
CHECK VALVES



I.T.E.
INDUSTRIAL TECHNICAL EQUIPMENT

INTRODUCTION



I.T.E. is an Italian company established in 1998 from the merge between 2 companies, one specialized in trading and one in machining activities, both operating in the Oil & Gas field since 1980. I.T.E. is one of the largest Italian and European manufacturers of valves and fittings for the installation of industrial instruments, mainly in O&G and Energy sectors, with a huge production of: **Needle Valves, Instrument Manifolds, Ball Valves, Pots & Siphons, Compression Fittings, Check Valves, Forged Globe Needle Valves, Adapters/Fittings, Fire Sensors, Sampling Systems, Protection Boxes.**

I.T.E. is specialized also on tailor-made solutions, on request complete packages can be provided to meet customer's needs.

I.T.E. is a flexible and customer oriented company, the manufacturing plant is equipped with different CNC machines, automatic welding machines and an automatic warehouse with different semi-finished standard products, this structure allows us to be reliable partner with a fast response to the customer needs.

I.T.E. products are 100% engineered, manufactured, assembled and tested in Italy, all the products have the traceability system so that we are able to provide the best assistance to customers also specially during maintenance activities providing the right product/component.



FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from I.T.E. s.r.l., its authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by I.T.E. s.r.l. and its subsidiaries at any time without notice.

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FEATURES

Across years of experience in instrumentation sector and increasing its know-how, today I.T.E. is able to offer a wide range of check valves and accessories for several application and sector. All products shown on this catalogue are available with integral compression ends (performance system improved, safety factors, size and weight reduction). R&D dept. is constantly committed to refining and improving the quality of the products.

STANDARD FEATURES

Wetted parts according to **NACE MR.0175/MR.0103** as standard.

Shell test and seat leakage test are performed according to **API 598** and **ASME B16.34** (1.5 of max rating pressure).

Certificate 3.1 certificate according to EN 10 204 on valve body material.

MATERIAL

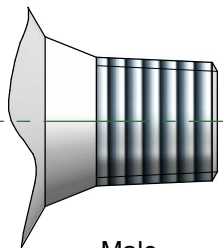
MATERIAL GROUP	I.T.E. DESIGNATION	ASTM	UNS	AVAILABILITY ON STOCK
Stainless Steel	316/316L	316/316L	S31600	YES
	6Mo		N08367	ON REQUEST
Ferritic Stainless Steel	Duplex	F51	S31803	YES
	Superduplex	F55	S32750	YES
Carbon Steel	LF2	LF2		ON REQUEST
	A105	A105		ON REQUEST
Alloy	Alloy 400		N04400	YES
	Alloy C276		N10276	ON REQUEST
	Alloy 625		N06625	ON REQUEST
	Alloy 825		N08825	ON REQUEST
Titanium	Ti Gr.2		R50400	ON REQUEST



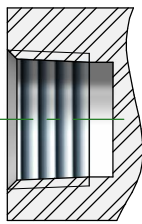
CONNECTIONS

I.T.E. manufactures a lot of different connections and combinations. Below are some of the most used. If you don't find your option please contact us.

TAPERED PIPE THREADS



Male

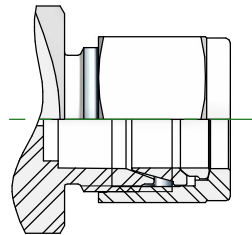


Female

NPT threads acc. to.
ASME B 1.20.1

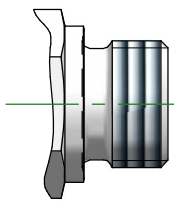
BSPT threads acc. to.
ISO 7/1

TWIN FERRULE TUBE FITTINGS

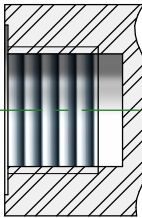


The direct pipe connection is available in both metric and inch sizes.
All components are made by I.T.E. s.r.l.

PARALLEL PIPE THREADS (1) (2)



Male



Female

BSPP threads acc. to.
ISO 228-1
ISO 1179-1

Metric threads acc. to.
ISO 261

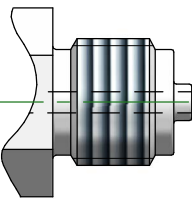
NOTE

(1) Cylindrical connection for fittings hydraulic or gas applications. The seal between male and female is made by metal to metal contact between two parallel surfaces.

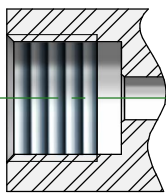
(2) Pressure connection for use with pressure gauges. The end can be fixed or rotatable according to the needs of use. The seal is carried out by means of a flat gasket placed at the bottom of the female thread.

Size from 1/8" to 1"
Metric size: M20 x 1.5

PARALLEL PIPE THREADS - GAUGE CONN. (1)



Male



Female

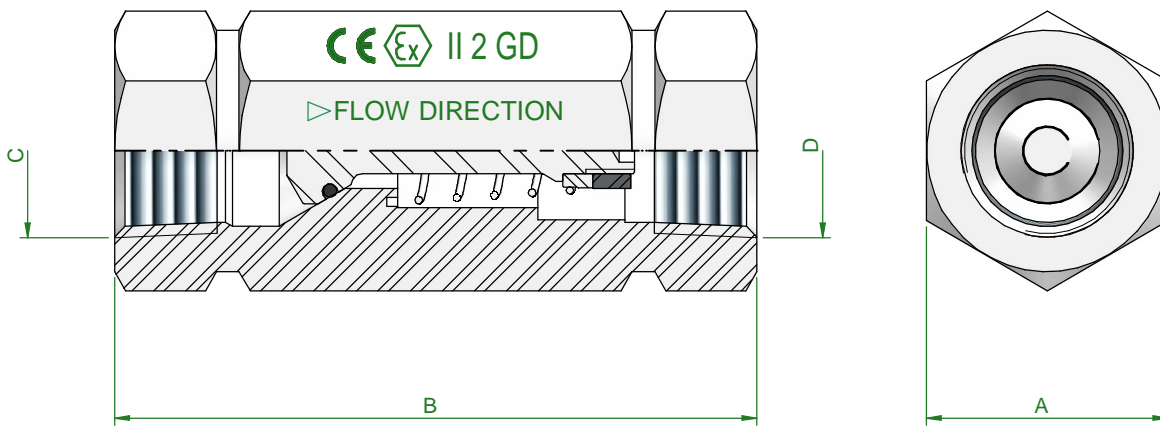
G Threads acc. to.
ISO 228-1
EN 837-1

Metric threads acc. to.
ISO 261



VR1

VR1 check valves (Non-Return Valves) are designed for a max. allowable working pressure of 10.000 psi. The check valve allows flow in one direction only, closing the position when the flow reverses. in case you do not find your product solution please do not hesitate to contact us. VR1 check valves are available with a lot of options. *We are showing on this page just the standard types.*



VR1 CHECK VALVE IS DESIGNED ACCORDING TO STD. SNAM GASD A 6.42.01

GENERAL DIMENSION				
RATING	A	B	C	D
3K psi	19	60	1/4" NPT-F	1/4" NPT-F
6K psi	22			
10K psi	24			
3K psi	22	85	3/8" NPT-F	3/8" NPT-F
6K psi	24			
10K psi	27			
3K psi	30	100	1/2" NPT-F	1/2" NPT-F
6K psi	32			
10K psi	36			
3K psi	41	115	3/4" NPT-F	3/4" NPT-F
6K psi	46			
10K psi	50			

3.000 PSI VALVE:
 Max operating pressure: 210 Bar
 Hydraulics pressure test: 315 Bar
 Pneumatic sealing test: 6 Bar
 Opening differential pressure: 0.2 Bar
 Perfect tightness with d.p.: 0.2 Bar
 Temperature range: -20 / +205 °C

6.000 PSI VALVE:
 Max operating pressure: 420 Bar
 Hydraulics pressure test: 630 Bar
 Pneumatic sealing test: 6 Bar
 Opening differential pressure: 0.2 Bar
 Perfect tightness with d.p.: 0.2 Bar
 Temperature range: -20 / +205 °C

10.000 PSI VALVE:
 Max operating pressure: 690 Bar
 Hydraulics pressure test: 1035 Bar
 Pneumatic sealing test: 6 Bar
 Opening differential pressure: 0.2 Bar
 Perfect tightness with d.p.: 0.2 Bar
 Temperature range: -20 / +205 °C

STD. spring material: X10CrNi18-8
 STD. packing: VITON



VR1 CHECK VALVES - HOW TO ORDER

V R 1 - 0 6 S V 4 N

MODEL

VR1 Check Valve VR1

RATING

03 Series 3.000 PSI
06 Series 6.000 PSI
10 Series 10.000 PSI

MATERIAL

S	Aisi 316L	F	Alloy 400
A	A105	G	Alloy C276
D	Duplex F51	H	6 Mo/F44
E	Superduplex F55	I	Alloy 625

PACKING (VBV ONLY)

V Viton

CONNECTIONS

4 1/4"
6 3/8"
8 1/2"
12 3/4"
20 M20 x 1,5

THREAD

N NPT
K BSPT R/RC (ISO 7)
I BSPP GAS (ISO 1179)
R BSPP GAS (EN 837-1) - Gauge connection
M Metric (similar EN 837-1)

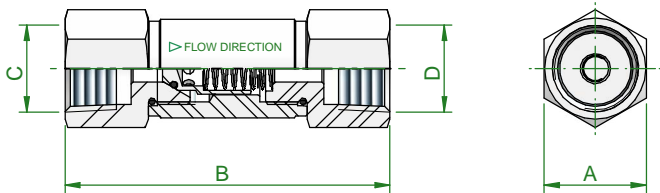
Attention - Above guideline show s all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your



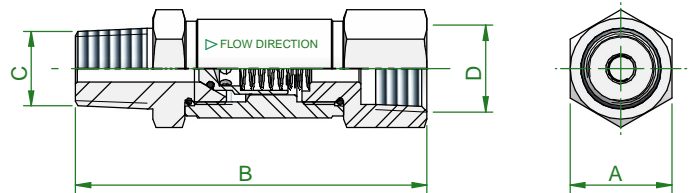
CK

CK check valves (Non-Return Valves) are designed for a max. allowable working pressure of 6.000 psi. The check valve allows flow in one direction only, closing the position when the flow reverses. in case you do not find your product solution please do not hesitate to contact us. CK check valves are available with a lot of options. *We are showing on this page just the standard types.*

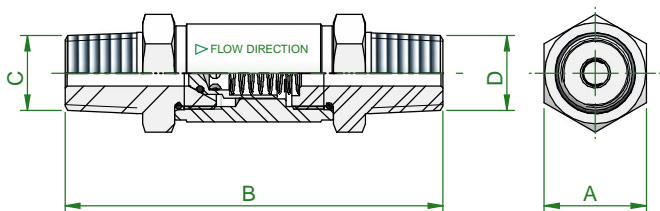
CK1 - FEMALExFEMALE THREAD



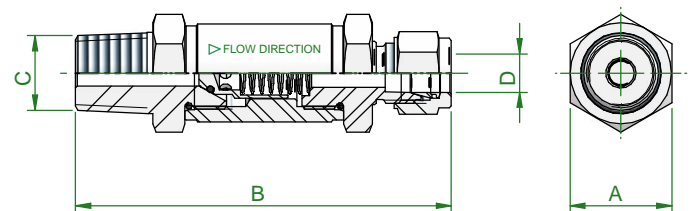
CK2 - MALExFEMALE THREAD



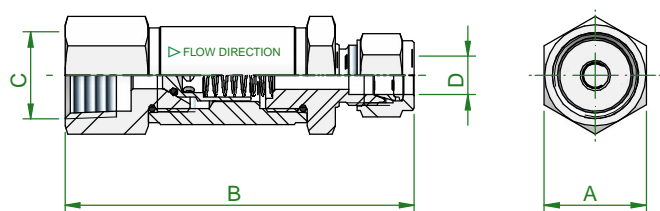
CK3 - MALExMALE THREAD



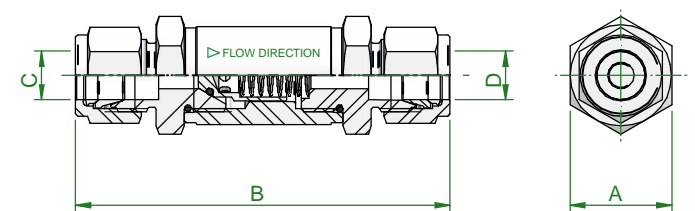
CK4 - MALExFEMALE - THREADxTUBE OD



CK5 - FEMALExFEMALE - THREADxTUBE OD

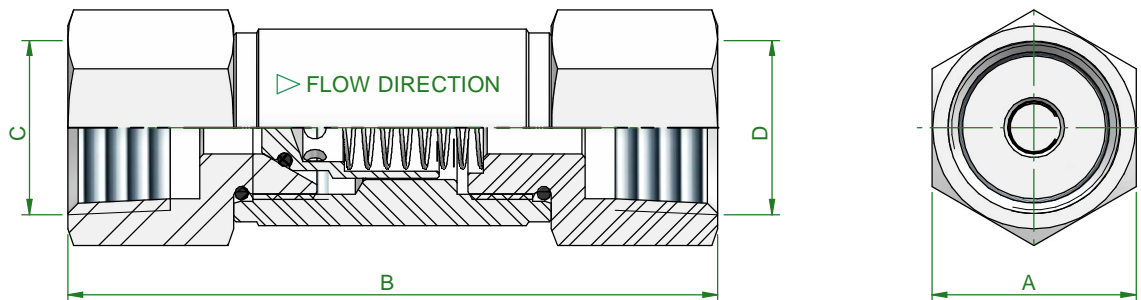


CK6 - FEMALExFEMALE TUBE OD



CK

CK check valves (Non-Return Valves) are designed for a max. allowable working pressure of 6.000 psi. The check valve allows flow in one direction only, closing when flow reverses. Should you still not find your option please contact the factory. CK check valves are available with a lot of options. *We are showing on this page just the standard types.*



GENERAL DIMENSION

MODEL	RATING	A	B	C (IN)	D (OUT)
CK1	6K psi	27	78	1/4" NPT-F	1/4" NPT-F
			82	3/8" NPT-F	3/8" NPT-F
			86	1/2" NPT-F	1/2" NPT-F
CK2			78	1/4" NPT-M	1/4" NPT-F
			86	3/8" NPT-M	3/8" NPT-F
			93	1/2" NPT-M	1/2" NPT-F
CK3			89	1/4" NPT-M	1/4" NPT-M
			90	3/8" NPT-M	3/8" NPT-M
			100	1/2" NPT-M	1/2" NPT-M
CK4			90	1/4" NPT-M	6 OD
			92	3/8" NPT-M	8 OD
			100	1/2" NPT-M	10 OD
			102		12 OD
CK5			85	1/4" NPT-F	6 OD
			89	3/8" NPT-F	8 OD
	92	1/2" NPT-F	10 OD		
	94		12 OD		
CK6	92	1/4 OD	1/4 OD		
	96	3/8 OD	3/8 OD		
	99	1/2 OD	1/2 OD		
	102	3/4 OD	3/4 OD		

3.000 PSI VALVE:

Max operating pressure: 210 Bar
 Hydraulics pressure test: 315 Bar
 Pneumatic sealing test: 6 Bar
 Opening differential pressure: 0.2 Bar
 Perfect tightness with d.p.: 0.2 Bar
 Temperature range: -20 / +205 °C

6.000 PSI VALVE:

Max operating pressure: 420 Bar
 Hydraulics pressure test: 630 Bar
 Pneumatic sealing test: 6 Bar
 Opening differential pressure: 0.2 Bar
 Perfect tightness with d.p.: 0.2 Bar
 Temperature range: -20 / +205 °C

STD. spring material: X10CrNi18-8
 STD. packing: VITON



CK CHEK VALVES - HOW TO ORDER

C K - 0 6 S T 8 I 8 I

MODEL

CK Check Valve

RATING

03 Series 3.000 PSI
06 Series 6.000 PSI

MATERIAL

S	Aisi 316L	F	Alloy 400
A	A105	G	Alloy C276
D	Duplex F51	H	6 Mo/F44
E	Super Duplex F55	I	Alloy 625

PACKING

V Viton

IN

4	1/4"	12	3/4"
6	3/8"	16	1"
8	1/2"	20	M20 x 1,5

THREAD

N	NPT	I	BSPP GAS (ISO 1179)
K	BSPT R/RC (ISO 7) Tube OD	R	BSPP GAS (EN 837-1) - Gauge connection
M	Metric (similar EN 837-1)		

OUT (Same as "IN" standard)

4	1/4"	12	3/4"
6	3/8"	16	1"
8	1/2"	20	M20 x 1,5

THREAD (Same as "IN" standard)

N	NPT	I	BSPP GAS (ISO 1179)
K	BSPT R/RC (ISO 7) Tube OD	R	BSPP GAS (EN 837-1) - Gauge connection
M	Metric (similar EN 837-1)		


Attention - Above guideline show s all possible product configuration. Tailor-made solutions must be evaluated and approved by ITE technical dept before accepting and processing your order




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