



NUOVA GENERAL INSTRUMENTS

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Calcolo portata di scarico valvola di sicurezza
Safety Valve Fluid Delivery Calculation

Typ. : D10

Fluido : ARIA

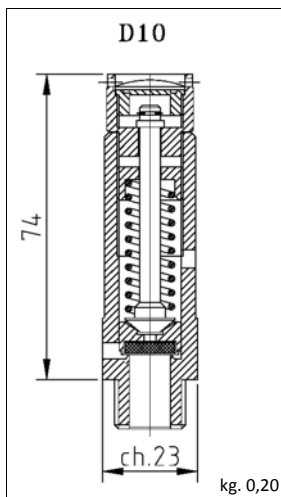
Fluid : AIR

$$Q_m = P_o C A K_{dr} \sqrt{\frac{M}{T_o Z}} \quad (\text{kg/h})$$

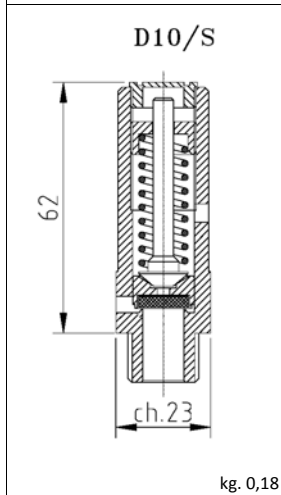
PS	Pressione di taratura bar <i>Setting pressure bar</i>	<u>14,5</u>
T	Temperatura °C <i>Temperature °C</i>	<u>0</u>
A	Area orificio mm ² <i>Orifice area mm²</i>	<u>78,5</u>
Kdr	Coefficiente di efflusso <i>Coefficient of discharge</i>	<u>0,77</u>
Po	Pressione in bar assoluti (P+Sovrapressione+1) <i>Absolute flowing pressure (P+Over pressure +1)</i>	<u>16,95</u>
C	Funzione dell'esponente isentropico <i>Function of the isentropic exponent</i>	<u>2,7</u>
To	Temperatura del fluido in °K (°C + 273) <i>Fluid temperature °K (°C + 273)</i>	<u>273</u>
M	Massa molecolare del fluido in kg/kmoli <i>Fluid molecular mass in kg/kmol</i>	<u>28,97</u>
Z	Fattore di comprimibilità del fluido <i>Compressibility factor</i>	<u>1</u>
ϕ	Massa volumica del fluido alla temperatura di calcolo in kg/mc <i>Fluid volumic mass at the calculation temperature in kg/mc</i>	<u>1,2928</u>

Inserendo i valori nella formula si ottiene :
Putting these data in the formula the result is :

$$\begin{aligned} Q_m &= \underline{901,13} \text{ kg/h} \\ \text{kg/h} / \phi &= \underline{697,04} \text{ m}^3/\text{h} \\ \text{m}^3/\text{h} / 0,06 &= \underline{11617,27} \text{ l/min} \\ \text{l/min} \times 60 &= \underline{697036,35} \text{ l/h} \\ \text{l/min} / 60 &= \underline{193,62} \text{ l/s} \end{aligned}$$

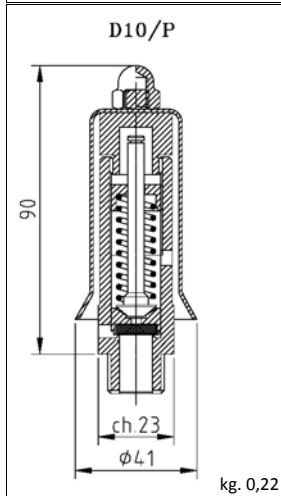


Tipo : Type :	D10		do: 10 mm
Omologazione Homologation	PN	Coefficiente efflusso ridotto Low flow coefficient	Campo di taratura Setting range
E.D. 2014/68/EU - IV Cat.(PED)	60	0,77	0,3 - 60,0 bar
EAC	60	0,77	0,3 - 60,0 bar
ATEX Ex h II 2 Gb (1)	60	0,77	0,3 - 60,0 bar
ATEX Ex h II 2 Db	/	/	/
ASME VIII Div.1	60	0,712	1,0 - 60,0 bar
Canadian Reg. CRN	60	0,712	1,0 - 60,0 bar



CONFIGURAZIONE - CONFIGURATION

Materiale Material	Ottone Brass	Mista Ottone-Acciaio inox Mixed Brass-Stainless steel	Acciaio inox Stainless steel
Modelli <i>Model</i>	Con ghiera With ring nut	/	Con ghiera With ring nut
	Senza Ghiera Without ring nut	/	Senza Ghiera Without ring nut
	Con protezione With Protection	/	Con protezione With Protection
	/	/	/
	/	/	/
Sedi di Tenuta <i>Seal System</i>	N.B.R. (Std) -10 / + 100 °C	/	N.B.R. (Std) -10 / + 100 °C
	E.P.D.M. -50 / + 150 °C	/	E.P.D.M. -50 / + 150 °C
	VITON -20 / +200 °C	/	VITON -20 / +200 °C
	SILICONE -60 / +200 °C	/	SILICONE -60 / +200 °C
	PTFE -196 / +250 °C	/	PTFE -196 / +250 °C
	KALREZ -20 / +250 °C	/	KALREZ -20 / +275 °C
	/	/	/
Connessione Entrata <i>Inlet Connection</i>	G.3/8" - 1/2" ISO228	/	G.3/8" - 1/2" ISO228
	R.3/8" - 1/2" EN10226	/	R.3/8" - 1/2" EN10226
	3/8" - 1/2" NPT	/	3/8" - 1/2" NPT
	/	/	3/4" Tri Clamp
	/	/	/
	/	/	/
	/	/	/
Connessione Uscita <i>Outlet Connection</i>	/	/	/
	/	/	/
	/	/	/
	/	/	/
	/	/	/
	/	/	/
	/	/	/



A richiesta possono essere eseguiti collaudi dai più prestigiosi enti quali: INAIL (area ISPESL), TÜV, RINA, Bureau Veritas, ABS e Lloyd Register.
On request tests can be made by the most prestigious societies, such as: INAIL (area ISPESL), TÜV, RINA, Bureau Veritas, ABS and Lloyd Register.

Note: (1) No Modello Con protezione / No Model With P