

Tavola riassuntiva delle principali caratteristiche costruttive e di funzionamento

Main fabrication and operating characteristics table

| Mod. | Tipo di cappello | Certificati | Connessioni |
|---------------------------------|----------------------------------|---------------|------------------------------------------------------------------------------------------------------|
| 281 con bocchaglio pieno | Cappello chiuso (molla coperta) | PED-ATEX-GOST | Connessioni Std. flangiate ANSI B16.5 (per esecuzioni diverse, fare riferimento all'Ufficio Tecnico) |
| 282 con bocchaglio pieno | Cappello aperto (molla scoperta) | PED-GOST | |

| Type | Bonnet type | Certifications | Connections |
|------------------------|-------------------------|----------------|------------------------------------------------------------------------------------------------|
| 281 full nozzle | Closed (covered spring) | PED-ATEX-GOST | Std. connections flanged ANSI B16.5 (for different executions please refer to Technical Dept.) |
| 282 full nozzle | Open (uncovered spring) | PED-GOST | |

Principali caratteristiche di funzionamento

| Applicazioni | Aeriformi e liquidi |
|------------------------------------------------|-----------------------------|
| Intervallo pressioni di taratura p: | da 0.5 a 250 barg |
| Materiali di costruzione di corpo e cappello | Interv. temp. di esercizio* |
| Corpo e cappello in acciaio al carbonio | da -20 a +426°C |
| Corpo e cappello in acciaio basso legato Cr Mo | da -20 a +538°C |
| Corpo e cappello in acciaio inossidabile | da -196 a +538°C |

* Per temperature e pressioni diverse da quelle riportate nella presente tabella, fare riferimento all'Ufficio Tecnico.

| Coef. di efflusso equivalenti Aeriformi | Liquidi |
|-----------------------------------------|---------|
| Kd | 0.975 |
| | 0.65 |

| | Aeriformi | Liquidi |
|--------------------|--------------------------------------------------------|---------------------------------------------------|
| Sovrapressione | +10% se $p \geq 1$ bar +0.1 bar se $p < 1$ bar | +10% se $p \geq 1$ bar +0.1 bar se $p < 1$ bar |
| Scarto di chiusura | -10% 0.1 bar se $p < 1$ bar -0.1 bar se $p < 1$ bar | -20% di p -0.2 bar se $p < 1$ bar |

Massima contropressione pb ammessa generata pb***

| | |
|------------------------------------------|--------------------------------------------------------------------------------|
| Valvola senza soffiutto di bilanciamento | 10% della press. di taratura aeriformi 20% della press. di taratura liquidi |
| Valvola con soffiutto di bilanciamento | 40% della press. di taratura |

***Per l'impiego di valvole in contropressione (pb) imposta fare riferimento all'Ufficio Tecnico (UT).

Main operating characteristics

| Applications | Gas - vapour and liquid |
|---------------------------------------|-------------------------|
| Set pressure range p: | from 0.5 to 250 barg |
| Body and bonnet construction material | Temperature Range* |
| Carbon steel body and bonnet | from -20 to +426°C |
| Cr Mo alloy steel body and bonnet | from -20 to +538°C |
| Stainless steel body and bonnet | from -196 to +538°C |

* For temperature and pressure different than those in this table, ask to Tecnical or Technical Department.

| Effective coeff. of discharge | Gaseous | Liquid |
|-------------------------------|---------|--------|
| Kd | 0.975 | 0.65 |

| | Gaseous | Liquid |
|--------------|--------------------------------------------------------|---------------------------------------------------|
| Overpressure | +10% if $p \geq 1$ bar +0.1 bar if $p < 1$ bar | +10% if $p \geq 1$ bar +0.1 bar if $p < 1$ bar |
| Blow down | -10% 0.1 bar if $p < 1$ bar -0.1 bar if $p < 1$ bar | -20% of p -0.2 bar if $p < 1$ bar |

Maximum allowable builtup back pressure pb***

| | |
|----------------------------------------|------------------------------------------------------------------|
| Safety valves without balancing bellow | 10% of set pressure gas and vapour 20% of set pressure liquid |
| Safety valves with balancing bellow | 40% of set pressure |

*** In case of superimposed backpressure, please refer to Technical Department.

LEGENDA: p= pressione di taratura (barg); pb= contropressione (barg).

Note

Alcuni dati riportati nella presente pagina possono variare su specifica richiesta, previa analisi e approvazione delle funzioni competenti di Besa® S.p.A.

LEGENDA: p=set pressure (barg) pb= backpressure (barg)

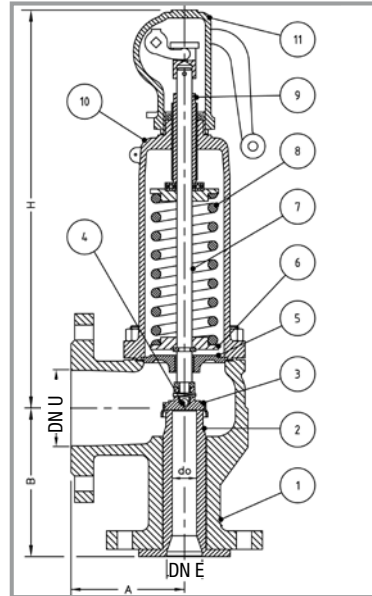
Note

Some information given on these pages can be changed upon specific requests, after Besa® qualified office approval.

Valvole di sicurezza Modello 281-282
Safety Valves Type 281-282

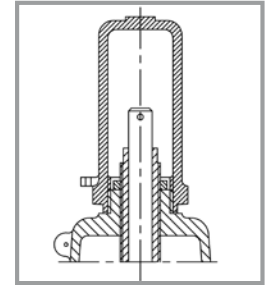
Legenda materiali std.

| Descrizione | 281-C / 282-C | 281-L/282-L | 281-I |
|-----------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------|
| | Valvola con corpo in acciaio al carbonio | Valvola con corpo in acciaio legato | Valvola con corpo in acciaio inossidabile |
| 1 Corpo Valvola | Acciaio al Carbonio ASTM A216 WCB - EN 1.0619 | Acciaio legato ASTM A217 WC6 - EN 1.7357 | Acciaio inossidabile ASTM A351 CF8M - EN 1.4408 |
| 2 Boccaglio (sede) | Acciaio inossidabile ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 316 - EN 1.4401 |
| 3 Otturatore | Acciaio inossidabile ASTM 420 - EN 1.4028 o ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 420 - EN 1.4028 o ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 316 - EN 1.4401 |
| 4 Sfera | Acciaio inossidabile ASTM 420 - EN 1.4028 o ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 420 - EN 1.4028 o ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 316 - EN 1.4401 |
| 5 Piattello Guida | Acciaio al carbonio o Acciaio inossidabile ASTM 316 - EN 1.4401 | Acciaio al carbonio o Acciaio inossidabile ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 316 - EN 1.4401 |
| 6 Ralla Molla | Acciaio AVP o Acciaio inossidabile ASTM 316 - EN 1.4401 | Acciaio AVP o Acciaio inossidabile ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 316 - EN 1.4401 |
| 7 Asta | Acciaio inossidabile ASTM 430F - EN 1.4104 o ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 430F - EN 1.4104 o ASTM 316 - EN 1.4401 | Acciaio inossidabile ASTM 316 - EN 1.4401 |
| 8 Molla | Acciaio al carbonio Acciaio legato | Acciaio al carbonio Acciaio legato | Acciaio inossidabile ASTM 316 S42 |
| 9 Vite di regolazione | Acciaio AVP o Acciaio inossidabile ASTM 316 - EN 1.4401 con bussola in PTFE | Acciaio AVP o Acciaio inossidabile ASTM 316 - EN 1.4401 con bussola in PTFE | Acciaio inossidabile ASTM 316 - EN 1.4401 con bussola in PTFE |
| 10 Cappello | Acciaio al Carbonio ASTM A216 WCB - EN 1.0619 | Acciaio al Carbonio ASTM A216 WCB - EN 1.0619 | Acciaio inossidabile ASTM A351 CF8M - EN 1.4408 |
| 11 Cappuccio H4 a tenuta con leva | ASTM A216 WCB - EN 1.0619 | ASTM A216 WCB - EN 1.0619 | Acciaio inossidabile ASTM A351 CF8M - EN 1.4408 |

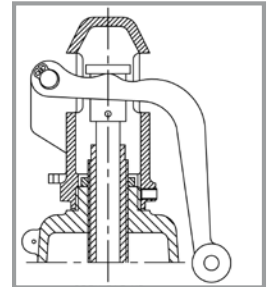


Cappucci

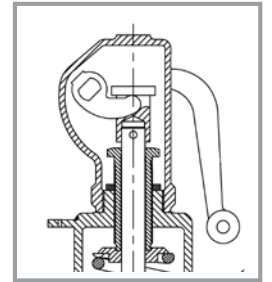
Cappuccio tipo H2, a tenuta senza leva di sollevamento



Cappuccio tipo H3, aperto con leva di sollevamento dell'otturatore



Cappuccio H4, a tenuta con leva di sollevamento dell'otturatore



Dimensioni scartamenti - classificazione flange entrata x uscita

| DN E | Orifizio | ASME CL 150 x 150 | | ASME CL 300 x 150 | | ASME CL 600 x 150 | | ASME CL 900 x 150 | | ASME CL 900 x 300 | | ASME CL 1500 x 150 | | ASME CL 1500 x 300 | | ASME CL 2500 x 300 | | H mm |
|------------|----------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|------|
| | | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | |
| 1"x2" | D/E | 114.3 | 104.8 | 114.3 | 104.8 | 114.3 | 104.8 | | | | | | | | | | | 320 |
| 1"1/2 x 2" | D | | | | | | | | | 139.7 | 104.8 | | | 139.7 | 104.8 | | | 373 |
| | E | | | | | | | | | 139.7 | 104.8 | | | 139.7 | 104.8 | | | |
| | F | 120.7 | 123.8 | 120.7 | 123.8 | 152.4 | 123.8 | | | | | | | | | | | |
| 1"1/2 X 3" | D | | | | | | | | | | | | | | | 177.8 | 139.7 | 386 |
| | E | | | | | | | | | | | | | | 177.8 | 139.7 | | |
| | F | | | | | | | | | 165.1 | 123.8 | | | 165.1 | 123.8 | 177.8 | 139.7 | |
| | G | 120.7 | 123.8 | 120.7 | 123.8 | 152.4 | 123.8 | | | 165.1 | 123.8 | | | 165.1 | 123.8 | | | |
| | H | 123.8 | 130.2 | 123.8 | 130.2 | | | | | | | | | | | | | |
| 2" x 3" | G | | | | | | | | | | | | | 171.4 | 155.5 | 171.4 | 155.5 | 425 |
| | H | | | 123.8 | 130.2 | 161.9 | 153.9 | 161.9 | 153.9 | | | | | 161.9 | 153.9 | | | |
| | J | 123.8 | 136.5 | 123.8 | 136.5 | | | | | | | | | | | | | |
| 3" x 4" | J | | | 180.9 | 184.1 | 180.9 | 184.1 | 180.9 | 184.1 | | | | | 180.9 | 184.1 | | | 580 |
| | K | 161.9 | 155.6 | 161.9 | 155.6 | 180.9 | 184.1 | | | | | | | | | | | |
| 3" x 6" | L | | | | | | | | | | | | | | | | | 645 |
| | K | | | | | | | 215.9 | 198.4 | | | | | 215.9 | 196.9 | | | |
| 4" x 6" | L | | | 181 | 179.4 | 181 | 179.4 | 222.3 | 196.9 | | | 222.3 | 196.9 | | | | | 684 |
| | M | 184.2 | 117.8 | 184.2 | 177.8 | 203.2 | 177.8 | 222.3 | 196.9 | | | | | | | | | |
| | N | 209.6 | 196.9 | 209.6 | 196.9 | 222.3 | 196.9 | 222.3 | 196.9 | | | | | | | | | |
| | P | 228.6 | 181 | 228.6 | 181 | 254 | 225.4 | 254 | 225.4 | | | | | | | | | |
| 6" x 8" | Q | 241.3 | 239.7 | 241.3 | 239.7 | 241.3 | 239.7 | | | | | | | | | | | 766 |
| | R | 241.3 | 239.7 | 241.3 | 239.7 | | | | | | | | | | | | | |
| 6" x 10" | R | | | 266.7 | 239.7 | 266.7 | 239.7 | | | | | | | | | | | 766 |
| 8" x 10" | T | 279.4 | 276.2 | 279.4 | 276.2 | | | | | | | | | | | | | 1280 |

dimensioni indicative, da confermare in caso di ordine

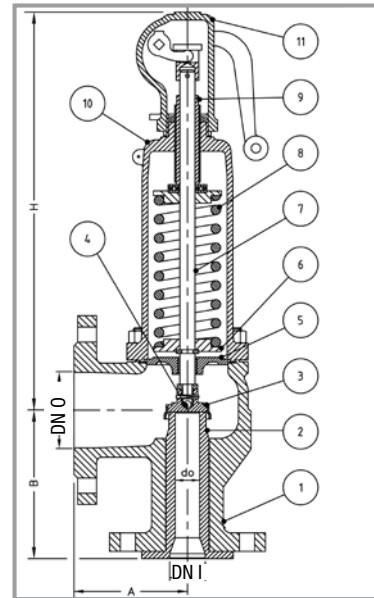
A richiesta e con l'approvazione dell'Ufficio Tecnico, la costruzione delle valvole può essere eseguita utilizzando componenti di materiale diverso da quello indicato nella tabella soprastante.

Valvole di sicurezza Modello 281-282

Safety Valves Type 281-282

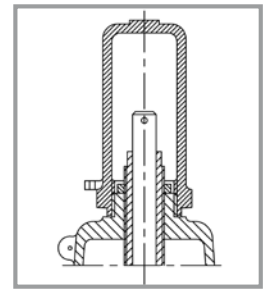
Std. material legenda

| Description | 281-C / 282-C Valve with carbon steel body | 281-L/282-L Valve with alloy steel body | 281-I Valve with stainless steel body |
|------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------|
| 1 Valve body | Carbon steel ASTM A216 WCB - EN 1.0619 | Alloy steel ASTM A217 WC6 - EN 1.7357 | Stainless steel ASTM A351 CF8M - EN 1.4408 |
| 2 Full nozzle (seat) | Stainless steel ASTM 316 - EN 1.4401 | Stainless steel ASTM 316 - EN 1.4401 | Stainless steel ASTM 316 - EN 1.4401 |
| 3 Disc | Stainless steel ASTM 420 - EN 1.4028 or ASTM 316 - EN 1.4401 | Stainless steel ASTM 420 - EN 1.4028 or ASTM 316 - EN 1.4401 | Stainless steel ASTM 316 - EN 1.4401 |
| 4 Ball | Stainless steel ASTM 420 - EN 1.4028 or ASTM 316 - EN 1.4401 | Stainless steel ASTM 420 - EN 1.4028 or ASTM 316 - EN 1.4401 | Stainless steel ASTM 316 - EN 1.4401 |
| 5 Guide | Carbon steel or Stainless steel ASTM 316 - EN 1.4401 | Carbon steel or Stainless steel ASTM 316 - EN 1.4401 | Stainless steel ASTM 316 - EN 1.4401 |
| 6 Spring plate | AVP steel or Stainless steel ASTM 316 - EN 1.4401 | AVP steel or Stainless steel ASTM 316 - EN 1.4401 | Stainless steel ASTM 316 - EN 1.4401 |
| 7 Spindle | Stainless steel ASTM 430F - EN 1.4104 or ASTM 316 - EN 1.4401 | Stainless steel ASTM 430F - EN 1.4104 or ASTM 316 - EN 1.4401 | Stainless steel ASTM 316 - EN 1.4401 |
| 8 Spring | Carbon steel Alloy steel | Carbon steel Alloy steel | Stainless steel ASTM 316 S42 |
| 9 Pressure adjusting screw | AVP steel or Stainless steel ASTM 316 - EN 1.4401 with bush PTFE | AVP steel or Stainless steel ASTM 316 - EN 1.4401 with bush PTFE | Stainless steel ASTM 316 - EN 1.4401 with bush PTFE |
| 10 Bonnet | Carbon steel ASTM A216 WCB - EN 1.0619 | Carbon steel ASTM A216 WCB - EN 1.0619 | Stainless steel ASTM A351 CF8M - EN 1.4408 |
| 11 Tight cap H4 with lifting lever | ASTM A216 WCB - EN 1.0619 | ASTM A216 WCB - EN 1.0619 | Stainless steel ASTM A351 CF8M - EN 1.4408 |

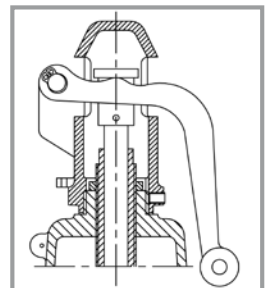


Caps

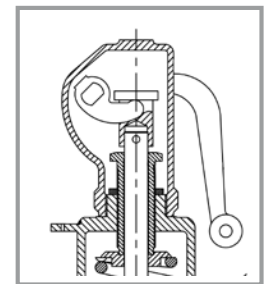
Tight Cap H2 without lifting lever



Open Cap H3 with plain lifting lever



Tight cap H4 with packed lifting lever



Center to face dimensions - Inlet x outlet flange ratings

| DN I | Orifice | ASME CL 150 x 150 | | ASME CL 300 x 150 | | ASME CL 600 x 150 | | ASME CL 900 x 150 | | ASME CL 900 x 300 | | ASME CL 1500 x 150 | | ASME CL 1500 x 300 | | ASME CL 2500 x 300 | | H mm | |
|-------------|---------|----------------------|-------|----------------------|-------|----------------------|-------|----------------------|-------|----------------------|-------|-----------------------|------|-----------------------|-------|-----------------------|-------|-------|-------|
| | | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | A mm | B mm | | |
| 1"x2" | D/E | 114.3 | 104.8 | 114.3 | 104.8 | 114.3 | 104.8 | | | | | | | | | | | 320 | |
| 1 1/2" x 2" | D | | | | | | | | | 139.7 | 104.8 | | | 139.7 | 104.8 | | | 373 | |
| | E | | | | | | | | | 139.7 | 104.8 | | | 139.7 | 104.8 | | | | |
| | F | 120.7 | 123.8 | 120.7 | 123.8 | 152.4 | 123.8 | | | | | | | | | | | | |
| 1 1/2" x 3" | D | | | | | | | | | | | | | | | | 177.8 | 139.7 | |
| | E | | | | | | | | | | | | | | | | 177.8 | 139.7 | |
| | F | | | | | | | | | 165.1 | 123.8 | | | 165.1 | 123.8 | | 177.8 | 139.7 | |
| | G | 120.7 | 123.8 | 120.7 | 123.8 | 152.4 | 123.8 | | | 165.1 | 123.8 | | | | | | | 386 | |
| | H | 123.8 | 130.2 | 123.8 | 130.2 | 152.4 | 123.8 | | | 165.1 | 123.8 | | | | | | | | |
| 2" x 3" | G | | | | | | | | | | | | | | | 171.4 | 155.5 | 171.4 | 155.5 |
| | H | | | 123.8 | 130.2 | 161.9 | 153.9 | 161.9 | 153.9 | | | | | 161.9 | 153.9 | | | 425 | |
| | J | 123.8 | 136.5 | 123.8 | 136.5 | | | | | | | | | | | | | | |
| 3" x 4" | J | | | | | 180.9 | 184.1 | 180.9 | 184.1 | | | | | 180.9 | 184.1 | | | 580 | |
| | K | 161.9 | 155.6 | 161.9 | 155.6 | 180.9 | 184.1 | | | | | | | | | | | | |
| 3" x 6" | L | | | | | | | 215.9 | 198.4 | | | | | 215.9 | 196.9 | | | 645 | |
| | K | | | | | | | | | | 222.3 | 196.9 | | | | | | | |
| 4" x 6" | M | 184.2 | 117.8 | 184.2 | 177.8 | 203.2 | 177.8 | 222.3 | 196.9 | | | | | | | | | 684 | |
| | N | 209.6 | 196.9 | 209.6 | 196.9 | 222.3 | 196.9 | 222.3 | 196.9 | | | | | | | | | | |
| | P | 228.6 | 181 | 228.6 | 181 | 254 | 225.4 | 254 | 225.4 | | | | | | | | | | |
| | | 228.6 | 181 | 254 | 181 | 254 | 225.4 | 254 | 225.4 | | | | | | | | | | |
| 6" x 8" | Q | 241.3 | 239.7 | 241.3 | 239.7 | 241.3 | 239.7 | | | | | | | | | | | 766 | |
| | R | 241.3 | 239.7 | 241.3 | 239.7 | | | | | | | | | | | | | | |
| 6" x 10" | R | | | | | 266.7 | 239.7 | | | | | | | | | | | 766 | |
| 8" x 10" | T | 279.4 | 276.2 | 279.4 | 276.2 | | | | | | | | | | | | | 1280 | |

approximate dimensions to be confirmed at order

Valves can be manufactured with materials different than those in this table upon request and after Besa® Technical Dept. approval.

Tabella delle Portate / Flow rate table

| Pressione di taratura P / Set pressure P | ORIFIZIO D / ORIFICE D | | | ORIFIZIO E / ORIFICE E | | | ORIFIZIO F / ORIFICE F | | | ORIFIZIO G / ORIFICE G | | |
|---------------------------------------------|------------------------|----------------|----------------------------------------|------------------------|----------------|----------------------------------------|------------------------|----------------|----------------------------------------|------------------------|----------------|----------------------------------------|
| | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam |
| | a 25°C kg/h | a 25°C kg/h | kg/h | a 25°C kg/h | a 25°C kg/h | kg/h | a 25°C kg/h | a 25°C kg/h | kg/h | a 25°C kg/h | a 25°C kg/h | kg/h |
| 1 | 2461 | 105 | 71 | 4368 | 187 | 126 | 6864 | 293 | 198 | 11266 | 481 | 325 |
| 2 | 3481 | 173 | 118 | 6177 | 307 | 209 | 9707 | 483 | 328 | 15933 | 792 | 539 |
| 3 | 4263 | 243 | 159 | 7565 | 432 | 282 | 11889 | 679 | 443 | 19514 | 1114 | 728 |
| 4 | 4923 | 316 | 208 | 8736 | 561 | 369 | 13728 | 881 | 579 | 22533 | 1447 | 951 |
| 5 | 5504 | 380 | 249 | 9767 | 675 | 442 | 15348 | 1061 | 694 | 25193 | 1742 | 1139 |
| 6 | 6029 | 445 | 290 | 10699 | 789 | 514 | 16813 | 1240 | 808 | 27597 | 2036 | 1327 |
| 7 | 6512 | 509 | 331 | 11556 | 903 | 587 | 18160 | 1419 | 923 | 29808 | 2330 | 1514 |
| 8 | 6962 | 574 | 372 | 12354 | 1018 | 659 | 19414 | 1599 | 1036 | 31866 | 2625 | 1701 |
| 9 | 7384 | 638 | 412 | 13104 | 1132 | 732 | 20592 | 1779 | 1150 | 33799 | 2920 | 1888 |
| 10 | 7783 | 702 | 453 | 13813 | 1247 | 804 | 21705 | 1959 | 1264 | 35628 | 3216 | 2075 |
| 12 | 8526 | 831 | 534 | 15131 | 1475 | 948 | 23777 | 2318 | 1489 | 39028 | 3804 | 2444 |
| 14 | 9209 | 960 | 615 | 16343 | 1704 | 1092 | 25682 | 2678 | 1716 | 42155 | 4396 | 2816 |
| 16 | 9845 | 1090 | 696 | 17472 | 1934 | 1236 | 27456 | 3038 | 1942 | 45066 | 4987 | 3188 |
| 18 | 10442 | 1219 | 778 | 18532 | 2163 | 1380 | 29121 | 3399 | 2168 | 47800 | 5579 | 3559 |
| 20 | 11007 | 1348 | 859 | 19534 | 2392 | 1525 | 30696 | 3759 | 2396 | 50385 | 6169 | 3932 |
| 22 | 11544 | 1477 | 940 | 20487 | 2622 | 1668 | 32194 | 4120 | 2620 | 52844 | 6762 | 4301 |
| 24 | 12058 | 1606 | 1022 | 21398 | 2851 | 1813 | 33626 | 4479 | 2849 | 55194 | 7353 | 4677 |
| 26 | 12550 | 1736 | 1104 | 22272 | 3081 | 1959 | 34999 | 4841 | 3079 | 57448 | 7947 | 5053 |
| 28 | 13024 | 1865 | 1187 | 23113 | 3310 | 2106 | 36320 | 5201 | 3310 | 59617 | 8537 | 5433 |
| 30 | 13481 | 1995 | 1269 | 23924 | 3540 | 2252 | 37595 | 5563 | 3539 | 61709 | 9132 | 5809 |
| 35 | 14561 | 2319 | 1475 | 25841 | 4115 | 2618 | 40607 | 6466 | 4114 | 66653 | 10614 | 6753 |
| 40 | 15567 | 2643 | 1685 | 27725 | 4690 | 2990 | 43411 | 7370 | 4699 | 71255 | 12097 | 7713 |
| 45 | 16511 | 2967 | 1896 | 29301 | 5266 | 3364 | 46044 | 8275 | 5287 | 75578 | 13583 | 8677 |
| 50 | 17404 | 3290 | 2107 | 30886 | 5839 | 3740 | 48535 | 9176 | 5877 | 79666 | 15061 | 9647 |
| 55 | 18253 | 3615 | 2323 | 32393 | 6416 | 4123 | 50904 | 10082 | 6479 | 83554 | 16549 | 10635 |
| 60 | 19065 | 3939 | 2542 | 33834 | 6989 | 4511 | 53167 | 10983 | 7088 | 87270 | 18028 | 11634 |
| 70 | 20593 | 4585 | 2987 | 36545 | 8137 | 5301 | 57427 | 12786 | 8330 | 94262 | 20988 | 13673 |
| 80 | 22014 | 5229 | 3445 | 39068 | 9279 | 6113 | 61392 | 14582 | 9606 | 100770 | 23935 | 15767 |
| 90 | 23350 | 5872 | 3819 | 41438 | 10421 | 6777 | 65116 | 16376 | 10650 | 106883 | 26879 | 17481 |
| 100 | 24613 | 6511 | 4405 | 43679 | 11555 | 7818 | 68639 | 18158 | 12285 | 112665 | 29805 | 20165 |
| 110 | 25814 | 7131 | 4916 | 45811 | 12656 | 8724 | 71989 | 19887 | 13708 | 118164 | 32643 | 22501 |
| 120 | 26962 | 7759 | 5444 | 47848 | 13769 | 9661 | 75190 | 21637 | 15182 | 123418 | 35515 | 24919 |
| 130 | 28063 | 8388 | 6007 | 49802 | 14885 | 10660 | 78260 | 23391 | 16751 | 128457 | 38394 | 27495 |
| 140 | 29122 | 9010 | 6607 | 51682 | 15990 | 11725 | 81215 | 25128 | 18425 | 133307 | 41245 | 30243 |
| 150 | 30145 | 9626 | 7089 | 53496 | 17083 | 12581 | 84065 | 26844 | 19770 | 137985 | 44062 | 32451 |
| 200 | 34808 | 12635 | / | 61772 | 22423 | / | 97070 | 35236 | / | 159332 | 57837 | / |
| 250 | 28916 | 15514 | / | 69063 | 27531 | / | 108527 | 43263 | / | 178138 | 71013 | / |
| 300 | 42631 | 18261 | / | 75655 | 32406 | / | 118886 | 50924 | / | / | / | / |
| 350 | 46047 | 20870 | / | 81716 | 37036 | / | / | / | / | / | / | / |
| 400 | 49226 | 23366 | / | 87358 | 41467 | / | / | / | / | / | / | / |

| Pressione di taratura P / Set pressure P | ORIFIZIO H / ORIFICE H | | | ORIFIZIO J / ORIFICE J | | | ORIFIZIO K / ORIFICE K | | | ORIFIZIO L / ORIFICE L | | |
|---------------------------------------------|------------------------|----------------|----------------------------------------|------------------------|----------------|----------------------------------------|------------------------|----------------|----------------------------------------|------------------------|----------------|----------------------------------------|
| | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam |
| | a 25°C kg/h | a 25°C kg/h | kg/h | a 25°C kg/h | a 25°C kg/h | kg/h | a 25°C kg/h | a 25°C kg/h | kg/h | a 25°C kg/h | a 25°C kg/h | kg/h |
| 1 | 17541 | 750 | 506 | 28733 | 1230 | 830 | 41114 | 1757 | 1390 | 63820 | 2727 | 1840 |
| 2 | 24807 | 1233 | 839 | 40691 | 2023 | 1377 | 58144 | 2891 | 1967 | 90255 | 4488 | 3053 |
| 3 | 30382 | 1735 | 1133 | 49836 | 2845 | 1859 | 71211 | 4066 | 2656 | 110540 | 6311 | 4123 |
| 4 | 35082 | 2252 | 1481 | 57546 | 3695 | 2429 | 82228 | 5279 | 3471 | 127640 | 8195 | 5387 |
| 5 | 39223 | 2712 | 1774 | 64338 | 4448 | 2909 | 91934 | 6356 | 4157 | 142706 | 9866 | 6453 |
| 6 | 42967 | 3170 | 2065 | 70479 | 5199 | 3388 | 100708 | 7429 | 4841 | 156327 | 11532 | 7514 |
| 7 | 46409 | 3627 | 2358 | 76126 | 5950 | 3867 | 108777 | 8502 | 5526 | 168852 | 13198 | 8578 |
| 8 | 49614 | 4087 | 2648 | 81382 | 6705 | 4344 | 116288 | 9581 | 6207 | 180511 | 14872 | 9634 |
| 9 | 52623 | 4546 | 2939 | 86318 | 7456 | 4821 | 123342 | 10654 | 6889 | 191461 | 16539 | 10694 |
| 10 | 55470 | 5006 | 3230 | 90988 | 8212 | 5298 | 130014 | 11734 | 7571 | 201817 | 18215 | 11752 |
| 12 | 60764 | 5923 | 3806 | 99672 | 9716 | 6242 | 142423 | 13883 | 8920 | 221080 | 21551 | 13846 |
| 14 | 65633 | 6843 | 4384 | 107658 | 11225 | 7192 | 153834 | 16040 | 10276 | 238793 | 24899 | 15952 |
| 16 | 70164 | 7765 | 4964 | 115091 | 12737 | 8142 | 164456 | 18199 | 11634 | 255281 | 28251 | 18059 |
| 18 | 74420 | 8687 | 5541 | 122073 | 14249 | 9089 | 174432 | 20361 | 12988 | 270766 | 31606 | 20161 |
| 20 | 78446 | 9605 | 6122 | 128676 | 15755 | 10042 | 183867 | 22513 | 14350 | 285413 | 34946 | 22275 |
| 22 | 82275 | 10529 | 6697 | 134957 | 17270 | 10985 | 192841 | 24678 | 15696 | 299343 | 38307 | 24365 |
| 24 | 85933 | 11447 | 7282 | 140957 | 18777 | 11944 | 201416 | 26831 | 17067 | 312654 | 41649 | 26493 |
| 26 | 89442 | 12372 | 7868 | 146713 | 20294 | 12906 | 209641 | 28999 | 18441 | 325420 | 45014 | 28626 |
| 28 | 92818 | 13291 | 8458 | 152251 | 21802 | 13874 | 217555 | 31153 | 19825 | 337705 | 48359 | 30774 |
| 30 | 96076 | 14218 | 9045 | 157595 | 23322 | 14836 | 225190 | 33325 | 21200 | 349558 | 51729 | 32908 |
| 35 | 103774 | 16525 | 10514 | 170222 | 27106 | 17247 | 243233 | 38733 | 24644 | 377565 | 60124 | 38254 |
| 40 | 110939 | 18835 | 12009 | 181975 | 30895 | 19699 | 260027 | 44147 | 28148 | 403634 | 68528 | 43694 |
| 45 | 117669 | 21147 | 13510 | 193014 | 34688 | 22161 | 275801 | 49566 | 31666 | 428119 | 76940 | 49154 |
| 50 | 124034 | 23449 | 15019 | 203455 | 38465 | 24636 | 290719 | 54963 | 35203 | 451277 | 85317 | 54645 |
| 55 | 135872 | 25765 | 16558 | 213385 | 42263 | 27161 | 304909 | 60390 | 38803 | 473303 | 93742 | 60245 |
| 60 | 135872 | 28069 | 18114 | 222873 | 46042 | 29712 | 318467 | 65790 | 42457 | 494349 | 102124 | 65904 |
| 70 | 146759 | 32676 | 21288 | 240731 | 53599 | 34919 | 343984 | 76589 | 34919 | 533958 | 118887 | 77452 |
| 80 | 156892 | 37265 | 24548 | 257352 | 61126 | 40267 | 367734 | 87344 | 57539 | 570825 | 135582 | 89316 |
| 90 | 166409 | 41849 | 27217 | 272963 | 68645 | 44645 | 390041 | 98088 | 63794 | 605452 | 152259 | 99026 |
| 100 | 175410 | 46404 | 31395 | 287728 | 76118 | 51498 | 411139 | 108766 | 73586 | 638202 | 168835 | 114226 |
| 110 | 183972 | 50823 | 35033 | 301772 | 83366 | 57464 | 431207 | 119122 | 82112 | / | / | / |
| 120 | 192152 | 55294 | 38798 | 315191 | 90699 | 63640 | 450381 | 129602 | 90937 | / | / | / |
| 130 | 199998 | 59777 | 42808 | 328061 | 98053 | 70219 | 468771 | 140110 | 100337 | / | / | / |
| 140 | 207548 | 64215 | 47086 | 340445 | 105333 | 77236 | 486467 | 150512 | 110364 | / | / | / |
| 150 | 214833 | 68602 | 50524 | 352394 | 112528 | 82875 | 503541 | 160794 | 118421 | / | / | / |
| 200 | / | / | / | / | / | / | / | / | / | / | / | / |
| 250 | / | / | / | / | / | / | / | / | / | / | / | / |
| 300 | / | / | / | / | / | / | / | / | / | / | / | / |
| 350 | / | / | / | / | / | / | / | / | / | / | / | / |
| 400 | / | / | / | / | / | / | / | / | / | / | / | / |

Nota 1: le portate sono state calcolate secondo le formule indicate dalla norma API RP 520 e con una sovrappressione pari al 10% della pressione di taratura p (0.1 bar se p < 1 barg).
 Nota 2: i valori intermedi possono essere approssimativamente ricavati per interpolazione lineare.
 Nota 3: le portate indicate nella presente tabella non vincolano in alcun modo Besa®, la quale si riserva di eseguire sempre il dimensionamento fluidodinamico di ogni valvola di sicurezza, indicando il valore della portata calcolata sui documenti applicabili (Specific di prodotto nel caso di offerta; Certificato di collaudo nel caso di ordine; modulo di calcolo ove applicabile)

Note 1) Flow rates have been calculated according to API RP 520 rules with overpressure 10% (0.1 bar if p < 1 barg)
 Note 2) Approximate intermediate values can be obtained by linear interpolation
 Note 3) Flow rates given in this table are undemanding; Besa® will always check fluid mechanical sizing of each safety valve, and indicate calculated flow rate in every relevant document (Specification sheet in case of offer, inspection certificate in case of order, calculation sheet when applicable)

Tabella delle Portate / Flow rate table

| Pressione di taratura P / Set pressure P | ORIFIZIO M / ORIFICE M | | | ORIFIZIO N / ORIFICE N | | | ORIFIZIO P / ORIFICE P | | | ORIFIZIO Q / ORIFICE Q | | |
|---------------------------------------------|------------------------|--------------|----------------------------------------|------------------------|--------------|----------------------------------------|------------------------|--------------|----------------------------------------|------------------------|--------------|----------------------------------------|
| | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam |
| | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C |
| bar | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h |
| 1 | 80529 | 3441 | 2322 | 97065 | 4148 | 2799 | 142685 | 6098 | 4114 | 142685 | 10562 | 7126 |
| 2 | 113886 | 5663 | 3853 | 137271 | 6825 | 4644 | 201788 | 10033 | 6826 | 201788 | 17378 | 11823 |
| 3 | 139481 | 7964 | 5202 | 168121 | 9599 | 6270 | 247139 | 14110 | 9217 | 247139 | 24439 | 15965 |
| 4 | 161058 | 10341 | 6798 | 194130 | 12464 | 8194 | 285371 | 18322 | 12045 | 285371 | 31735 | 20862 |
| 5 | 180069 | 12448 | 8143 | 217044 | 15005 | 9815 | 319054 | 22057 | 14427 | 319054 | 38203 | 24989 |
| 6 | 197256 | 14551 | 9482 | 237760 | 17539 | 11429 | 349507 | 25782 | 16800 | 349507 | 44655 | 29099 |
| 7 | 213060 | 16653 | 10823 | 256810 | 20073 | 13046 | 377510 | 29507 | 19177 | 377510 | 51107 | 33216 |
| 8 | 227771 | 18765 | 12157 | 274541 | 22618 | 14653 | 403575 | 33249 | 21540 | 403575 | 57588 | 37308 |
| 9 | 241588 | 20869 | 13494 | 291195 | 25154 | 16264 | 428056 | 36976 | 23908 | 428056 | 64044 | 41410 |
| 10 | 254656 | 22984 | 14828 | 306946 | 27703 | 17873 | 451211 | 40724 | 26274 | 451211 | 70534 | 45507 |
| 12 | 278961 | 27193 | 17471 | 336243 | 32777 | 21058 | 494277 | 48182 | 30956 | 494277 | 83452 | 53616 |
| 14 | 301313 | 31418 | 20128 | 363184 | 37869 | 24261 | 533880 | 55668 | 35664 | 533880 | 96417 | 61770 |
| 16 | 322117 | 35647 | 22787 | 388260 | 42967 | 27466 | 570742 | 63161 | 40376 | 570742 | 109396 | 69932 |
| 18 | 341657 | 39880 | 25439 | 411812 | 48069 | 30663 | 605363 | 70662 | 45075 | 605363 | 122388 | 78071 |
| 20 | 360138 | 44096 | 28107 | 434088 | 53151 | 33878 | 638109 | 78131 | 49801 | 638109 | 135325 | 86256 |
| 22 | 377716 | 48336 | 30744 | 455275 | 58261 | 37057 | 669254 | 85644 | 54474 | 669254 | 148337 | 94351 |
| 24 | 394511 | 52553 | 33429 | 475519 | 63345 | 40293 | 699013 | 93117 | 59231 | 699013 | 161280 | 102589 |
| 26 | 410620 | 56800 | 36120 | 494936 | 68463 | 43537 | 727556 | 100640 | 64000 | 727556 | 174311 | 110849 |
| 28 | 426121 | 61020 | 38830 | 513619 | 73549 | 46804 | 755021 | 108117 | 68802 | 755021 | 187261 | 119166 |
| 30 | 441077 | 65272 | 41524 | 531647 | 78675 | 50050 | 781521 | 115652 | 73574 | 781521 | 200312 | 127432 |
| 35 | 476417 | 75865 | 48270 | 574244 | 91443 | 58182 | 844139 | 134422 | 85527 | 844139 | 232821 | 148135 |
| 40 | 509312 | 86469 | 55134 | 613893 | 104225 | 66455 | 902422 | 153210 | 97688 | 902422 | 265363 | 169198 |
| 45 | 540207 | 97084 | 62023 | 651132 | 117019 | 74759 | 957163 | 172017 | 109896 | / | / | / |
| 50 | 569428 | 107654 | 68952 | 686353 | 129760 | 83111 | 1008939 | 190747 | 122173 | / | / | / |
| 55 | 597221 | 118285 | 76017 | 719853 | 142574 | 91627 | 1058184 | 209583 | 134691 | / | / | / |
| 60 | 623777 | 128861 | 83159 | 751862 | 155321 | 100235 | 1105237 | 228323 | 147345 | / | / | / |
| 70 | 673756 | 150014 | 97730 | / | / | / | / | / | / | / | / | / |
| 80 | | | | | | | | | | | | |
| 90 | | | | | | | | | | | | |
| 100 | | | | | | | | | | | | |

| Pressione di taratura P / Set pressure P | ORIFIZIO R / ORIFICE R | | | ORIFIZIO T / ORIFICE T | | |
|---------------------------------------------|------------------------|--------------|----------------------------------------|------------------------|--------------|----------------------------------------|
| | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam | acqua/ water | aria/ air | vapore d'acqua sat. / sat. steam |
| | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C | a 25°C |
| bar | kg/h | kg/h | kg/h | kg/h | kg/h | kg/h |
| 1 | 357858 | 15293 | 10319 | 581488 | 24850 | 16767 |
| 2 | 506087 | 25163 | 17120 | 822349 | 40888 | 27819 |
| 3 | 619828 | 35388 | 23117 | 1007167 | 57503 | 37564 |
| 4 | 715715 | 45953 | 30208 | 1162977 | 74669 | 49086 |
| 5 | 800194 | 55319 | 36184 | 1300248 | 89888 | 58797 |
| 6 | 876569 | 64662 | 42136 | 1424350 | 105070 | 68467 |
| 7 | 946802 | 74005 | 48097 | 1538474 | 120251 | 78154 |
| 8 | 1012174 | 83389 | 54022 | 1644698 | 135501 | 87782 |
| 9 | 1073573 | 92737 | 59963 | 1744465 | 150690 | 97435 |
| 10 | 1131645 | 102136 | 65895 | 1838828 | 165962 | 107073 |
| 12 | 1239655 | 120841 | 77638 | 2014335 | 196356 | 126155 |
| 14 | 1338981 | 139615 | 89445 | 2175730 | 226863 | 145341 |
| 16 | 1431431 | 158409 | 101263 | 2325954 | 257401 | 164544 |
| 18 | 1518262 | 177222 | 113048 | 2467046 | 287970 | 183694 |
| 20 | 1600388 | 195955 | 124902 | 2600495 | 318410 | 202955 |
| 22 | | | | | | |
| 24 | | | | | | |
| 26 | | | | | | |
| 28 | | | | | | |
| 30 | | | | | | |

Nota 1: le portate sono state calcolate secondo le formule indicate dalla norma API RP 520 e con una sovrappressione pari al 10% della pressione di taratura p (0,1 bar se p < 1 barg).
 Nota 2: i valori intermedi possono essere approssimativamente ricavati per interpolazione lineare.
 Nota 3: le portate indicate nella presente tabella non vincolano in alcun modo Besa®, la quale si riserva di eseguire sempre il dimensionamento fluidodinamico di ogni valvola di sicurezza, indicando il valore della portata calcolata sui documenti applicabili (Specifiche di prodotto nel caso di offerta; Certificato di collaudo nel caso di ordine; modulo di calcolo ove applicabile)

Note 1) Flow rates have been calculated according to API RP 520 rules with overpressure 10% (0,1 bar if p < 1 barg)
 Note 2) Approximate intermediate values can be obtained by linear interpolation
 Note 3) Flow rates given in this table are undemanding; Besa® will always check fluid mechanical sizing of each safety valve, and indicate calculated flow rate in every relevant document (Specification sheet in case of offer, inspection certificate in case of order, calculation sheet when applicable)

Il diagramma rappresenta la tendenza del coefficiente di efflusso Kd, secondo il rapporto pb/p0 (aeriformi)

Diagram showing coefficient of discharge Kd trend vs. pb/p0 ratio (gaseous)

pb= contropressione (bar a)
 po= pressione di scarico (bar a)

pb= backpressure (bar abs)
 po= upstream relieving pressure (bar abs)

