

Product data sheet UHV gate valve, Series 108, DN 100 (ID 4'') Ordering No. 10840-PE24

Description

Actuator pneumatic, double acting – with position indicator Feedthrough Bellows Feedthrough Bellows Technical data - Valve body – Valve seat - Valve seat - 1 10 ⁻⁹ mbar Is ⁻¹ Pressure range - Valve seat Differential pressure on the gate < 1.6 bar Conductance (molecular flow) 5000 (unheated and under clean conditions) Conductance (molecular flow) 740 Is ⁻¹ Cycles until first service 50000 (unheated and under clean conditions) Temperature (Maximum values: depending on operating conditions and sealing materials) - Valve Body Heating and cooling rate - Valve Body Heating and cooling rate - Valve Body Bellows AISI 304 (1.4301) Alsi 336L (1.4404, 1.4135) - Valve Body Bellows AISI 336L (1.4404, 1.4135) Seal Bonnet FKM (Viton [®]), vulcanized - Actuator - Valve Mody - Sate - Sate - Actuator any Volume of pneumatic actuator - Valve Body - Sate - Actuator - Sate FKM (Viton [®]), vulcanized - Actuator	Flange		ISO-F 100
Technical dataLeak rate $- Valve body$ $- Valve seat5 \cdot 10^{-10} \text{ mbar ls}^{-1}1 \cdot 10^{-9} \text{ mbar ls}^{-1}Pressure range1 \cdot 10^{0} \text{ mbar to } 1.6 \text{ bar (abs)}Differential pressure on the gate\leq 1.6 \text{ bar}Differential pressure at opening\leq 30 \text{ mbar}Conductance (molecular flow)1740 \text{ ls}^{-1}Conductance (molecular flow)1740 \text{ ls}^{-1}Conductance (molecular flow)1740 \text{ ls}^{-1}Conductance (molecular flow)200 \text{ °C open } / \le 200 \text{ °C closed (bake-out max. 24h)}Conductance (molecular flow)- Valve Body- ActuatorTemperature(Maximum values: dependingsealing materials)- Valve Body- Actuator- Valve Body- Actuator\leq 250 \text{ °C open } / \le 200 \text{ °C closed (bake-out max. 24h)}\le 200 \text{ °C}Heating and cooling rate- Valve Body- Mechanism- BellowsHeating (main components)- Valve Body- Bellows- Bonnet- Gate- Catemetal- KKM (Viton®), vulcanized- ActuatorSeal- Bonnet- Gate- ActuatorMounting positionanyVolume of pneumatic actuator0.1111/0.0038 \text{ ft}^3Compressed airmin max. overpressure0.111/0.0038 \text{ ft}^3$	Actuator		
Leak rate $-$ Valve body $-$ Valve seat $< 5 \cdot 10^{-10}$ mbar ls ⁻¹ $< 1 \cdot 10^{-9}$ mbar ls ⁻¹ Pressure range $1 \cdot 10^{-10}$ mbar to 1.6 bar (abs)Differential pressure on the gate ≤ 1.6 barDifferential pressure at opening ≤ 30 mbarConductance (molecular flow) 1740 ls ⁻¹ Cycles until first service $50 000$ (unheated and under clean conditions)Temperature (Maximum values: depending on operating conditions and sealing materials) $-$ Valve Body $-$ Actuator $\leq 250 \ ^{\circ}$ C open / $\leq 200 \ ^{\circ}$ C closed (bake-out max. 24h) $\leq 200 \ ^{\circ}$ CHeating and cooling rate $-$ Valve Body $-$ Actuator $\leq 30 \ ^{\circ}$ CMaterial (main components) $-$ Valve Body $-$ Bellows $AISI 304 \ (1.4301)$ $AISI 316L \ (1.4404), AISI 304 \ (1.4301)$ $AISI 316L \ (1.4404), AISI 304 \ (1.4301)$ $AISI 316L \ (1.4404), AISI 304 \ (1.4301)$ $AISI 316L \ (1.4404), NBRMounting position= Bonnet- ActuatormetalFKM (Viton®), vulcanizedFKM (Viton®), NBRMounting position= Actuator= ActuatorVolume of pneumatic actuator= O1111/0.0038 ft34 - 7 bar / 58 - 102 psi$	Feedthrough		Bellows
Leak rate $- Valve body- Valve seat< 5 \cdot 10^{-10} \text{ mbar ls}^{-1}< 1 \cdot 10^{-9} \text{ mbar ls}^{-1}Pressure range1 \cdot 10^{-10} \text{ mbar ls}^{-1}1 \cdot 10^{-10} \text{ mbar ls}^{-1}Differential pressure on the gate\leq 1.6 \text{ bar}Differential pressure at opening\leq 30 \text{ mbar}Conductance (molecular flow)1740 \text{ ls}^{-1}Cycles until first service50 000 \text{ (unheated and under clean conditions)}Temperature(Maximum values: dependingon operating conditions andsealing materials)- Valve Body- Actuator\leq 250 \ ^{\circ}C \text{ open } / \leq 200 \ ^{\circ}C \text{ closed (bake-out max. 24h)} \\ \leq 200 \ ^{\circ}C \text{ closed (bake-out max. 24h)} \\ \leq 200 \ ^{\circ}C \text{ closed (bake-out max. 24h)} \\ \leq 200 \ ^{\circ}C \text{ closed (bake-out max. 24h)} \\ \leq 200 \ ^{\circ}C \text{ closed (bake-out max. 24h)} \\ = Actuator \text{ Position indicator} \\ = Position indicator \text{ close closed (bake-out max. 24h)} \\ = Actuator \text{ close close closed (bake-out max. 24h)} \\ = Actuator \text{ close close closed (bake-out max. 24h)} \\ = Actuator \text{ close close close closed (bake-out max. 24h)} \\ = Actuator \text{ close close close close closed (bake-out max. 24h)} \\ = Actuator \text{ close close close close closed (bake-out max. 24h)} \\ = Actuator close $			
$- Valve seat$ $< 1 \cdot 10^{-9} mbar ls^{-1}$ Pressure range $1 \cdot 10^{-10} mbar to 1.6 bar (abs)$ Differential pressure on the gate $\leq 1.6 bar$ Differential pressure at opening $\leq 30 mbar$ Conductance (molecular flow) $1740 ls^{-1}$ Cycles until first service $50 000$ (unheated and under clean conditions)Temperature (Maximum values: depending on operating conditions and sealing materials) $- Valve Body$ $- Actuator\leq 250 °C \text{ open } / \leq 200 °C \text{ closed (bake-out max. 24h)} \leq 200 °CHeating and cooling rate- Valve Body- Actuator\leq 80 °CMaterial (main components)- Valve Body- BellowsAISI 304 (1.4301)AISI 316L (1.4404), AISI 304 (1.4301)AISI 316L (1.4404), AISI 304 (1.4301)AISI 316L (1.4404), AISI 304 (1.4301)AISI 316L (1.4404), NBRMounting position- Bonnet- Gate- ActuatormetalFKM (Viton®), vulcanizedFKM (Viton®), NBRMounting positionany0.111 l / 0.0038 ft^3Compressed airmin max. overpressure4 - 7 bar / 58 - 102 psi$	Technical data		
Differential pressure on the gate $\leq 1.6 \text{ bar}$ Differential pressure at opening $\leq 30 \text{ mbar}$ Conductance (molecular flow) 1740 ls^{-1} Cycles until first service $50 000 \text{ (unheated and under clean conditions)}$ Temperature (Maximum values: depending on operating conditions and sealing materials) $- \text{Valve Body}$ $- \text{Actuator}$ $\leq 250 \ ^{\circ}\text{C} \text{ open } / \leq 200 \ ^{\circ}\text{C}$ Heating and cooling rate $- \text{Valve Body}$ $- Position indicator\leq 200 \ ^{\circ}\text{C}\leq 80 \ ^{\circ}\text{C}Material (main components)- \text{Valve Body}- BellowsAISI 304 (1.4301)AISI 316L (1.4404), AISI 304 (1.4301)AISI 316L (1.4404), AISI 304 (1.4301)AISI 316L (1.4404), AISI 304 (1.4301)AISI 316L (1.4404), NBRMounting position= 30 \text{ onnet}- ActuatormetalFKM (Viton^{\circ}), vulcanizedFKM (Viton^{\circ}), NBRMounting positionany0.1111/0.0038 \ \text{ft}^3Volume of pneumatic actuator0.1111/0.0038 \ \text{ft}^3Compressed airmin max. overpressure4 - 7 \text{ bar} / 58 - 102 \text{ psi}$	Leak rate	-	< 5 · 10 ⁻¹⁰ mbar ls ⁻¹ < 1 · 10 ⁻⁹ mbar ls ⁻¹
Differential pressure at opening $\leq 30 \text{ mbar}$ Conductance (molecular flow)1740 ls ⁻¹ Cycles until first service $50 000 \text{ (unheated and under clean conditions)}$ Temperature (Maximum values: depending on operating conditions and sealing materials) $- \text{Valve Body}$ $= \text{Valve Body}$ 	Pressure range		$1 \cdot 10^{-10}$ mbar to 1.6 bar (abs)
Conductance (molecular flow)1740 ls $^{-1}$ Cycles until first service50 000 (unheated and under clean conditions)Temperature (Maximum values: depending on operating conditions and sealing materials)- Valve Body - Actuator $\leq 250 \ ^{\circ}C \$	Differential pressure on the gate		≤ 1.6 bar
Cycles until first service50 000 (unheated and under clean conditions)Temperature (Maximum values: depending on operating conditions and sealing materials)- Valve Body - Actuator - Position indicator $\leq 250 \ ^{\circ}C \ open / \leq 200 \ ^{\circ}C \ \leq 200 \ ^{\circ}C \ \leq 80 \ ^{\circ}C$ Heating and cooling rate- Valve Body - Position indicator $\leq 50 \ ^{\circ}C \ h^{-1}$ Material (main components)- Valve Body - Mechanism - BellowsAISI 304 (1.4301) AISI 316L (1.4404), AISI 304 (1.4301) AISI 316L (1.4404, 1.4435)Seal- Bonnet - Gate - Actuatormetal FKM (Viton®), vulcanized FKM (Viton®), NBRMounting positionanyVolume of pneumatic actuator0.1111/ 0.0038 ft^3 4 - 7 bar / 58 - 102 psi	Differential pressure at opening		≤ 30 mbar
Temperature (Maximum values: depending on operating conditions and sealing materials)- Valve Body - Actuator - Position indicator $\leq 250 ^{\circ}C$ open / $\leq 200 ^{\circ}C$ closed (bake-out max. 24h) $\leq 200 ^{\circ}C$ $\leq 80 ^{\circ}C$ Heating and cooling rate50 $^{\circ}C h^{-1}$ Material (main components)- Valve Body - Mechanism - BellowsAISI 304 (1.4301) AISI 316L (1.4404), AISI 304 (1.4301) AISI 316L (1.4404, 1.4435)Seal- Bonnet - Gate - Actuatormetal FKM (Viton®), vulcanized FKM (Viton®), NBRMounting positionanyVolume of pneumatic actuator0.1111/ 0.0038 ft^3 4 - 7 bar / 58 - 102 psi	Conductance (molecular flow)		1740 ls ⁻¹
(Maximum values: depending on operating conditions and sealing materials)- Actuator $\leq 200 ^{\circ}\text{C}$ Heating and cooling rate- Position indicator $\leq 80 ^{\circ}\text{C}$ Material (main components)- Valve Body - Mechanism - BellowsAISI 304 (1.4301) AISI 316L (1.4404), AISI 304 (1.4301) AISI 316L (1.4404, 1.4435)Seal- Bonnet - Gate - Actuatormetal FKM (Viton®), vulcanized FKM (Viton®), NBRMounting positionanyVolume of pneumatic actuator0.11 I / 0.0038 ft³ 4 - 7 bar / 58 - 102 psi	Cycles until first service		50 000 (unheated and under clean conditions)
Material (main components)- Valve Body - Mechanism - BellowsAISI 304 (1.4301) AISI 316L (1.4404), AISI 304 (1.4301) AISI 316L (1.4404, 1.4435)Seal- Bonnet - Gate - Actuatormetal FKM (Viton®), vulcanized FKM (Viton®), NBRMounting positionanyVolume of pneumatic actuator0.11 I / 0.0038 ft³ 4 - 7 bar / 58 - 102 psi	(Maximum values: depending on operating conditions and	– Actuator	≤ 200 °C
 Mechanism Bellows AISI 316L (1.4404), AISI 304 (1.4301) AISI 316L (1.4404, 1.4435) Seal Bonnet Gate Gate Actuator FKM (Viton[®]), vulcanized FKM (Viton[®]), NBR Mounting position any Volume of pneumatic actuator Compressed air min. – max. overpressure AISI 316L (1.4404), AISI 304 (1.4301) AISI 316L (1.4404, 1.4435) AI	Heating and cooling rate		50 °C h ⁻¹
- Gate - ActuatorFKM (Viton®), vulcanized FKM (Viton®), NBRMounting positionanyVolume of pneumatic actuator0.11 I / 0.0038 ft³Compressed air min max. overpressure4 - 7 bar / 58 - 102 psi	Material (main components)	– Mechanism	AISI 316L (1.4404), AISI 304 (1.4301)
Volume of pneumatic actuator0.11 I / 0.0038 ft3Compressed air4 – 7 bar / 58 – 102 psimin. – max. overpressure	Seal	– Gate	FKM (Viton [®]), vulcanized
Compressed air4 – 7 bar / 58 – 102 psimin. – max. overpressure	Mounting position		any
min. – max. overpressure	Volume of pneumatic actuator		0.11 I / 0.0038 ft ³
Compressed air connection %" ISO / NPT	•		4 – 7 bar / 58 – 102 psi
	Compressed air connection		⅓" ISO / NPT

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Actuation time	– closing – opening	1.2 s 1.2 s
Weight		12.6 kg / 27.8 lbs
Behavior in case of compressed air pressure drop	– Valve closed – Valve open	valve remains closed undefined
Behavior in case of power failure	Valve closedValve open	depending on customer installation

Position indicator

Туре	
Voltage	
Current max.	

Micro switch		
\leq 50 V AC / DC		
≤ 1.2 A		

_1		OPEN	
_6		CLOSED	
Valve/Ventil/Vanne			
	1,2	OPEN connected	CLOSED -
Front view	6,5	-	connected

Wiring diagram

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