



For reduction of turbulence in pump forelines during pump-down

Protection device against

- turbulence in piping and chambers
- particulate contamination in vacuum installations
- movement of substrates caused by turbulence

Soft-start throttle valves consist of two halves of throttle flaps supported on a common axis and maintained in the open position by a spring. The axis is held in an ISO-KF centering ring that is formed as a body with valve seat.

When mounting them between two ISO-KF flanges (instead of a centering ring), the open flaps must be orientated against the air flow in the vacuum line. When the roughing system goes into operation, a strong air flow occurs in the forevacuum line, which immediately closes the valve and reduces the pipe section by about 99%. When reaching a differential pressure of approx. 15 mbar, the valve opens abruptly and leaves the pipe section nearly unobstructed for further pumping.

Technical data

DN		dimensions		open area		
		A			open	closed
mm	16	6.2	mm ²	90	4	
inch	$\frac{5}{8}$	0.24	inch ²	0.14	0.006	
mm	25	9	mm ²	200	5.5	
inch	1	0.35	inch ²	0.31	0.0085	
mm	40	14.3	mm ²	570	8	
inch	1½	0.56	inch ²	0.88	0.012	
mm	50	19.9	mm ²	1190	10.5	
inch	2	0.78	inch ²	1.84	0.016	

Ordering numbers

		DN	Ordering numbers
mm	16		31124-KASO
inch	$\frac{5}{8}$		
mm	25		31128-KASO
inch	1		
mm	40		31132-KASO
inch	1½		
mm	50		31134-KASO
inch	2		

Behavior

- fast closing
 - opening
- when roughing is started at Δp approx. 15 mbar ¹⁾

Bake-out temperature ²⁾ 150°C

Mounting position any

Cycle life 100 000 (at T_{max} 80°C, Δp max. 1 bar)

Material

- centering ring EN AW-6082 (3.2315)
- inner parts AISI 301 (1.4310), AISI 303 (1.4305)

Seal FKM (VITON)

¹⁾ Depending on system configuration

²⁾ Maximum value: depending on operating conditions and sealing materials