

240和250系列 气动控制阀带AC-1或AC-2阀内件



应用

低噪音、低压损的最优化阀内件，适用液体流体，压差最高为40巴。

公称通径 DN 50至300 • NPS 2至12

压力等级 PN 16至160 • Class150至900

温度范围 -10至220°C • 14至428°F



AC-1 阀内件特征如下：

- 凸面阀座
- 抛物线型阀芯，阀座内部集成导向

AC-2 阀内件在抛物线型阀芯和阀芯导向上游、阀座内部集成装配1至4块衰减板。

压差不超过40巴或580psi。

类型

标准型用于SAMSON控制阀，按照表2和表3

- AC-1 • 最优化阀内件用于DN50至300或NPS 2至12的控制阀
- AC-2 • 最优化阀内件配置1至4块衰减板用于DN80至250或NPS 3至10的控制阀

其他类型

按要求可提供压力平衡型

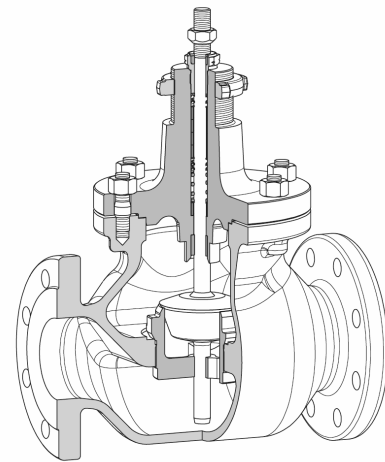


图1 • 配置AC-1 阀内件的3251型

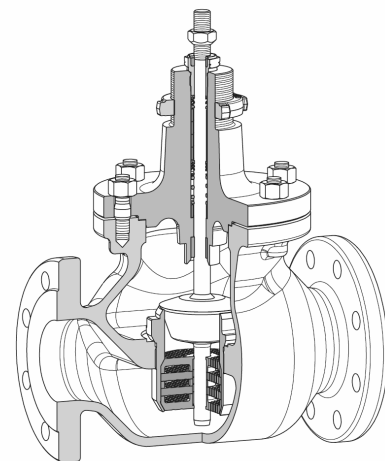


图2 • 配置AC-2 阀内件及4块衰减板的3251型

工作原理

介质流体沿流开方向流经阀门。流通横截面积大小由阀芯决定。 K_v 系数由阀芯调整，必要时，在阀座入口配置组合式衰减板。

为防止振动，阀芯为上下导向，顶部阀盖导向套和阀座内的导向套。

AC-1

与标准阀门内件相比，此阀内件通过提升初始空化作用点，在0.25 和0.75差压比 X_F 之间，显著减少声压级。

根据阀门负荷不同，可不同程度地降低声压级。

AC-2

阀座入口可选装1至4块衰减板，可在阀门较大负荷时有更高的差压比 X_F （初始空化作用）。

在阀门负荷较低时，抛物线型阀芯的较高 X_{F2} 值会将初始空化转化为较高的压差比。

与标准阀门内件相比，此阀内件通过改变初始空化作用点，在0.25 和0.9差压比 X_F 之间，很好地降低声压级。

压差比 X_F 定义如下：

$$X_F = \frac{\Delta p}{p_1 - p_v}$$

其中， Δp 为阀门两端压差； p_1 为上游压力； p_v 是介质蒸汽压力。

与标准阀内件相比的声压级 ΔL_p 降低，如图5和图6所示，图中给出了4种不同的阀门负荷。

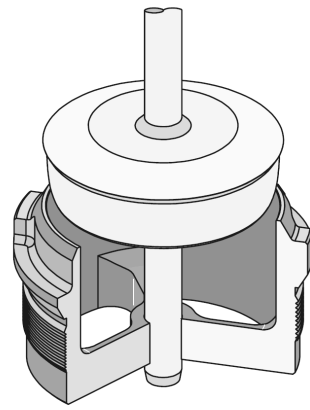


图3 • AC-1 阀内件剖面图

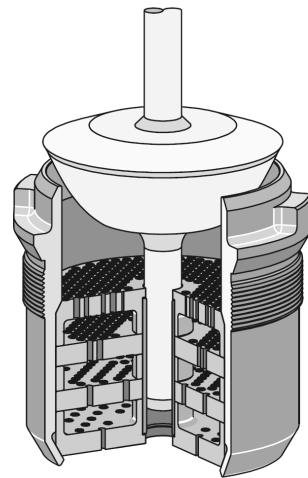


图4 • 配置4块衰减板的AC-2阀内件剖面图

表1 • AC-1和AC-2阀内件技术数据

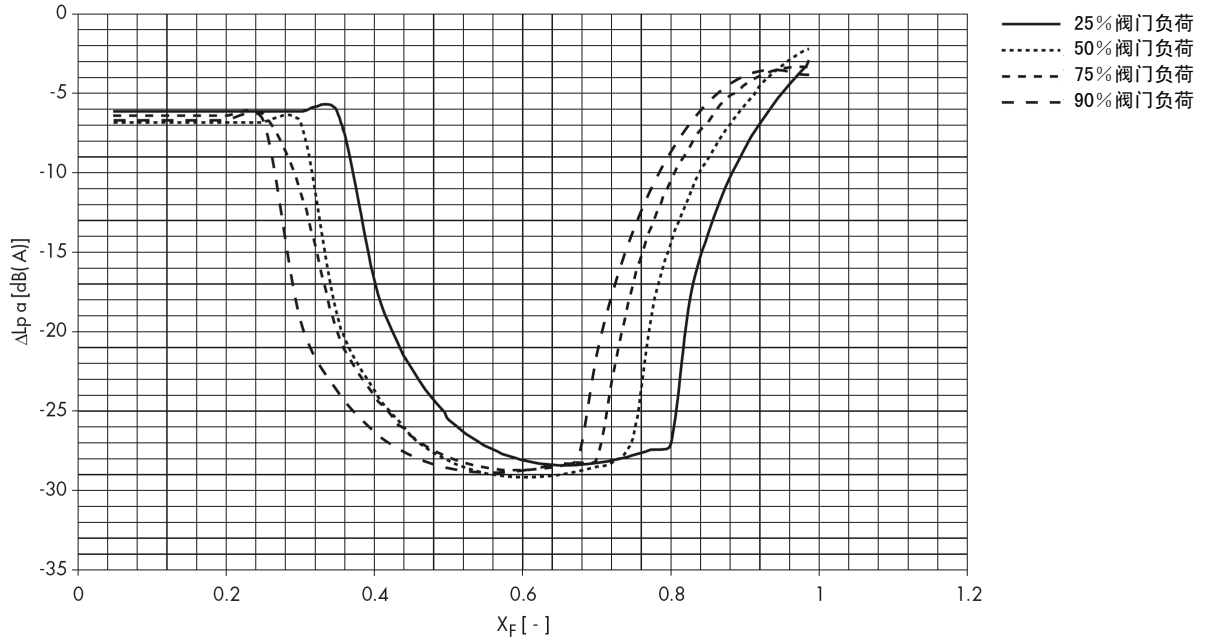
| | AC-1 | AC-2 |
|--------------------|---|-------------------------|
| 公称口径 | DN 50至300 • NPS 2至12 | DN 80至250 • NPS 3至10 |
| 压力等级 | PN 16至160 • Class 150至900 | |
| 温度范围 | -10至220°C • 14至428°F | |
| Δp_{max} | 无空化运行: < 40 巴 • < 580 psi | |
| 最大允许差压 | 空化运行: < 25 巴 • < 360 psi | |
| 介质 | 仅限液体 | |
| 流向 | 仅限流开方向 (FTO) | |
| 闭合部件 | 双导向抛物线型阀芯 | 双导向抛物线型阀芯 以及阀座内集成衰减板 |
| 阀座-阀芯密封 | 金属密封: IV级 | |
| 泄漏等级 (DIN EN 1349) | SB ≥ 100: IV-S1 • SB < 100: IV-S2 | |
| K_v/C_v 值 | 见表2 | 见表3 |
| 特性 | 等百分比 | 修正的等百分比 |
| 可调比 | 50:1 | 见表3 |
| 阀座孔 | 见表2 | 见表3 |
| 行程 | 见表2 | 见表3 |
| 阀内件材质 | 1. 4571 司太莱加硬 / 1. 4006 司太莱加硬 / 1. 4301 | |

声压级降低

下图给出使用AC-阀内件时不同于标准阀内件的声压级 ΔL_{pa} 降低
其它AC-阀内件的 ΔL_{pa} 按要求提供

图5和6 • 公称口径DN 80 (NPS 3) 和DN 150 (NPS 6)

特殊阀内件和V-port阀内件间的声压级差 (dB(A)) ΔL_{pa}
公称口径DN 80 Kv 35/Cv 40



特殊阀内件和V-port阀内件间的声压级差 (dB(A)) ΔL_{pa}
公称口径DN 150 Kv 135/Cv 160

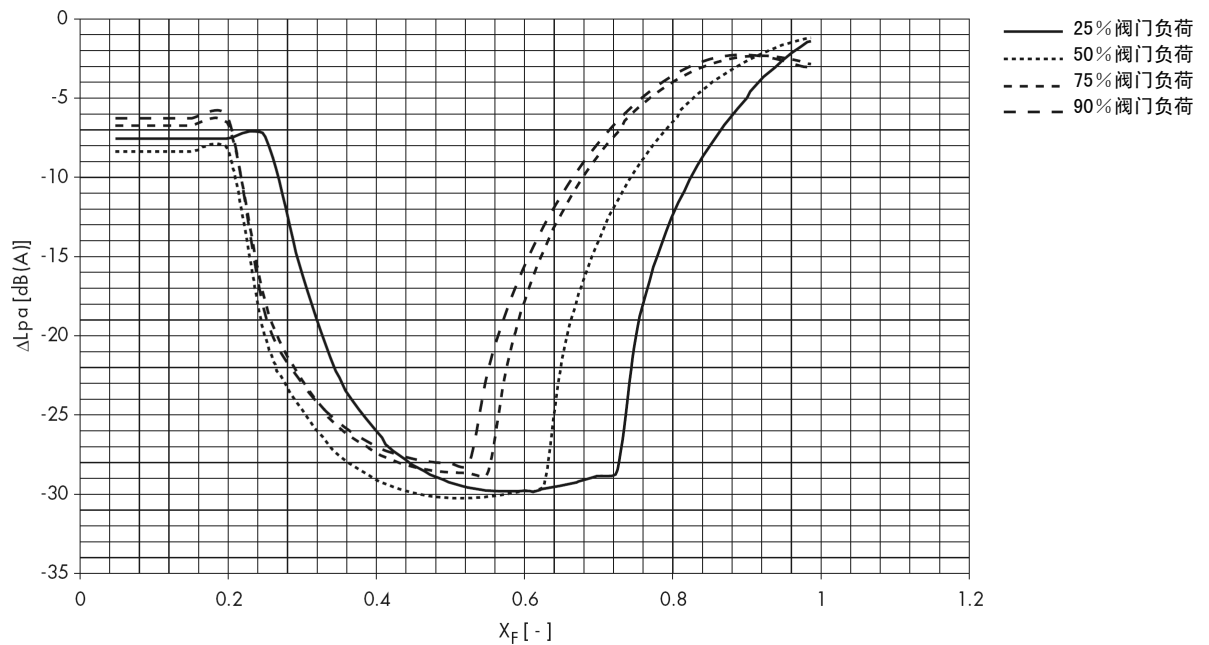


表2 • AC-1 阀内件 • 公称通径及相应流量系数 (K_v和C_v)

指定行程必须满足10%的余量。

对于执行器故障-安全动作“杆伸出”的需要使用机械行程限位

| DN/in | SB [mm] | 行程 [mm] | K _v | C _v | 阀门型号 | X _{fz} 值 [阀门负荷%] |
|-----------------|---------|---------|----------------|----------------|--|--|
| DN 50 NPS 2 | 48 | 15 | 35 | 40 | 3241 | 0.34 (90 %) |
| | 50 | 30 | | | 3251/3256 | 0.38 (75 %) 0.45 (50 %) 0.54 (25 %) |
| DN 80 NPS 3 | 48 | 15 | 35 | 40 | 3241 | 0.34 (90 %) |
| | 50 | 30 | | | 3251/3256 | 0.38 (75 %) 0.45 (50 %) 0.54 (25 %) |
| | 63 | 15 | 50 | 60 | 3241 | 0.31 (90 %) |
| | | 30 | | | 3251/3256 | 0.35 (75 %) 0.44 (50 %) 0.56 (25 %) |
| | 80 | 30 | 60 | 70 | 3251 3256 | 0.38 (90 %) 0.42 (75 %) 0.49 (50 %) 0.60 (25 %) |
| | | | 70 | 80 | | 0.35 (90 %) 0.38 (75 %) 0.47 (50 %) 0.58 (25 %) |
| DN 100 NPS 4 | 48 | 15 | 38 | 45 | 3241 | 0.33 (90 %) |
| | 50 | 30 | | | 3251/3256 | 0.36 (75 %) 0.43 (50 %) 0.53 (25 %) |
| | 63 | 30 | 55 | 65 | 3241 | 0.29 (90 %) |
| | | | | | 3251/3256 | 0.33 (75 %) 0.42 (50 %) 0.54 (25 %) |
| | 80 | 30 | 75 | 90 | 3251/3256 | 0.33 (90 %) 0.37 (75 %) 0.45 (50 %) 0.57 (25 %) |
| | | | 75 | 90 | | 0.42 (90 %) 0.46 (75 %) 0.53 (50 %) 0.63 (25 %) |
| | 100 | 30 | 100 | 120 | 3241 | 0.37 (90 %) |
| | | | | | 3251/3256 | 0.40 (75 %) 0.48 (50 %) 0.59 (25 %) |
| DN 150 NPS 6 | 80 | 30 | 95 | 110 | 3241 | 0.27 (90 %) |
| | | | | | 3251/3256 | 0.32 (75 %) 0.41 (50 %) 0.53 (25 %) |
| | 100 | 30 | 145 | 170 | 3241/3251/3256 | 0.28 (90 %) 0.32 (75 %) 0.41 (50 %) 0.54 (25 %) |
| | | | | | 3241 | 0.25 (90 %) |
| | 125 | 30 | 205 | 240 | 3251/3256 | 0.29 (75 %) |
| | | 60 | | | | 0.38 (50 %) 0.50 (25 %) |
| 150 | 60 | 205 | 240 | 3251 3256 | 0.34 (90 %) 0.37 (75 %) 0.45 (50 %) 0.57 (25 %) | |
| | | 250 | 290 | | 0.28 (90 %) 0.33 (75 %) 0.41 (50 %) 0.54 (25 %) | |

| DN/in | SB [mm] | 行程 [mm] | K _v | C _v | 阀门型号 | X _{fz} 值 [阀门负荷%] |
|------------------|-------------|-------------|----------------|----------------|----------------------|------------------------------|
| DN 200 NPS 8 | 100 | 30 | 155 | 180 | 3241 3251 3256 | 0.27 (90 %) |
| | | | | | | 0.31 (75 %) |
| | 0.40 (50 %) | | | | | |
| | 0.53 (25 %) | | | | | |
| | 125 | 60 | 230 | 270 | | 0.22 (90 %) |
| | | | | | | 0.26 (75 %) |
| | 0.36 (50 %) | | | | | |
| | 0.49 (25 %) | | | | | |
| 150 | 60 | 305 | 360 | 0.24 (90 %) | | |
| | | | | 0.28 (75 %) | | |
| 0.37 (50 %) | | | | | | |
| 0.51 (25 %) | | | | | | |
| 200 | 60 | 360 | 420 | 0.33 (90 %) | | |
| | | | | 0.37 (75 %) | | |
| | | 480 | 560 | 0.45 (50 %) | | |
| | | | | 0.57 (25 %) | | |
| 0.26 (90 %) | 0.31 (75 %) | 0.40 (50 %) | 0.52 (25 %) | | | |
| | | | | | | |
| DN 250 NPS 10 | 100 | 30 | 155 | 180 | 3241 3254 | 0.27 (90 %) |
| | | | | | | 0.31 (75 %) |
| | 0.40 (50 %) | | | | | |
| | 0.53 (25 %) | | | | | |
| | 125 | 60 | 230 | 270 | | 0.22 (90 %) |
| | | | | | | 0.26 (75 %) |
| | 0.36 (50 %) | | | | | |
| | 0.49 (25 %) | | | | | |
| 150 | 60 | 305 | 360 | 0.24 (90 %) | | |
| | | | | 0.28 (75 %) | | |
| 0.37 (50 %) | | | | | | |
| 0.51 (25 %) | | | | | | |
| 200 | 60 | 360 | 420 | 0.33 (90 %) | | |
| | | | | 0.37 (75 %) | | |
| | | 480 | 560 | 0.45 (50 %) | | |
| | | | | 0.57 (25 %) | | |
| 0.26 (90 %) | 0.31 (75 %) | 0.40 (50 %) | 0.52 (25 %) | | | |
| | | | | | | |
| DN 300 NPS 12 | 125 | 60 | 230 | 270 | 3241 3254 | 0.22 (90 %) |
| | | | | | | 0.26 (75 %) |
| | 0.36 (50 %) | | | | | |
| | 0.49 (25 %) | | | | | |
| | 150 | 60 | 305 | 360 | | 0.24 (90 %) |
| | | | | | | 0.28 (75 %) |
| | 0.37 (50 %) | | | | | |
| | 0.51 (25 %) | | | | | |
| 200 | 60 | 480 | 560 | 0.26 (90 %) | | |
| | | | | 0.31 (75 %) | | |
| 0.40 (50 %) | | | | | | |
| 0.52 (25 %) | | | | | | |
| 250 | 120 | 1000 | 1150 | 0.20 (90 %) | | |
| | | | | 0.24 (75 %) | | |
| 0.33 (50 %) | | | | | | |
| 0.48 (25 %) | | | | | | |

表3 • AC-2阀内件 • 公称通径及相应流量系数 (K_v和C_v)

指定行程必须满足10%的余量。

对于执行器故障-安全动作“杆伸出”的需要使用机械行程限位

| DN/in | SB [mm] | 行程 [mm] | KV | CV | 阀门型号 | 衰减板 | | 可调比 |
|------------------|------------|------------|-----|-----|--------------|-----|------|-------|
| | | | | | | 数量 | 孔径 φ | |
| DN 80 NPS 3 | 80 | 30 | 16 | 20 | 3251 | 4 | 3 | >10:1 |
| | | | 22 | 25 | | | | |
| | | | 25 | 30 | | | | |
| | | | 30 | 35 | | | | |
| | | | 35 | 40 | | 3 | | >15:1 |
| | | | 38 | 45 | | 2 | | >20:1 |
| | | | 43 | 50 | | 1 | | >25:1 |
| | | | 50 | 60 | | | | |
| DN 100 NPS 4 | 100 | 30 | 35 | 40 | 3251 | 4 | 3 | >20:1 |
| | | | 38 | 45 | | | | |
| | | | 43 | 50 | | | | |
| | | | 45 | 55 | | | | |
| | | | 50 | 60 | | 3 | | >15:1 |
| | | | 55 | 65 | | 2 | | >20:1 |
| | | | 60 | 70 | | 1 | | >30:1 |
| | | | 63 | 75 | | | | |
| 72 | 85 | | | | | | | |
| DN 150 NPS 6 | 150 | 60 | 85 | 100 | 3251 | 4 | 5 | >15:1 |
| | | | 95 | 110 | | | | |
| | | | 100 | 120 | | | | |
| | | | 110 | 130 | | | | |
| | | | 120 | 140 | | 3 | | >15:1 |
| | | | 130 | 150 | | 2 | | >20:1 |
| | | | 135 | 160 | | 1 | | >25:1 |
| | | | 145 | 170 | | | | |
| | | | 155 | 180 | | | | |
| | | | 160 | 190 | | | | |
| 180 | 210 | | | | | | | |
| DN 200 NPS 8 | 200 | 60 | 135 | 160 | 3241 3251 | 4 | 5 | >15:1 |
| | | | 145 | 170 | | | | |
| | | | 155 | 180 | | | | |
| | | | 160 | 190 | | | | |
| | | | 170 | 200 | | 3 | | >10:1 |
| | | | 180 | 210 | | 2 | | >15:1 |
| | | | 190 | 220 | | 1 | | 20:1 |
| | | | 205 | 240 | | | | >20:1 |
| | | | 220 | 255 | | | | >20:1 |
| | | | 250 | 290 | | | | >25:1 |
| | | | 260 | 305 | | | | >25:1 |
| | | | 280 | 325 | | | | |
| 320 | 375 | | | | | | | |
| DN 250 NPS 10 | 200 | 60 | 135 | 160 | 3241 | 4 | 5 | >15:1 |
| | | | 145 | 170 | | | | |
| | | | 155 | 180 | | | | |
| | | | 160 | 190 | | | | |
| | | | 170 | 200 | | 3 | | >10:1 |
| | | | 180 | 210 | | 2 | | >15:1 |
| | | | 190 | 220 | | 1 | | 20:1 |
| | | | 205 | 240 | | | | >20:1 |
| | | | 220 | 255 | | | | >20:1 |
| | | | 250 | 290 | | | | >25:1 |
| | | | 260 | 305 | | | | >25:1 |
| | | | 280 | 325 | | | | |
| | | | 320 | 375 | | | | |

表4 · 240系列控制阀带有AC-1或AC-2阀内件的允许压差

表4a · 控制阀故障-安全动作位置“阀门关闭”(FA) · 压差>40 巴时仅对于ANSI类型

| 弹簧范围 (巴) 执行器规格 (cm ²) | | | | 240 | 0.3...1.1 | 0.6...2.2 | 0.9...3.3 | - | - | - | | |
|--------------------------------------|-----------|-----|------------------------|----------------|-----------|-----------|-----------|-----------|-----------|------|------|--|
| | | | | 350/700 | 0.4...1.2 | 0.8...2.4 | 1.2...3.6 | 1.4...2.3 | 2.1...3.3 | | | |
| 所需气源压力 | | | | 弹簧范围上限 + 0.2 巴 | | | | | | | | |
| DN | Kvs | SB | 执行器 cm ² | 当p2=0巴时的Δp | | | | | | | | |
| DN 50 | 35 | 48 | 350 | 6 | 11.9 | 17.9 | 20.8 | 31.2 | - | - | - | |
| | | | 700 | (23.8) | - | - | - | - | - | - | - | |
| DN 80 | 35 | 48 | 350 | 6 | 11.9 | 17.9 | 20.8 | 31.2 | - | - | - | |
| | 50 | 63 | | 3.5 | 6.9 | 10.4 | 12.1 | 18.1 | - | - | - | |
| | 35 | 48 | 700 | (23.8) | (47.6) | - | - | - | - | - | - | |
| | 50 | 63 | | (13.8) | (27.6) | - | - | - | - | - | - | |
| DN 80 PN 40 | 35 | 48 | 700 | (23.8) | (47.6) | (50) | - | - | - | 50 | - | |
| | 50 | 63 | | (13.8) | (27.6) | (41.5) | - | - | - | 46.6 | - | |
| DN 100 | 38 | 48 | 350 | 6 | 11.9 | 17.9 | 20.8 | 31.2 | - | - | - | |
| | | | | (23.8) | (47.6) | (50) | - | - | - | (50) | - | |
| | 55 | 63 | 700 | 6.9 | 13.8 | 20.7 | 24.2 | 36.3 | 44.9 | - | - | |
| | 75 | 80 | | 4.3 | 8.6 | 12.9 | 15 | 22.5 | 27.9 | - | - | |
| | 100 | | 2.7 | 5.5 | 8.2 | 9.6 | 14.4 | 17.8 | - | - | | |
| DN 100 PN 40 | 55 | 63 | 1400 | 27.6 | - | - | - | - | 50 | 50 | 50 | |
| | 75 | 80 | | 17.1 | - | - | - | - | 42.8 | 43.9 | 50 | |
| | 100 | 100 | | 11 | - | - | - | - | 27.4 | 28.1 | 33.6 | |
| DN 150 | 95 | 80 | 700 | 4.3 | 8.6 | 12.9 | 15 | 22.5 | 27.9 | - | - | |
| | 145 | 100 | | 2.7 | 5.5 | 8.2 | 9.6 | 14.4 | 17.8 | - | - | |
| | 205 | 125 | | 1.8 | 3.5 | 5.3 | 6.1 | 9.2 | 11.4 | - | - | |
| DN 150 PN 40 | 95 | 80 | 1400 | 17.1 | - | - | - | - | 42.8 | 43.9 | 50 | |
| | 145 | 100 | | 11 | - | - | - | - | 27.4 | 28.1 | 33.6 | |
| | 205 | 125 | | 7 | - | - | - | - | 17.6 | 18 | 21.5 | |
| DN 200 和DN 250 | 155 | 100 | 1400 | 11 | - | - | - | - | 27.4 | 28.1 | 33.6 | |
| | 230 | 125 | | - | 7 | 8.8 | 12.3 | 14.9 | - | - | - | |
| | 305 | 150 | | - | 4.9 | 6.1 | 8.5 | 10.4 | - | - | - | |
| | 135...480 | 200 | | - | 2.7 | 3.4 | 4.8 | 5.8 | - | - | - | |
| | 155 | 100 | 2800 | - | - | - | - | - | - | - | 50 | |
| | 230 | 125 | | - | - | 28.1 | - | 35.1 | 42.1 | 49.1 | - | |
| | 305 | 150 | | - | - | 19.5 | - | 24.4 | 29.3 | 34.1 | - | |
| | 135...480 | 200 | - | - | 11 | - | 13.7 | 16.5 | 19.2 | - | | |
| DN 200/250 PN 40 | 230 | 125 | 2x2800 | - | - | 50 | - | 50 | 50 | - | - | |
| | 305 | 150 | | - | - | 39 | - | 48.8 | 50 | - | - | |
| | 135...480 | 200 | | - | - | 21.9 | - | 27.4 | 32.9 | - | - | |
| DN 300 | 230 | 125 | 1400 | - | 7 | 8.8 | 12.3 | 14.9 | - | - | - | |
| | 305 | 150 | | - | 4.9 | 6.1 | 8.5 | 10.4 | - | - | - | |
| | 480 | 200 | | - | 2.7 | 3.4 | 4.8 | 5.8 | - | - | - | |
| | 1000 | 250 | | - | 1.8 | 2.2 | 3.1 | 3.7 | - | - | - | |
| | 230 | 125 | 2800 | - | - | 28.1 | - | 35.1 | 42.1 | 49.1 | - | |
| | 305 | 150 | | - | - | 19.5 | - | 24.4 | 29.3 | 34.1 | - | |
| | 480 | 200 | | - | - | 11 | - | 13.7 | 16.5 | 19.2 | - | |
| | 1000 | 250 | | 5.5 | 6.6 | - | 7.9 | - | - | - | - | |

表4b • 240系列控制阀 故障-安全动作位置“阀门开启”(FE) • 压差>40 巴时仅对于ANSI类型

| 弹簧范围 (巴) 执行器规格 (cm ²) | | | | 240 | 0.2...1.0 | | | | |
|--------------------------------------|-----------------|-----|------------------------|---------------|--------------------------|--------|--------|------|---|
| | | | | 350/700 | 0.2...0.6 | | | | |
| | | | | 700 | 0.4...2.0 (0.3...1.1) | | | | |
| | | | | 1400 | | | | | |
| | | | | 2800 | | | | | |
| | | | | 2x2800 | | | | | |
| 所需气源压力 | | | | 1.4 | 2.4 | 3.6 | 4 | 6 | |
| DN | K _{vs} | SB | 执行器 cm ² | 当p2 = 0 巴时的Δp | | | | | |
| DN 50 | 35 | 48 | 350 | 6 | 20.8 | 38.7 | - | - | |
| | | | 700 | (23.8) | - | - | - | - | |
| DN 80 | 35 | 48 | 350 | 6 | 20.8 | 38.7 | 44.6 | - | |
| | 50 | 63 | | 3.5 | 12.1 | 22.5 | 25.9 | - | |
| | 35 | 48 | | 6 | 20.8 | 38.7 | 44.6 | - | |
| | 50 | 63 | | 3.5 | 12.1 | 22.5 | 25.9 | - | |
| DN 80 | 35 | 48 | 700 | (23.8) | (50) | (50) | (50) | - | |
| PN 40 | 50 | 63 | | (13.8) | (31.1) | (50) | (50) | - | |
| DN 100 | 38 | 48 | 350 | 6 | 20.8 | 38.7 | 44.6 | 50 | |
| | 55 | 63 | 700 | (35.7) | (50) | (50) | - | - | |
| | | 75 | | 80 | 6.9 | 24.2 | 44.9 | 50 | - |
| | | 100 | | 100 | 4.3 | 15 | 27.9 | 32.1 | - |
| | | | | 2.7 | 9.6 | 17.8 | 20.6 | - | |
| DN 100 | 55 | 63 | 1400 | (10.4) | (44.9) | (50) | - | - | |
| PN 40 | 75 | 80 | | (6.4) | (27.9) | (50) | - | - | |
| | 100 | 100 | | (4.1) | (17.8) | (34.3) | - | - | |
| DN 150 | 95 | 80 | 700 | 4.3 | 15 | 27.9 | 32.1 | - | |
| | 145 | 100 | | 2.7 | 9.6 | 17.8 | 20.6 | - | |
| | 205 | 125 | | 1.8 | 6.1 | 11.4 | 13.2 | - | |
| DN 150 | 95 | 80 | 1400 | (6.4) | (27.9) | (50) | - | - | |
| PN 40 | 145 | 100 | | (4.1) | (17.8) | (34.3) | - | - | |
| | 205 | 125 | | (2.6) | (11.4) | (21.9) | - | - | |
| DN 200 和 DN 250 | 155 | 100 | 1400 | (4.1) | (17.8) | (34.3) | (39.8) | (50) | |
| | 230 | 125 | | - | 3.5 | 14 | 17.6 | 35.1 | |
| | 305 | 150 | | - | 2.4 | 9.8 | 12.2 | 24.4 | |
| | 135...480 | 200 | | - | 1.4 | 5.5 | 6.9 | 13.7 | |
| | 230 | 125 | 2800 | (5.3) | (22.8) | (43.9) | (50) | - | |
| | 305 | 150 | | (3.7) | (15.8) | (30.5) | (35.3) | - | |
| | 135...480 | 200 | | (2.1) | (8.9) | (17.1) | (19.9) | - | |
| DN 200/250 | 230 | 125 | 2x2800 | (10.5) | (45.6) | - | - | - | |
| PN 40 | 305 | 150 | | (7.3) | (31.7) | - | - | - | |
| | 135...480 | 200 | | (4.1) | (17.8) | - | - | - | |
| DN 300 | 230 | 125 | 1400 | - | 3.5 | 14 | 17.6 | 35.1 | |
| | 305 | 150 | | - | 2.4 | 9.8 | 12.2 | 24.4 | |
| | 480 | 200 | | - | 1.4 | 5.5 | 6.9 | 13.7 | |
| | 1000 | 250 | | - | 0.9 | 3.5 | 4.4 | 8.8 | |
| | 230 | 125 | 2800 | (5.3) | (22.8) | (43.9) | (50) | - | |
| | 305 | 150 | | (3.7) | (15.8) | (30.5) | (35.3) | - | |
| | 480 | 200 | | (2.1) | (8.9) | (17.1) | (19.9) | - | |
| | 1000 | 250 | | - | 1.8 | 7 | 8.8 | - | |

表5 · 250系列控制阀带有AC-1或AC-2阀内件的允许压差

表5a · 控制阀故障-安全动作位置“阀门关闭”(FA)

| 弹簧范围(巴) 执行器规格(单位cm ²) | | | | 700 | 0.4...1.2 (0.8...1.2) | 0.8...2.4 | - | 1.2...3.6 | 1.4...2.3 | 2.1...3.3 | 2.35...3.8 | 2.6...4.3 |
|--------------------------------------|-----------------------|-----|------------------------|----------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|--------------------------|---------------------------|
| | | | | 1400 | | 0.8...2.4 (1.6...2.4) | | 1.0...3.0 (2.0...3.0) | 1.4...2.7 | 2.05...2.7 | - | 1.7...3.2 (2.45...3.2) |
| | | | | 2800 2x2800 | 0.4...1.2 (0.8...1.2) | 0.8...2.4 (1.6...2.4) | 1.0...3.0 (2.0...3.0) | 1.2...3.6 (2.4...3.6) | 1.1...3.6 (2.4...3.6) | 1.1...1.8 (1.25...1.6) | 1.8...3.8 (2.8...3.8) | 2.8...3.2 (2.8...3.8) |
| 所需气源压力 | | | | 弹簧范围上限 + 0.2 巴 | | | | | | | | |
| DN | Kvs | SB | 执行器 cm ² | 当p2=0巴时的△p | | | | | | | | |
| DN 5 PN 16...40 | 35 | 50 | 700 | 11 | 21.9 | - | 32.9 | 38.4 | - | - | - | |
| DN 50 PN 63...160 | 35 | 50 | 700 | 11 | 21.9 | - | 32.9 | 38.4 | 57.6 | 64.4 | 71.3 | |
| | | | 1400 | (43.9) | (87.8) | - | (109.7) | - | (112.4) | - | (134.4) | |
| DN 80 PN 16...40 | 35 | 50 | 700 | 11 | 21.9 | - | 32.9 | 38.4 | 57.6 | 64.4 | 71.3 | |
| | | | 1400 | (43.9) | (87.8) | - | - | - | - | - | - | |
| | 50 | 63 | 700 | 6.9 | 13.8 | - | 20.7 | 24.2 | 36.3 | 40.6 | 44.9 | |
| | | | 1400 | (27.6) | (55.3) | - | - | - | - | - | - | |
| | 16...70 | 80 | 700 | 4.3 | 8.6 | - | 12.9 | 15 | 22.5 | 25.2 | 27.9 | |
| | | | 1400 | (17.1) | (34.3) | - | - | - | - | - | - | |
| DN 80 PN 63...160 | 35 | 50 | 700 | 11 | 21.9 | - | 32.9 | 38.4 | 57.6 | 64.4 | 71.3 | |
| | | | 1400 | (43.9) | (87.8) | - | (109.7) | - | 112.4 | - | (134.4) | |
| | 50 | 63 | 700 | 6.9 | 13.8 | - | 20.7 | 24.2 | 36.3 | 40.6 | 44.9 | |
| | | | 1400 | (27.6) | (55.3) | - | (69.1) | - | (70.8) | - | (84.6) | |
| | 16...70 | 80 | 700 | 4.3 | 8.6 | - | 12.9 | 15 | 22.5 | 25.2 | 27.9 | |
| | | | 1400 | (17.1) | (43.3) | - | (42.8) | - | 43.9 | - | (52.5) | |
| DN 100 PN 16...40 | 38 | 50 | 700 | 11 | 21.9 | - | 32.9 | 38.4 | 57.6 | 64.4 | 71.3 | |
| | | | 1400 | (43.9) | (87.8) | - | (109.7) | - | 112.4 | - | (134.4) | |
| | 55 | 63 | 700 | 6.9 | 13.8 | - | 20.7 | 24.2 | 36.3 | 40.6 | 44.9 | |
| | | | 1400 | (27.6) | (55.3) | - | (69.1) | - | 70.8 | - | (84.6) | |
| | 75 | 80 | 700 | 4.3 | 8.6 | - | 12.9 | 15 | 22.5 | 25.2 | 27.9 | |
| | | | 1400 | (17.1) | (34.3) | - | (42.8) | - | (43.9) | - | (52.5) | |
| | 35...100 | 100 | 700 | 2.7 | 5.5 | - | 8.2 | 9.6 | 14.4 | 16.1 | 17.8 | |
| | | | 1400 | (11) | (21.9) | - | (27.4) | - | (28.1) | - | (33.6) | |
| | DN 100 PN 63...160 | 38 | 50 | 700 | 11 | 21.9 | - | 32.9 | 38.4 | 57.6 | 64.4 | 71.3 |
| | | | | 1400 | (43.9) | (87.8) | - | (109.7) | - | 112.4 | - | (134.4) |
| 55 | | 63 | 700 | 6.9 | 13.8 | - | 20.7 | 24.2 | 36.3 | 40.6 | 44.9 | |
| | | | 1400 | (27.6) | (55.3) | - | (69.1) | - | 70.8 | - | (84.6) | |
| 75 | | 80 | 700 | 4.3 | 8.6 | - | 12.9 | 15 | 22.5 | 25.2 | 27.9 | |
| | | | 1400 | (17.1) | (34.3) | - | (42.8) | - | 43.9 | - | (52.5) | |
| 35...100 | | 100 | 700 | 2.7 | 5.5 | - | 8.2 | 9.6 | 14.4 | 16.1 | 17.8 | |
| | | | 1400 | (11) | (21.9) | - | (27.4) | - | 28.1 | - | (33.6) | |

| 弹簧范围 (巴) 执行器规格 (单位cm ²) | | 700 | | 0.4...1.2 (0.8...1.2) | | 0.8...2.4 | | - | | 1.2...3.6 | | 1.4...2.3 | | 2.1...3.3 | | 2.35...3.8 | | 2.6...4.3 | | | |
|--|-----------------|----------------|------------------------|--------------------------|--------|--------------------------|--------|--------------------------|------|--------------------------|--------|--------------------------|--|---------------------------|--|--------------------------|--|---------------------------|--|--|--|
| | | 1400 | | 0.4...1.2 (0.8...1.2) | | 0.8...2.4 | | - | | 1.0...3.0 (2.0...3.0) | | 1.4...2.7 | | 2.05...2.7 | | - | | 1.7...3.2 (2.45...3.2) | | | |
| | | 2800 2x2800 | | 0.4...1.2 (0.8...1.2) | | 0.8...2.4 (1.6...2.4) | | 1.0...3.0 (2.0...3.0) | | 1.2...3.6 (2.4...3.6) | | 1.1...3.6 (2.4...3.6) | | 1.1...1.8 (1.25...1.6) | | 1.8...3.8 (2.8...3.8) | | 2.8...3.2 (2.8...3.8) | | | |
| 所需气源压力 | | | | 弹簧范围上限 + 0.2 巴 | | | | | | | | | | | | | | | | | |
| DN | K _{vs} | SB | 执行器 cm ² | 当p2 = 0 巴时的Δp | | | | | | | | | | | | | | | | | |
| DN 150 | 95 | 80 | 700 | 4.3 | 8.6 | - | 12.9 | 15 | 22.5 | 25.2 | 27.9 | | | | | | | | | | |
| | | | 1400 | (17.1) | (34.3) | - | (42.8) | - | 43.9 | - | (52.5) | | | | | | | | | | |
| | | | 2800 | - | - | - | - | - | 120 | 107.1 | 120 | | | | | | | | | | |
| | 145 | 100 | 700 | 2.7 | 5.5 | - | 8.2 | 9.6 | 14.4 | 16.1 | 17.8 | | | | | | | | | | |
| | | | 1400 | (11) | (21.9) | - | (27.4) | - | 28.1 | - | (33.6) | | | | | | | | | | |
| | | | 2800 | - | - | - | - | - | 76.8 | 68.6 | 76.8 | | | | | | | | | | |
| | 205 | 125 | 1400 | 3.5 | 7 | - | 8.8 | 12.3 | - | - | 14.9 | | | | | | | | | | |
| | | | 2800 | (14) | (28.1) | (35.1) | (42.1) | (22.8) | - | - | (49.1) | | | | | | | | | | |
| | | | 2x2800 | (28.1) | (56.2) | - | - | (45.6) | - | - | - | | | | | | | | | | |
| | 85...250 | 150 | 1400 | 2.4 | 4.9 | - | 6.1 | 8.5 | - | - | 10.4 | | | | | | | | | | |
| | | | 2800 | (9.8) | (19.5) | (24.4) | (29.3) | (15.8) | - | - | (34.1) | | | | | | | | | | |
| | | | 2x2800 | (19.5) | (39) | - | - | (31.7) | - | - | - | | | | | | | | | | |
| 200 | 155 | 100 | 700 | 2.7 | 5.5 | - | 8.2 | 9.6 | 14.4 | 16.1 | 18.8 | | | | | | | | | | |
| | | | 1400 | (11) | (21.9) | - | (27.4) | - | 28.1 | - | (33.6) | | | | | | | | | | |
| | | | 2800 | - | - | - | - | - | 76.8 | 68.6 | 76.8 | | | | | | | | | | |
| | 230 | 125 | 1400 | 3.5 | 7 | - | 8.8 | 12.3 | - | - | 14.9 | | | | | | | | | | |
| | | | 2800 | (14) | (28.1) | (35.1) | (42.1) | (22.8) | - | - | (49.1) | | | | | | | | | | |
| | | | 2x2800 | (28.1) | (56.2) | (70.2) | (84.2) | (45.6) | - | - | - | | | | | | | | | | |
| | 3.5 | 150 | 1400 | 2.4 | 4.9 | - | 6.1 | 8.5 | - | - | 10.4 | | | | | | | | | | |
| | | | 2800 | (9.8) | (19.5) | (24.4) | (29.3) | (15.8) | - | - | (34.1) | | | | | | | | | | |
| | | | 2x2800 | (19.5) | (39) | (48.8) | (58.5) | (31.7) | - | - | - | | | | | | | | | | |
| | 135...480 | 200 | 1400 | 1.4 | 2.7 | - | 3.4 | 4.8 | - | - | 5.8 | | | | | | | | | | |
| | | | 2800 | (5.5) | (11) | (13.7) | (16.5) | (8.9) | - | - | (19.2) | | | | | | | | | | |
| | | | 2x2800 | (11) | (21.9) | (27.4) | (32.9) | (17.8) | - | - | - | | | | | | | | | | |
| 300 | 230 | 125 | 1400 | 3.5 | 7 | - | 8.8 | 12.3 | - | - | 14.9 | | | | | | | | | | |
| | | | 2800 | (14) | (28.1) | (35.1) | (42.1) | (22.8) | - | - | (49.1) | | | | | | | | | | |
| | | | 2x2800 | (28.1) | (56.2) | (70.2) | (84.2) | (45.6) | - | - | - | | | | | | | | | | |
| | 305 | 150 | 1400 | 2.4 | 4.9 | - | 6.1 | 8.5 | - | - | 10.4 | | | | | | | | | | |
| | | | 2800 | (9.8) | (19.5) | (24.4) | (29.3) | (15.8) | - | - | (34.1) | | | | | | | | | | |
| | | | 2x2800 | (19.5) | (39) | (48.8) | (58.5) | (31.7) | - | - | - | | | | | | | | | | |
| | 480 | 200 | 1400 | 1.4 | 2.7 | - | 3.4 | 4.8 | - | - | 5.8 | | | | | | | | | | |
| | | | 2800 | (5.5) | (11) | (13.7) | (16.5) | (8.9) | - | - | (19.2) | | | | | | | | | | |
| | | | 2x2800 | (11) | (21.9) | (27.4) | (32.9) | (17.8) | - | - | - | | | | | | | | | | |
| | 1000 | 250 | 2800 | 1.8 | 3.5 | 4.4 | 5.3 | 4.8 | 7.9 | - | - | | | | | | | | | | |
| | | | 2x2800 | 3.5 | 7 | 8.8 | 10.5 | 9.7 | 15.8 | - | - | | | | | | | | | | |

表5b • 250系列控制阀 故障-安全动作位置“阀门开启”(FE)

| 弹簧范围(巴) 执行器规格 (cm ²) | | | | 700 | 0.2 ... 1.0 | | | | |
|-------------------------------------|----------|------|------------------------|----------------|---------------|---------|--------|--------|-------|
| | | | | 1400 | 0.4 ... 2.0 | | | | |
| 所需气源压力 | | | | 2800 | (0.3 ... 1.1) | | | | |
| | | | | 2x2800 | 2.4 | 3.6 | 4.0 | 5.0 | 6.0 |
| DN | Kvs | SB | 执行器 cm ² | 当 p2 = 0 巴时的Δp | | | | | |
| DN 50 PN 16...40 | 35 | 50 | 700 | 38.4 | - | - | - | - | |
| DN 50 PN 63...160 | 35 | 50 | 700 | 38.4 | 71.3 | 82.3 | 109.7 | - | |
| | | | 1400 | (71.3) | - | - | - | - | |
| DN 80 PN 16...40 | 35 | 50 | 700 | 38.4 | 71.3 | 82.3 | - | - | |
| | | | 1400 | (71.3) | - | - | - | - | |
| | 50 | 63 | 700 | 24.2 | 44.9 | 51.8 | - | - | |
| | | | 1400 | (44.9) | - | - | - | - | |
| 16...70 | 80 | 700 | 15 | 27.9 | 32.1 | - | - | | |
| | | 1400 | (27.9) | - | - | - | - | | |
| DN 80 PN 63...160 | 35 | 50 | 700 | 38.4 | 71.3 | 82.3 | 109.7 | 137.1 | |
| | | | 1400 | (71.3) | (137.1) | (159.1) | - | - | |
| | 50 | 63 | 700 | 24.2 | 44.9 | 51.8 | 69.1 | 86.4 | |
| | | | 1400 | (44.9) | (86.4) | (100.2) | - | - | |
| | 16...70 | 80 | 700 | 15 | 27.9 | 32.1 | 42.8 | 53.6 | |
| | | | 1400 | (27.9) | (53.6) | (62.1) | - | - | |
| DN 100 PN 16...40 | 38 | 50 | 700 | 38.4 | 71.3 | 82.3 | 109.7 | 137.1 | |
| | | | 1400 | (71.3) | (137.1) | - | - | - | |
| | 55 | 63 | 700 | 24.2 | 44.9 | 51.8 | 69.1 | 86.4 | |
| | | | 1400 | (44.9) | (86.4) | - | - | - | |
| | 75 | 80 | 700 | 15 | 27.9 | 32.1 | 42.8 | 53.6 | |
| | | | 1400 | (27.9) | (53.6) | - | - | - | |
| | 35...100 | 100 | 700 | 9.6 | 17.8 | 20.6 | 27.4 | 34.3 | |
| | | | 1400 | (17.8) | (34.3) | - | - | - | |
| DN 100 PN 63...160 | 38 | 50 | 700 | 38.4 | 71.3 | 82.3 | 109.7 | 137.1 | |
| | | | 1400 | (71.3) | (137.1) | (159.1) | - | - | |
| | 55 | 63 | 700 | 24.2 | 44.9 | 51.8 | 69.1 | 86.4 | |
| | | | 1400 | (44.9) | (86.4) | (100.2) | - | - | |
| | 75 | 80 | 700 | 15 | 27.9 | 32.1 | 42.8 | 53.6 | |
| | | | 1400 | (27.9) | (53.6) | (62.1) | - | - | |
| | 35...100 | 100 | 700 | 9.6 | 17.8 | 20.6 | 27.4 | 34.3 | |
| | | | 1400 | (17.8) | (34.3) | (39.8) | - | - | |
| | DN 150 | 95 | 80 | 700 | 15 | 27.9 | 32.1 | 42.8 | 53.6 |
| | | | | 1400 | (27.9) | (53.6) | (62.1) | (83.6) | (105) |
| 2800 | | | | 0 | 0 | 0 | 0 | 0 | |
| 145 | | 100 | 700 | 9.6 | 17.8 | 20.6 | 27.4 | 34.3 | |
| | | | 1400 | (17.8) | (34.3) | (39.8) | (53.5) | (67.2) | |
| | | | 2800 | 0 | 0 | 0 | 0 | 0 | |
| 205 | | 125 | 1400 | 3.5 | 14 | 17.6 | 26.3 | 35.1 | |
| | | | 2800 | (22.8) | (43.9) | (50.9) | - | - | |
| | | | 2x2800 | (45.6) | - | - | - | - | |
| 85...250 | | 150 | 1400 | 2.4 | 9.8 | 12.2 | 18.3 | 24.4 | |
| | | | 2800 | (15.8) | (30.5) | (35.3) | - | - | |
| | | | 2x2800 | (31.7) | - | - | - | - | |

| 基准范围 (单位巴) 执行器规格 (单位cm ²) | | | 700 | 0.2...1.0 | | | | |
|--|-----------------|-----|------------------------|---------------|--------|--------|--------|--------|
| | | | 1400 | 0.4 ... 2.0 | | | | |
| | | | 2800 | (0.3...1.1) | | | | |
| | | | 2x2800 | | | | | |
| 要求供应压力 | | | 2.4 | 3.6 | 4.0 | 5.0 | 6.0 | |
| DN | K _{vs} | SB | 执行器 cm ² | 当p2 = 0 巴时的Δp | | | | |
| DN 200 | 155 | 100 | 700 | 9.6 | 17.8 | 20.6 | 27.4 | 34.3 |
| | | | 1400 | (17.8) | (34.3) | (39.8) | (53.5) | (67.2) |
| | | | 2800 | 0 | 0 | 0 | 0 | 0 |
| | 230 | 125 | 1400 | 3.5 | 14 | 17.6 | 26.3 | 35.1 |
| | | | 2800 | (22.8) | (43.9) | (50.9) | (68.4) | (86) |
| | | | 2x2800 | (45.6) | - | - | - | - |
| | 305 | 150 | 1400 | 2.4 | 9.8 | 12.2 | 18.3 | 24.4 |
| | | | 2800 | (15.8) | (30.5) | (35.3) | (47.5) | (59.7) |
| | | | 2x2800 | (31.7) | - | - | - | - |
| | 135...480 | 200 | 1400 | 1.4 | 5.5 | 6.9 | 10.3 | 13.7 |
| | | | 2800 | (8.9) | (17.1) | (19.1) | (26.7) | (33.6) |
| | | | 2x2800 | (17.8) | - | - | - | - |
| DN 300 | 230 | 125 | 1400 | 3.5 | 14 | 17.6 | 26.3 | 35.1 |
| | | | 2800 | (22.8) | (43.9) | (50.9) | (68.4) | (86) |
| | | | 2x2800 | (45.6) | (87.8) | - | - | - |
| | 305 | 150 | 1400 | 2.4 | 9.8 | 12.2 | 18.3 | 24.4 |
| | | | 2800 | (15.8) | (30.5) | (35.3) | (47.5) | (59.7) |
| | | | 2x2800 | (31.7) | (60.9) | - | - | - |
| | 480 | 200 | 1400 | 1.4 | 5.5 | 6.9 | 10.3 | 13.7 |
| | | | 2800 | (8.9) | (17.1) | (19.9) | (26.7) | (33.6) |
| | | | 2x2800 | (17.8) | (34.3) | - | - | - |
| | 1000 | 250 | 2800 | 1.8 | 7 | 8.8 | 13.2 | 17.6 |
| | | | 2x2800 | 3.5 | 14 | 17.6 | - | - |

定货需要如下信息:

AC-1 阀内件的Kv/Cv符合表2

或

AC-2 阀内件的Kv/Cv符合表3

材质

所用位号 ...

定货/询价 ...

操作压力

最小、正常和最大流量下的压力

(单位: 巴(a)、巴(g) 或 psi(a)、psi(g))

流量

工作状态下的最小、正常和最大流量

(单位kg/h或 m³/h)

工艺介质

密度 (kg/m³) 和温度 (°C/°F)

蒸汽压力 (巴)

管道直径

DN...或英寸

压力等级

PN...或ANSI等级

材质

按表1

数据规格可能因技术进步而变更



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