

PARTS LIST AND MATERIAL SPECIFICATION

| | 93610 | 94610** |
|----------------|---------------------|--------------|
| 1 SEAT | BRASS | ST.STL. |
| 2 DISC | ST.STL. 316 | ST.STL. 440B |
| 3 BALL | ST.STL. | |
| 4 DISC HOLDER | ST.STL. | |
| 5 PLUNGER | ST.STL. | |
| 6 BODY | BRONZE | ST.STL. |
| 7 SPRING | ST.STL. | |
| 8 ADJUSTER | BRASS | ST.STL. |
| 9 SPINDLE | ST.STL. | |
| 10 CAP | BRASS | ST.STL. |
| 11 WIRE & SEAL | ST.STL. & LEAD | |
| 12 LEVER | BRASS | ST.STL. * |
| 13 O'RING | TO SUIT APPLICATION | |

* TYPE SL ONLY

** 94610 TYPE VALVES. SEE 'TYPE L' OPTION NOTES

APPROVALS

Designed in accordance with BS EN ISO 4126:1

TÜV Approved:- Ref- TÜV.SV.**-1016.10.D/G.0,83.p. For 3-28 Bar.g. Below 3 Bar.g see ' α_w vs Set Pressure' chart. 93610 type materials meet the requirements of BAM (Germany) for oxygen service. P.E.D. 2014/68/EU

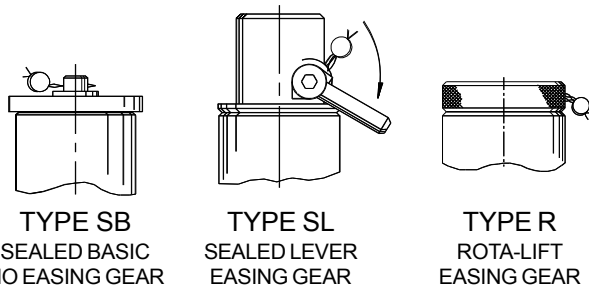
Type examination module B, Cert. No. 01 202 642-B-10017

Quality management system module D, Cert. No. COV0812369/01.

TECHNICAL DATA

| | | |
|---|------------------------|---|
| Relieving pressure | = Set pressure +10%, | 0.1 Bar.g below 1.0 Bar.g. |
| Reseating pressure | = Set pressure -10%, | 0.3 Bar.g below 3.0 Bar.g. |
| Maximum set pressure | = 28 Bar.g | |
| Minimum set pressure | = 0.3 Bar.g | |
| Flow area | = 78.5 mm ² | |
| Inlet bore diameter | = 10 mm | |
| TÜV allotted outflow coefficient α_w | = 0.83 | |
| TÜV allotted outflow coefficient α_w | = Below 3.0 Bar.g. | see ' α_w vs set pressure' chart. |
| Leak tightness at 90% set pressure to API 527 and in accordance with BS6759 Part 3 1984, Table 9 Grade 2. | | |
| Greater leak tightness may be achieved on request. | | |
| Maximum temperature | = 250°C | Note: For sealed top fittings, max. temp. dependent on seal material. |
| Minimum temperature | = -196°C | subject to material specification. |
| Maximum permissible built up back pressure | = 10% | of set pressure at or below which flow is not reduced. |
| Stable operation on flows down to 50% of valve rated capacity. | | |
| FOR FURTHER INFORMATION, INSTALLATION AND OPERATION INSTRUCTIONS, CONVERSION FACTORS ETC. | | |
| SEE TECHNICAL INFORMATION SECTION. | | |

ALTERNATIVE TOP FITTINGS



TYPE SB
SEALED BASIC
NO EASING GEAR

TYPE SL
SEALED LEVER
EASING GEAR

TYPE R
ROTA-LIFT
EASING GEAR



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10mm Nominal Bore METAL SEAL
DIRECT SPRING LOADED ENCLOSED
DISCHARGE SAFETY VALVE FOR
COMPRESSED AIR, GASES & STEAM

ENCLOSED DISCHARGE
10mm NOMINAL BORE SERIES
TYPE 93610 BRASS
TYPE 94610 ST.STL.

SHEET 1 OF 3 SHEETS

FLOW CHART

- TO CALCULATE INTERMEDIATE FLOWS SEE TECHNICAL INFORMATION SECTION

- FOR GREATER FLOWS REFER TO 15mm BORE TYPE 93615 DATA SHEET.

| SET PRESSURE Bar.g | 0.3 | 0.5 | 1.0 | 2.0 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 15 | 20 | 25 | 28 |
|---|------|------|------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| RATED DISCHARGE * CAPACITY IN ACCORDANCE WITH BS6759, AIR AT 15°C AND 1013 mbar std. Litres/s | 11.7 | 15.8 | 23.7 | 31.1 | 54 | 67 | 81 | 95 | 109 | 122 | 136 | 150 | 219 | 288 | 357 | 398 |
| RATED DISCHARGE * CAPACITY IN ACCORDANCE WITH BS6759, PART 1, STEAM Kg/h | 31.4 | 42.9 | 64.8 | 104.4 | 147 | 185 | 222 | 260 | 298 | 335 | 373 | 411 | 599 | 787 | 975 | 1089 |
| RATED DISCHARGE * CAPACITY IN ACCORDANCE WITH TUV, AIR AT 0°C AND 1013 mbar Normal m³/h | 39.1 | 56.3 | 83.5 | 134.8 | 191 | 240 | 289 | 338 | 386 | 435 | 484 | 533 | 777 | 1021 | 1266 | 1412 |
| RATED DISCHARGE * CAPACITY IN ACCORDANCE WITH TUV, STEAM Kg/h | 32.5 | 44.5 | 66.1 | 106.2 | 149 | 186 | 222 | 259 | 295 | 332 | 368 | 405 | 585 | 765 | 947 | 1055 |

* DISCHARGING TO ATMOSPHERE

O'RING SEAL CHART

| O'RING MATERIAL | 10th DIGIT | MAX. STATIC TEMP. °C | MIN. STATIC TEMP. °C |
|-----------------|------------|----------------------|----------------------|
| NITRILE | 1 | 150 | -30 |
| VITON® | 3 | 250 | -20 |
| SILICONE | 4 | 250 | -50 |
| NEOPRENE | 5 | 120 | -40 |
| E.PROPYLENE | 6 | 150 | -40 |
| # P.T.F.E. | 7 | 250 | -196 |

Note:

Digits '1 - 7' indicates the required o'ring material dependent on the maximum / minimum static temperature.

Example:

Ordering code 93610A 407 3 is a Brass seated, Sealed lever lift **Type SL**, 1/2" BSP parallel MALE inlet connection, 1" BSP parallel outlet connection, with Viton® O'ring seals.

For cryogenic service Type 'S' valves only.
TYPE 94610 VALVES ARE NOT SUITABLE FOR CRYOGENIC SERVICE. USE 93610 TYPE 'S'

VALVE SELECTION CHART

Standard thread sizes shown, other sizes may be available

| INLET CONNECTION | OUTLET CONNECTION | ORDERING CODE | TOP FITTING CODE | | | |
|-------------------------------------|--------------------------|------------------|------------------|-----|-----|------|
| | | | R | SB | SL | L ** |
| G 1/2 (1/2" BSP PARALLEL MALE) | G 1 (1" BSP PARALLEL) | 93610A 94610A | 207 | 127 | 407 | 327 |
| R 1/2 (1/2" BSP TAPER MALE) | | | 208 | 128 | 408 | 328 |
| G 1/2 (1/2" BSP PARALLEL FEMALE) | | 93610D 94610D | 207 | 127 | 407 | 327 |

Example 1:

Ordering code 93610A 207 3 is Brass seated, Rota lift type R, with 1/2" BSP parallel MALE inlet connection, 1" BSP parallel outlet connection, with Viton® O'ring.

Example 2:

Ordering code 93610D 207 3 is Brass seated, Rota lift type R, with 1/2" BSP parallel FEMALE inlet connection, 1" BSP parallel outlet connection, with Viton® O'ring.

** TYPE L NOT AVAILABLE ON 94610



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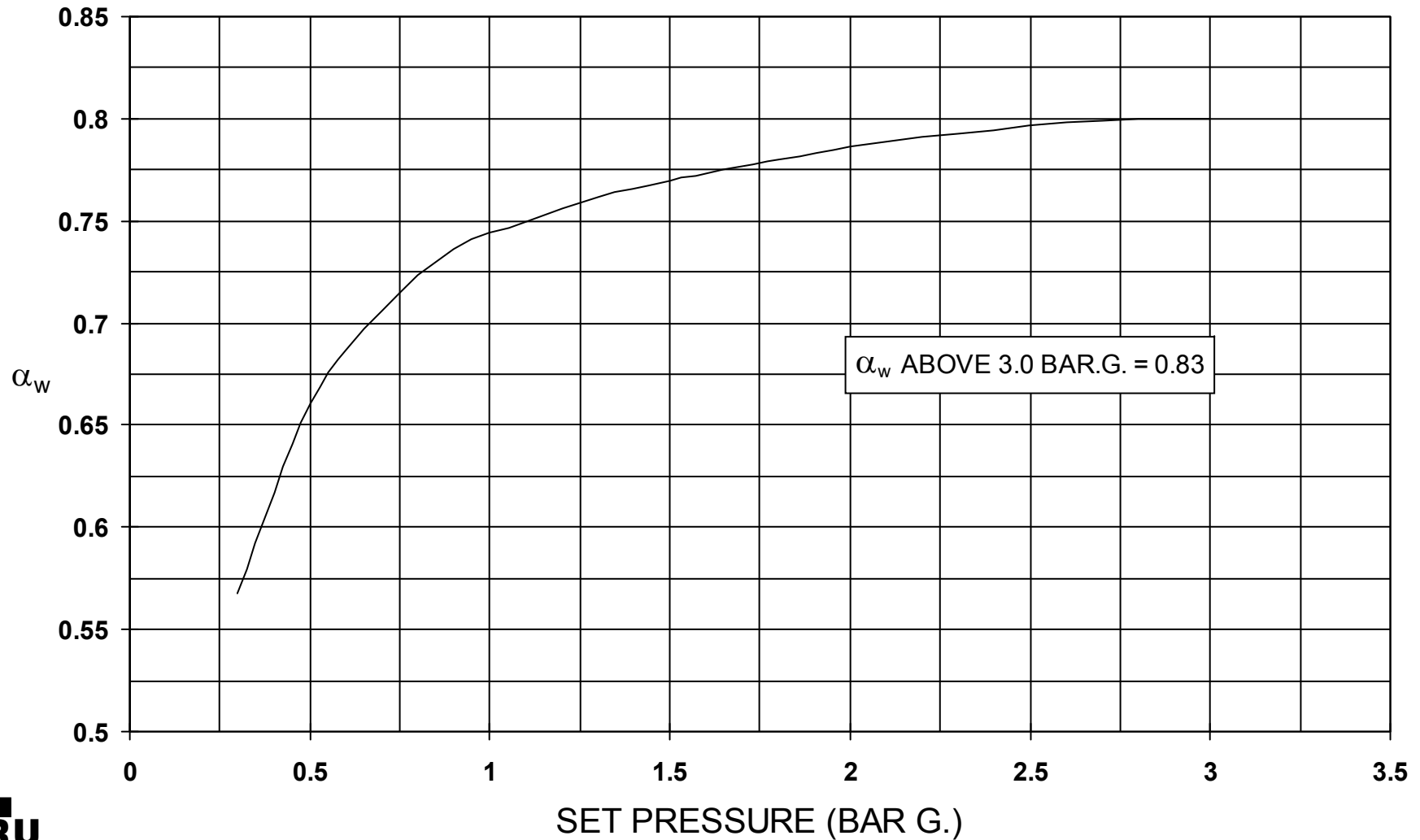
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 TYPE 93610 BRASS
 TYPE 94610 ST.STL.

SHEET 2 OF 3 SHEETS

α_w vs SET PRESSURE CHART
SEETRU SAFETY RELIEF VALVE 93610 / 94610.
0.3 to 3.0 BAR G.



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SHEET 3 OF 3 SHEETS

ENCLOSED DISCHARGE
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