

CALCULATION SHEET

Actuator Sizing

Doc. num. 800302-ASZ-001

Rev. Num. 00

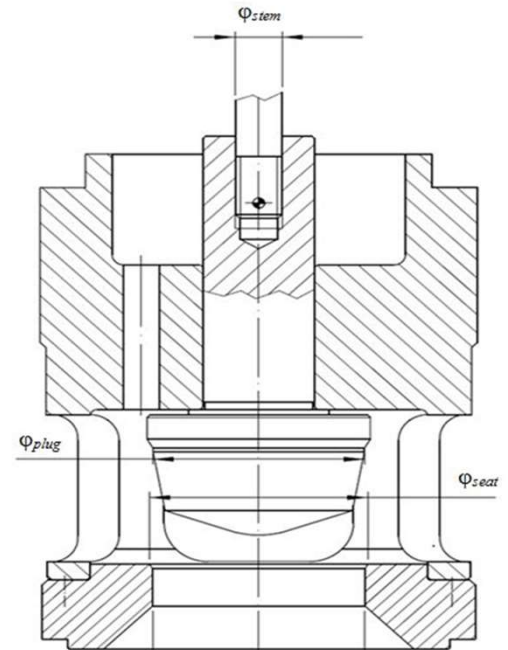
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1. TRIM CONFIGURATION

| | | |
|------------------|--------------------------------------|----------|
| Layout | Contoured Plug - Flow under the seat | |
| DN | 1 | [inches] |
| Port | 11 | [mm] |
| Stroke | 19,1 | [mm] |
| Shutoff Pressure | 22 | [bar g] |
| Air Supply | 4,5 | [bar g] |
| Fail Action | FAIL CLOSE | [-] |
| Bellows Seal | No | [-] |
| Stem Material | 316 SS | [-] |
| Configuration | Double 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 | 17917,92 [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 | 8929 | 10,5 |
| End To Close - ETC | 722 | 8297 | 11,5 |

Note: Plug spontaneous movements in negative notation