P.A. – S.p.A. – EQUIPAGGIAMENTI TECNICI DEL LAVAGGIO
VIA MILANO, 13 – CASELLA POSTALE 115 – 42048 RUBIERA (REGGIO EMILIA) – ITALY
Tel. +39 0522 623611 – Fax. +39 0522 629600 – R.E.A. RE 156319 – R.I. RE11535 – Mecc. RE 013446
C.F. e P. IVA 01035950359 – Cap. Soc. i.v. € 750.000,00 – Codice Identificativo C.E.E. IT 01035950359
ART. 2497 – BIS C.C. DIREZIONE E COORDINAMENTO BENETTI srl R.I. TRIB. DI RE 01480690351
Web: http://www.pa-etl.it – **E-mail:** info@pa-etl.it

VNR- OHD VNR- IHD - Check Valve

Technical manual: E 280

Flow regulating valve.
Allows a one-way flow, preventing the back flow.





- **60.2100.00** VNR-OHD G 1/4 FF brass **DN8**
- **60.2120.00** VNR-OHD G 3/8 FF brass **DN10**
- **60.2140.00** VNR-OHD G 1/2 FF brass **DN15**
- **60.2150.00** VNR-OHD G 3/4 FF brass **DN20**
- **60.2160.00** VNR-OHD G 1 FF brass **DN25**
- **60.2170.00** VNR-OHD G 1 1/4 FF brass **DN30**
- **60.2145.00** VNR-IHD G 1/2 FF S.S.T. Ai303 **DN15**

-Sturdy construction in S.S.T. and brass.
-O ring NBR (Nitrile)
-Return action of piston carried out by spring
-Minimum pressure loss.
-Rapid intervention at minimum flow variation
-Easy assembly

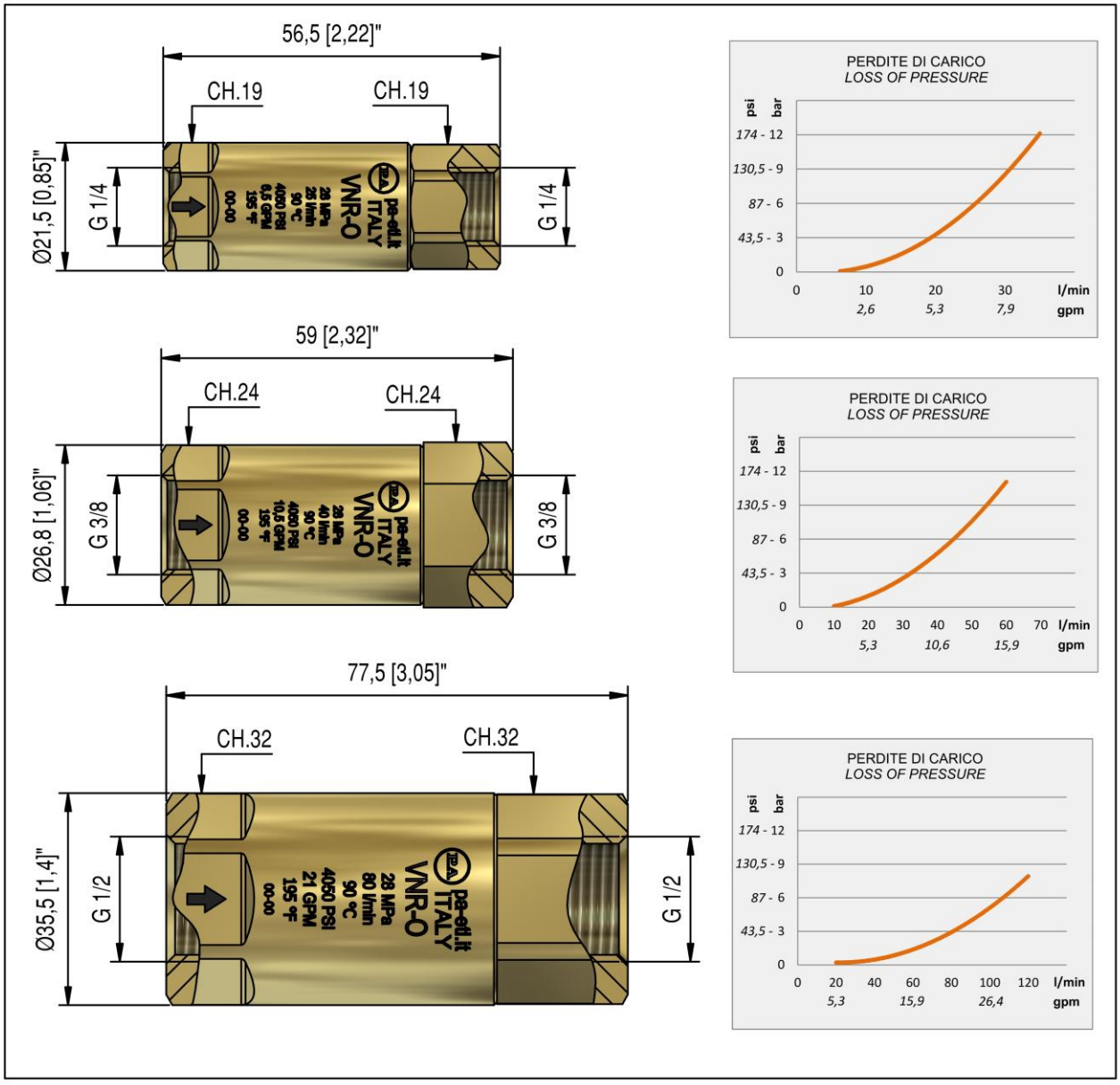
Technical specifications

Max temperature: 90°C

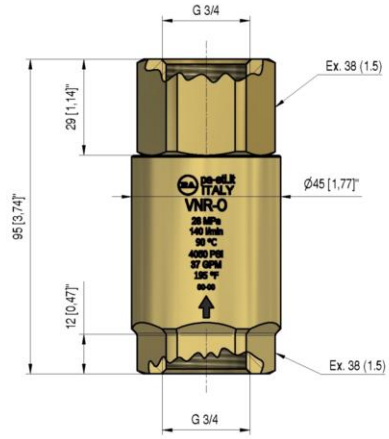
Part number	Rated pressure bar - MPa	Permissible pressure bar - MPa	Minimum pressure intervention bar - MPa	Flow rate L/min	Inlet Outlet A	Weight g
60.2100.00	280 - 28	310 - 31	0.2 – 0.02	25	G1/4 FF	114
60.2120.00	280 - 28	310 - 31	0.2 – 0.02	40	G3/8 FF	192
60.2140.00	280 - 28	310 - 31	0.2 – 0.02	80	G1/2 FF	446
60.2050.00	280 - 28	310 - 31	0.2 – 0.02	140	G3/4 FF	860,2
60.2160.00	280 - 28	310 - 31	0.2 – 0.02	200	G1 FF	1403,8
60.2170.00	280 - 28	310 - 31	0.2 – 0.02	450	G1 1/4 FF	2058,4
60.2145.00	350 - 35	390 - 39	0.2 – 0.02	80	G1/2 FF	544

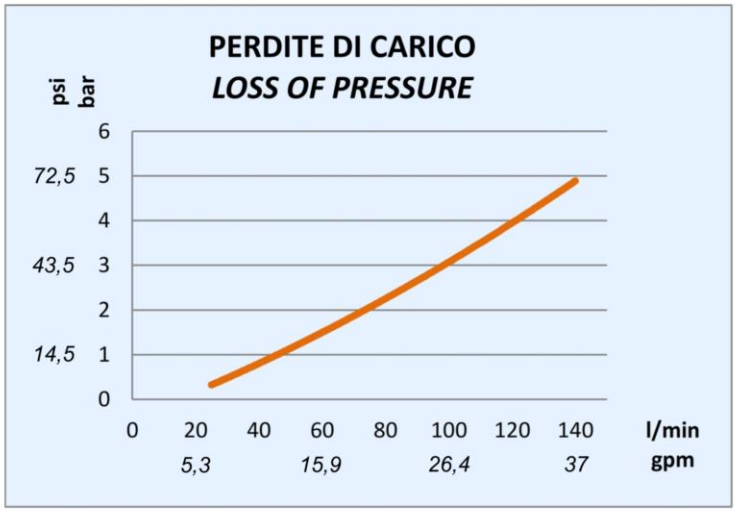
Instruction manual, maintenance, installation, spare parts. For a correct utilization, follow the directions of this manual **Re-print them on the Use and Maintenance booklet of the machine.**	n. 12.9280.50

DIMENSIONAL DRAWING

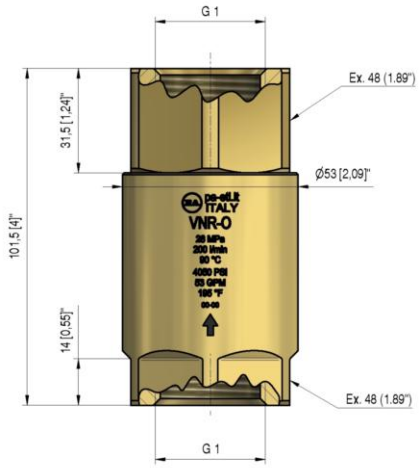


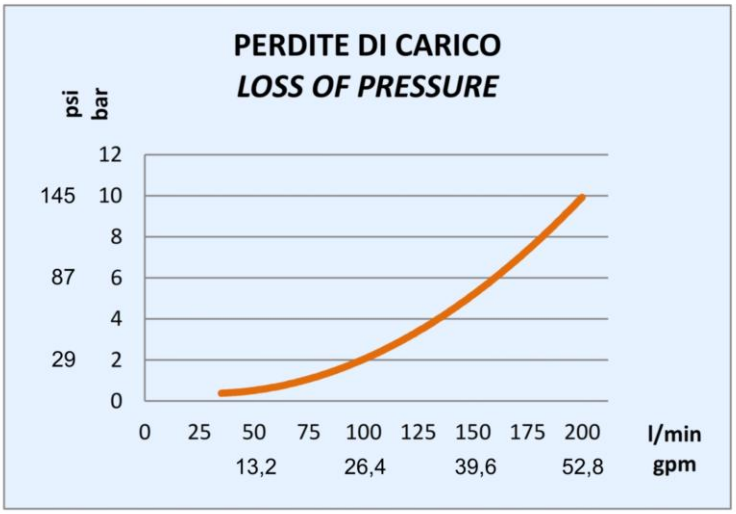
DN20



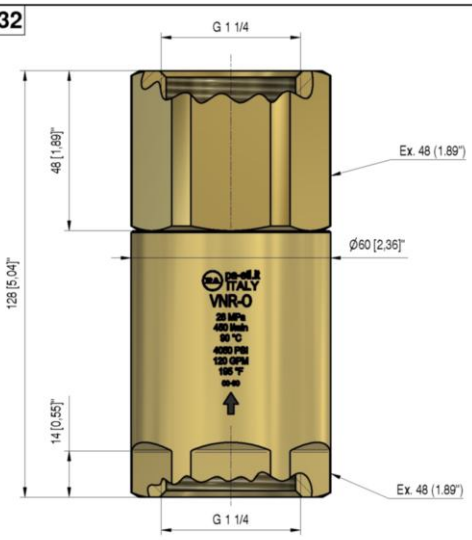


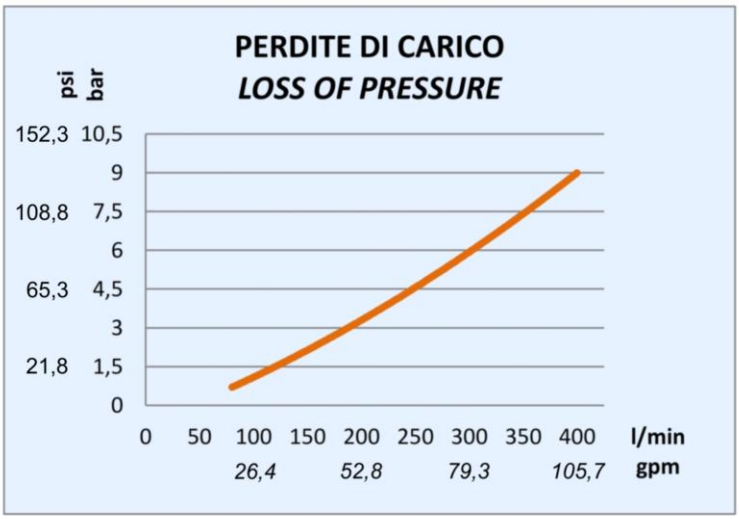
DN25





DN32





INSTRUCTIONS

SELECTION

This product is to be utilized with clean fresh water, even slightly additivated with normal detergents. For use involving different or corrosive liquids, contact the PA Technical department. Appropriate filtration should be installed when using unclean liquids. Choose the valve in line with the data of normal running (system rated pressure, max flow and max temperature). In any case, the pressure of the machine should not exceed the permissible pressure rate imprinted on the valve.

INSTALLATION

Make sure that the system is well proportioned. In particular, fit a piping system in line with the flow and pressure specifications. A bad proportioned system can ruin, without repair, all single components or damage the performance. This accessory, on a system that produces hot water, must be fitted in front of the heat generator. This product is bound to be incorporated on a finished machine. On a system that generates hot water, anticipate the fitting of accessories that limit the accidental increase of fluid temperature.

Always install a safety valve that protects the pressurized inlet channel.

ATTENTION: During assembly, respect the direction of the flow indicated on the valve.
The valve is designed to work in installations that remain always full of water. If it appears necessary to empty the part of the circuit downstream of the valve, it is advisable to adopt an aparatus that guarantees a gradual start of the pump or the filling of the circuit at low pressure.

OPERATIONS

Water flows freely in a one-way direction, while it is totally blocked in the opposite direction.
Hermetic sealing is ensured by Viton seals.
The internal construction allows a rapid convertion in case of back flow and low pressure drop.

PROBLEMS AND SOLUTIONS

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Valve leakage	Worn out seal Material matter in the seat Worn out seat	Replace Remove and clean Replace valve body
Slow closure	Valve not properly sized Piping too small	Change type of valve Replace

REGULATIONS

The Project and construction of our products comply with: norm CEI EN 60335-2-79 first edition, published 1999-03 and relative variations to the project of norm prEN1829.
Read this manual before starting the assembly
For a correct utilization, follow the directions described in this manual and re-print them on the Use and maintenance manual of the machine.

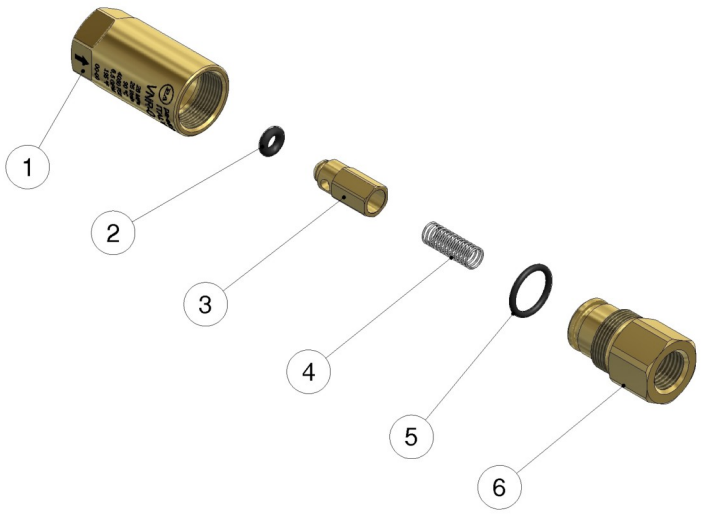
The present manual is valid for all valves named **VNR– OHD VNR- IHD**

MAINTENANCE

Maintenance has to be carried out by **Specialized Technicians.**
SPECIAL: every 800 working hours(circa 20,000 cycles), control the wear of the seals and internal parts.
ATTENTION: reassemble the valve in the correct manner paying special attention to the flow direction indicated on the valve.
.**The manufacturer is not to be considered responsible for damage as a result from incorrect fitting and maintenance-**

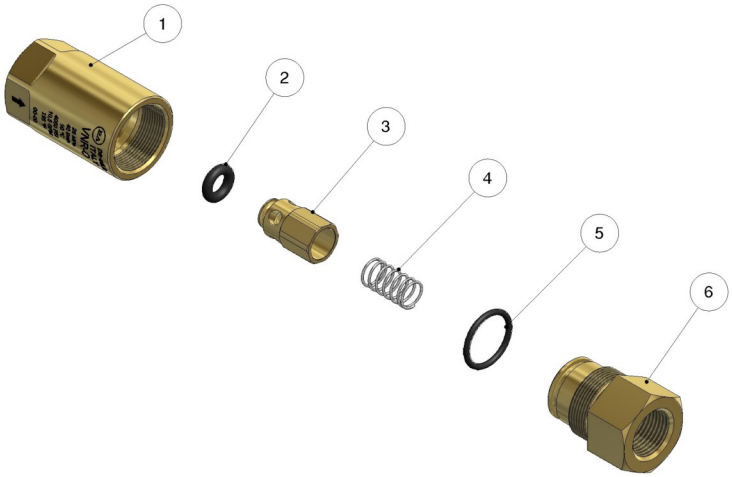
Technical data, descriptions and illustrations are indicative and liable to modification without notice

60.2100.00 VNR-OHD check valv. brass 1/4FF Bsp



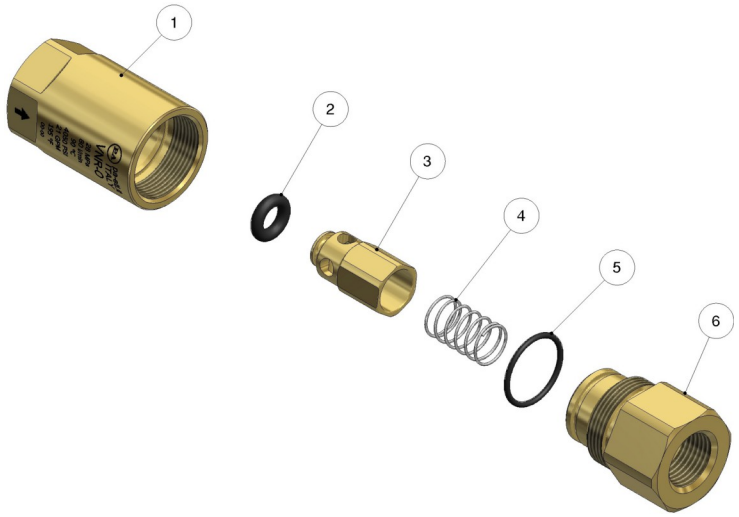
Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.2101.31R	Coupling, 1/4 Bsp F x M18x1 F brass	1					3
2	10.3125.00R	O-ring, 2,5x4 mm	1					10
3	60.0859.99R	Shutter pin, brass+or 2,5x4 mm N	1					10
4	60.0867.51R	Spring, 0,5x6,5x22 mm Sst.	1					10
5	10.3060.01R	O-ring, 1,78x12,42 mm Ni 85	1					10
6	60.2102.31R	Shutter coupl., 1/4F Bsp brass	1					3

60.2120.00 VNR-OHD check valv. brass 3/8FF Bsp



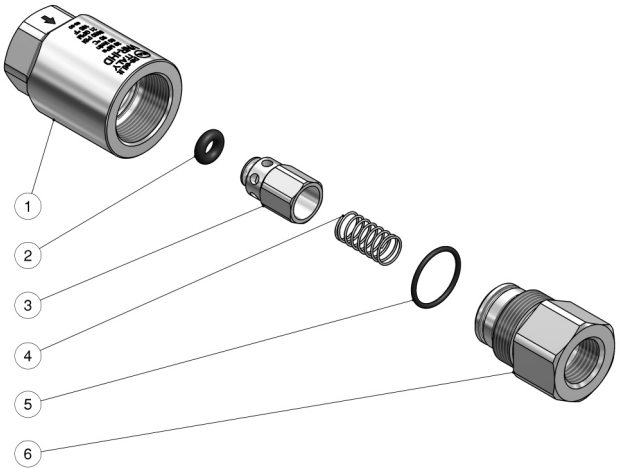
Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.2121.31R	Coupling, 3/8 Bsp F x M22x1 F brass	1					3
2	10.3213.00R	O-ring, 3x6 mm	1					10
3	60.0052.99R	Shutter pin, brass+o-ring 3x6 mm	1					10
4	60.0053.51R	Spring, 0,7x9x20 mm Sst.	1					10
5	10.3066.01R	O-ring, 1,78x15,6 mm Ni 85	1					10
6	60.1811.31R	Shutter coupl., 3/8F Bsp brass	1					5

60.2140.00 VNR-OHD check valv. brass 1/2FF Bsp



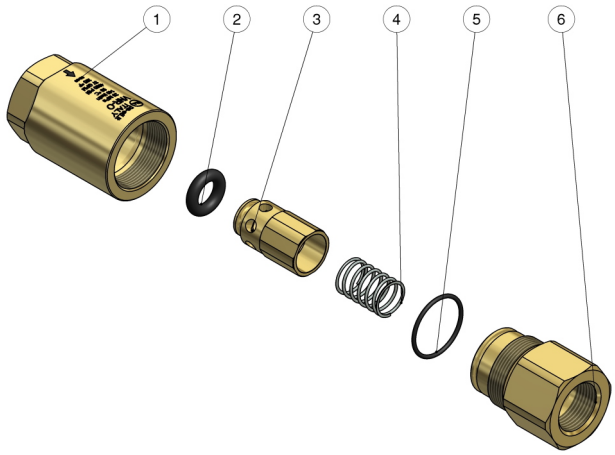
Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.2141.31R	Coupling, 1/2 Bsp F x M30x1,5F brass	1					3
2	10.3292.00R	O-ring, 4x8 mm	1					10
3	60.0488.99R	Shutter pin, brass+or 4x8 mm	1					10
4	60.0489.51R	Spring, 0,8x13,3x27 mm Sst.	1					5
5	10.3072.60R	O-ring, 1,78x21,95 mm Ni 85	1					10
6	60.2809.31R	Shutter coupl., 1/2F Bsp brass	1					3

60.2145.00 VNR-IHD check valv. sst 1/2FF Bsp



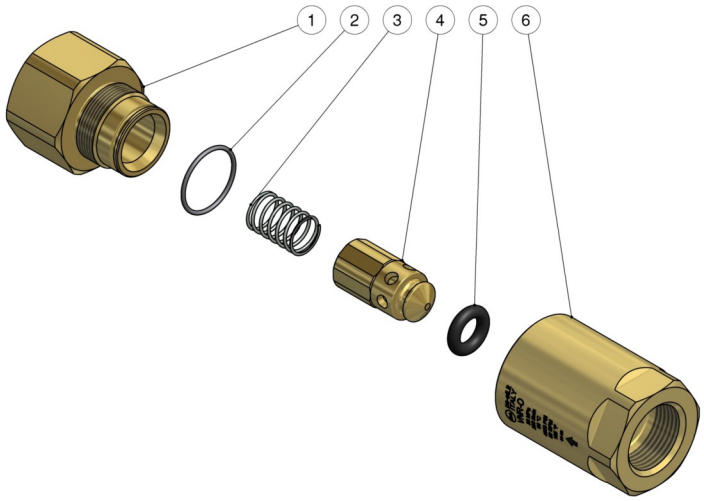
Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.2147.51R	Sst. seat 1/2 Bsp F x M30x1,5F	1					3
2	10.3292.08R	O-ring, 4x8 mm Ni 85	1					10
3	60.8020.51R	Pin, hex.17 Sst	1					3
4	60.8007.51R	Spring, 0,8x12,2x27 mm Sst.	1					3
5	10.3072.60R	O-ring, 1,78x21,95 mm Ni 85	1					10
6	60.2146.51R	Sst. coupling, 1/2 Bsp F x M30x1,5 M	1					3

60.2150.00 VNR-OHD check valv. brass 3/4 FF Bsp



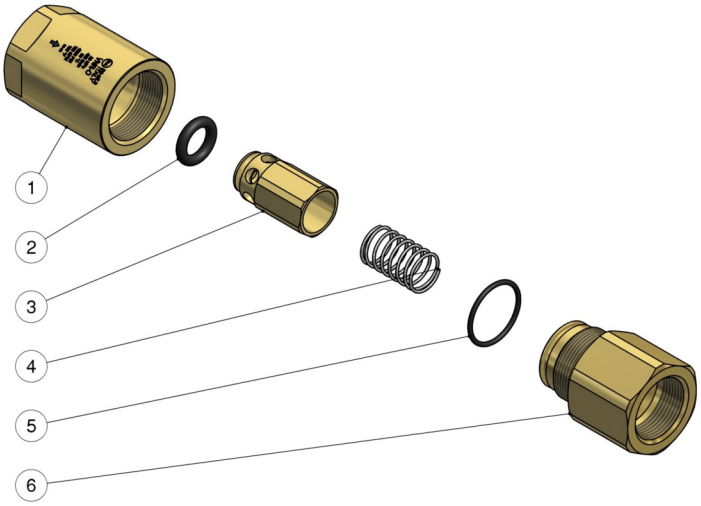
Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.2151.31R	Coupling, 3/4 Bsp F x M35x1,5 F brass	1					3
2	10.3314.00R	O-ring, 5,33x12,06 mm	1					10
3	60.5012.99R	Shutter pin, brass+or 5,33x12,06 mm N	1					5
4	60.5013.51R	Spring, 1,3x18x29 mm Sst.	1					10
5	10.3077.08R	O-ring, 1,78x28,3 mm Ni 85	1					10
6	60.4802.31R	Coupling, 3/4"Bsp F brass	1					3

60.2160.00 VNR-OHD check valv. brass 1" FF Bsp



Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.4303.31R	Shutter coupl., 1"Bsp F brass	1					1
2	10.3077.08R	O-ring, 1,78x28,3 mm Ni 85	1					10
3	60.5013.51R	Spring, 1,3x18x29 mm Sst.	1					10
4	60.5012.99R	Shutter pin, brass+or 5,33x12,06 mm N	1					5
5	10.3314.00R	O-ring, 5,33x12,06 mm	1					10
6	60.2161.31R	Coupling, 1" Bsp F x M35x 1,5 F brass	1					3

60.2170.00 VNR-OHD check valv. brass 1"1/4 FF Bsp



Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.2171.31R	Coupling, 1"1/4 Bsp F x M45x 2 F brass	1					3
2	10.3350.00R	O-ring, 6x18 mm	1					10
3	60.4012.31R	Check valve	1					3
4	60.4013.51R	Spring, 1,6x23,1x44mm	1					3
5	10.3208.28R	O-ring, 2,62x36,17 mm Ni85	1					5
6	60.4014.31R	Piston holder, 1"1/4 Bsp F	1					3