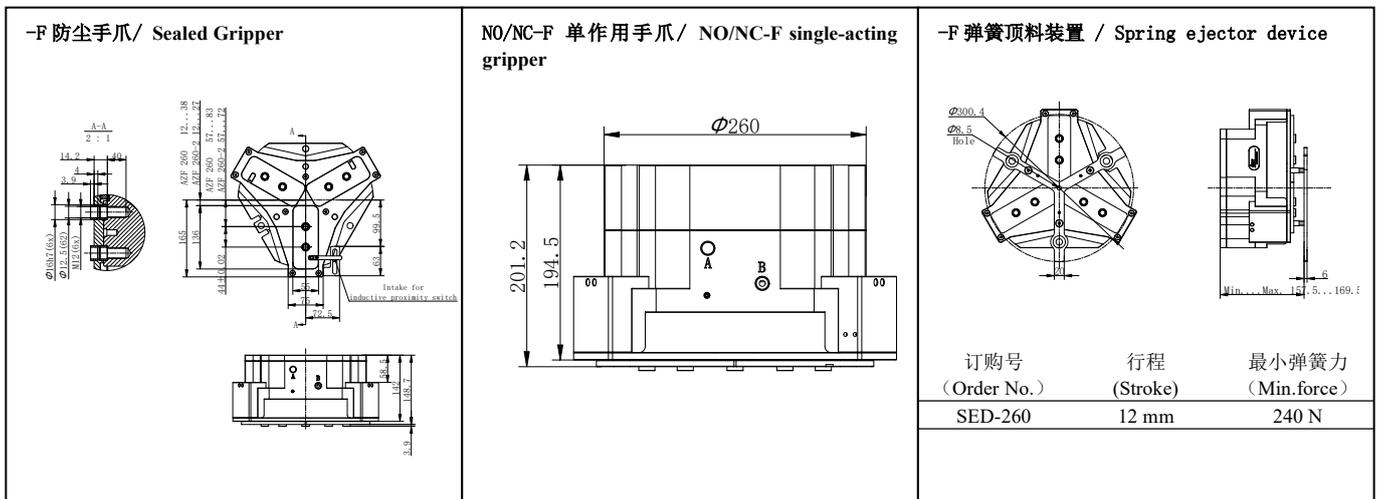
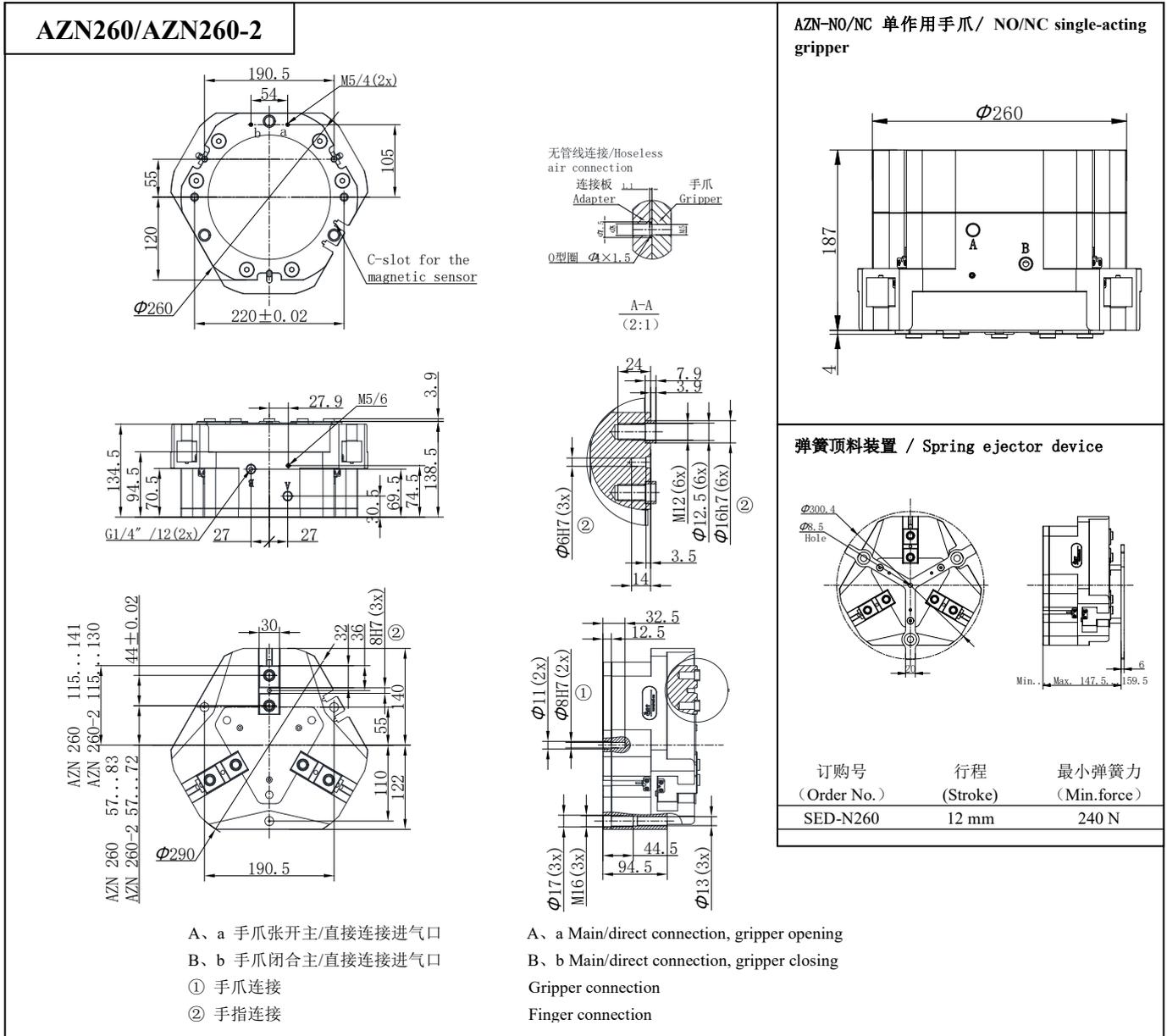
技术资料/Technical data

Description		AZN260	AZN260-NC	AZN260-NO	AZN260-2	AZN260-2-NC	AZN260-2-NO
手指单边行程 Stroke per finger	mm	26	26	26	15	15	15
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1858*P	2383*P	3640*P	4700*P	
	6bar 气压下夹持力	N	11148	14298	21840	28200	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1910*P	2435*P	3740*P		4800*P
	6bar 气压下夹持力	N	11460	14610	22440		28800
断气最小夹持力 Min. gripping force without pressure air	N		4200	4200		7000	7000
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	18.5	22.5	22.2	18.5	22.5	22.2
空气消耗量/周期 Air consumption per double stroke	cm ³	1720	4370	4380	1720	4370	4380
开/闭时间 Closing/opening time	s	1.2/1.2	1.1/2.1	2.1/1.1	1.2/1.2	1.1/2.1	2.1/1.1
重复精度 Repeat accuracy	mm				0.05		
最大手指长度 Max. permitted finger length	mm	300	250	250	250	250	250
单个手指最大重量 Max. permitted weight per finger	Kg	8.5	8.5	8.5	8.5	8.5	8.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

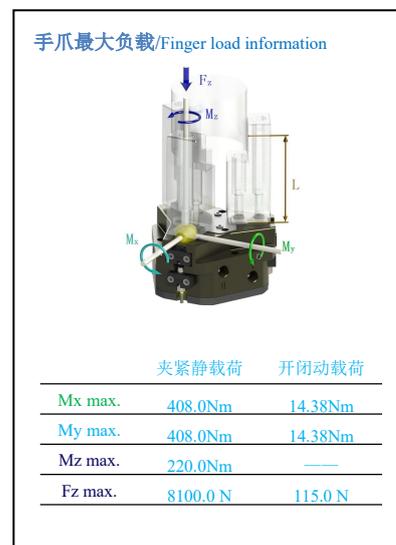
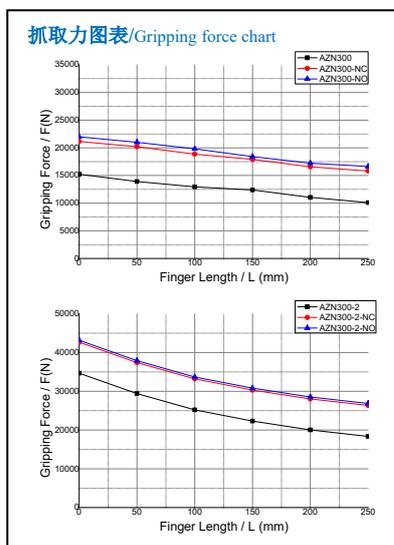
◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZN300



❖所有参数为气压 6bar 下测试/All data measured at 6bar

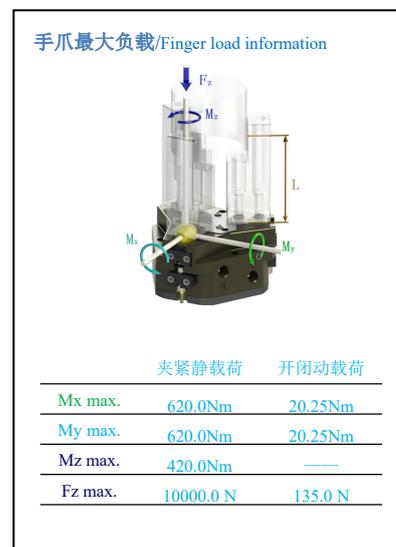
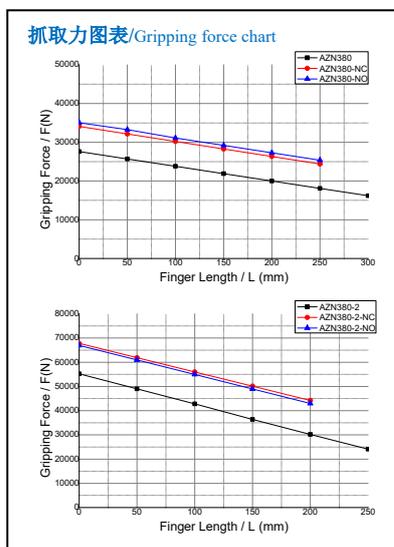
技术资料/Technical data

Description		AZN300	AZN300-NC	AZN300-NO	AZN300-2	AZN300-2-NC	AZN300-2-NO
手指单边行程 Stroke per finger	mm	30	30	30	17	17	17
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	2540*P	3352.5*P	5652*P	7100*P	
	6bar 气压下夹持力	N	15240	20115	33912	42600	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	2600*P	3412.5*P	5820*P		7190*P
	6bar 气压下夹持力	N	15600	20475	34920		43140
断气最小夹持力 Min. gripping force without pressure air	N		6500	6500		10000	10000
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	29.5	36.9	35.8	30	39.9	38.8
空气消耗量/周期 Air consumption per double stroke	cm ³	2599	5640	5640	2599	5640	5640
开/闭时间 Closing/opening time	s	1.3/1.3	1.2/2.5	2.5/1.2	1.3/1.3	1.2/2.5	2.5/1.2
重复精度 Repeat accuracy	mm				0.05		
最大手指长度 Max. permitted finger length	mm	350	310	310	310	310	310
单个手指最大重量 Max. permitted weight per finger	Kg	11.5	11.5	11.5	11.5	11.5	11.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

AZN380



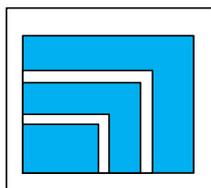
❖所有参数为气压 6bar 下测试/All data measured at 6bar

技术资料/Technical data

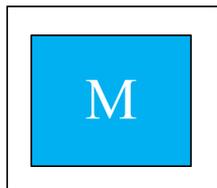
Description		AZN380	AZN380-NC	AZN380-NO	AZN380-2	AZN380-2-NC	AZN380-2-NO
手指单边行程 Stroke per finger	mm	45	45	45	26	26	26
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	4600*P	5680*P	7615*P	11160*P	
	6bar 气压下夹持力	N	27600	34080	55200	66960	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	4750*P	5840*P	7880*P		11300*P
	6bar 气压下夹持力	N	28580	35040	56000		67800
断气最小夹持力 Min. gripping force without pressure air	N		6500	6500		11800	11800
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	65	77.5	76	65	77.5	76
空气消耗量/周期 Air consumption per double stroke	cm ³	6400	12000	12000	6400	12000	12000
开/闭时间 Closing/opening time	s	2/2	2/3	3/2	2/2	2/3	3/2
重复精度 Repeat accuracy	mm			0.05			
最大手指长度 Max. permitted finger length	mm	300	250	250	250	200	200
单个手指最大重量 Max. permitted weight per finger	Kg	13.5	13.5	13.5	13.5	13.5	13.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					标准型 (无) : IP 45 密封型 (-F) : IP 66		

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

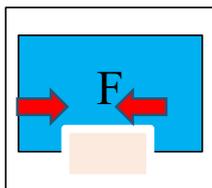
❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes



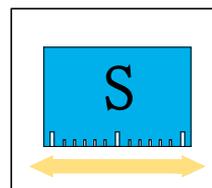
Sizes
66.....180



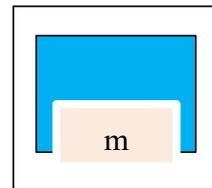
Weight
0.52...15.9Kg



Gripping Force
690...19745N



Stroke per finger
3...18mm



Workpiece weight
3...60Kg

应用案例 / Application example



① AZP80

3 指定心密封手爪

AZP 803-Finger Concentric Seals Gripper series

3 指定心手爪 / 3-Finger Concentric Gripper

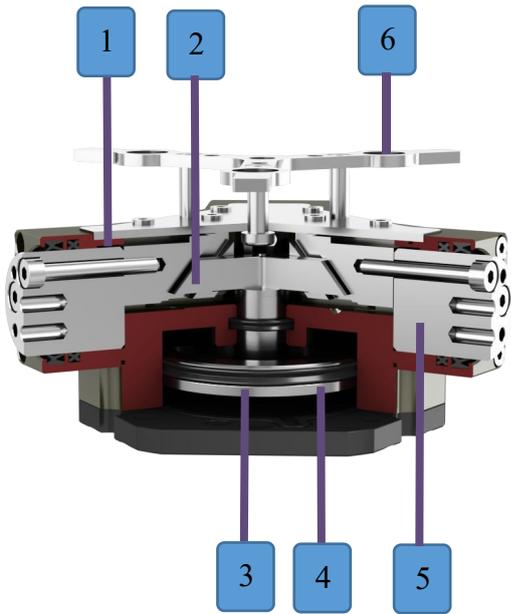
原理

- 压缩空气推动圆形活塞上下运动
- 楔形将驱动力转化为夹持力
- 完全密封结构

Principle

- The Circular piston is moved up or down by means of compressed air
- High gripping force as a result of optimal direction change of driving force into gripping force
- Completely Sealed

剖视图 / Sectional diagram



- 1 **本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 **T 型导轨 T-slot guidance**
重负载导轨：负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 3 **传动方式 Transmission Model**
高动力传输
High power transmission
- 4 **驱动部分 Energy supply**
圆形活塞，提供更大的夹持力
Large Circular piston: can have greater force
- 5 **密封结构**
防尘防水密封
Completely Sealed
- 6 **弹簧顶料装置 Spring ejector device**
在手爪打开时弹簧提供推力保持负载
For Spring-supported positioning of the workpiece against a stop after the gripper has opened.

传感系统 Sensor system

磁性传感器 / Magnetic Sensor (选购/Order)



	型号(NO.)
NPN	WMS-M9T
PNP	WMS-M9T

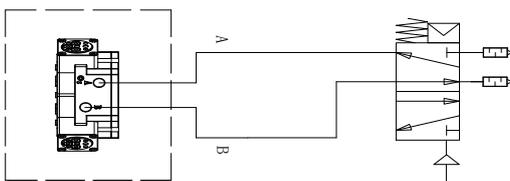
● 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80°C 下使用/The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80°C.

接近开关 / Proximity switch (选购/Order)



适用规格(NO.)	AGP 66/80/100/125	AGP160/180
NPN	WPS-8GM18N	WPS-8GM35N
PNP	WPS-8GM18P	WPS-8GM35P

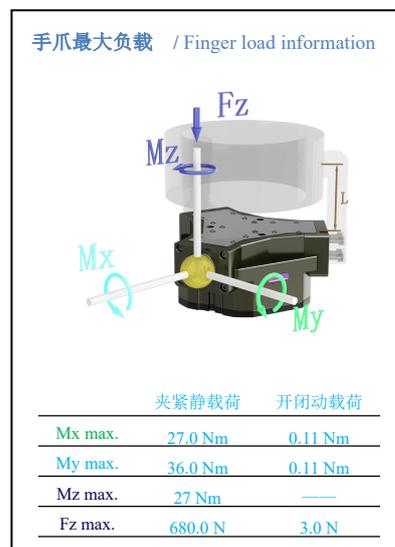
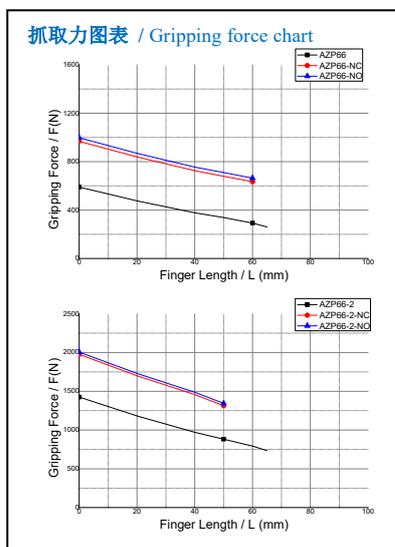
手爪气路连接原理图



手爪适配气管及电磁阀有效截面积建议值

型号	AZP		
	66/80	100/125	160/180
气管直径 (mm)	≥6	≥8	≥10
电磁阀有效截面积 (Cv/mm ²)	≥17.0	≥28.0	≥48.0

AZP66



❖所有参数为气压 6bar 下测试/All data measured at 6bar

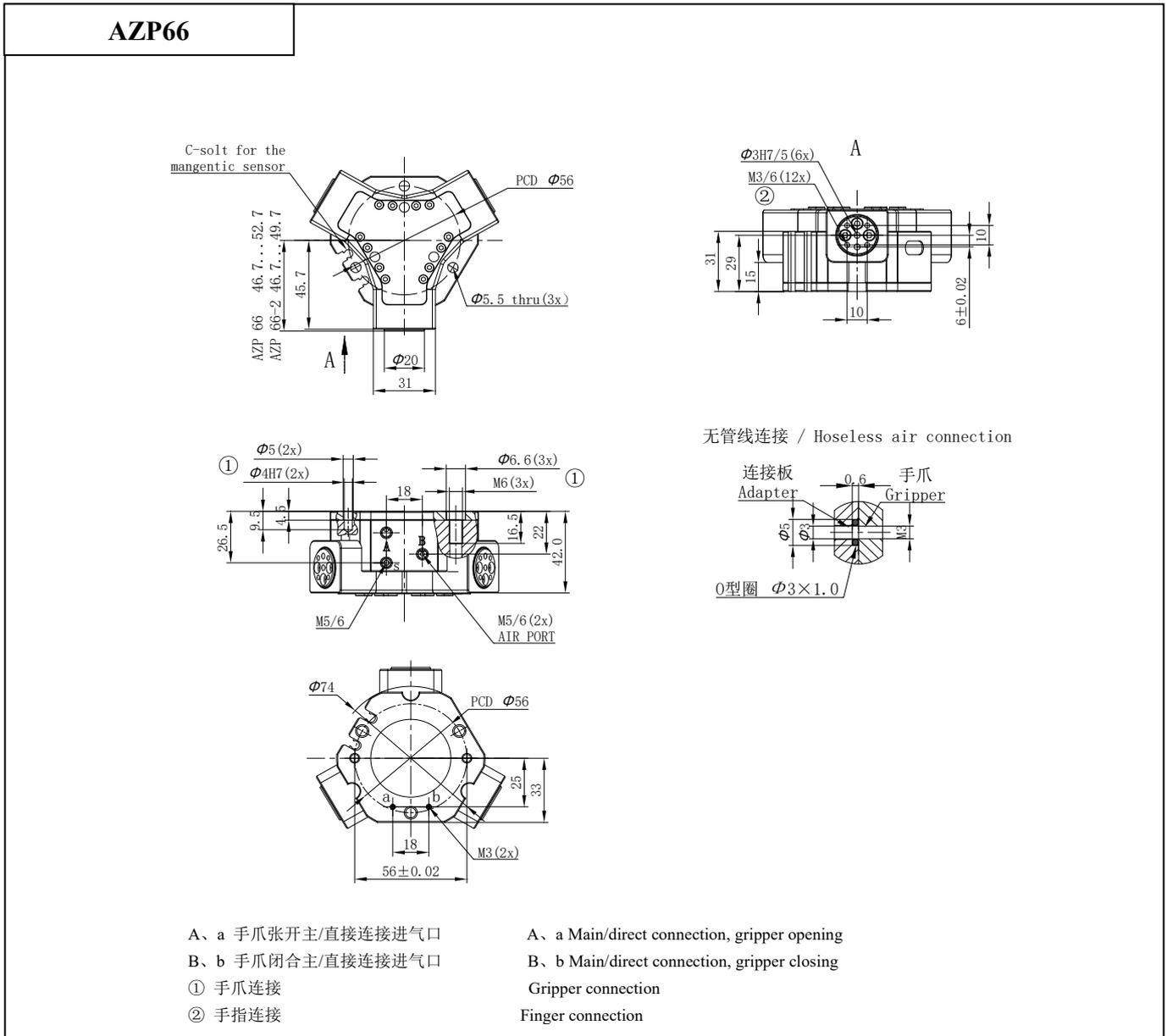
技术资料/Technical data

Description		AZP66	AZP66-NC	AZP66-NO	AZP66-2	AZP66-2-NC	AZP66-2-NO
手指单边行程 Stroke per finger	mm	6	6	6	3	3	3
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	115*P	155*P	237.5*P	328*P	
	6bar 气压下夹持力	N	690	936	1425	1968	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	120*P	161*P	252*P		335*P
	6bar 气压下夹持力	N	720	966	1512		2010
断气最小夹持力 Min. gripping force without pressure air	N		210	210		480	480
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	0.52	0.72	0.7	0.53	0.73	0.71
空气消耗量/周期 Air consumption per double stroke	cm ³	21.5	48	48	21.5	48	48
开/闭时间 Closing/opening time	s	0.04/0.04	0.05/0.03	0.03/0.05	0.04/0.04	0.05/0.03	0.03/0.05
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	65	50	45	50	50	45
单个手指最大重量 Max. permitted weight per finger	Kg	0.3	0.3	0.3	0.3	0.3	0.3
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					IP 67		

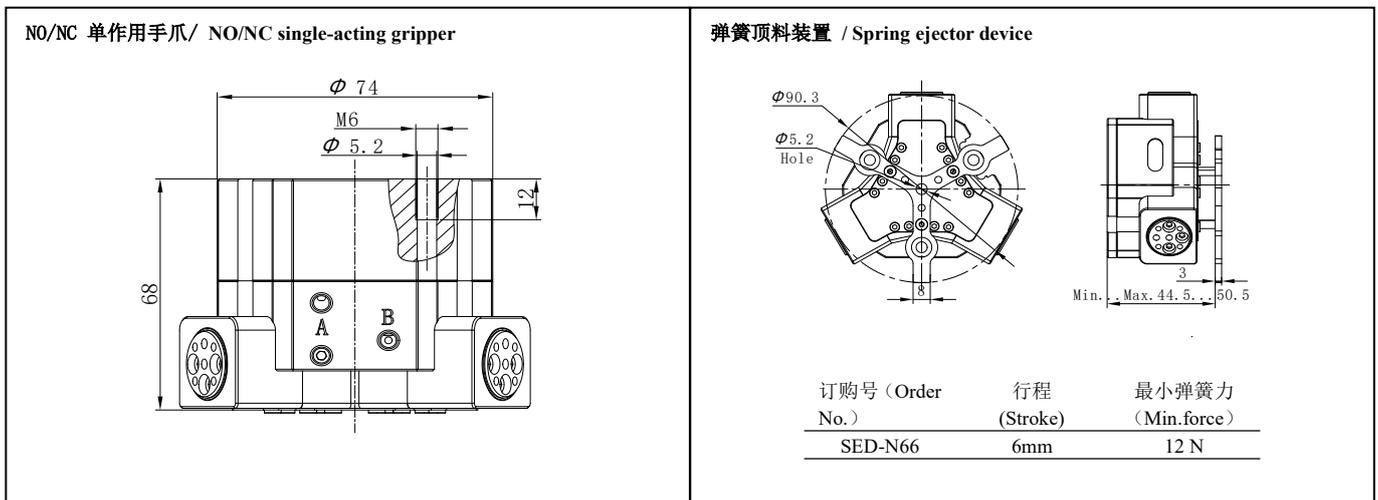
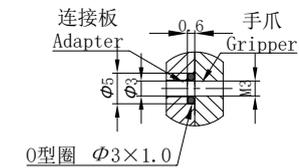
◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

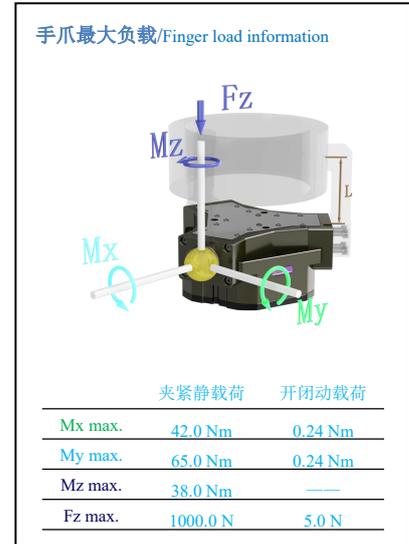
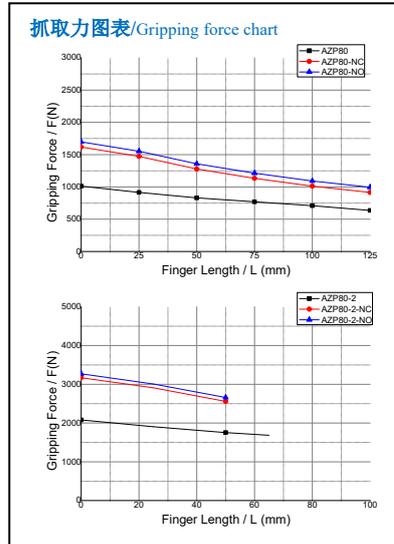
尺寸图/Dimensions



无管线连接 / Hoseless air connection



AZP80



❖所有参数为气压 6bar 下测试/All data measured at 6bar

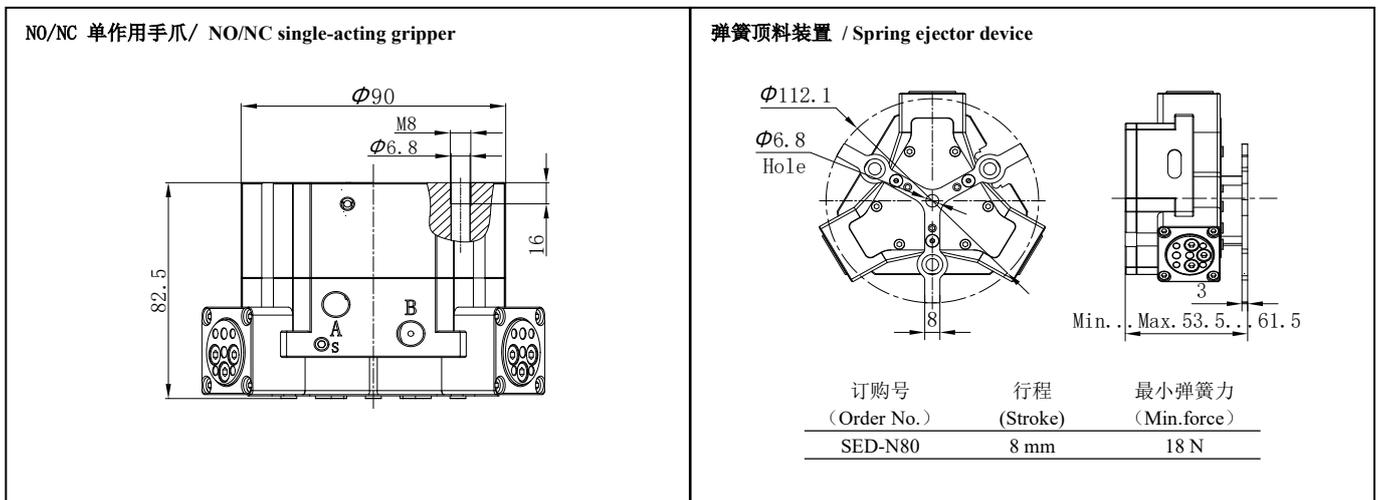
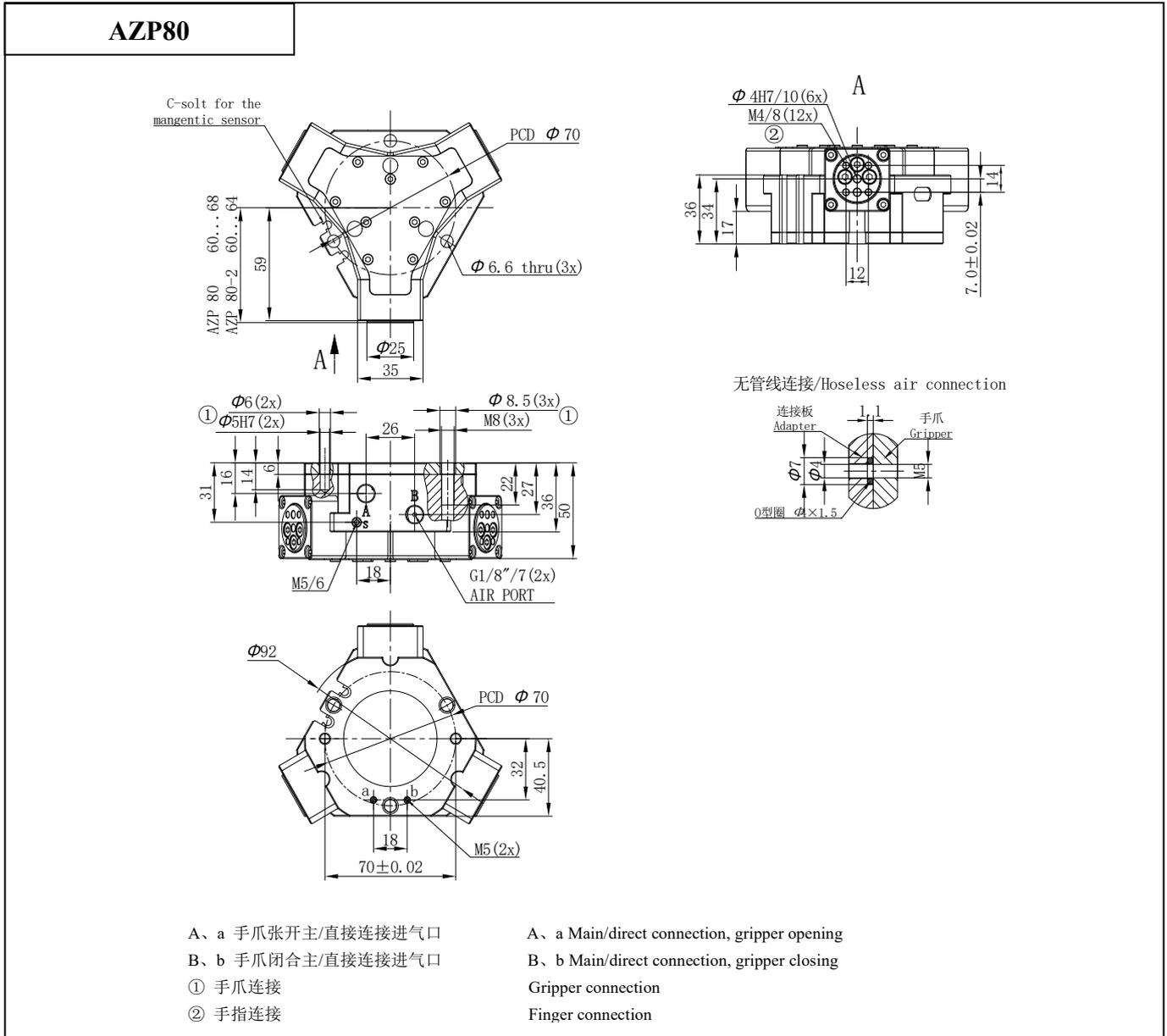
技术资料/Technical data

Description		AZP80	AZP80-NC	AZP80-NO	AZP80-2	AZP80-2-NC	AZP80-2-NO
手指单边行程 Stroke per finger	mm	8	8	8	4	4	4
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	168*P	269*P	346*P	548*P	
	6bar 气压下夹持力	N	1012	1614	2340	3288	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	181*P	286*P	405*P		564*P
	6bar 气压下夹持力	N	1086	1698	2430		3384
断气最小夹持力 Min. gripping force without pressure air	N		520	520		1000	1000
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	0.95	1.35	1.26	0.98	1.38	1.29
空气消耗量/周期 Air consumption per double stroke	cm ³	46	112	112	46	112	112
开/闭时间 Closing/opening time	s	0.07/0.07	0.08/0.04	0.04/0.08	0.07/0.07	0.08/0.04	0.04/0.08
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	80	65	65	65	52	52
单个手指最大重量 Max. permitted weight per finger	Kg	0.5	0.5	0.5	0.5	0.5	0.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					IP 67		

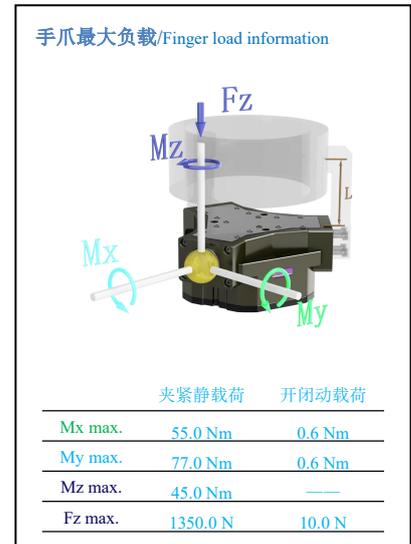
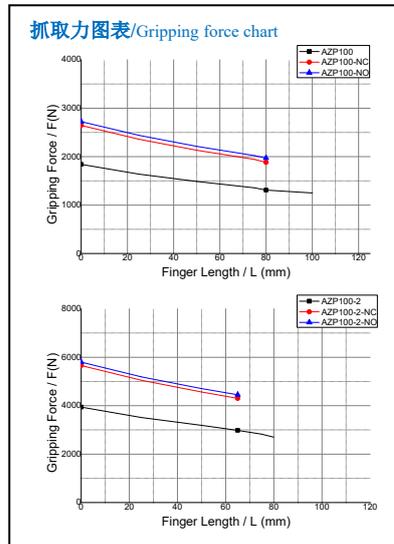
◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZP100



❖所有参数为气压 6bar 下测试/All data measured at 6bar

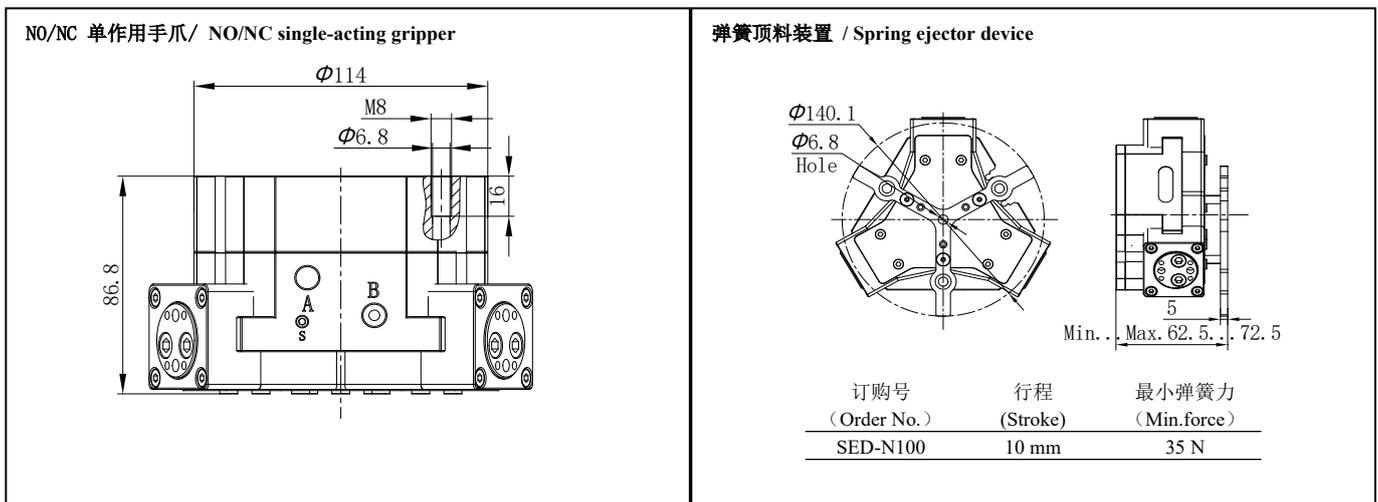
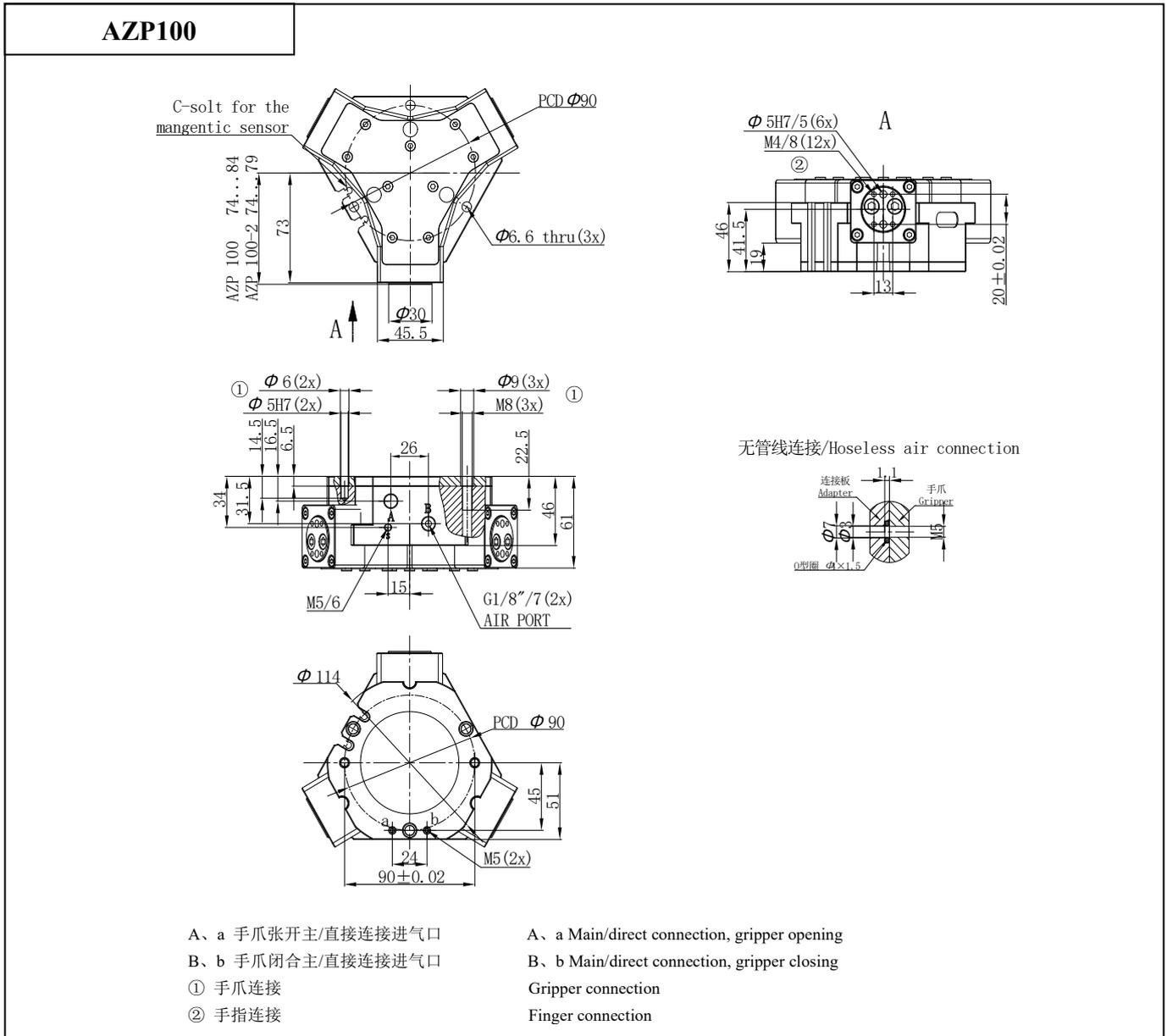
技术资料/Technical data

Description		AZP100	AZP100-NC	AZP100-NO	AZP100-2	AZP100-2-NC	AZP100-2-NO
手指单边行程 Stroke per finger	mm	10	10	10	5	5	5
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	306*P	440*P	655*P	943*P	
	6bar 气压下夹持力	N	1836	2640	3930	5658	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	351*P	455*P	668*P		966*P
	6bar 气压下夹持力	N	1940	2730	4008		5796
断气最小夹持力 Min. gripping force without pressure air	N		650	650		1300	1300
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	1.95	2.8	2.69	1.6	2.8	2.69
空气消耗量/周期 Air consumption per double stroke	cm ³	100	227	227	100	227	227
开/闭时间 Closing/opening time	s	0.1/0.1	0.2/0.01	0.01/0.2	0.1/0.1	0.2/0.01	0.01/0.2
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	100	80	80	80	65	65
单个手指最大重量 Max. permitted weight per finger	Kg	1.0	1.0	1.0	1.0	1.0	1.0
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					IP 67		

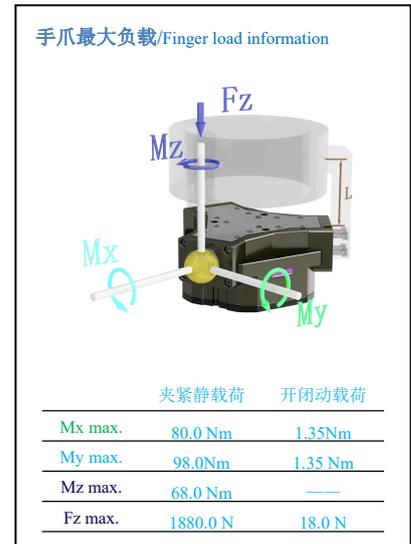
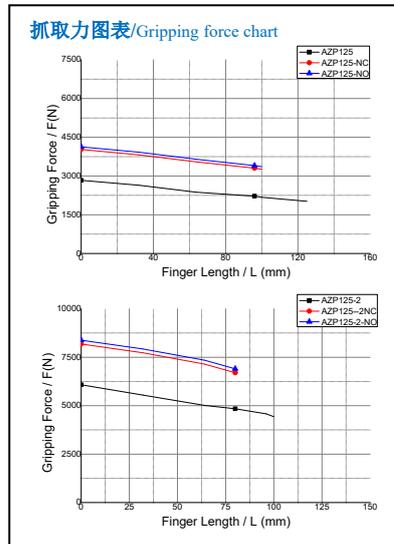
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZP125



❖所有参数为气压 6bar 下测试/All data measured at 6bar

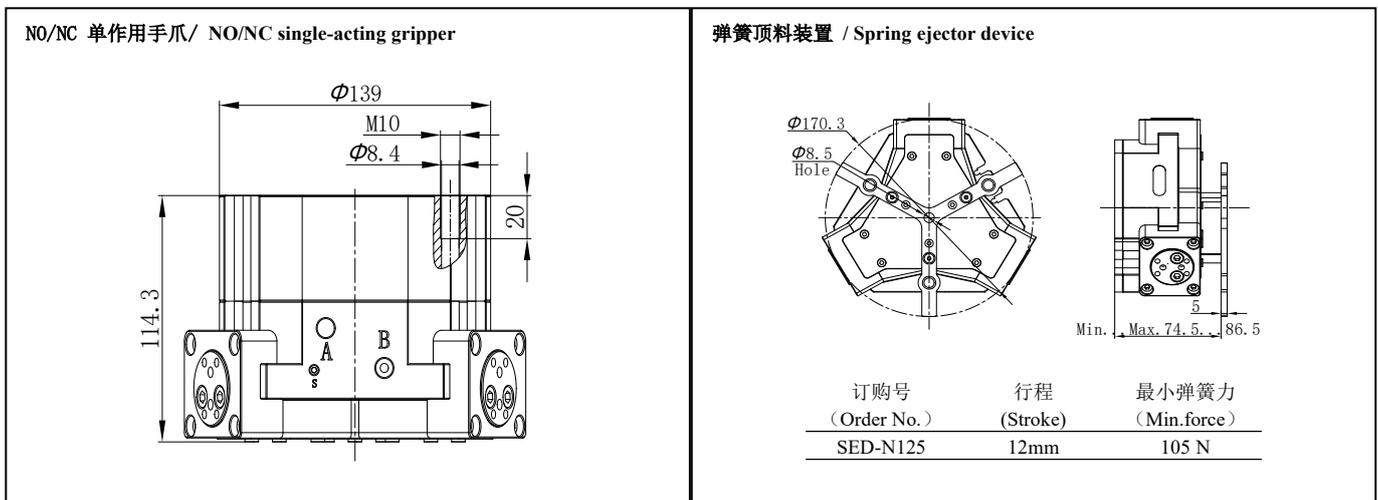
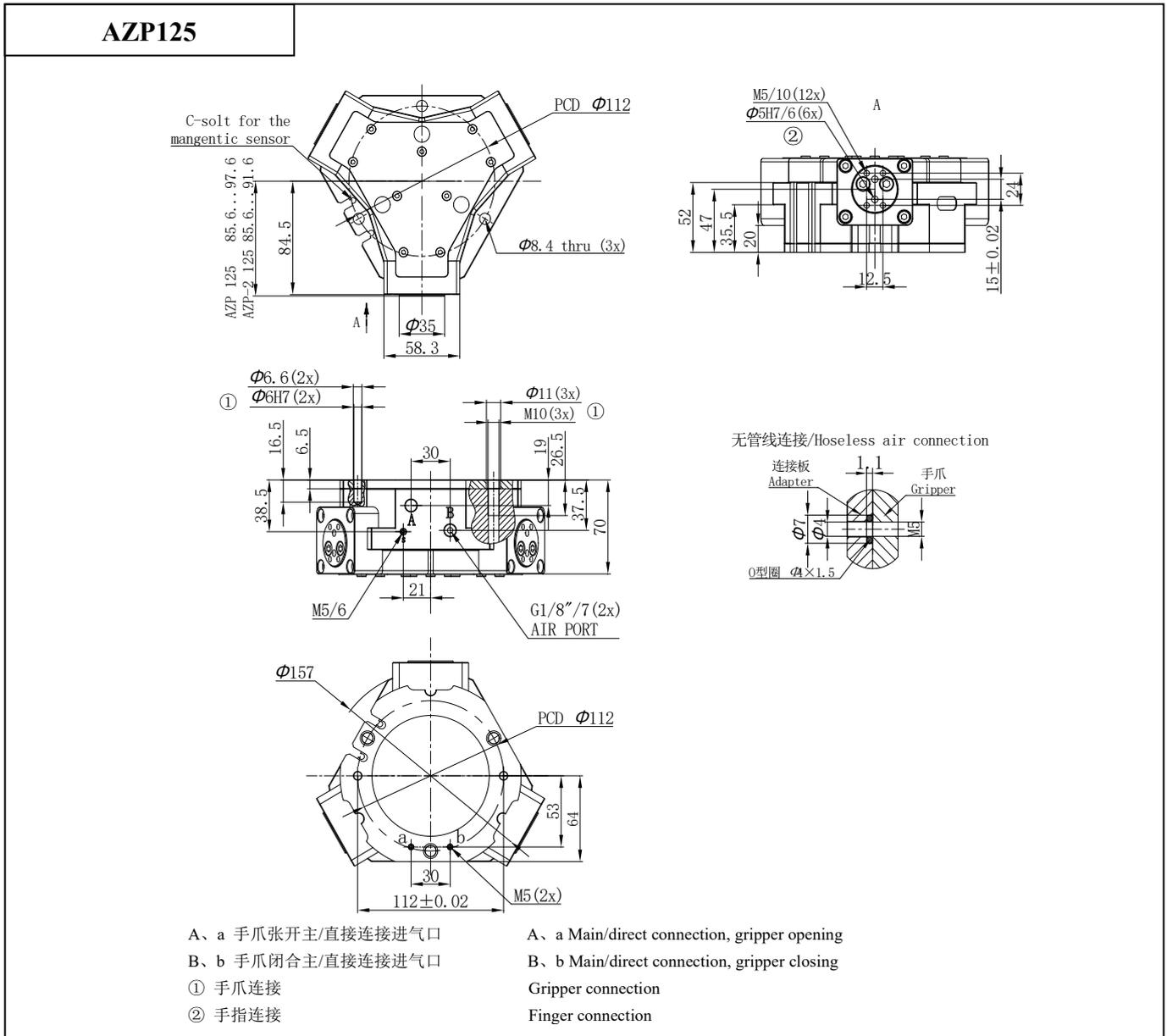
技术资料/Technical data

Description		AZP125	AZP125-NC	AZP125-NO	AZP125-2	AZP125-2-NC	AZP125-2-NO
手指单边行程 Stroke per finger	mm	12	12	12	6	6	6
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	505*P	670*P	1012*P	1345	
	6bar 气压下夹持力	N	3030	4020	6072	8070	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	558*P	686*P	1052*P		1375*P
	6bar 气压下夹持力	N	3120	4116	6312		8250
断气最小夹持力 Min. gripping force without pressure air	N		900	900		1750	1750
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	3.5	4.78	4.74	3.5	4.78	4.74
空气消耗量/周期 Air consumption per double stroke	cm ³	190	433	433	190	433	433
开/闭时间 Closing/opening time	s	0.25/0.25	0.4/0.2	0.2/0.4	0.25/0.25	0.4/0.2	0.2/0.4
重复精度 Repeat accuracy	mm				0.01		
最大手指长度 Max. permitted finger length	mm	125	100	100	100	80	80
单个手指最大重量 Max. permitted weight per finger	Kg	1.8	1.8	1.8	1.8	1.8	1.8
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性开关/接近开关	接近开关	接近开关	磁性开关/接近开关	接近开关	接近开关
IP 等级 IP class					IP 67		

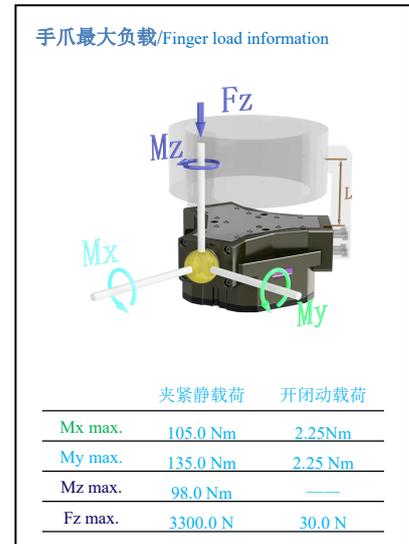
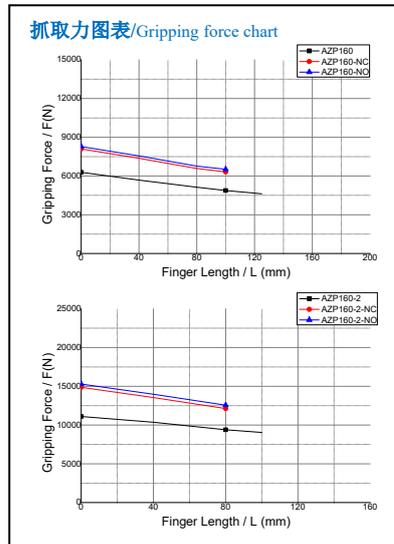
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZP160



❖所有参数为气压 6bar 下测试/All data measured at 6bar

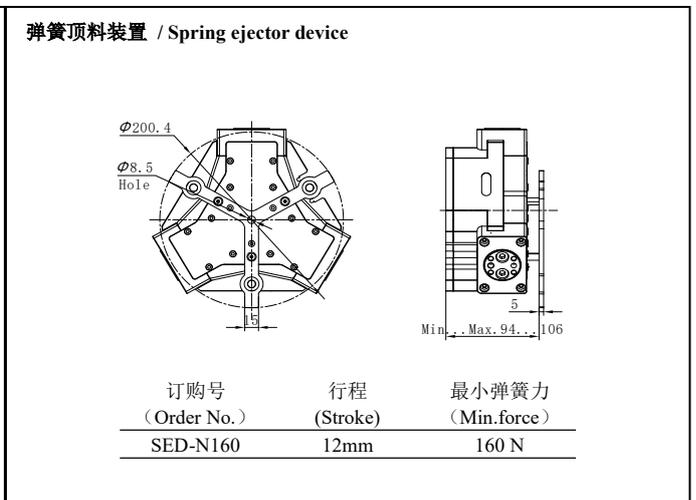
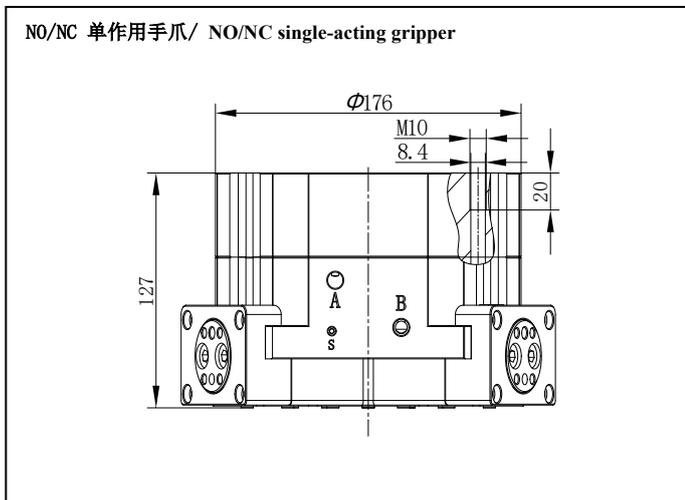
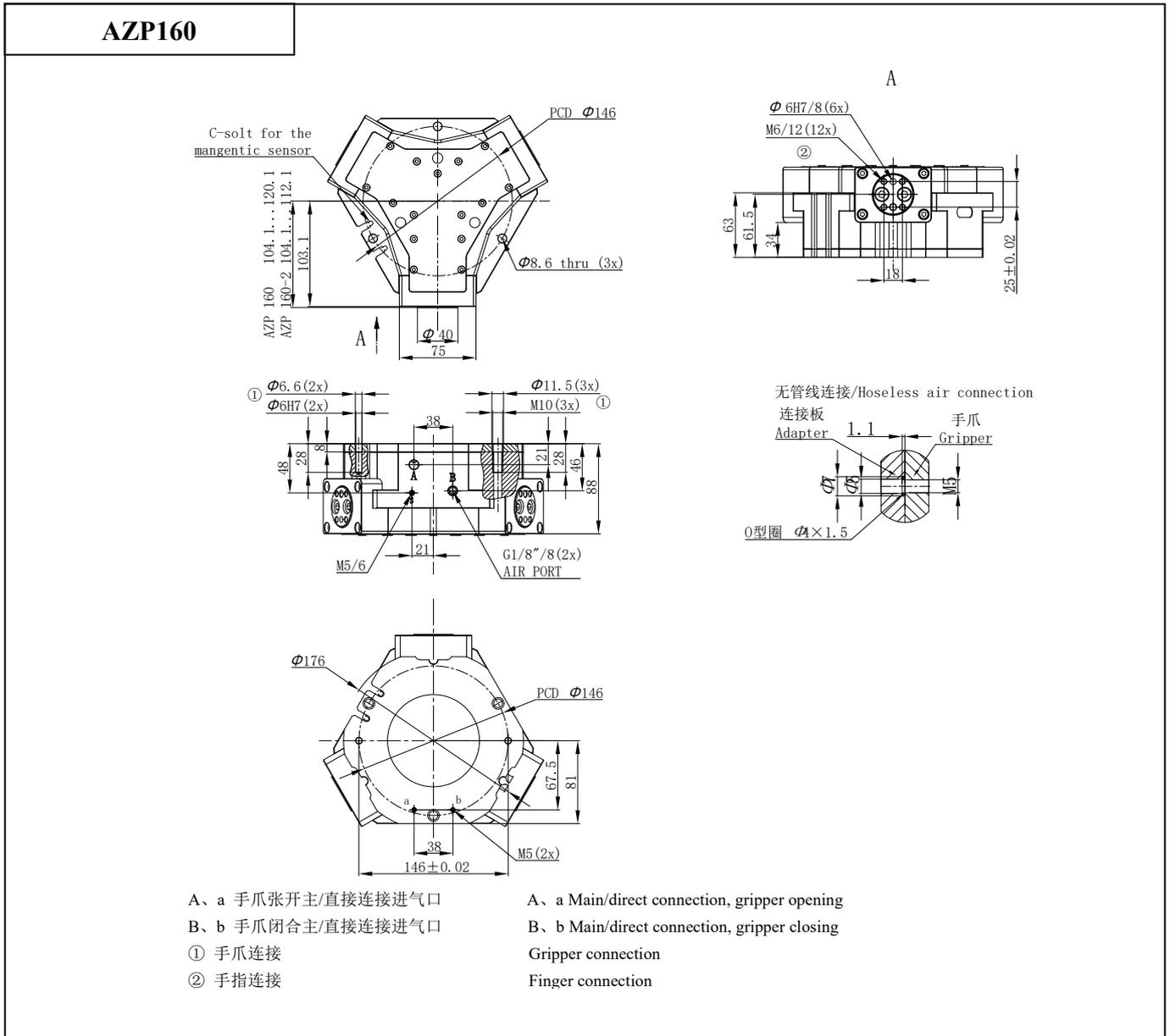
技术资料/Technical data

Description		AZP160	AZP160-NC	AZP160-NO	AZP160-2	AZP160-2-NC	AZP160-2-NO
手指单边行程 Stroke per finger	mm	16	16	16	8	8	8
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1045*P	1350*P	1850*P	2510*P	
	6bar 气压下夹持力	N	6270	8100	11100	14800	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1065*P	1380*P	1965*P		2545*P
	6bar 气压下夹持力	N	6390	8280	11790		15270
断气最小夹持力 Min. gripping force without pressure air	N		1850	1850		3700	3700
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	6.2	8	7.8	6.2	8	7.8
空气消耗量/周期 Air consumption per double stroke	cm ³	485	1226	1226	485	1226	1226
开/闭时间 Closing/opening time	s	0.5/0.5	0.4/0.8	0.8/0.4	0.5/0.5	0.4/0.8	0.8/0.4
重复精度 Repeat accuracy	mm				0.02		
最大手指长度 Max. permitted finger length	mm	125	100	100	100	80	80
单个手指最大重量 Max. permitted weight per finger	Kg	3	3	3	3	3	3
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					IP 67		

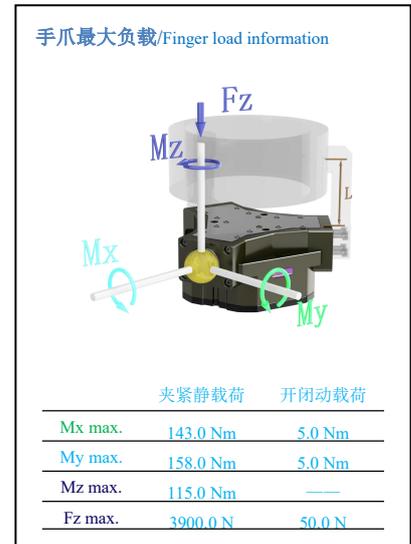
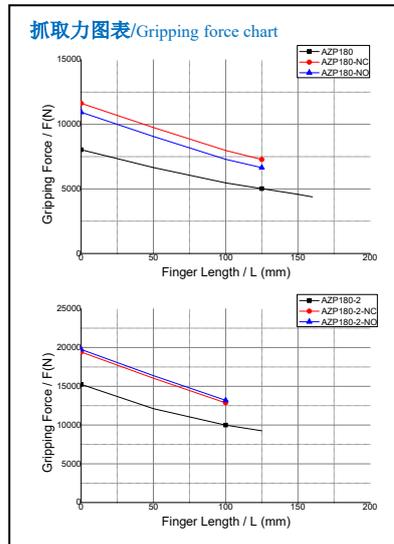
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AZP180



❖所有参数为气压 6bar 下测试/All data measured at 6bar

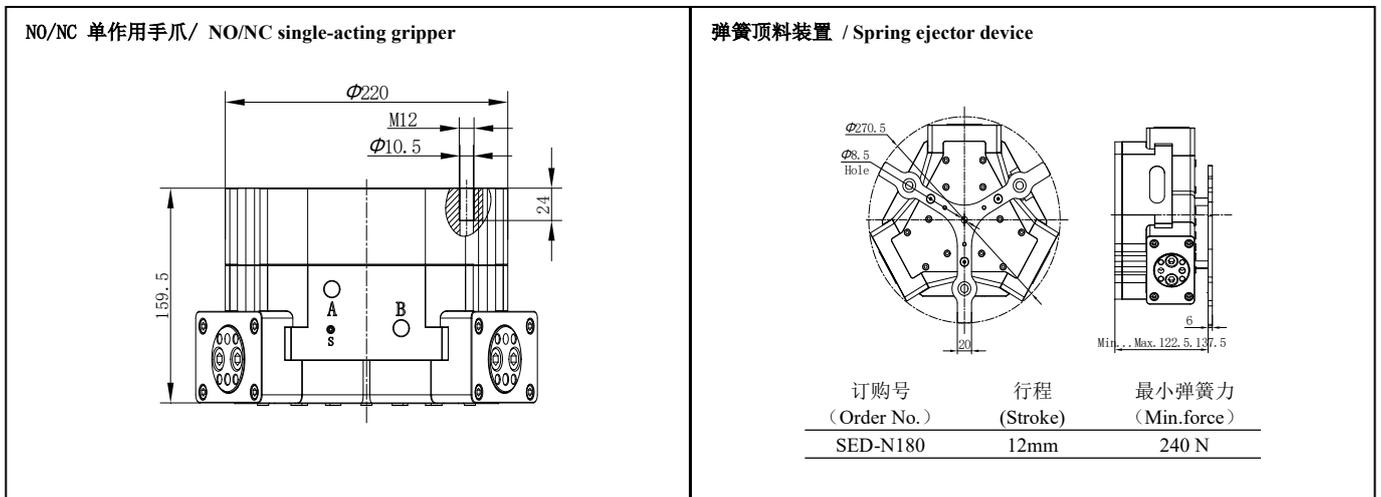
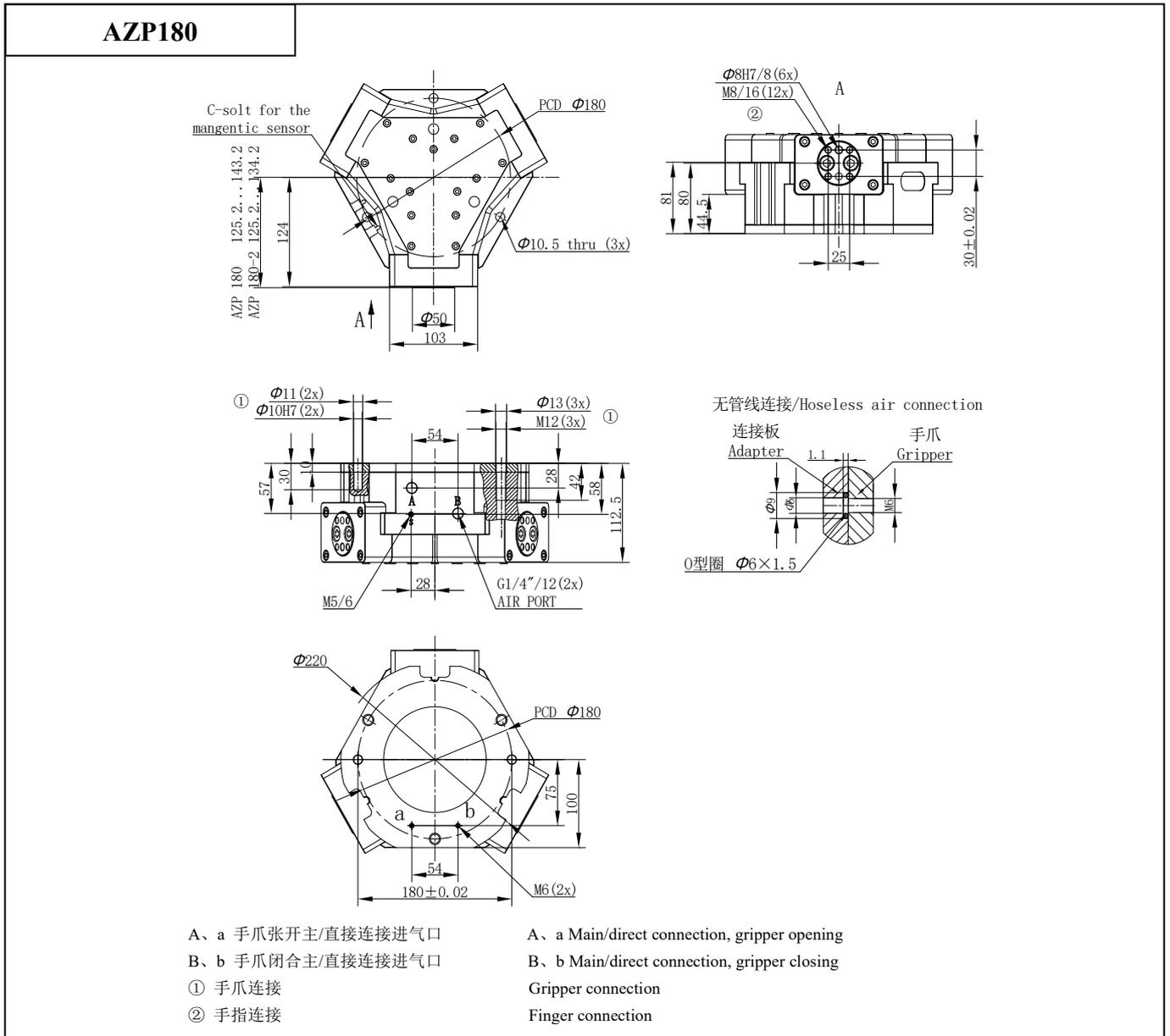
技术资料/Technical data

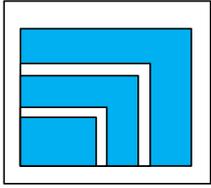
Description		AZP180	AZP180-NC	AZP180-NO	AZP180-2	AZP180-2-NC	AZP180-2-NO
手指单边行程 Stroke per finger	mm	18	18	18	9	9	9
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1338*P	1650*P	2375*P	3235*P	
	6bar 气压下夹持力	N	8028	9900	15250	19410	
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1385*P	1750*P	2485*P		3291*P
	6bar 气压下夹持力	N	8310	10500	15910		19746
断气最小夹持力 Min. gripping force without pressure air	N		2500	2500		4500	4500
使用压力范围 Max./Min. operating pressure	bar				3/8		
自重 Self weight	Kg	11.8	15.9	15.3	11.8	15.9	15.3
空气消耗量/周期 Air consumption per double stroke	cm ³	855	1520	1520	855	1520	1520
开/闭时间 Closing/opening time	s	1.5/1.5	1.2/1.8	1.8/1.2	1.5/1.5	1.2/1.8	1.8/1.2
重复精度 Repeat accuracy	mm				0.02		
最大手指长度 Max. permitted finger length	mm	160	125	125	125	100	100
单个手指最大重量 Max. permitted weight per finger	Kg	5	5	5	5	5	5
适应最小/最大环境温度 Min./Max. ambient temperature	°C				标准型 (无) : 5/80 高温型 (-R) : 5/200		
适配传感器类型 Adapted sensor type		磁性/接近	接近	接近	磁性/接近	接近	接近
IP 等级 IP class					IP 67		

◇P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

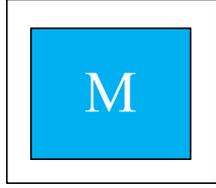
◇P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

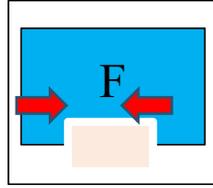




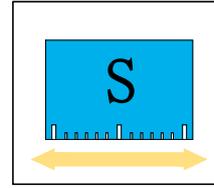
Series
66.....180



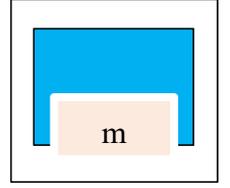
Weight
0.55...11.2Kg



Gripping Force
660...15900N



Stroke per finger
6...18mm



Workpiece weight
3..35Kg

应用案例 / Application example



① AXN100

4 指定心手爪

AXN100 4-Finger Concentric Gripper

4 指定心手爪 / 4-Finger Concentric Gripper

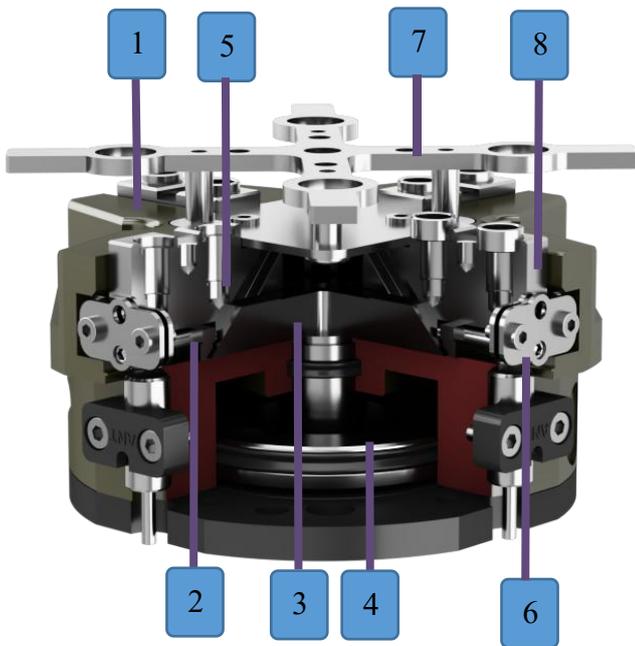
原理

- 压缩空气推动圆形活塞上下运动
- 楔形将驱动力转化为夹持力
- 滑块同步运动

Principle

- The Circular piston is moved up or down by means of compressed air
- High gripping force as a result of optimal direction change of driving force into gripping force
- Synchronous gripping movement of both base jaws

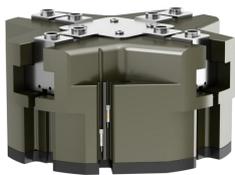
剖视图 / Sectional diagram



- 本体 Housing**
涂层处理的高强度铝合金
High-strength aluminum alloy, anodiXed
- T 型导轨 T-slot guidance**
重负载导轨：负载更长的手指长度
Heavy load rails, robust base jaw guidance for extremely long gripper fingers
- 传动方式 Transmission Model**
高动力传输
High power transmission
- 驱动部分 Energy supply**
圆形活塞，提供更大的夹持力
Large Circular piston: can have greater force
- 滑块 Jaw**
连接工件手指
For the connection of the workpiece-specific gripper fingers
- 传感系统 Sensor system**
接近式传感器
Of gripper jaw via proximity switch
- 弹簧顶料装置 Spring ejector device**
在手爪打开时弹簧提供推力保持负载
For Spring-supported positioning of the workpiece against a stop after the gripper has opened.
- 可调感应块 Adjustable induction block**
便捷可调感应凸块
Convenience, adjustable switch cam

传感系统 Sensor system

磁性传感器 / Magnetic Sensor (选购/Order)



型号(NO.)

NPN WMS-M9T

PNP WMS-M9T

- 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80℃ 下使用/The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80℃.

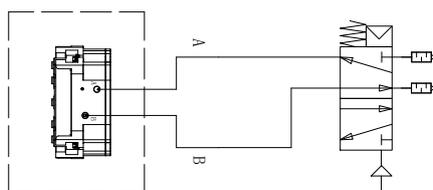
接近开关 / Proximity switch (选购/Order)



适用型号(NO.) AXN 66/80/100 AXN 125/160/180

NPN WPS-8GM18N WPS-8GM35N

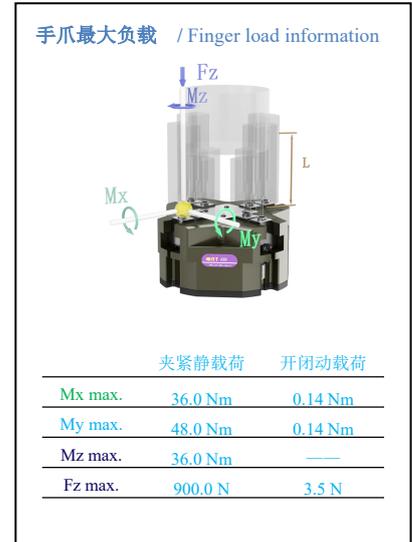
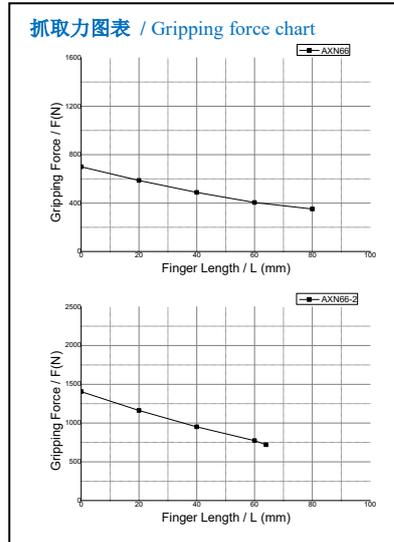
手爪气路连接原理图



手爪适配气管及电磁阀有效截面积建议值

型号	AXN		
	66/80	100/125	160/180
气管直径 (mm)	≥6	≥8	≥10
电磁阀有效截面积 (mm ²)	≥17.0	≥28.0	≥48.0

AXN66



❖所有参数为气压 6bar 下测试/All data measured at 6bar

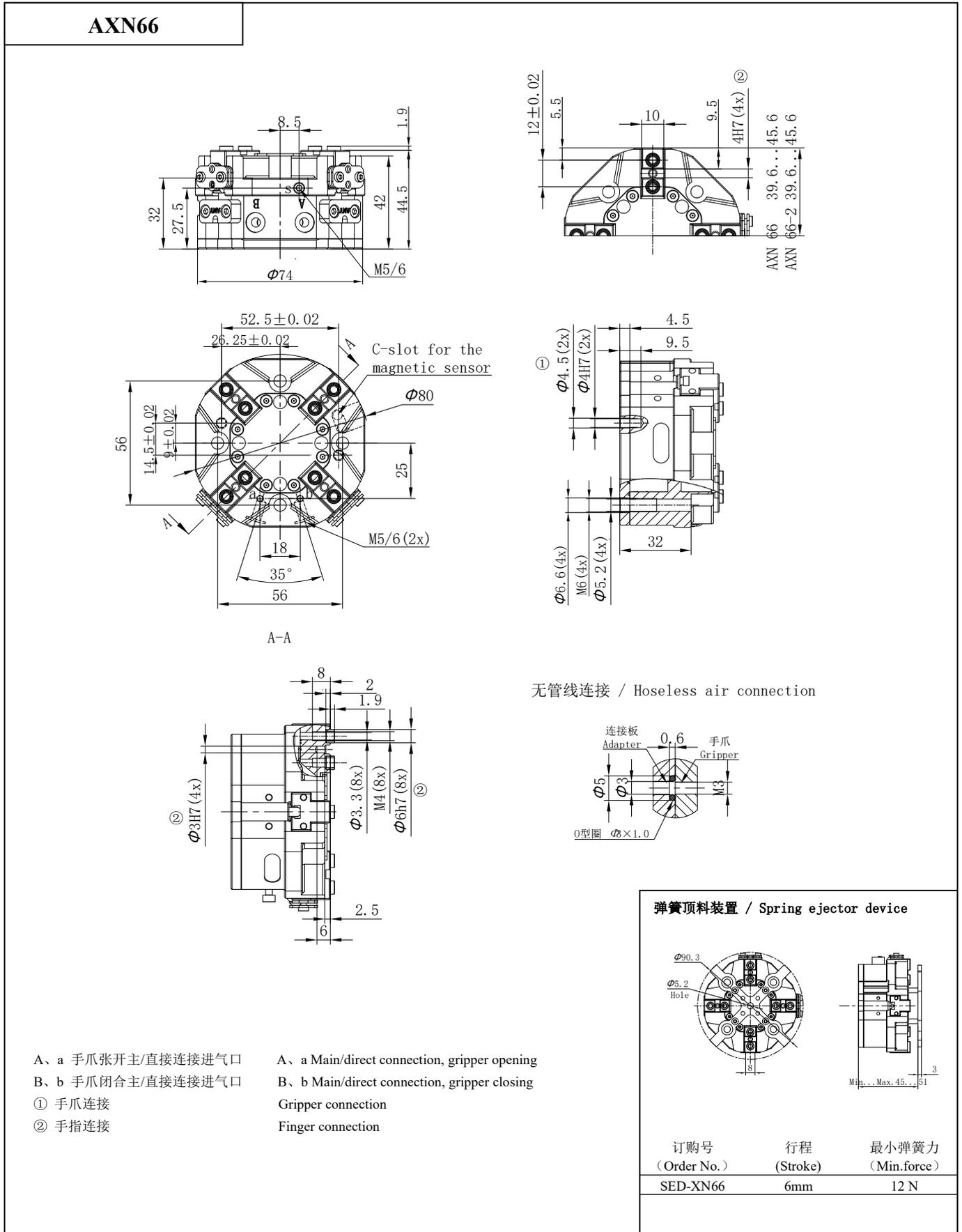
技术资料/Technical data

Description		AXN66	AXN66-2
手指单边行程 Stroke per finger	mm	6	3
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	110*P	233*P
	6bar 气压下夹持力	660	1398
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	127*P	246*P
	6bar 气压下夹持力	750	1476
使用压力范围 Max./Min. operating pressure	bar	3/8	
自重 Self weight	Kg	0.55	0.55
空气消耗量/周期 Air consumption per double stroke	cm ³	21.5	21.5
开/闭时间 Closing/opening time	s	0.03/0.03	0.03/0.03
重复精度 Repeat accuracy	mm	0.01	
最大手指长度 Max. permitted finger length	mm	80	64
单个手指最大重量 Max. permitted weight per finger	Kg	0.35	0.35
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 (无) : 5/80 高温型 (-R) : 5/200	
IP 等级 IP class		IP 45	

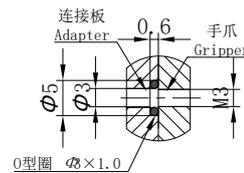
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

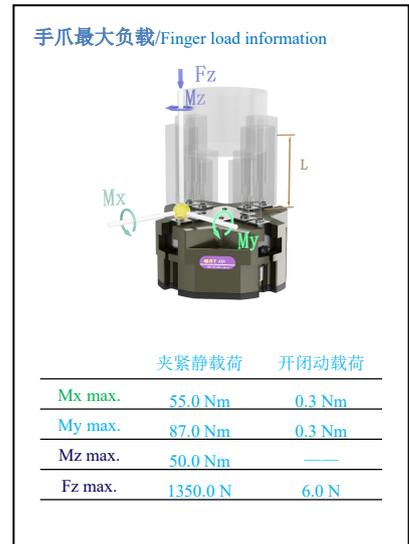
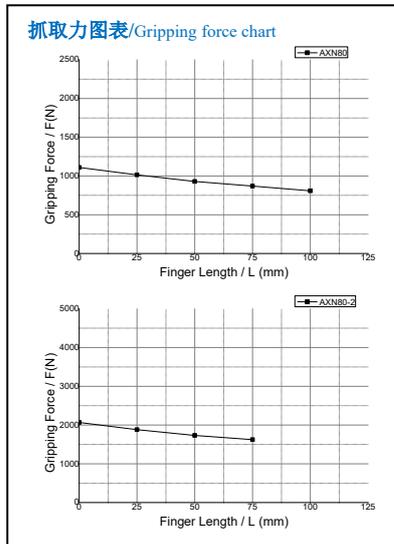
尺寸图/Dimensions



无管线连接 / Hoseless air connection



AXN80



❖所有参数为气压 6bar 下测试/All data measured at 6bar

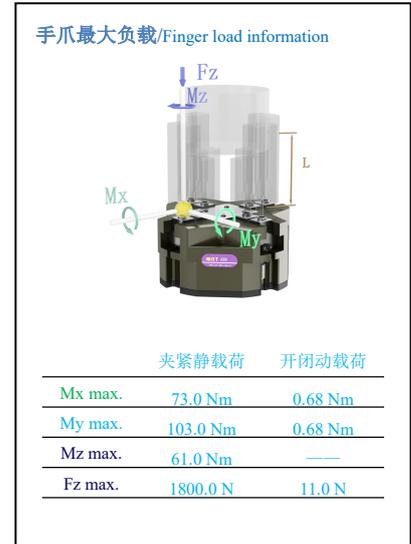
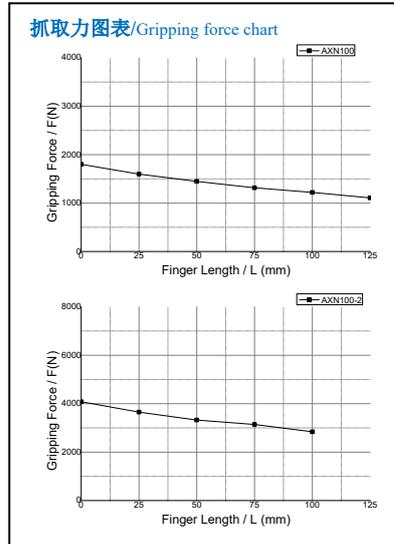
技术资料/Technical data

Description		AXN80	AXN80-2
手指单边行程 Stroke per finger	mm	8	4
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	354*P
	6bar 气压下夹持力	N	2124
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	369*P
	6bar 气压下夹持力	N	2214
使用压力范围 Max./Min. operating pressure	bar	3/8	
自重 Self weight	Kg	1.0	1.0
空气消耗量/周期 Air consumption per double stroke	cm ³	46	46
开/闭时间 Closing/opening time	s	0.05/0.05	0.05/0.05
重复精度 Repeat accuracy	mm	0.01	
最大手指长度 Max. permitted finger length	mm	100	75
单个手指最大重量 Max. permitted weight per finger	Kg	0.6	0.6
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型(无) : 5/80 高温型(-R) : 5/200	
IP 等级 IP class		IP 45	

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

AXN100



❖所有参数为气压 6bar 下测试/All data measured at 6bar

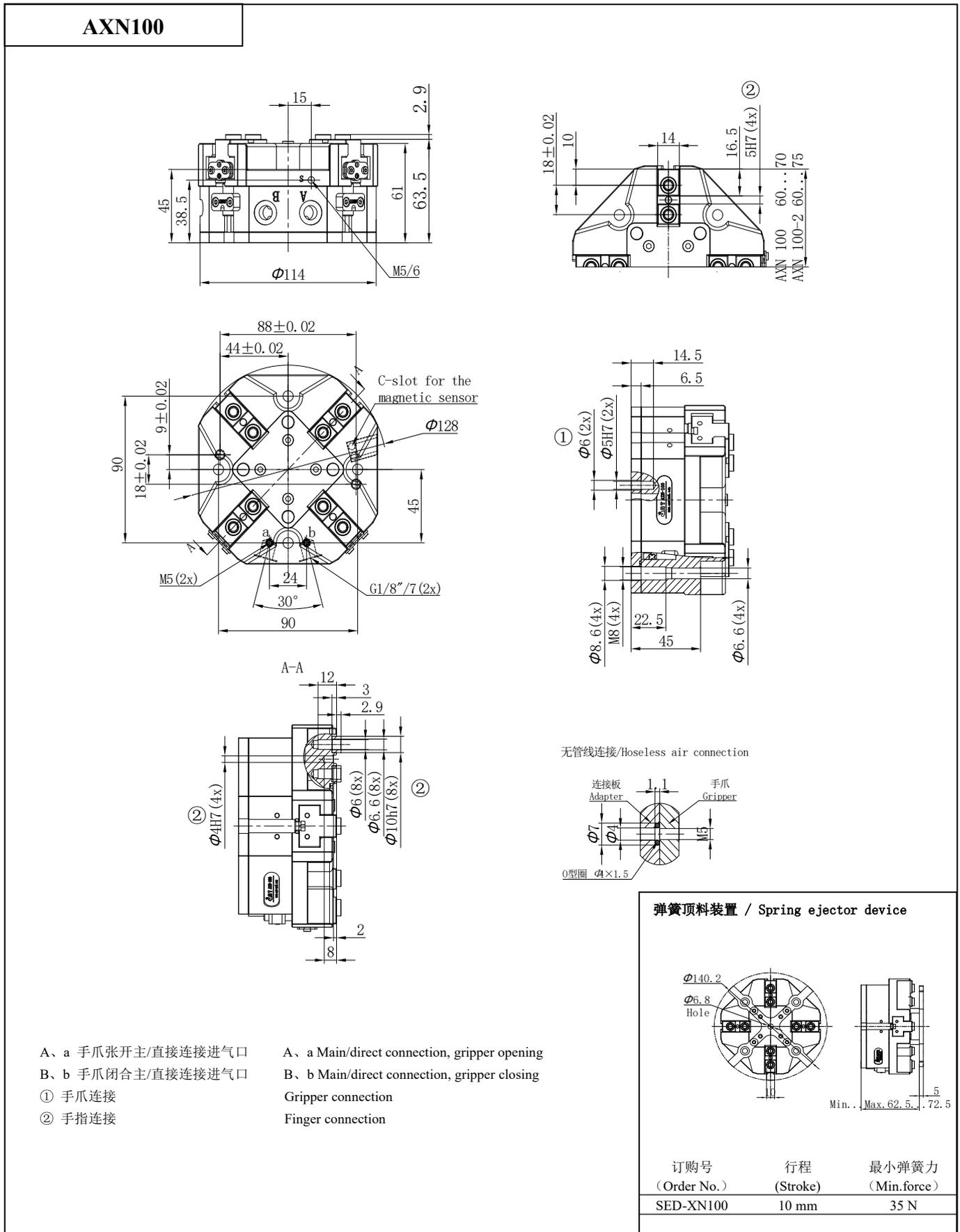
技术资料/Technical data

Description		AXN100	AXN100-2
手指单边行程 Stroke per finger	mm	10	5
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	300*P	664*P
	6bar 气压下夹持力	1800	3984
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	317*P	675*P
	6bar 气压下夹持力	1902	4050
使用压力范围 Max./Min. operating pressure	bar	3/8	
自重 Self weight	Kg	1.85	1.85
空气消耗量/周期 Air consumption per double stroke	cm ³	100	100
开/闭时间 Closing/opening time	s	0.1/0.1	0.1/0.1
重复精度 Repeat accuracy	mm	0.01	
最大手指长度 Max. permitted finger length	mm	125	100
单个手指最大重量 Max. permitted weight per finger	Kg	1.1	1.1
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 (无) : 5/80 高温型 (-R) : 5/200	
IP 等级 IP class		IP 45	

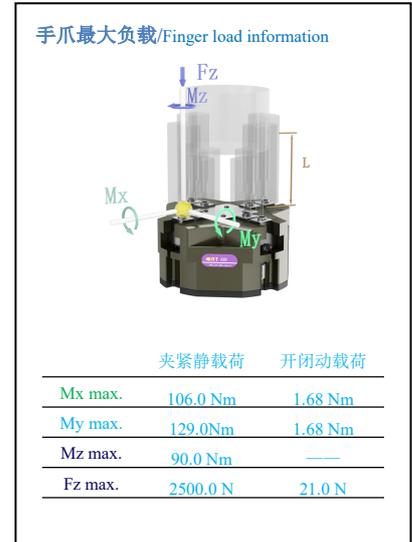
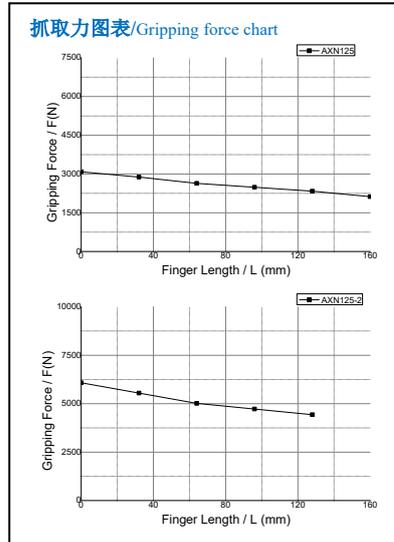
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AXN125



❖所有参数为气压 6bar 下测试/All data measured at 6bar

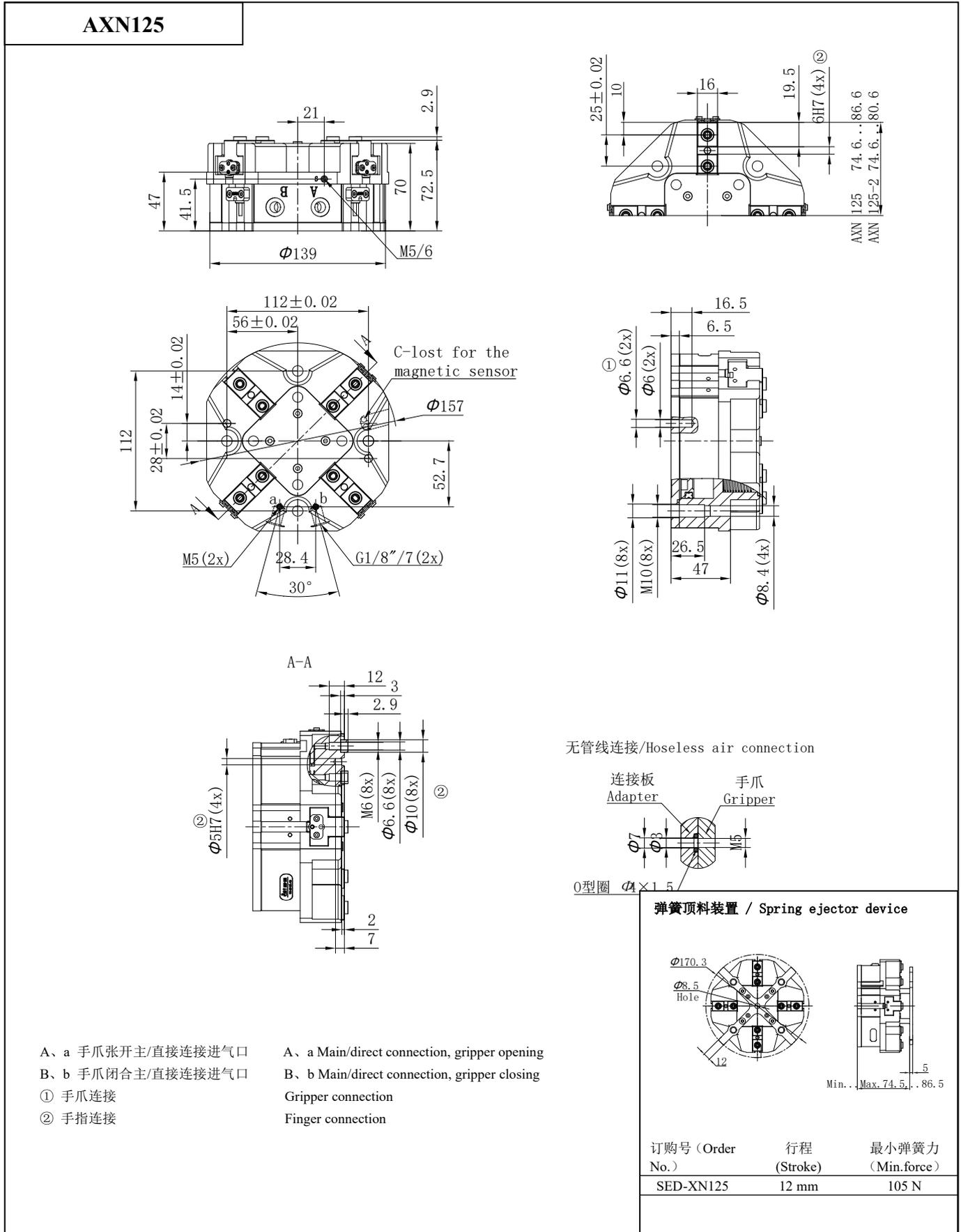
技术资料/Technical data

Description		AXN125	AXN125-2
手指单边行程 Stroke per finger	mm	12	6
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	491*P	1010*P
	6bar 气压下夹持力	3096	6060
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	533*P	1050*P
	6bar 气压下夹持力	3198	6300
使用压力范围 Max./Min. operating pressure	bar	3/8	
自重 Self weight	Kg	3.15	3.15
空气消耗量/周期 Air consumption per double stroke	cm ³	190	190
开/闭时间 Closing/opening time	s	0.2/0.2	0.2/0.2
重复精度 Repeat accuracy	mm	0.01	
最大手指长度 Max. permitted finger length	mm	160	125
单个手指最大重量 Max. permitted weight per finger	Kg	2.1	2.1
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 (无) : 5/80 高温型 (-R) : 5/200	
IP 等级 IP class		IP 45	

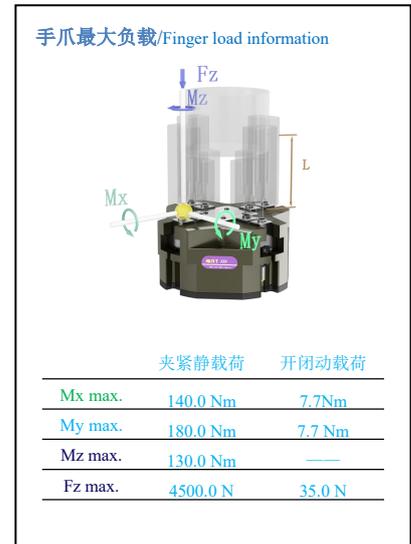
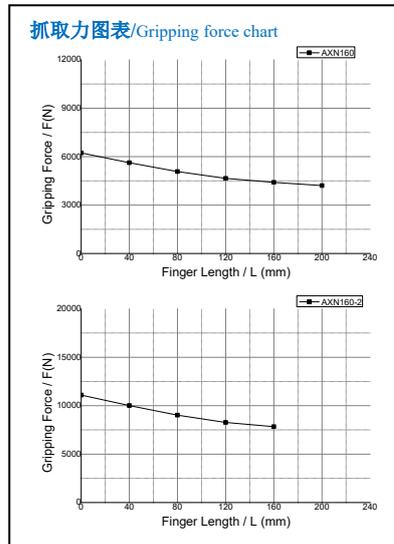
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AXN160



❖所有参数为气压 6bar 下测试/All data measured at 6bar

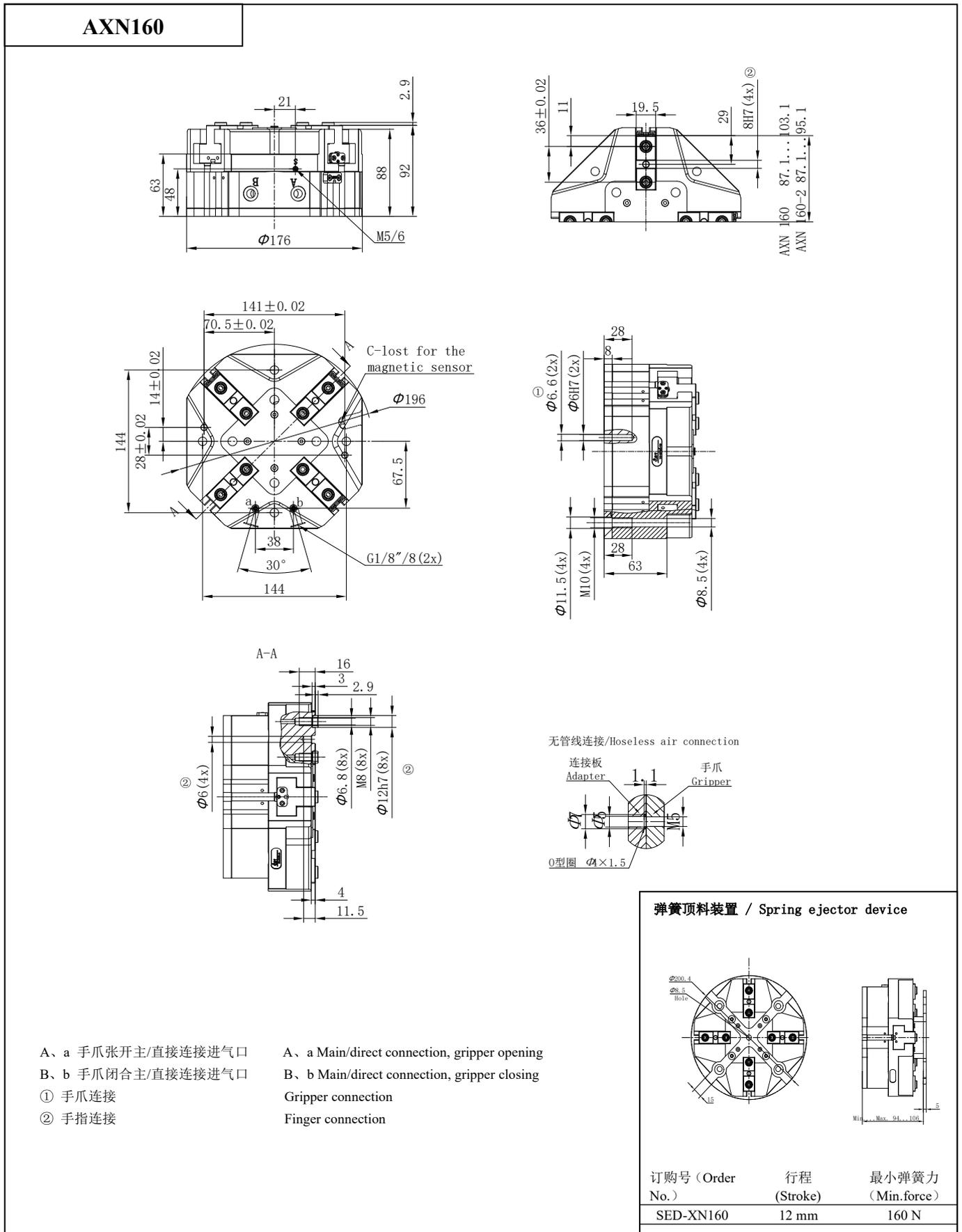
技术资料/Technical data

Description		AXN160	AXN160-2
手指单边行程 Stroke per finger	mm	16	8
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1030*P
	6bar 气压下夹持力	N	6180
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1050*P
	6bar 气压下夹持力	N	6300
使用压力范围 Max./Min. operating pressure	bar	3/8	
自重 Self weight	Kg	6.2	6.2
空气消耗量/周期 Air consumption per double stroke	cm ³	485	485
开/闭时间 Closing/opening time	s	0.5/0.5	0.5/0.5
重复精度 Repeat accuracy	mm	0.02	
最大手指长度 Max. permitted finger length	mm	200	160
单个手指最大重量 Max. permitted weight per finger	Kg	3.5	3.5
适应最小/最大环境温度 Min./Max. ambient temperature	°C	标准型 (无) : 5/80 高温型 (-R) : 5/200	
IP 等级 IP class		IP 45	

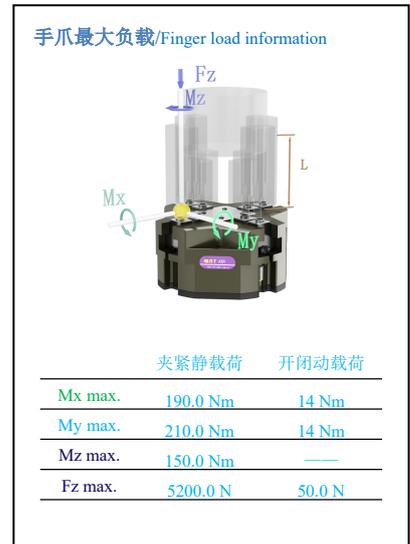
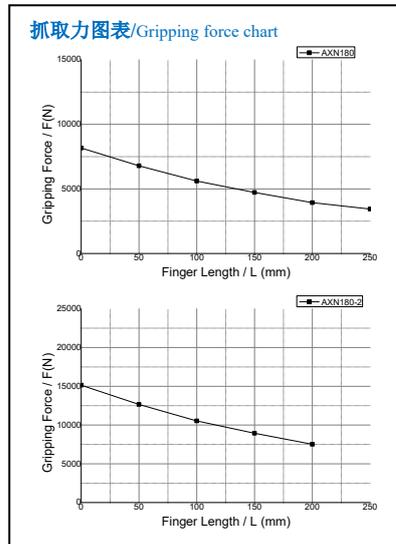
❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



AXN180



❖所有参数为气压 6bar 下测试/All data measured at 6bar

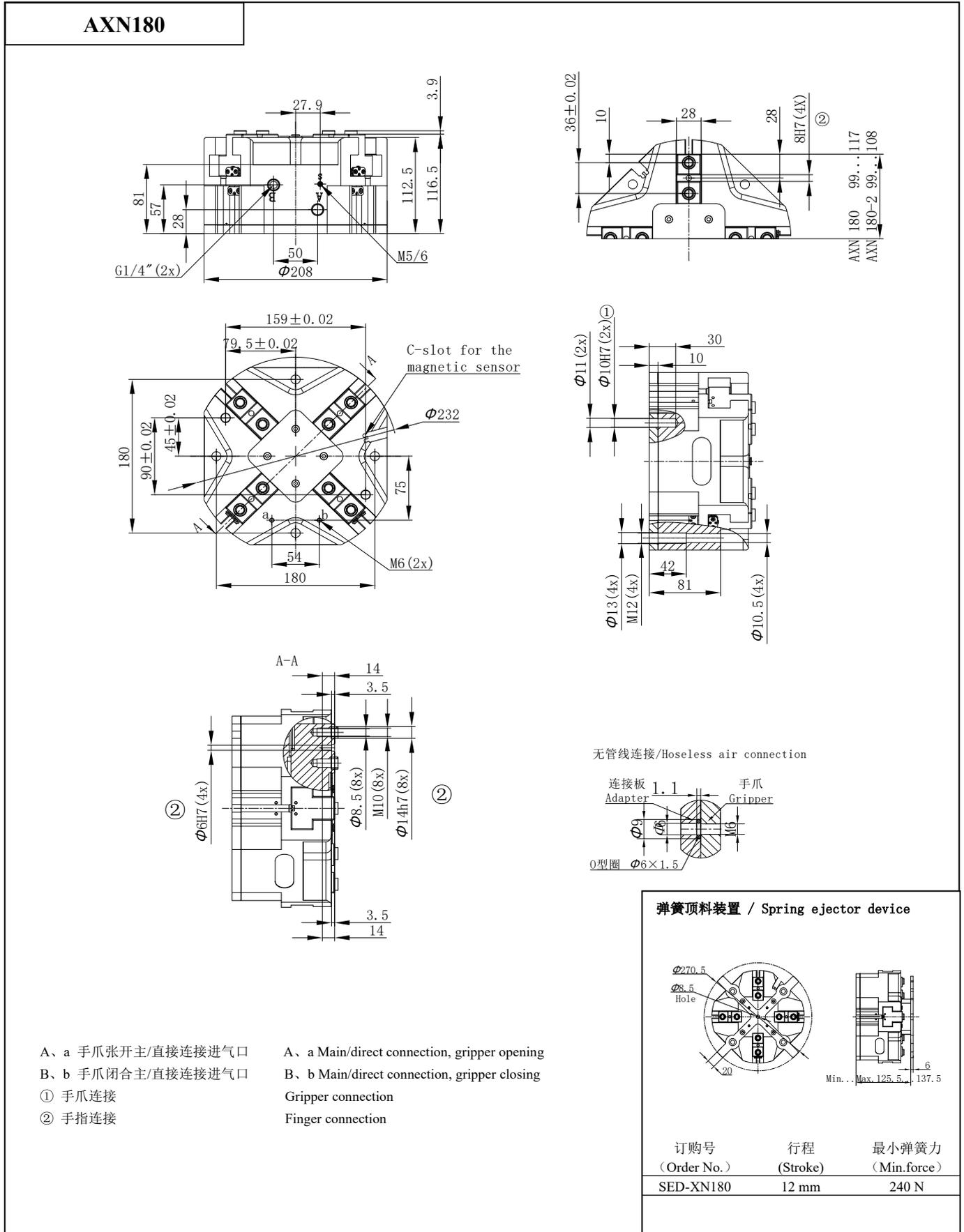
技术资料/Technical data

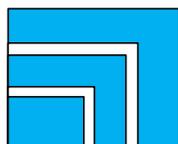
Description		AXN180	AXN180-2
手指单边行程 Stroke per finger	mm	18	9
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1315*P
	6bar 气压下夹持力	N	7890
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	1370*P
	6bar 气压下夹持力	N	8220
使用压力范围 Max./Min. operating pressure	bar		3/8
自重 Self weight	Kg	11	11.2
空气消耗量/周期 Air consumption per double stroke	cm ³	855	855
开/闭时间 Closing/opening time	s	0.5/0.5	0.5/0.5
重复精度 Repeat accuracy	mm		0.02
最大手指长度 Max. permitted finger length	mm	250	200
单个手指最大重量 Max. permitted weight per finger	Kg	5	5
适应最小/最大环境温度 Min./Max. ambient temperature	°C		标准型 (无) : 5/80 高温型 (-R) : 5/200
IP 等级 IP class			IP 45

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

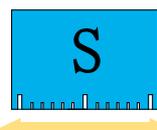




Sizes
90

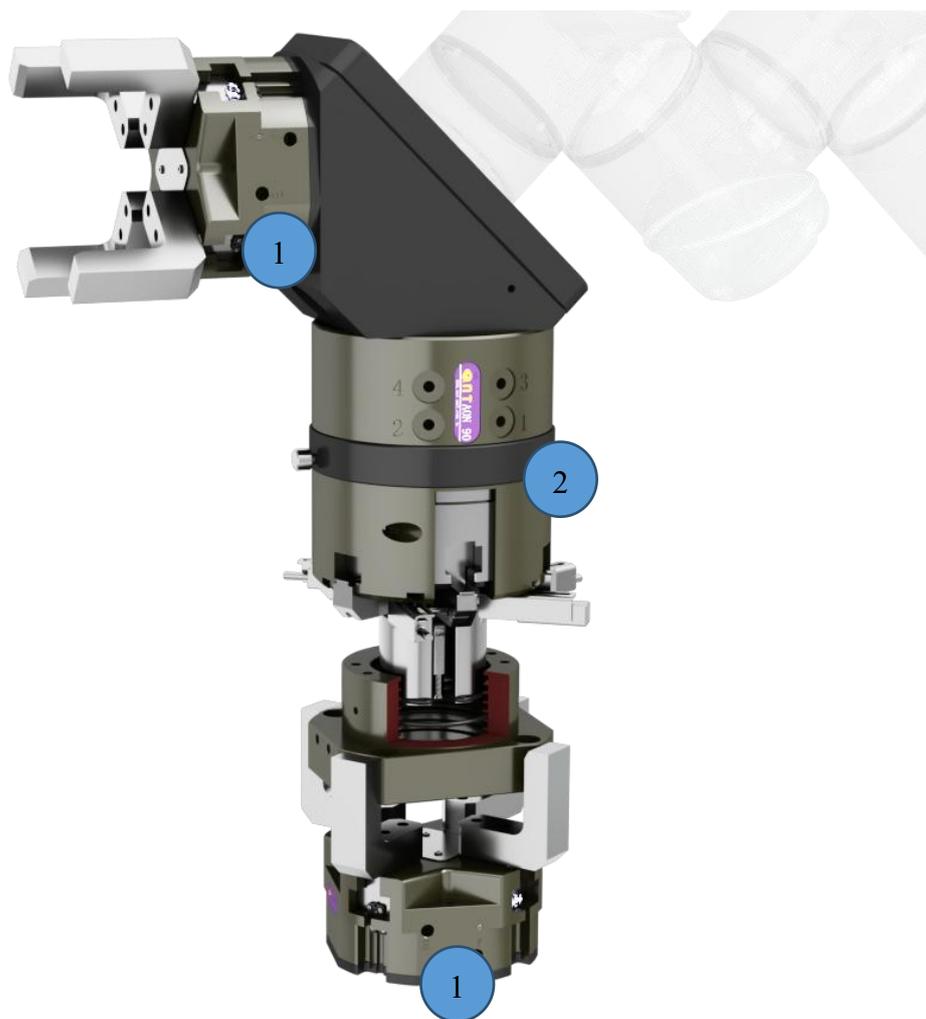


Weight
2Kg



Stroke per finger
12mm

应用案例 / Application example



- ① AZN66 三指定心手爪
- ② AON90 O 型圈装配手爪

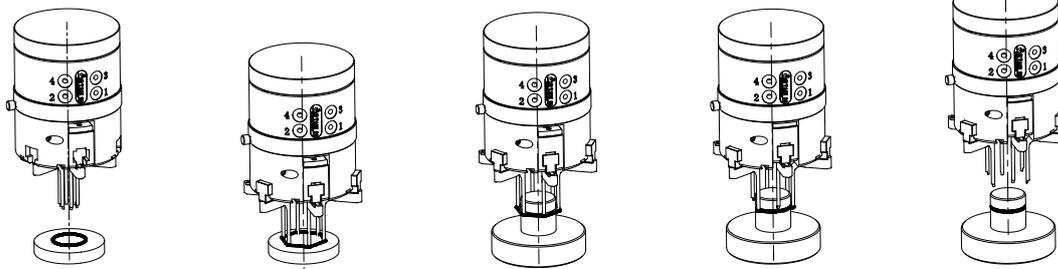
AZN66 3-Finger Concentric Gripper
O-Ring Assembly Gripper series

O 型圈装配手爪 / O-Ring Assembly Gripper series

O 型圈装配手爪可用于轴上和孔内 O 型圈、大部分方形密封圈和其他密封圈的装配。行程可调的手指方便快速调试，防止 O 型圈过度拉伸保证统一的质量。

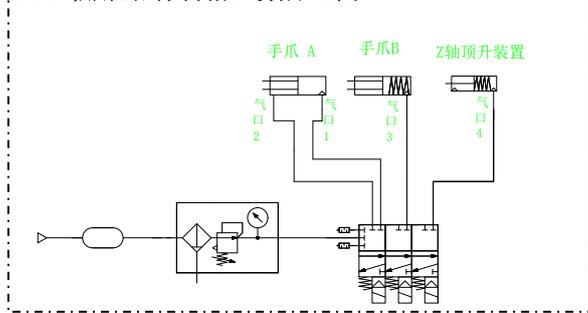
AON90 密封圈抓取手爪工作原理

AON 轴用密封圈装配工作原理



- 1、手爪 A、B 闭合、手爪移动到上料位，气口 1、3 同时通气手爪 A、B 手指张开，将 O 型圈撑成六边形（六边形内切圆直径大于工件轴径 3-4mm）；
- 2、已抓取密封圈手爪随机器人移动至装配端，从轴端将密封圈套入密封圈槽位置；
- 3、气孔 4 通气，Z 轴退料装置动作，手爪 A 上的手指松开密封圈，密封圈收缩到槽内；
- 4、机器人沿工件轴向移出，密封圈和手爪 B 上的手指脱离，密封圈完全收到到密封圈槽内；

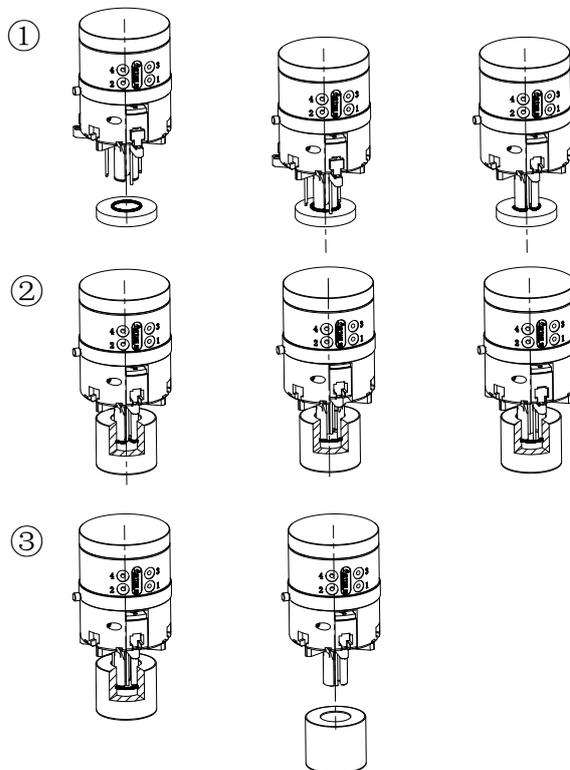
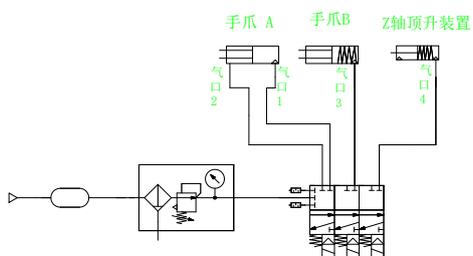
AON 轴用密封圈装配气动原理图



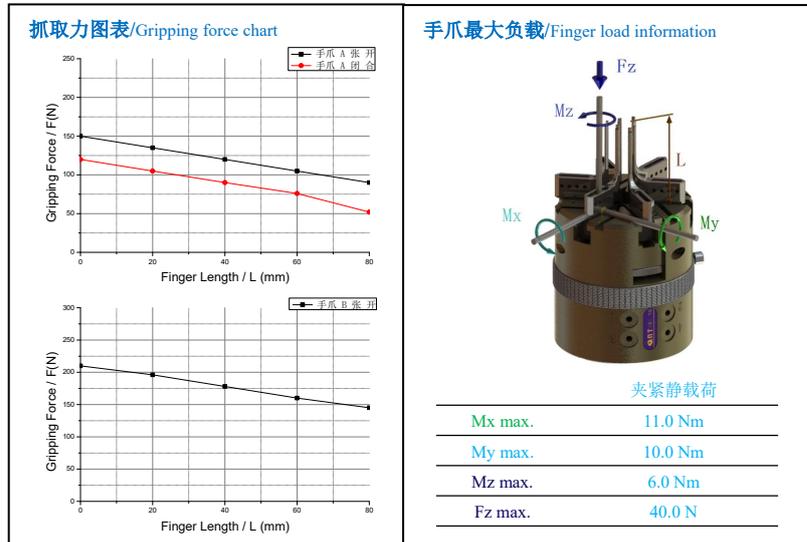
AON 孔用密封圈装配工作原理

- 1、手爪 A 张开、手爪 B 闭合、手爪移动到上料位，气口 3 先通气、然后气口 1 通气、手爪 A 上的手指向内拉伸密封圈，密封圈内圈紧贴手爪 B 的手指面上（抓取后密封圈外径小于孔径 2-4mm）
- 2、已抓取密封圈手爪随机器人移动至装配端，从零件孔端将密封圈移动至密封圈槽位置；气孔 3 通气，手爪 B 张开，手指张开将密封圈推入槽内；气孔 4 通气，Z 轴退料装置动作，手爪 A 上的手指脱离密封圈，密封圈弹性恢复至圆形形状，气口 4 断气，Z 轴退料装置复位，气口 1 通气，手爪 A 张开，手指将未能完全恢复形状的密封圈推入密封圈槽内；
- 3、将气口 2 通气、气口 3 断气，手爪 A、B 闭合，手指移动至最内侧，机器人移动将手爪移出装配孔内；

AON 孔用密封圈装配气动原理图



AON



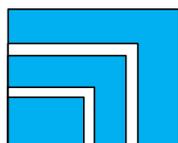
技术资料/Technical data

❖所有参数为气压 6bar 下测试/All data measured at 6bar

Description			AON90
手爪 A 工作原理			双动作
手爪 A 单指最大行程	Stroke per finger	mm	21
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	20*P
	6bar 气压下夹持力	N	120
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	25*P
	6bar 气压下夹持力	N	150
手爪 B 工作原理			单动作
手爪 B 单指最大行程	Stroke per finger	mm	15
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	35*P
	6bar 气压下夹持力	N	210
Z 轴顶升装置 行程		mm	5
理论夹持力-收缩 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	49*P
	6bar 气压下夹持力	N	294
使用压力范围		bar	4.5/6
自重		Kg	2
手爪 A 空气消耗量/周期		cm ³	16
手爪 B 空气消耗量/周期		cm ³	14
Z 轴行程装置空气消耗量/周期		cm ³	5
开/闭时间		s	0.1/0.15
允许最大手指长度		mm	80
重复精度		mm	0.05
适应最小/最大环境温度		°C	5/80
IP 等级			40

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

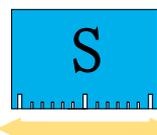
❖P: Pressure [bar], L:The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes



Sizes
90

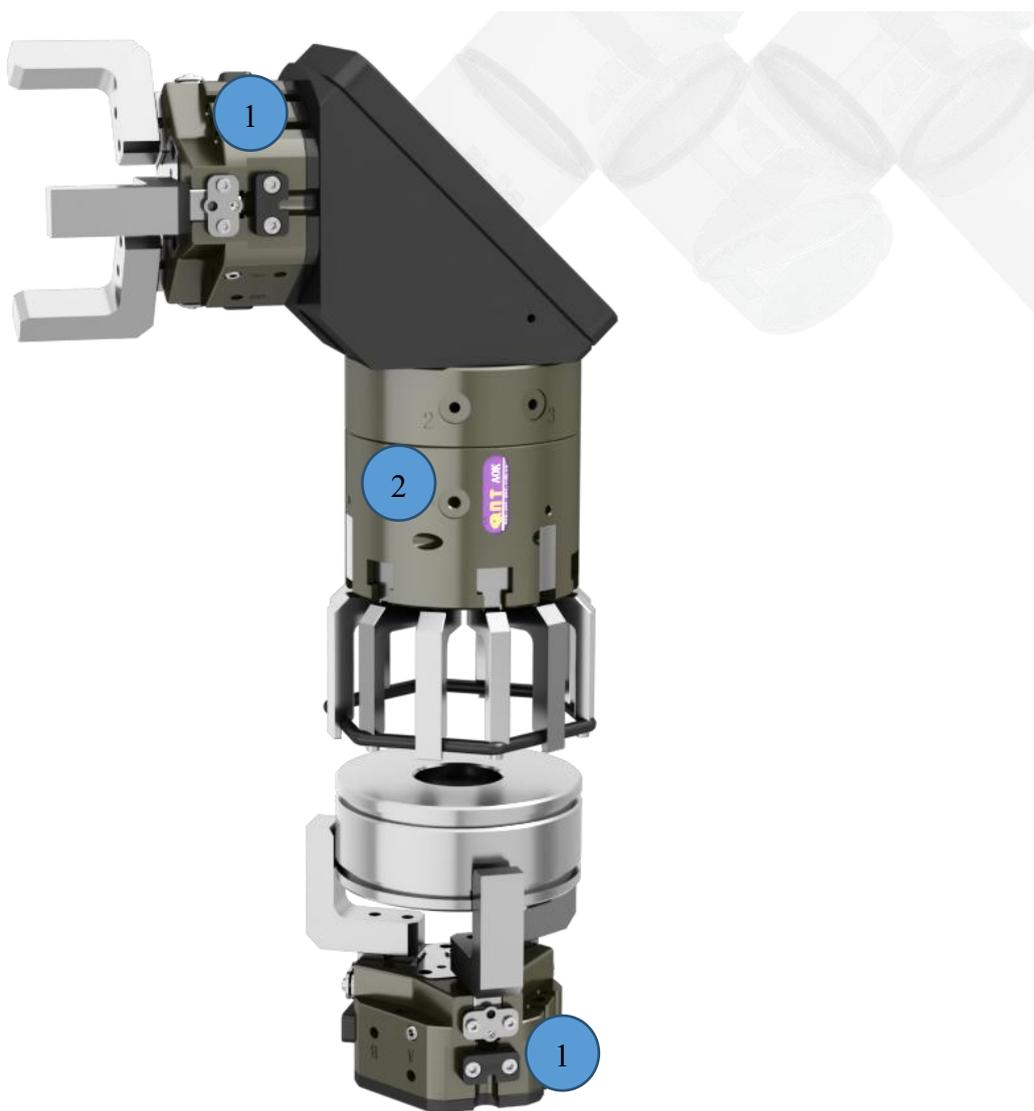


Weight
2Kg



Stroke per finger
12mm

应用案例 / Application example



- ① AZN66 三指定心手爪
- ② AOK90 O 型圈装配手爪

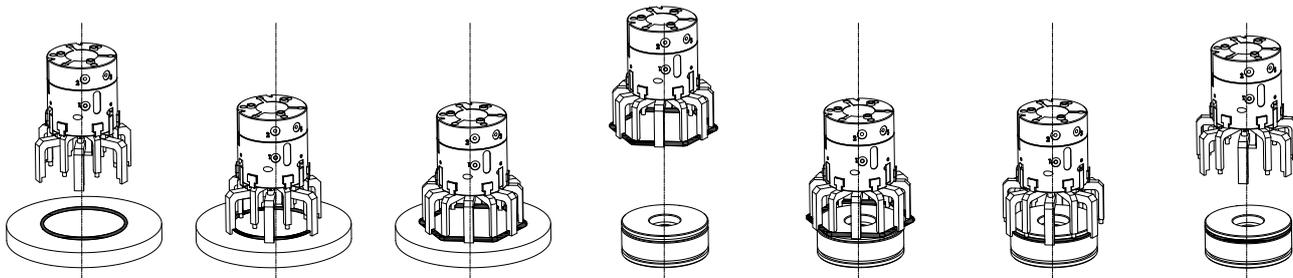
AZN66 3-Finger Concentric Gripper
O-Ring Assembly Gripper series

O 型圈装配手爪 / O-Ring Assembly Gripper series

O 型圈装配手爪可用于轴上 O 型圈、大部分方形密封圈和其他密封圈的装配。行程可调的手指方便快速调试，防止 O 型圈过度拉伸保证统一的质量。

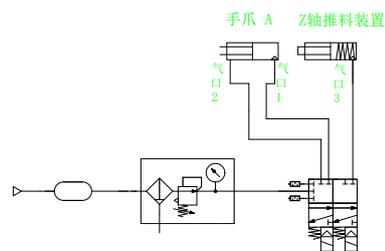
AOK90 轴密封圈抓取手爪工作原理

AOK 轴用密封圈装配工作原理



- 1、手爪 A、B 闭合、手爪移动到上料位，气口 1 通气手爪 A 手指张开，将 O 型圈撑成六边形（六边形内切圆直径大于工件轴径 3-4mm）；
- 2、已抓取密封圈手爪随机器人移动至装配端，从轴端将密封圈套入密封圈槽位置；
- 3、气孔 3 通气，Z 轴推料装置动作，密封圈从手爪 A 上的手指滑落并落入密封圈槽内，密封圈完全收到到密封圈槽内；
- 4、机器人沿工件轴向移出；

AOK 轴用密封圈装配气动原理图



传感系统 Sensor system

磁性传感器 / Magnetic Sensor (选购/Order)



型号(NO.)

NPN

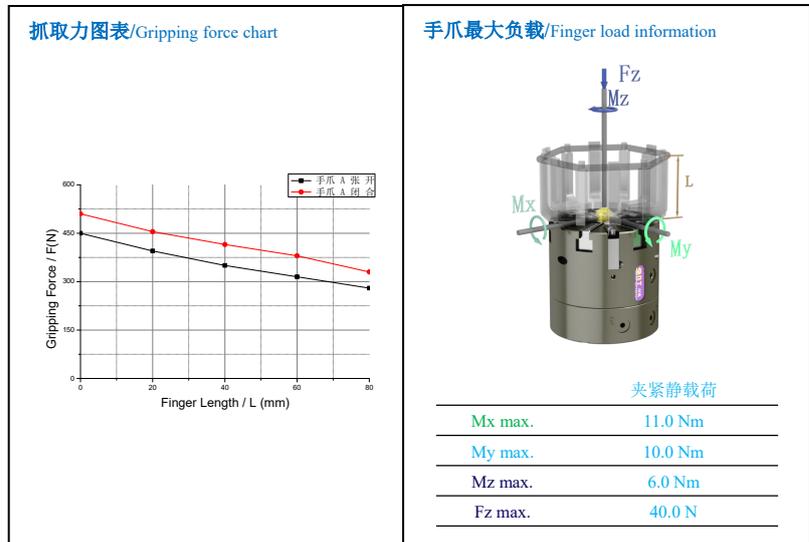
WMS-M9T

PNP

WMS-M9T

● 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80℃ 下使用/The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80℃.

AOK



❖所有参数为气压 6bar 下测试/All data measured at 6bar

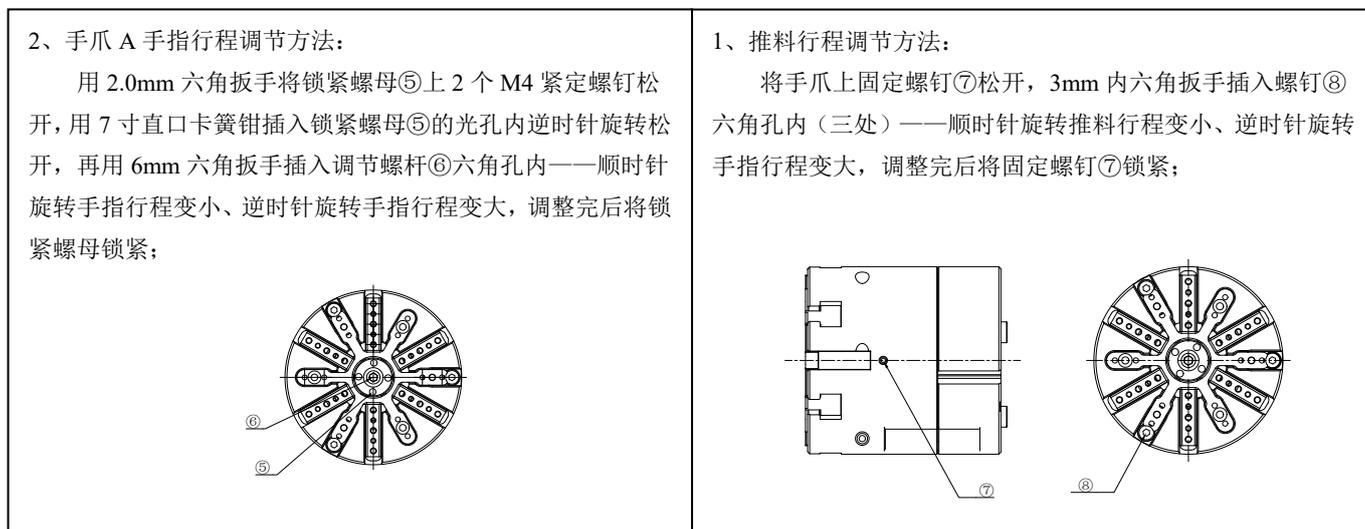
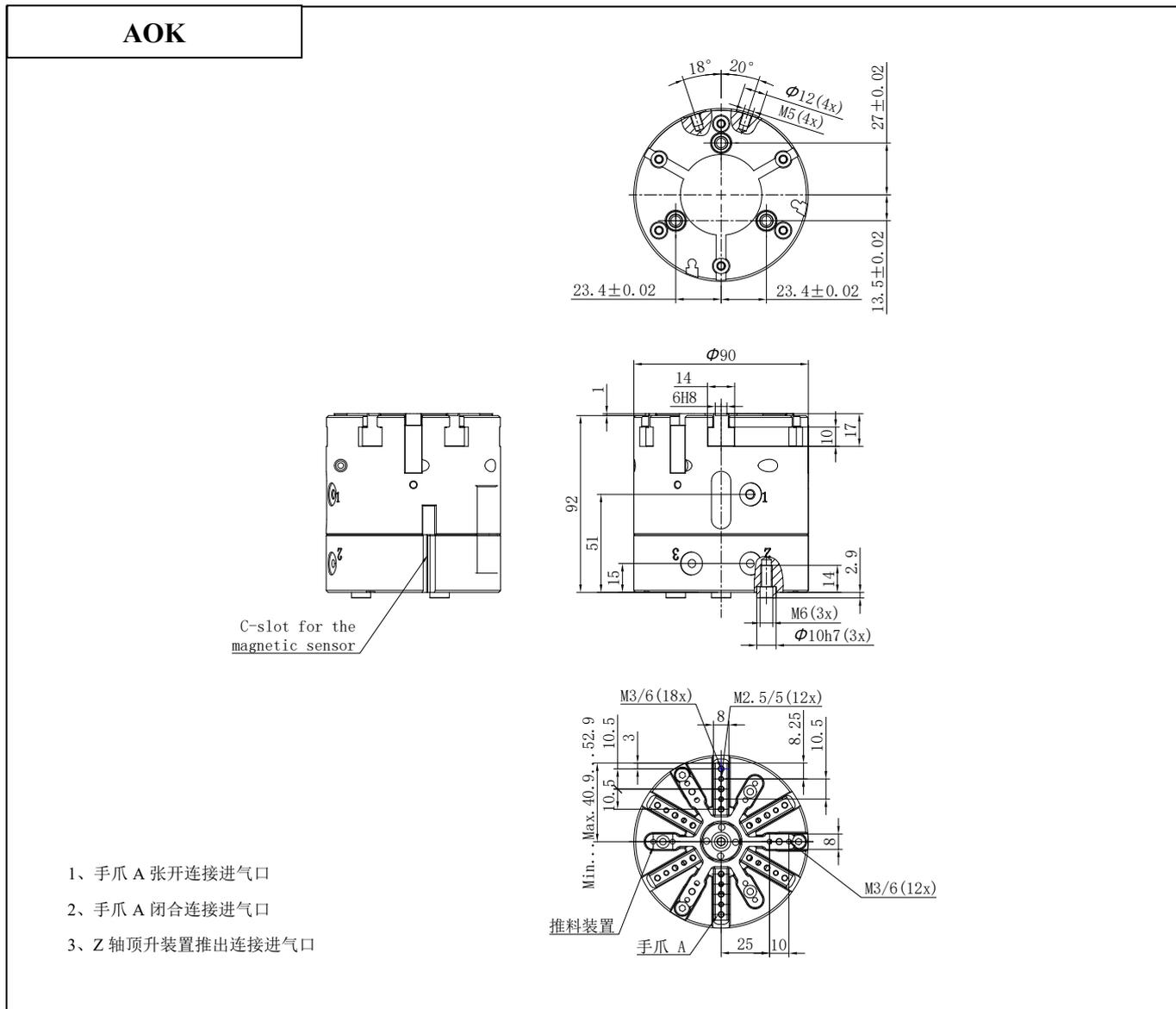
技术资料/Technical data

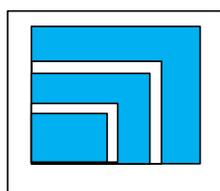
Description			AOK90
手爪 A 工作原理			双动作
手爪 A 单指最大行程	Stroke per finger	mm	12
理论夹持力-闭 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	75*P
	6bar 气压下夹持力	N	450
理论夹持力-开 Opening force	夹持力 $F=k*P$ (k:系数, P:bar)	N	85*P
	6bar 气压下夹持力	N	510
Z 轴推料装置 行程		mm	10
Z 轴推料装置原理			单动作
理论夹持力-收缩 Closing force	夹持力 $F=k*P$ (k:系数, P:bar)	N	15*P
	6bar 气压下夹持力	N	90
使用压力范围		bar	3/6
Max./Min. operating pressure			
自重		Kg	1.85
手爪 A 空气消耗量/周期		cm ³	17
Air consumption per double stroke			
Z 轴行程装置空气消耗量/周期		cm ³	4
Air consumption per double stroke			
开/闭时间		s	0.1/0.15
Closing/opening time			
允许最大手指长度		mm	80
Max. permitted finger length			
重复精度		mm	0.05
Repeat accuracy			
适应最小/最大环境温度		°C	5/80
Min./Max. ambient temperature			
IP 等级			40
IP class			

❖P: 空气压力[bar], 手指夹持工件作用点到手指安装面距离 L [mm] *重复精度: 连续动作 100 次后检测值

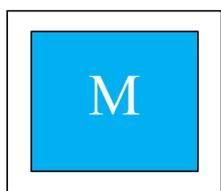
❖P: Pressure [bar], L: The distance from the point of the Finger gripping the workpiece to the finger mounting surface [mm] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

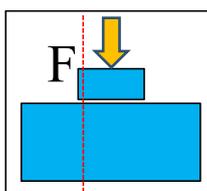




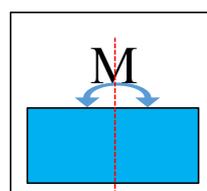
Sizes
30...63



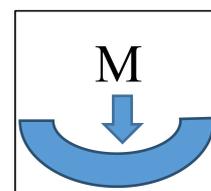
Weight
2.96...26Kg



Axial Force
1500...11800N



Torque
10.6...108Nm



Bending moment
30.8...340Nm

应用案例 / Application example



- ① SRP30 旋转模块
- ② AZN66 三爪定心手爪

- SRP30 Swivel Head
- AZN66 3-Jaw Concentric Gripper

旋转摆台 / Swivel unit

扭矩 Torque

Two dual-action pneumatic cylinders

旋转角度 90° or 180° Rotation angle 90° or 180°

Choice of 90° or 180° angle of traverse

调整角度+3°/-3° Adjustability of end positions +3°/-3°

Adjustability of end positions +3° or -3°

传感器 Sensors

电磁位置传感器

magnetic position sensors

中心孔穿线 Center Bore

内部走线中心孔

The actuator with central hole provides the relocation of wires through the swivel head by the customer.

内部走气 Hose-free direct connection

无管线走气

For hoseless transfer of compressed air. Up to 6 way integrated air connection



工作原理 / Function description

空气压力作用时，两个气动活塞沿活塞孔直线运动至另一端，通过相互啮合齿带动小齿轮转动。

When subjected to pressure, the two pneumatic pistons move their end faces in a straight line in their bores, turning the pinion by means of the serrations on their sides.

应用领域 / area of application

旋转模块适用于清洁和肮脏的环境。

For use in both clean and dirty environments, wherever pneumatic swiveling is suitable.

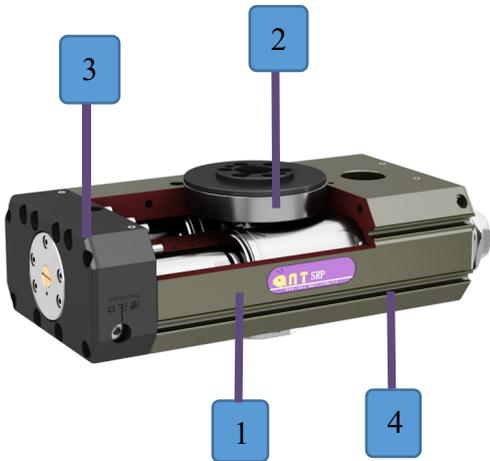
磁性开关 / Magnetic Sensor

	型号(NO.)
NPN	WMS-M9T
PNP	WMS-M9T

- 传感器成对使用
- 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80°C 下使用
- Two sensors (NO contacts) are required for each swivel unit.
- The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80°C.



剖视图 / Sectional diagram



1 本体 Housing

涂层处理的高强度铝合金
High-strength aluminum alloy, anodized

2 传动方式 Transmission Model

齿轮齿条传动方式
Rotary actuator of rack & pinion type

3 缓冲模块 The buffer module

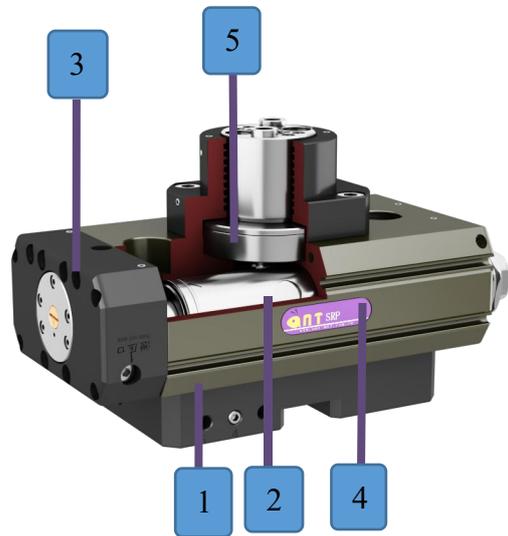
可调节的缓冲结构
Adjustable cushion structure improves both performance and accuracy

4 磁性开关安装槽 Integrated slot

安装和定位磁性开关
Mounting and positioning of magnetic field sensors

5 无管线气路 Hoseless

内部多至 6 路气
Integrated up to 6 way hoseless pneumatic feed-through

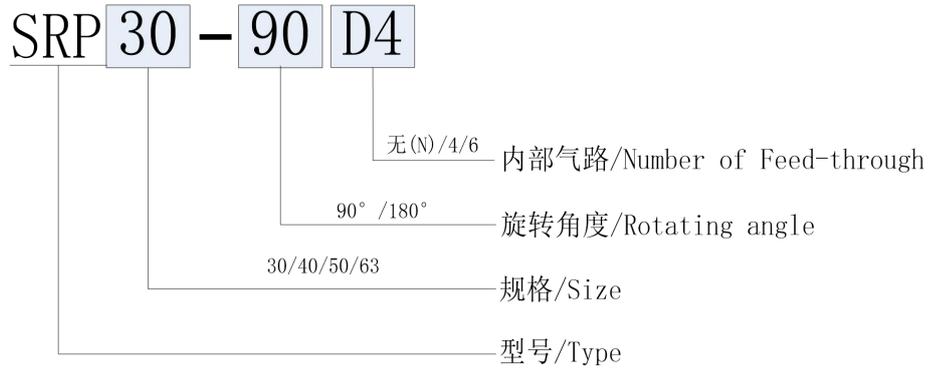


应用案例 / Application example



- ① SRP30-D6 旋转模块
SRP30-D6 Swivel Head
- ② SRH-P30 旋转模块
SRH-P30 Swivel Head
- ③ AZN66 三爪定心手爪
AZN66 3-Jaw Concentric Gripper

型号 / Order no.



- ❖30 规格 30 / Installation size 30
- ❖40 规格 40 / Installation size 40
- ❖50 规格 50 / Installation size 50
- ❖63 规格 63 / Installation size 63

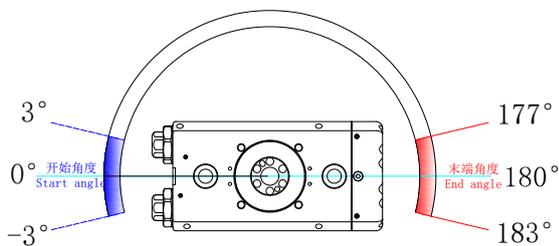
- ❖无 (N) 无内部气路 / Without Feed-through
- ❖D4 内部 4 路气 / Integrated 4 way hoseless pneumatic feed-through
- ❖D6 内部 6 路气 / Integrated 6 way hoseless pneumatic feed-through

- ❖90 调整旋转角度 90° / Swivel angle 90°
- ❖90D4 内部 4 路气 / Integrated 4 way hoseless pneumatic feed-through
- ❖90D6 内部 6 路气 / Integrated 6 way hoseless pneumatic feed-through

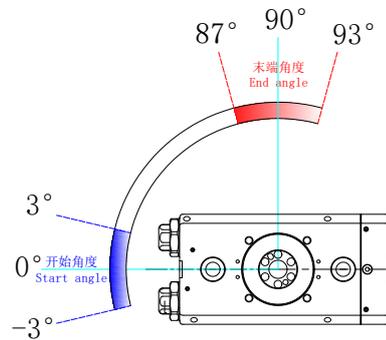
- ❖180 调整旋转角度 0~180° / Swivel angle 0~180°adjustable
- ❖180D4 内部 4 路气 / Integrated 4 way hoseless pneumatic feed-through
- ❖180D6 内部 6 路气 / Integrated 4 way hoseless pneumatic feed-through

旋转模块终止位调整 / End stop adjustability of the Swivel unit

180°旋转模块 / In the case 180° units



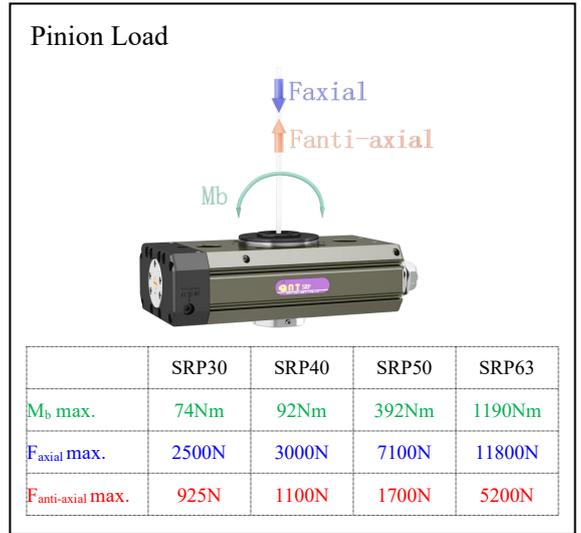
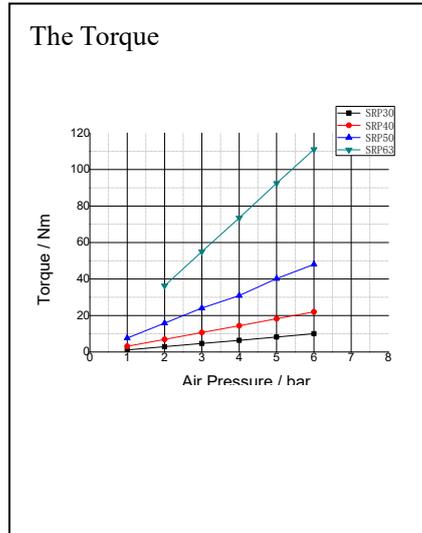
90°旋转模块 / In the case 90° units



 开始端调整角度 Adjustment range of start angle

 末端调整角度 Adjustment range of end angle

SRP



❖所有参数为气压 6bar 下测试/All data measured at 6bar

技术资料 Technical data

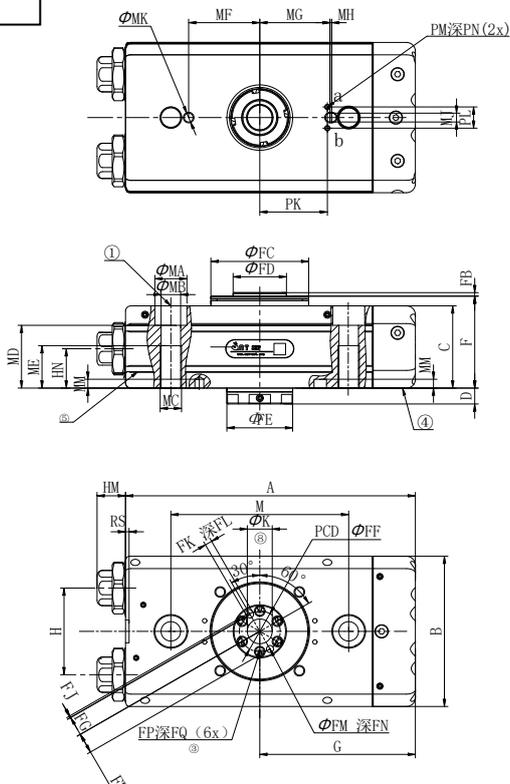
Description		SRP30-90	SRP30-180	SRP40-90	SRP40-180	SRP50-90	SRP50-180	SRP63-90	SRP63-180	
扭矩 Torque	旋转扭矩 $T=k*P$ (k:系数, P:bar) [Nm]	1.76*P	1.76*P	3.76*P	3.76*P	8.25*P	8.25*P	18*P	18*P	
	6bar 气压下旋转扭矩 [Nm]	10.5	10.5	22	22	49.5	49.5	108	108	
旋转角度 Rotating angle	[°]	90	180	90	180	90	180	90	180	
调整角度 Adjustability of end positions	[°]					3.0				
IP 等级 IP class						64				
自重 Self weight	[Kg]	2.4	2.4	4.36	4.36	9.1	9.1	26	26	
旋转时间 Swiveling time with middle attached load	[s]	1.0	1.2	1.2	1.5	1.6	1.8	1.9	2.1	
使用压力 Nominal pressure	[bar]					6				
最大使用压力 Maximum pressure	[bar]					8				
最小使用压力 Minimum pressure	[bar]	3	3	3	3	3	3	4.5	4.5	
空气消耗量 Air consumption per double stroke	[cm ³]	196	196	322	322	560	560	990	990	
适应最小/最大环境温度 Min./max. ambient temperature	[°C]					5~60				
重复精度 Repeat accuracy	[°]	0.05	0.05	0.07	0.07	0.07	0.07	0.1	0.1	
缓冲装置 Buffering mode		液压缓冲器/Hydraulic damper								

❖P: 空气压力[bar] *重复精度: 连续动作 100 次后检测值

❖P: Pressure[bar] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

SRP

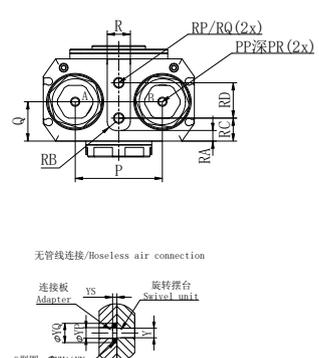


① 旋转模块连接
③ 附件连接
④ 缓冲器
⑤ 磁性开关安装槽

A、a 顺时针旋转进气口
B、b 逆时针旋转进气口

A、a Main/direct connection, clockwise rotary unit
B、b Main/direct connection, anti-clockwise rotary unit

Fixing for swivel unit
Attachment connecting
Absorber shock
Slot for magnetic field sensor



无管线连接/Boseless air connection

连接板 Adapter
旋转平台 Swivel unit

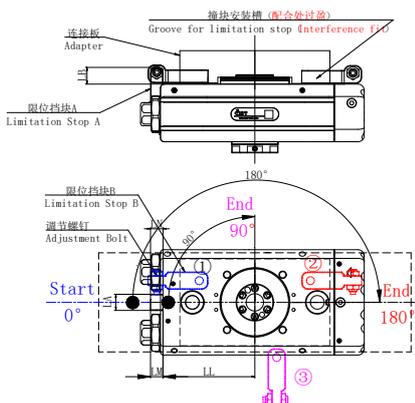
① 10°
② 15°
③ 20°
④ 25°
⑤ 30°
⑥ 35°
⑦ 40°
⑧ 45°
⑨ 50°
⑩ 55°
⑪ 60°
⑫ 65°
⑬ 70°
⑭ 75°
⑮ 80°
⑯ 85°
⑰ 90°

型号	Y	YP	YQ	YS	YM	YM
SRP 30	M3	3	5.4	0.6	3	1
SRP 40	M4	4	7.4	1.1	4	1.5
SRP 50	M5	4	7.4	1.1	4	1.5
SRP 63	M6	6	9.4	1.1	6	1.5

型号	A	B	C	D	F	FB	FC	FD	FE	FF	FG	FH	FJ	FK	FL	FM	FN	FP	FQ	G	H	HM	HN	K	M	MA	MB
SRP30	163	85	46.5	10	52	2	55	30h7	37	23	11	11.5±0.02	1	4H7	4	4H7	4	M6	10	87.5	49	16	22.3	14	100	18	10.3
SRP40	192	115	57	10	63.5	2.5	68	40h7	42	30	14	15±0.02	2	5H7	5	5H7	5	M8	14	102	60	17	26	18	120	20	12.3
SRP50	262	145	70	13	77	2.5	85	52h7	55	41	19.5	20.5±0.02	2	8H7	8	8H7	8	M10	15	137	82	20.4	31	25	150	24	14.3
SRP63	402	180	96	17	104.5	4	110	80h7	80	63	30.5	31.5±0.02	2	10H7	10	10H7	10	M12	24	212	100	20	48	30	220	33	21

型号	MC	MD	ME	MF	MG	MH	MJ	MK	MM	P	PL	PK	PM	PN	PP	PR	Q	R	RA	RB	RC	RD	RP	RQ	RS
SRP30	M12	33.5	24	40±0.02	39.5	1	5H7	5H7	5	49	12	38	M3	3	M5	6	22.3	13±0.01	6	R5	13	20	M6	8	2
SRP40	M14	44	28	47±0.02	46	2	6H7	6H7	6	60	14	48	M4	4	G1/8	7	26	16±0.01	7.5	R5	17.5	24	M8	12	2.5
SRP50	M16	55	25	60±0.02	59	2	8H7	8H7	8	82	18	60	M5	4	G1/8	7	32	20±0.01	8	R5	18	30	M10	15	5
SRP63	M24	71	48	90±0.02	89	2	12H7	12H7	12	100	25	80	M6	6	G1/8	7	48	25±0.01	—	R12.5	56	25	M12	15	38

外部限位 / External Limit Types



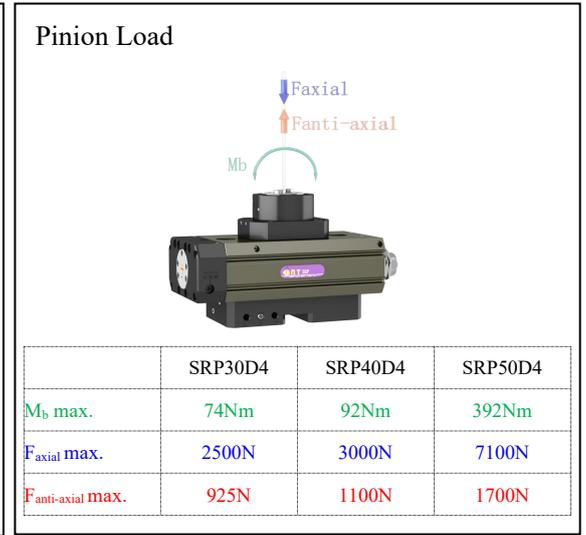
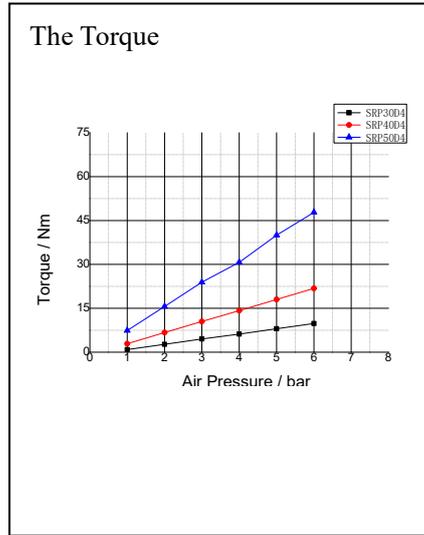
限位块 / Limited Stopper (选购/Order)

订购号 (Order No)	SRP30	SRP40	SRP50	SRP63
限位块 A	LS-3N-A300	LS-4N-A400	LS-5N-A500	LS-6N-A630
限位块 B	LS-3N-B300	LS-4N-B400	LS-5N-B500	LS-6N-B630

❖限位块成对使用，180° (①、②) 和 90° (①、③)
❖Two Limited Stoppers are required for each swivel.180° (①、②) or 90° (①、③)

型号	LA	LB	LL	LM
SRP 30	13	13.5	73.5	10
SRP 40	16	15.5	87.5	12
SRP 50	20	18	107.5	15
SRP 63	25	24.5	152	18

SRP-D4



❖所有参数为气压 6bar 下测试/All data measured at 6bar

技术资料 Technical data

Description		SRP30-90D4	SRP30-180D4	SRP40-90D4	SRP40-180D4	SRP50-90D4	SRP50-180D4
扭矩 Torque	旋转扭矩 $T=k*P$ (k:系数, P:bar) [Nm]	1.76*P	1.76*P	3.76*P	3.76*P	8.25*P	8.25*P
	6bar 气压下旋转扭矩	10.5	10.5	22	22	49.5	49.5
旋转角度 Rotating angle	[°]	90	180	90	180	90	180
调整角度 Adjustability of end positions	[°]			3.0			
直连供气口 No.of fluid feed-throughs				4			
IP 等级 IP class				64			
自重 Self weight	[Kg]	2.7	2.7	5.69	5.69	11.37	11.37
旋转时间 Swiveling time with middle attached load	[s]	1.5	1.5	1.8	1.8	2	2
使用压力 Nominal pressure	[bar]			6			
最大使用压力 Maximum pressure	[bar]			8			
最小使用压力 Minimum pressure	[bar]			3			
空气消耗量 Air consumption per double stroke	[cm ³]	196	196	322	322	560	560
适应最小/最大环境温度 Min./max. ambient temperature	[°C]			5~60			
重复精度 Repeat accuracy	[°]	0.05	0.05	0.07	0.07	0.07	0.07
缓冲装置 Buffering mode				液压缓冲器/Hydraulic damper			

❖P: 空气压力[bar] *重复精度: 连续动作 100 次后检测值

❖P: Pressure[bar] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

SRP-D4

A、a 顺时针旋转进气口 A、a Main/direct connection, clockwise rotary unit

B、b 逆时针旋转进气口 B、b Main/direct connection, anti-clockwise rotary unit

① 旋转模块连接 Fixing for swivel unit

③ 附件连接 Attachment connecting

④ 缓冲器 Absorber shock

⑤ 磁性开关安装槽 Slot for magnetic field sensor

无线线连接/Hoseless air connection

无线线连接					
型号	Y	YP	YQ	YS	YM
SRP30D4	2	3	5.4	0.6	3
SRP40D4	3.3	4	7.4	1.1	4
SRP50D4	4.2	4	7.4	1.1	4

型号	A	B	C	D	DA	DB	DC	DD	DE	DF	DG	DH	DK	DL	DM	E	F	FB	FC	FD	G	H	HM	HN	J	JA	JB	JC
SRP30D4	163	85	68.5	22	118	65	50	105	80±0.02	M8	45	6H7	6	20	8	85.5	104.5	1.2	51	35	87.5	49	16	44.3	24	70	58	23±0.02
SRP40D4	192	115	82	25	138	95	50	120	100±0.02	M8	45	6H7	6	25	10	100.5	125.5	1.2	67.5	45	102	60	17	51	30	86	72	32±0.02
SRP50D4	262	145	100	30	180	100	80	150	125±0.02	M10	68	8H7	10	25	8	120	145	1.2	84	60.2	137	82	20.4	61	40	108	90	41±0.02

型号	JE	JD	JF	JM	JN	K	P	PA	PB	PD	PE	PF	PG	PP	PR	Q	R	RA	RB	RC	RD	RP	RQ	RS
SRP30D4	10h7	M6	2.8	75°	45°	10	49	40	88	6	M5	7	8	M5	6	22.3	13±0.01	28	R5	35	20	M6	8	2
SRP40D4	12h7	M8	2.9	75°	40°	14	60	46	106	8	G1/8	7	12.5	G1/8	7	26	16±0.01	32.5	R5	42.5	24	M8	12	2.5
SRP50D4	14h7	M10	3.9	60°	35°	20	82	62	126	15	G1/8	7	15	G1/8	7	62	20±0.01	38	R5	48	30	M10	15	5

外部限位 / External Limit Types

限位块 / Limited Stopper (选购/Order)

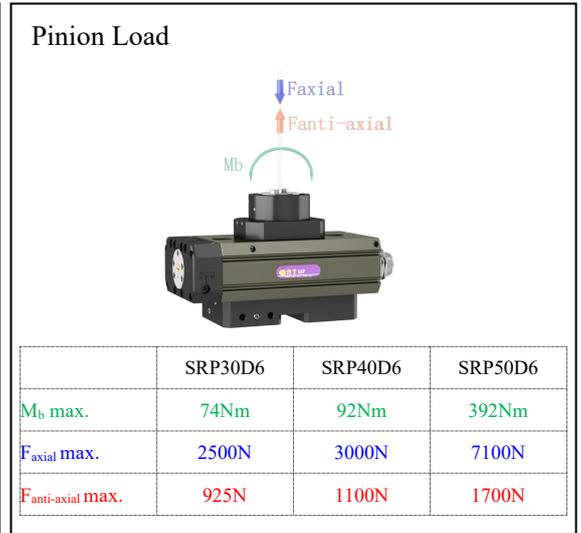
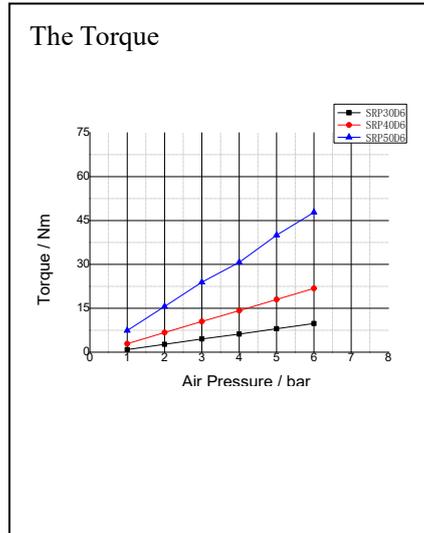
订购号 (Order No)	SRP30D4	SRP40D4	SRP50D4
限位块 A	LS-3N-A300	LS-4N-A400	LS-5N-A500
限位块 B	LS-34-B300	LS-44-B400	LS-54-B500

- ❖ 限位块成对使用，180° (①、②) 和 90° (①、③)
- ❖ Two Limited Stoppers are required for each swivel. 180° (①、②) or 90° (①、③)

型号	LA	LB	LL	LM
SRP30D4	13	13.5	73.5	10
SRP40D4	16	15.5	87.5	12
SRP50D4	20	18	107.5	15

127

SRP-D6



❖所有参数为气压 6bar 下测试/All data measured at 6bar

技术资料 Technical data

Description		SRP30-90D6	SRP30-180D6	SRP40-90D6	SRP40-180D6	SRP50-90D6	SRP50-180D6
扭矩 Torque	旋转扭矩 $T=k*P$ (k:系数, P:bar) [Nm]	1.76*P	1.76*P	3.76*P	3.76*P	8.25*P	8.25*P
	6bar 气压下旋转扭矩 [Nm]	10.5	10.5	22	22	49.5	49.5
旋转角度 Rotating angle	[°]	90	180	90	180	90	180
调整角度 Adjustability of end positions	[°]			3.0			
直连供气口 No.of fluid feed-throughs				6			
IP 等级 IP class				64			
自重 Self weight	[Kg]	2.7	2.7	5.69	5.69	11.37	11.37
旋转时间 Swiveling time with middle attached load	[s]	1.5	1.5	1.8	1.8	2	2
使用压力 Nominal pressure	[bar]			6			
最大使用压力 Maximum pressure	[bar]			8			
最小使用压力 Minimum pressure	[bar]			3			
空气消耗量 Air consumption per double stroke	[cm ³]	196	196	322	322	560	560
适应最小/最大环境温度 Min./max. ambient temperature	[°C]			5~60			
重复精度 Repeat accuracy	[°]	0.05	0.05	0.07	0.07	0.07	0.07
缓冲装置 Buffering mode				液压缓冲器/Hydraulic damper			

❖P: 空气压力[bar], *重复精度: 连续动作 100 次后检测值

❖P: Pressure[bar], *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

SRP-D6

A, a 顺时针旋转进气口 A, a Main/direct connection, clockwise rotary unit

B, b 逆时针旋转进气口 B, b Main/direct connection, anti-clockwise rotary unit

① 旋转模块连接 Fixing for swivel unit

③ 附件连接 Attachment connecting

④ 缓冲器 Absorber shock

⑤ 磁性开关安装槽 Slot for magnetic field sensor

① 旋转模块连接 Fixing for swivel unit

③ 附件连接 Attachment connecting

④ 缓冲器 Absorber shock

⑤ 磁性开关安装槽 Slot for magnetic field sensor

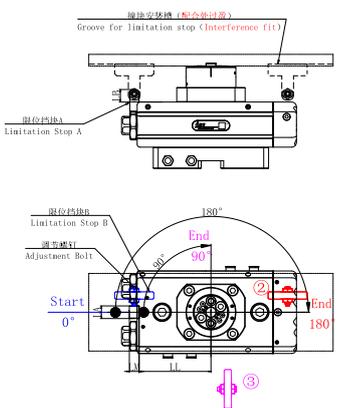
无管连接/Hoseless air connection

无管连接						
型号	Y	YP	YQ	YS	YM	YM
SRP30D6	2	3	5.4	0.6	3	1
SRP40D6	3.3	3	6	1.1	3	1.5
SR 50D6	4.2	4	7.4	1.1	4	1.5

型号	A	B	C	D	DA	DB	DC	DD	DE	DF	DG	DH	DK	DL	DM	E	F	FB	FC	FD	G	H	HM	HN	J	JA	JB	JC
SRP30D6	163	85	68.5	22	118	65	50	105	80±0.02	M8	45	6H7	6	20	8	85.5	116.5	1.2	51	35	87.5	49	16	44.3	28	70	58	23±0.02
SRP40D6	192	115	82	25	138	95	50	120	100±0.02	M8	45	6H7	6	25	10	100.5	139.5	1.2	67.5	45	102	60	17	51	36	86	72	32±0.02
SRP50D6	262	145	100	30	180	100	80	150	125±0.02	M10	68	8H7	10	25	8	120	159	1.2	84	60.2	137	82	20.4	62	45	108	91	41±0.02

型号	JD	JE	JF	JG	JM	JN	JP	K	P	PA	PB	PC	PD	PE	PF	PG	PP	PR	Q	R	RA	RB	RC	RD	RP	RQ	RS
SRP30D6	M6	10h7	2.8	14	85°	60°	35°	10	49	40	64	88	6	M5	7	8	M5	6	44.3	13±0.01	28	R5	35	20	M6	8	2
SRP40D6	M8	12h7	2.9	18	85°	60°	35°	14	60	46	76	106	8	G1/8	7	12.5	G1/8	7	51	16±0.01	32.5	R5	42.5	24	M8	12	2.5
SRP50D6	M10	14h7	3.9	24	85°	60°	35°	20	82	62	94	126	15	G1/8	7	15	G1/8	7	32	20±0.01	38	R5	48	30	M10	15	5

外部限位 / External Limit Types

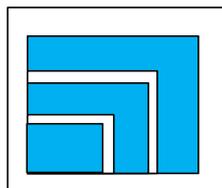


限位块 / Limited Stopper (选购/Order)

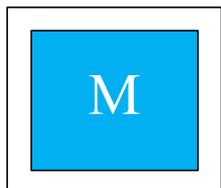
订购号 (Order No)	SRP30D6	SRP40D6	SRP50D6
限位块 A	LS-3N-A300	LS-4N-A400	LS-5N-A500
限位块 B	LS-36-B300	LS-46-B400	LS-56-B500

❖限位块成对使用, 180° (①、②) 和 90° (①、③)
❖Two Limited Stoppers are required for each swivel. 180° (①、②) or 90° (①、③)

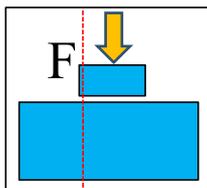
型号	LA	LB	LL	LM
SRP30D6	13	13.5	73.5	10
SRP40D6	16	15.5	87.5	12
SRP50D6	20	18	107.5	15



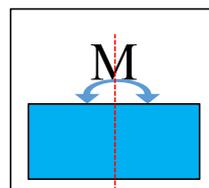
Sizes
30...50



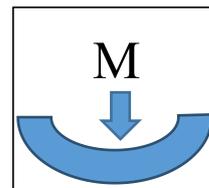
Weight
3.6...16Kg



Axial Force
1500...9000N



Torque
10.6...49.5Nm



Bending moment
30.8...340Nm

应用案例 / Application example



- ① SRH-P30 旋转模块
- ② AZN66 三爪定心夹爪

SRH-P30 Swivel Head
AZN66 3-Jaw Concentric Gripper

旋转手腕 / Swivel head

原理

- 压缩空气推动两个齿条活塞做相反运动
- 齿条驱动齿轮轴转动
- 旋转角度 180°

Principle

- Air pressure drives the piston racks in opposite directions
- the piston racks simultaneously drive the pinion gear which is attached to the flange
- Swivel angle 180°

剖视图 / Sectional diagram



1 本体 Housing

涂层处理的高强度铝合金
High-strength aluminum alloy, anodized

2 传动方式 Transmission Model

齿轮齿条传动方式
Rotary actuator of rack & pinion type

3 内部走气 Hoss-free direct connction

无管线走气
For hoseless tansfer of compressed air

4 缓冲模块 The buffer module

可调节的缓冲结构
Adjustable cushion structure improves both performance and Accuracy

5 高精度轴承 High precision bearing

高负载，高精度
High force and torque intake,high precision

6 磁性开关安装槽 Integrated slot

安装和定位磁性开关
Mounting and positioning of magnetic field sensors

7 外置限位 External Stop

可调、方便、保护内部运动机构
Adjustable、convenient、protect internal mechanism

传感系统 Sensor system

磁性开关 / Magnetic Sensor(选购/Order)

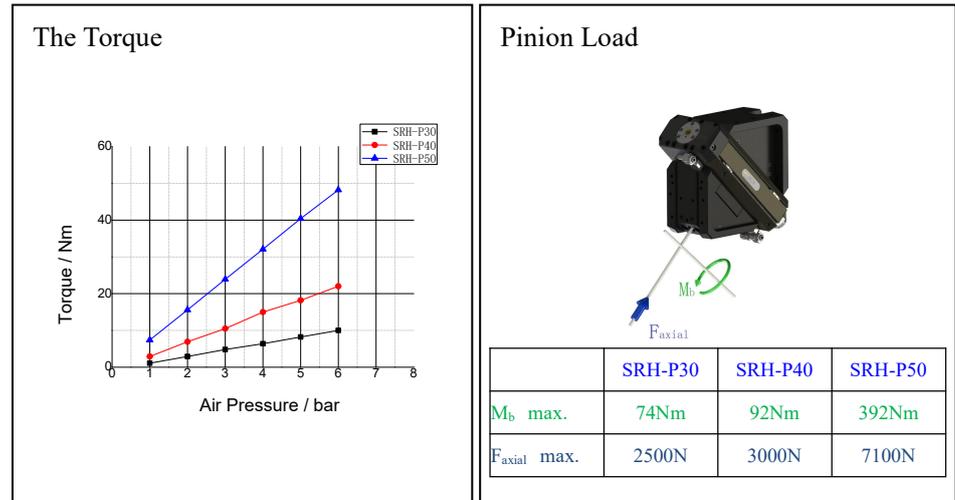


型号(NO.)

NPN	WMS-M9T
PNP	WMS-M9T

- 传感器成对使用
- 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80℃ 下使用
- Two sensors (NO contacts) are required for each swivel unit.
- The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic field and the temperature is greater than 80℃.

SRH-P



❖所有参数为气压 6bar 下测试/All data measured at 6bar

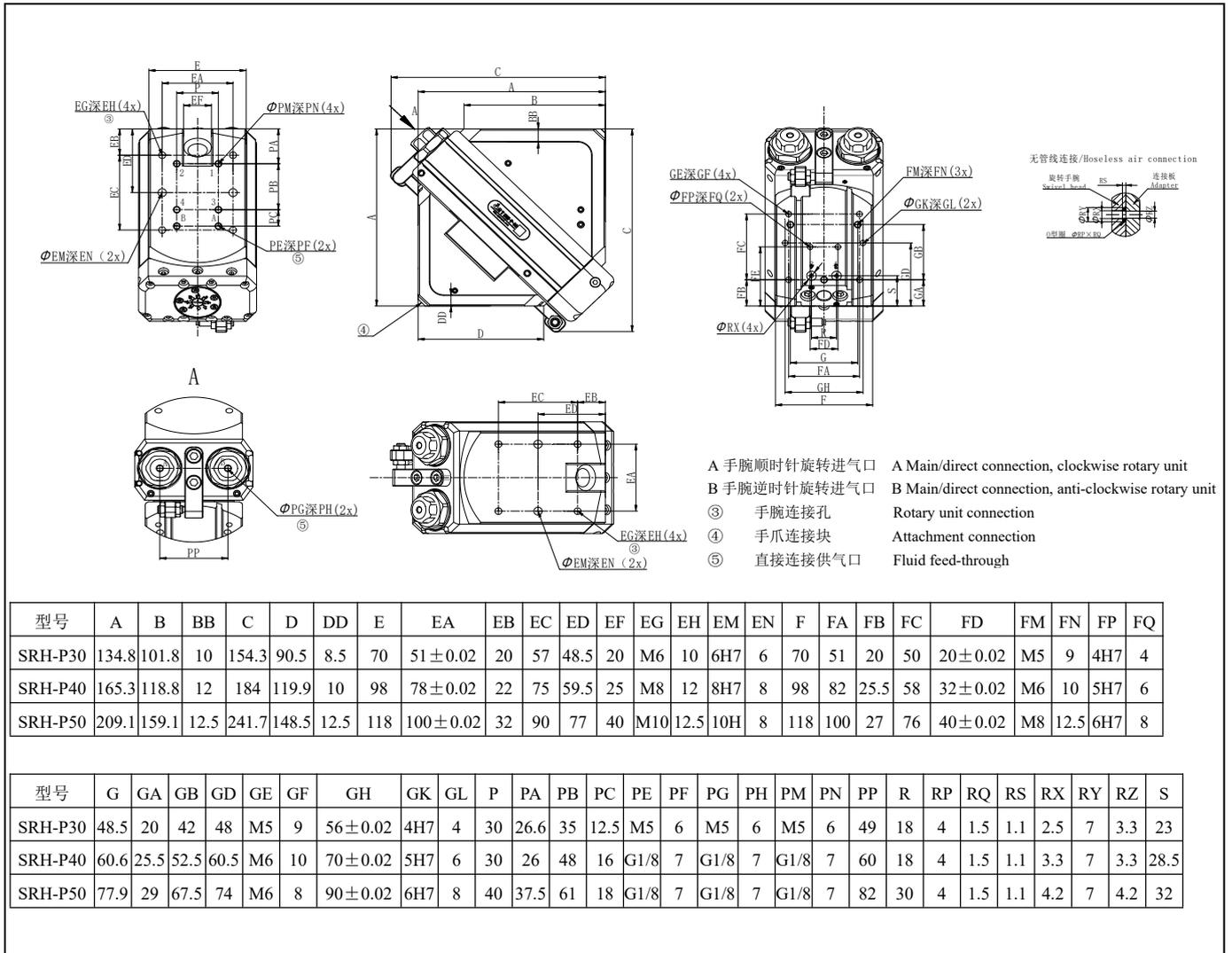
技术资料 Technical data

Description		SRH-P30	SRH-P30-E	SRH-P40	SRH-P40-E	SRH-P50	SRH-P50-E
扭矩 Torque	旋转扭矩 $T=k*P$ (k:系数, P:bar) [Nm]	1.76*P	1.76*P	3.76*P	3.76*P	8.25*P	8.25*P
	6bar 气压下旋转扭矩 [Nm]	10.5	10.5	22	22	49.5	49.5
旋转角度 Rotating angle	[°]			180			
调整角度 Adjustability of end positions	[°]			3.0			
直接接口 No. of fluid feed-through		4	无	4	无	4	无
IP 等级 IP class				64			
自重 Self weight	[Kg]	4	3.9	7.5	7.3	15.8	15
旋转时间 Swiveling time with middle attached load	[s]	0.9	0.9	1.2	1.2	1.5	1.5
使用压力 Nominal pressure	[bar]			6			
最大使用压力 Maximum pressure	[bar]			8			
最小使用压力 Minimum pressure	[bar]			3			
空气消耗量 Air consumption per double stroke	[cm ³]	196	196	322	322	560	560
适应最小/最大环境温度 Min./max. ambient temperature	[°C]			5~60			
重复精度 Repeat accuracy	[°]	0.05	0.1	0.07	0.1	0.07	0.1
缓冲装置 Buffering mode		液压缓冲器/Hydraulic damper					

↘P: 空气压力[bar] *重复精度: 连续动作 100 次后检测值

↘P: Pressure[bar] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

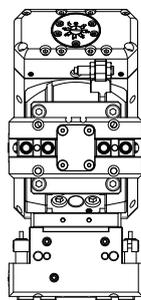
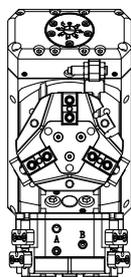
尺寸图/Dimensions



适配的手爪 / Adapter for gripper assembly

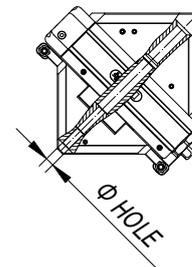
三爪

二爪

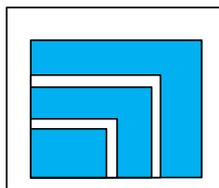


型号	三爪	二爪
SRH-P30	AZN66/AZN80	AGN80/AGN100
SRH-P40	AZN80/AZN100	AGN160
SRH-P50	AZN100/AZN125	4AGN160

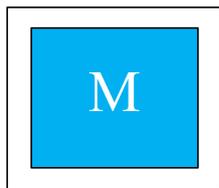
中心线孔 / Center Bore



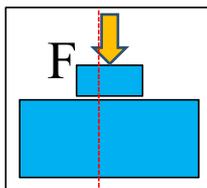
型号	中心孔 (Hole)
SRH-P30	Φ10
SRH-P30-E	Φ14
SRH-P40	Φ14
SRH-P40-E	Φ18
SRH-P50	Φ20
SRH-P50-E	Φ25



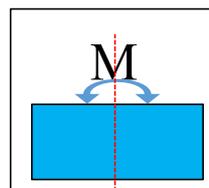
Sizes
40...80



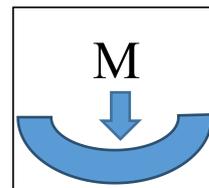
Weight
1.67...21Kg



Axial Force
1800...3400N

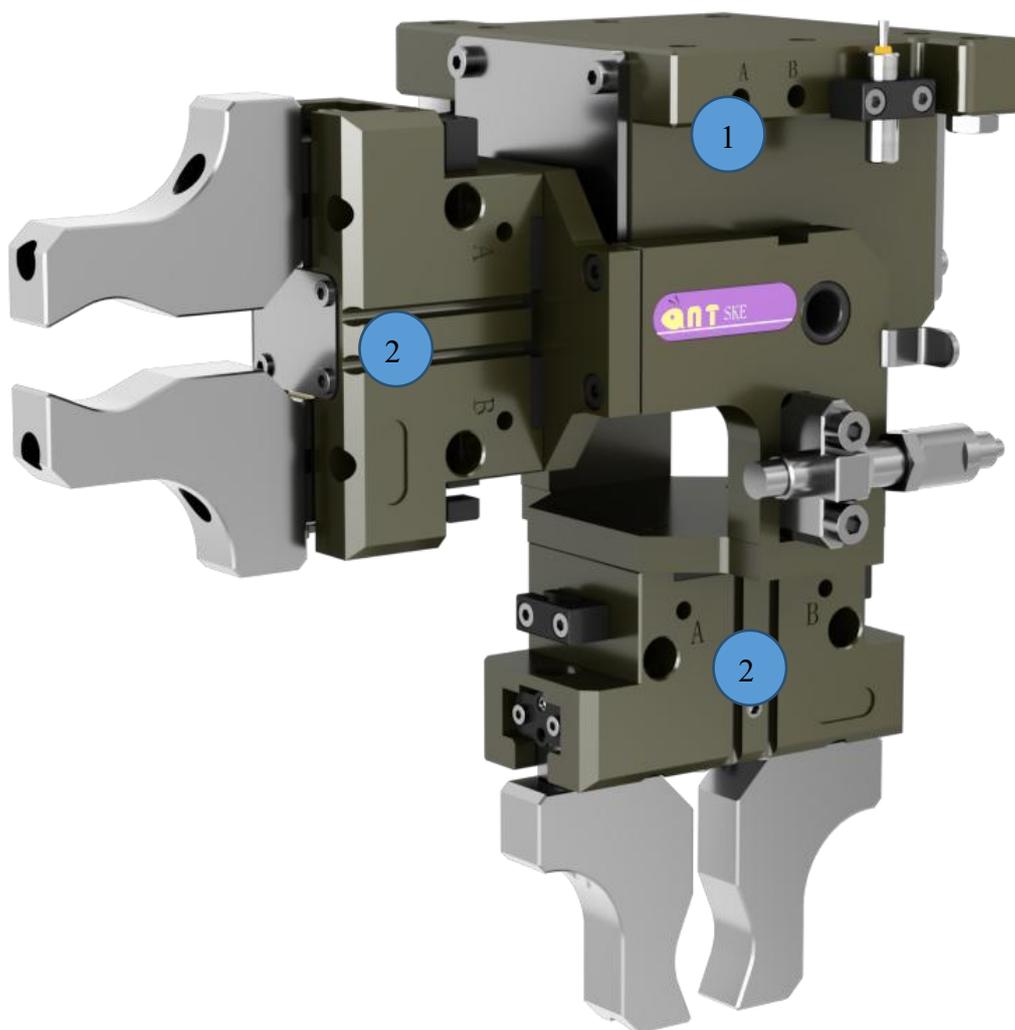


Torque
5.5...40Nm



Bending moment
90...230Nm

应用案例 / Application example



- ① SKE40 旋转手腕
- ② AGN80 二爪张角式手爪

- SKE40 Swivel Head
- AGN80 2-Finger Parallel Gripper

旋转手腕 / Swivel head

原理

- 压缩空气推动齿条活塞
- 齿条驱动齿轮轴转动
- 旋转角度 90°

Principle

- Air pressure drives the piston racks
- The piston racks simultaneously drive the pinion gear which is attached to the flange
- Swivel angle 90°

剖视图 / Sectional diagram



1 本体 Housing

涂层处理的高强度铝合金
High-strength aluminum alloy, anodized

2 传动方式 Transmission Model

齿轮齿条传动方式
Rotary actuator of rack & pinion type

3 缓冲模块 The buffer module

油压缓冲结构
Hydraulic shock absorber

4 接近开关安装位 Mounting block

安装接近开关
Intake for inductive proximity switch

传感系统 Sensor system

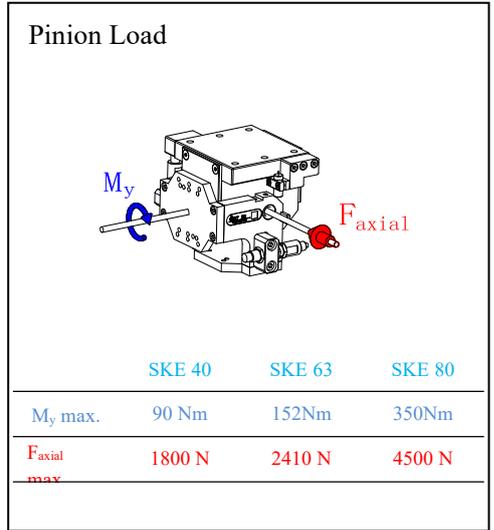
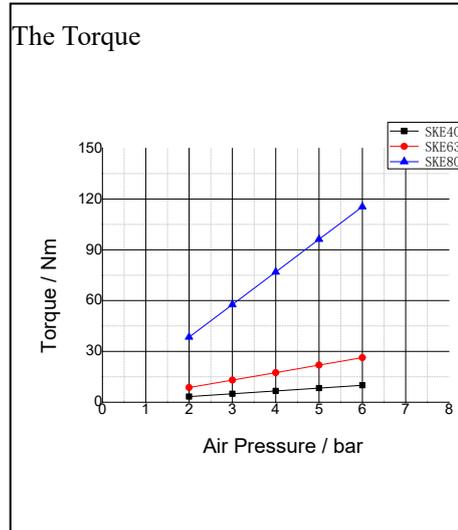


接近开关 / Proximity switch (选购/Order)

适用型号(NO.)	SKE40/SKE63/SKE80
NPN	WPS-8GM35N
PNP	WPS-8GM35P

- 传感器成对使用
- Two sensors (NO contacts) are required for each swivel unit.

SKE



❖所有参数为气压 6bar 下测试/All data measured at 6bar

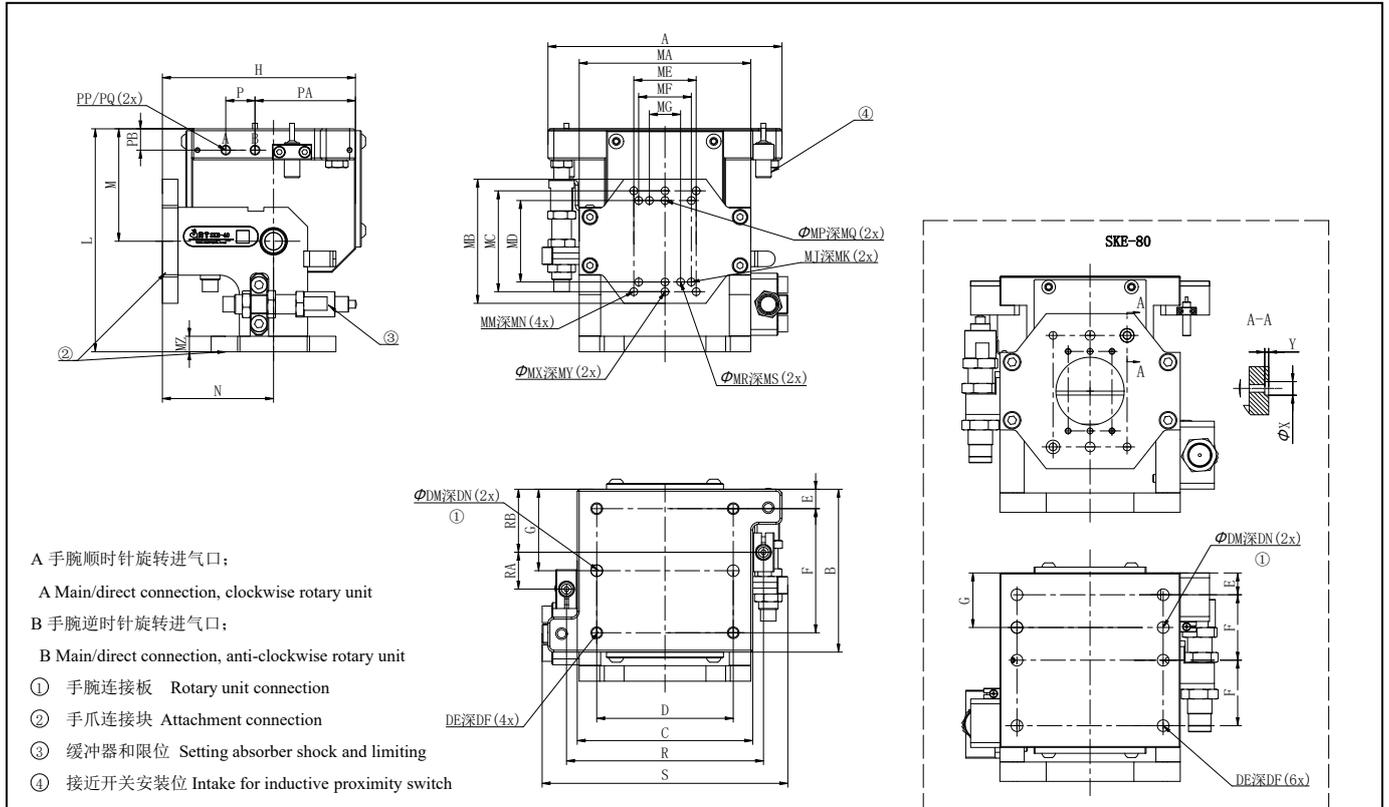
技术资料 Technical data

Description		SKE40	SKE63	SKE80
扭矩	旋转扭矩 $T=k*P$ (k:系数, P:bar) [Nm]	1.5*P	4.6*P	19.1*P
Torque	6bar 气压下旋转扭矩 [Nm]	9	27.6	114.6
旋转角度	[°]	90	90	90
Rotating angle				
调整角度	[°]	5.0	5.0	5.0
Adjustability of end positions				
IP 等级		64	64	64
IP class				
自重	[Kg]	1.97	7.2	21
Self weight				
旋转时间	[s]	1	1.5	2
Swiveling time with middle attached load				
最大使用压力	[bar]	6	6	6
Maximum pressure				
最小使用压力	[bar]	2	2	2
Minimum pressure				
空气消耗量	cm ³	112	221	498
Air consumption per double stroke				
适应最小/最大环境温度	[°C]	5~60	5~60	5~60
Min./max. ambient temperature				
重复精度	[°]	0.05	0.05	0.08
Repeat accuracy				
缓冲装置		液压缓冲器	液压缓冲器	液压缓冲器
Buffering mode		/Hydraulic damper	/Hydraulic damper	/Hydraulic damper

◇P: 空气压力[bar] *重复精度: 连续动作 100 次后检测值

◇P: Pressure[bar] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

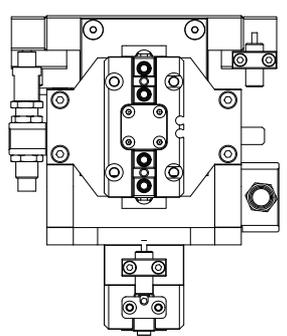
尺寸图/Dimensions



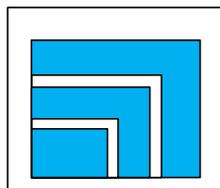
型号	A	B	C	D	DE	DF	DM	DN	E	F	G	H	L	M	MA	MB	MC	MD	ME	MF	MG	MJ	MK
SKE40	120	84	90	70±0.02	M6	12	6H7	6	10	64	42	99	115	58	88	64	52±0.02	42±0.02	32	27	16±0.02	M4	8
SKE63	179	125	135	100±0.02	M8	16	8H7	8	21.5	82	62.5	147.5	171	86	135	100	82±0.02	66±0.02	45	38	—	M5	12
SKE80	245	186	185	150±0.02	M12	24	12H	12	25.5	67.5	59.2	218	243.5	118.5	185	160	115±0.02	82±0.02	76±0.02	45	—	M6	12

型号	MM	MN	MP	MQ	MR	MS	MX	MY	MZ	N	P	PA	PB	PP	PQ	R	RA	RB	S	X	Y
SKE40	M4	8	4H7	4	4H7	4	4H7	4	8	57	15	51.5	11	M5	6	101	19	32.5	126	—	—
SKE63	M6	12	5H7	8	—	—	6H7	8	12	85	22	70.5	14	G1/8	7	146	33	46	186	—	—
SKE80	M8	16	6H7	9	—	—	10H7	10	20	125	28	108	22	G1/8	7	198	75	55.5	255	14H7	4

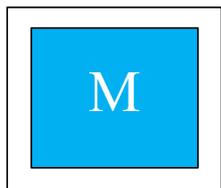
适配的手爪 / Adapter for gripper assembly



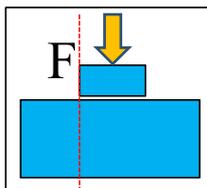
型号	手爪
SKE40	AGN66/AGN80/AWG80
SKE63	AGN100/AGN160/AWG100/AWG160
SKE80	AGN160 /AGN180/AWG160/AWG180



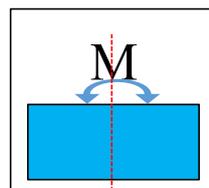
Sizes
70...160



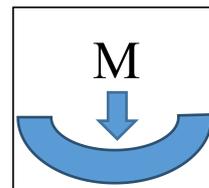
Weight
5...20Kg



Axial Force
500...2200N

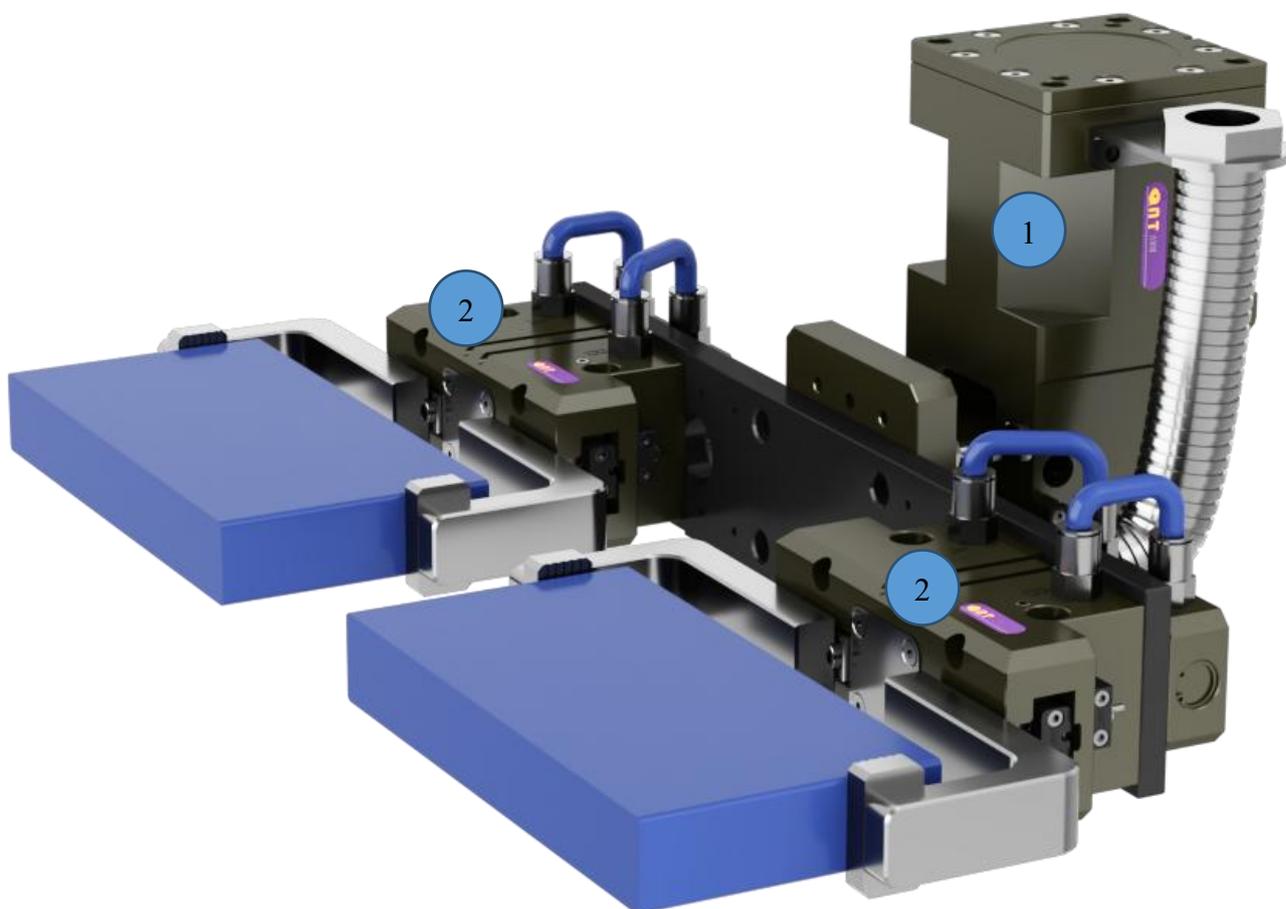


Torque
57...260Nm



Bending moment
60...240Nm

应用案例 / Application example



- ① AWM125 旋转模块
- ② AGN125 2指平动手爪

- AWM125 Swivel unit
- AGN125 2-Finger Gripper series

旋转手腕 / Swivel head

- 高起重扭矩
 - 旋转角度 90°
 - 可加装锁定装置
 - 内置滚动轴承，有效减少轴与轴孔的摩擦
 - 配置磁性传感器安装槽
-
- High lifting torque
 - Swivel angle 180°
 - Can be equipped with locking device
 - Build-in rolling bearing, effectively reduce the friction between shaft and the hole
 - Configuring sensor trenches



传感系统 Sensor system

接近开关 / Proximity switch (选购/Order)



型号(NO.)	
NPN	WPS-8GM35N
PNP	WPS-8GM35P

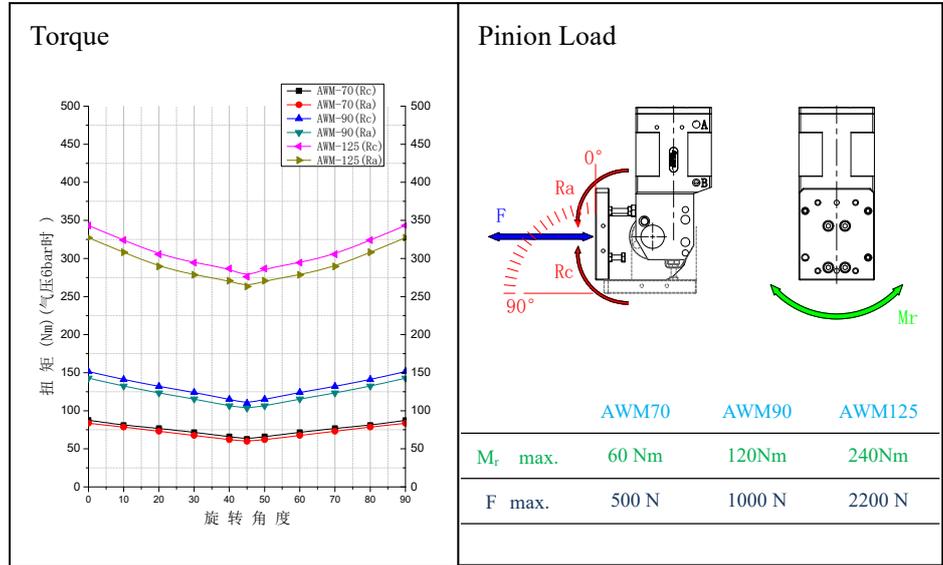
磁性开关 / Magnetic Sensor (选购/Order)



型号(NO.)	
NPN	WMS-M9T
PNP	WMS-M9T

- 传感器成对使用
- 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80℃ 下使用
- Two sensors (NO contacts) are required for each swivel unit.

AWM



技术资料 Technical data

所有参数为气压 6bar 下测试/All data measured at 6bar

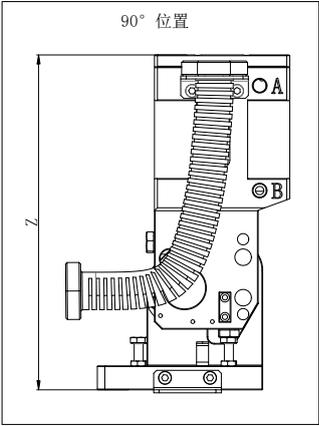
Description		AWM70	AWM90	AWM125
6bar 压力下旋转扭矩 (90° -0°) (Rc) Torque	旋转扭矩 $T=k*P$ (k:系数, P:bar) [Nm]	>10*P	>17.5*P	>45*P
	6bar 气压下旋转扭矩 [Nm]	>60	>105	>270
6bar 压力下旋转扭矩 (0° -90°) (Ra) Torque	旋转扭矩 $T=k*P$ (k:系数, P:bar) [Nm]	>9.5*P	>16.8*P	>42*P
	6bar 气压下旋转扭矩 [Nm]	>57	>100.8	>252
旋转角度 Rotating angle	[°]	90	90	90
调整角度 Adjustability of end positions	[°]	2.0	2.0	2.0
IP 等级 IP class		64	64	64
旋转时间 Swiveling time with middle attached load	[s]	1.5	2	3
自重 Self weight	[Kg]	4.5	10	20
空气消耗量 Air consumption per double stroke	[Cm³]	486	930	2282
使用压力 Nominal pressure	[bar]	6	6	6
最大使用压力 Maximum pressure	[bar]	8	8	8
最小使用压力 Minimum pressure	[bar]	3	3	3
空气连接口 Air connection		G1/8	G1/8	G1/4
适应最小/最大环境温度 Min./max. ambient temperature	[°C]	5~60	5~60	5~60
重复精度 Repeat accuracy	[°]	0.1	0.2	0.5
缓冲装置 Buffering mode		标准型: 无 缓冲型: -B		

◇P: 空气压力[bar] *重复精度: 连续动作 100 次后检测值

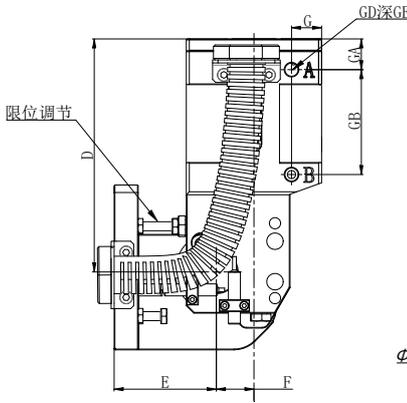
◇P: Pressure[bar] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes.

尺寸图/Dimensions

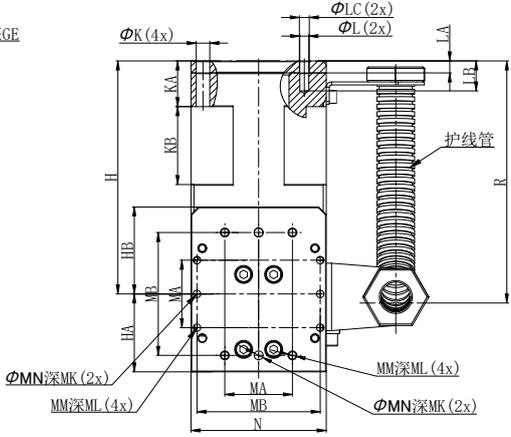
AWM



90° 位置

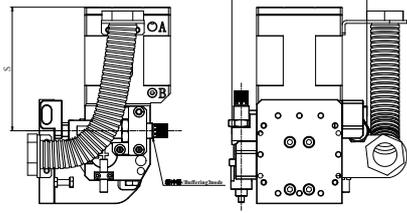
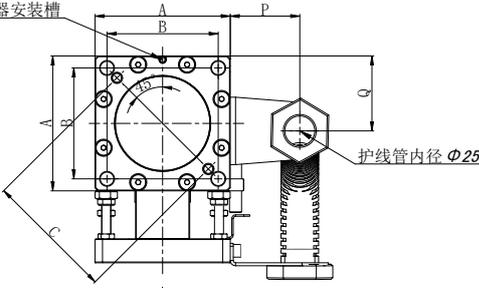


限位调节



护线管
磁性传感器安装槽

-B 缓冲装置 (选购) / Buffering mode (Order)

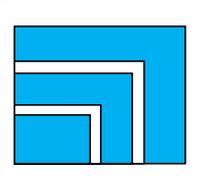
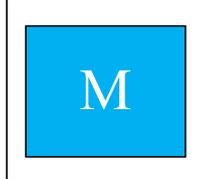
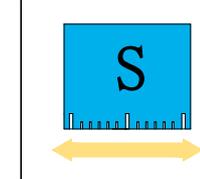
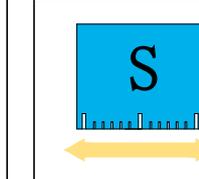
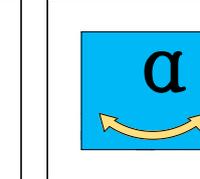
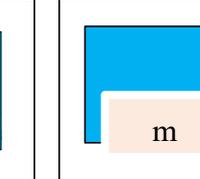



订购号 (Order No)	适配型号	S	T
HDBM70	AWM-70	130.5	150
HDBM90	AWM-90	168	172
HDBM125	AWM-125	205	245

型号	A	B	C	D	E	F	G	GA	GB	GD	GE	H	HA	HB	K	KA	KB	L	LA
AWM70	90	74	86±0.02	155.5	68	25	19	20.5	70	G1/8	10	155.5	52	58	9	30.5	52	6H7	8
AWM90	115	94	110±0.02	195	78	27.5	25	25	86	G1/8	10	195	62	63	11	37	66	8H7	10
AWM125	155	127	146±0.02	242.5	102	37.5	37	27.5	118	G1/4	12	242.5	82	78	17	47.5	88	10H7	12.5

型号	LB	LC	MA	MB	MM	ML	MN	MK	N	P	Q	R	Z
AWM70	20	6.6	45	82±0.02	M6	12	6H7	8.5	90	46	50	157.5	223.5
AWM90	25	9	56	100±0.02	M6	12	6H7	12	110	46	57.5	197.5	273
AWM125	27.5	11	76±0.02	115±0.02	M8	16	8H7	12	145	46	77.5	259	344.5

141

					
Sizes 2...50	Weight 0.25...6Kg	Compensation paths XY $\pm 2...2.5$	Compensation paths Z 4...10mm	Rotation XY / Z $\pm 3^\circ / \pm 10..12.5^\circ$	Workpiece weight 10...50Kg

应用案例 / Application example



① ACM10 精度补偿模块

ACM10 Compensation Unit

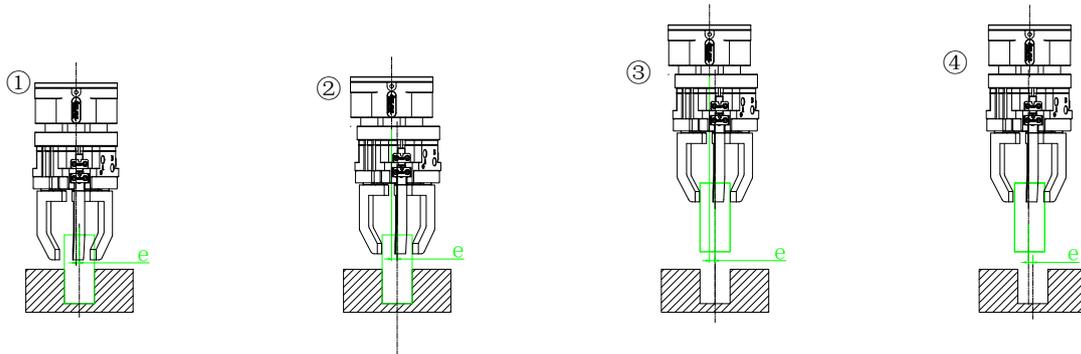
② AZN80 3指定心手爪

AZN80 3-Finger Concentric Gripper

精度补偿模块/Compensation Unit

精度补偿模块适用于装配搬运等场合，ACM 精度补偿模块具有 XYZ 方向移动补偿和 XYZ 轴方向角度旋转补偿，适用于各种精度要求高的场合，浮动模块内置弹簧，可用作压紧装置推紧工件。

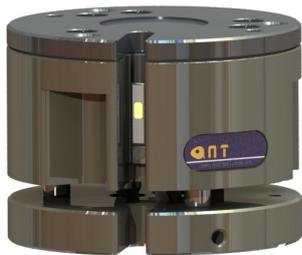
工作原理



- 1、装有补偿模块的机械抓手，移动至物料上方，工件中心线与手爪中心线不重合，偏心距 e ；
- 2、气口 B 通气，气口 A 断气，补偿装置处于浮动状态，手爪抓取工件，手爪轴心平行移动至与工件中心线处；
- 3、夹紧工件后，机械手沿 Z 轴方向运动，将工件从夹具中取出；
- 4、气口 A 通气，气口 B 断气，，抓取工件的手爪回到机械手中心位置；

传感系统 Sensor system

传感器 / Sensor (选购/Order)



型号(NO.)	ACM 2
传感器类型	磁性开关 / Magnetic Sensor
检测信号	浮动信号
NPN	WMS-M9T
PNP	WMS-M9T
适配传感器数量/QTY	1

- 磁性传感器不适用于连接具有磁性的连接板或环境为磁场环境和环境温度大于 80℃下使用
- The magnetic sensors are not suitable for connecting the magnetic plate or the environment is magnetic

传感器 / Sensor (选购/Order)

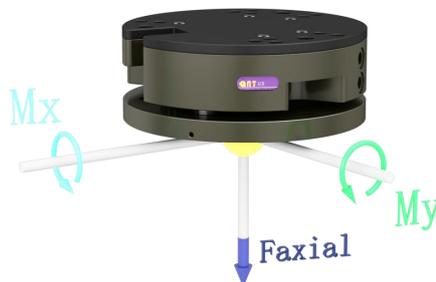


型号(NO.)	ACM10	ACM20	ACM50
传感器类型	接近传感器/Proximity sensor		
检测信号	浮动信号	浮动信号	浮动/锁紧信号
NPN	WPS-5GM30N-P	WPS-5GM30N-P	WPS-5GM30N-P
PNP	WPS-5GM30P-P	WPS-5GM30P-P	WPS-5GM30P-P
适配传感器数量			
QTY	1	1	2

ACM



静态力和力矩/Static forces and torques



	ACM2	ACM10	ACM20	ACM50
M_x max.	6.9 Nm	48.0 Nm	100.0 Nm	200Nm
M_y max.	6.9 Nm	48.0 Nm	100.0 Nm	200Nm
F _{axial} max.	200 N	2200.0 N	4000.0 N	5500N

❖所有参数为气压 6bar 下测试/All data measured at 6bar

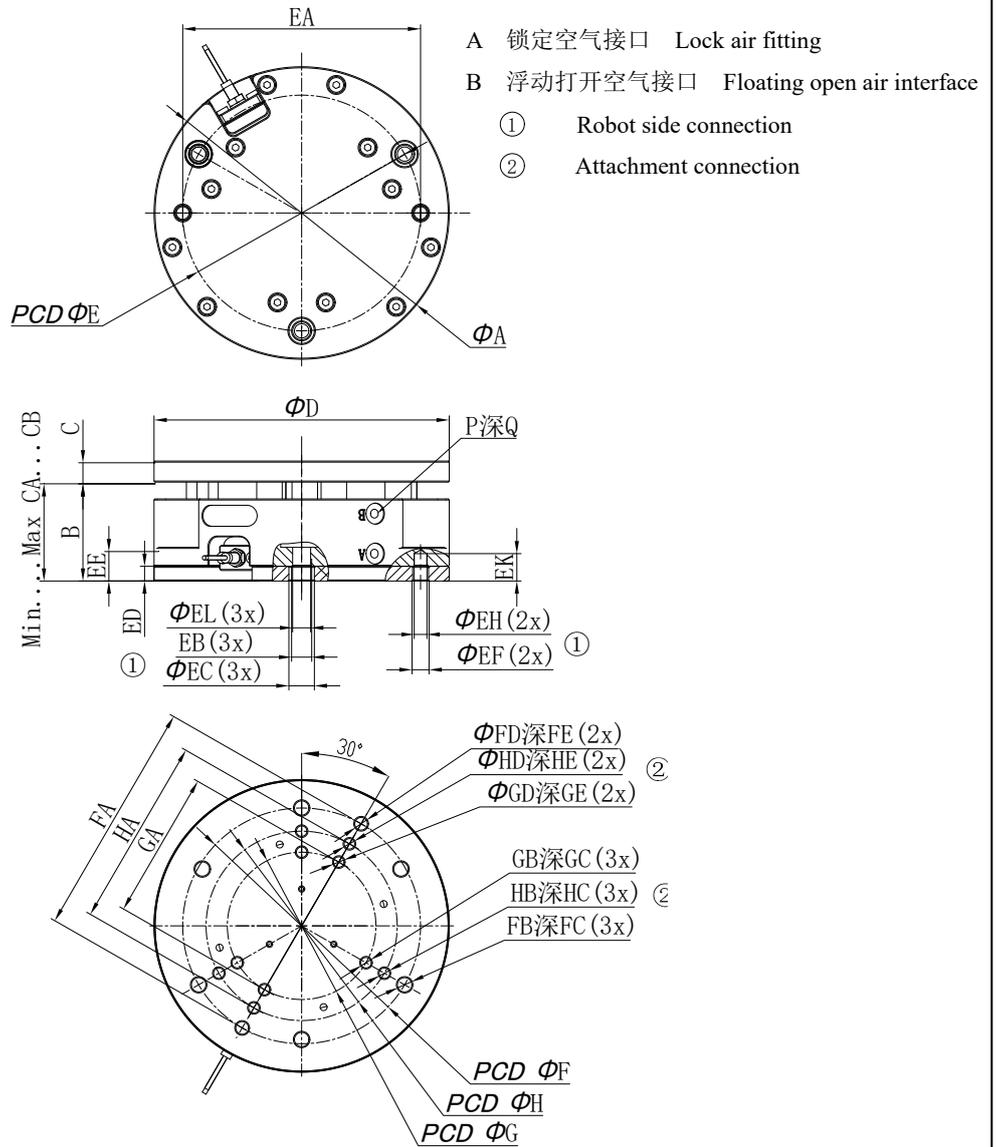
技术资料 Technical data

名称	单位	ACM2	ACM2-S	ACM10	ACM10-S	ACM20	ACM20-S	ACM50	ACM50-S
负载重量/Recommend Payload weight	[Kg]	2	2	10	10	20	20	50	50
XY 方向补偿/Compensation XY	[mm]	±2	±2	±2	±2	±2	±2	±2.5	±2.5
Z 方向补偿/Compensation Z	[mm]	4		8		8		10	
XY 方向旋转补偿角度/Rotary	[°]	±3		±3		±3		±3	
Z 轴方向角度补偿/Angular compensation	[°]	±6	无	±4	无	±2.5	无	±2	无
Z 方向最小弹簧力	无标记 [N]	4		10		20		40	
/Z-Min.spring force	配置-E [N]	40		170		350		750	
重量/Weight	[Kg]	0.25	0.27	1.2	1.4	3.1	3.4	6	6.45
使用压力/Nominal pressure	[bar]	6	6	6	6	6	6	6	6
最大使用压力/Maximum pressure	[bar]	8	8	8	8	8	8	8	8
最小使用压力/Minimum pressure	[bar]	3	3	3	3	3	3	3	3
空气消耗量/Air consumption per double	cm3	51	51	50	50	89	89	200	200
重复定位精度/Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
适应最小/最大环境温度/Min./Max.	[°C]	5~60	5~60	5~60	5~60	5~60	5~60	5~60	5~60

✧P: 空气压力[bar], *重复精度: 连续动作 100 次后检测值

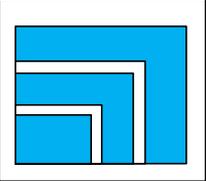
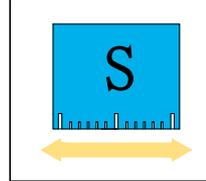
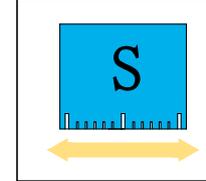
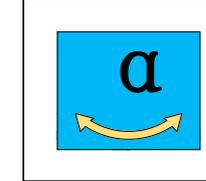
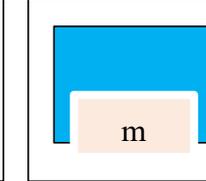
✧P: Pressure [bar], *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

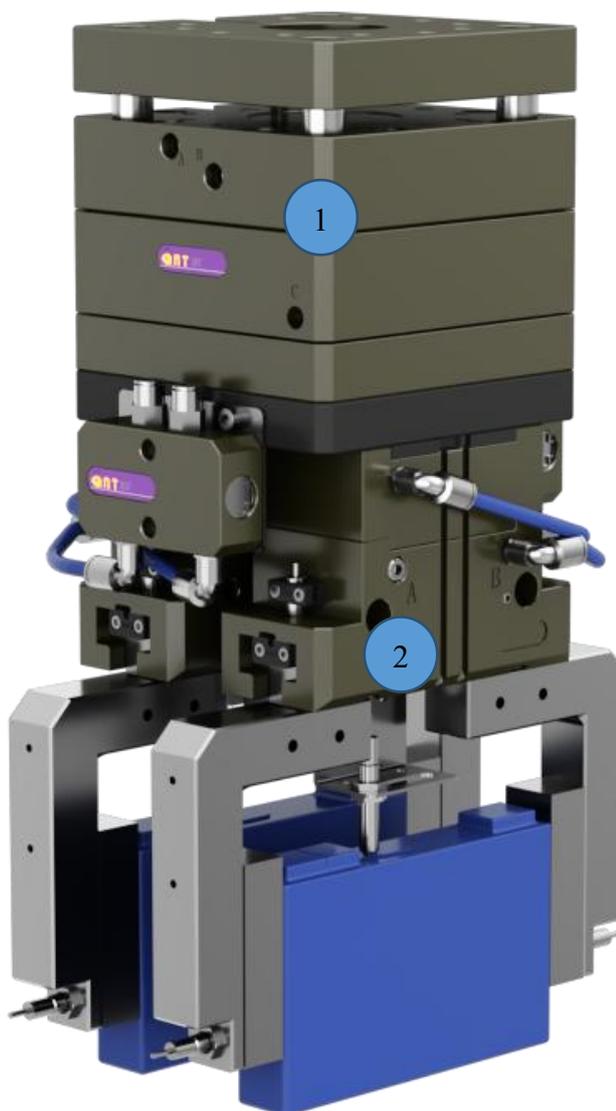


	A	B	C	CA	CB	D	E	EA	EB	EC	ED	EE	EF	EH	EK	EL	F	FA	FB	FC
ACM2	54	27.8	8	27.8	31.8	54	44	44±0.02	M4	4.5	4	10	3.5	3H7	10	—	44	44±0.02	M3	8
ACM10	96	47	10	39	47	96	70	70±0.02	M8	9	7	14	6.6	5H7	17	—	70	70±0.02	M6	10
ACM20	139	47	10	39	47	139	112	112±0.02	M10	12	7	14	8	6H7	13	8.5	112	112±0.02	M8	10
ACM50	180	57	15	47	57	180	146	146±0.02	M12	—	7	—	—	10H7	20	—	146	146±0.02	M12	7

	FD	FE	H	HA	HB	HC	HD	HE	G	GA	GB	GC	GD	GE	P	Q
ACM2	3	8	—	—	—	—	—	—	—	—	—	—	—	M5	6	
ACM10	5H7	6	56	56±0.02	M5	10	4H7	6	—	—	—	—	—	M5	6	
ACM20	6H7	10	90	90±0.02	M6	10	5H7	6	70	70±0.02	M6	10	5H7	6	M5	6
ACM50	10H7	10	—	—	—	—	—	—	—	—	—	—	—	G1/8	8	

					
Sizes 5...250	Weight 1.6...55Kg	Compensation paths XY ± 3 — ± 10 mm	Compensation paths Z ± 8 — ± 12 mm	Rotation $\pm 5^\circ$	Workpiece weight 5...250Kg

应用案例 / Application example



① AFC50-XY 精度补偿模块

AFC50-XY Compensation Unit

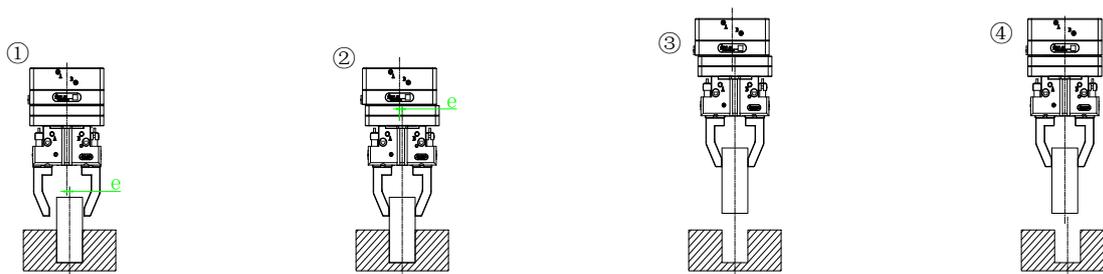
② AGN125-NC 2指平动手爪

AGN125-NC 2-Finger Gripper series

精度补偿模块/Compensation Unit

精度补偿模块适用于装配搬运等场合，AFC 精度补偿模块具有 XYZ 方向移动补偿和 Z 轴方向角度旋转补偿，适用于各种精度要求高的场合。

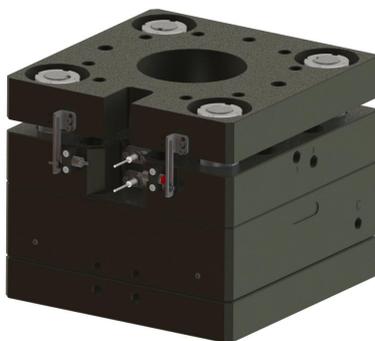
工作原理



- 1、装有补偿模块的机械抓手，移动至物料上方，工件中心线与手爪中心线不重合，偏心距 e ；
- 2、气口 B 通气，补偿装置处于浮动状态，手爪抓取工件，手爪轴心平行移动至与工件中心线处；
- 3、夹紧工件后，机械手沿 Z 轴方向运动，将工件从夹具中取出；
- 4、气孔 A 通气，抓取工件的手爪回到机械手中心位置；

传感系统 Sensor system

传感器 /Sensor (选购/Order)



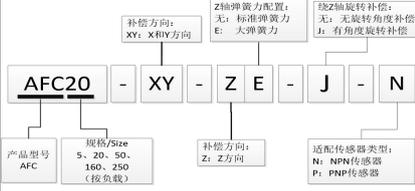
型号(NO.)	
传感器类	Z 轴补偿
型	接近传感器/Proximity sensor
NPN	WPS-8GM18N
PNP	WPS-8GM18P

规格/Spec	XY 补偿				
	5	20	50	160	250
传感器类型	接近传感器/Proximity sensor				
检测信号	浮动信号	浮动信号	浮动信号	浮动/锁紧信号	浮动/锁紧信号
NPN	WPS-4GM25N	WPS-5GM30N-P	WPS-5GM30N-P	WPS-5GM30N-P	WPS-5GM30N-P
PNP	WPS-4GM25P	WPS-5GM30P-P	WPS-5GM30P-P	WPS-5GM30P-P	WPS-5GM30P-P
适配传感器数量 QTY	1	1	1	2	2

AFC



订购号/Order



补偿方向: XY: X和Y方向
Z轴弹簧力配置: 无: 标准弹簧力 E: 大弹簧力
绕Z轴旋转补偿: 无: 无旋转角度补偿 J: 有角度旋转补偿

规格/Size: 5, 20, 50, 160, 250 (按负载)
产品型号: AFC
补偿方向: Z: Z方向
适配传感器类型: N: NPN传感器 P: PNP传感器

静态力和力矩/Static forces and torques



	AFC5	AFC20	AFC50	AFC160	AFC250
M_x max.	10 Nm	66 Nm	240 Nm	500 Nm	800 Nm
M_y max.	10 Nm	66 Nm	240 Nm	500 Nm	800 Nm
M_z max.	10 Nm	50 Nm	120 Nm	220 Nm	300 Nm
F_z max.	60 N	250 N	1000 N	2000 N	3600 N
F_{z-a} max.	500 N	1200 N	2500 N	4000 N	5000 N

技术资料 Technical data

❖所有参数为气压 6bar 下测试/All data measured at 6bar

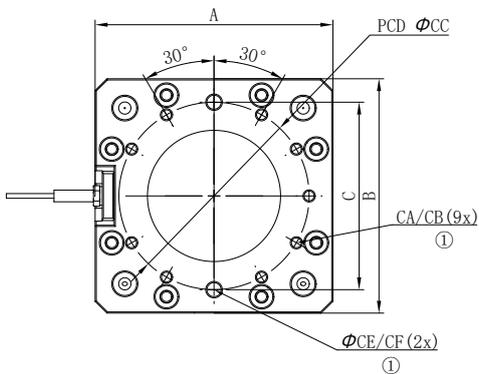
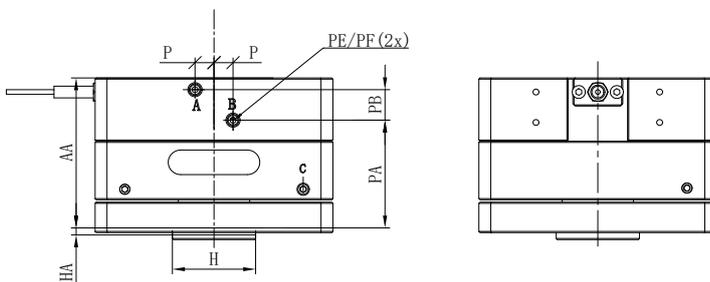
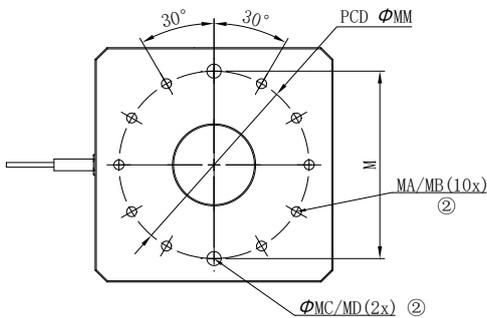
名称	单位	AFC5-XY (-Z)	AFC20-XY (-Z)	AFC50-XY (-Z)	AFC160-XY(-Z)	AFC250-XY (-Z)	
负载重量 Recommend Payload weight	[Kg]	5	20	50	160	250	
XY 方向补偿 Compensation XY	[mm]	±3	±4	±6	±8	±10	
绕 Z 轴角度补偿 Angular compensation	无标记	无角度补偿					
	配置-J [°]	±10	±10	±10	±10	±10	
锁紧力 Locking force	[N]	420	1400	2500	5000	6000	
Z 方向补偿(选购) Compensation Z (Order)	Z 方向补偿 Compensation Z	[mm]	8	8	10	12	
	Z 方向最小弹簧力 Z-Min.spring force	无标记 [N]	29	52	100	120	
	配置-E [N]	[N]	135	350	750	1000	1300
重复定位精度 Repeat accuracy	[mm]	±0.1	±0.1	±0.1	±0.1	±0.1	
重量 Weight	XY 浮动 XY compensation	[Kg]	0.85	2.7	10.5	18	43
	XY-Z 浮动 XY-Z compensation	[Kg]	1.1	3.5	14	25	55
空气消耗量 Air consumption per double stroke	XY 浮动 XY compensation	cm ³	4.2	19	33.8	194	298
	Z 浮动 Z compensation	cm ³	8.6	27.6	61	210	342
最小/大使用压力 Min....Max pressure	[bar]	3/8	3/8	3/8	3/8	3/8	
使用压力 Nominal pressure	[bar]	6	6	6	6	6	
适应最小/最大环境温度 Min./max. ambient temperature	[°C]	5~60	5~60	5~60	5~60	5~60	

⇨P: 空气压力[bar] *重复精度: 连续动作 100 次后检测值

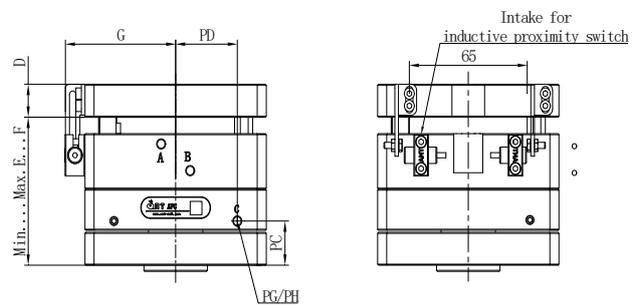
⇨P: Pressure [bar] *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

- A XY 锁定空气接口 Lock air connection
- B XY 浮动空气接口 Unlocked air connection
- C Z 浮动空气接口 Unlocked air connection
- ① Robot side connection
- ② Attachment connection

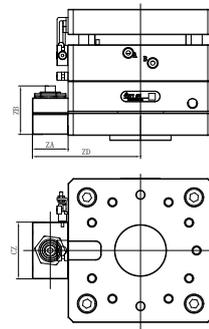


-Z 方向补偿/ Compensation Z



XY 轴向浮动行程调节装置 (选购)

XY axial compensation adjustment device (Order)

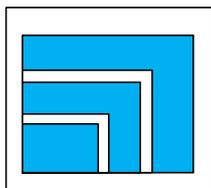


注: 适用型号 50 型号以上

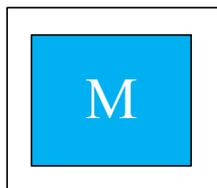
XY 轴向浮动行程调节装置					
订购号 (Order No)	适配型号	ZA	ZB	ZC	ZD
CAFC-XY-50	AFC-50	35	37.5	56	106
CAFC-XY-160	AFC-160	35	37.5	56	170
CAFC-XY-250	AFC-250	35	37.5	56	170

	A	AA	B	C	CA	CB	CC	CE	CF	H	HA	L	M	MA	MB	MC	MD	MM	P	PA	PB	PE	PF
AFC5-XY	70	52	70	45±0.02	M4	8	45	4H7	5	30h7	3	35	45±0.02	M4	8	4H7	5	45	5	38	9	M5	6
AFC20-XY	100	66	100	80±0.02	M5	10	80	6H7	6	35h7	3	45	80±0.02	M5	10	6H7	6	80	8	46	13	M5	6
AFC50-XY	142	99	142	110±0.02	M8	16	110	8H7	8	60h7	5	64.5	110±0.02	M8	16	8H7	8	110	12	71.5	10	G1/8	7
AFC160-XY	210	136	210	160±0.02	M12	24	160	12H7	16	100h7	5	111	160±0.02	M12	24	12H7	16	160	12	118	8	G1/8	7
AFC250-XY	270	153	270	200±0.02	M12	24	200	12H7	16	100h7	10	118	200±0.02	M12	24	12H7	16	200	16	126	16	G1/8	7

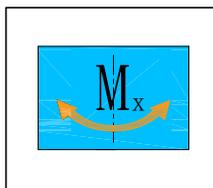
	D	E	F	G	PC	PD	PG	PH
AFC5-XY-Z	12	52	60	45.8	15	19	M5	6
AFC20-XY-Z	16	64	72	60.8	18.5	37.5	M5	6
AF 50-XY-Z	25	99	109	99.8	31.5	51	G1/8	7
AFC160-XY-Z	34	136	146	115.8	46	75	G1/8	7
AFC 250-XY-Z	35	153	165	145.8	43.5	100	G1/8	7



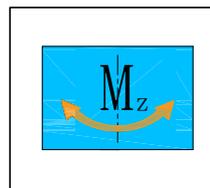
Sizes
6...300



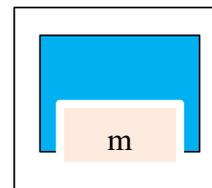
Weight
0.3...20Kg



Moment Load XY
29.4... 5390Nm

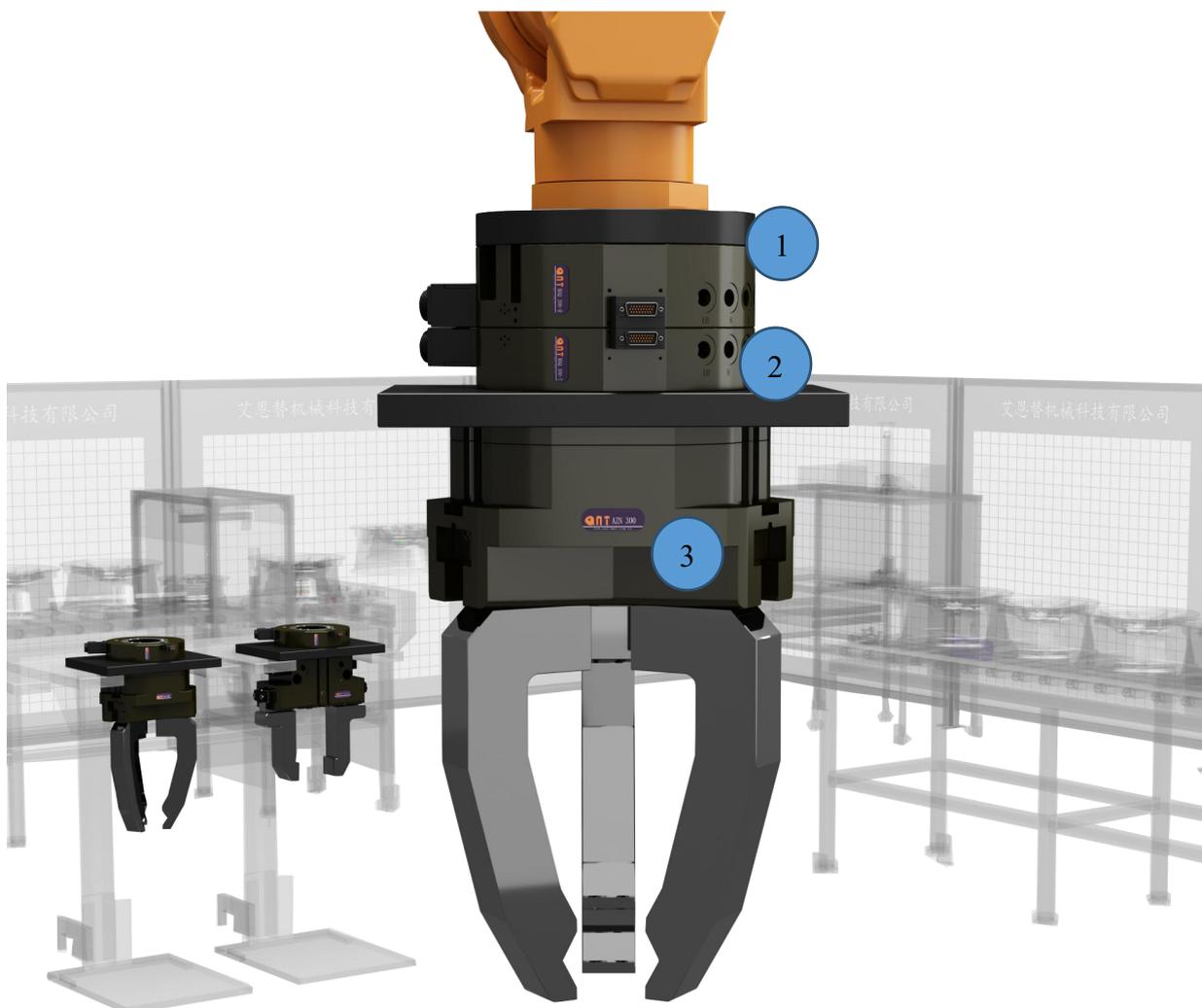


Moment Load Z
41.2... 4802Nm



Workpiece weight
6...300Kg

应用案例 / Application example



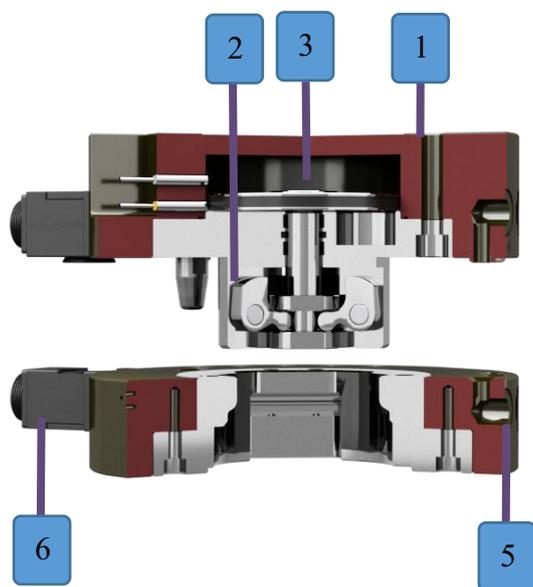
- ① MAQ300-R 机器人侧快换模块
- ② MAQ300-T 工具侧快换模块
- ③ AZN300 3指定心手爪

- MAQ300-R Robot side Quick-change Unit
- MAQ300-T Tool side Quick-change Unit
- AZN300 3-Finger Concentric Gripper

快换模块/ Quick-change Unit

快换模块通过使自动更换不同的末端执行器或外围设备，使工业自动化的应用更具柔性。快换模块有两部分组成，分别是机器人侧和工具侧：机器人侧安装在机器人手臂上，工具侧安装在末端执行器上。机器人侧和工具侧自动锁紧连接的同时可以连通不同的介质如气体、电信号、液体等。

剖视图 / Sectional diagram



MAQ-R
机器人侧

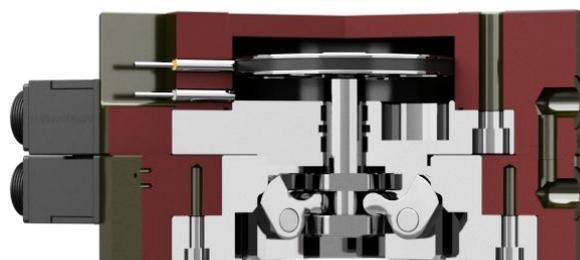
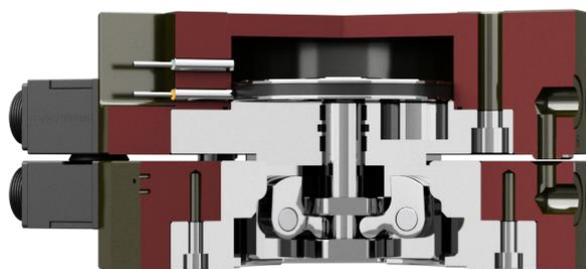
MAQ-T
工具侧

- 1 本体 Housing
涂层处理的高强度铝合金
High-strength aluminum alloy, anodized
- 2 传动方式 Transmission Model
连杆原理
Rod element design principle
- 3 驱动部分 Energy supply
圆形活塞，提供更大的夹持力
Large Circular piston: can have greater force
- 4 空气连接/Air fluid-through
内置气路
Integrated hoseless pneumatic feed-through
- 6 电信号模块/Electric feed-through module (选购/Order)
可外接电气信号模块内置气路
Integrated hoseless pneumatic feed-through

工作原理

解锁状态

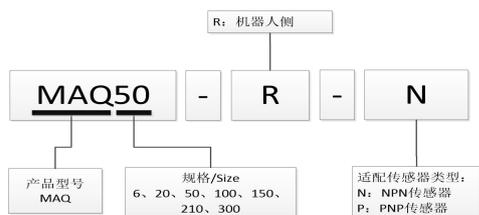
锁紧状态



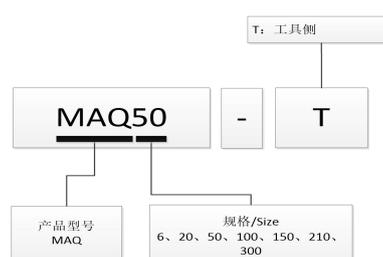
- 1、气口 U 通气，机器人侧快换侧解锁状态下插入到工具侧快换模块孔内；
- 2、气孔 U 断气、气口 L 通气，机器人侧模块气缸动作锁紧工具侧模块；

订购号/Order

机器人侧快换模块



工具侧快换模块



MAQ6



最大动态允许力矩/Max. Dynamic allowable moment

- M_x max. 29.4Nm
- M_y max. 29.4Nm
- M_z max. 41.2Nm

技术资料 Technical data

❖所有参数为气压 6bar 下测试/All data measured at 6bar

名称	单位	MAQ6-R	MAQ6-T
		Quick-change	Quick-change
建议负载重量/Recommend Payload weight	[Kg]	6	6
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	700	
重量/Weight	[Kg]	0.35	0.165
空气/NO. Of fluid-through		5	5
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±1	±1
最大允许角度偏差/Max. permissible angular offset	[°]	±2	±2
最小/最大使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

❖ 重复精度: 连续动作 100 次后检测值 *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

解锁信号检测开关(1x)
M5 (5x)
AIR PORT

⑤

L 锁紧空气接口 Lock air connection
U 解锁空气接口 Unlocked air connection

① 连接机器人 Robot side connection
② 连接附件 Attachment connection
⑤ 内部气路连接接口 Pneumatic feed-through

注: 图示检测开关注释仅用于位置及数量标注

到位置检测开关(1x)
M5 (2x)
AIR PORT

MAQ 6-R

MAQ 6-T

解锁信号检测开关/Unlocking detection switch

型号(NO.)	
NPN	WPS-5GM30N-P
PNP	WPS-5GM30P-P

到位置检测开关/Position detection switch

型号(NO.)	
NPN	WPS-5GM30N-P
PNP	WPS-5GM30P-P

MAQ20



最大动态允许力矩/Max. Dynamic allowable moment

- M_x max. 118Nm
- M_y max. 118Nm
- M_z max. 162Nm

技术资料 Technical data

❖所有参数为气压 6bar 下测试/All data measured at 6bar

名称	单位	MAQ20-R	MAQ20-T
		Quick-change	Quick-change
建议负载重量/Recommend Payload weight	[Kg]	20	20
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	2150	
重量/Weight	[Kg]	0.39	0.18
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±1.5	±1.5
最大允许角度偏差/Max. permissible angular offset	[°]	±2	±2
最小/最大使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

❖ 重复精度: 连续动作 100 次后检测值 *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

解锁信号检测开关 (1x)
 $\Phi 5H7/5$ (2x)
 5 ± 0.02
 $\Phi 75$
 60 ± 0.02
 PCD $\Phi 60$
 M5 (2x) AIR PORT
 到位信号检测开关 (1x)

M5 (10x) AIR PORT
 L 锁紧空气接口 Lock air connection
 U 解锁空气接口 Unlocked air connection
 ① 连接机器人 Robot side connection
 ② 连接附件 Attachment connection
 ⑤ 内部气路连接接口 Pneumatic feed-through
 注: 图示检测开关注释仅用于位置及数量标注

54 锁紧状态
 31
 24.2
 MAQ 20-R
 23
 6.2
 MAQ 20-T
 ①
 $\Phi 11$ (3x)
 $\Phi 6.6$ (3x)
 ②
 $\Phi 5H7/5$ (2x)
 5 ± 0.02
 60 ± 0.02
 PCD $\Phi 60$
 M5 (10x) AIR PORT
 ⑤

解锁信号检测开关/Unlocking detection switch

型号(NO.)	
NPN	WPS-5GM30N-P
PNP	WPS-5GM30P-P

到位信号检测开关/Position detection switch

型号(NO.)	
NPN	WPS-5GM30N-P
PNP	WPS-5GM30P-P

MAQ50



最大动态允许力矩/Max. Dynamic allowable moment

- M_x max. 353Nm
- M_y max. 353Nm
- M_z max. 510Nm

技术资料 Technical data

❖所有参数为气压 6bar 下测试/All data measured at 6bar

名称	单位	MAQ50-R	MAQ50-T
		Quick-change	Quick-change
建议负载重量/Recommend Payload weight	[Kg]	50	50
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	5292	
重量/Weight	[Kg]	2.1	1.36
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最小/最大使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

❖ 重复精度: 连续动作 100 次后检测值 *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

L 锁紧空气接口 Lock air connection
 U 解锁空气接口 Unlocked air connection
 ① 连接机器人 Robot side connection
 ② 连接附件 Attachment connection
 ⑤ 内部气路连接接口 Pneumatic feed-through
 注: 图示检测开关注释仅用于位置及数量标注

解锁/锁紧信号检测开关/Locking/Unlocking detection switch
 型号(NO.)
 NPN WPS-5GM30N-P
 PNP WPS-5GM30P-P

到位信号检测开关/Position detection switch
 型号(NO.)
 NPN WPS-8GM35N
 PNP WPS-8GM35P

MAQ100



最大动态允许力矩/Max. Dynamic allowable moment

- M_x max. 1610Nm
- M_y max. 1610Nm
- M_z max. 1610Nm

技术资料 Technical data

◆所有参数为气压 6bar 下测试/All data measured at 6bar

名称	单位	MAQ100-R	MAQ100-T
		Quick-change	Quick-change
建议负载重量/Recommend Payload weight	[Kg]	100	100
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	11000	
重量/Weight	[Kg]	3.25	2.9
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最小/最大使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◆ 重复精度: 连续动作 100 次后检测值 *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

在位信号检测开关(2x)
G1/8(10x) AIR PORT

锁紧信号检测开关(1x)
解锁信号检测开关(1x)

MAQ 100-R

MAQ 100-T

锁紧空气接口 Lock air connection
L
解锁空气接口 Unlocked air connection
U

① 连接机器人 Robot side connection
② 连接附件 Attachment connection
⑤ 内部气路连接接口 Pneumatic feed-through

注: 图示检测开关注释仅用于位置及数量标注

解锁/锁紧信号检测开关/Locking/Unlocking detection switch

型号(NO.)	
NPN	WPS-5GM30N-P
PNP	WPS-5GM30P-P

到位信号检测开关/Position detection switch

型号(NO.)	
NPN	WPS-8GM35N
PNP	WPS-8GM35P

MAQ150



最大动态允许力矩/Max. Dynamic allowable moment

- M_x max. 2058Nm
- M_y max. 2058Nm
- M_z max. 2058Nm

技术资料 Technical data

◆所有参数为气压 6bar 下测试/All data measured at 6bar

名称	单位	MAQ150-R	MAQ150-T
		Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	150	150
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	14700	
重量/Weight	[Kg]	6.4	5.2
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最小/最大使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◆ 重复精度: 连续动作 100 次后检测值 *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

在位信号检测开关 (2x)
锁紧信号检测开关 (1x)
解锁信号检测开关 (1x)

锁紧空气接口 Lock air connection
解锁空气接口 Unlocked air connection

① 连接机器人 Robot side connection
② 连接附件 Attachment connection
⑤ 内部气路连接接口 Pneumatic feed-through

注: 图示检测开关注释仅用于位置及数量标注

MAQ 150-R

MAQ 150-T

解锁/锁紧信号检测开关/Locking/Unlocking detection switch

型号(NO.)	
NPN	WPS-5GM30N-P
PNP	WPS-5GM30P-P

到位置信号检测开关/Position detection switch

型号(NO.)	
NPN	WPS-8GM35N
PNP	WPS-8GM35P

MAQ210



最大动态允许力矩/Max. Dynamic allowable moment



- M_x max. 3140Nm
- M_y max. 3140Nm
- M_z max. 3140Nm

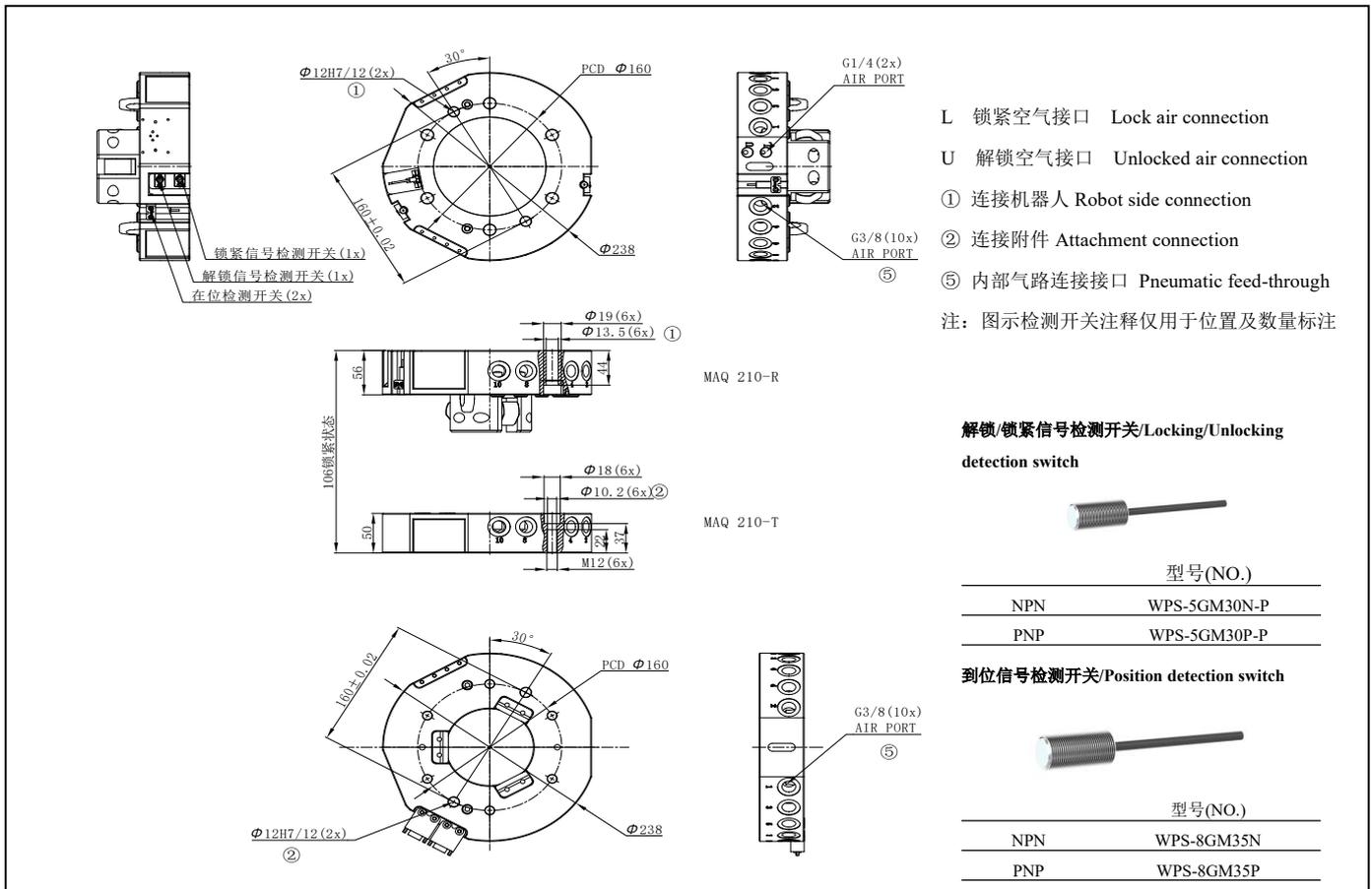
技术资料 Technical data

◆所有参数为气压 6bar 下测试/All data measured at 6bar

名称	单位	MAQ210-R	MAQ210-T
		Quick-change	Quick-change
建议负载重量/Recommend Payload weight	[Kg]	210	210
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	22500	
重量/Weight	[Kg]	9.6	7.5
空气/NO. Of fluid-through		10	10
重复定位精度/Repeat accuracy	[mm]	0.02	0.02
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2	±2
最大允许角度偏差/Max. permissible angular offset	[°]	±1	±1
最小/最大使用压力/Min./max. nominal pressure	[bar]	4/7	4/7
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60	0~60
适用湿度(不结露)/Humidity environment (no condensing)		0~95%	0~95%

◆ 重复精度: 连续动作 100 次后检测值 *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions



MAQ300



最大动态允许力矩/Max. Dynamic allowable moment

- M_x max. 5390Nm
- M_y max. 5390Nm
- M_z max. 4802Nm

技术资料 Technical data

◆所有参数为气压 6bar 下测试/All data measured at 6bar

名称	单位	MAQ300-R		MAQ300-T	
		Quick-change master	Quick-change adapter	Quick-change master	Quick-change adapter
建议负载重量/Recommend Payload weight	[Kg]	300	300	300	300
锁紧力(气压 5bar 时)/ Locking force (pressure at 5bar)	[N]	31400			
重量/Weight	[Kg]	13.5		9.8	
空气/NO. Of fluid-through		10		10	
重复定位精度/Repeat accuracy	[mm]	0.02		0.02	
X/Y 最大允许偏差/Max. permissible XY-axis offset	[mm]	±2		±2	
最大允许角度偏差/Max. permissible angular offset	[°]	±1		±1	
最小/最大使用压力/Min./max. nominal pressure	[bar]	4/7		4/7	
适用最大/最小室温 Min./max. ambient temperature	[°C]	0~60		0~60	
适用湿度(不结露)/Humidity environment (no condensing)		0~95%		0~95%	

◆ 重复精度: 连续动作 100 次后检测值 *Repeat accuracy is defined as the spread of the limit position after 100 consecutive strokes

尺寸图/Dimensions

在位信号检测开关(2x) $\phi 12H7/16(2x)$ ①

锁紧信号检测开关(1x)

解锁信号检测开关(1x)

PCD $\phi 160$

160 ± 0.02

$\phi 250$

G1/8(2x) AIR PORT

L 锁紧空气接口 Lock air connection

U 解锁空气接口 Unlocked air connection

① 连接机器人 Robot side connection

② 连接附件 Attachment connection

⑤ 内部气路连接接口 Pneumatic feed-through

注: 图示检测开关注释仅用于位置及数量标注

MAQ 300-R

MAQ 300-T

$\phi 20(10x)$ ①

$\phi 13.5(10x)$

72

19.5

58.5

IP27 锁紧状态

$\phi 18(9x)$ ②

$\phi 10.2(9x)$

55

30

74

M12(9x)

$\phi 12H7/16(2x)$ ②

PCD $\phi 180$

160 ± 0.02

$\phi 250$

G3/8(10x) AIR PORT ⑤

解锁/锁紧信号检测开关/Locking/Unlocking detection switch

型号(NO.)

NPN	WPS-5GM30N-P
PNP	WPS-5GM30P-P

到位信号检测开关/Position detection switch

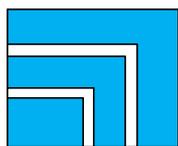
型号(NO.)

NPN	WPS-8GM35N
PNP	WPS-8GM35P

电模块					
		规格	电模块	接头	防尘板
9 芯	机器人侧	规格: DC24V / 3A 重量: 电模块 25g 接头 20g 防尘板	DMK-A-A009-R 	DB0114-DB9-R 	DMK-DC09 
	工具侧	规格: DC24V / 3A 重量: 电模块 25g 接头 20g	DMK-A-A009-T 	DB0114-DB9-T 	DMK-DC09 
15 芯	机器人侧	规格: DC24V / 3A 重量: 电模块 25g 接头 20g 防尘板	DMK-A-A015--R 	DB0124-15P-R 	DMK-DC15 
	工具侧	规格: DC24V / 3A 重量: 电模块 25g 接头 20g 防尘板	DMK-A-A015-T 	DB0124-15P-T 	DMK-DC15 
24 芯	机器人侧	规格: DC24V / 3A 重量: 电模块 210g 接头 105g 防尘板	DMK-A-A024-R 	DB0134-24P-R 	DMK-DC24-T 
	工具侧	规格: DC24V / 3A 重量: 电模块 25g 接头 203g	DMK-A-A024-T 	DB0134-24P-T 	DMK-DC24-R 

伺服电模块					
		规格	电模块	接头	防尘板
8 芯	机器人侧	规格: AC 380V / 20A 重量: 电模块 205g 接头 76g	SFMK-A-04 × 5R 	DB020-8P-R 	DMK-DC24-T 
	工具侧	规格: AC 380V / 20A 重量: 电模块 200g 接头 73g	SFMK-A-04 × 5T 	DB020-8P-T 	DMK-DC24-R 

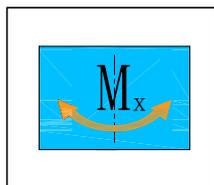
流体模块					
		气模块	液体流体模块		
机器人侧	QMK-G06-R		QUC-FM-02R		
	接口 M5		接口 PT3/8		
	6 口		2 口		
工具侧	QMK-G06-T		QUC-FM-02T		
	接口 M5		接口 PT3/8		
	6 口		2 口		



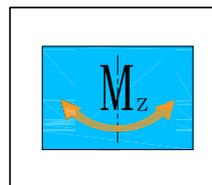
Sizes
6



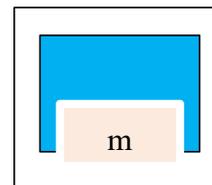
Weight
0.6Kg



Moment Load XY
8Nm

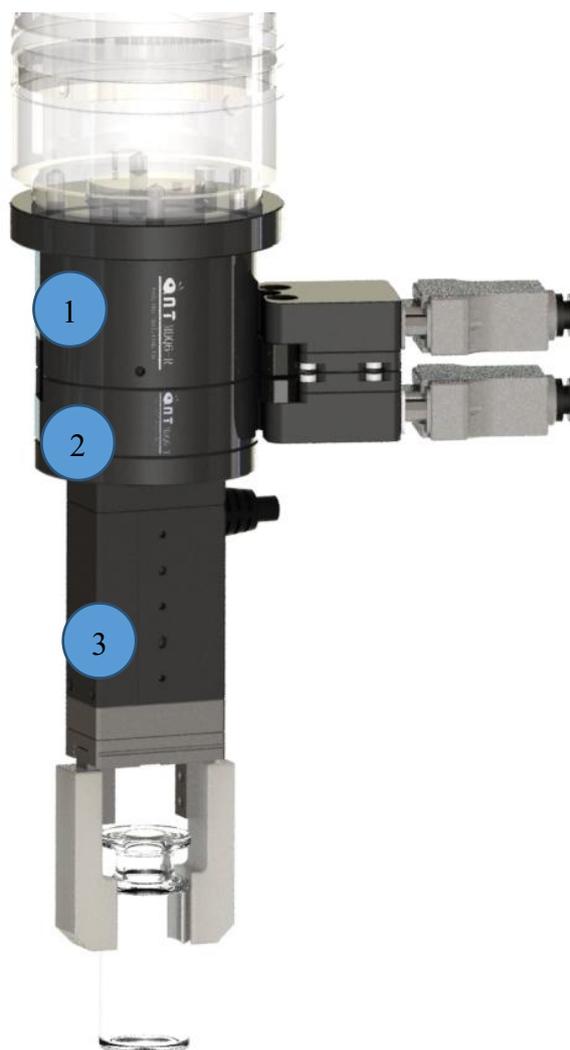


Moment Load Z
8Nm



Workpiece weight
6Kg

应用案例 / Application example



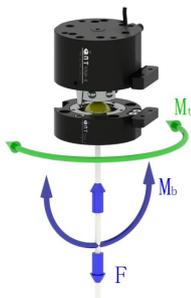
- | | | |
|-----------------|----------|--|
| ① MDQ6-R | 机器人侧快换模块 | MDQ6-R Robot side Quick-change Unit |
| ② MDQ6-T | 工具侧快换模块 | MDQ6-T Tool side Quick-change Unit |
| ③ EGB-06H-16D-1 | 电动二指手爪 | EGB-06H-16D-1 Electrical 2-finger parallel gripper |

MDQ6

技术资料



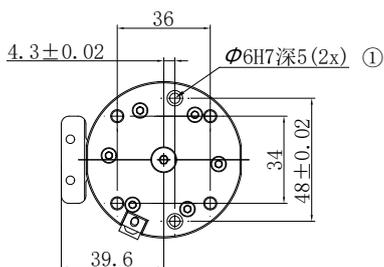
最大动态允许力矩 /Max. Dynamic allowable moment



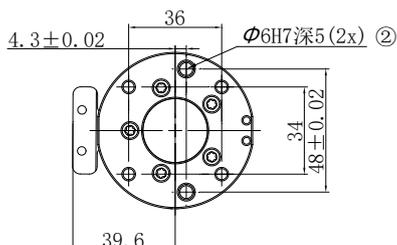
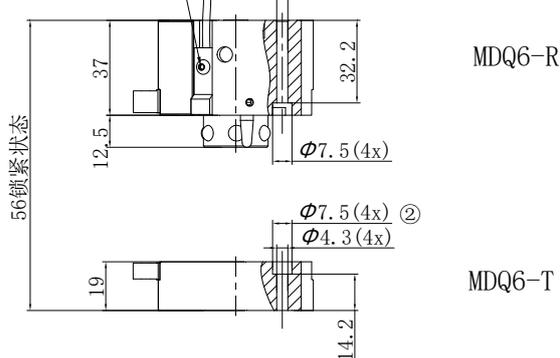
- M_t max. 8Nm
- M_b max. 8Nm
- F max. 500N

名称	单位	MDQ6-R	MDQ6-T
		Quick-ch	Quick-ch
建议负载重量	[Kg]	6	6
电压	[N]	24DC	—
电流	[A]	0.25	—
重量	[Kg]	0.45	0.15
重复定位精度	[mm]	0.05	0.05
耦合/退耦时间	[s]	1.2	1.2
最大耦合距离	[Kg]	0.45	0.15
X/Y 最大允许偏差	[mm]	0.5	0.5
适用最大/最小室温	[°C]	0~60	0~60
适用湿度(不结露)		0~95%	0~95%

尺寸图/Dimensions



锁紧到位信号检测开关(1x) $\Phi 4.3(4x)$ ①



① 连接机器人 Robot side connection

② 连接附件 Attachment connection

注：图示检测开关注释仅用于位置及数量标注

附件(订购)

电气信号模块/Electric signal module



No.Pins	Master	Adapter	Dust cover
3A(50V)×9	DMK-A-0009-R	DMK-A-A009-T	DMK-DC09

电气信号模块/Electric signal module



No.Pins	Master	Adapter	Dust cover
3A(50V)×15	DMK-A-0015-R	DMK-A-A015-T	DMK-DC15

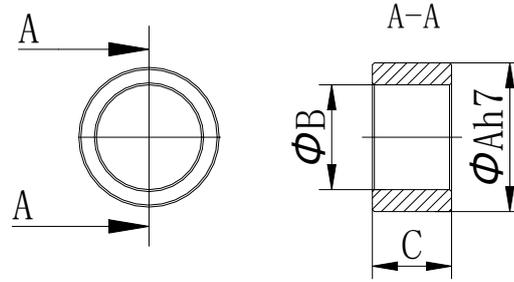
到位信号检测开关/Locking/Unlocking detection switch



型号(NO.)

NPN	WFS-8FN-D
PNP	WFS-8FP-D

CSA 定心套 / Centering sleeves



Technical data

Description	CSA-0503	CSA-0604	CSA-0806	CSA-1006	CSA-1208	CSA-1410	CSA-1612	CSA-1812	CSA-2820
∅ A/mm	∅ 5h7	∅ 6h7	∅ 8h7	∅ 10h7	∅ 12h7	∅ 14h7	∅ 16h7	∅ 18h7	∅ 28h7
∅ B/mm	∅ 3.4	∅ 4.5	∅ 6.3	∅ 6.6	∅ 8.5	∅ 10.5	∅ 12.5	∅ 12.5	∅ 21
∅ C/mm	3.9	3.9	3.9	5.9	5.9	7.9	7.9	11.9	19.8

定心套用于两连接间定位，其中空结构可穿过螺钉，与螺钉保持同心，应用于手爪、旋转模块等

The centering sleeves are used for positioning action between the element, the hollow structure are inserted coaxially to the screws, applied to gripper and rotary modules, etc.

AAC 直通接头 / Straight fitting



Technical data

Description		AAC4-M5	AAC6-M5	AAC6-01	AAC8-01	AAC8-02	AAC10-02
管径/ Hose	mm	4	6	6	8	8	10
接口/Connection thread		M5	M5	G1/8	G1/8	G1/4	G1/4
Max.permissible pressure	bar	10	10	10	10	10	10
Min.ambient temperature	°C	-5	-5	-5	-5	-5	-5
Min.ambient temperature	°C	60	60	60	60	60	60

接头成对使用 Two Fittings are required for each product.

ASL 直角接头 / Angled fitting



Technical data

Description		ASL4-M5	ASL6-M5	ASL6-01	ASL8-01	ASL8-02	ASL10-02
管径/ Hose	mm	4	6	6	8	8	10
接口/Connection thread		M5	M5	G1/8	G1/8	G1/4	G1/4
Max.permissible pressure	bar	10	10	10	10	10	10
Min.ambient temperature	°C	-5	-5	-5	-5	-5	-5
Min.ambient temperature	°C	60	60	60	60	60	60

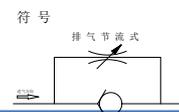
管接头成对使用 Two Fittings are required for each product.

ASC 调速接头 / Flow control valve fitting



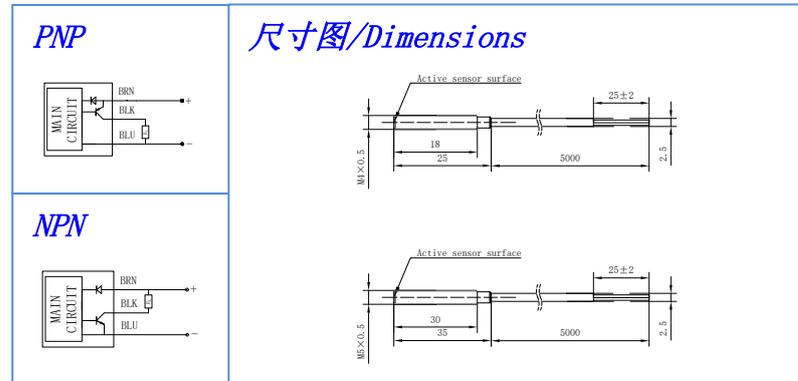
Technical data

Description		ASC4-M5	ASC6-M5	ASC6-01	ASC8-01	ASC8-02	ASC10-02
管径/ Hose	mm	4	6	6	8	8	10
接口/Connection thread		M5	M5	G1/8	G1/8	G1/4	G1/4
Max.permissible pressure	bar	10	10	10	10	10	10
Min.ambient temperature	°C	-5	-5	-5	-5	-5	-5
Min.ambient temperature	°C	60	60	60	60	60	60



管接头成对使用 Two Fittings are required for each product.

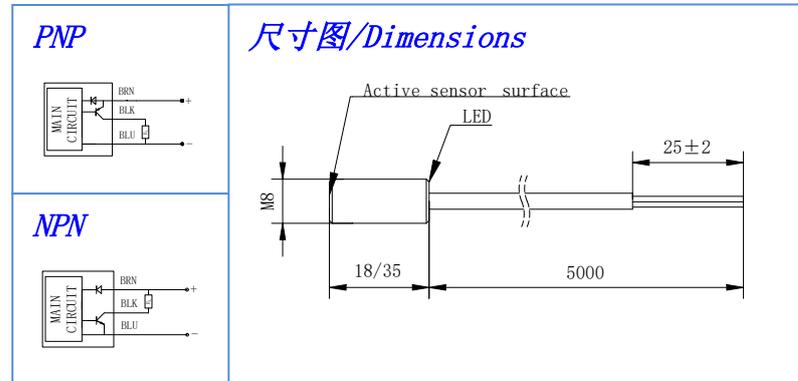
WPS 接近开关 / Proximity switch



Technical data

Description		WPS-4GM25N	WPS-4GM25P	WPS-5GM30N-P	WPS-5GM30P-P
型号 Type of switching		NPN	PNP	NPN	PNP
开关点功能 Switch function		常开	常开	常开	常开
感应距离 Switching distance	mm	1	1	1.2	1.2
安装 Installation		齐平	齐平	齐平	齐平
传感器长度 Cable length	mm	25	25	35	35
传感器螺纹 Cable connector		M4×0.5	M4×0.5	M5×0.5	M5×0.5
电压类型 Type of voltage		DC	DC	DC	DC
工作电压 Operating voltage	V	10-30	10-30	10-30	10-30
连波	W	<10%	<10%	<10%	<10%
无负载电流 No load current	mA	<10	<10	<10	<10
最大负载电流 Max. Load current	mA	100	100	150	150
电压降 Voltage drop	V	1.5Max	1.5Max	1.5Max	1.5Max
泄露电流 Leakage current	mA	0.01Max	0.01Max	0.01Max	0.01Max
开关频率 Switching frequency		2KHz	2KHz	1KHz	1KHz
响应时间 Response time	mm	0.1ms	0.1ms	0.2ms	0.2ms
开关迟滞 Switch delay		<15%(Sr)	<15%(Sr)	<15%(Sr)	<15%(Sr)
重复精度 Repeat precision		<5.0%(Sr)	<5.0%(Sr)	<5.0%(Sr)	<5.0%(Sr)
温度漂移 Temperature drift		<10%(Sr)	<10%(Sr)	<10%(Sr)	<10%(Sr)
EMC		RFI>3V/M/EFT>1KV / ESD>4KV(contact)			
耐冲击/震动 Shock/Vibration		IEC 60947-5-2,part7.4.1 / IEC 60947-5-2,part7.4.2			
过载电流保护点 Overload current protection		-	-	180mA	180mA
工作温度 Ambient temperature	°C	-25 ~ +70	-25 ~ +70	-25 ~ +70	-25 ~ +70
保护等级 Protection class		IP67	IP67	IP67	IP67
保护电路 Protection circuit		---	---	短路保护	Short circuit protection

WPS 接近开关 / Proximity switch



Technical data

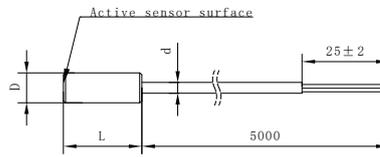
Description		WPS-8GM18N	WPS-8GM35N	WPS-8GM18P	WPS-8GM35P
型号 Type of switching		NPN	NPN	PNP	PNP
开关点功能 Switch function		常开	常开	常开	常开
感应距离 Switching distance	mm	1	2	1	2
安装 Installation		齐平	齐平	齐平	齐平
传感器长度 Cable length	mm	18	35	18	35
传感器螺纹 Cable connector		M8	M8	M8	M8
电压类型 Type of voltage		DC	DC	DC	DC
工作电压 Operating voltage	V	10-30	10-30	10-30	10-30
连波	W	<10%	<10%	<10%	<10%
无负载电流 No load current	mA	<10	<10	<10	<10
最大负载电流 Max. Load current	mA	150	150	150	150
电压降 Voltage drop	V	1.5Max	1.5Max	1.5Max	1.5Max
泄露电流 Leakage current	mA	0.01Max	0.01Max	0.01Max	0.01Max
开关频率 Switching frequency		2KHz	2KHz	2KHz	2KHz
响应时间 Response time	mm	0.1ms	0.1ms	0.1ms	0.1ms
开关迟滞 Switch delay		<15%(Sr)	<15%(Sr)	<15%(Sr)	<15%(Sr)
重复精度 Repeat precision		<5.0%(Sr)	<5.0%(Sr)	<5.0%(Sr)	<5.0%(Sr)
温度漂移 Temperature drift		<10%(Sr)	<10%(Sr)	<10%(Sr)	<10%(Sr)
EMC	RFI>3V/M/EFT>1KV / ESD>4KV(contact)				
耐冲击/震动 Shock/Vibration	IEC 60947-5-2,part7.4.1 / IEC 60947-5-2,part7.4.2				
过载电流保护点 Overload current protection		180mA	180mA	180mA	180mA
工作温度 Ambient temperature	°C	-25 ~ +70	-25 ~ +70	-25 ~ +70	-25 ~ +70
保护等级 Protection class		IP67	IP67	IP67	IP67
保护电路 Protection circuit	短路保护 Short circuit protection				

WPE 防爆接近开关 / Explosion-Proof switch

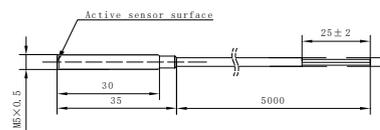


注：防爆传感器使用必须配套安全隔离栅

尺寸图/Dimensions



尺寸	WPE-4GP25	WPE-8GP35
直径 (D)	M4×0.5	M8×1.0
长度 (L)	25	35
线缆线径 (d)	2.5	3

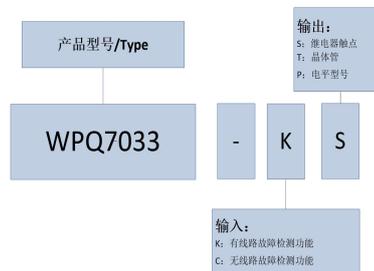
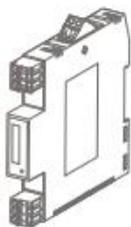


尺寸	WPE-5GP35
直径 (D)	M5×0.5
螺纹长度 (L)	30
长度 (d)	35
线缆线径 (d)	2.5

Technical data

Description	WPE-4GP25	WPE-5GP35	WPE-8GP35
线数	2 线	2 线	2 线
开关点功能 Switch function	常闭	常闭	常闭
感应距离 Switching distance	mm 0.8±10%	1±10%	2±10%
安装 Installation	齐平	齐平	齐平
传感器长度 Cable length	mm 25	25	35
传感器螺纹 Cable connector	M4×0.5	M5×0.5	M8×1.0
电压类型 Type of voltage	DC	DC	DC
工作电压 Operating voltage	V 6-12	6-12	6-12
工作电流 No load current	mA	>2.2mA(OFF) <1.1mA () ON	
开关频率 Switching frequency	100Hz	100Hz	70Hz
响应时间 Response time	mm 2ms	2ms	2ms
开关迟滞 Switch delay	<15%(Sr)	<15%(Sr)	<15%(Sr)
温度漂移 Temperature drift	<5%(Sr)	<5%(Sr)	<5%(Sr)
工作温度 Ambient temperature	°C -25 ~ +70	-25 ~ +70	-25 ~ +70
保护等级 Protection class	IP67	IP67	IP67

❖ 开关量输入隔离安全栅



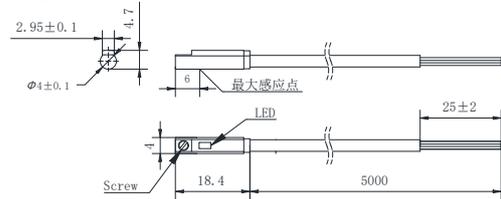
供电电源		从危险区输入		向安全区输出					
供电电压范围	20~30V DC	开路电压	8V±0.5V	继电器触点 S	晶体管	电平信号			
额定供电电压	24V DC	开关阈值	1.2~2.1mA	触点特性	24VDC, 2A	外部供电电压	<40V	高电平	4.5~5.5V
电流消耗 (24V DC, 继电器输出)	<25mA	回滞	0.2mA(典型值)	负载类型	电阻性负载	驱动输出电流	<40mA	低电平	≤0.5V
		线路故障时断路电流	<0.1mA	响应时间	<10ms	晶体管集电极输出	高电平: VCC 低电平: ≤2.5V	高电平驱动能力	≤20mA
		线路故障时短路电流	>4mA			晶体管发射极输出	高电平: VCC-2.5V 低电平: ≤0.5V		

WMS 磁性开关 / Magnetic Sensor

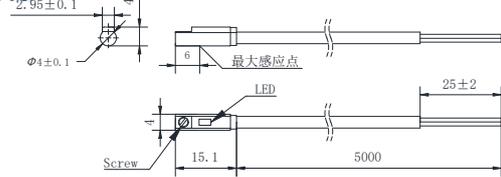


尺寸图/Dimensions

WMS-M9T

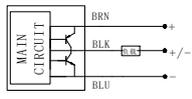


WMS-M9

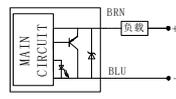


接线图

WMS-M9T



WMS-M9



Technical data

Description		WMS-M9T	WMS-M9
型号 Sensor type		自动识别 NPN/PNP 型	——
开关逻辑 Switch logic		三线电子式无接点; 常开型 Electronic non-contact; Nominal Open	两线无接点晶体管; 常开型 Two-wire contactless transistor; Nominal Open
传感器长度 Cable length	mm	18.4	15.1
电压类型 Type of voltage		DC	DC
工作电压 Operating voltage	V	5-30	10-30
最大开关容量 Max. Contact consumption	W	3	3
最大开关电流 Max. Switching current	mA	100	100
内部消耗电流 Current consumption	mA	14mA Max.@24V(Switch Active)	65 μA Max.@24V
残留压降 Voltage drop	V	0.5V Max.@100mA DC	2.65V Max.@50mA DC
泄露电流 Leakage current	mA	1mA Max.	90 μA Max.@28V
指示灯 Indication		Red LED	Red LED
电缆线直径 Cable diameter	mm	2.9	2.8
灵敏度 Sensitivity		50Guss	25-1000G
最大开关切换频率 Max. Switch frequency	Hz	1000	1000
耐冲击 Shock		50G	60G
耐震动 Vibration		9G	9G
保护等级 Protection class		IP67(EN60529)	IP67(EN60529)
保护电路 Protection circuit		电源极性反向保护, 突波吸收保护 The reverse polarity protection, surge absorption protection	
工作温度	°C	-25 ~ +70	-10 ~ +70

BYF



❖ 内置双阀接线方便

任意气路加装，即插即用

❖ 主动断气保压

当压出现压力损失时，内部回流阀关闭，保持机器人末端执行器的内部压力，防止意外压力损失时工件掉落或伤人；

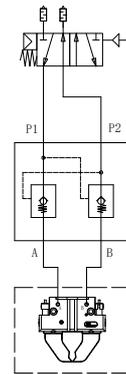
❖ 密封保压

适用于自动化、保压测试，周期压力保持测试、工件耐压测试等；

技术资料/Technical data

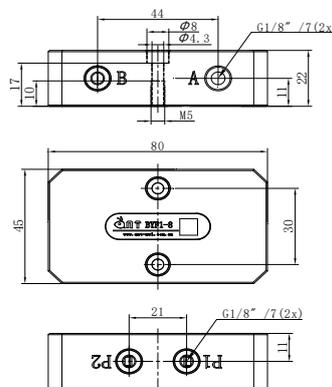
Description		BYF1-8
连接接口 Connection		G1/8
最大流量 Max.throughput	L/min	200
自重 weight	Kg	0.25
最小操作压力 Min. operating pressure	bar	1
最大操作压力 Max. operating pressure	bar	10
适应最小/最大环境温度 Min./Max. ambient temperature	°C	-10/80
使用流体 Fluid		空气 (Air)

Principle

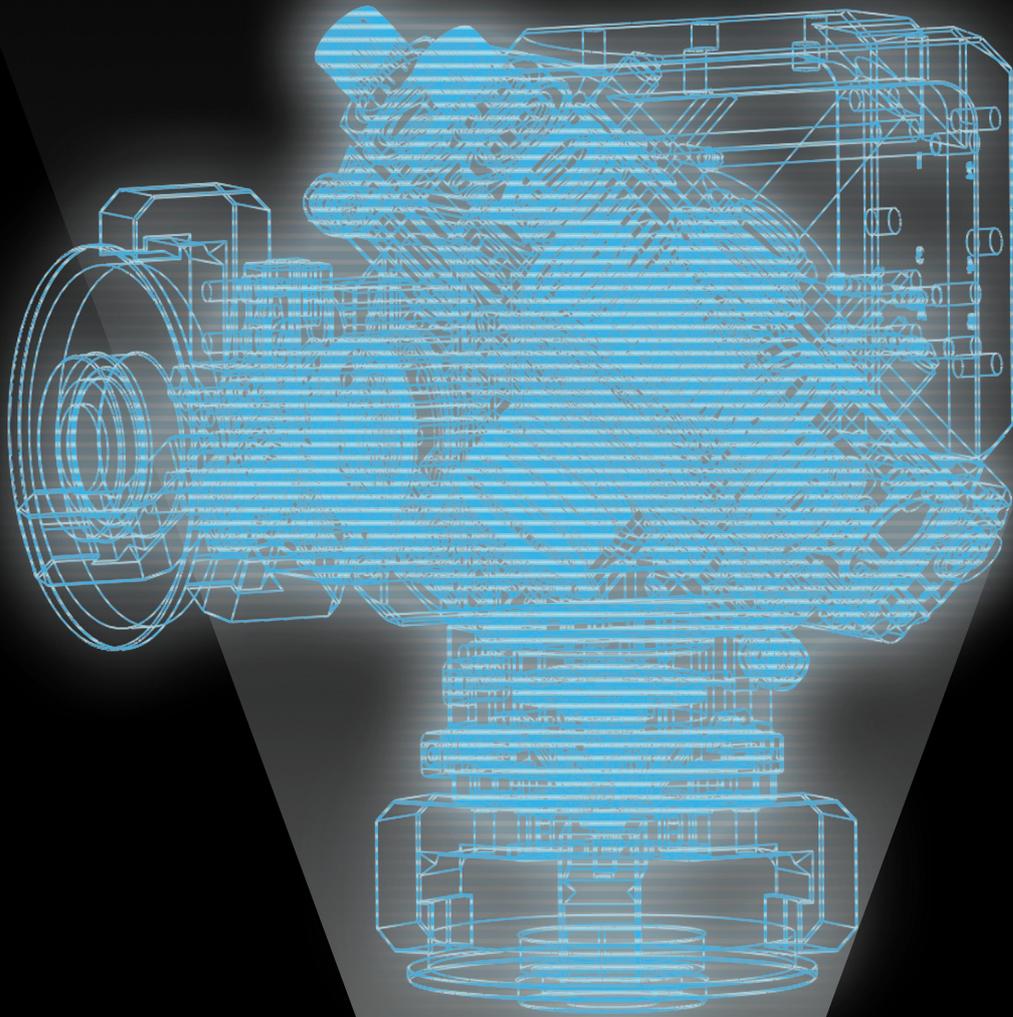


注：为确保双向断气自锁阀功能正常，阀安装位置必须尽量靠近手爪或旋转模块的空气接口

尺寸图/Dimension



DRIVRN BY TECHNOLOGY



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