

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

UT系列多弹簧气动薄膜执行机构及附件

Utmost UT Series Multi-spring diaphragm Actuator and Accesories



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UT 系列多弹簧气动薄膜执行机构及附件

Utmost UT Series Multi-spring diaphragm
Actuator and Accesories

Utmost®

UT 系列执行机构
UT Series Actuator

执行机构的型号说明
Type code of Multi-Spring-Actuator

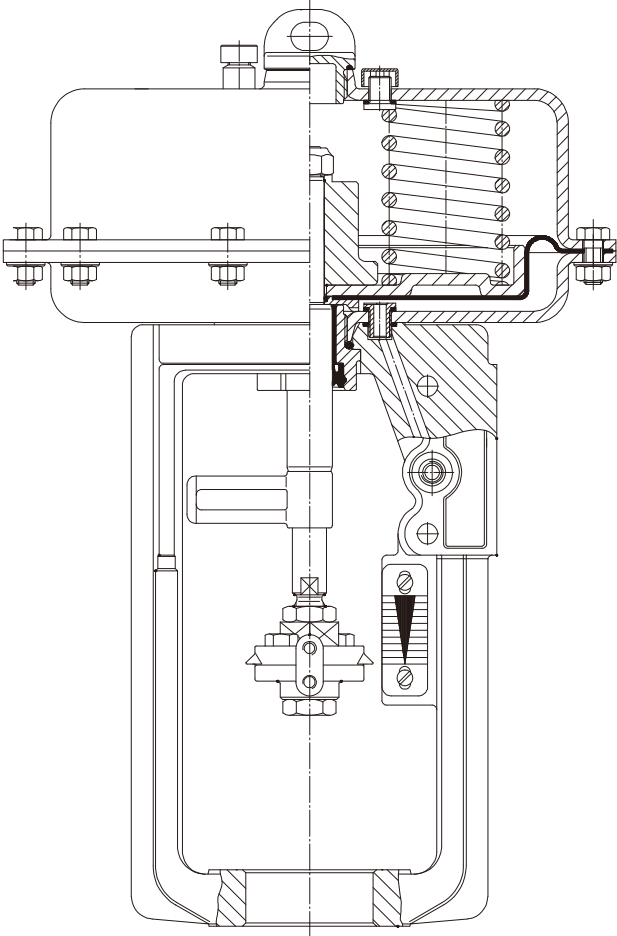
型号编码 Type code

	UT	I	20	•	3	O	HW	B
系列 Series								
执行机构尺寸 Actuator size								
1 UT I 膜片面积 320 cm ² 最大行程 20mm UT I diaphragm surface 320 cm ² Max. stroke 20 mm								
2 UT II 膜片面积 720 cm ² 最大行程 30 mm UT II diaphragm surface 720 cm ² Max. stroke 30 mm								
3 UT III 膜片面积 720 cm ² 最大行程 60mm UT III diaphragm surface 720 cm ² Max. stroke 60 mm								
4 UT A 膜片面积 1510 cm ² 最大行程 120mm UT A diaphragm surface 1510 cm ² Max. stroke 120 mm								
行程 Stroke								
UT I= stroke 20 UT II stroke 30 UT III= stroke 60 UT A= stroke 60~120								
弹簧数量 Spring sets								
3=3 springs 6=6 springs 9=9 springs 12=12 springs								
功能 Function								
O= 压缩弹簧推动阀杆向上移动（气开） Springs move the spindle upwards (Air to open)								
C= 压缩弹簧推动阀杆向下移动（气关） Springs move the spindle downwards (Air to close)								
手轮 Handwheel								
Execution B or C or E								

UT 系列执行机构
UT Series Actuator

执行机构基本数据
Technical Data Sheet of Multi-Spring-Actuator

系列	Series	UT
膜片面积	Diaphragm effective area	320/720cm ² /1510cm ²
行程	Stroke	20-120mm
控制信号	Control signal	6 bar max
材料	Materials	支架 Yoke: 碳钢 Carbon Steel 推杆 Spindle: 1.4122/1.4571 弹簧 Spring: 55CrSi (standard;other material on request) 膜片 Diaphragm: NBR
操作温度	Operating temperature	-20 to +80 °C (Option -40 to + 80°C)
弹簧个数	No. of springs	3-12
弹簧最大控制力	Control force spring max.	6.3-40 kN
气源最大控制力	Control force air max.	14.4- 59 kN



- 无外接气路、结构简捷坚固，杜绝外部泄漏点，简化结构形式。
Compact design without external gas line, pipe, simple and firm structure.
- 推杆密封结构设计独特，可防止外界环境的腐蚀，增强密封效果，并延长使用寿命。
Unique designed spindle prevent the environmental corrosions and also enhance the sealing effect, extend the life span.
- 膜室气压容积小，信号反应灵敏。
Small diaphragm house volume, high sensitive response.
- 独特的膜片压紧结构，保证膜片合理压紧，方便维修服务。
Unique diaphragm clamping structures ensure reasonable diaphragm compression, easy to maintenance.
- 适用于各种调节阀密封推力的弹簧范围，可选性强，适用范围广。
Various spring ranges, widely use.
- 设计结构紧凑，体积小，重量轻。
Compact design with small size and light weight.
- 支架材料选用碳钢，其性能更加坚固。
Carbon steel yoke with high performance and more robust structure.

UT 系列执行机构 UT Series Actuator

执行机构基本数据 Technical Data Sheet of Multi-Spring-Actuator

Opening function (air to open - spring to close)

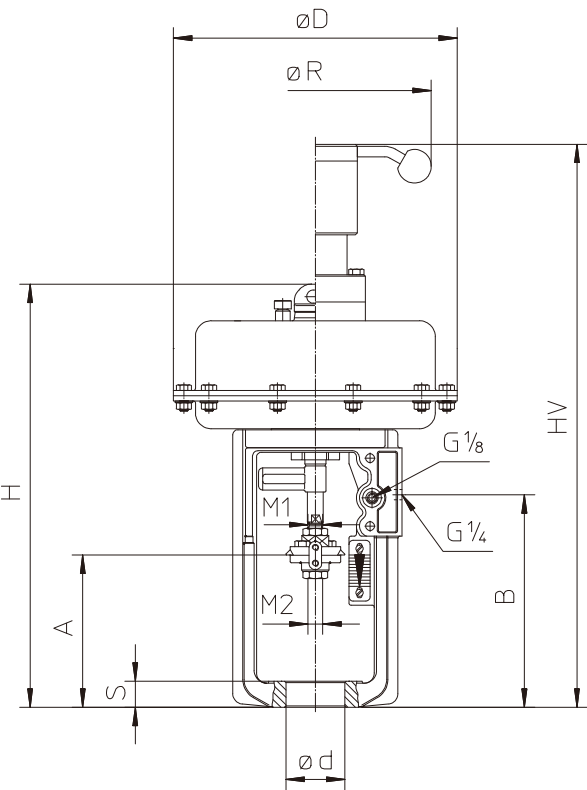
型号 Size	膜片面积 Diaphragm surface (cm ²)	弹簧个数 No. of springs	行程 Stroke (mm)	控制范围 Control range		最小气源压力 Control Pressure Min bar	输出推力 Control force (kN)
				from(bar)	to(bar)		
UT I	320	3	20	0.75	1.5	2	2.4
		6		1.5	3.0	3.5	4.8
UT II	720	3	30	0.7	1.5	2	5
		6		1.5	3.0	3.5	10
		9		1.8	3.7	4.2	13
		12		2.2	4.4	5	16
UT III		3	60	0.7	1.5	2	5
		6		1.4	3.0	3.5	10
		9		1.7	3.6	4	12
		12		2.0	4.3	5	14
UTA-60	1510	4	60	1.36	2.07	3	20
		6		2.03	3.10	4	30
		8		2.72	4.14	5	40
UTA-100/120		6	100	1.65	3.75	5	24.5
		8		2.19	5	6	33
		6	120	1.22	3.75	5	18
		8		1.63	5	6	24.5

Closing function (air to close - spring to open)

型号 Size	膜片面积 Diaphragm surface (cm ²)	弹簧个数 No. of springs	行程 Stroke (mm)	最小控制压力 Control Pressure Min bar	不同气压下的输出推力 (kN)				
					2.0 bar	3.0 bar	4.0 bar	5.0 bar	6.0 bar
UT I	320	3	20	1.5	1.6	4.8	8.0	11.2	14.4
		6		3.0	—	—	3.2	6.4	9.6
UT II	720	3	30	1.5	3.6	10.8	18	25.2	32.4
		6		3.0	—	—	7.2	14.4	21.6
		9		3.7	—	—	2.2	9.4	16.6
		12		4.4	—	—	—	4.3	11.5
UT III		3	60	1.5	3.6	10.8	18	25.2	32.4
		6		3.0	—	—	7.2	14.4	21.6
		9		3.6	—	—	2.9	10.1	17.3
		12		4.3	—	—	—	5.0	12.2
UTA-60	1510	2	60	0.9	14	29	44	59	—
		4		1.8	—	14	29	44	59
UTA-100/120		2	100	1.11	13	28	43	58	—
		4		2.22	—	11	26	41	57
		2	120	1.11	13	28	43	58	—
		4		2.22	—	11	26	41	57

UT 系列执行机构
UT Series Actuator

执行机构的外形尺寸和重量
Weights and Dimensions of Multi-Spring-Actuator



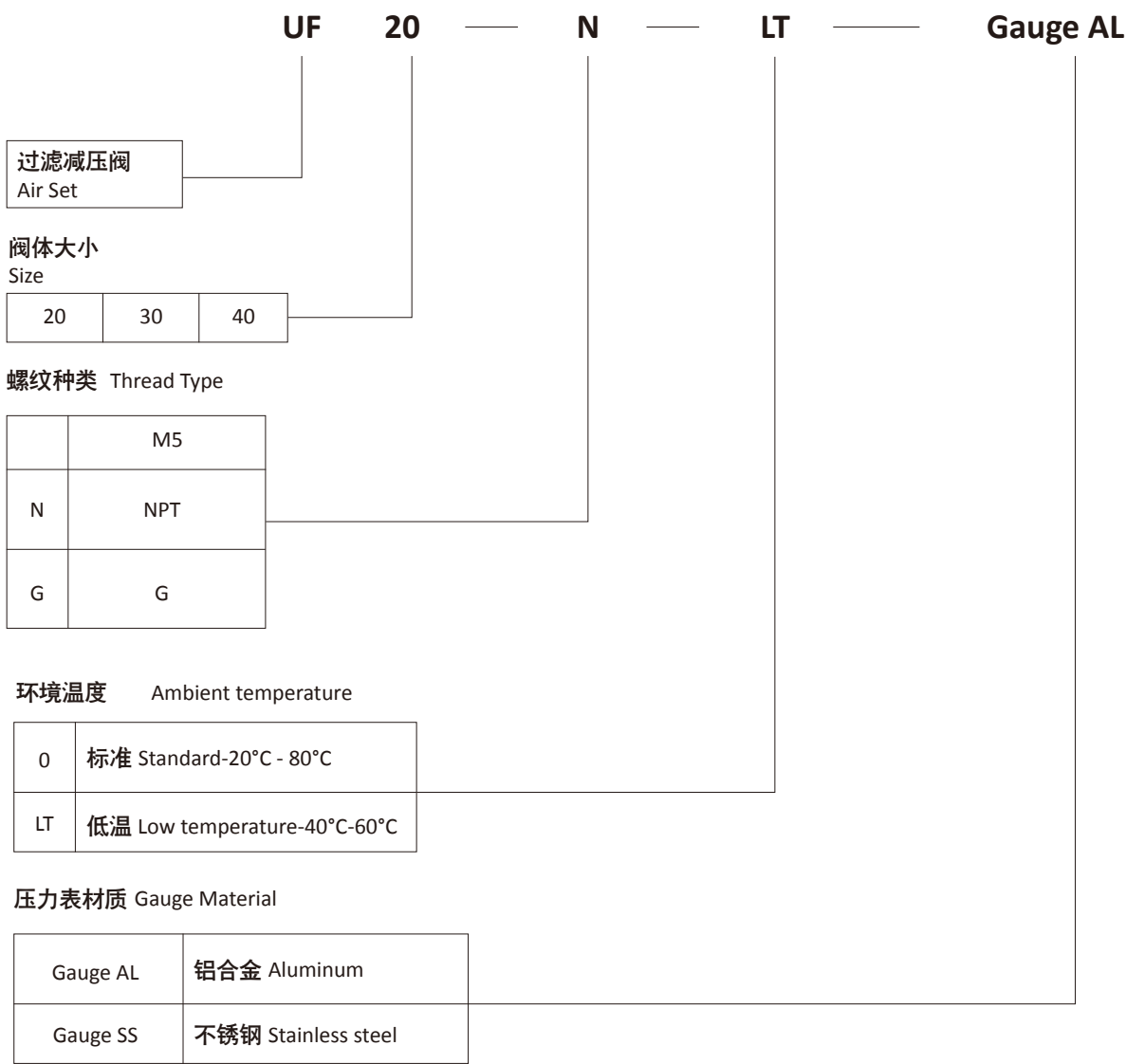
Closing function (air to close - spring to open)

型号 Size	膜片面积 Diaphragm surface (cm²)	重量 weight	弹簧个数 No. of springs (Kg)	行程 Stroke (mm)	ΦD (mm)	M1 Actuator	Φd (mm)	S (mm)	A (mm)	B (mm)	H (mm)	HV (mm)	ΦR (mm)	
UT I	320	14	3	20	270	10	40	20	120	180	361	508	220	
			6											
UT II	720	40	3	30	400	20*1.5	56	25	142	251	489	651	335	
			6											
		42	9											
			12											
UT III		45	3	60		20*1.5	72	30	192	309	625	888	335	
			6											
		47	9											
			12											
UTA	1510	229	2	60	600		M24*2	72	30	197	—	841.5	—	—
			4											
		240	2	100/120			M24*2	100	50	339	—	990.8	—	—
			4											

过滤减压阀
Filter and Reducing Station

型号 TYPE: UF20/30/40

型号说明 Code Inroduction:



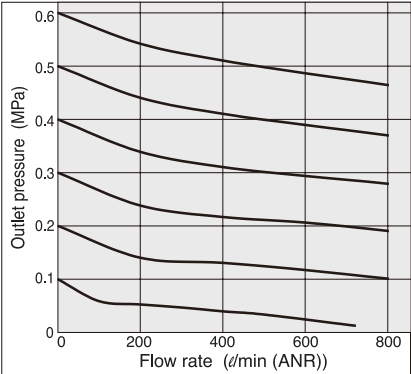
过滤减压阀
Filter and Reducing Station

标准规格:
Standard Specification:

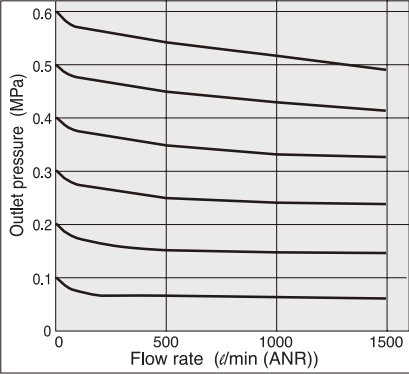
标准选型 Standard Type	型 号 Type		
	UF20	UF30	UF40
连接口径 Body Size(INCH)	1/4" NPT	1/4" NPT	1/2" NPT
介质 Medium	压缩空气 Air		
耐压试验压力 Testing Pressure	1.5MPa		
设定压力范围 Setting Range	0.05~0.85MPa		
压力表连接口径 Gauge Connection Size	1/8	1/8	1/4
过滤精度 Nominal filtration rating	5μm	5μm	5μm
阀体材质 Body Material	压铸铝 Aluminum die-cast		
阀盖材质 Body Material	聚乙醛 Polycarbonate		
杯体材质 Bonnet Material	压铸铝 Aluminum die-cast		
构造 Structure	溢流型 Relieving type		
重量 (kg) Weight	0.32	0.4	0.72
环境温度℃ Ambient Temperature	标准 Standard: -20~60 低温 Low Temperature: -40~60		

流量特性:

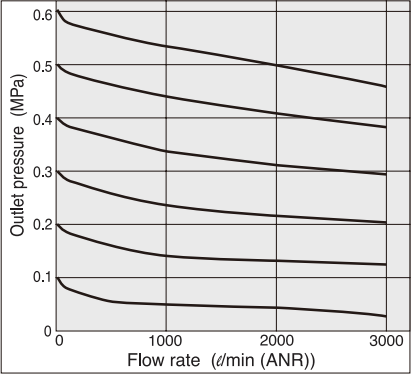
UF20



UF30

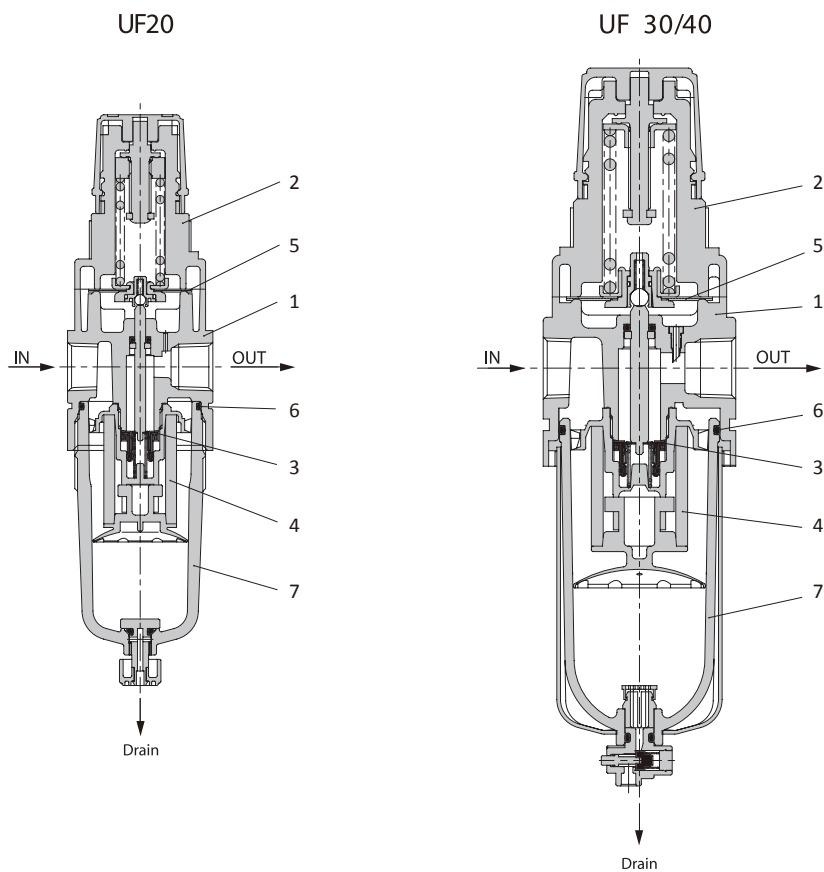


UF40



过滤减压阀
Filter and Reducing Station

结构图



构成零部件 Component Parts:

序号 No.	名称 Description	材质 Material			备注 Note
		UF20	UF30	UF40	
1	阀体 Body	压铸锌 Zinc die-casted		压铸铝 Aluminum die-casted	涂铂银色 Platinum silver
2	阀盖 Bonnet	聚乙醛 Polyacetal			黑色 Black

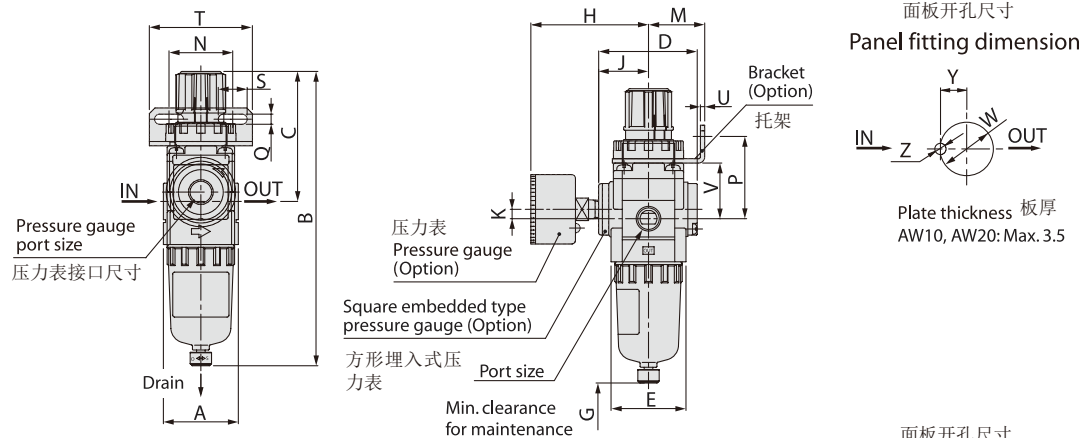
可换件 Replacement Parts:

序号 No.	名称 Description	零部件型号 Part no.			
		Material	UF20	UF30	UF40
3	阀芯组件 Valve assembly	不锈钢 / 黄铜 .HNBR Stainless steel/Brass, HNBR	UF20P-360AS(3)	UF30P-360AS(3)	UF40P-360AS
4	滤芯组件 Filter element	无纺布 Non-woven fabric	AF20P-060S	AF30P-060S	AF40P-060S
5	膜片组件 Diaphragm assembly	耐候性 NBR Weatherability NBR	AR20P-150AS ¹	AR30P-150AS	AR40P-150AS
6	杯 O 形圈 Bowl O-ring	NBR	C2SFP-260S	C3SFP-260S	C4SFP-260S
7	杯组件 Bowl assembly ²	PC	C2SF	C3SF	C 4SF

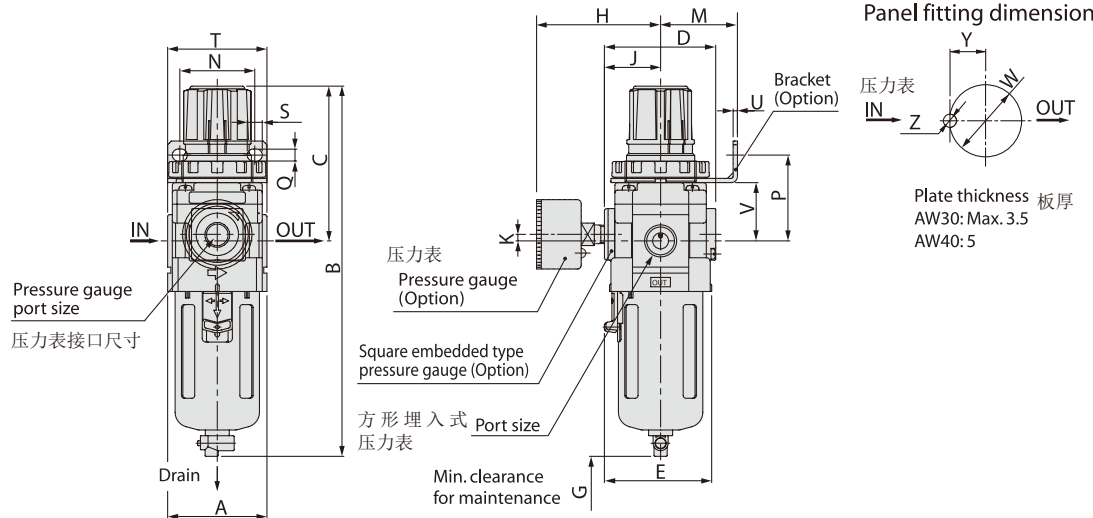
过滤减压阀
Filter and Reducing Station

外形尺寸图:

UF20



UF30/40



型号 Model	连接口径 Port size	标准规格 Standard specifications						可造次规格 Accessory specifications														
								带压力表 With pressure gauge			拉架安装 Bracket mounting size							面板安装尺寸 Panel mount				带自动排水器 With auto-drain
		A	B	C	D	E	G	H	J	K	M	N	P	Q	S	T	U	V	W	Y	Z	B
UF20	1/8, 1/4	40	160	73	52	40	40	63	27	5	30	34	44	5.4	15.4	55	2.3	30	28.5	14	6	177
UF30	1/4, 3/8	53	201	86	59	57	55	66	30.5	3.5	41	40	46	6.5	8	53	2.3	31	38.5	19	7	242
UF40	1/4, 3/8, 1/2	70	239	92	75	73	80	76	38.5	1.5	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7	278

型号 Model	带排水器 Optional specifications			
	带倒钩接头 With barb fitting	带排水器 With drain guide	金属杯 Metal bowl	标准规格 Metal bowl with level gauge
	B	B	B	B
UF20	—	—	160	—
UF30	209	208	214	234
UF40	247	246	252	272

过滤减压阀 Filter and Reducing Station

产品注意事项 Product Precautions:

使用前请仔细阅读

Be sure to read before handling.

安装。调整

Mounting and Adjustment

！警告 Warning

- ✓ 在确认一次侧压力及二次侧压力表的指示范围后再进行压力设定。若手轮回转过分，会造成内部零件的损坏。
Set the regulator while verifying the displayed values of the inlet and outlet pressure gauges. Turning the regulator knob excessively can cause damage to the internal parts.
- ✓ 调整手轮应用手调整，不得用工具调整，以免造成损坏。
Do not use tools on the pressure regulator knob as this may cause damage. It must be operated manually.

！注意 Warning

- ✓ 手轮开锁后进行压力调整，调整后再锁住。否则，手轮会损坏或二次侧压力会变动。
Be sure to unlock the knob before adjusting the pressure and lock it after setting the pressure. Failure to follow this procedure can cause damage to the knob and the outlet pressure may fluctuate.
- ✓ 调整手轮外拉则开锁（调整手轮下侧可看到桔黄色标记）
Pull the pressure regulator knob to unlock. (You can visually verify this with the "orange mark" that appears in the gap.)
- ✓ 将调整手轮压入则锁住，若难锁住时，向左右稍稍回转一下再推压即可（锁住时看不见桔黄色标记。）
Push the pressure regulator knob to lock. When the knob is not easily locked, turn it left and right a little and then push it (when the knob is locked, the "orange mark", i.e., the gap will disappear).



品质与艺术完美结合

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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