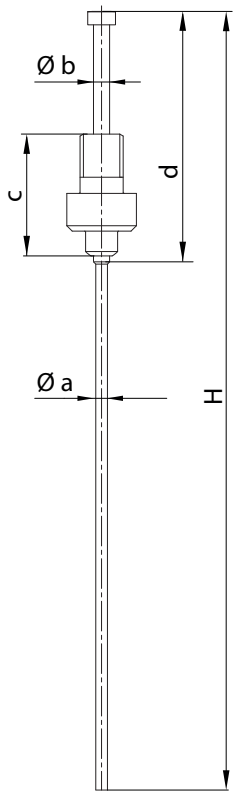


Gruppo spillo - Valve gate pin group

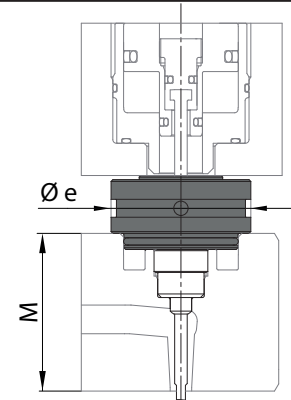


| | | | | | | |
|--|----------------------------------|---------------|---------------|---------------|---------------|---------------|
| Valve Gate type <i>Tipo gr.ott.</i> | S20 - S28 - S32 | | | | K32 | |
| Nozzle type <i>Tipo ugello</i> | TF12 - TF17 - TF23 - TD18 - TD22 | | | | | |
| Pin group code <i>Codice gr.spillo</i> | E18330 | E20309 | E18331 | E20310 | E18332 | E18333 |
| Ø a | | | | | Ø 2.5 | |
| Ø b | | | | | Ø 3.5 | |
| d | 82 | | | | 57 | |
| c | 22.5 | 37 | 22.5 | 37 | 22.5 | |
| H | 280 | | 500 | | 280 | 500 |

| | | | | | | |
|--|---------------|---------------|---------------|---------------|-------|----|
| Valve Gate type <i>Tipo gr.ott.</i> | S28 - S32 | | | | K32 | |
| Nozzle type <i>Tipo ugello</i> | FN32 - TD30 | | | | | |
| Pin group code <i>Codice gr.spillo</i> | E18334 | E20313 | E18332 | E18333 | | |
| Ø a | | | | | Ø 3.3 | |
| Ø b | | | | | Ø 3.5 | |
| d | | | | | 98 | |
| c | 22.5 | 37 | 22.5 | 37 | 22.5 | 37 |
| H | 280 | | | 500 | | |

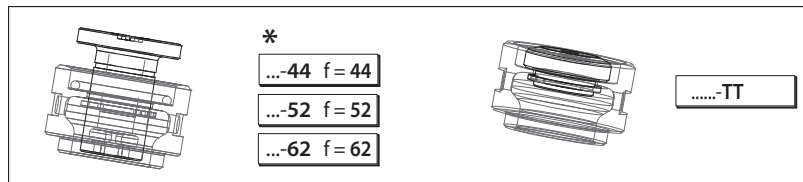
| | | | | | | |
|--|---------------|--|--|---------------|-------|--|
| Valve Gate type <i>Tipo gr.ott.</i> | S60 - K40 | | | | | |
| Nozzle type <i>Tipo ugello</i> | FN46 - DN44 | | | | | |
| Pin group code <i>Codice gr.spillo</i> | E18336 | | | E18337 | | |
| Ø a | | | | | Ø 5.8 | |
| Ø b | | | | | Ø 6 | |
| d | | | | | 120 | |
| c | | | | | 30.5 | |
| H | 400 | | | 600 | | |

Gruppo contrasto - Pressure group

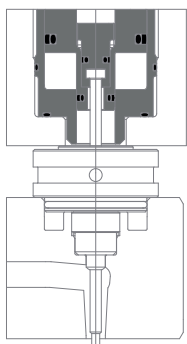


| | | | | | | |
|--|---------------------------------|--|-------------------------------|--|---------------|--|
| Manifold type <i>Tipo piastra</i> | C - Conventional / Tradizionale | | | | | |
| Valve gate type <i>Tipo gr.otturatore</i> | S20 | | S28 - S32 | | S60 | |
| Pressure gr. code <i>Codice gr.contrasto</i> | E20327 - * | | E20328 - * | | E21474 | |
| Nozzle type <i>Tipo ugello</i> | TFØ12/17/23 - TDØ18/22 | | TFØ12/17/23/32 TDØ18/22/30 | | FNØ46 - DN44 | |
| Ø e | Ø 31 | | Ø 39 | | Ø 54 | |
| *M | 44 - 52 - 62 -TT | | | | | |

| | | | | | | |
|--|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Manifold type <i>Tipo piastra</i> | B - bolted down | | | | | |
| M | 44 | | 52 | | 62 | |
| Ø e | Ø 31 | Ø 39 | Ø 31 | Ø 39 | Ø 31 | Ø 39 |
| Pressure gr. code <i>Codice gr.contrasto</i> | E21375 | E21466 | E21383 | E21467 | E21384 | E21468 |
| Valve gate type <i>Tipo gr.otturatore</i> | S20 - S28 - S32 | | | | | |
| Nozzle type <i>Tipo ugello</i> | TFØ12/17/23/32 - TDØ18/22/30 | | | | | |



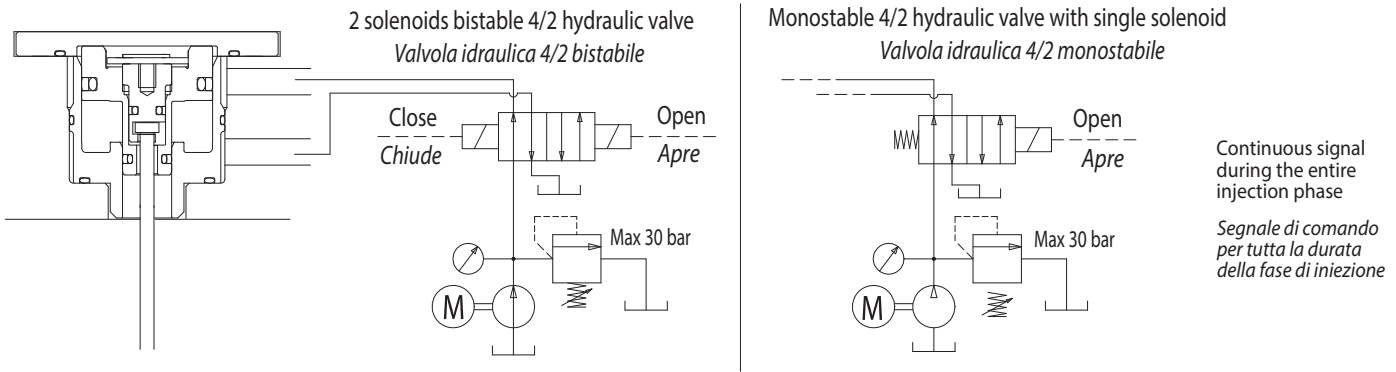
Gruppo otturatore - Valve gate group



| | | | | | | |
|--|---------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------------|
| Manifold type <i>Tipo piastra</i> | C - Conventional / Tradizionale | | | | | |
| Valve gate type <i>Tipo gr.otturatore</i> | S | | | | K | |
| Valve gate type <i>Tipo gr.otturatore</i> | S20 - HY | S28 - PN | S32 - PN | S32 - HY | S60 - PN | K32 - PN K40 - PN |
| Valve gate gr.code <i>Codice gr.otturatore</i> | E21105 - * | E21474 - * | E19399 - * | E21487 - * | E18327 | E18326 E18329 |
| Nozzle type <i>Tipo ugello</i> | TFØ12/17/23 TDØ18/22 | TFØ12/17/23/32 TDØ18/22/30 | TFØ12/17/23/32 TDØ18/22/30 | FNØ46 DNØ44 | TFØ12/17/23/32 TDØ18/22/30 | FNØ46 DNØ44 |
| Manifold type <i>Tipo piastra</i> | B - bolted down | | | | | |
| Valve gate type <i>Tipo gr.otturatore</i> | S | | | | | |
| Valve gate type <i>Tipo gr.otturatore</i> | S20 - HY | S28 - PN | S32 - PN | S32 - HY | | |
| Valve gate gr.code <i>Codice gr.otturatore</i> | E21360 | E21492 | E21361 | E21362 | | |
| Nozzle type <i>Tipo ugello</i> | TFØ12/17/23 TDØ18/22 | TFØ12/17/23/32 TDØ18/22/30 | TFØ12/17/23/32 TDØ18/22/30 | TFØ12/17/23/32 TDØ18/22/30 | | |



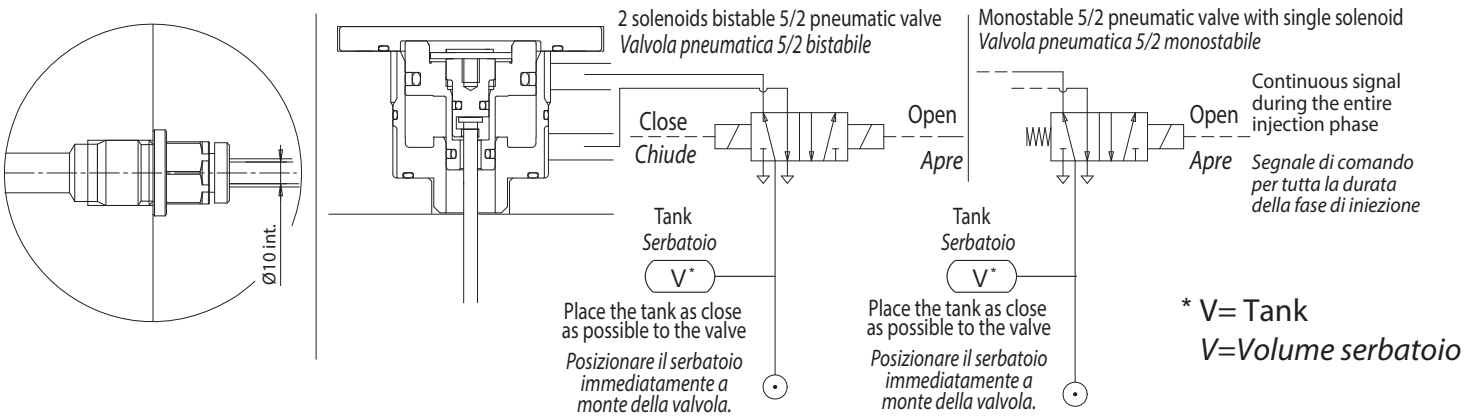
HYDRAULIC OPERATION / AZIONAMENTO IDRAULICO



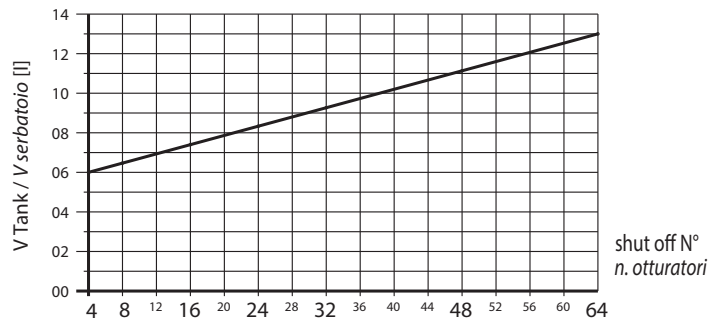
HYDRAULIC OPERATION: 30 bar MAX - FUNZIONAMENTO IDRAULICO MAX 30 bar

WARNING! When the injection system is cold, do not activate the shut off group. When testing the injection system on the bench, use 5 bar maximum pressure.
ATTENZIONE! Si consiglia di non azionare il gruppo otturazione a sistema d'iniezione freddo/Nelle prove eseguite con stampo non fissato sulla pressa NON utilizzare pressioni oltre i 5 bar.

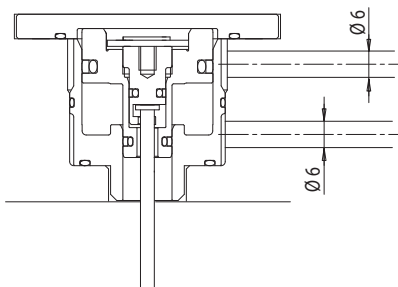
PNEUMATIC OPERATION / AZIONAMENTO PNEUMATICO



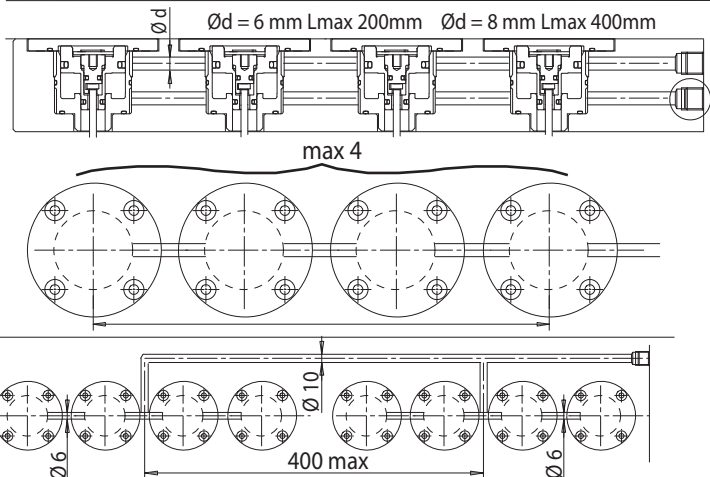
| VALVE SIZE DIMENSIONE VALVOLA | SHUT OFF N° n. OTTURATORI | Valve flow rate Portata della valvola |
|----------------------------------|------------------------------|--|
| 1 → 8 | | ≥ 550 NI/min |
| 9 → 16 | | ≥ 1100 NI/min |
| 17 → 64 | | ≥ 4600 NI/min |



1 SHUT OFF GROUPS / 1 OTTURATORE



IN SERIES SHUT OFF GROUPS / OTTURATORI IN SERIE



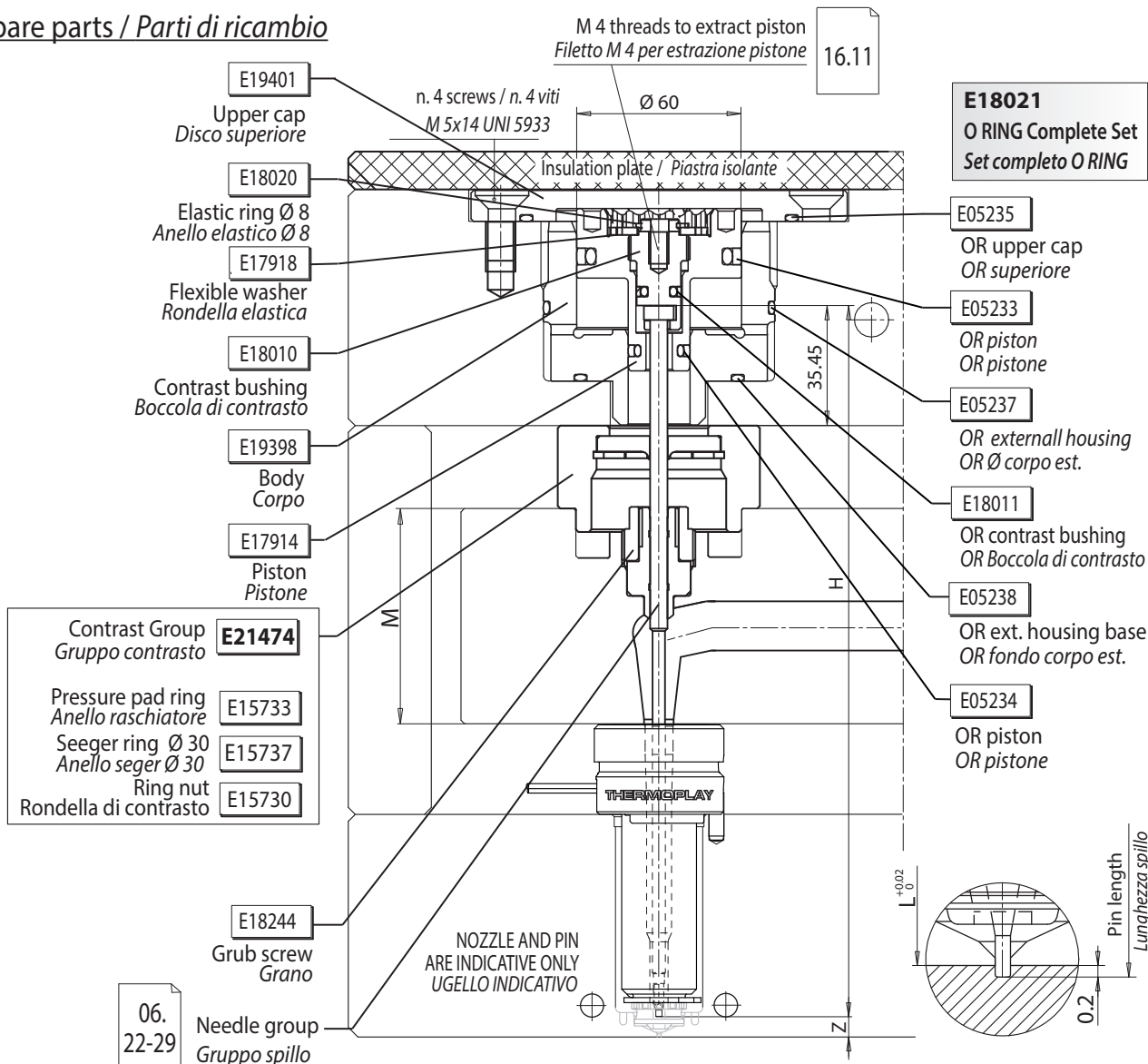
PNEUMATIC OPERATION: 10 bar ADVISED - FUNZIONAMENTO PNEUMATICO CONSIGLIATI 10 bar



S60-PN

"S" TYPE VALVE GATE GROUP - BORE PISTON 60 - PNEUMATIC
GRUPPO OTTURATORE TIPO "S" - ALESAGGIO PISTONE 60 - PNEUMATICO

Spare parts / Parti di ricambio



Z = Pin stroke 16 mm / Corsa spillo 16 mm

M = Manifold height / Altezza distributore

H = Pin length / Lunghezza spillo

ATTENZIONE!

Si consiglia di non azionare il gruppo otturazione a sistema d'iniezione freddo.

FUNZIONAMENTO PNEUMATICO consigliati 10 bar.

Nelle prove eseguite con stampo non fissato sulla pressa **NON** utilizzare pressioni oltre i 5 bar.

ATTENTION!

Do not activate the shut off group when the injection system is cold

PNEUMATIC OPERATION: 10 bar ADVISED

When testing the injection system on the bench, use 5 bar maximum pressure.

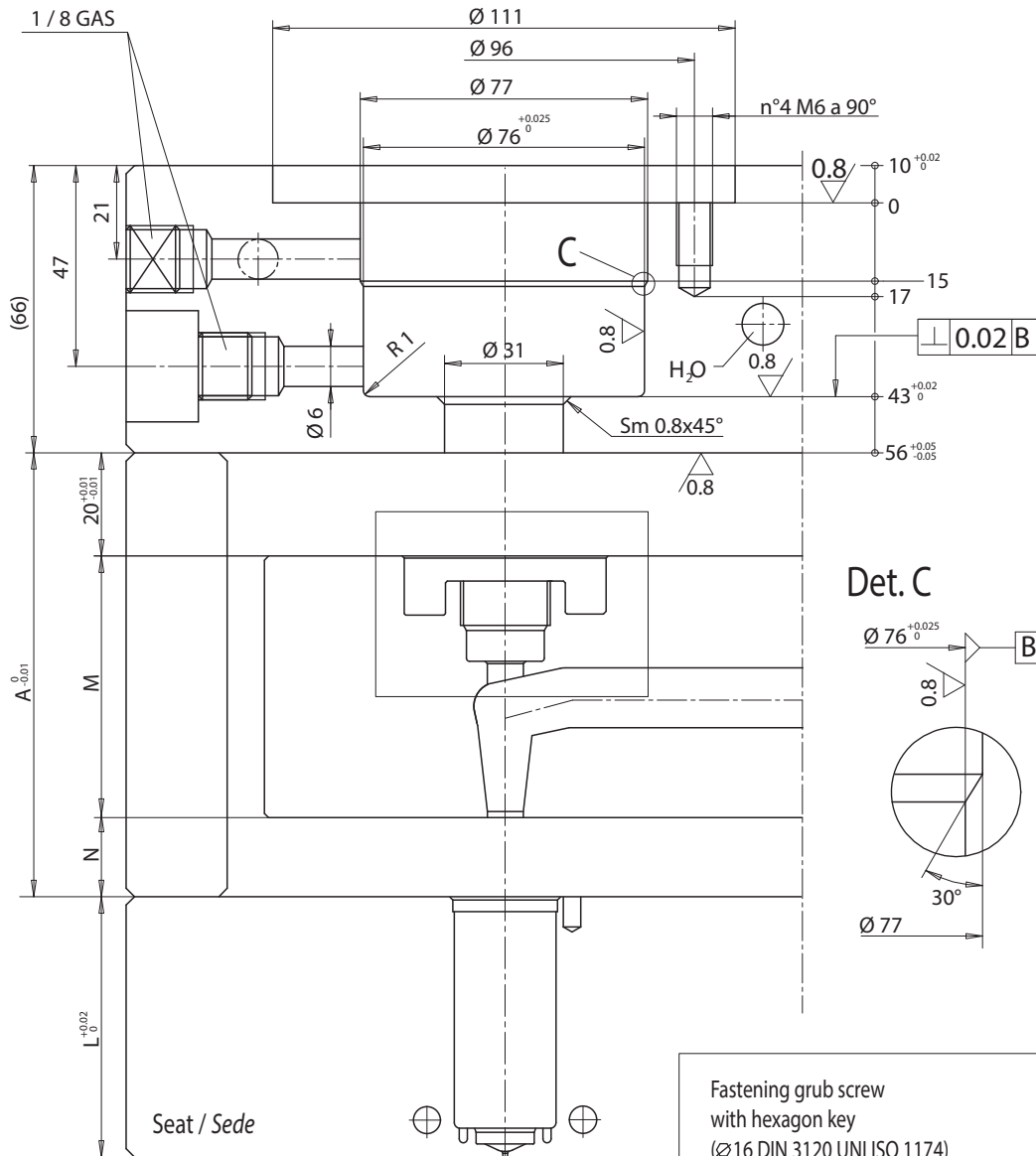
FOR NOZZLES / PER UGELLI

FN3-FN3B-FN3DLSA-FN3DSLUI Ø46 - DN3 Ø44



"S" TYPE VALVE GATE GROUP CUTOUT - BORE PISTON 60 - PNEUMATIC
SEDE GRUPPO OTTURATORE TIPO "S" - ALESAGGIO PISTONE 60 - PNEUMATICO

S60-PN



- L** = Nozzle length / Lunghezza ugello
- A** = Spacers thickness / Altezza distanziali
- N** = Nozzle head thickness / Altezza testa ugello
- M** = Manifold height / Altezza distributore

Fastening grub screw
with hexagon key
(Ø16 DIN 3120 UNI ISO 1174)
Tightening torque 50 Nm

Chiusura grano
chiave esagonale
(Ø16 DIN 3120 UNI ISO 1174)
Coppia di serraggio 50 Nm

16.11

ATTENZIONE!
Si consiglia di non azionare il gruppo otturazione
a sistema d'iniezione freddo.
FUNZIONAMENTO PNEUMATICO consigliati 10 bar.

Nelle prove eseguite con stampo non fissato
sulla pressa **NON** utilizzare pressioni oltre i 5 bar.

ATTENTION!
Do not activate the shut off group
when the injection system is cold
PNEUMATIC OPERATION: 10 bar ADVISED

When testing the injection system on the bench,
use 5 bar maximum pressure.



S20-HY

S28-PN

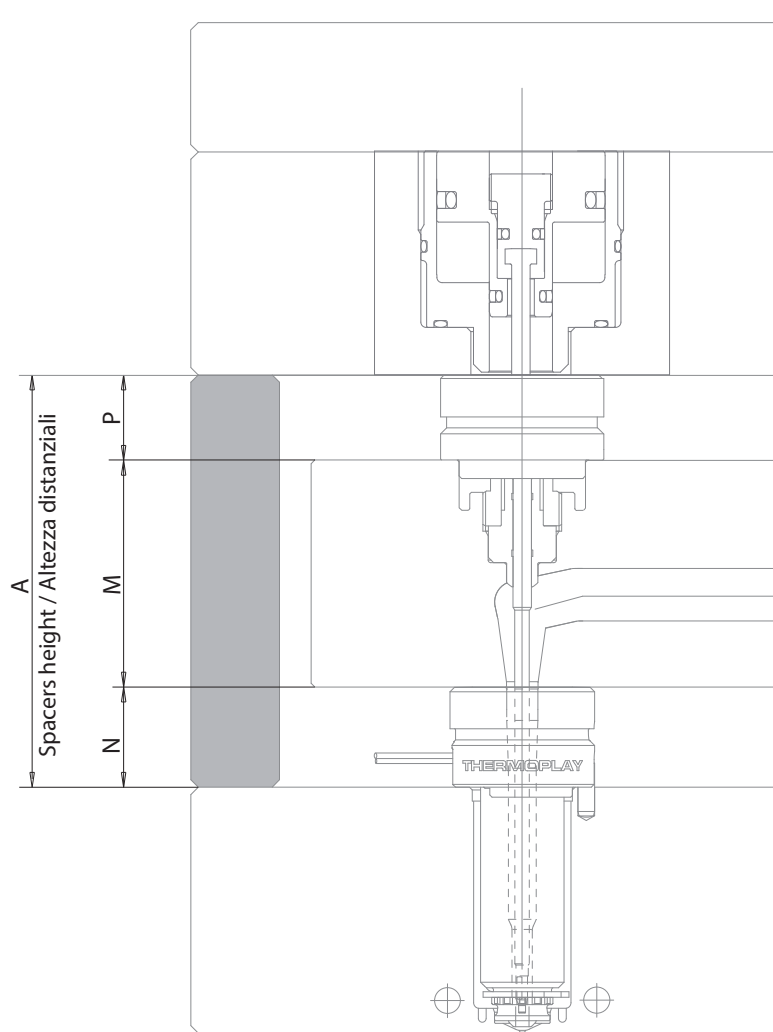
S32-PN

S32-HY

S60-PN

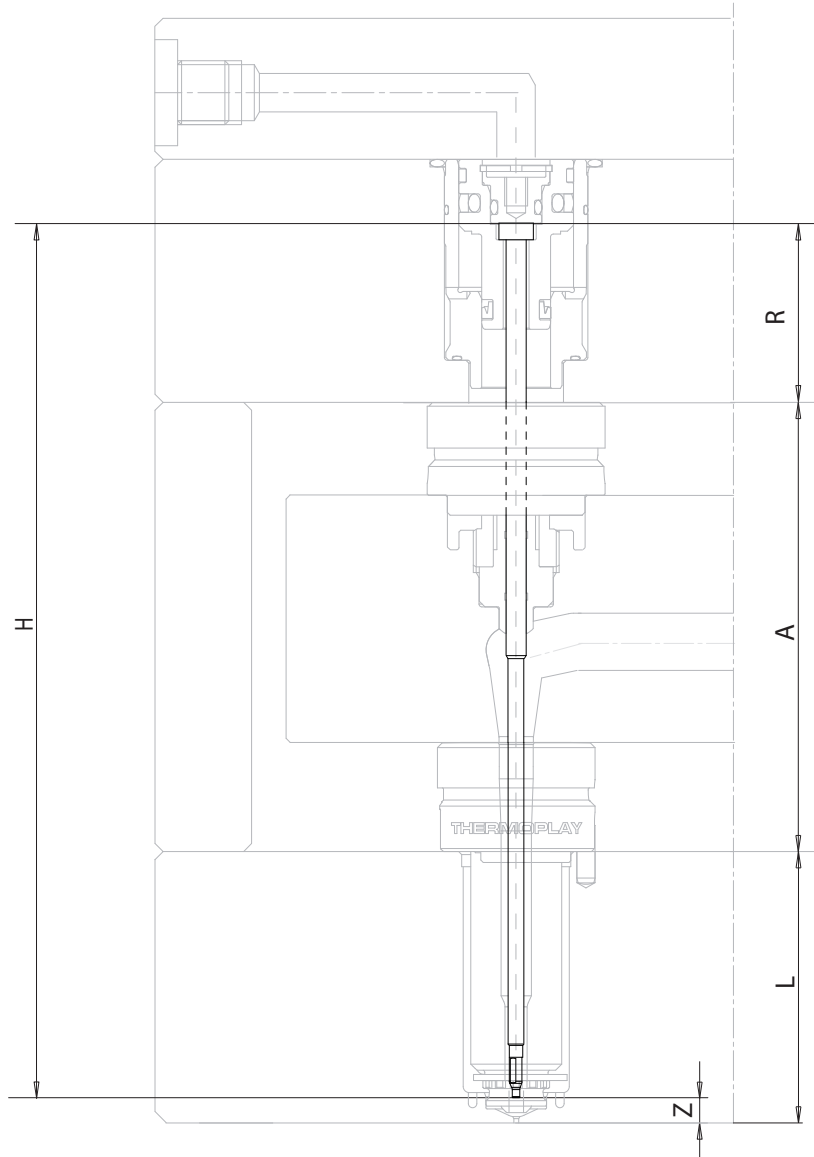
K32-PN

K40-PN



$$A = (N+M+P) + [(N+M+6) \times \Delta t \times K] - 0.05 = \text{mm}$$

| | | | | | | | | | |
|-------------|--|-------|-------|-------|-------|-------|-------|------|------|
| A | Spacer height / Altezza distanziali | | | | | | | | |
| | Nozzle type / Tipo ugelli | | | | | | | | |
| | TF12 | TF17 | TF23 | FN32 | FN46 | TD18 | TD22 | TD30 | DN44 |
| N | 13 | 18 | 20 | 20 | 25 | 18 | 20 | 20 | 25 |
| M | Manifold height / Altezza distributore | | | | | | | | |
| | Actuator group / Gruppo otturatore | | | | | | | | |
| | S20HY | S28PN | S32HY | S32PN | S60PN | K32PN | K40PN | | |
| P | 16 | | | 20 | | 21.5 | 30.5 | | |
| ΔT | Temperature difference between manifold and mold / Differenza di temperatura tra canale caldo e stampo | | | | | | | | |
| k | Coefficient of thermal expansion for steel / Coeficiente di dilatazione termica dell'acciaio 0.000125 | | | | | | | | |
| 0.05 | Theoretical compression value / Valore teorico di chiusura | | | | | | | | |



S20-HY

S28-PN

S32-PN

S32-HY

S60-PN

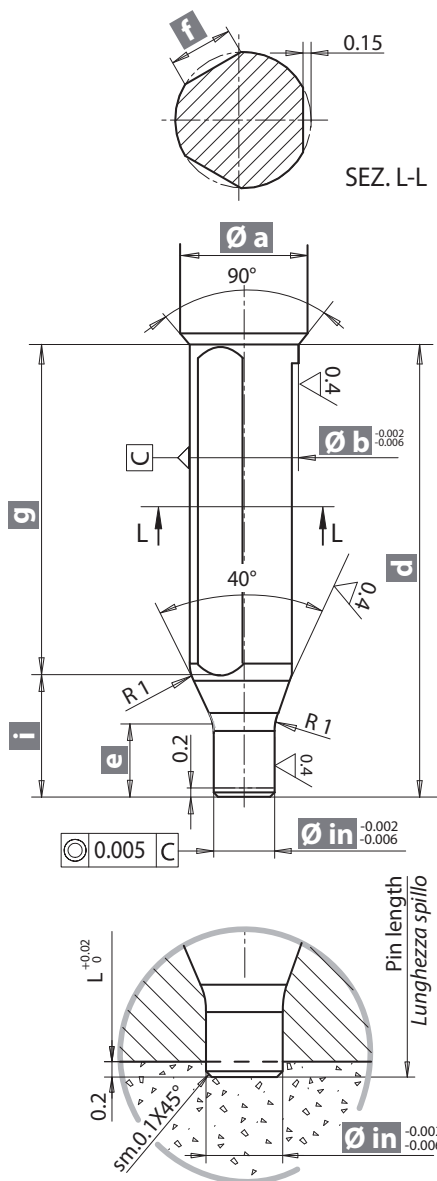
$$H = (L+A+R-Z) - [(L+A+R-Z) \times \Delta t \times k] + n = \text{mm}$$

| | | | | |
|-----------|---|-------|-----------------------|-------------|
| H | Pin length (cold) / Lunghezza spillo a freddo | | | |
| L | Nozzle length / Lunghezza ugello | | | |
| A | Spacer height (including expansion) / Misura dei distanziali comprensiva della dilatazione per il serraggio | | | |
| | Valve gate group type / Tipo gruppo otturatore | | | |
| | S20HY | S28PN | S32HY | S32PN |
| R | 31.4 | 23.95 | | 35.45 |
| Z | 10 | | | 16 |
| | Nozzle TIP type / Tipo puntale ugello | | | |
| | TF3/3B-TF3D/3DSL A all diameters TD18/22/30 - 3 - DN44-3 | | TF17/23-FN32 - 3DSL U | FN46-3DSL U |
| n | 0.2 | | 0.64 | 1.76 |
| k | Coefficient of thermal expansion for steel / Coeficiente di dilatazione termica dell'acciaio 0.000125 | | | |
| ΔT | Temperature difference between manifold and mold / Differenza di temperatura tra canale caldo e stampo | | | |



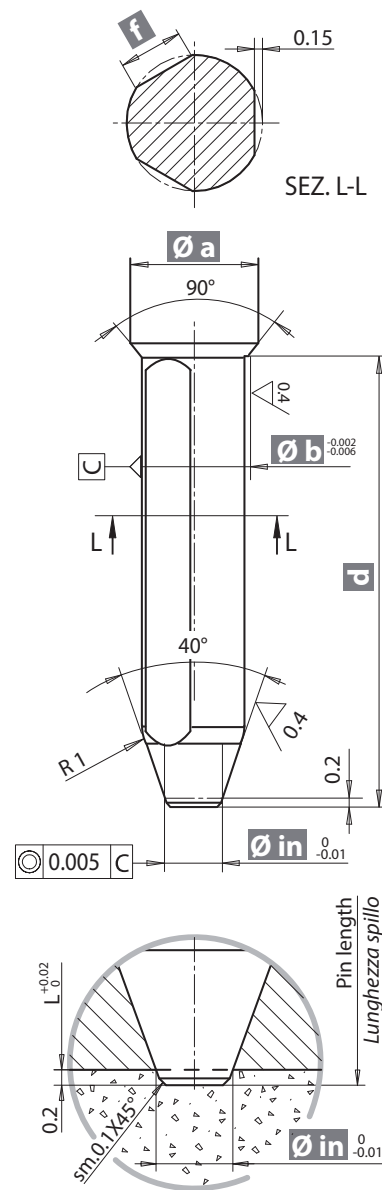
CILINDRIC

(execution customer care - *a cura cliente*)



CONICAL

(execution customer care - *a cura cliente*)



ATTENTION - ATTENZIONE!
With conical shut off, if pin stroke adjustment or length are not correct, damage can occur to steel in the gate area.
Nella chiusura conica l'errata regolazione della corsa dello spillo o della sua lunghezza potrebbero causare danni alla matrice

| CILINDRIC | | | | | | |
|-------------------------|------|------|------|------|------|------|
| Nozzle type Tipo ugello | | | | | | |
| TF17 | TF23 | FN32 | FN46 | TD22 | TD30 | DN44 |
| 0.8 | 0.8 | 1.6 | 3.5 | 0.8 | 1.6 | 3.5 |
| 1.8 | 2 | 3 | 5.5 | 1.3 | 2 | 4 |
| 2.5 | 2.5 | 3.3 | 5.8 | 2.5 | 3.3 | 5.8 |
| 2.4 | 2.4 | 3.2 | 5.7 | 2.4 | 3.2 | 5.7 |
| 9 | 9 | 9 | 13 | 9 | 9 | 13 |
| 1.5 | 1.5 | 1.8 | 2.2 | 1.5 | 1.8 | 2.2 |
| 1.16 | 1.16 | 1.35 | 1.82 | 1.16 | 1.35 | 1.82 |
| - | - | 7.7 | 11.2 | - | 7.7 | 11.2 |
| - | - | 1.3 | 1.8 | - | 1.3 | 1.8 |

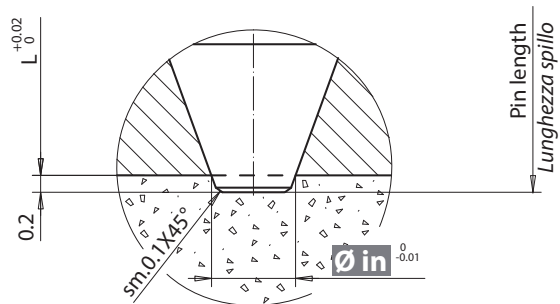
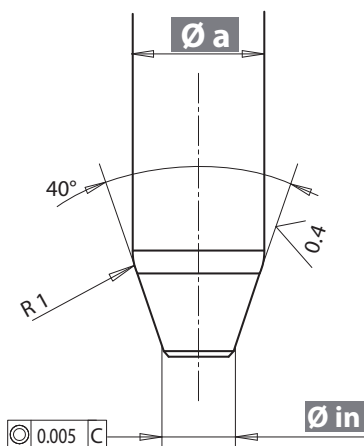
| CONICAL | | | | | | |
|-------------------------|------|------|------|------|------|------|
| Nozzle type Tipo ugello | | | | | | |
| TF17 | TF23 | FN32 | FN46 | TD22 | TD30 | DN44 |
| 0.8 | 0.8 | 1.6 | 3.5 | 0.8 | 1.6 | 3.5 |
| 1.3 | 1.3 | 2.5 | 4.5 | 1.6 | 2.5 | 4.5 |
| 2.5 | 2.5 | 3.3 | 5.8 | 2.5 | 3.3 | 5.8 |
| 2.4 | 2.4 | 3.2 | 5.7 | 2.4 | 3.2 | 5.7 |
| 9 | 9 | 9 | 13 | 9 | 9 | 13 |
| - | - | - | - | - | - | - |
| 1.16 | 1.16 | 1.35 | 1.82 | 1.16 | 1.35 | 1.82 |
| - | - | 7.7 | 11.2 | - | 7.7 | 11.2 |
| - | - | 1.3 | 1.8 | - | 1.3 | 1.8 |



NOZZLE / UGELLO
TF3D-TF3DSLA

CONICAL

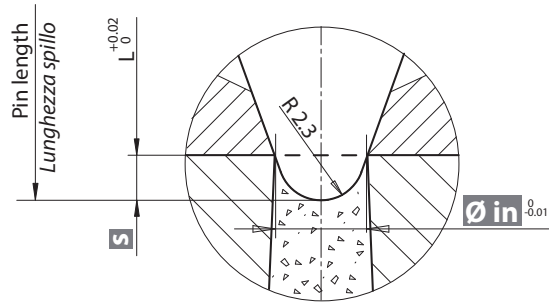
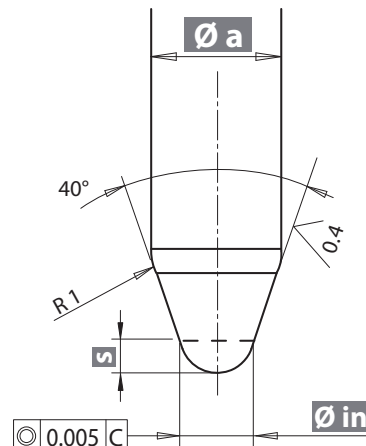
(execution customer care - *a cura cliente*)



NOZZLE / UGELLO
TF3DSL

CONICAL

(execution customer care - *a cura cliente*)



ATTENTION - ATTENZIONE!

With conical shut off, if pin stroke adjustment or length are not correct, damage can occur to steel in the gate area.
*Nella chiusura **conica** l'errata regolazione della corsa dello spillo o della sua lunghezza potrebbero causare danni alla matrice*

| Nozzle type | | | | | | | | Nozzle type | | | | | | |
|-------------|------|------|------|-------|------|------|------|-------------|------|------|------|-----|------|------|
| 3D | | | | 3DSLA | | | | 3DSL | | | | | | |
| TF17 | TF23 | FN32 | FN46 | TF17 | TF23 | FN32 | FN46 | TF17 | TF23 | FN32 | FN46 | | | |
| 0.8 | 1.6 | 3.5 | 0.9 | 1.7 | 3.5 | Ø in | 1.3 | 2.5 | 3.3 | 5.8 | Ø a | | | |
| | 1.7 | 3.6 | | | | | | | | | | 1.9 | 3.7 | |
| 0.9 | 1.8 | 3.7 | 1.1 | 2.1 | 4.1 | | | | | | | | | |
| | 1.9 | 3.8 | | | | | | | | | | 1.3 | 2.3 | 4.3 |
| 1.0 | 2.0 | 3.9 | 2.5 | 4.5 | | | | | | | | | | |
| | 1.1 | 2.1 | | | 4.1 | | | | | | | 2.5 | 4.5 | |
| 1.2 | | 2.2 | 4.2 | 2.5 | 4.5 | | | | | | | | | |
| | 1.2 | 2.3 | 4.3 | | | | | | | | | 2.5 | 4.5 | |
| 1.3 | | 2.4 | 4.4 | 2.5 | 4.5 | | | | | | | | | |
| | 1.3 | 2.5 | 4.5 | | | | | | | | | 2.5 | 4.5 | |
| 2.5 | | 3.3 | 5.8 | 2.5 | 3.3 | | | | | | | | | 5.8 |
| -- | -- | -- | -- | -- | -- | | | | | | | s | 0.63 | 1.02 |