

ILLUSTRATED SHOWING
TYPE L
LEVER LIFT
EASING GEAR

**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

APPROVALS

TÜV Approved:-
Ref- TÜV.SV.08-1016.10.D/G.0,83.p. For 3-28 Bar.g. Below 3 Bar.g. see ' α_D vs Set Pressure' chart.
93610 type materials meet the requirements of BAM (Germany) for oxygen service.
Designed in accordance with BS 6759 (but not approved) & ISO 4126 .

P.E.D. 97/23/EC

Type examination module B, Cert. No. 01 202 111-B00017

Quality management system module D, Cert. No. EDS 002011/01.

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 mm²
 Inlet bore diameter = 10 mm
 TÜV Derated coefficient of discharge α_D = 0.83. Below 3.0 Bar.g. see ' α_D 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.

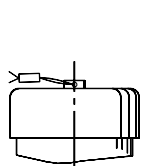
FLOW CHART

- TO CALCULATE INTERMEDIATE FLOWS SEE TECHNICAL INFORMATION SECTION
 - FOR GREATER FLOWS REFER TO 15mm BORE TYPE 93615 DATA SHEET.

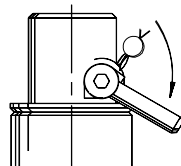
SET PRESSURE Bar.g	0.3	0.5	1.0	2.0	3	4	5	6	7	8	9	10	15	20	25	28
RATED DISCHARGE * CAPACITY IN ACCORDANCE WITH BS6759, AIR AT 15°C AND 1013 mbar std. Litres/s	11.7	15.8	23.7	31.1	54	67	81	95	109	122	136	150	219	288	357	398
RATED DISCHARGE * CAPACITY IN ACCORDANCE WITH BS6759, PART 1, STEAM Kg/h	31.4	42.9	64.8	104.4	147	185	222	260	298	335	373	411	599	787	975	1089
RATED DISCHARGE * CAPACITY IN ACCORDANCE WITH TÜV, AIR AT 0°C AND 1013 mbar Normal m ³ /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 TÜV, 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

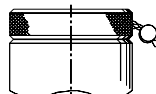
ALTERNATIVE TOP FITTINGS



TYPE S
SEALED
NO EASING GEAR



TYPE SL
SEALED LEVER
EASING GEAR



TYPE R
ROTA-LIFT
EASING GEAR



SEETRU LIMITED

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

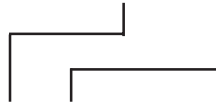
SHEET 1 OF 3 SHEETS

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

VALVE SELECTION CHART

Standard thread sizes shown, other sizes may be available

INLET CONNECTION	OUTLET CONNECTION	ORDERING CODE	TOP FITTING CODE			
			R	S	SL	L #
G 1/2 (1/2" BSP PARALLEL MALE)	G 1 (1" BSP PARALLEL)	93610A	207	127	407	327
R 1/2 (1/2" BSP TAPER MALE)		94610A	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.

NOT AVAILABLE ON 94610

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'



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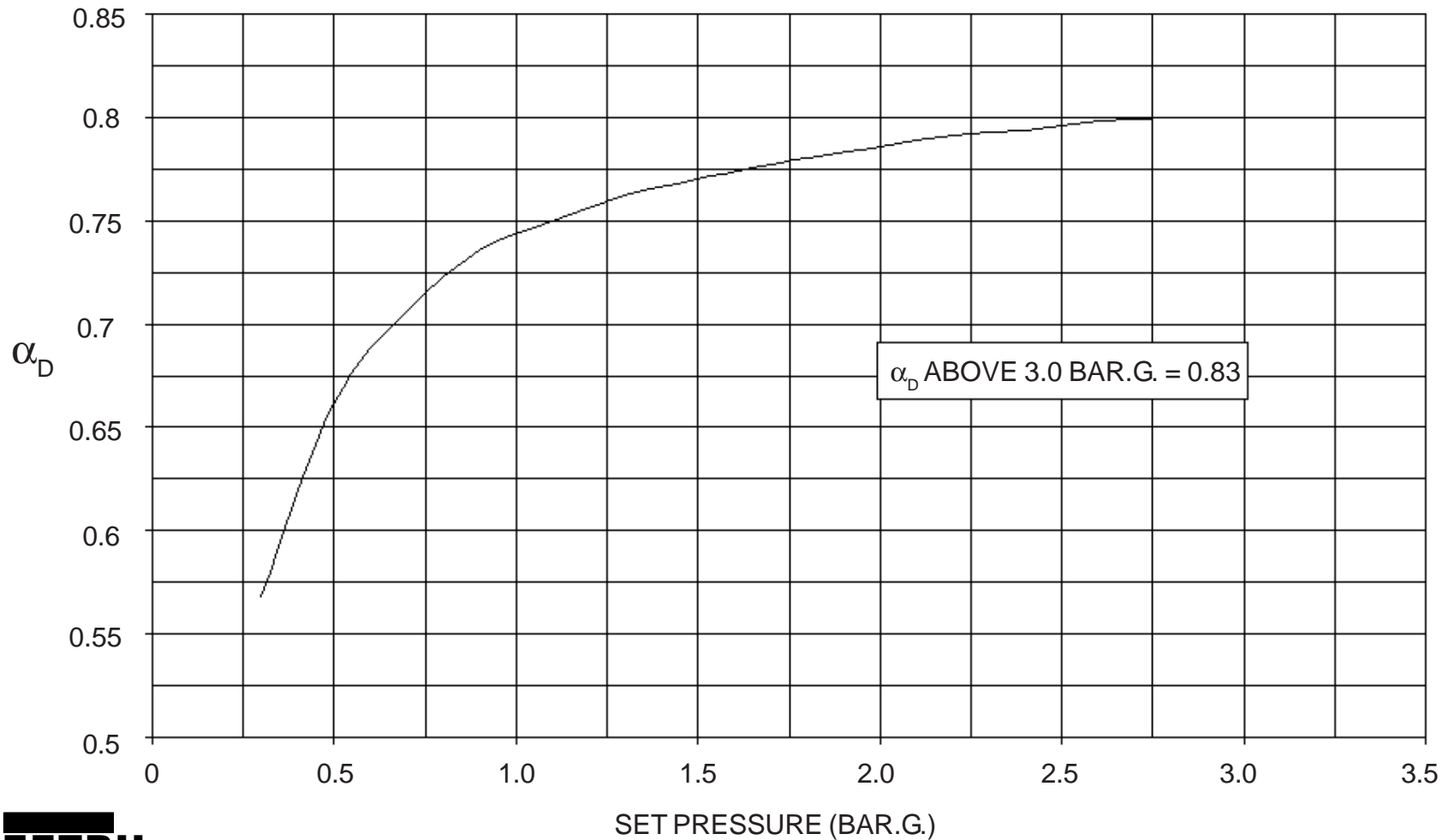
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COMPRESSED AIR, GASES & STEAM

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

SHEET 2 OF 3 SHEETS

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