

PERFORMANCE CHARACTERISTICS:

性能特点



● 模块化设计

HXY系列拨叉执行器采用模块化设计，每个箱体均可采用不同气缸及弹簧来满足各种扭矩需求。同时模块化设计使装配、备货更简便，有利于现场维护更换。

● MODULAR DESIGN

HXY series scotch yoke actuators adopt a modular design, under which each box can use different cylinders and springs to meet various torque demands. The modular design also makes convenience for assembly and stocking, which is conducive to on-site maintenance and replacement.

● 耐磨性

活塞杆、导杆等运动部件配合处均采用自润滑轴承，具有优秀的耐磨性，延长滑动部件的使用寿命。

● WEAR RESISTANCE

Self-lubricating bearings are adopted at places where movable parts (such as piston rods and guide bars) fit with each other. They have excellent wear resistance, and extend the service life of sliding parts.

● 标准连接尺寸

输出轴符合NAMUR、ISO5211标准，NAMUR标准指示器便于安装位置开关，信号器等附件。

● STANDARD CONNECTION DIMENSIONS

The output shaft complies with NAMUR and ISO5211 standards. The indicator based on the NAMUR standard facilitates the installation of position switches, annunciators, and other accessories.



● 限位调节

两个独立的行程调节螺钉可以进行方便、精确±6°调节开、关位置。

● LIMIT ADJUSTMENT

Two independent stroke adjustment screws can conveniently and precisely adjust opening-closing positions by ±6°.

● 星型圈设计

执行器往复运到处采用X型密封圈，代替传统O型圈的设计，避免在运动过程中密封件出现翻边风险。

● X-RING DESIGN

X-ring seals, instead of traditional O-ring seals, are adopted at sites affected by the reciprocating motion of the actuator. This design avoids the risk of seal flanging during motion.

● 优化易损件材质

导向带采用酚醛夹布纤维+树脂，代替传统的PTFE和POM导向带。

● OPTIMIZE THE MATERIAL OF VULNERABLE PARTS

The guide belt adopts phenolic fiber and resin, replacing traditional PTFE and POM guide belts

● 防水保护

箱体、箱盖等连接处均装有O型圈，防止外界水分进入执行机构内部。

● WATERPROOF PROTECTION

The box, the cover, and other connections are mounted with O-rings to prevent external moisture from entering the actuator.

● 铜滑块结构

曲臂与销轴的连接设置铜滑块机构，四方铜滑块将力的传递由线转化为面，材质9-4铝青铜，强度高耐磨性好。

● COPPER SLIDER STRUCTURE

A copper slider mechanism is set for the connection between the crank and the hinge pin. The square copper slider converts the transmission of force from a linear to a planar mode. Made of 9-4 aluminum bronze, it features high strength and wear resistance.

● 前置的气源接口、吊环顶置

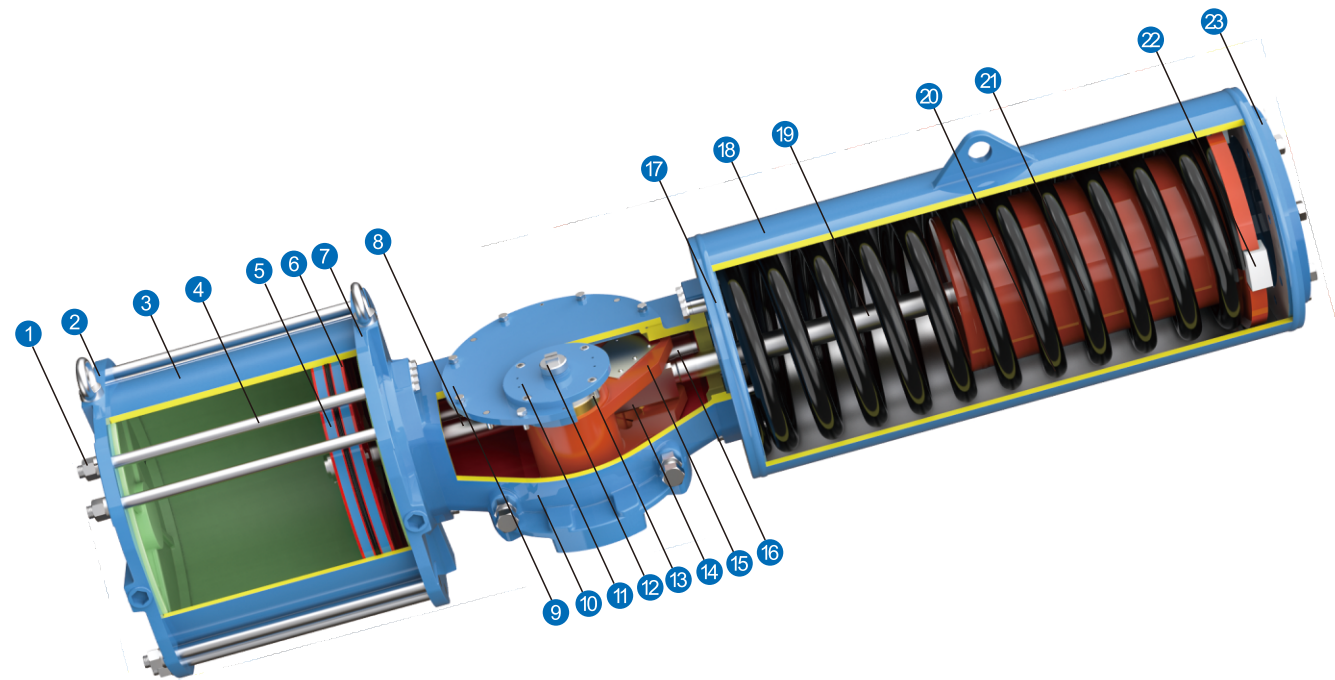
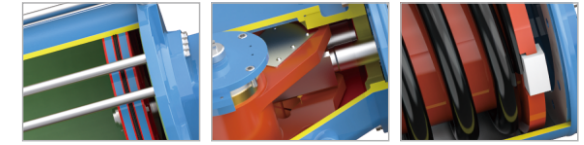
气源接口前置后置，接管方便灵活。吊环孔顶置-便于起吊。

● FRONT/REAR SETTING OF AIR CONNECTION AND OVERHEAD SETTING OF LIFTING LUG

The front/rear setting of the air connection makes it convenient and flexible to connect tubes. The overhead setting of the lifting lug facilitates lifting.

MATERIAL LIST

材料明细表



气缸模块 Cylinder module

序号 No.	1	2	3	4	5	6	7	8
名称 Name	螺母(组合件) Nut (unit)	外盖 Outer cover	气缸 Cylinder	拉杆 Pull rod	支撑环 Supporting ring	活塞 Piston	中盖 Middle cover	活塞杆 Piston rod
材料 Material	碳钢 Carbon steel	碳钢 Carbon steel	碳钢 Carbon steel	合金钢 Alloy steel	合成树脂 Synthetic resin	碳钢 Carbon steel	碳钢 Carbon steel	合金钢 Alloy steel

箱体模块 Drive Module

序号 No.	9	10	11	12	13	14	15	16
名称 Name	箱盖 Cover	箱体 Box	顶盖 Top cover	指示轴 Indicator shaft	无油轴承 Oilless bearing	导向块 Guide block	拨叉 Scotch yoke	导向杆 Guide bar
材料 Material	球墨铸铁 Nodular cast iron	球墨铸铁 Nodular cast iron	碳钢 Carbon steel	不锈钢 Stainless steel	复合材料 Composite material	合金钢 Alloy steel	球墨铸铁 Nodular cast iron	合金钢 Alloy steel

弹簧模块 Spring Module

序号 No.	17	18	19	20	21	22	23
名称 Name	弹簧筒盖 Spring strut cover	弹簧筒 Spring strut	弹簧拉杆 Spring rod	弹簧座 Spring seat	弹簧 Spring	耐磨块 Wear-resistant block	弹簧闷盖 Spring cap
材料 Material	碳钢 Carbon steel	碳钢 Carbon steel	合金钢 Alloy steel	碳钢 Carbon steel	弹簧钢 Spring steel	工程塑料 Engineering plastics	碳钢 Carbon steel

DOUBLE-ACTING OUTPUT TORQUE 双作用输出扭矩

单位 Unit: mm

型号 Model	3.5 Bar			4 Bar			5 Bar			6 Bar		
	0°	45°	90°	0°	45°	90°	0°	45°	90°	0°	45°	90°
HXYZ-F16-220-DA	1872	1003	1872	2127	1146	2127	2659	1433	2659	3191	1719	3191
HXYZ-F16-250-DA	2408	1297	2408	2752	1483	2752	3440	1853	3440	4128	2224	4128
HXYZ-F16-280-DA	3034	1635	3034	3467	1868	3467	4334	2336	4334	5200	2800	5200
HXYZ-F25-280-DA	3440	1854	3440	3923	2119	3923	4915	2469	4915	5898	3178	5898
HXYZ-F25-320-DA	4518	2434	4518	5163	2782	5163	6454	3478	6454	7745	4174	7745
HXYZ-F25-350-DA	5420	2921	5420	6194	3338	6194	7743	4173	7743	9292	5000	9292
HXYZ-F30-350-DA	6586	3550	6586	7527	4056	7527	9400	5070	9400	11290	6085	11290
HXYZ-F30-400-DA	8639	4656	8639	9874	5321	9874	12342	6650	12342	14811	7982	14811
HXYZ-F30-450-DA	10967	5900	10967	12534	6754	12534	15667	8443	15667	18801	10132	18801
HXY-F35-450-DA	13124	7072	13124	14999	8083	14999	18748	10104	18748	22498	12125	22498
HXY-F35-500-DA	16237	8750	16237	18557	10000	18557	23196	12501	23196	27835	15000	27835
HXY-F35-560-DA	20375	10980	20375	23286	12540	23286	29100	15680	29100	34900	18824	34900
HXY-F35-630-DA	25760	13880	25760	29400	15800	29400	36800	19800	36800	44100	23800	44100
HXY-F40-630-DA	31066	16742	31066	35504	19130	35504	44380	23917	44380	53256	28700	53256
HXY-F40-700-DA	38395	20692	38395	43800	23648	43800	54850	29560	54850	65820	35472	65820
HXY-F40-800-DA	50166	27036	50166	57333	30890	57333	71667	38623	71667	86000	46347	86000
HXY-F48-800-DA	60000	32360	60000	68625	36983	68625	85782	46229	85782	102938	55475	102938
HXY-F48-900-DA	76252	41094	76252	87146	46964	87146	108932	58706	108932	130719	70447	130719
HXY-F48-1000-DA	94366	50856	94366	107847	58121	107847	134809	72651	134849	161771	87182	161771

SINGLE-ACTING OUTPUT TORQUE 单作用输出扭矩

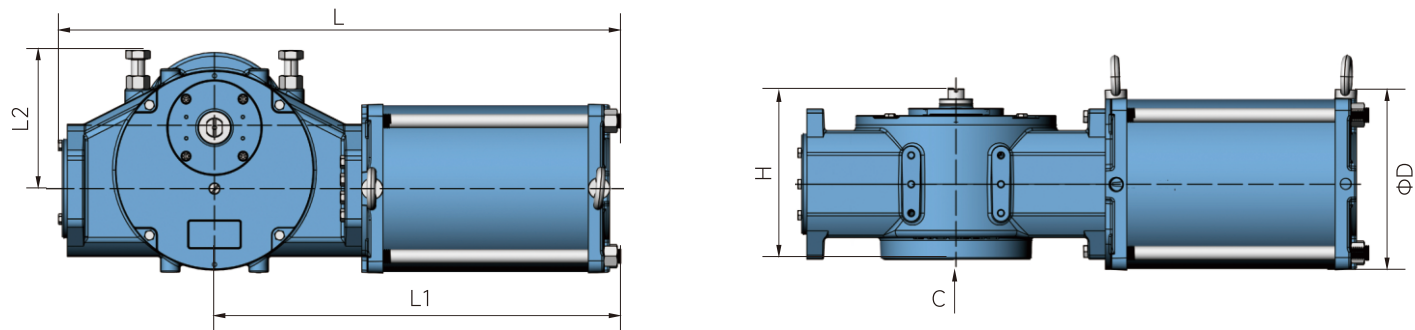
单位 Unit: mm

型号 Model	4Bar Air to Spring			Spring			5Bar Air to Spring			Spring			6Bar Air to Spring			Spring		
	0°	45°	90°	90°	45°	0°	0°	45°	90°	90°	45°	0°	0°	45°	90°	90°	45°	0°
HXYZ-F16-220-SR4	1407	575	790	1404	574	788	1956	863	1339	1404	574	788	2505	1150	1888	1404	574	788
HXYZ-F16-220-SR5	-	-	-	-	-	-	1728	723	1032	1712	714	1015	2277	1010	1581	1712	714	1015
HXYZ-F16-220-SR6	-	-	-	-	-	-	-	-	-	-	-	-	2104	882	1263	2030	843	1188
HXYZ-F16-250-SR4	1819	770	1123	1712	714	1015	2528	1141	1832	1712	714	1015	3237	1513	2540	1712	714	1015
HXYZ-F16-250-SR5	-	-	-	-	-	-	2355	1013	1513	2030	843	1188	3064	1384	2222	2030	843	1188
HXYZ-F16-250-SR6	-	-	-	-	-	-	-	-	-	-	-	-	2652	1089	1505	2747	1138	1600
HXYZ-F16-280-SR4	2367	1019	1526	2030	843	1188	3257	1485	2415	2030	843	1188	4146	1951	3304	2030	843	1188
HXYZ-F16-280-SR5	-	-	-	-	-	-	2845	1190	1698	2747	1138	1600	3734	1655	2587	2747	1138	1600
HXYZ-F16-280-SR6	-	-	-	-	-	-	-	-	-	-	-	-	3381	1421	2047	3287	1372	1953
HXYZ-F25-280-SR4	2590	1085	1552	2500	1037	1462	3603	1615	2565	2500	1037	1462	4617	2146	3578	2500	1037	1462
HXYZ-F25-280-SR5	-	-	-	-	-	-	3124	1292	1811	3254	1361	1942	4137	1823	2824	3254	1361	1942
HXYZ-F25-280-SR6	-	-	-	-	-	-	-	-	-	-	-	-	3799	1555	2138	3941	1629	2279
HXYZ-F25-320-SR4	3351	1411	2039	3254	1361	1942	4675	2105	3362	3254	1361	1942	5998	2798	4685	3254	1361	1942
HXYZ-F25-320-SR5	-	-	-	-	-	-	4337	1836	2675	3941	1629	2279	5660	2530	3999	3941	1629	2279
HXYZ-F25-320-SR6	-	-	-	-	-	-	-	-	-	-	-	-	5046	2074	2873	5067	2085	2894
HXYZ-F25-350-SR4	4052	1687	2391	3941	1629	2279	5636	2517	3974	3941	1629	2279	7219	3346	5557	1941	1629	2279
HXYZ-F25-350-SR5	-	-	-	-	-	-	5021	2061	2848	5067	2085	2894	6605	2890	4431	5067	2085	2894
HXYZ-F25-350-SR6	-	-	-	-	-	-	-	-	-	-	-	-	5925	2251	3168	6100	2318	3525
HXYZ-F25-400-SR4	5377	2247	3204	5067	2085	2894	7745	3330	5271	5067	2085	2894	9513	4413	7339	5067	2085	2894
HXYZ-F25-400-SR5	-	-	-	-	-	-	8086	3295	4700	7980	3400	4590	10655	4633	7240	7980	3400	4590
HXYZ-F25-400-SR6	-	-	-	-	-	-	-	-	-	-	-	-	7799	3258	4642	7764	3240	4607
HXYZ-F30-400-SR4	6433	2661	3729	6356	2621	3653	8954	3982	6254	6356	2621	3653	11476	5303	8773	6356	2621	3653
HXYZ-F30-400-SR5	-	-	-	-	-	-	8004	3311	4639	7968	3292	4603	10525	4632	7161	7968	3292	4603
HXYZ-F30-400-SR6	-	-	-	-	-	-	-	-	-	-	-	-	9709	4005	5584	9544	3919	5419
HXYZ-F30-450-SR4	8161	3394	4797	7968	3292	4603	11353	5065	7988	7968	3292	4603	14544	6737	11179	7968	3292	4603
HXYZ-F30-450-SR5	-	-	-	-	-	-	10536	4438	6411	9544	3919	5419	13728	6110	9603	9544	3919	5419
HXYZ-F30-450-SR6	-	-	-	-	-	-	-	-	-	-	-	-	12126	4999	6962	12185	5030	7021
HXYZ-F35-450-SR4	9841	4127	5917	9358	3874	5433	13660	6127	9736	9358	3874	5433	17479	8128	13555	9358	3874	5433
HXYZ-F35-450-SR5	-	-	-	-	-	-	12144	5066	7199	11895	4935	6950	15963	7066	11018	11895	4935	6950
HXYZ-F35-450-SR6	-	-	-	-	-	-	-	-	-	-	-	-	14542	6001	8372	14540	6000	8370
HXYZ-F35-500-SR4	11547	5096	6692	11781	5227	6926	16165	7677	11310	11781	5227	6926	20784	10258	15929	11781	5227	6926
HXYZ-F35-500-SR5	-	-	-	-	-	-	14331	6267	8098	14993	6637	8760	18949	8848	12717	14993	6637	8760
HXYZ-F35-500-SR6	-	-	-	-	-	-	-	-	-	-	-	-	18949	8848	12717	14993	6637	8760
HXYZ-F35-560-SR4	14417	6315	8184	14993	6637	8760	20212	9553	13979	14993	6637	8760	26007	12791	19774	14993	6637	8760
HXYZ-F35-560-SR5	-	-	-	-	-	-	18035	8082	10668	18304	8170	10938	23829	11258	16462	18304	8170	10938
HXYZ-F35-560-SR6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
HXYZ-F35-630-SR4	18403	8225	11036	18304	8170	10938	25738	12324	18371	18304	8170	10938	33073	16423	25706	18304	8170	10938
HXYZ-F35-630-SR5	-	-	-	-	-	-	25180	10573	15753	22234	9568	12468	32778	14585	23351	22234	9568	12468
HXYZ-F35-630-SR6	-	-	-	-	-	-	-	-	-	-	-	-	29337	12291	17374	28209	12035	16248
HXYZ-F40-630-SR4	23497	9639	13896	22613	9693	13013	32625	14460	23025	22613	9639	13013	41752	19279	32152	22613	9639	13013
HXYZ-F40-630-SR5	-	-	-	-	-	-	29371	12049	17372	28266	12049	16267	38498	16869	26499	28266	12049	16267
HXYZ-F40-630-SR6	-	-	-	-	-	-	-	-	-	-	-	-	33708	13320	18174	36591	15598	21057
HXYZ-F40-700-SR4	28886	11793	16886	28266	12049	16267	40174	17754	28174	28266	12049	16267	51463	23715	39463	28266	12049	16267
HXYZ-F40-700-SR5	-	-	-	-	-	-	35384	14206	19850	36591	15598	21057	46671	20186	31138	36591	15598	21057
HXYZ-F40-700-SR6	-	-	-	-	-	-	-	-	-	-	-	-	41408	16267	21992	45737	19497	26321
HXYZ-F40-800-SR4	38020	18715	26980	-	15598	21057	52790	23397	37653	36591	15598	21057	67559	31196	52026	36591	15598	21057
HXYZ-F40-800-SR5	-	-	-	-	-	-	47526	19498	28109	45737	19497	26321	62295	27297	42879	45737	19497	26321
HXYZ-F40-800-SR6	-	-	-	-	-	-	-	-	-	-	-	-	57030	23397	33730	54886	23397	31586
HXYZ-F48-800-SR4	45619	18715	26980	43904	18715	25266	63340	28073	44702	43904	18715	25266	81016	37430	62423	43904	18715	25266
HXYZ-F48-800-SR5	-	-	-	-	-	-	56577	23063	32050	55656	23725	32029	74298	32421	50671	55656	23725	32029
HXYZ-F48-800-SR6	-	-	-	-	-	-	-	-	-	-	-	-	66291	26490	36757	69570	29657	40036

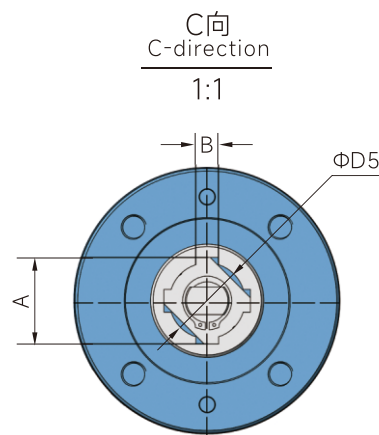
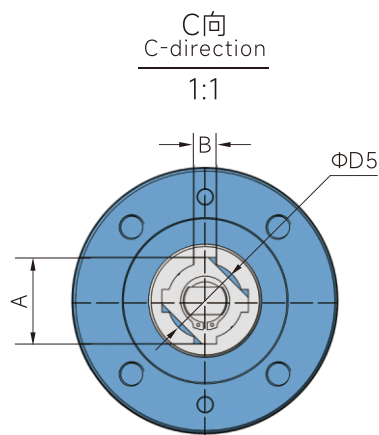
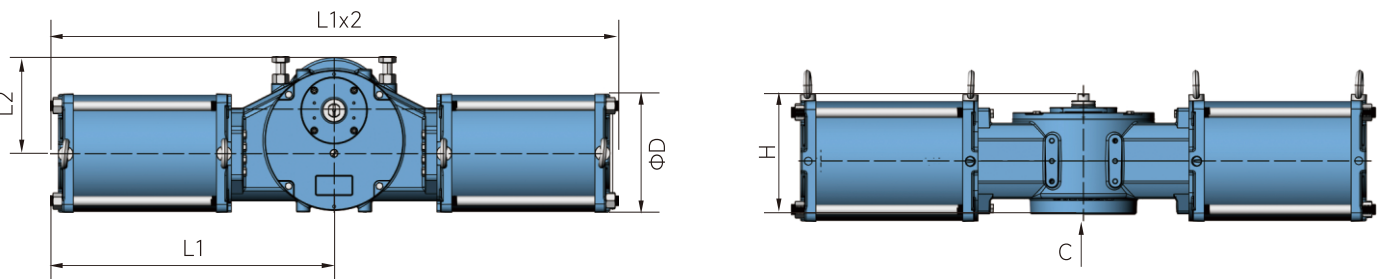
DOUBLE-ACTING EXTERNAL DIMENSIONS

双作用外形尺寸

单缸 Single-cylinder



双缸 Double-cylinder



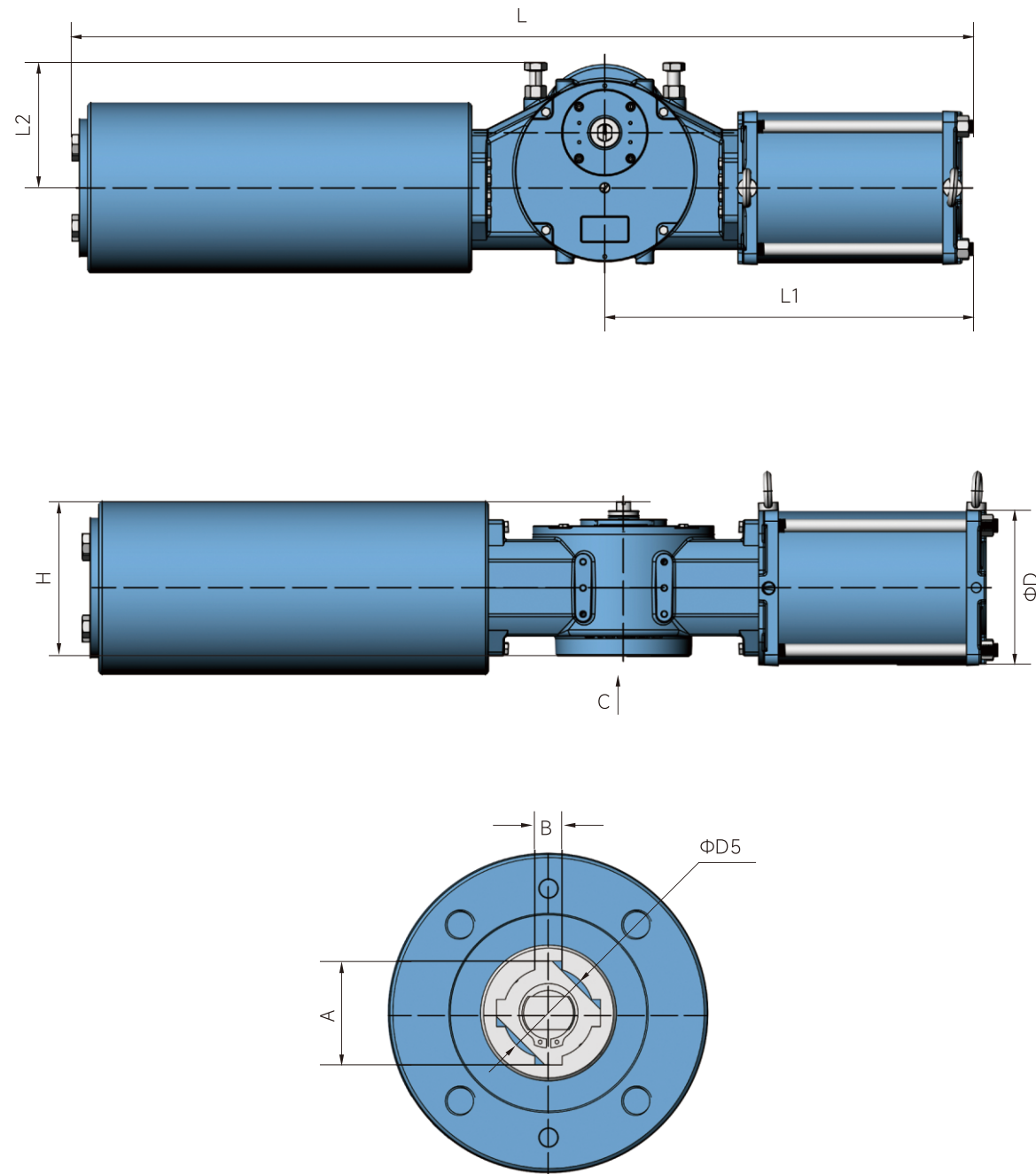
DOUBLE-ACTING EXTERNAL DIMENSIONS

双作用外形尺寸

型号 Model	L	L1	L2	H	D	D5	A	B	连接法兰 Connection flange	气源接口 Air connection
	单位 Unit: mm									ISO5211
HXYZ-F16-220-DA	825	595	187	238	322	60	64.4	18	F16	1/2"ZG(NPT)
HXYZ-F16-250-DA	835	605	187	288	339.5	60	64.4	18	F16	1/2"ZG(NPT)
HXYZ-F16-280-DA	835	605	187	326	339.5	60	64.4	18	F16	1/2"ZG(NPT)
HXYZ-F25-280-DA	930	678	211	234	340	72	76.9	20	F25	1/2"ZG(NPT)
HXYZ-F25-320-DA	935	683	211	234	364	72	76.9	20	F25	1/2"ZG(NPT)
HXYZ-F25-350-DA	941	692	211	234	392	72	76.9	20	F25	3/4"ZG(NPT)
HXYZ-F30-350-DA	990	720	241	263	392	100	106.4	28	F30	3/4"ZG(NPT)
HXYZ-F30-400-DA	1075	793	241	263	440	100	106.4	28	F30	1"ZG(NPT)
HXYZ-F30-450-DA	1075	793	241	263	537	100	106.4	28	F30	1"ZG(NPT)
HXY-F35-450-DA	1244	922	312	308	588	160	169.4	40	F35	1"ZG(NPT)
HXY-F35-500-DA	1244	922	312	308	610	160	169.4	40	F35	1 1/4"(NPT)
HXY-F35-560-DA	1244	922	312	308	682	160	169.4	40	F35	1 1/4"(NPT)
HXY-F35-630-DA	1244	922	312	308	723	160	169.4	40	F35	1 1/4"(NPT)
HXY-F40-630-DA	1424	1003.5	380	361	730	165	183.8	40	F40	1 1/4"(NPT)
HXY-F40-700-DA	1424	1003.5	380	361	800	165	183.8	40	F40	1 1/4"(NPT)
HXY-F40-800-DA	1424	1003.5	380	361	900	165	183.8	40	F40	1 1/4"(NPT)
HXY-F48-800-DA	1755	1245	473	464	900	220	242.8	50	F48	1 1/4"(NPT)
HXY-F48-900-DA	1755	1245	473	464	1033	220	242.8	50	F48	1 1/4"(NPT)
HXY-F48-1000-DA	1755	1245	473	464	1135	220	242.8	50	F48	1 1/4"(NPT)

SINGLE-ACTING EXTERNAL DIMENSIONS

单作用外形尺寸



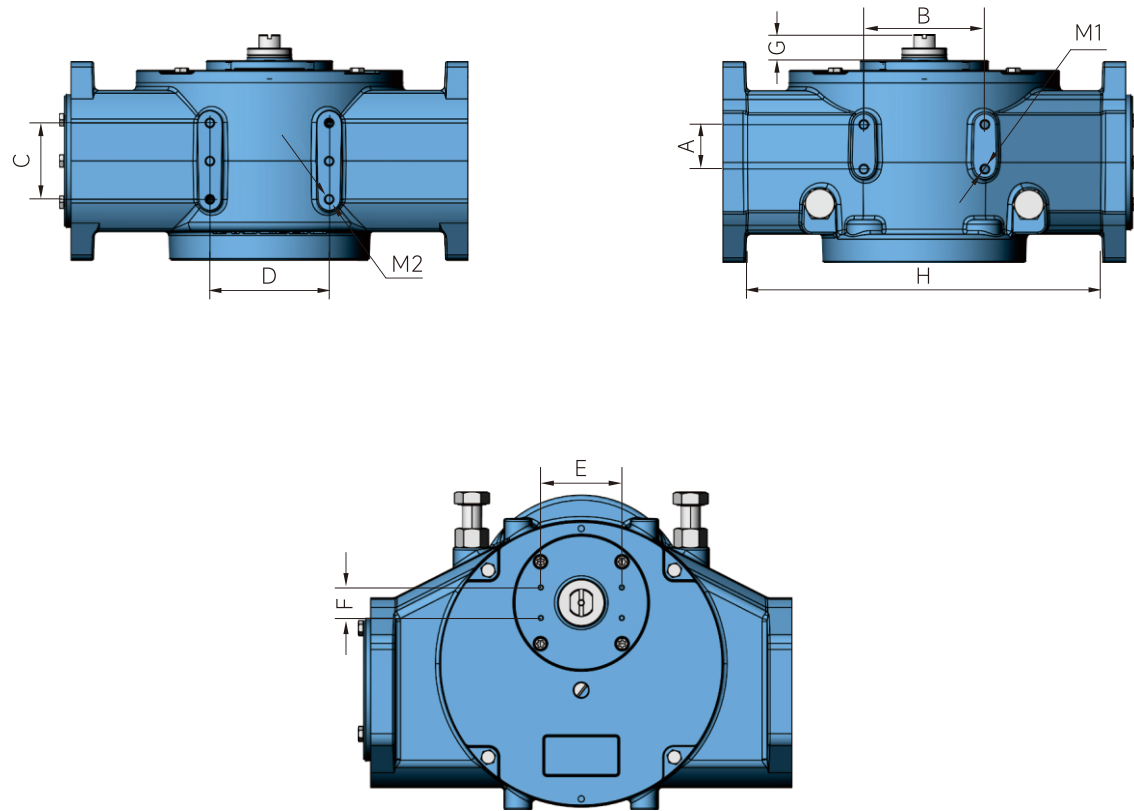
SINGLE-ACTING EXTERNAL DIMENSIONS

单作用外形尺寸

型号 Model	L	L1	L2	H	D	D5×Depth	A	B	连接法兰 Connection flange	气源接口 Air connection
									ISO5211	
单位 Unit: mm										
HXYZ-F16-220-SR04	1443	595	185	232	332	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-220-SR05	1458	595	185	232	332	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-220-SR06	1534	595	185	232	332	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-250-SR04	1468	605	185	232	339	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-250-SR05	1544	605	185	232	339	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-250-SR06	1544	605	185	232	339	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-280-SR04	1543	611	185	232	369	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-280-SR05	1523	611	185	232	369	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F16-280-SR06	1543	611	185	232	369	Ø60	51.8	18	F16	1/2 ZG (NPT)
HXYZ-F25-280-SR04	1649	677	211	234	375	Ø72	76.9	20	F25	1/2 ZG (NPT)
HXYZ-F25-280-SR05	1773	677	211	234	375	Ø72	76.9	20	F25	1/2 ZG (NPT)
HXYZ-F25-280-SR06	1773	677	211	234	375	Ø72	76.9	20	F25	1/2 ZG (NPT)
HXYZ-F25-320-SR04	1768	674	211	234	415	Ø72	76.9	20	F25	1/2 ZG (NPT)
HXYZ-F25-320-SR05	1772	673	211	234	415	Ø72	76.9	20	F25	1/2 ZG (NPT)
HXYZ-F25-320-SR06	1768	674	211	234	415	Ø72	76.9	20	F25	1/2 ZG (NPT)
HXYZ-F25-350-SR04	1785	689	211	234	444	Ø72	76.9	20	F25	3/4 ZG (NPT)
HXYZ-F25-350-SR05	1785	689	211	234	444	Ø72	76.9	20	F25	3/4 ZG (NPT)
HXYZ-F25-350-SR06	1838	689	211	234	444	Ø72	76.9	20	F25	3/4 ZG (NPT)
HXYZ-F25-400-SR04	1788	693	211	234	500	Ø72	76.9	20	F25	1 ZG (NPT)
HXYZ-F25-400-SR05	1843	693	211	234	500	Ø72	76.9	20	F25	1 ZG (NPT)
HXYZ-F25-400-SR06	1822	693	211	234	500	Ø72	76.9	20	F25	1 ZG (NPT)
HXYZ-F30-400-SR04	2075	793	241	263	500	Ø100	106.4	28	F30	1 ZG (NPT)
HXYZ-F30-400-SR05	2061	793	241	263	500	Ø100	106.4	28	F30	1 ZG (NPT)
HXYZ-F30-400-SR06	2075	793	241	263	500	Ø100	106.4	28	F30	1 ZG (NPT)
HXYZ-F30-450-SR04	2075	802	241	263	588	Ø100	106.4	28	F30	1 ZG (NPT)
HXYZ-F30-450-SR05	2084	802	241	263	588	Ø100	106.4	28	F30	1 ZG (NPT)
HXYZ-F30-450-SR06	2084	802	241	263	588	Ø100	106.4	28	F30	1 ZG (NPT)
HXYZ-F35-450-SR04	2227	859	312	308	558	Ø160	169.4	40	F35	1 ZG (NPT)
HXYZ-F35-450-SR05	2227	859	312	308	558	Ø160	169.4	40	F35	1 ZG (NPT)
HXYZ-F35-450-SR06	2227	859	312	308	558	Ø160	169.4	40	F35	1 ZG (NPT)
HXYZ-F35-500-SR04	2290	922	312	308	610	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-500-SR05	2290	922	312	308	610	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-500-SR06	2350	922	312	308	610	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-560-SR04	2510	932	312	308	682	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-560-SR05	2510	932	312	308	682	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-560-SR06	2510	932	312	308	682	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-630-SR04	2616	942	312	308	765	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-630-SR05	2616	942	312	308	765	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F35-630-SR06	2616	942	312	308	765	Ø160	169.4	40	F35	1 1/4" (NPT)
HXYZ-F40-630-SR04	2545	1004	380	361	765	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-630-SR05	2545	1004	380	361	765	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-630-SR06	2545	1004	380	361	765	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-700-SR04	2560	1004	380	361	800	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-700-SR05	2560	1004	380	361	800	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-700-SR06	2560	1004	380	361	800	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-800-SR04	2560	1004	380	361	900	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-800-SR05	2560	1004	380	361	900	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F40-800-SR06	2560	1004	380	361	900	Ø165	183.8	40	F40	1 1/4" (NPT)
HXYZ-F48-800-SR04	3165	1255	473	464	900	Ø220	242.8	50	F48	1 1/4" (NPT)
HXYZ-F48-800-SR05	3165	1255	473	464	900	Ø220	242.8	50	F48	1 1/4" (NPT)
HXYZ-F48-800-SR06	3165	1255	473	464	900	Ø220	242.8	50	F48	1 1/4" (NPT)

ACCESSORIES INSTALLATION DIMENSIONS

附件安装尺寸



箱体连接尺寸图及外形尺寸 Box connection size diagram and external dimensions

箱体号 Box number	A X B	C X D	螺纹孔 M1 Threaded hole	螺纹孔 M2 Threaded hole	E	F	G	H
HXYZ-F16	40x125	75x125	4-M12螺纹深18 4-M12 thread depth 18	4-M12螺纹深18 4-M12 thread depth 18	80	30	30	368
HXYZ-F25	50x125	80x125	4-M12螺纹深18 4-M12 thread depth 18	4-M12螺纹深18 4-M12 thread depth 18	130	30	30	420
HXYZ-F30	50x125	80x125	4-M12螺纹深18 4-M12 thread depth 18	4-M12螺纹深18 4-M12 thread depth 18	130	30	30	480
HXYZ-F35	82x180	115x185	4-M12螺纹深18 4-M12 thread depth 18	4-M12螺纹深18 4-M12 thread depth 18	130	30	30	582

COMMON FAULTS AND TROUBLESHOOTING METHODS:

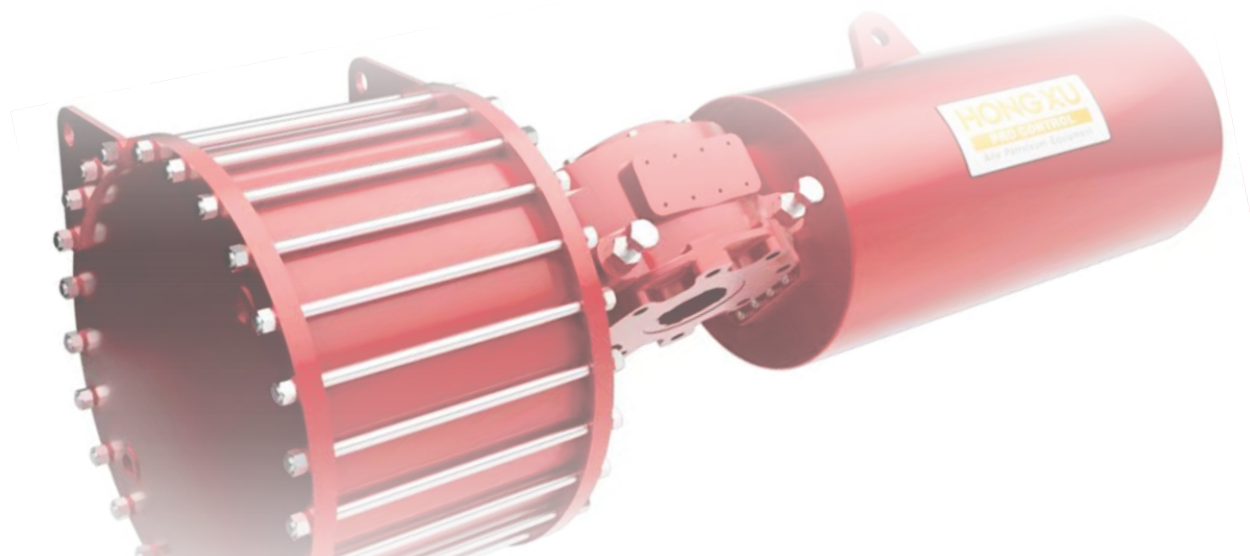
常见故障及排除办法

故障现象 Fault	检查项目 Check item	排除方法 Troubleshooting method
阀门不动作 Failure to actuate the valve	电磁阀是否正常、线圈是否烧坏、电磁阀芯是否被赃物卡死。 Whether the solenoid valve is normal, whether the coil is burnt out, and whether the solenoid valve core is jammed by dirt.	更换电磁阀、更换线圈、清除赃物。 Replace the solenoid valve/coil, and remove any dirt.
	对执行器单独供气，是否正常工作，如气缸串气不正常，拆开执行器检查密封件是否损坏，气缸内表面是否损坏。 Provide a separate air supply to the actuator to see whether it normally functions; in the case of abnormal cylinder blow-by, disassemble the actuator to check whether the seal is damaged and whether the inner surface of the cylinder is damaged.	更换已坏密封圈，更换气缸。 Replace the damaged sealing ring/cylinder.
	阀内有杂质将球芯卡住。 Jammed by impurities in the valve.	清除杂质更换阀件。 Remove impurities and replace valve parts.
	手动操作机构的手柄处在手动位置。 Handle of the manual operating mechanism placed at the manual position.	将手柄扳到自动位置。 Turn the handle to the automatic position.
阀门动作迟缓爬行 Slow valve action	气源压力不够。 Insufficient air supply pressure.	增加气源压力。 Increase air supply pressure.
	气动执行器推力过小。 Excessively small thrust of pneumatic actuator.	增大执行器型号规格。 Increase actuator model and specifications.
	阀门阀芯或其它阀件装配太紧不合理。 Valve core or other valve parts assembled too tightly or irrationally.	修理装配，调整推力。 Repair assembly and adjust thrust.
	气源管路堵塞流量过小。 Blocked air supply pipeline, resulting in excessively low flow rate.	排除堵塞。 Remove obstacles.
回讯器无信号 No signal from valve position transmitter	信号电源线路、短路、断路。 Short circuit or open circuit in the signal power circuit.	维修电源线路。 Repair the power circuit.
	凹轮位置不正确。 Incorrect concave wheel position.	调整凹轮至正确位置。 Adjust concave wheel position.
	微动开关损坏。 Damaged microswitch.	更换微动开关。 Replace the microswitch.

INSTALLATION AND USE: 安装与使用

- 气执行器在出厂时已经经过必要的性能测试，且按订单要求进行整定，用户一般可直接安装使用，底部安装孔设计符合ISO5211标准，可以直接安装支架；
- 打开包装箱后要检查产品是否有意外损坏，所配零件是否齐全，特别是经过长时间存放后的产品要全面维护后才可以安装并使用；
- 执行器与阀门安装前应核对型号规格，是否与阀门所需推力的要求相符合；
- 检查执行器与阀门连接的支架法兰尺寸是否相符，安装空间是否充足；
- 如选用气/手动切换机构，执行器安装后，应核对切换机构工作状态是否与实际相符，防止误操作。带手动操作机构的阀门在弹簧复位(关闭阀门)或是气动开启(关闭)阀门过程中，任何一个开度都不能使用“气动-手动”切换；
- 如选用气/手动切换机构，使用手轮操作前，先将气缸内的残余气体通过电磁阀(或控制元件) 排空(在气缸内有残余气体的情况下)，手动操作确认无误后再进行气动试用检查；
- 如选用气/手动切换机构，使用手轮操作时，不得用力过大，且不可使用外力工具作用在手动机构上。

- The pneumatic actuator has undergone necessary performance testing before leaving the factory, and has been set according to the order requirements. In general, users can directly install it for use. The design of the bottom mounting hole complies with the ISO5211 standard, allowing for direct installation of the bracket.
- After unpackaging, it is necessary to check whether the product has been accidentally damaged and whether the accompanying parts are complete. Notably, after long-term storage, the product must receive comprehensive maintenance before being installed for use.
- Before installing the actuator and the valve, the model and specifications should be checked to see whether they conform to the required thrust of the valve.
- It is also necessary to check whether the flange size of the bracket connecting the actuator and the valve is qualified, and whether the installation space is sufficient.
- If a pneumatic/manual switching mechanism is selected, after the actuator is installed, the working status of the switching mechanism should be checked to see whether it matches the actual situation, thereby preventing misoperation. For valves with a manual operating mechanism, it is not allowed to switch between "pneumatic and manual" at any opening during the spring return (closing) or pneumatic opening (closing) of the valve.
- If a pneumatic/manual switching mechanism is selected, the residual gas in the cylinder should be emptied first using a solenoid valve (or control element) (in cases where there is residual gas in the cylinder) before operating with the handwheel. Pneumatic trial inspection can be conducted only after confirming the correctness of manual operation.
- If a pneumatic/manual switching mechanism is selected, excessive force should not be exerted when operating with the handwheel, and external tools should not be used to act on the mechanism.



MAINTENANCE AND MAINTENANCE 维护和保养

- 要保证整个气动仪表控制系统处于正常工作状态，需每月检验气动执行机构应不少于一次，每年检修一次，保持执行机构外表清洁、无粉尘堆积、无油污沾染；
- 要保证执行机构密封良好，各密封面、点应完整牢固、严密无损；
- 定期检查气缸和空气管系的各部位，定期检查各管接着部分有无漏气，保持气源压力正常，气管不允许有凹陷，保持畅通；
- 检修时，应检查并清洗缸套及活塞，如发现O型圈密封有损伤或老化时应及时更换，装配时应在气缸壁和密封圈沟槽内涂润滑油，并注意缓慢将活塞推入气缸，以免损坏O型密封圈；
- 对带有气/手动切换装置的成套气动阀门，手动操作机构应润滑良好，启闭灵活，对切换轴上的轴承等传动部位每三个月或半年加一次足够的润滑油脂；
- 气源压力应在0.3-0.8MPA(G)范围内，气源应经除尘、脱水等净化处理。定期对执行器配套的空气过滤器进行放水、排污，以免进入电磁阀和执行器，影响正常工作；
- 电气部分的信号应无缺相、短路、断路故障、外壳防护接头连接应紧实、严密，防止水与灰尘的侵蚀；
- 填料压盖不允许歪斜，避免对阀杆部位摩擦而咬死，造成执行器不灵或不能正常工作。

- To keep the entire pneumatic instrument control system in normal working state, it is necessary to inspect the pneumatic actuator at least once a month, provide it with overhaul once a year, and maintain a clean appearance without contamination by dust or oil stains.
- The actuator should be well sealed, and all sealing surfaces and points should be intact, firm, and tight without damage.
- It is also necessary to regularly check all parts of the cylinder and the air pipe system, especially the connections between pipes, for any air leakage, and to maintain a normal air supply pressure. All air pipes must be kept smooth, without any sinking.
- During overhaul, the cylinder jacket and the piston should be inspected and cleaned. If an O-ring seal is found to be damaged or aged, it should be replaced without delay. During assembly, lubricating oil should be applied to the cylinder wall and the sealing ring groove, and the piston should be carefully pushed into the cylinder to avoid damage to the O-ring seal.
- For complete sets of pneumatic valves with a pneumatic/manual switching mechanism, the manual operating mechanism should be well lubricated to allow for flexible opening/closing. Sufficient lubricating grease should be applied to the transmission parts (such as bearings) on the switching shaft every three months or six months.
- Air supply pressure should be within the range of 0.3-0.8 MPA (G), and air supply should be purified by means of dust removal, dehydration, etc. The supporting air filter of the actuator should be regularly drained and washed to prevent dirt from entering the solenoid valve and the actuator and affecting their normal service.
- The signal of the electrical part should be free from phase loss, short circuit, and open circuit faults. The protective joint of the casing should be tight enough to prevent water and dust erosion.
- The packing gland should not be tilted, otherwise, it may cause the seizure of the valve stem due to friction, resulting in actuator failure.

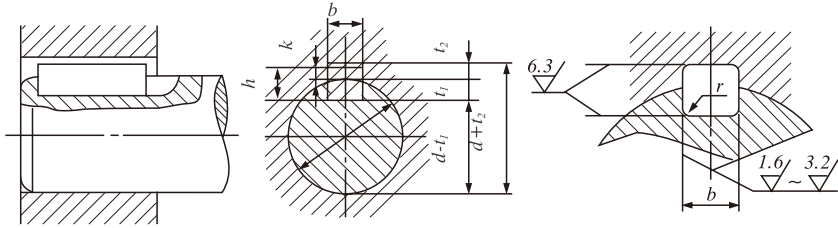


STANDARD ON KEYS

键的标准

平键键槽的尺寸与公差(摘自GB/T1095—2003)
本标准规定了宽度 $b=2\sim 100\text{mm}$ 的普通型导向型平键键槽的剖面尺寸

Dimensions and tolerances of flat keyways (excerpted from GB/T1095-2003)
This standard specifies the surface dimensions of parallel oriented flat keyways with a width of $b=2\sim 100\text{mm}$.



轴的公称直径 nominal diameter of the shaft d	键尺寸 Key size $d \times h$	键槽 Keyway										半径 Radius r		
		基本尺寸 Size	宽度 b						深度 Degree					
			极限偏差 Limit deviation						轴 Axle t_1		毂 Hub t_2			
			正常连接 Normal connection	紧连接 Stressed joint	松连接 Loose connection	基本尺寸 Size	极限偏差 Error	基本尺寸 Size	极限偏差 Error	基本尺寸 Size	极限偏差 Error			
6~8	2x2	2	-0.004		-0.006	+0.025	+0.060	1.2	+0.1	1.0	+0.1	0.08	0.16	
8~10	3x3	3	-0.029	± 0.0125	-0.031	0	+0.020	1.8	0	1.4	0			
10~12	4x4	4	0	± 0.015	-0.012	+0.030	+0.078	2.5	+0.1	1.8	+0.1	0.08	0.16	
12~17	5x5	5	-0.030		-0.042	0	+0.030	3.0	0	2.3	0			
17~22	6x6	6	0	± 0.018	-0.015	+0.036	+0.098	3.5	+0.2	2.8	+0.2	0.16	0.25	
22~30	8x7	8	-0.036		-0.051	0	+0.040	4.0	0	3.3	0			
30~38	10x8	10	0	± 0.0215	-0.018	+0.043	+0.120	5.0	+0.2	3.3	+0.2	0.25	0.40	
38~44	12x8	12	-0.043		-0.061	0	+0.050	5.0	0	3.3	0			
44~50	14x9	14	0	± 0.026	-0.022	+0.052	+0.052	5.5	+0.2	3.8	+0.2	0.25	0.40	
50~58	16x10	16	-0.043		-0.074	0	+0.065	6.0	0	4.3	0			
58~65	18x11	18	0	± 0.031	-0.026	+0.062	+0.062	7.0	+0.3	4.4	+0.3	0.40	0.60	
65~75	20x12	20	-0.052		-0.088	0	+0.080	7.5	0	4.9	0			
75~85	22x14	22	0	± 0.037	-0.032	+0.074	+0.074	9.0	+0.3	5.4	+0.3	0.40	0.60	
85~95	25x14	25	-0.052		-0.106	0	+0.100	9.0	0	5.4	0			
95~110	28x16	28	0	± 0.0435	-0.032	+0.074	+0.074	10.0	+0.3	6.4	+0.3	1.20	1.60	
110~130	32x18	32	-0.062		-0.088	0	+0.080	11.0	0	7.4	0			
130~150	36x20	36	0	± 0.037	-0.032	+0.074	+0.074	12.0	+0.3	8.4	+0.3	0.70	1.00	
150~170	40x22	40	-0.062		-0.088	0	+0.080	13.0	0	9.4	0			
170~200	45x25	45	0	± 0.037	-0.032	+0.074	+0.074	15.0	+0.3	10.4	+0.3	1.20	1.60	
200~230	50x28	50	-0.074		-0.106	0	+0.100	17.0	0	11.4	0			
230~260	56x32	56	0	± 0.037	-0.032	+0.074	+0.074	20.0	+0.3	12.4	+0.3	2.00	2.50	
260~290	63x32	63	-0.074		-0.106	0	+0.100	20.0	0	12.4	0			
290~330	70x36	70	0	± 0.037	-0.032	+0.074	+0.074	22.0	+0.3	14.4	+0.3	2.00	2.50	
330~380	80x40	80	-0.074		-0.106	0	+0.100	22.0	0	14.4	0			
380~440	90x45	90	0	± 0.0435	-0.037	+0.087	+0.087	25.0	+0.3	15.4	+0.3	2.00	2.50	
440~500	100x50	100	-0.087		-0.124	0	+0.120	28.0	0	17.4	0			

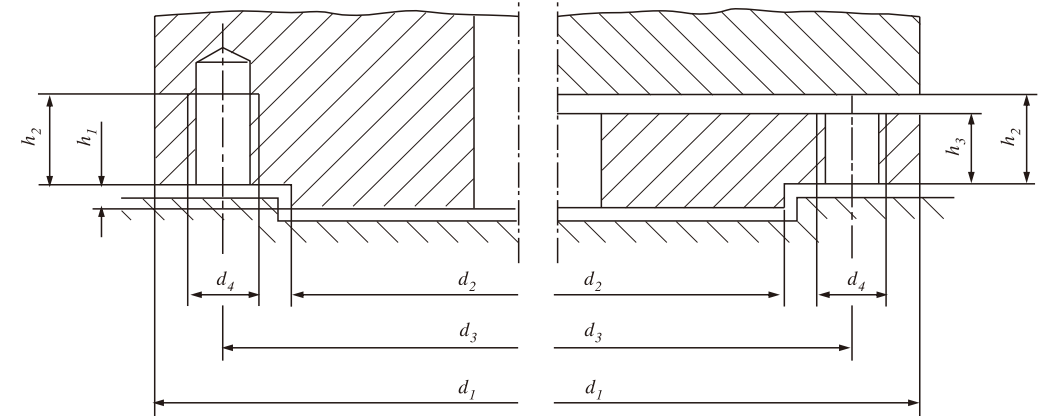
- 注: 1.导向平键的轴槽与轮毂槽用较松键连接的公差。
2.除轴伸外, 在保证传递所需转矩条件下, 允许采用较小截面的键, 但 t_1 和 t_2 的数值必要时应重新计算, 使键侧与轮毂槽接触高度各为 $h/2$ 。
3.平键轴槽的长度公差用H14。
4.键槽的对称度公差: 为便于装配, 轴槽及轮毂槽对称度公差根据具体要求, 一般可 GB/T 1184-1996 中附表对称度公差7~9级选取。键槽(轴槽及轮毂槽)的对称度公差的公称尺寸是指键宽 b 。
5.表中 $(d-t_1)$ 和 $(d+t_2)$ 两组组合尺寸的极限偏差按相应的 t_1 和 t_2 的极限偏差选取, 但 $(d-t_1)$ 的极限偏差值应取负号。
6.表中“轴的公称直径 d ”是沿用旧标准(1979年)的数据, 仅供设计者初选时参考, 然后根工况验算确定键的规格。

- Note: 1. The shaft grooves and hub grooves of oriented flat keys should adopt the tolerance for loose keys.
2. Keys with smaller cross-sections are allowed under the premise of guaranteeing the required torque transmission, except for shaft extension. However, the values of t_1 and t_2 should be recalculated if necessary, so that the contact height between the key side and the hub groove is $h/2$ in each case.
3. The length tolerance of flat key ways is H14.
4. Symmetry tolerance of key ways: For the convenience of assembly, the symmetry tolerance of shaft grooves and hub grooves for the shaft and the hub axis, depending on specific requirements, can adopt the grade 7-9 symmetry tolerances in the attached table of GB/T 1184-1996. The nominal size of the symmetry tolerance of key ways (shaft grooves and hub grooves) refers to key width b .
5. The limit deviations of the combined dimensions of $(d-t_1)$ and $(d+t_2)$ in the table are set according to the corresponding limit deviations of t_1 and t_2 , but the limit deviation value of $(d-t_1)$ should be negative.
6. The “nominal diameter d of the shaft” in the table adopts the data from the old standard (1979) and is only for reference during initial selection. The specifications of the key are determined by checking working conditions.

STANDARD ON CONNECTION FLANGE

连接法兰标准

BS EN ISO 5211:20:2017
ISO 52 11:2017(E)



法兰尺寸表 Flange size table

单位 Unit: mm

法兰型号 Flange model	尺寸 Dimensions							螺钉、螺柱或螺栓数量 Number of screws, studs, or bolts n
	d_1 min.	d_2^a	d_3	d_4	h_1 max.	h_2 min.	h_3 min.	
F03	Φ46	Φ25	Φ36	M5	3	8	5	4
F04	Φ54	Φ30	Φ42	M5	3	8	5	4
F05	Φ65	Φ35	Φ50	M6	3	90	6	4
F07	Φ90	Φ55	Φ70	M8	3	12	8	4
F10	Φ125	Φ70	Φ102	M10	3	15	10	4
F12	Φ150	Φ85	Φ125	M12	3	18	12	4
F14	Φ175	Φ100	Φ140	M16	4	24	16	4
F16	Φ210	Φ130	Φ165	M20	5	30	20	4
F25	Φ300	Φ200	Φ254	M16	5	24	16	8
F30	Φ350	Φ230	Φ298	M20	5	30	20	8
F35	Φ415	Φ260	Φ356	M30	5	45	30	8
F40	Φ475	Φ300	Φ406	M36	8	54	36	8
F48	Φ560	Φ370	Φ483	M36	8	54	36	12
F60	Φ686	Φ470	Φ603	M36	8	54	36	20
F80	Φ900	Φ670	Φ813	M42	10	63	42	20
F100	Φ1200	Φ870	Φ1042	M42	10	63	42	32