

# CALCULATION SHEET

## Actuator Sizing

Doc. num. 24-0151.VS

Rev. Num. 2

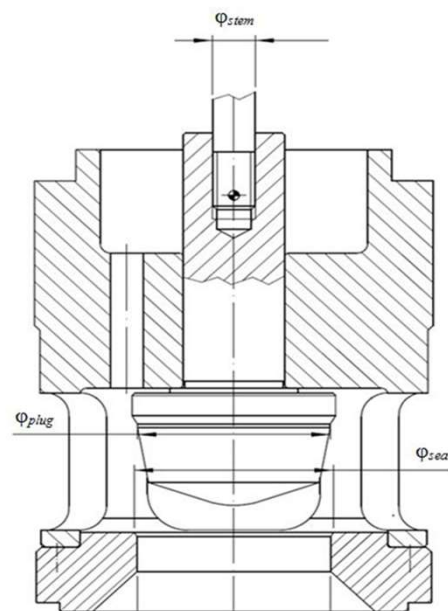
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### 1. TRIM CONFIGURATION

Layout	Contoured Plug - Flow under the seat		
DN	1	[inches]	
Port	11	[mm]	
Stroke	19.05	[mm]	
Shutoff Pressure	22	[bar g]	
Air Supply	4.5	[bar g]	
Fail Action	FAIL CLOSE	[-]	
Bellows Seal	No	[-]	
Stem Material	316 SS	[-]	
Configuration	Single Effect		

### 2. PRESSURE FORCES

	Diameter		Forces	
Seat Sealing	11	[mm]	209	[N]
Plug	11	[mm]	209	[N]
Cage	N/A	[mm]	N/A	[N]
Stem	15.0	[mm]	389	[N]
C-Ring	N/A	[mm]	N/A	[N]
Bellows	N/A	[mm]		



### 3. FRICTIONAL AND SEATING FORCES

Plug Balancing Rings	N/A	P=Pmax	N/A	[N]
		P=0	N/A	[N]
Packing Rings	PTFE V-Ring 150-1500	P=Pmax	458	[N]
		P=0	450	[N]
Seating Force	Class IV		55	[N]
C-Ring	No		N/A	[N]

### 4. RESULTS

Selected Actuator	L-Act 25
Spring	Standard
Spring Range	1396.742 [N]
	2028.389 [N]
MAST	17984.16 [N]

Thrusts [N]			
	Valve	Actuator	Safety Factor
Break To Open - BTO	349	5283	15.1
End To Open - ETO	169	4651	27.4
Break To Close - BTC	847	2028	2.4
End To Close - ETC	722	1397	1.9

Note: Plug spontaneous movements in negative notation