

## VRN VRH - Spring Check Valve Dimensions

### Spring check valve VRN VRH

The sanitary spring check valves are realized in three pieces machined from solid round bar in stainless steel AISI 316L, assembled with a standard BS clamp.

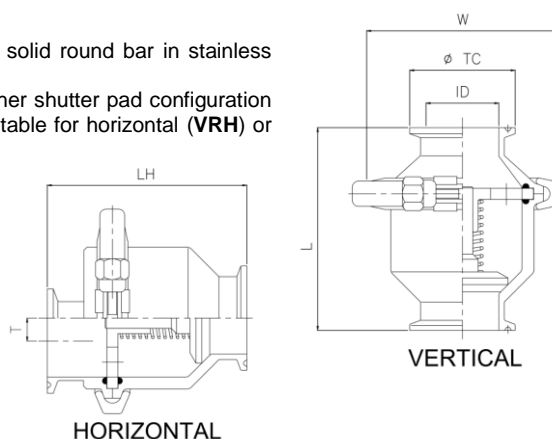
In size ½" up to 4" standard version the sealing head is completely in TFM (other shutter pad configuration on request) with two Silicone body orings (different elastomer on request). Suitable for horizontal (VRH) or vertical (VRN) in-line position. (fully drainable in both execution).

### Application:

The sanitary spring check valves can be easily and quickly dismantled and reassembled without tools and are appreciated where necessary meets the FDA standards in chemicals and pharma process.

### Advantages:

- Sterilizable – Autoclavable
- High temperature and pressure resistant
- Meets FDA specifications
- Full material traceability



Dimensions table

CODE	DN	INCH	ID	ØTC	L TC	L BW	LH	W	T
VR(#)-050-..G..G-XT1-14A	15	½"	9,4	25	75	70	75	67	11,3
VR(#)-075-..H..H-XT1-14A	20	¾"	15,7	25	75	70	75	67	8,1
VR(#)-100-..J..J-XT1-14A	25	1"	22,1	50,4	85,5	85,5	95	82	10,5
VR(#)-150-..M..M-XT1-14A	40	1" ½	34,8	50,4	96,5	96,5	96,5	94	11,1
VR(#)-200-..N..N-XT1-14A	50	2"	47,5	64	96,5	96,5	96,5	105	11,4
VR(#)-250-..O..O-XT1-14A	65	2" ½	60,2	77,5	105	105	105	134	18,0
VR(#)-300-..P..P-XT1-14A	80	3"	72,9	91	111,5	111,5	n.a.	134	na
VR(#)-400-..R..R-XT1-14A	100	4"	97,4	119	Only on request				

(#) VRN vertical execution VRH horizontal execution LTC clamped (code A)

LBW butt weld (code B)

L overall length

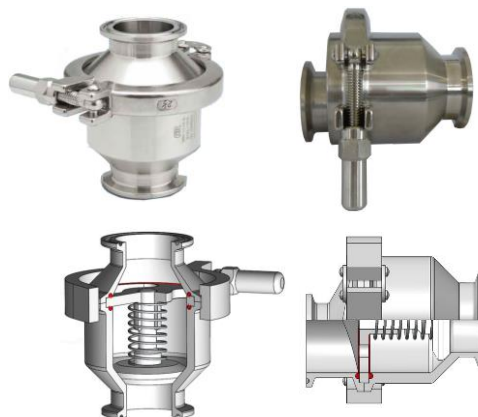
Special extended tube for orbital welding available on request

### Operating conditions:

Opening pressure	0,03÷0,09 barg
Working pressure	from 1 to 6 barg
Working temperature	from 0°C to 150°C

### Material:

valve body	AISI 316L stainless steel
reducer	AISI 316L stainless steel
guide plate	AISI 316L stainless steel
clamp assembly	AISI 304 stainless steel
body o-ring (n.2)	SILICONE, EPDM**,FKM
Spring	AISI 316 stainless steel
Shutter	size ½" up to 4" completely in TFM without o-ring
** range temperature reduced, ref. instruction manual	



### Surface finish:

Wetted surfaces are finish with Ra<0,5 micron or better

### Sealing head:

For size ½" up to 4" included, the stem and sealing head is completely machined in a one piece of TFM without o-ring

### Available Documentations on request:

- 3.1 certificate according to 10204
- Surface Roughness certificate
- FDA certificate
- Ex ATEX certificate according to Directive 2014/34/UE

**NOTE:** the new type of TFM PTFE sealing head are perfectly interchangeable with old style with o-ring in Silicone;

In the interests of development and improvement of the product, we reserve the right to change the specifications without prior notice.



## VRN VRH - Maintenance

### Sanitary Spring Check Valve VRN-VRH

The sanitary spring check valves is suitable for use in liquid system at the following maximum operating conditions:

Working temperature from 0°C to 150°C\*\*

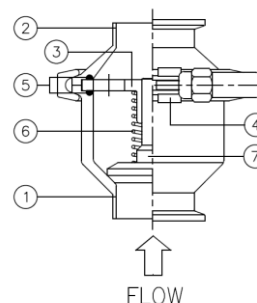
Working pressure from 1 to 6 barg @

\*\* range temperature reduced, ref. instruction manual

@ NOTE - pressure rating may exceed that of clamp connections

#### Installation

The sanitary spring check valves will operate when installed in any orientation; flow should be toward the face of the seal plate (7) as right illustrated.



#### Maintenance

The sanitary spring check valves can be easily and quickly dismantled and reassembled without tools for cleaning or maintenance. Replacement body and seat seals are available as is a complete internals assembly.

Disassembly / assembly instructions are as follows:

1. Firstly intercept the service fluid and ensuring any residual system pressure has been relieved, then remove complete valve from line.
2. Loosen and remove the central body clamp (4).
3. Remove all internal components, checking for signs or wear or damage.
4. Fit new seat seals (5), or spring (6), or shutter (7) if necessary.
5. When reassembling the internal components, ensure that the stem guide plate (3) is correctly positioned.
6. Re-fit internals into inlet valve body (1) and marry with outlet body (2). Re-fit and tighten clamp (4) as appropriate.
7. Restore service fluid, the valve can work again.

#### Parts list :

1	inlet valve body	AISI 316L
2	outlet valve body	AISI 316L
3	stem guide plate	AISI 316L
4	clamp assembly	AISI 304
5	seat seal (2 off)	SILICONE
6	spring	AISI 316
7	shutter	TFM PTFE

For size 1/2" up to 4" included, the stem and sealing head is completely machined in a one piece of TFM without o-ring

NOTE: the new type of TFM sealing head are perfectly interchangeable with old style with o-ring in Silicone

**Caution: When welding valves in-line care should be taken to protect internal seals. We recommended that valves are disassembled prior to welding.**

Spare parts table

Kit code	inch	DN
KRN-075- (#) T1- (...)	1/2"	15
KRN-075- (#) T1- (...)	3/4"	20
KRN-100- (#) T1- (...)	1"	25
KRN-150- (#) T1- (...)	1 1/2"	40
KRN-200- (#) T1- (...)	2"	50
KRN-250- (#) T1- (...)	2 1/2"	65
KRN-300- (#) T1- (...)	3"	80
KRN-400- (#) T1- (...)	4"	100

Material seat seal ( # )	Composition KIT ( ... )
# = X SILICONE	(...) = 01 seat seal only
# = E EPDM	(...) = 02 seat seal + spring
# = V FKM	(...) = 03 seat seal + shutter
other material	(...) = 04 seat seal + spring + shutter
on request	

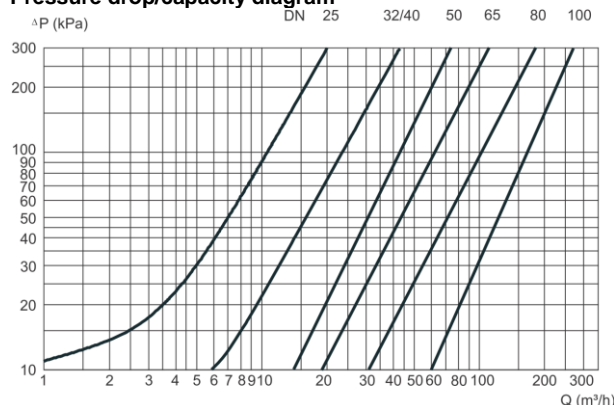
#### Available spares

Standard spare parts kit (01 code) include all seals in silicone, 2 off seat seal (5) for body.

Different material as EPDM, FKM, FEP-Silicone available on specific request

Spring & Shutter (not included in the standard spare parts kit) available on specific request: 02, 03 or 04 code selection.

Pressure drop/capacity diagram



For the diagram the following applies medium Water at 25°C