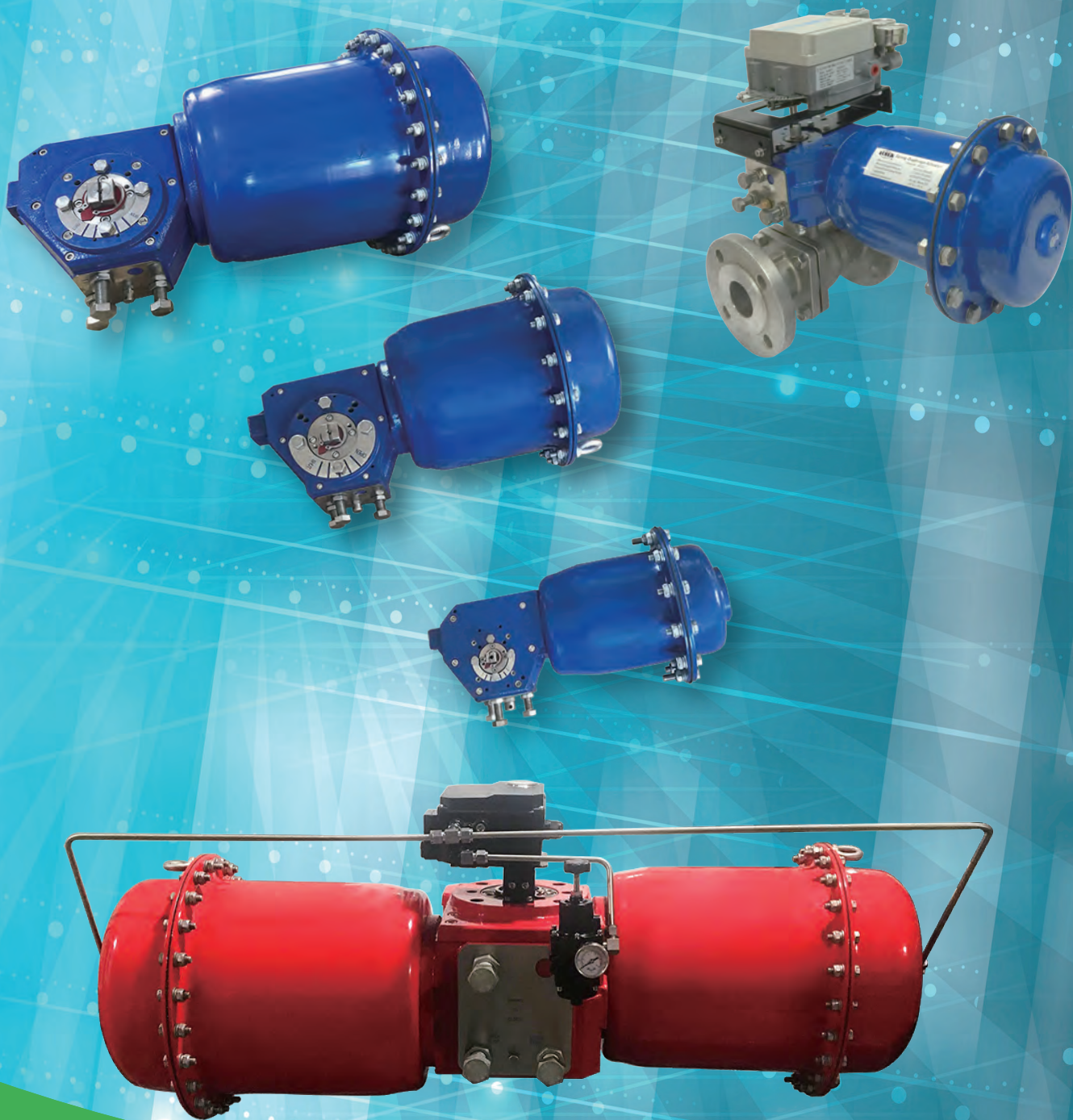




ACHEN[®]

ASD 系列弹簧薄膜执行器
ASD SERIES Spring-Diaphragm Actuators

ACHEM ASD

弹簧薄膜回转式执行器

SPRING-DIAPHRAGM ROTARY ACTUATORS

ACHEM ASD 系列弹簧薄膜回转式执行器，采用高端的弹簧薄膜技术和可靠的曲柄连杆机械原理，专为回转式阀门的自动化和高精密的阀位控制而研发生产。

ACHEM ASD 系列弹簧薄膜回转式执行器，即使在最低的供气压力 (1Bar) 下，也能通过气、水、基于矿物的液压流体介质来平稳运行。该执行器的工作温度可低至 -60°C (-76°F) 高达 170°C (338°F)。

Designed and developed specifically for quarter turn valves. The ACHM ASD Spring-Diaphragm Rotary Actuators were designed by using advanced spring-diaphragm technology that focuses on the crank-shaft and the connecting rod.

The ACHM ASD Spring-Diaphragm Rotary Actuators are designed to be used with minimal pressure when necessary and can be operated by air, water, mineral-based hydraulic fluid. Our housing and cover are constructed with a ductile iron / carbon steel casing that is coated with a polyester powder coating. Our independent media room is equipped with a Buna-N diaphragm reinforced with polyamine fabric. These actuators are designed to work in temperatures as low as -60°C (-76°F) and as high as 170°C (338°F).



主要特点 MAIN FEATURES



ISO5211法兰标准

ACHEM ASD 系列弹簧薄膜回转式执行器采用 ISO5211 国际标准与行业标准相结合的法兰安装尺寸设计，可直接安装在各种类型的阀门顶部。

Namur 标准连接

ACHEM ASD 系列弹簧薄膜回转式执行器的附件连接尺寸均按 Namur 标准设计，可与电磁阀、限位开关、定位器等控制附件直接连接。

多样化的驱动轴套

ACHEM ASD 系列弹簧薄膜回转式执行器引入可装拆的驱动轴套技术，能与各种类型驱动阀杆（轴头）的阀门直接进行驱动连接。

摩擦系数低工作寿命长

ACHEM ASD 系列弹簧薄膜回转式执行器采用含油轴承和聚乙烯轴承导向式的隔膜滑行设计技术，有助于降低摩擦系数，确保动作顺畅平稳，延长使用寿命。

可逆的失气开、关调节

ACHEM ASD 系列弹簧薄膜回转式执行器采用连接尺寸的对称设计，确保用户在现场就可以快速方便的实现失气关和失气开的转换。



Universal Mounting Pads – Direct Mount

The ACHAM ASD series offer a combination of different mounting pads that allow you to directly replace existing Spring-Diaphragm Actuator or mount directly to new and existing quarter turn valves.

Namur Mount

The ACHAM ASD Spring-Diaphragm Rotary Actuators are designed to incorporate namur mounting for solenoids, limit switches and positioners.

Multiple Drive Bushing (Removable & Replaceable)

The ACHAM ASD Spring-Diaphragm Rotary Actuators feature removable drive bushings which allow you to mount our actuators to a number of different new or existing valve stem configurations in the field for existing valves or for new valve applications.

High Cycle Life Design & Low-Friction

The ACHAM ASD Spring-Diaphragm Rotary Actuators feature a rolling diaphragm design with a one piece diaphragm retainer and UMW Polyethylene bearing which helps to obtain longevity of the life cycle and exceptionally smooth actuation due to the low-friction that is produced during operation.

Reversible in Field Fail Open or Fail Closed Option

The ACHAM ASD Spring-Diaphragm Rotary Actuators can be quickly and easily changed to the fail open or fail closed positions in the field if necessary.

扭矩范围

ACHEM ASD 系列弹簧薄膜回转式执行器的弹簧回复扭矩范围可在17~1850Nm (150~16373 in.lbs) 之间选择。最大气动扭矩可达到 3500Nm (31009 in.lbs)

工作压力

ACHEM ASD 系列弹簧薄膜回转式执行器的工作压力可在 1.0bar ~ 6.2 bar (15 PSI ~ 90 PSI) 范围内选择。

工作介质

ACHEM ASD 系列弹簧薄膜回转式执行器的工作介质为气、水、基于矿物的液压流体。

行程调节

ACHEM ASD 系列弹簧薄膜回转式执行器具有双向可调限位装置，可使执行器在全开或全关位置进行 $< \pm 5^\circ$ 调节。

机械锁定

ACHEM ASD 系列弹簧薄膜回转式执行器在弹簧失效时可以被机械锁定。

耐腐蚀性

ACHEM ASD 系列弹簧薄膜回转式执行器的外部采用防紫外线的聚酯涂层，所有紧固件采用不锈钢材质，能在恶劣的环境中提供保护，提高耐腐蚀性和耐久性。我们也有聚四氟乙烯涂层可供选择。

免润滑油维护

ACHEM ASD 系列弹簧薄膜回转式执行器在出厂前已做润滑处理，机械转动部位采用含油轴承，在使用过程中无需进一步润滑。

Torque Ranges

The ACHAM ASD Spring-Diaphragm Rotary Actuators output torques range from 17 to 1850Nm (150 to 16373 in.lbs) depending on the actuator size and available supply pressure.

Supply Pressures

The ACHAM ASD Spring-Diaphragm Rotary Actuators can be operated with a number of different supply pressures ranging from 1.0 bar ~ 6.2 bar (15 PSI ~ 90 PSI).

Supply Media

The ACHAM ASD Spring-Diaphragm Rotary Actuators can be operated by air, water, mineral-based hydraulic fluid.

Travel Stops

The ACHAM ASD Spring-Diaphragm Rotary Actuators have double adjustable travel stops that allow our actuators to be adjusted to the fully open or the fully closed positions.

Mechanical Lockout Option

The ACHAM ASD Spring-Diaphragm Rotary Actuators can be locked in the spring failure mode.

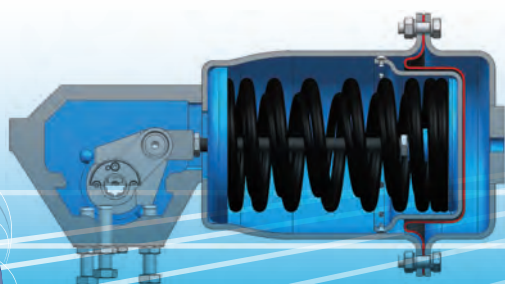
Corrosion Resistant

The ACHAM ASD Spring-Diaphragm Rotary Actuators come complete with stainless steel external fasteners which provide durability and protection in corrosive application and atmospheres. Our actuators have a UV polyester resistant coating and a PTFE coating is also available as an option.

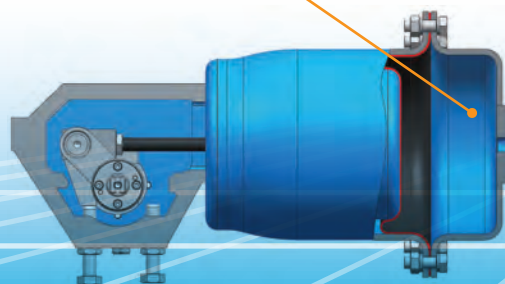
Maintenance Free Lubrication

The ACHAM ASD Spring-Diaphragm Rotary Actuators are lubricated at our factory during the time of production and not further lubrication is required during its life cycle.

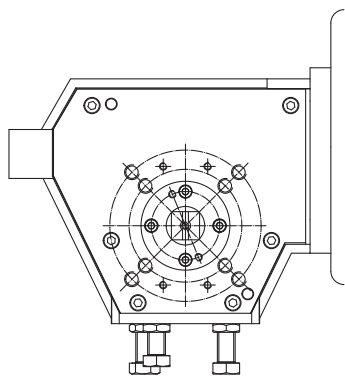
弹簧失效机械锁定模式
Mechanical Lock-Spring Failure Mode



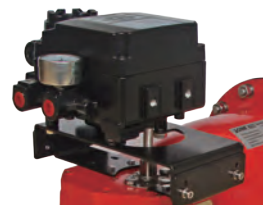
独立介质室
Independent Media Chamber



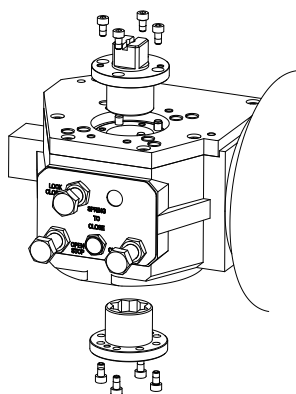
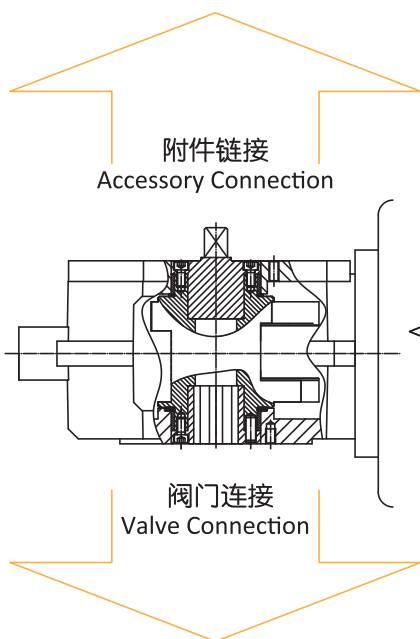
驱动轴套 Drive Bushings



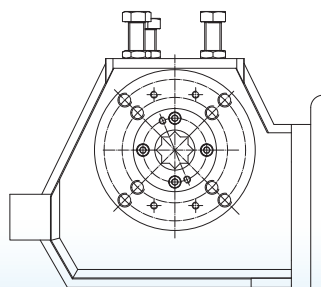
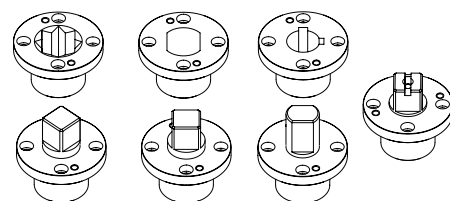
限位开关
Limit Switch



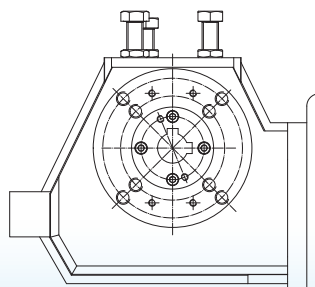
定位器
Positioner



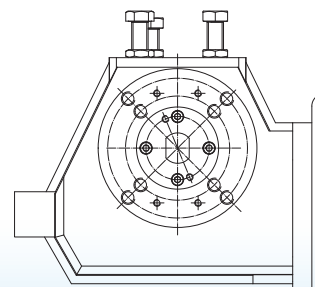
多样化的驱动轴套
Removable Drives



八角孔
Female Double Square

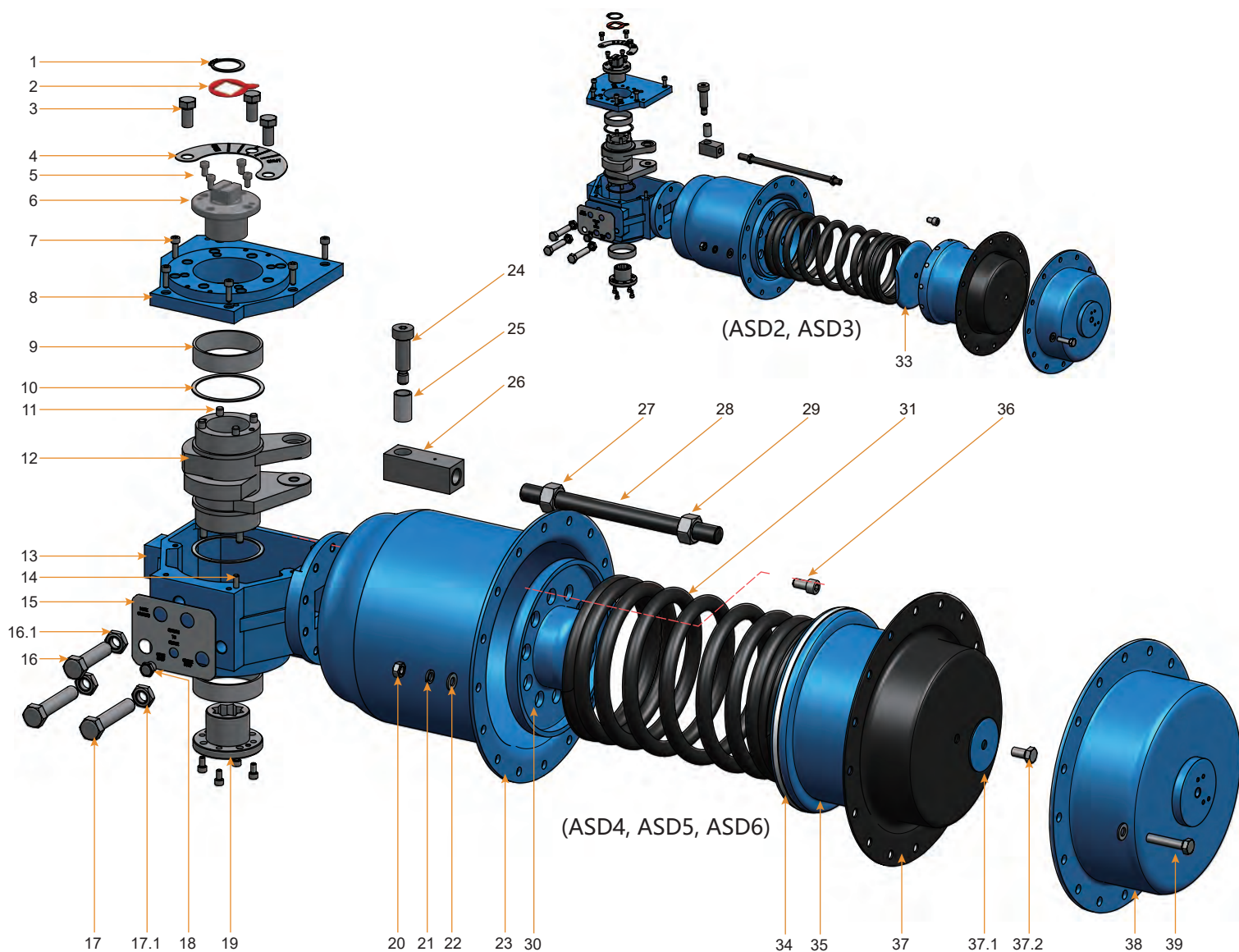


键槽孔
Female Keyed



双 D 孔
Female Double D

零件装配示意图
Exploded view



零件及材料

Bill of Material & Parts List

NO.	Part Name	Qty.			Material	Surface treatment
		ASD2/3	ASD4/5	ASD6		
1	Spring Ring 弹簧挡圈	1	1	1	Stainless Steel 304 304不锈钢	
2	Indicator Pointer 指示针	1	1	1	Stainless Steel 304 304不锈钢	
3	Hex Head Cap Screw 外六角螺钉	3	3	3	Stainless Steel 304 304不锈钢	
4	Indicator Plate 指示板	1	1	1	Stainless Steel 304 304不锈钢	
5	Socket Head Bush Screws 内六角圆柱头螺钉	8	8	8	Stainless Steel 304 304不锈钢	
6	Namur stem Namur 轴头	1	1	1	Carbon Steel 碳钢	Nickel coated chemically 镀镍
7	Socket Head Cap Screw 沉头螺钉	6	6	6	Stainless Steel 304 304不锈钢	
8	Cover 端盖	1	1	1	Carbon Steel 碳钢	polyester powder coated 聚酯粉末涂层
9	Driver Arm Bearing 驱动臂轴承	2	2	2	Stainless Steel w/ Acetal Lining 不锈钢w/ 乙缩醛衬层	
10	Thrust Bearing 止推轴承	2	2	2	Nylon 尼龙	
11	Cylindrical pin 定位销	8	8	8	Carbon Steel 碳钢	
12	Driver Arm 驱动臂	1	1	1	Ductile Iron 球墨铸铁	Nickel coated chemically 镀镍
13	Driver Housing 驱动壳体	1	1	1	Ductile Iron 球墨铸铁	Polyester powder coated 聚酯粉末涂层
14	Cylindrical pin 定位销	2	2	2	Stainless Steel 304 304不锈钢	
15	Nameplate 铭牌	1	1	1	Stainless Steel 304 304不锈钢	
16	Set Screw 定位螺丝	1	1	1	Stainless Steel 304 304不锈钢	
16.1	Hex Jam Nut 六角扁螺母	1	1	1	Stainless Steel 304 304不锈钢	
17	Stop screws 止动螺钉	2	2	2	Stainless Steel 不锈钢	
17.1	Hex Jam Nut 六角扁螺母	2	2	2	Stainless Steel 304 304不锈钢	
18	Breather 消声器	1	1	1	Stainless Steel 316 316不锈钢	
19	Drive bush 驱动轴套	1	1	1	Carbon Steel 碳钢	Nickel coated chemically 镀镍
20	Lock Nut 止动螺母	12	12	24	Stainless Steel 不锈钢	
21	Spring-washer 弹簧垫圈	12	12	24	Stainless Steel 不锈钢	
22	Gasket 垫圈	24	24	48	Stainless Steel 不锈钢	
23	Spring Housing 弹簧套	1	1	2	Carbon Steel 碳钢	Polyester powder coated 聚酯粉末涂层
24	Shoulder Screw 带肩螺钉	1	1	2	Carbon Steel (12.8) 碳钢(12.8)	
25	Clevis Bearing 叉头支撑	1	1	2	Stainless Steel w/ Acetal Lining 不锈钢w/ 乙缩醛衬层	
26	Clevis 叉头	1	1	2	Carbon Steel 碳钢	
27	Hex Jam Nut 六角扁螺母	1	1	2	Stainless Steel 304 304不锈钢	
28	Actuator Rod 执行机构杆	1	1	2	Carbon Steel 碳钢	
29	Hex Jam Nut 六角扁螺母	1	1	2	Carbon Steel 碳钢	
30	Spring Retainer 弹簧座	1	1	2	Carbon Steel 碳钢	Polyester powder coated 聚酯粉末涂层
31 / 32	Compression Springs 压缩弹簧	1	1	2	55Mn Spring Steel 55Mn 55Mn 弹簧钢	Polishing+capacitance coated 抛光+电容涂层
33	Spring Retainer Plate 弹簧座片	1	-	-	Carbon Steel 碳钢	Polyester powder coated 聚酯粉末涂层
34	Diaphragm Retainer Bearing Pins 轴承销	12	-	-	UHMW PE 超高分子聚乙烯	
34	Diaphragm Retainer Bearing 轴承圈	-	1	2	POM 聚甲醛	
35	Diaphragm Retainer 挡板	1	1	2	Carbon Steel 碳钢	Polyester powder coated 聚酯粉末涂层
36	Hex Head Cap Screw 六角螺钉	4	4	8	Carbon Steel 碳钢	
37	Diaphragm 膜片	1	1	2	NBR/Nylon66 Fabric Blend(-25°C~70°C) 丁腈橡胶/尼龙66织物混合(-25°C~70°C)	
	Diaphragm (optional) 膜片(可选)	1	1	2	L NBR/Nylon66 Fabric Blend(-40°C~70°C) 低温丁腈橡胶/尼龙66织物混合(-40°C~70°C)	
	Diaphragm (optional) 膜片(可选)	1	1	2	EPDM4/Polyester Fabric Blend(-15°C~170°C) EPDM4涤纶(-15°C~170°C)	
	Diaphragm (optional) 膜片(可选)	1	1	2	Composite silica/Nylon66 Fabric Blend(-60°C~70°C) 复合硅胶/尼龙66织物混合(-60°C~70°C)	
37.1	Retaining washer 定位垫圈	-	1	2	Stainless steel 不锈钢	
37.2	Hex head cap screw 六角螺钉	-	1	2	Stainless steel 不锈钢	
38	Diaphragm Cover 膜片端盖	1	1	2	Carbon Steel 碳钢	Polyester powder coated 聚酯粉末涂层
39	Hex Head Cap Screw 六角螺钉	12	12	24	Carbon Steel 碳钢	Darcolo Treatment

选型与订购

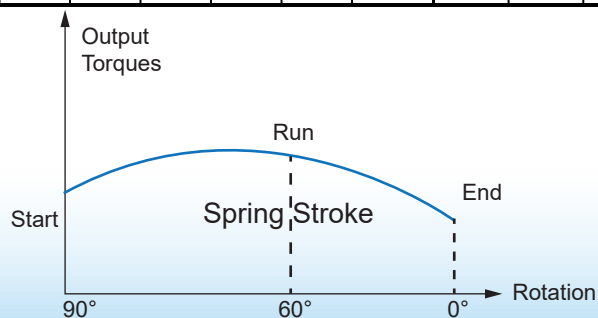
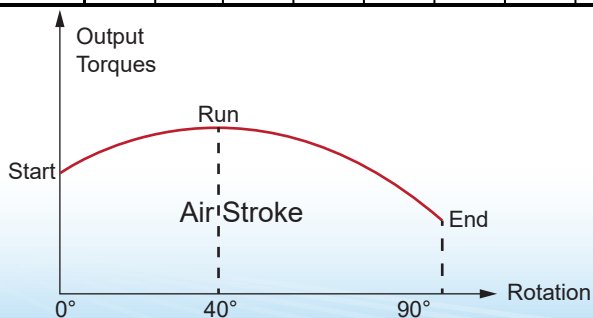
How To Order By Part Number

ASD	3	C	MI	FS	MN	T1
						环境温度 Environment Temperature T1: -25℃ ~ 70℃ (-13°F ~ 158°F) T2: -40℃ ~ 70℃ (-40°F ~ 158°F) T3: -15℃ ~ 170℃ (5°F ~ 338°F) T4: -60℃ ~ 70℃ (-78°F ~ 158°F)
						顶部驱动 Top Drive Namur轴头 MN-Namur Stem 八角孔 FS-Female Star (Double Square) 键槽孔 FK-Female Keys 双D形孔 FD-Female Double D 四方轴头 MQ-Male Square 星形轴头 MT/JT-Male Star (ISO 5211 Star / JB Star) 双D形轴头 MD-Male Double D
						底部驱动 Bottom Drive 八角孔 FS-Female Star (Double Square) 键槽孔 FK-Female Keys 双D形孔 FD-Female Double D 四方轴头 MQ-Male Square 星形轴头 MT/JT-Male Star (ISO 5211 Star / JB Star) 双D形轴头 MD-Male Double D Namur轴头 MN-Namur Stem
						法兰安装结构 Flange Mount Configuration ISO 5211标准安装 MI - ISO 5211 Mount ISO + Jb标准安装 MJ - ISO + Jb Mount
						弹簧配置 Spring Configurations A - 建议工作压力为 15–30 / 1.0–2.0 (psi / bar) recommended supply media pressure at 15–30 / 1.0–2.0 (psi / bar) B1- 建议工作压力为 30–50 / 2.0–3.4 (psi / bar) recommended supply media pressure at 30–50 / 2.0–3.4 (psi / bar) B2- 建议工作压力为 50–70 / 3.4–4.8 (psi / bar) recommended supply media pressure at 50–70 / 3.4–4.8 (psi / bar) C - 建议工作压力为 60–80 / 4.1–5.5 (psi / bar) recommended supply media pressure at 60–80 / 4.1–5.5 (psi / bar) D - 建议工作压力为 70–90 / 4.8–6.2 (psi / bar) recommended supply media pressure at 70–90 / 4.8–6.2 (psi / bar) E - 建议工作压力为 80–90 / 5.5–6.2 (psi / bar) recommended supply media pressure at 80–90 / 5.5–6.2 (psi / bar)
						执行器尺寸 Actuator Size 2-弹簧回复最大输出扭矩 797 / 90 (in · lbs / N · m) Maximum spring return output torque 797 / 90 (in·lbs / N·m) 3-弹簧回复最大输出扭矩 1646 / 186 (in · lbs / N · m) Maximum spring return output torque 1646 / 186 (in·lbs / N·m) 4-弹簧回复最大输出扭矩 2965 / 335 (in · lbs / N · m) Maximum spring return output torque 2965 / 335 (in·lbs / N·m) 5-弹簧回复最大输出扭矩 7080 / 800 (in · lbs / N · m) Maximum spring return output torque 7080 / 800 (in·lbs / N·m) 6-弹簧回复最大输出扭矩 19470 / 2200 (in · lbs / N · m) Maximum spring return output torque 19470 / 2200 (in·lbs / N·m)
						Achem 弹簧薄膜回转式执行器 Achem Spring-Diaphragm Rotary Actuator

*具体选型根据扭矩表来选 The model selection should still refer to the actuator's output torques.

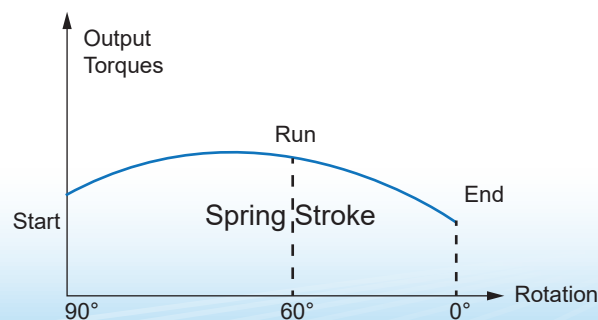
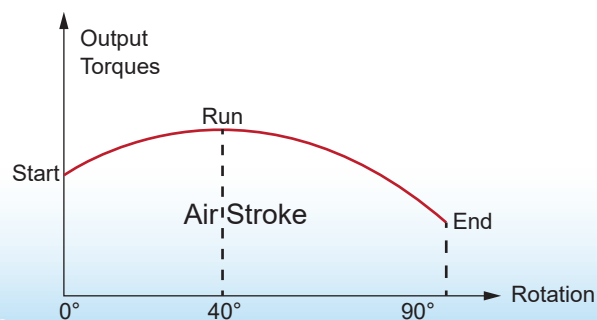
ASD 执行器输出扭矩 (Nm) ASD Actuator Output Torques

型号 Size	气源压力 Air Stroke at Pressure (BAR)															弹簧回复 Spring Stroke		
	1			1.3			2			2.8			3.4			Start (90°)	Run (60°)	End (0°)
	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)			
ASD2A	25	33	10	45	53	27	95	100	69							34	39	17
ASD2B1							55	37	8	80	90	42	110	129	68	90	105	48
ASD2B2													140	141	35	130	149	65
ASD2C																119	144	75
ASD2D																144	174	90
ASD3A	60	68	22	100	114	49	210	221	116							85	97	41
ASD3B1							110	91	30	180	203	100	260	287	160	180	211	100
ASD3B2													240	223	110	250	291	134
ASD3C																320	369	162
ASD3D																394	448	186
ASD4B1							170	193	80	340	407	250	460	568	370	310	372	190
ASD4B2													476	429	139	569	629	226
ASD4C																657	738	290
ASD4D																748	843	335
ASD5B1							350	305	105	626	724	368	848	1038	590	672	806	414
ASD5B2													800	904	350	958	1135	556
ASD5C																1029	1241	650
ASD5D																1333	1590	800
ASD6B1							545	639	182	1244	1485	800	1583	1998	1250	1200	1466	800
ASD6B2													1300	1518	650	1886	2236	1100
ASD6C																2363	2811	1400
ASD6D																2768	3275	1600
ASD6E																3100	3500	2200



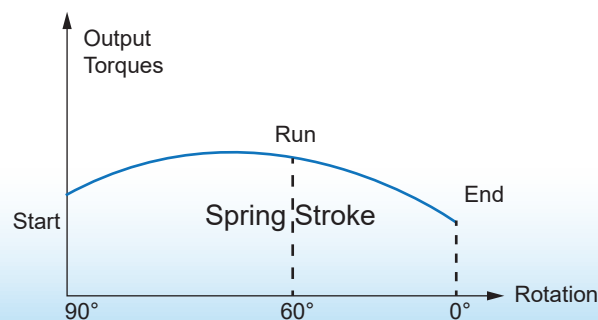
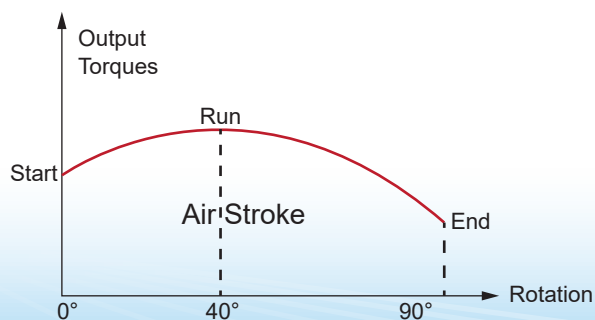
ASD 执行器输出扭矩 (Nm) ASD Actuator Output Torques

型号 Size	气源压力 Air Stock at Pressure (BAR)												弹簧回复 Spring Stock		
	4.1			4.8			5.5			6.2			Start (90°)	Run (60°)	End (0°)
	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)			
ASD2A													34	39	17
ASD2B1													90	105	48
ASD2B2	170	198	68	220	254	100							130	149	65
ASD2C	132	144	50	154	187	79	187	230	108				119	144	75
ASD2D				148	185	64	180	217	92	213	261	120	144	174	90
ASD3A													85	97	41
ASD3B1													180	211	100
ASD3B2	280	323	179	370	422	247							250	291	134
ASD3C	270	288	108	350	393	175	440	498	248				320	369	162
ASD3D				302	300	104	378	404	171	508	517	240	394	448	186
ASD4B1													310	372	190
ASD4B2	654	671	276	840	921	420							569	629	226
ASD4C	685	691	250	826	919	400	1092	1165	552				657	738	290
ASD4D				697	696	214	886	941	369	1105	1156	488	748	843	335
ASD5B1													672	806	414
ASD5B2	1100	1302	630	1400	1701	930							958	1135	556
ASD5C	826	1137	560	1290	1586	865	1581	1994	1150				1029	1241	650
ASD5D				1056	1213	760	1571	1852	1080	1773	2070	1330	1333	1590	800
ASD6B1													1200	1466	800
ASD6B2	1886	2147	1200	2502	3038	1800							1886	2236	1100
ASD6C	1523	1589	1100	2267	2550	1700	2933	2870	2200				2363	2811	1400
ASD6D				1765	2773	1500	2800	3282	2000	3544	4272	2700	2768	3275	1600
ASD6E							2400	2700	1100	3000	3500	1600	3100	3500	2200



ASD 执行器输出扭矩 (in.lbs) ASD Actuator Output Torques

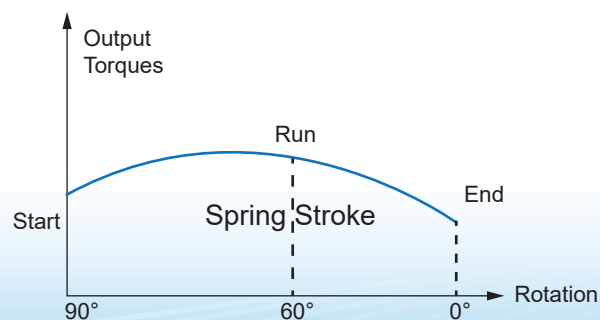
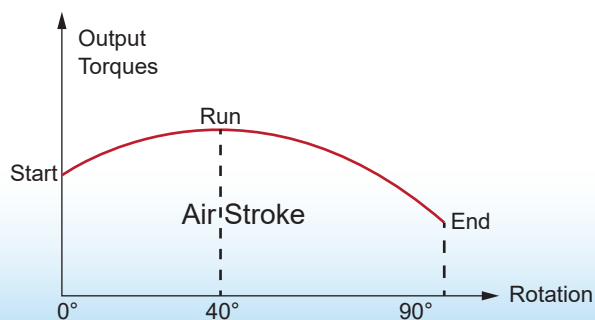
型号 Size	气源压力 Air Strock at Presure (PSI)															弹簧回复 Spring Strock		
	15			20			30			40			50			Start (90°)	Run (60°)	End (0°)
	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)			
ASD2A	229	302	92	423	498	254	870	916	632							301	345	150
ASD2B1							504	339	73	698	785	366	987	1158	610	797	929	425
ASD2B2													1257	1266	314	1151	1319	575
ASD2C																1053	1274	664
ASD2D																1274	1540	797
ASD3A	549	623	201	939	1070	460	1923	2023	1062							752	858	363
ASD3B1							1007	833	275	1569	1770	872	2334	2576	1436	1593	1867	885
ASD3B2													2154	2002	987	2213	2575	1186
ASD3C																2832	3266	1434
ASD3D																3487	3965	1646
ASD4B1							1556	1767	732	2965	3549	2180	4129	5098	3321	2744	3292	1682
ASD4B2													4272	3851	1248	5036	5567	2000
ASD4C																5814	6531	2567
ASD4D																6620	7461	2965
ASD5B1							3204	2792	961	5458	6313	3209	7611	9317	5296	5947	7133	3664
ASD5B2													7181	8114	3141	8478	10045	4921
ASD5C																9107	10983	5753
ASD5D																11797	14072	7080
ASD6B1							4990	5850	1666	10847	12948	6975	14208	17933	11220	10620	12974	7080
ASD6B2													11668	13625	5834	16691	19789	9735
ASD6C																20913	24877	12390
ASD6D																24497	28984	14160
ASD6E																27435	30975	19470



ASD 执行器输出扭矩 (in.lbs)

ASD Actuator Output Torques

型号 Size	气源压力 Air Strock at Presure (PSI)												弹簧回复 Spring Strock		
	60			70			80			90					
	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (0°)	Run (40°)	End (90°)	Start (90°)	Run (60°)	End (0°)
ASD2A													301	345	150
ASD2B1													797	929	425
ASD2B2	1518	1769	607	1958	2261	890							1151	1319	575
ASD2C	1179	1286	447	1371	1664	703	1660	2042	959				1053	1274	664
ASD2D				1317	1647	570	1598	1926	817	1887	2312	1063	1274	1540	797
ASD3A													752	858	363
ASD3B1													1593	1867	885
ASD3B2	2501	2885	1599	3293	3756	2199							2213	2575	1186
ASD3C	2412	2572	965	3115	3498	1558	3906	4421	2202				2832	3266	1434
ASD3D				2688	2670	926	3356	3587	1518	4501	4581	2126	3487	3965	1646
ASD4B1													2744	3292	1682
ASD4B2	5841	5993	2465	7477	8198	3738							5036	5567	2000
ASD4C	6118	6172	2233	7352	8180	3560	9694	10343	4901				5814	6531	2567
ASD4D				6204	6195	1905	7866	8354	3276	9790	10242	4324	6620	7461	2965
ASD5B1													5947	7133	3664
ASD5B2	9825	11629	5627	12461	15140	8278							8478	10045	4921
ASD5C	7378	10156	5002	11482	14117	7699	14036	17702	10209				9107	10983	5753
ASD5D				9399	10797	6765	13947	16442	9588	15709	18340	11784	11797	14072	7080
ASD6B1													10620	12974	7080
ASD6B2	16846	19177	10718	22270	27041	16022							16691	19789	9735
ASD6C	13603	14193	9825	20178	22697	15131	26038	25479	19531				20913	24877	12390
ASD6D				15710	24682	13351	24858	29137	17755	31399	37849	23922	24497	28984	14160
ASD6E							21307	23970	9766	26580	31009	14176	27435	30975	19470



技术参数

Technical Specifications

执行器 Actuator Size	空气量要求 Air Volume Requirements		
	总体积(L) Total volume(L)	换气体积(L) Swept volume(L)	有效薄膜面积 (cm ²) Effective Diaphragm Area(cm ²)
ASD-2	1.57 (96 in ³)	1.08 (66 in ³)	155 (24 in ²)
ASD-3	3.13 (191 in ³)	2.18 (133 in ³)	245 (38 in ²)
ASD-4	6.03 (368 in ³)	4.34 (265 in ³)	387 (60 in ²)
ASD-5	11.72 (715 in ³)	8.7 (531 in ³)	619 (96 in ²)
ASD-6	23.44 (1430 in ³)	17.4 (1062 in ³)	1238 (192 in ²)

执行器 Actuator Size	运行速度 (s)* Operating Speed (s)*		重量 (kg/lb) WT (kg/lb)
	空气行程 Air travel	弹簧行程 Spring travel	
ASD-2C	1.6	1.0	21/46
ASD-3C	3.4	1.6	35/77
ASD-4C	6.0	3.3	58/128
ASD-5C	8.0	6.3	101/222
ASD-6C	8.0	6.3	201/442

* 在输入1387L/M流量、4.8Bar的空气压力下得出的测试数据。

* Testing operated under 4.8 Bar air pressure with 1387 L/M flow capacity for input and exhausted.

工作条件

Working conditions

最大工作压力: 7 bar (100 PSI)

温度范围: -25°C ~ 70°C (-13°F ~ 158°F)

可选温度范围: -40°C ~ 70°C (-40°F ~ 158°F)

可选温度范围: -15°C ~ 170°C (5°F ~ 338°F)

可选温度范围: -60°C ~ 70°C (-78°F ~ 158°F)

行程调节: 在开或关位, 可 < ±5° 的行程微调

工作介质: 气、水、基于矿物的液压流体。

Maximum Operating Pressure: 7 bar (100 PSI)

Temperature Rating: -25°C to 70°C (-13°F to 158°F)

Optional Temperature Rating: -40°C to 70°C (-40°F to 158°F)

Optional Temperature Rating: -15°C to 170°C (5°F to 338°F)

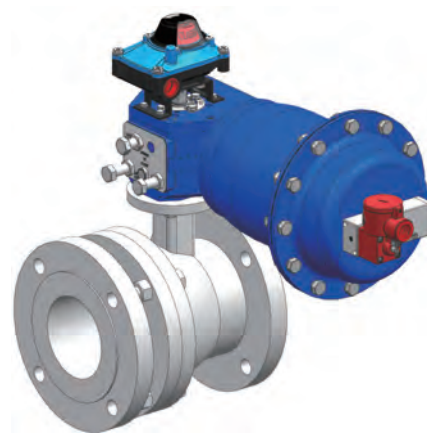
Optional Temperature Rating: -60°C to 70°C (-78°F to 158°F)

Rotation Adjustment: < ±5° adjustment at open or closed positions.

Supply Media: Air, water, mineral-based hydraulic fluid.

*采用大流量的电磁阀可增加执行器的运行速度。在不同的条件下, 实际运作时间可能会有所不同。您可以根据需要向我们工厂咨询。

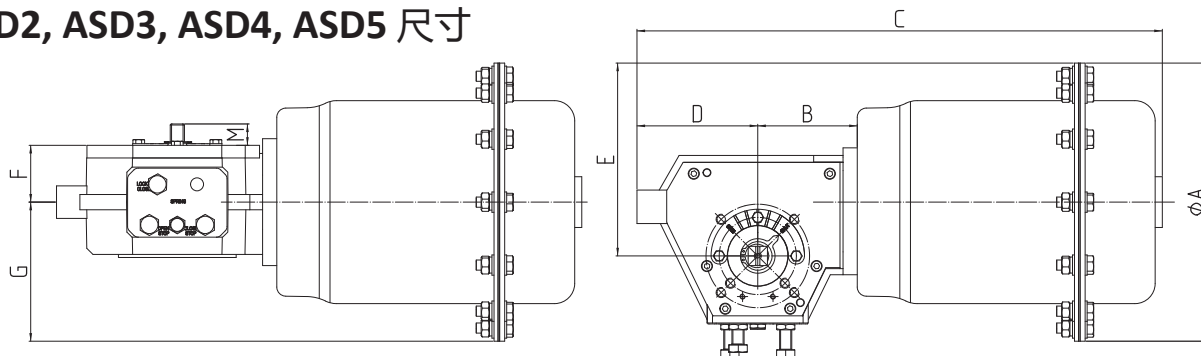
*Larger solenoid pilot valves may be used to increase operating speeds. Actual times may vary with different applications. Please consult the factory for more specific details based on application requirements.



外形尺寸 Dimension

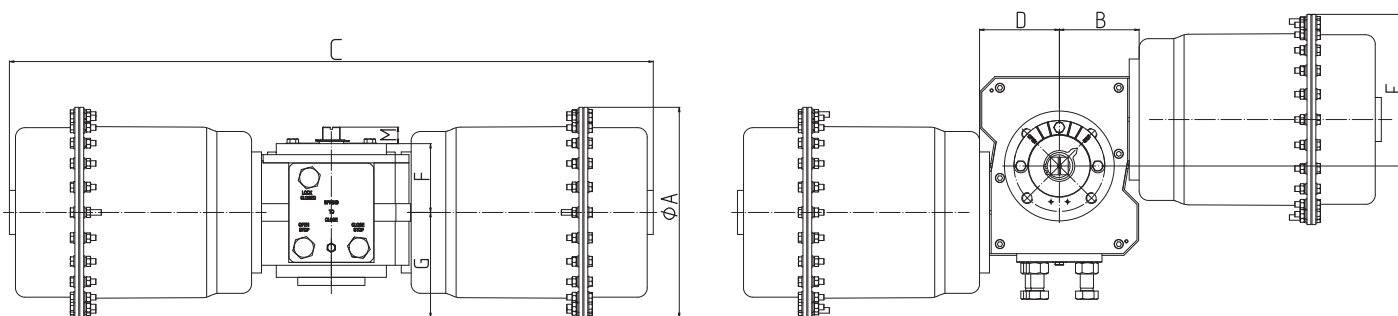
ASD2, ASD3, ASD4, ASD5 dimensions

ASD2, ASD3, ASD4, ASD5 尺寸



ASD6 dimensions

ASD6 尺寸

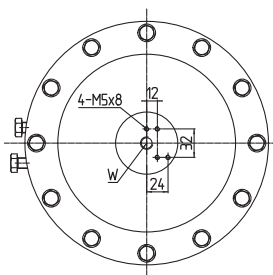


Actuator Size	相关尺寸 Approximate dimensions (mm)							
	ØA	B	C	D	E	F	G	M
ASD-2	227	75	440	99	148	51	114	20
ASD-3	274	84	527	118	190	56	137	20
ASD-4	320	92	593	140	216	71	160	30
ASD-5	382	113	731	160	261	83	191	30
ASD-6	382	113	1142	131	261	132	191	30

Size 型号	相关尺寸 Approximate dimensions (in)							
	ØA	B	C	D	E	F	G	M
ASD-2	8.94	2.95	17.32	3.90	5.83	2.01	4.49	0.8
ASD-3	10.79	3.31	20.74	4.65	7.48	2.20	5.39	0.8
ASD-4	12.60	3.62	23.35	5.51	8.50	2.80	6.30	1.18
ASD-5	15.04	4.45	28.78	6.30	10.28	3.27	7.52	1.18
ASD-6	15.04	4.45	44.96	5.16	10.28	5.20	7.52	1.18

气孔尺寸

Air port and Namur connection



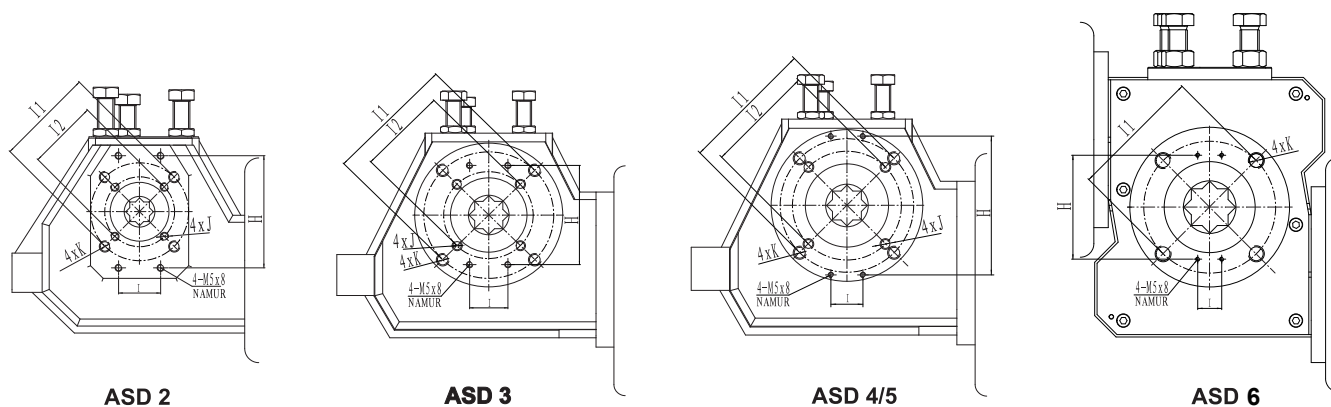
Actuator 执行器	气孔 (W) Air Port (W)
ASD-2	3/8 " or 1/4" FNPT NAMUR and 1/2" FNPT on request"
ASD-3	3/8 " or 1/4" FNPT NAMUR and 1/2" FNPT on request"
ASD-4	3/8 " or 1/4" FNPT NAMUR and 1/2" FNPT on request"
ASD-5	3/8 " or 1/4" FNPT NAMUR and 1/2" FNPT on request"
ASD-6	3/8 " or 1/4" FNPT NAMUR and 1/2" FNPT on request"

安装尺寸

Mounting Dimensions

ACHEM ASD 弹簧薄膜回转式执行器的法兰连接尺寸按ISO5211标准和JB行业标准组合设计，附件连接尺寸采用NAMUR标准。

The ACHAM ASD Spring-Diaphragm Rotary Actuator mounting dimensions are made to ISO 5211 standards and all our actuators come with Namur mounting pads as a standard.



单位 Unit: in (mm)

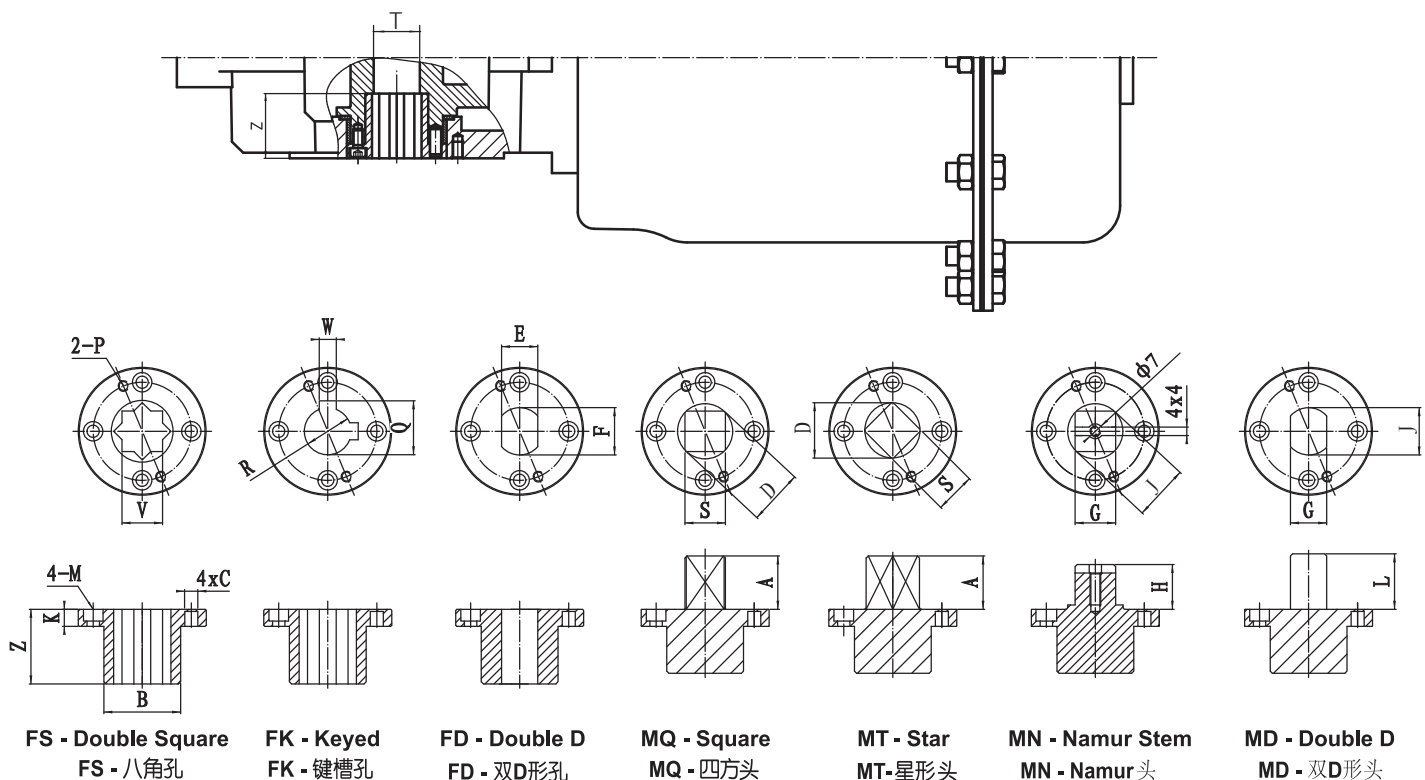
执行器 Actuator	ISO 5211 标准 ISO 5211 Mount					Namur标准 (VDI/VDE 3845) Namur (VDI/VDE 3845)	
	ØI1	K	ØI2	J	Flange Mount Configuration	H	I
ASD2	2.76 (F07)	M8X13	1.97 (F05)	M6X10	F05 + F07	3.15 (80)	1.18 (30)
ASD3	4.02 (F10)	M10X16	2.76 (F07)	M8X13	F07 + F10	3.15 (80)	1.18 (30)
ASD4	4.92 (F12)	M12X20	4.02 (F10)	M10X16	F10 + F12	5.12 (130)	1.18 (30)
ASD5	5.51 (F14)	M16X25	4.02 (F10)	M10X16	F10 + F14	5.12 (130)	1.18 (30)
ASD6	6.50 (F16)	M20X25	-	-	F16	5.12 (130)	1.18 (30)

驱动轴套 *

Bushing Dimensions *

驱动轴套规格有键槽、双D、八角、四方、星形、Namur轴套。

Drive bushings are available in keyed, double D, female double square, male square, star and namur mount.



单位 Unit: in (mm)

型号 Size	Female drive 驱动轴孔						Male drive 驱动轴头						
	八角孔 Double Square (FS)	键槽孔 Keys (FK)			双D型孔 Double D (FD)		四方头/ISO 5211星形头 Square / ISO 5211 Star (MQ / MT)			Namur头/双D型头 Namur / Double D (MN / MD)			
	V	R	Q	W	E	ØF	S	A	ØD	G	H	L	ØJ
ASD2	0.55 (14)	0.55 (14)	0.64 (16.3)	0.20 (5)	0.55(14)	0.71(18.1)	0.67(17)	0.75(19)	0.87(22)	0.55(14)	0.79(20)	0.98 (25)	0.71(18)
ASD3	0.87(22)	0.87 (22)	0.98 (24.8)	0.24 (6)	0.87(22)	1.11(28.2)	0.87(22)	0.94(24)	1.10(28)	0.87(22)	0.79(20)	1.54 (39)	1.10(28)
ASD4	1.06(27)	1.42 (36)	1.55 (39.3)	0.39 (10)	1.06(27)	1.43(36.2)	1.06(27)	1.14(29)	1.42(36)	1.06(27)	1.18(30)	1.89 (48)	1.42(36)
ASD5	1.42(36)	1.65 (42)	1.78 (45.3)	0.47(12)	1.42(36)	1.90(48.2)	1.42(36)	1.50(38)	1.89(48)	1.42(36)	1.18(30)	2.52(64)	1.89(48)
ASD6	1.81(46)	1.97 (50)	2.12(53.8)	0.55(14)	1.81(46)	2.37(60.2)	1.81(46)	1.89(48)	2.36(60)	1.81(46)	1.18(30)	3.23(82)	2.36(60)

型号 Size	轴套连接 Bush Connections					
	ØB	K	Z	M / P	ØC	ØT
ASD2	0.98(25)	0.24(6)	1.18 (30)	M4x8	0.16 (4)	0.79(20)
ASD3	1.42(36)	0.31(8)	1.38 (35)	M5x10	0.24 (6)	0.98(25)
ASD4	1.97(50)	0.39(10)	1.77 (45)	M6x12	0.31 (8)	1.46(37)
ASD5	2.20(56)	0.47(12)	2.17 (55)	M8x14	0.39 (10)	1.65(42)
ASD6	2.83(72)	0.59(15)	3.23 (82)	M12x16	0.49 (12)	2.36(60)

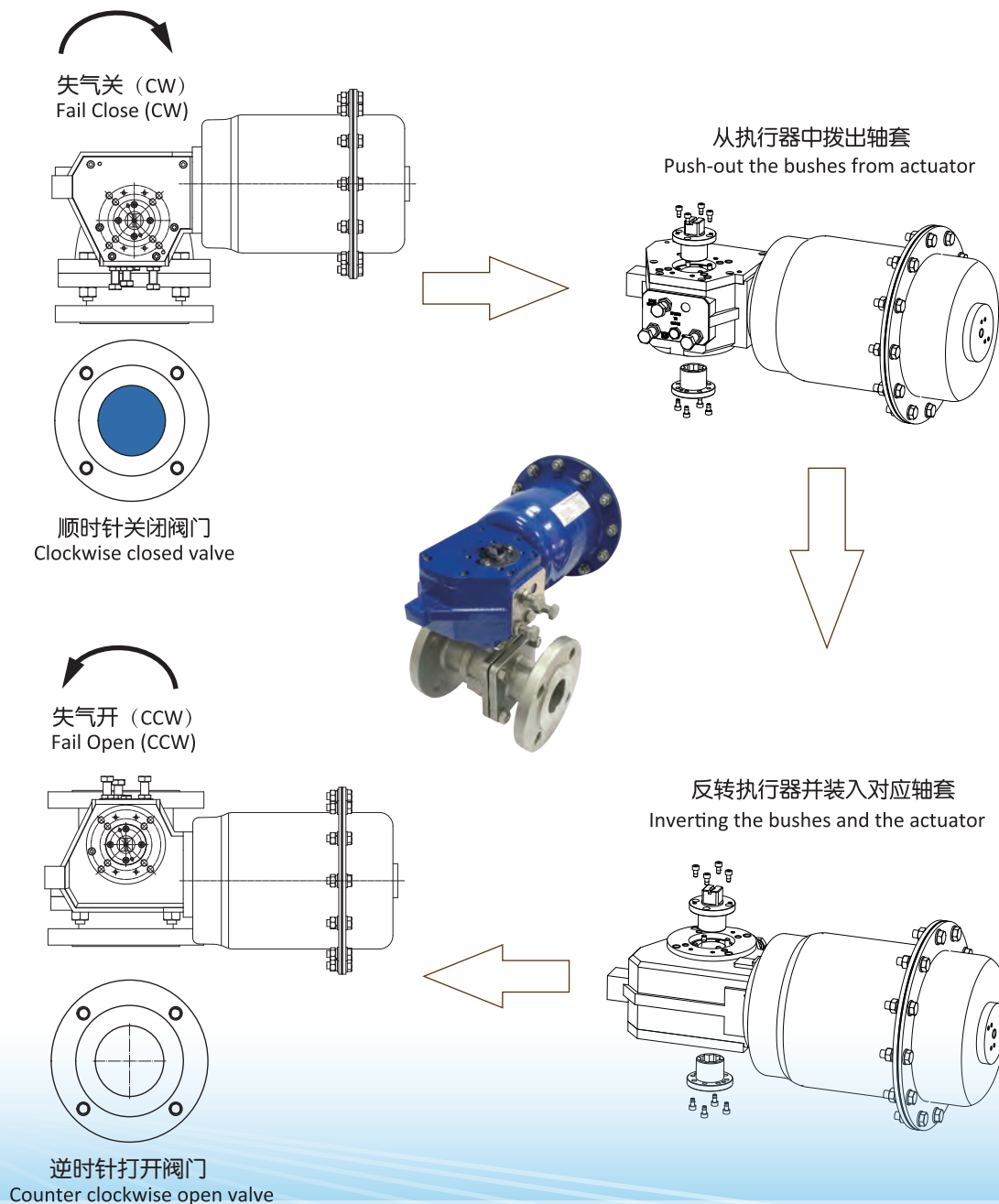
* It is available to customize the drive type.

** These dimensions are exactly the same as the industry common mount dimensions (JB).

失气关至失气开 Fail-close to Fail-open

ASD 系列的执行器能通过调换驱动轴套和反装执行器可快速实现失气关和失气开之间的转换。

As for ASD series actuator, Fail-close or fail-open operation can be quickly changed in the field by simply inverting bushes and the actuator.



手动控制装置

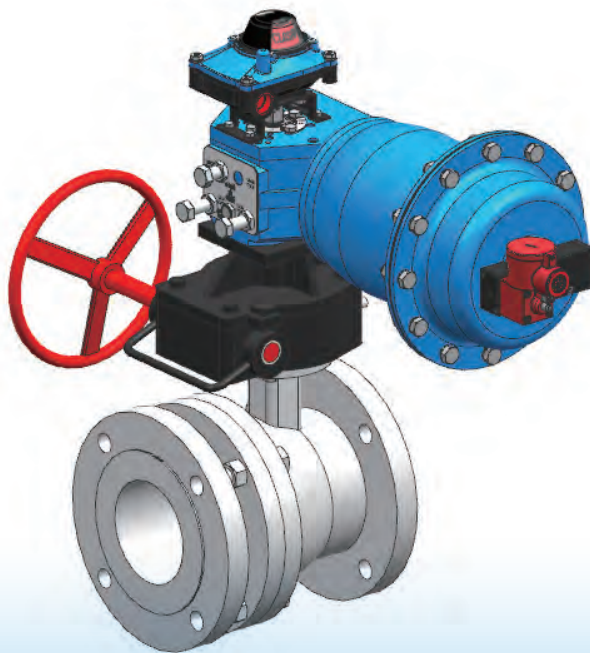
Manual Override

ASD 系列的执行器都可以选配安装ALXL系列手动控制装置，实现ASD执行器在安装调试和紧急情况下的手动操作。

ACHEM 具有多种手动控制功能和安装方案，您可以向我们工厂咨询更多关于手动操作和安装方面的信息。

A manual override is available for all models of our ASD series actuators and all of our manual overrides can be used with any of our drive bushings.

ACHEM has the ability to customize our manual overrides to work in various directions and can be mounted in different ways. Please consult our factory for more information about our overrides and mounting capabilities.

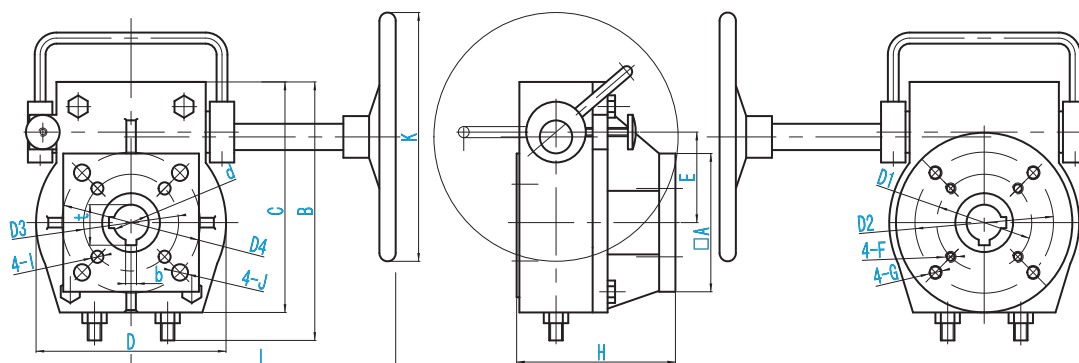


选配指南 Override Guide

序号 NO.	执行器 Actuator	手动控制装置 Manual Override	传动比 Gear Ratio	输入扭矩 Input Torque(Nm)	输出扭矩 Output Torque(Nm)	重量 (Kg) Weight(Kg)
1	ASD-2	ALXL38	38:1	60 (531 in.lbs)	550 (4868 in.lbs)	5.5 (12.1 lb)
2	ASD-3	ALXL54	54:1	120 (1062 in.lbs)	1200 (10620 in.lbs)	9 (19.8 lb)
3	ASD-4	ALXL80	80:1	140 (1239 in.lbs)	2000 (17700 in.lbs)	35 (77 lb)
4	ASD-5	ALXL78	78:1	200 (1770 in.lbs)	3600 (31860 in.lbs)	44 (96.8 lb)
5	ASD-6	ALXL98	98:1	300 (2655 in.lbs)	9000 (79650 in.lbs)	135 (297 lb)

ALXL系列手动控制装置的相关尺寸

ALXL series Manual Override Approximate Dimensions



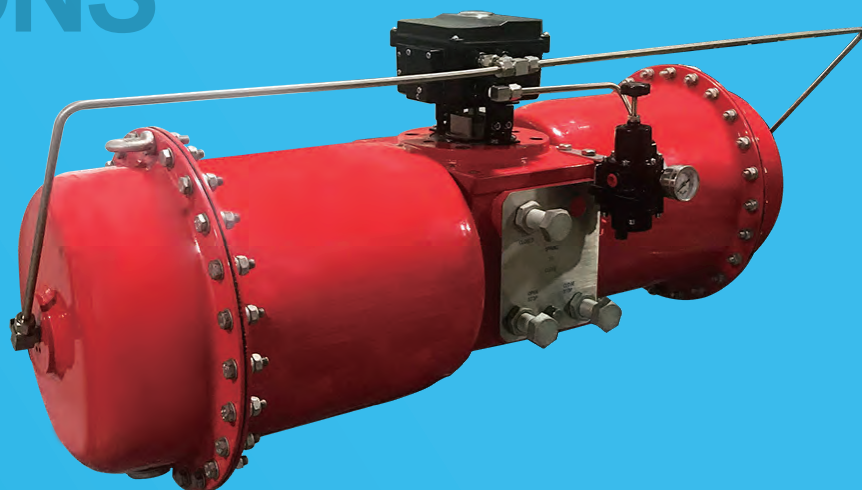
单位 Unit:mm

Model	d	b	t	D1	F	D2	G	A	H	E	D3	I	D4	J	K	L	B	C	D
ALXL38-1	38	10	41.3			102	M10	110	117	65			102	Φ12	Φ200	195	195	165	140
ALXL54-1	38	10	41.3	125	M12						125	Φ14			Φ280	210	235	210	175
	48	14	51.8			140	M16	130	118	85			140	Φ18					
ALXL80-1	48	14	51.8	140	M16			156	148	124	140	Φ18			Φ400	260	320	295	245
	60	18	64.4			165	M20						165	Φ22					
ALXL78-1	60	18	64.4	165	M20			220	150	142	165	Φ22			Φ500	265	360	340	285
	80	22	85.6																
ALXL98-1	80	22	85.6	165	M20			230	195	229	165	Φ22			Φ800	420	550	535	455

单位 Unit:in

Model	d	b	t	D1	F	D2	G	A	H	E	D3	I	D4	J	K	L	B	C	D
ALXL38-1	1.50	0.39	1.63			4.02	M10	4.33	4.61	2.56			4.02	Φ0.47	Φ7.87	7.68	7.68	6.50	5.51
ALXL54-1	1.50	0.39	1.63	4.92	M12			5.12	4.65	3.35	4.92	Φ0.55			Φ11.02	8.27	9.25	8.27	6.89
	1.89	0.55	2.04			5.51	M16						5.51	Φ0.71					
ALXL80-1	1.89	0.55	2.04	5.51	M16			6.14	5.83	4.88	5.51	Φ0.71			Φ15.75	10.24	12.60	11.61	9.65
	2.36	0.71	2.54			6.50	M20						6.50	Φ0.87					
ALXL78-1	2.36	0.71	2.54	6.50	M20			8.66	5.91	5.59	6.50	Φ0.87			Φ19.69	10.43	14.17	13.39	11.22
	3.15	0.87	3.37																
ALXL98-1	3.15	0.87	3.37	6.50	M20			9.06	7.68	9.02	6.50	Φ0.87			Φ31.50	16.54	21.65	21.06	17.91

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