

Utmost®

品质与艺术完美结合

艾坦姆流体控制技术（北京）有限公司
Utmost Flow Control Tech.(Beijing) Co.,Ltd



艾坦姆

E700系列偏心旋转控制阀

Utmost E700 Series Eccentric Rotary Control Valve







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UTMOST E700 Series Eccentric Rotary Valve

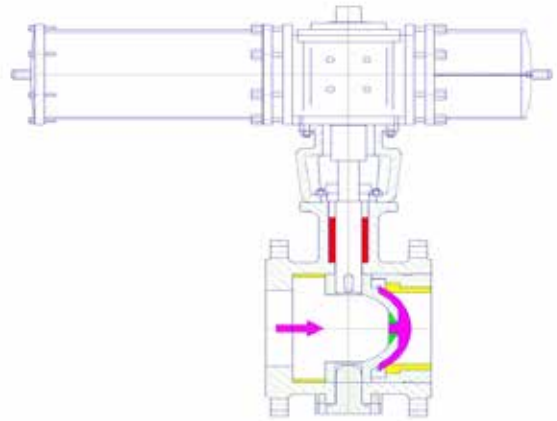
艾坦姆 E700 系列偏心旋转调节阀

Utmost E700 Series Eccentric Rotary Valve

偏心旋转调节阀亦称为凸轮挠曲阀，是一种结构新颖、流体阻力小的直通型角行程控制阀，阀芯的回转中心不与旋转轴同心，可减小阀座磨损，延长使用寿命；

Eccentric rotary valve is also known as off-centre control valve, which is a new type control valve with small fluid resistance, the valve core of the valve doesn't rotate with the shaft, such structure can reduce valve seat wear and prolong valve life span.

阀芯后部设有一个导流翼，有利于流体稳定流动，具有优良的稳定性。同时，还具有流量大，可调范围广的优点特别适用于含有淤浆的工艺系统控制。



Down the trim there is a "diversion" wing which is conducive to the stable flow of fluid with good stability. At the same time, also be ideal for large flow, adjustable range and particularly suitable for process control systems containing slurry fluid.

规格与技术参数:

Specifications:

公称通径 Nominal Diameter	mm	25	40	50	80	100	150	200	250	300	
	in	1	1 1/2	2	3	4	6	8	10	12	
流量系数 Flow Coefficient	额定 Cv 值 Rated CV		14	30	50	135	230	500	850	1300	1750
	缩腔 Reducing	60%	8.4	18	30	81	138	300	510	780	1050
		40%	5.6	12	20	54	92	200	340	520	700
	20%	2.8	6.0	10	—	—	—	—	—	—	
流量特性 Flow characteristics	近似线性、近似等百分比 Approximate Linear or approximate Equal percentage.										
压力等级 Rating	150lbs, 300lbs, 600lbs, 900lbs										
工作温度 Operating Temperature	-196℃ ~ 400℃										
执行机构 Actuator	UTQ75~ UTQ320										
泄露等级 Leakage	硬密封 IV 级、V、软密封 VI (GBT/4213-2008) Metal seal: IV V, Soft seal VI (GBT/4213-2008)										
行程 Stroke	0~50°										
气源压力 Air Pressure	0.3、0.4、0.5、0.6										
可调比 Adjustable Ratio	全通径 100:1, 60% 缩径 60:1, 40% 缩径 40:1, 20% 缩径 20:1, Full size 100:1, 60% Reducing 60:1, 40% Reducing 40:1, 20% Reducing 20:1,										
作用方式 Action Model	气开、气关或双作用 Air to Open, Air to Close or Double Action										
连接形式 Connections	对夹式、法兰式 Wafer type, Flange type										

艾坦姆 E700 系列偏心旋转调节阀 UTMOST E700 Series Eccentric Rotary Valve

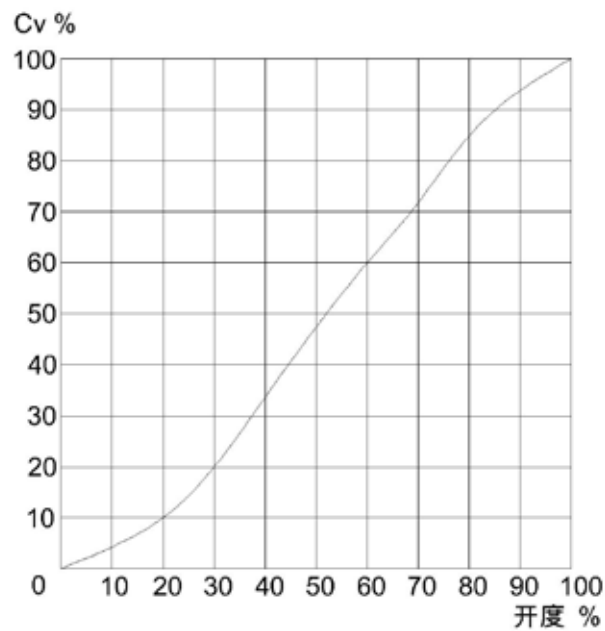
行业应用：石油、化工、冶金、电力、造纸、医药、轻纺、食品和环保；

Applications: Petrochemical, Chemical, Metallurgy, Power, Paper, Medicine, Textile, Food and environment protection;

适用介质：水、蒸汽、油品、硝酸、醋酸、氧化性介质、尿素等多种介质；

Medium: Water, Steam, Oil, Nitric acid, Acetic acid, Oxidizing mediums, Urea ect;

相对开度与流量系数 Cv 的关系 /Travel and Rated Cv							
公称通径 /ND		相对开度 /Travel					
		10%	30%	50%	70%	90%	100%
25	1	0.5	2	5.2	10	19	28
40	1 1/2	1.2	5.7	15	30	54	81
50	2	1.9	8.8	23	46	83	125
65	2 1/2	3.2	14	39	76	138	208
80	3	4.4	20	54	106	192	290
100	4	7	33	86	170	308	465
125	5	10	46	122	240	436	658
150	6	13	60	157	310	564	850
200	8	21	97	255	503	915	1380
250	10	33	152	401	792	1440	2170
300	12	46	216	572	1130	2050	3090



艾坦姆 E700 系列偏心旋转调节阀具有以下特点
Utmost E700 series Eccentric rotary valve has the follow characteristics

主要参数:

Main specifications

项目 /Item		配用定位器 /Positioner
基本误差 % /Basic error%		≤±2.0
回差 % /Hysteresis%		≤2.0
死区 % /Dead zone%		≤0.8
额定行程偏差 % Rated stroke deviation%		≤±2.5
泄漏量 Leakage	金属阀座 Metal Seat	≤ 额定 Cv 的 0.01% ≤0.01% of the rated Cv
	软阀座 Soft Seat	≤ 额定 Cv 的 10 ⁻⁷ ≤10 ⁻⁷ of the rated Cv
可调比 Adjustable ratio		100:1

*注: 性能指标执行标准: GB/T4213《气动调节阀》

Note: All the specifications following to the standard of GB/T4213 "Pneumatic control valve"

1. 采用蝶形或圆柱形弹簧加载的可调整阀座结构, 能够有效避免阀座与阀芯之间的卡滞和阀芯脱落问题, 密封可靠、使用寿命长;
Valve seat structure with butterfly or cylindrical shaped spring loading is adjustable, which can effectively avoid jamming or valve trim spool off problems, with reliable sealing, long service life.
2. 阀体内腔为流线直通型、流道简单、对流体运动阻力小、压降损失小与同口径单、双座阀相比有较大的流体能力;
Valve body cavity with straight and simple flow path, compared to single or double seat valve with little resistance to the flow, less valve pressure drop and better flow capacity.
3. 偏心旋转调节阀不仅具有良好的调节性能, 还对介质具有剪切作用, 所以是含有颗粒物、纤维、浆料等操作介质的理想解决方案;
Eccentric rotary valve not only has a good performance of control, but also has a better shut off function, which is a ideal solution for particles, fibers, slurry and other operating mediums;
4. 模块化阀芯结构形式: 可根据用户不同的操作工况选用不同的硬质合金材料, 喷涂镍基合金(硬度 ≥HRC60)、超音速喷涂钨钴合金(最高硬度 ≥HRC70)及特种硬化材料等多种先进工艺, 适用于各种苛刻工况;
Module valve structure: different alloy materials can be selected to meet various users' operating conditions, spraying nickel alloy (hardness ≥ HRC60), supersonic tungsten cobalt alloy spraying (hardness ≥ HRC70) and other different of advanced technology, to meet various of harsh conditions.
5. 阀门结构紧凑、通用性强, 切断型偏心旋转阀密封性能好, 可取代闸阀、截止阀及普通球阀等多种阀门, 调节型偏心旋转阀具有可调范围大、调节精度高的特点;
Compact, commonality, Eccentric rotary valve with good shut-off functions can replace gate valve, globe valve, common ball valve, also has good performance under large range ability and high accuracy application request.

艾坦姆 E700 系列偏心旋转调节阀具有以下特点
Utmost E700 series Eccentric rotary valve has the follow characteristics

结构原理:

Structure principle

偏心旋转调节阀阀芯、阀杆只做旋转运动，阀门在开关运动时所承受摩擦力很小。当阀芯和阀座接触关闭时，阀芯柔臂在执行机构作用下产生微小弹性变形及弹性涨紧力能够使阀芯和阀座实现完全紧密贴合，因此艾坦姆 E700 系列偏心旋转调节阀具有泄露量小、阀门关闭所需推力小的优点。

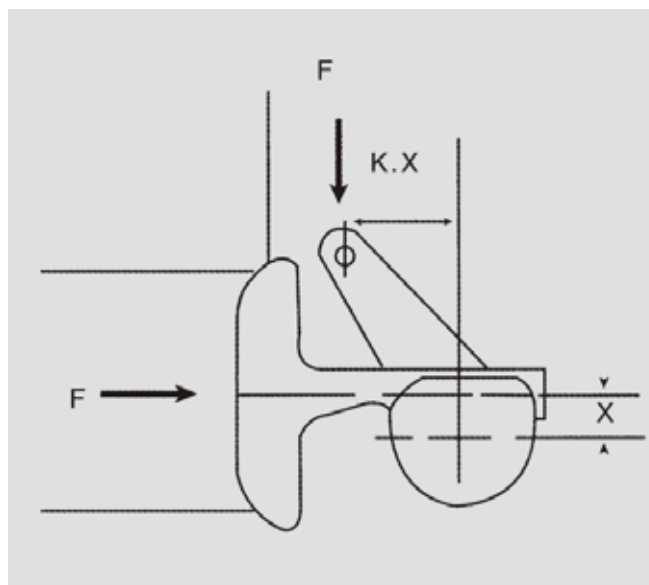
As the valve trim of eccentric rotary valve do rotary movement all the time, so the valve friction is very small while valve trim contact to the seat closed the valve. Flexible valve stem with actuator's action can produce a small elastic deformation can make the valve core and valve seat fully fit, so UTMOST E700 series eccentric rotary valve has a very small leakage and need small thrust to close.

放大输出原理:

Output enlarge principle

艾坦姆 E700 系列偏心旋转调节阀采用杠杆和力矩原理来实现放大输出力的目的，偏心旋转阀中心线对于阀杆中心有一个偏心距 x ，而连杆受到执行机构的推力作用点距离偏心旋转轴中心有一个力臂，长为 $Kx > x$ ，所以偏心旋转阀推力放大倍数为 K ，如图所示：

Utmost E700 series can magnifying output force achieve of eccentric rotary valve using leverage and torque principle to achieve the aim of magnifying the output force, the eccentric rotary valve centerline to the center of the valve stem has an eccentric distance x , the connection rod by performing eccentric thrust actuator's action point from rotating shaft center has a lever, as long as $Kx > x$, so eccentric rotary valve thrust magnification for K , as shown in the figure.



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艾坦姆 E700 系列偏心旋转调节阀具有以下特点
Utmost E700 series Eccentric rotary valve has the follow characteristics

允许压差:

Allowable Pressure drop

金属阀座 /Metal seat

单作用气缸执行机构 / 气源压力: 0.4Mpa /Single acting piston actuator/ Air pressure 0.4 Mpa

填料: 聚四氟乙烯 / 柔性石墨 /Packing set: PTFE/Graphite

压力单位: Mpa

执行机构 Actuator	压差 ΔP	公称通径 /Nominal diameter (DN)										
		25	40	50	65	80	100	125	150	200	250	300
UTQ75	ΔP	0.19										
UTQ85	ΔP	1.19	0.09									
UTQ100	ΔP	3.79	1.59	0.81	0.11							
UTQ125	ΔP			2.19	0.89	0.59						
UTQ160	ΔP				2.19	1.39	0.53	0.34				
UTQ190	ΔP					2.59	1.22	0.78				
UTQ280	ΔP						3.08	2.00	1.22	0.68	0.39	0.19
UTQ320	ΔP							2.00	1.76	0.93	0.70	0.44

允许压差:

Allowable Pressure drop

金属阀座 /Metal seat

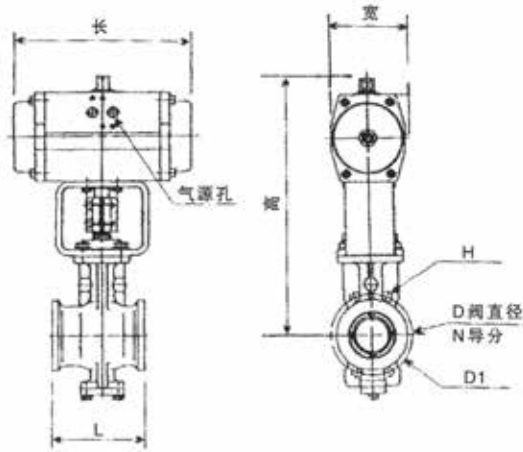
双作用气缸执行机构 / 气源压力: 0.4Mpa /Double acting piston actuator/ Air pressure 0.4 Mpa

填料: 聚四氟乙烯 / 柔性石墨 /Packing set: PTFE/Graphite

压力单位: Mpa

执行机构 Actuator	压差 ΔP	公称通径 /Nominal diameter (DN)										
		25	40	50	65	80	100	125	150	200	250	300
UTQ63	ΔP	2.35	0.94									
UTQ75	ΔP	5.00	2.84	1.49	0.57	0.33						
UTQ5	ΔP			2.39	0.99	0.62						
UTQ100	ΔP				1.54	0.99	0.30	0.19				
UTQ125	ΔP					2.66	1.29	0.80	0.39			
UTQ160	ΔP						2.84	1.79	0.89	0.47	0.26	0.14
UTQ280	ΔP							2.00	1.76	0.95	1.02	0.76
UTQ320	ΔP										1.02	0.78

E700 系列偏心旋转调节阀外形尺寸
Dimensions of E700 Eccentric rotary valve



Unit: mm

规格 /Size	L
1"	102
1 1/2"	115
2"	125
3"	165
4"	195
6"	229
8"	245
10"	298
12"	338

外形尺寸: ANSI150/300 长 × 宽 × 高 (法兰中心至最高点距离) (不含附件)

Dimensions: ANSI/150/300 L x W x H (valve flange center to the highest point) without accessories.

Unit: mm

公称通径 DN		25	40	50	65	80	100	125	150	200	250	300
外形尺寸 Size												
执行机构 Actuator												
UTQ63 UTQ75	双作用 Double-Action	196X80 X300	196X80 X310									
	单作用 Single-Action	234X80 X300	234X80 X310									
UTQ75 UTQ85	单作用 Single-Action	234X80 X300	234X80 X310	234X80 X325	234X80 X335	234X80 X345						
	双作用 Double-Action	250X106 X300	250X106 X310	250X106 X325	250X106 X335							
UTQ85 UTQ100	双作用 Double-Action		250X106 X340	250X106 X360	250X106 X375	250X106 X380						
	单作用 Single-Action	297x123 x330	297x123 x340	297x123 x360	297x123 x375	297x123 x380						
UTQ100	单作用 Single-Action					297x123 x380	297x123 x415					
	双作用 Double-Action		404x148 x380	404x148 x395	404x148 x405	404x148 x415	404x148 x425					
UTQ125 UTQ160	双作用 Double-Action					404x148 x415	404x148 x455	404x148 x515	522x187 x550			
	单作用 Single-Action					522x187 x470	522x187 x500	522x187 x530	522x187 x550			
UTQ160 UTQ190	单作用 Single-Action						522x187 x500	522x187 x530	522x187 x550	522x187 x600		
	双作用 Double-Action					380 x185 x470	380 x185 x500	380 x185 x545	380 x185 x590			
UTQ280 UTQ280	双作用 Double-Action						612x265 x620	612x265 x650	717x310 x670	612x265 x710	612x265 x740	612x265 x790
	单作用 Single-Action						612x265 x620	612x265 x650	717x310 x670	612x265 x710	612x265 x740	612x265 x790
UTQ320 UTQ320	双作用 Double-Action							717x310 x700	717x310 x730	717x310 x770	717x310 x800	717x310 x840
	单作用 Single-Action							717x310 x700	717x310 x730	717x310 x770	717x310 x800	717x310 x840

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UTMOST E700 Series Eccentric Rotary Valve

E700 系列偏心旋转调节阀外形尺寸
Dimensions of E700 Eccentric rotary valve

外形尺寸：ANSI600/ANSI900 长 × 宽 × 高 (法兰中心至最高点距离) (不含附件)

Dimensions : ANSI600/900 L x W x H (valve flange center to the highest point) without accessories

Unit: mm

执行机构 Actuator	外形尺寸 Size	公称通径 DN							
		25	40	50	65	80	100	125	150
UTQ63	双作用	196X80 X300	196X80 X310						
UTQ75	单作用	234X80 X300	234X80 X310						
UTQ75	单作用	234X80 X300	234X80 X310	234X80 X325	234X80 X345	234X80 X360			
UTQ85	双作用	250X106 X300	250X106 X310	250X106 X325	250X106 X345				
UTQ85	双作用	250X106 X300	250X106 X340	250X106 X355	250X106 X365	250X106 X375			
UTQ100	单作用	297x123 x330	297x123 x360	297x123 x375	297x123 x385	297x123 x395			
UTQ100	单作用					297x123 x410	297x123 x450		
UTQ125	双作用	404x148 x380	404x148 x390	404x148 x415	404x148 x425	404x148 x440	404x148 x480		
UTQ125	双作用					404x148 x440	404x148 x480	404x148 x500	
UTQ160	单作用					522x187 x480	522x187 x510	522x187 x550	522x187 x570
UTQ160	单作用						522x187 x500	522x187 x530	522x187 x550
UTQ190	双作用					380 x185 x470	380 x185 x500	380 x185 x545	380 x185 x590
UTQ280	UTQ280					380x185 x490	380x185 x530	380x185 x570	380x185 x590
UTQ320	双作用							717x310 x720	717x310 x740
	单作用							717x310 x720	717x310 x740

Unit: mm

公称通径 DN	ANSI150			ANSI300			ANSI600/ANSI900		
	DI	N	H	DI	N	H	DI	N	H
25									
40									
50				127.0	8	Φ20	127.0	8	Φ20
65				149.0	8	Φ22	149.0	8	Φ22
80				168.0	8	Φ22	168.0	8	Φ22
100	190.5	8	Φ20	200.0	8	Φ22	216.0	8	M26
125	216.0	8	Φ22	235.0	8	Φ22	262.0	8	M30
150	241.5	8	M20	270.0	12	M20	292.0	12	M27
200	298.5	8	M20	330.0	12	M24			
250	362.0	12	M24	387.0	16	M27			
300	432.0	12	M24	451.0	16	M30			



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不仅仅是性能卓越的产品.....
艾坦姆还通过技术方案和综合的售后服务体系,
增强产品价值,为您的工厂提供全面支持!

More than just excellent products!
Utmost also supply technical solution and integrated after service
system to increase products value and fully support your factory!

声明:本样本所记载的数值为标准阀门理论值及测量值,数值规格
更新恕不另行通知。
Announcement: The data of this brochure comes from standard valve in
theory and measurement, data updates without notice.

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