penta s.r.l.

SAT 3

## MODELLO / *MODEL*

# SAT 3

Eurasian Conformity

Directive 2014/68/UE
"PED"

II2G c IIC TX
II2D c IIC TX

Directive 2014/34/UE
"ATEX"

**Il modello SAT3** è una evoluzione della tipologia costruttiva SAT1 mediante l'inserimento di due anelli (chiamati raschiatori) all'interno ed all'esterno dei seggi.

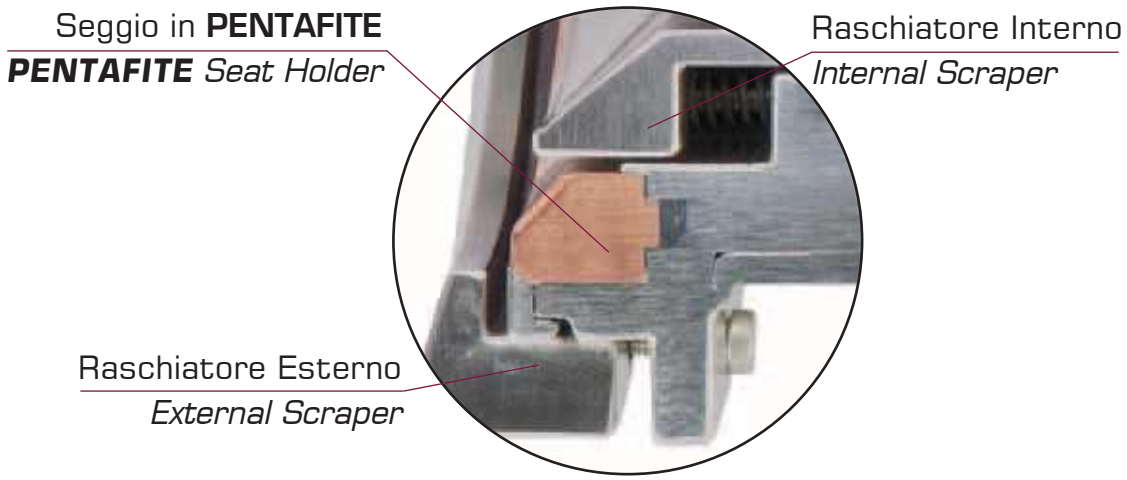
Gli anelli raschiatori hanno il compito di:

- pulire la superficie della sfera durante la manovra
- proteggere i seggi dalla azione abrasiva delle parti solide contenute nel fluido
- evitare l'incunearsi di tali parti solide tra seggio e sfera che provocherebbero il bloccaggio della valvola.
- ridurre la quantità di sporco che può depositarsi nella cavità del corpo valvola.

***The SAT3 model*** *is an evolution of the SAT with the insertion of two rings (called Scraper Rings) inside and outside the seats.*

*The Scraper Rings have to:*

- *clean ball surface during valve operation*
- *protect the seats from abrasion by fluid solid content*
- *avoid wedging in of solids between seat and ball surface cause of valve blocking*
- *reduce dirt can fill body cavity*




Come tutta la produzione PENTA le valvole della serie SAT3 sono progettate per essere equipaggiate con seggi metallici in PENTAFITE permettendo la realizzazione di valvole a sfera a tenuta metallica con **PERDITA ZERO** per servizi con temperature di esercizio continuo fino a 700°C.

Le particolari caratteristiche elasto-plastiche del materiale dei seggi PENTAFITE e la costruzione interamente bullonata permettono facili interventi di manutenzione, non necessitando di lavoro di adattamento tra sedi di ricambio e sfere.

Le valvole modello SAT3 sono disponibili in due versioni:

- Bi-direzionali, sia a sfera flottante o Trunnion mounted
- Monodirezionali, a sfera Trunnion mounted per montaggio con asse della tubazione verticale.

In questo caso le cavità del corpo sono lavorate in modo da favorire il drenaggio automatico ed evitare la sedimentazione del fluido all'interno della valvola.

*Like all PENTA production, valves of SAT3 series are equipped with metallic seats in PENTAFITE that allow the manufacturing of metal seated ball valves with Bubble tight (no leakage) suitable for a wide range of services with working temperatures up to 700°C.*

*The typical elastic properties of PENTAFITE seats and the fully bolted construction, allow an easy maintenance without necessity of additional lapping of the spare seats against the ball,*

*The SAT3 model is available in two version:*

- *Bi-directional, both with floating ball or trunnion mounted*
- *Uni-directional, trunnion mounted ball for applications where pipe axis is vertical.*

*In this case body cavity is machined to obtain a complete body cavity draining avoiding fluid deposit inside the valve (best for bottom tank valves).*

-100 °C +400 °C

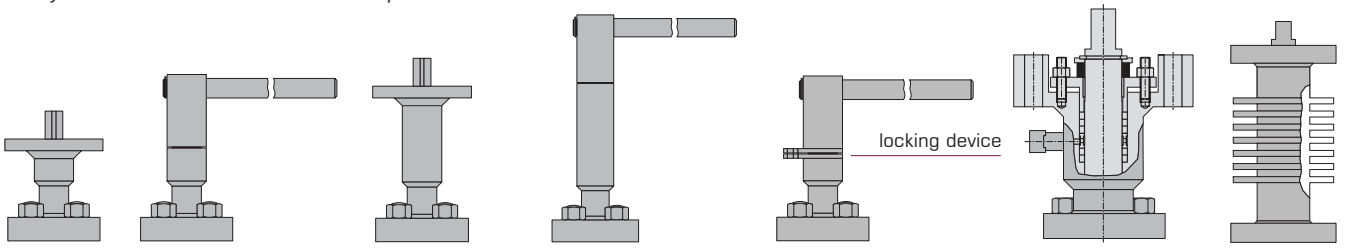
## INTERVALLO DI PRODUZIONE - *PRODUCTION RANGE*

| CLASSE - *PRESSURE CLASS* | | | | | | |
|---|---|---|---|---|---|---|
| ANSI B 16.34 | 150 | | 300 | | 600 | |
| PN | 16 - 25 | | 40 - 50 | | 64 - 100 | |
| Diametri Nominali *Nominal diameter* | F | T | F | T | F | T |
| ½" | | | | | | |
| ¾" | | | | | | |
| 1" | | | | | | |
| 1½" | | | | | | |
| 2" | | | | | | |
| 3" | | | | | | |
| 4" | | | | | | |
| 6" | | | | | | |

F = Sfera flottante - *Floating ball*
T = Sfera vincolata - *Trunnion mounted ball*

## ACCESSORI DISPONIBILI - *AVAILABLE ACCESSORIES*

Diversi accessori sono disponibili a richiesta
*Many accessories are available on request*




Coperchio con flangia o leva
*Cover with flange or lever*

Coperchio allungato per alta temperatura
*Clongated cover for high temperatures*

Coperchio allungato per servizi criogenici
*Elongated cover for cryogenic services*

*Body cavity filler*

Coperchio con baderna
*Cover with packing*

Coperchio alettato
*Finned cover*

## OPERATORI DISPONIBILI - *AVAILABLE OPERATORS*

- Riduttori manuali
- Attuatori pneumatici a semplice o doppio effetto
- Attuatori elettrici
- Attuatori idraulici

- *Manual gears*
- *Single or double acting pneumatic actuators*
- *Electric actuator*
- *Hydraulic actuators*

## MATERIALI DISPONIBILI PER I SEGGI - *AVAILABLE SEAT MATERIALS*

| Codice *Code* | Materiale *Material* | Durezza *Hardness* | Temperature di lavoro *Working temperature* | Pressioni di lavoro *Working pressure* | Servizio *Service Limits* |
|---|---|---|---|---|---|
| **S01** | **SILVER PENTAFITE** (Nickel + Graphite ) | 120 HB | -100°C / +780°C (148°F+1436°F) | ANSI 150 – 2500 PN10 - 420 | For clean services both liquid or gas. For use with **HTC, HTCN, HCR, WC, CRC, ST6** ball coated |
| **R01** | **RED PENTAFITE** (Cu + Graphite ) | 100 HB | -100°C / +500°C (-148°F / +932°F) | ANSI 150 – 600 PN 10 - 100 | For clean services both liquid or gas. Lower friction factors in dry gas or steam service. For use with **HTC, HTCN, HCR, ST6** ball coated |
| **B01** | **BLACK PENTAFITE** (Carbon + Graphite ) | 80 HB | Amb. / +400°C (Amb. / +752°F) | ANSI 150 – 300 PN 10 - 40 | For low pressure specific services where **S01** and **R01** cannot be used due to corrosion problems. A ball coat is not strictly necessary and should be evaluated time to time |
| **WC** | **CARBURO DI TUNGSTENO** *Tungsten Carbide Coat (Detonation Gun/HVOF)* | 1100 HV | Amb. / +350°C ( Amb. / +662°F ) | ANSI 150 – 600 PN 10 - 100 | For liquid or gas services with high presence of solids. Not suitable when small presence of caustic soda is expected. For use with WC ball coat |
| **CRC** | **CARBURO DI CROMO** *Chrome Carbide (Detonation Gun)* | 800 HV | Amb. / +750°C ( Amb. / +1382°F ) | ANSI 150 – 600 PN 10 - 100 | For liquid or gas services with small presence of solids. Not suitable when small presence of caustic soda is expected. |
| **ST6** | **STELLITE Gr.6** *(Detonation Gun/HVOF)* | 1000 HV | Amb. / +350°C ( Amb. / +662°F ) | ANSI 150 – 600 PN 10 - 100 | For liquid or gas services with small presence of solids. Suitable when small presence of caustic soda is expected. Best on dry gas or steam services. For use with **WC, CRC** ball coat |
| **PEEK** | **PoliEter EterKetone** | | -100°C / +240°C ( -148°F / +464°F ) | ANSI 150 – 1500 PN 10 - 100 | For cryogenic services,down to -100°C only,with high pressures |

## MATERIALI DISPONIBILI PER RIVESTIMENTO SFERE - *AVAILABLE BALL COATING MATERIALS*

| Codice *Code* | Materiale *Material* | Durezza *Hardness* | Temperature di lavoro *Working temperature* | Pressioni di lavoro *Working pressure* | Servizio *Service Limits* |
|---|---|---|---|---|---|
| **WC** | **CARBURO DI TUNGSTENO** Tungsten Carbide *(Detonation Gun/HVOF)* | 1100 HV | Amb. / +350°C ( Amb. / +662°F ) | ANSI 150 – 2500 PN 10 - 420 | For liquid or gas services with high presence of solids. Not suitable when small presence of caustic soda is expected. |
| **CRC** | **CARBURO DI CROMO** Chrome Carbide *(Detonation Gun/HVOF)* | 800 HV | Amb. / +750°C ( Amb. / +1382°F ) | ANSI 150 – 2500 PN 10 - 420 | For liquid or gas services with small presence of solids. Not suitable when small presence of caustic soda is expected. |
| **ST6** | **STELLITE GR.6** *(Detonation Gun/HVOF)* | 1000 HV | Amb. / +350°C ( Amb. / +662°F ) | ANSI 150 – 2500 PN 10 - 420 | For liquid or gas services with small presence of solids. Suitable when small presence of caustic soda is expected. Best on dry or steam services. |

## GRADO DI TENUTA - *TIGHTNESS*

Tutte le valvole PENTA modello SAT 3 sono collaudate per verificarne la TENUTA PERFETTA (perdita zero alla prova idraulica dei seggi secondo ANSI B16.34 e a 6 bar con aria).

*All PENTA valves SAT 3 model are tested to verify their BUBBLE TIGHTNESS (no visible leakage during hydraulic seat test according to ANSI B 16.34 and during low pressure air seats test at 100 psi)*