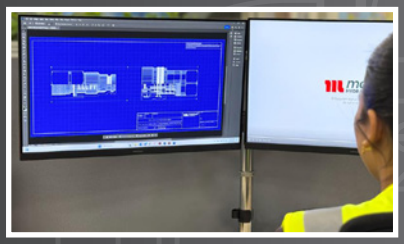
CHECK VALVES



Superior Reliability
Pressure Control
Devices

manuli® HYDRAULICS

"Manuli Hydraulics is focused on achieving excellence in the design, manufacture, and supply of fluid conveyance solutions, components and associated equipment for high pressure hydraulics, industrial material conveyance, refrigeration and cooling applications."



Our experienced Research & Development team take 2D drawings to 3D models to real life products.



Our world-class hoses, fittings and assembly equipment are manufactured in-house to the highest standards.



We test and validate our products to meet and exceed technical industry standards.

DESIGN → **MANUFACTURE** → **TEST**

SUPPLY ← **INTEGRATED SYSTEMS**



We provide the complete solution: hoses, fittings, crimping parameters and assembly equipment for a fully integrated system.



We supply fluid conveyance solutions directly to our customers whenever and wherever they are.

From design to manufacture, and assembly, Manuli Hydraulics' continual commitment to this unified philosophy makes us a global leader in providing integrated solutions for fluid and material transfer connector applications including hydraulics, refrigeration & air conditioning, oil & gas, water and industrial low-pressure.

Manuli Hydraulics offer a complete range of hoses, fittings and assembly equipment which are purposely designed to work seamlessly together. This harmonized approach allows us to guarantee the quality and performance of our hose assemblies.

Every metre of hose and every single fitting is backed by industry knowledge and experience, made available to you through our dedicated team of application engineers.

From advice on component selection and configuration, our technical expertise allows us to support and work directly with our customers whenever and wherever they are based.

Disclaimer: We reserve the right to modify our products and/or related services and/or discontinue the manufacture and/or supply of any of the products and/or related services, without notice. This document supersedes all previous versions and previously issued documentation. The only official source of technical crimping parameters regarding our products is our Digital Crimp Tools. Printed copies are uncontrolled therefore, please be sure to use the latest versions of our Manuli Crimp App or Crimp Web Tool. Do not mix and match: always use Manuli original hoses and fittings. For more information, see our 'Safety Guide' by scanning the QR code.

DON'T MIX & MATCH

INTELLIGENTLY DESIGNED PRESSURE CONTROL COMPONENTS

Pressure control is a critical part of the design of any hydraulic system. One of the most fundamental and widely used types of pressure control device is the “no-return” or check valve. Check valves can be used in a variety of applications, from prefill and bypass functions, to pre-tensioning or protection of hydraulic components against pressure surges. Due to this wide range of possible uses, Manuli check valves come in a number of different styles, configurations and pressure ratings, allowing you to tailor the check valve to the application.

Manuli’s check valve range is just a small section of a much broader product portfolio. Our extensive range of hoses and fittings allow us to service almost any hydraulic application, from simple pilot lines to ultra-high pressure mining and drilling systems. In addition to this we also offer one of the widest ranges of hydraulic quick couplings as well as a range of highly innovative “Smart Fittings”, designed especially for those situations where standard fitting designs just won’t do. Of course, as the world leader in supplying integrated hydraulic connector soultions, we also supply a comprehensive, fully scalable range of hose assembly equipment, suitable for everything from mobile maintenance vans to fully-equipped, high-volume OEM production lines.



WHY MANULI CHECK VALVES

Manuli Hydraulics' check valves are expertly designed for optimal hydrodynamic performance, ensuring minimal pressure drop across the component, and therefore minimising the impact on the fluid flow in your systems. Manufactured from high quality steel with a Cr3+ (trivalent chrome) plating, Manuli check valves offer superior corrosion resistance - up to 500 hours to red rust in salt spray conditions - with the option to upgrade to a zinc-nickel coating (720 hours to red rust) on request.

Valve sealing is supplied by a C98 high-carbon steel spring and (where required) a nitrile (NBR) o-ring and back-up ring arrangement, which prevents unwanted creeping of the rubber seal over time.

Manuli check valve housings come in 3 basic forms, "Standard", "DHI" and "Compact" . This choice of housing design makes it even easier for you to include Manuli check valves into your systems regardless of space constraints.

The Manuli check valve range also includes "Bi-Directional" options for both the "Standard" and "DHI" housing types, to allow an even greater level of pressure control in your systems.

STANDARD SERIES CHECK VALVES - MQS-CV

The Standard Series check valves from Manuli Hydraulics are designed to be the "go-to" check valve range for hydraulic system design.

Made from high-quality materials and with a robust design, the MQS-CV range of check valves covers all of the most commonly requested configurations in a wide range of pressure settings.

Available in sizes from ¼" to 2", the MQS-CV range comprises nearly 700 individual references, to ensure that you have the ability to choose an off-the-shelf valve for most hydraulic system applications, regardless of size and pressure requirements.

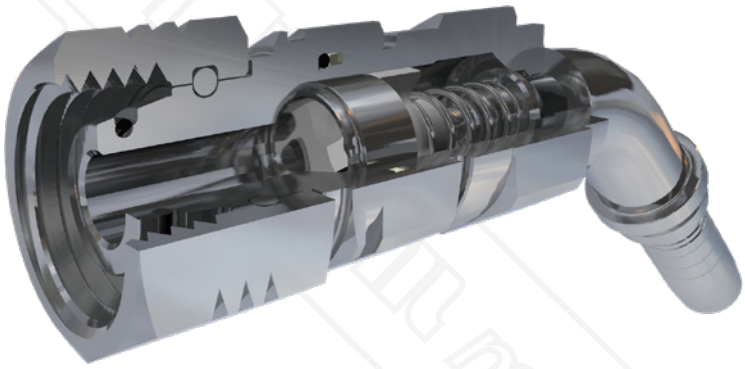


DHI SERIES CHECK VALVES: MQS-DHI

Unique to the Manuli Hydraulics portfolio, the DHI Series check valves bring several important advantages to the table.

First and foremost the DHI Series integrates directly to the hose instead of a traditional fitting and termination end. This saves both time and money by eliminating the need to stock and fit separate components.

By replacing the typical hydraulic fitting, use of the DHI Series also reduces the number of potential leak points throughout your system, while also minimising the potential for incorrect assembly due to the check valve being installed backwards.



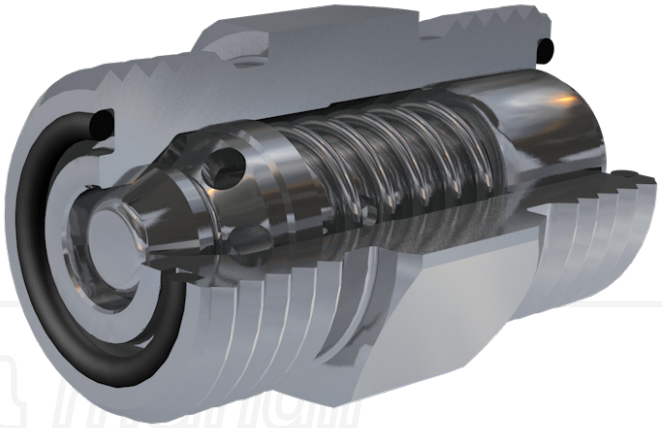
Another advantage is the reduction in space taken up by the check valve arrangement due to the elimination of the need for a termination end.

The MQS-DHI series is available with Multifit, Interlock Plus and Spiralfit tail options for seamless integration with Manuli hoses and ferrules.

COMPACT SERIES CHECK VALVES: MQS-CVC

Designed with both space saving and ease of maintenance in mind, the Compact Series of check valves prove that good things come in small packages

Boasting all the technical benefits of the MQS-CV range, the Compact Series valves take up as little as 50% of the room that their larger cousins occupy. This space saving, coupled with the associated weight reduction, makes the MQS-CVC Series perfect for those situations where available space is at a premium and every additional kilogram must be justified.



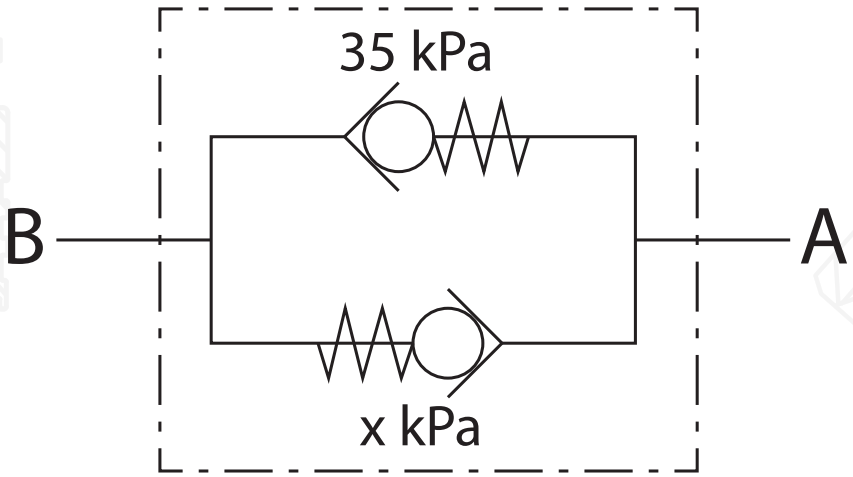
The single-piece outer body of the MQS-CVC Series also eliminates the need for internal threads and seals, thereby minimising potential leak points. Available in both even and uneven male-male configurations, the MQS-CVC Series can also be used in place of a step-up / step-down adaptor, thereby reducing the number of individual components required in your systems.

BI-DIRECTIONAL CHECK VALVES - MQS-CVB

Often required in hydraulics systems as a safety device or where it is necessary to build up some pressure before feeding an actuator, bi-directional check valves operate with two independently set crack pressures.

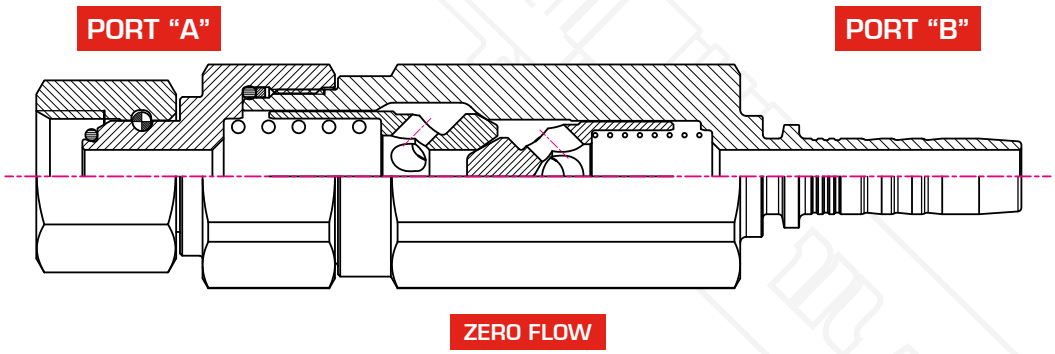
Instead of having an “INLET” and an “OUTLET” port, bi-directional check valves have “A” and “B” ports, allowing you to specify the crack pressure in each direction. Manuli bi-directional check valves have a standard crack pressure of 35 kPa in the B-A direction, and the A-B direction crack pressure can be specified as either 500 kPa or 800 kPa. Available in both Standard and DHI configurations, the Manuli bi-directional check valves range offers an extra level of flexibility to your system design options.

Available in sizes from ¼” to 2”, the MQS-CV range comprises nearly 700 individual references, to ensure that you have the ability to choose an off-the-shelf valve for most hydraulic system applications, regardless of size and pressure requirements.

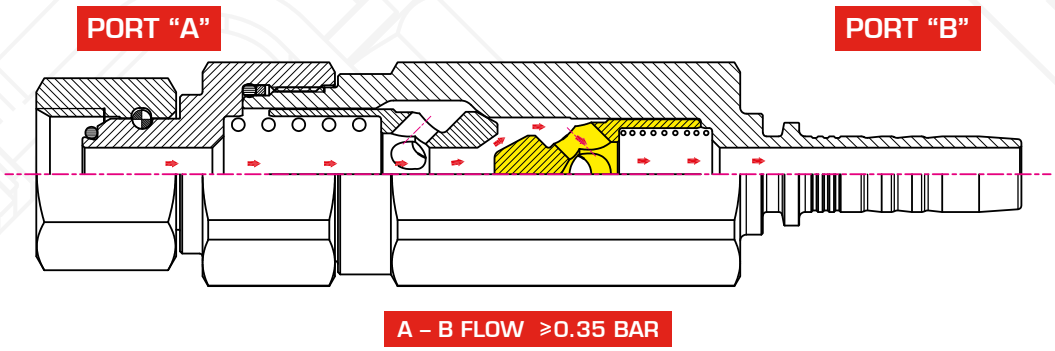




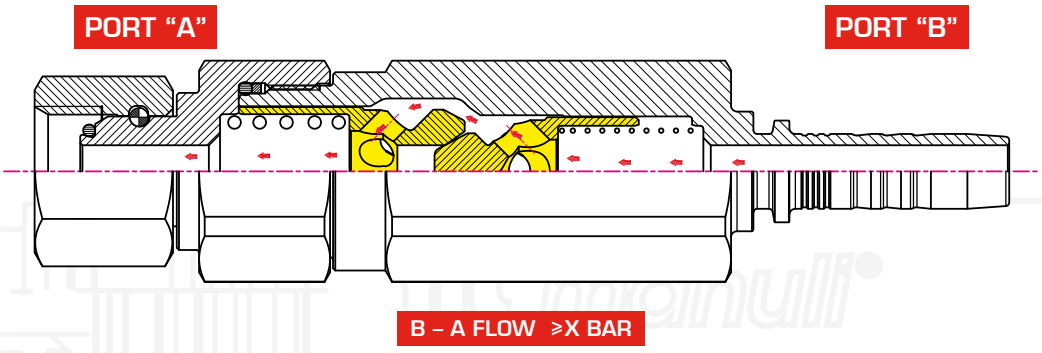
HOW DO MANULI BI-DIRECTIONAL CHECK VALVES WORK?



In it’s zero flow state the bi-directional check valve is sealed in both flow directions, meaning that no fluid can cross from port “A” to port “B” or vice versa.



When the pressure of the fluid flowing from port “A” to port “B” exceeds the specified valve rating, “X” kPa, the highlighted valve assembly is similarly forced out of the way to allow the fluid to flow.



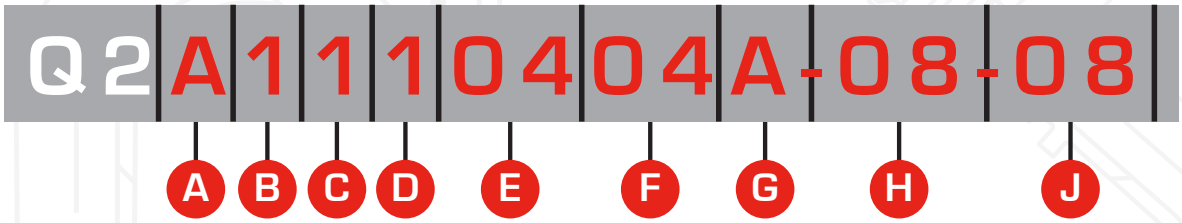
When the pressure of the fluid flowing from port “B” to port “A” exceeds 35 kPa the highlighted valve assembly is forced out of the way, thus allowing the fluid to flow.

HOW TO ORDER MANULI CHECK VALVES

Our portfolio of check valves is designed to allow maximum flexibility of selection with the minimum number of unique parts required. So for all of our off-the-shelf valve families it is possible to have any of the listed configurations supplied with any one of the standard crack pressures.

When placing your order simply substitute the 11th character in the part number for the relevant “Digit” shown in the table below.

Note: All part numbers in the following pages are shown with a “A” in this position*, corresponding to a 35 kPa (5.1 psi) crack pressure. Except in the case of bi-directional check valves where all the options are listed.



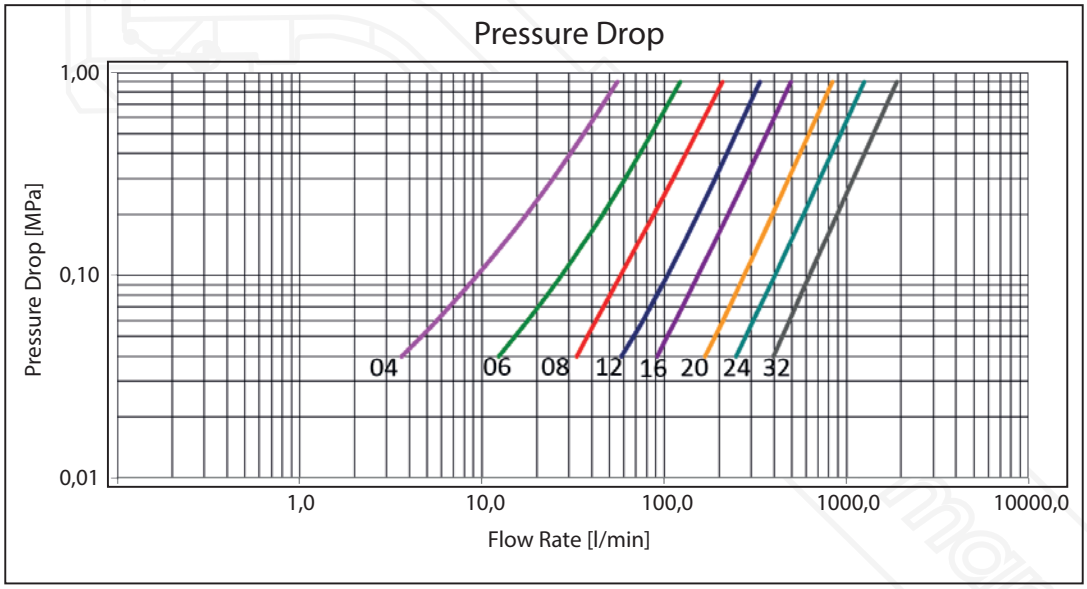
Digit	Pressure (kPa)	Pressure (psi)
A	35	5.1
B	10	1.5
C	20	2.9
D	50	7.3
E	100	14.5
F	150	21.8
G	200	29.0
H	250	36.3
J	300	43.5
K	350	50.8
L	400	58.0
M	450	65.3
N	500	72.5
P	600	87.0
Q	700	101.5
R	800	116.0
S	900	130.5
T	1000	145.0
X	Without Spring	

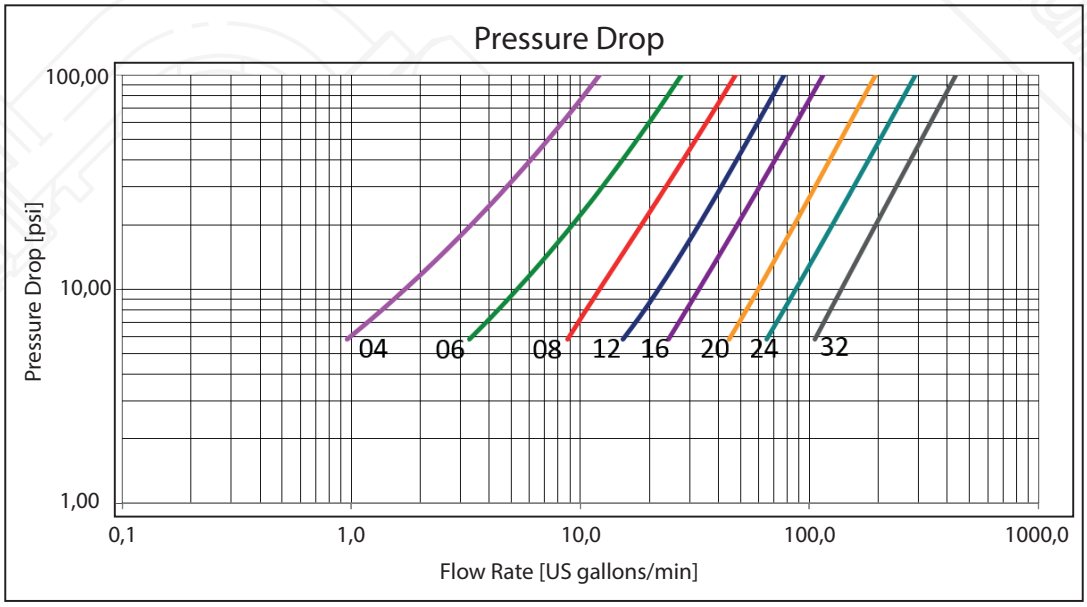
EXAMPLE
Part number “Q2A1110505A-04-04” would specify a 35 kPa crack pressure.

Part number “Q2A1110505M-04-04” would specify exactly the same valve configuration, but with a 450 kPa crack pressure.

Note: When specifying the crack pressure for a bi-directional check valve the digit value would refer to the crack pressure in the B-A direction. A-B direction crack pressure is always 35 kPa.

TECHNICAL DATA FOR STANDARD CHECK VALVES





NOMINAL SIZE			WORKING PRESSURE (Dynamic)		RATED FLOW at 0.2 MPa of pressure drop		MINIMUM BURST PRESURE (MPa)	
DN	inch	Size	MPa	psi	L/min	US G/min	MPa	psi
6	1/4"	04	45	6525	18	4.8	180	26100
10	3/8"	06	35	5075	46	12.2	140	20300
12	1/2"	08	35	5075	88	23.2	140	20300
19	3/4"	12	35	5075	153	40.4	140	20300
25	1"	16	35	5075	225	59.4	140	20300
31	1.1/4"	20	35	5075	394	104.1	140	20300
38	1.1/2"	24	35	5075	580	153.2	140	20300
51	2"	32	35	5075	890	235.1	140	20300

MQS-CV STANDARD SERIES CHECK VALVES

Q2A1110505

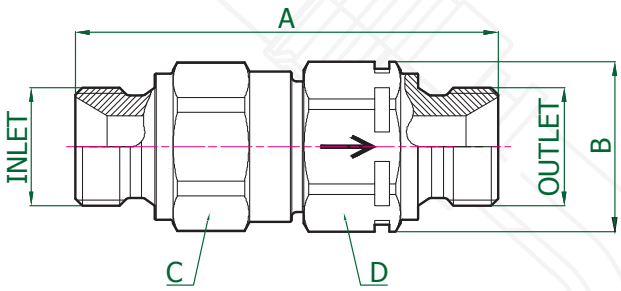
MALE-MALE, STANDARD

INLET: BSP MALE 60° CONE SEAT BS5200 / ISO 8434-6

OUTLET: BSP MALE 60° CONE SEAT BS5200 / ISO 8434-6

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2A1110505A-04-04	35 kPa	1/4"	1/4"	56	Ø21	19	19	
10	3/8"	-06	Q2A1110505A-06-06	35 kPa	3/8"	3/8"	64	Ø24,2	22	22	
12.5	1/2"	-08	Q2A1110505A-08-08	35 kPa	1/2"	1/2"	74.5	Ø30	27	27	
19	3/4"	-12	Q2A1110505A-12-12	35 kPa	3/4"	3/4"	88.2	Ø38	34	34	
25	1"	-16	Q2A1110505A-16-16	35 kPa	1"	1"	100.9	Ø45	41	41	
31	1-1/4"	-20	Q2A1110505A-20-20	35 kPa	1-1/4"	1-1/4"	122.4	Ø55	50	50	
38	1-1/2"	-24	Q2A1110505A-24-24	35 kPa	1-1/2"	1-1/2"	141	Ø66	60	60	
51	2"	-32	Q2A1110505A-32-32	35 kPa	2"	2"	173.7	Ø82	75	75	

Q2A1111111

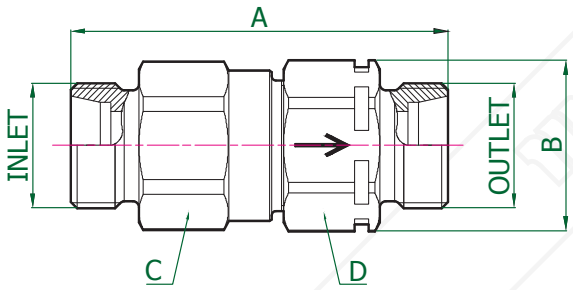
MALE-MALE, STANDARD

INLET: METRIC MALE 24° CONE SEAT LIGHT TYPE DIN 3861 / ISO 8434-1

OUTLET: METRIC MALE 24° CONE SEAT LIGHT TYPE DIN 3861 / ISO 8434-1

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2A1111111A-12-12	35 kPa	M12X1,5	M12X1,5	50.5	Ø21	19	19	
6	1/4"	-04	Q2A1111111A-14-14	36 kPa	M14X1,5	M14X1,5	50.5	Ø21	19	19	
10	3/8"	-06	Q2A1111111A-18-18	35 kPa	M18X1,5	M18X1,5	58.5	Ø24,2	22	22	
12.5	1/2"	-08	Q2A1111111A-22-22	35 kPa	M22X1,5	M22X1,5	66.5	Ø30	27	27	
19	3/4"	-12	Q2A1111111A-26-26	35 kPa	M26X1,5	M26X1,5	74.5	Ø38	34	34	
25	1"	-16	Q2A1111111A-30-30	35 kPa	M30X2	M30X2	84.5	Ø45	41	41	
31	1-1/4"	-20	Q2A1111111A-36-36	35 kPa	M36X2	M36X2	104	Ø55	50	50	

MQS-CV STANDARD SERIES CHECK VALVES

Q2A1111212

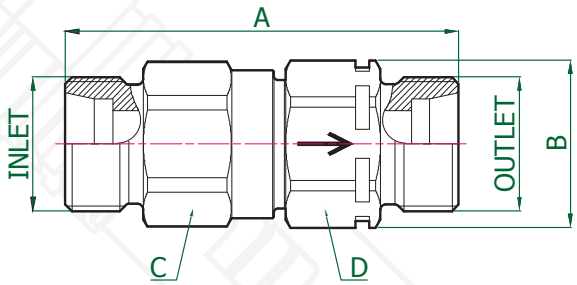
MALE-MALE, STANDARD

INLET: METRIC MALE 24° CONE SEAT HEAVY TYPE DIN 3861 / ISO 8434-1

OUTLET: METRIC MALE 24° CONE SEAT HEAVY TYPE DIN 3861 / ISO 8434-1

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2A1111212A-16-16	35 kPa	M16X1,5	M16X1,5	54.5	Ø21	19	19	
10	3/8"	-06	Q2A1111212A-20-20	35 kPa	M20X1,5	M20X1,5	60.5	Ø24,2	22	22	
12.5	1/2"	-08	Q2A1111212A-24-24	35 kPa	M24X1,5	M24X1,5	70.5	Ø30	27	27	
19	3/4"	-12	Q2A1111212A-30-30	35 kPa	M30X2	M30X2	82.5	Ø38	34	34	
25	1"	-16	Q2A1111212A-36-36	35 kPa	M36X2	M36X2	92.5	Ø45	41	41	

Q2A1112424

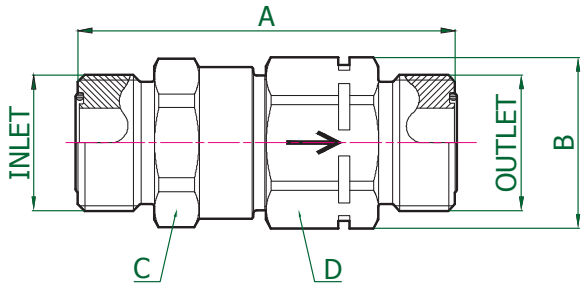
MALE-MALE, STANDARD

INLET: ORFS MALE ISO 8434-3 / SAE J1453

OUTLET: ORFS MALE ISO 8434-3 / SAE J1453

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
10	3/8"	-06	Q2A1112424A-06-06	35 kPa	11/16"-16 UN	11/16"-16 UN	58.9	Ø24,2	22	22	
12.5	1/2"	-08	Q2A1112424A-08-08	35 kPa	13/16"-16 UN	13/16"-16 UN	68.1	Ø30	27	27	
20	3/4"	-12	Q2A1112424A-10-10	35 kPa	1"-14 UNS	1"-14 UNS	74.3	Ø38	34	34	
20	3/4"	-12	Q2A1112424A-12-12	35 kPa	1.3/16"-12 UN	1.3/16"-12 UN	83.8	Ø38	34	34	
25	1"	-16	Q2A1112424A-16-16	35 kPa	1.7/16"-12 UN	1.7/16"-12 UN	91.5	Ø45	41	41	

MQS-CV STANDARD SERIES CHECK VALVES

Q2A1113224

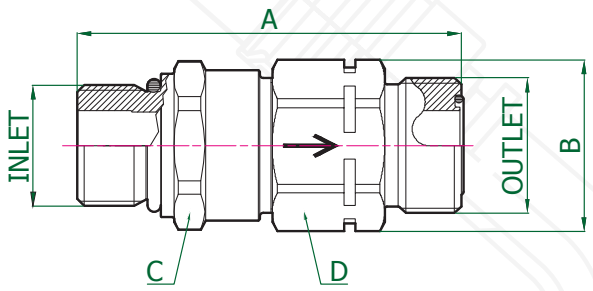
MALE-MALE, STANDARD

INLET: ORFS MALE
ISO 8434-3 / SAE J1453

OUTLET: MALE O'RING BOSS
(NON-ADJUSTABLE HEAVY) SAE J1926-2

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
10	3/8"	-06	Q2A1113224A-06-06	35 kPa	9/16"-18 UNF	11/16"-16 UN	59.7	Ø24,2	22	22	
12.5	1/2"	-08	Q2A1113224A-08-08	35 kPa	3/4"-16 UNF	13/16"-16 UN	69.3	Ø30	27	27	
20	3/4"	-12	Q2A1113224A-10-10	35 kPa	7/8"-14 UNF	1"-14 UNS	80.5	Ø38	34	34	
20	3/4"	-12	Q2A1113224A-12-12	35 kPa	1.1/16"-12 UN	1.3/16"-12 UN	86	Ø38	34	34	
25	1"	-16	Q2A1113224A-16-16	35 kPa	1.5/16"-12 UN	1.7/16"-12 UN	92.5	Ø45	41	41	

Q2A1112432

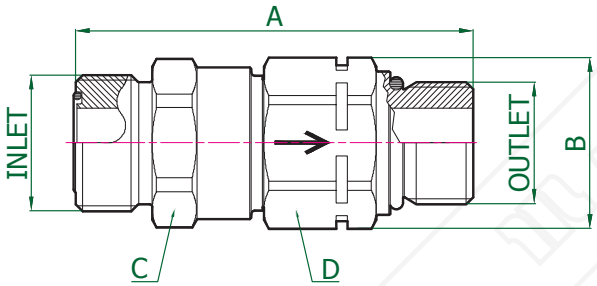
MALE-MALE, STANDARD

INLET: ORFS MALE
ISO 8434-3 / SAE J1453

OUTLET: MALE O'RING BOSS
(NON-ADJUSTABLE HEAVY) SAE J1926-2

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
10	3/8"	-06	Q2A1112432A-06-06	35 kPa	11/16"-16 UN	9/16"-18 UNF	60.7	Ø24,2	22	22	
12.5	1/2"	-08	Q2A1112432A-08-08	35 kPa	13/16"-16 UN	3/4"-16 UNF	72	Ø30	27	27	
20	3/4"	-12	Q2A1112432A-10-10	35 kPa	1"-14 UNS	7/8"-14 UNF	81.3	Ø38	34	34	
20	3/4"	-12	Q2A1112432A-12-12	35 kPa	1.3/16"-12 UN	1.1/16"-12 UN	85.3	Ø38	34	34	
25	1"	-16	Q2A1112432A-16-16	35 kPa	1.7/16"-12 UN	1.5/16"-12 UN	92.5	Ø45	41	41	

MQS-CV STANDARD SERIES CHECK VALVES

Q2A2100404

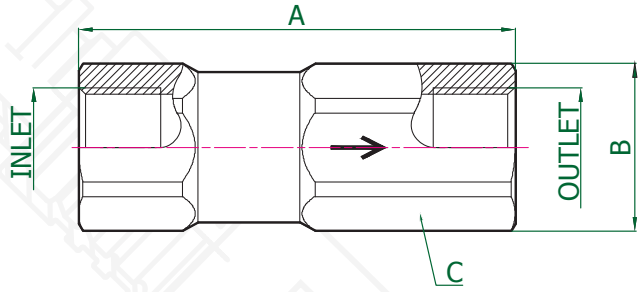
FEMALE-FEMALE, STANDARD

INLET: BSP FIXED FEMALE
DIN 3852-2 'FORM X' / ISO 1179-1

OUTLET: BSP FIXED FEMALE
DIN 3852-2 'FORM X' / ISO 1179-1

MATERIAL: STEEL

SEALS: NONE



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2A2100404A-04-04	35 kPa	1/4"	1/4"	60	Ø21	19		
10	3/8"	-06	Q2A2100404A-06-06	35 kPa	3/8"	3/8"	65 (67)	Ø24.2	22		
12.5	1/2"	-08	Q2A2100404A-08-08	35 kPa	1/2"	1/2"	77 (81)	Ø29.6	27		
19	3/4"	-12	Q2A2100404A-12-12	35 kPa	3/4"	3/4"	90	Ø37.4	34		
25	1"	-16	Q2A2100404A-16-16	35 kPa	1"	1"	104	Ø45	41		
31	1-1/4"	-20	Q2A2100404A-20-20	35 kPa	1-1/4"	1-1/4"	128.5	Ø55	50		
38	1-1/2"	-24	Q2A2100404A-24-24	35 kPa	1-1/2"	1-1/2"	148	Ø66	60		
51	2"	-32	Q2A2100404A-32-32	35 kPa	2"	2"	178	Ø82	75		

Dimension in brackets is for opening pressures of 600 kPa and greater

Q2A2103434

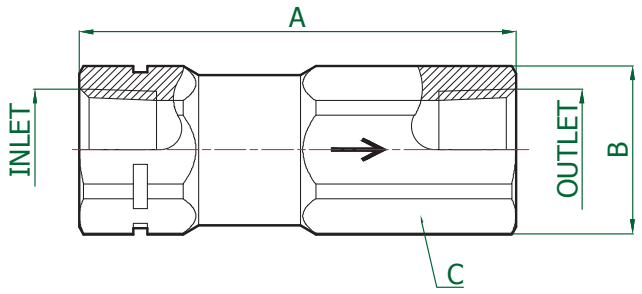
FEMALE-FEMALE, STANDARD

INLET: NPTF FIXED FEMALE
SAE J476A

OUTLET: NPTF FIXED FEMALE
SAE J476A

MATERIAL: STEEL

SEALS: NONE



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2A2103434A-04-04	35 kPa	1/4" NPTF	1/4" NPTF	60	Ø21	19		
10	3/8"	-06	Q2A2103434A-06-06	35 kPa	3/8" NPTF	3/8" NPTF	65 (67*)	Ø24.2	22		
12.5	1/2"	-08	Q2A2103434A-08-08	35 kPa	1/2" NPTF	1/2" NPTF	77 (81*)	Ø29.6	27		
19	3/4"	-12	Q2A2103434A-12-12	35 kPa	3/4" NPTF	3/4" NPTF	90	Ø37.4	34		
25	1"	-16	Q2A2103434A-16-16	35 kPa	1" NPTF	1" NPTF	104	Ø45	41		
31	1-1/4"	-20	Q2A2103434A-20-20	35 kPa	1-1/4" NPTF	1-1/4" NPTF	128.5	Ø55	50		
38	1-1/2"	-24	Q2A2103434A-24-24	35 kPa	1-1/2" NPTF	1-1/2" NPTF	148	Ø66	60		
51	2"	-32	Q2A2103434A-32-32	35 kPa	2" NPTF	2" NPTF	178	Ø82	75		

Dimension in brackets is for opening pressures of 600 kPa and greater

MQS-CV STANDARD SERIES CHECK VALVES

Q2A2103030

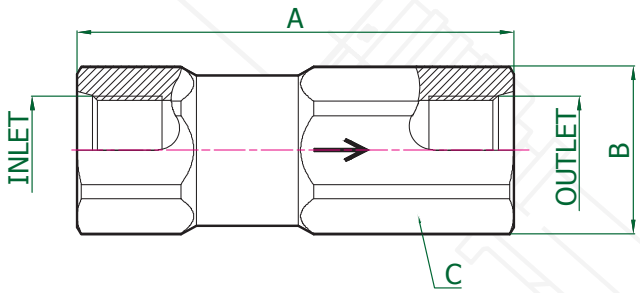
FEMALE-FEMALE, STANDARD

INLET: FEMALE O'RING BOSS TYPE SAE J1926-1

OUTLET: FEMALE O'RING BOSS TYPE SAE J1926-1

MATERIAL: STEEL

SEALS: NONE



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
12.5	1/2"	-08	Q2A2103030A-08-08	35 kPa	3/4"-16 UNF	3/4"-16 UNF	77 (81*)	Ø29.6	27		
19	3/4"	-12	Q2A2103030A-12-12	35 kPa	1.1/16"-12 UN	1.1/16"-12 UN	96	Ø37.4	34		
25	1"	-16	Q2A2103030A-16-16	35 kPa	1.5/16"-12 UN	1.5/16"-12 UN	104	Ø45	41		

Dimension in brackets is for opening pressures of 600 kPa and greater

Q2A3110504

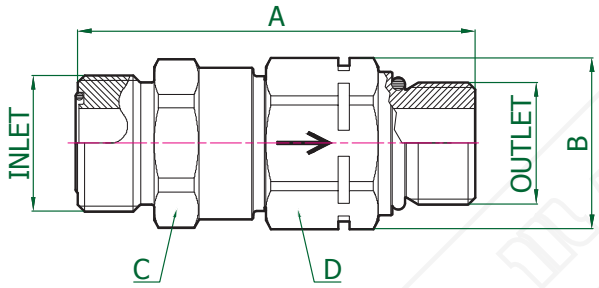
MALE-FEMALE, STANDARD

INLET: BSP MALE 60° CONE SEAT BS5200 / ISO 8434-6

OUTLET: BSP FIXED FEMALE DIN 3852-2 'FORM X' / ISO 1179-1

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2A3110504A-04-04	35 kPa	1/4"	1/4"	54.8	Ø21	19	19	
10	3/8"	-06	Q2A3110504A-06-06	35 kPa	3/8"	3/8"	63.8	Ø24,2	22	22	
12.5	1/2"	-08	Q2A3110504A-08-08	35 kPa	1/2"	1/2"	72.3	Ø30	27	27	
19	3/4"	-12	Q2A3110504A-12-12	35 kPa	3/4"	3/4"	83	Ø38	34	34	
25	1"	-16	Q2A3110504A-16-16	35 kPa	1"	1"	95.7	Ø45	41	41	

MQS-CV STANDARD SERIES
CHECK VALVES

Q2A4110405

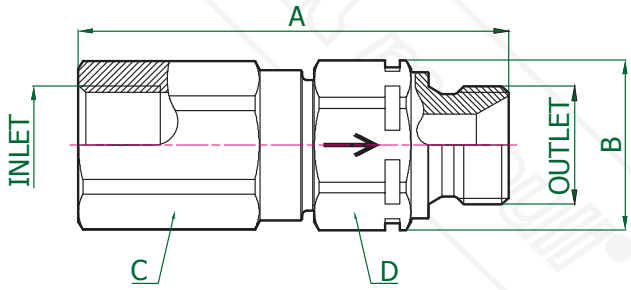
FEMALE-MALE, STANDARD

INLET: BSP FIXED FEMALE
DIN 3852-2 'FORM X' / ISO 1179-1

OUTLET: BSP MALE 60° CONE SEAT BS5200 / ISO 8434-6

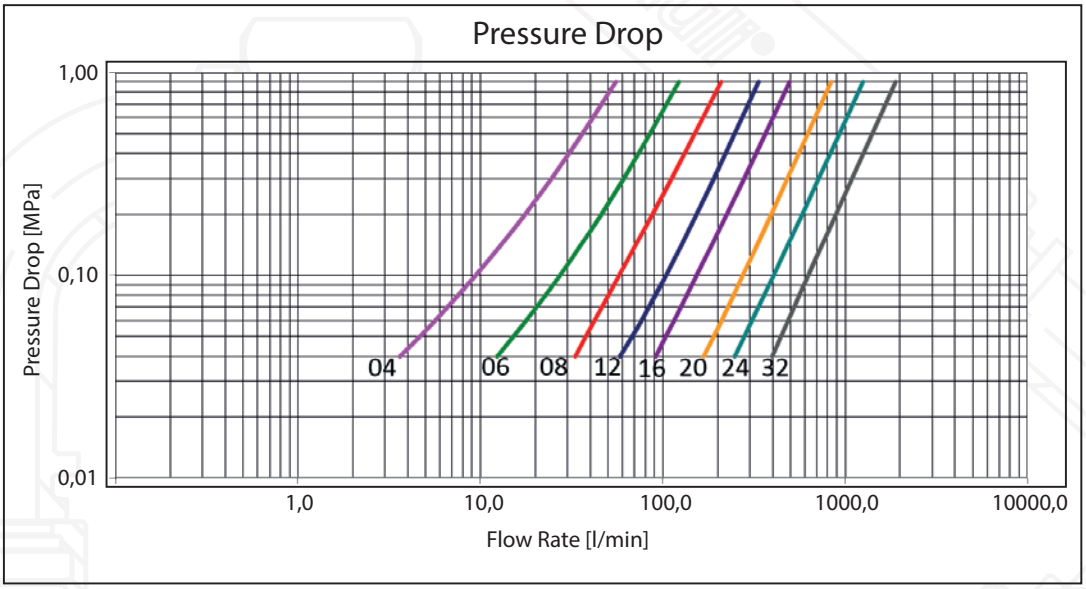
MATERIAL: STEEL

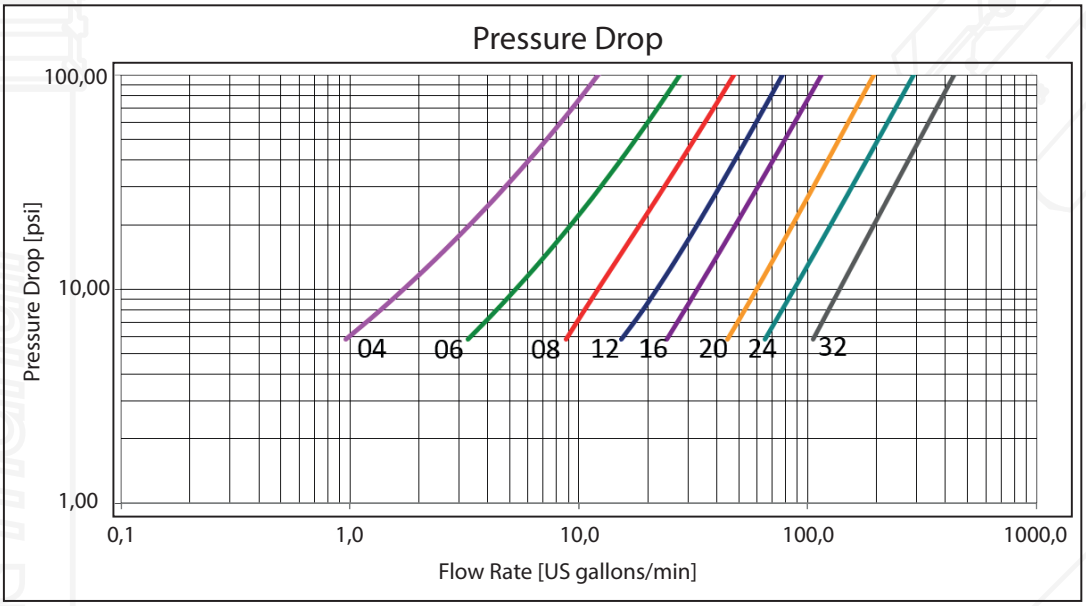
SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2A4110405A-04-04	35 kPa	1/4"	1/4"	62.5	Ø21	19	19	
10	3/8"	-06	Q2A4110405A-06-06	35 kPa	3/8"	3/8"	70.5	Ø24,2	22	22	
12.5	1/2"	-08	Q2A4110405A-08-08	35 kPa	1/2"	1/2"	83	Ø30	27	27	
19	3/4"	-12	Q2A4110405A-12-12	35 kPa	3/4"	3/4"	96.5	Ø38	34	34	
25	1"	-16	Q2A4110405A-16-16	35 kPa	1"	1"	111.5	Ø45	41	41	

TECHNICAL DATA FOR DHI CHECK VALVES





NOMINAL SIZE			WORKING PRESSURE (Dynamic)		RATED FLOW at 0.2 MPa of pressure drop		MINIMUM BURST PRESURE (MPa)	
DN	inch	Size	MPa	psi	L/min	US G/min	MPa	psi
6	1/4"	04	45	6525	18	4.8	180	26100
10	3/8"	06	35	5075	46	12.2	140	20300
12	1/2"	08	35	5075	88	23.2	140	20300
19	3/4"	12	35	5075	153	40.4	140	20300
25	1"	16	35	5075	225	59.4	140	20300
31	1.1/4"	20	35	5075	394	104.1	140	20300
38	1.1/2"	24	35	5075	580	153.2	140	20300
51	2"	32	35	5075	890	235.1	140	20300

MQS-CV DHI STANDARD SERIES CHECK VALVES

Q2A311M108

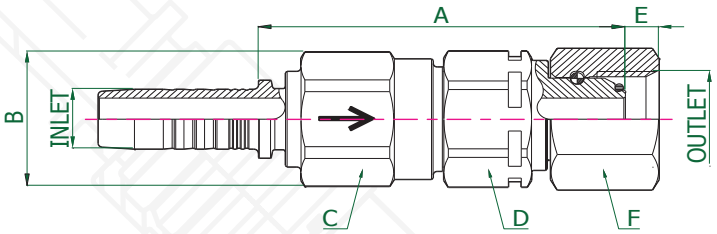
TAIL-FEMALE, STANDARD

INLET: MULTIFIT TAIL, STRAIGHT

OUTLET: BSP O-RING FEMALE 60° CONE BS5200 / ISO 8434-6

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm						
DN	inch	Size			INLET	OUTLET	A	B	C	D	E	F	G
6	1/4"	-04	Q2A-311M108A-04-04	35 kPa	1/4"	1/4"	50.2	Ø21	19	19	4.1	19	
10	3/8"	-06	Q2A-311M108A-06-06	35 kPa	3/8"	3/8"	62.3	Ø24,2	22	22	5.9	22	
12.5	1/2"	-08	Q2A-311M108A-08-08	35 kPa	1/2"	1/2"	70.9	Ø30	27	27	6.5	27	
19	3/4"	-12	Q2A-311M108A-12-12	35 kPa	3/4"	3/4"	80.6	Ø38	34	34	8.5	32	
25	1"	-16	Q2A-311M108A-16-16	35 kPa	1"	1"	86.9	Ø45	41	41	10.6	38	

Q2A311M105

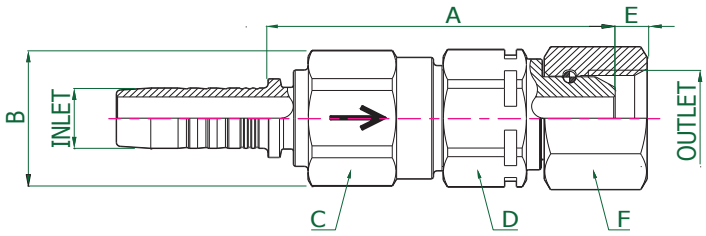
TAIL-FEMALE, STANDARD

INLET: MULTIFIT TAIL, STRAIGHT

OUTLET: BSP FEMALE 60° CONE BS5200 / ISO 8434-6

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm						
DN	inch	Size			INLET	OUTLET	A	B	C	D	E	F	G
31	1-1/4"	-20	Q2A-311M105A-20-20	35 kPa	1-1/4"	1-1/4"	111.2	Ø55	50	50	10.5	50	
38	1-1/2"	-24	Q2A-311M105A-24-24	35 kPa	1-1/2"	1-1/2"	126	Ø66	60	60	12.5	60	

MQS-CV DHI STANDARD SERIES CHECK VALVES

Q2A41108M1

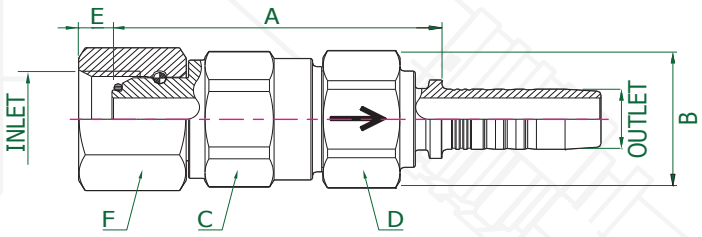
FEMALE-TAIL, STANDARD

INLET: BSP O-RING FEMALE 60° CONE BS5200 / ISO 8434-6

OUTLET: MULTIFIT TAIL, STRAIGHT

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm						
DN	inch	Size			INLET	OUTLET	A	B	C	D	E	F	G
6	1/4"	-04	Q2A-41108M1A-04-04	35 kPa	1/4"	1/4"	48	Ø21	19	19	4.1	19	
10	3/8"	-06	Q2A-41108M1A-06-06	35 kPa	3/8"	3/8"	57.3	Ø24,2	22	22	5.9	22	
12.5	1/2"	-08	Q2A-41108M1A-08-08	35 kPa	1/2"	1/2"	64.3	Ø30	27	27	6.5	27	
19	3/4"	-12	Q2A-41108M1A-12-12	35 kPa	3/4"	3/4"	73.4	Ø38	34	34	8.5	32	
25	1"	-16	Q2A-41108M1A-16-16	35 kPa	1"	1"	84.4	Ø45	41	41	10.6	38	

Q2A41105M1

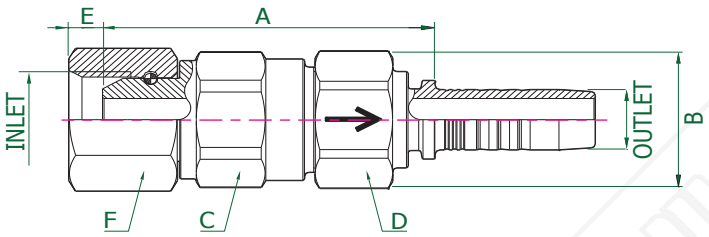
FEMALE-TAIL, STANDARD

INLET: BSP FEMALE 60° CONE BS5200 / ISO 8434-6

OUTLET: MULTIFIT TAIL, STRAIGHT

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm						
DN	inch	Size			INLET	OUTLET	A	B	C	D	E	F	G
31	1-1/4"	-20	Q2A-41105M1A-20-20	35 kPa	1-1/4"	1-1/4"	111.2	Ø55	50	50	10.5	50	
38	1-1/2"	-24	Q2A-41105M1A-24-24	35 kPa	1-1/2"	1-1/2"	126	Ø66	60	60	12.5	60	

MQS-CV DHI STANDARD SERIES CHECK VALVES

Q2A311M908

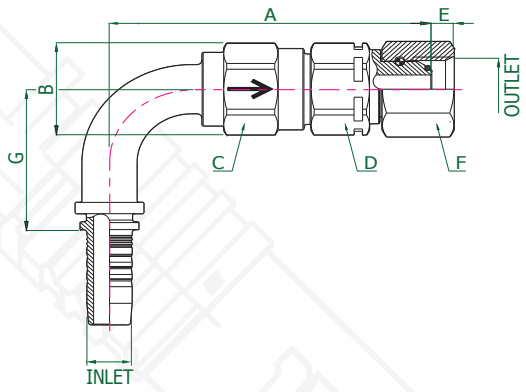
TAIL-FEMALE, STANDARD

INLET: MULTIFIT TAIL, 90° SWEPT

OUTLET: BSP O-RING FEMALE
60° CONE BS5200 / ISO 8434-6

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm						
DN	inch	Size			INLET	OUTLET	A	B	C	D	E	F	G
6	1/4"	-04	Q2A-311M908A-04-04	35 kPa	1/4"	1/4"	64.8	Ø21	19	19	4.1	19	30.1
10	3/8"	-06	Q2A-311M908A-06-06	35 kPa	3/8"	3/8"	79.9	Ø24	22	22	5.9	22	37
12.5	1/2"	-08	Q2A-311M908A-08-08	35 kPa	1/2"	1/2"	94.5	Ø30	27	27	6.5	27	45.9
19	3/4"	-12	Q2A-311M908A-12-12	35 kPa	3/4"	3/4"	115.8	Ø38	34	34	8.5	32	62.5
25	1"	-16	Q2A-311M908A-16-16	35 kPa	1"	1"	132	Ø45	41	41	10.6	38	70.6

Q2A41108M9

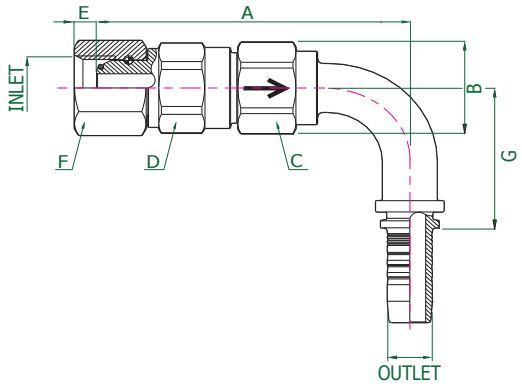
FEMALE-TAIL, STANDARD

INLET: BSP O-RING FEMALE
60° CONE BS5200 / ISO 8434-6

OUTLET: MULTIFIT TAIL, 90° SWEPT

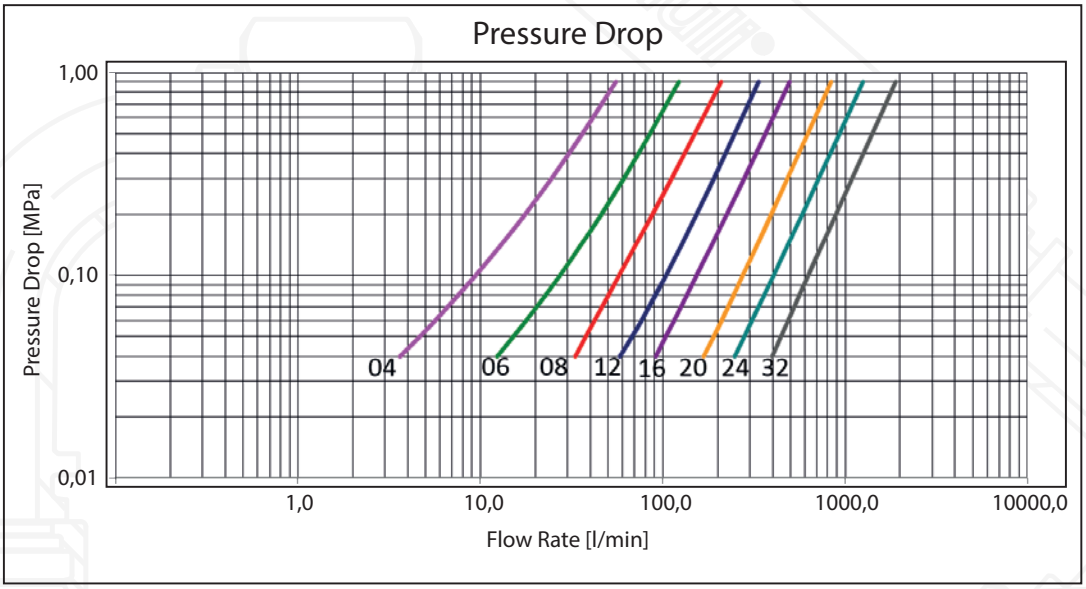
MATERIAL: STEEL

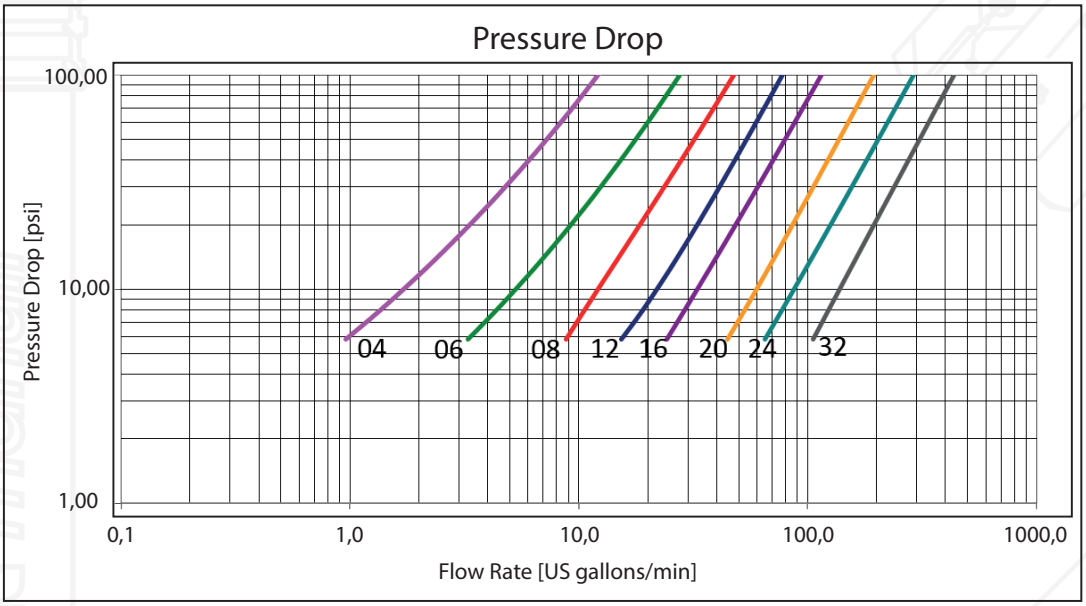
SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm						
DN	inch	Size			INLET	OUTLET	A	B	C	D	E	F	G
6	1/4"	-04	Q2A-41108M9A-04-04	35 kPa	1/4"	1/4"	62.6	Ø21	19	19	4.1	19	30.1
10	3/8"	-06	Q2A-41108M9A-06-06	35 kPa	3/8"	3/8"	74.9	Ø24	22	22	5.9	22	37
12.5	1/2"	-08	Q2A-41108M9A-08-08	35 kPa	1/2"	1/2"	88	Ø30	27	27	6.5	27	45.9
19	3/4"	-12	Q2A-41108M9A-12-12	35 kPa	3/4"	3/4"	108.6	Ø38	34	34	8.5	32	62.5
25	1"	-16	Q2A-41108M9A-16-16	35 kPa	1"	1"	129.5	Ø45	41	41	10.6	38	70.6

TECHNICAL DATA FOR DHI CHECK VALVES





NOMINAL SIZE			WORKING PRESSURE (Dynamic)		RATED FLOW at 0.2 MPa of pressure drop		MINIMUM BURST PRESURE (MPa)	
DN	inch	Size	MPa	psi	L/min	US G/min	MPa	psi
6	1/4"	04	35	5075	5	1.3	140	20300
10	3/8"	06	35	5075	11	2.9	140	20300
12	1/2"	08	35	5075	37	9.8	140	20300
19	3/4"	12	35	5075	73	19.3	140	20300
25	1"	16	35	5075	106	28.0	140	20300

MQS-CV COMPACT SERIES CHECK VALVES

Q2B1112424

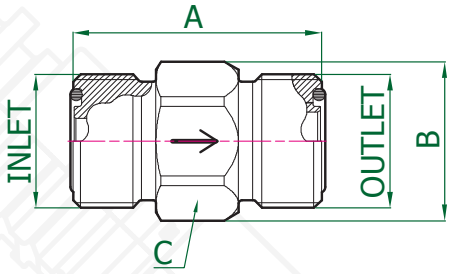
MALE-MALE, COMPACT

INLET: JIC MALE (37° CONE)
ISO 8434-2 / SAE J514

OUTLET: JIC MALE (37° CONE)
ISO 8434-2 / SAE J514

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2B1112525A-04-04	35 kPa	7/16"-20 UNF	7/16"-20 UNF	39.2	ø18,8	17		
10	3/8"	-06	Q2B1112525A-06-06	35 kPa	9/16"-18 UNF	9/16"-18 UNF	39.4	ø21	19		
12.5	1/2"	-08	Q2B1112525A-08-08	35 kPa	3/4"-16 UNF	3/4"-16 UNF	46.1	ø24,5	22		
12.5	1/2"	-08	Q2B1112525A-10-10	35 kPa	7/8"-14 UNF	7/8"-14 UNF	51.3	ø30	27		
20	3/4"	-12	Q2B1112525A-12-12	35 kPa	1.1/16"-12 UN	1.1/16"-12 UN	56.5	ø35,5	32		
25	1"	-16	Q2B1112525A-16-16	35 kPa	1.5/16"-12 UN	1.5/16"-12 UN	62	ø42	38		

Q2B1112432

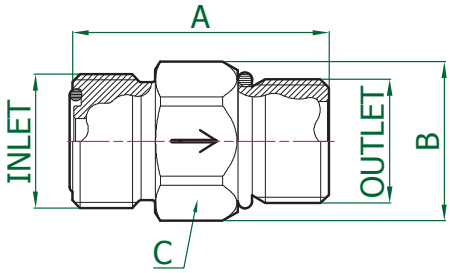
MALE-MALE, COMPACT

INLET: JIC MALE (37° CONE)
ISO 8434-2 / SAE J514

OUTLET: MALE O'RING BOSS
(NON-ADJUSTABLE HEAVY) SAE J1926-2

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
10	3/8"	-06	Q2B1112532A-06-06	35 kPa	9/16"-18 UNF	9/16"-18 UNF	37.3	ø21	19		
12.5	1/2"	-08	Q2B1112532A-08-08	35 kPa	3/4"-16 UNF	3/4"-16 UNF	43.4	ø24,5	22		
12.5	1/2"	-08	Q2B1112532A-10-10	35 kPa	7/8"-14 UNF	7/8"-14 UNF	48	ø30	27		
20	3/4"	-12	Q2B1112532A-12-12	35 kPa	1.1/16"-12 UN	1.1/16"-12 UN	53.1	ø35,5	32		
25	1"	-16	Q2B1112532A-16-16	35 kPa	1.5/16"-12 UN	1.5/16"-12 UN	57.4	ø42	38		

MQS-CVB BI-DIRECTIONAL CHECK VALVES

Q2B1112525

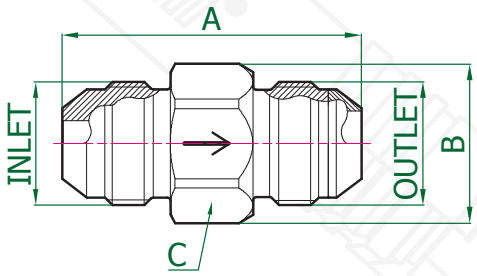
MALE-MALE, COMPACT

INLET: JIC MALE (37° CONE)
ISO 8434-2 / SAE J514

OUTLET: JIC MALE (37° CONE)
ISO 8434-2 / SAE J514

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
6	1/4"	-04	Q2B1112525A-04-04	35 kPa	7/16"-20 UNF	7/16"-20 UNF	39.2	ø18,8	17		
10	3/8"	-06	Q2B1112525A-06-06	35 kPa	9/16"-18 UNF	9/16"-18 UNF	39.4	ø21	19		
12.5	1/2"	-08	Q2B1112525A-08-08	35 kPa	3/4"-16 UNF	3/4"-16 UNF	46.1	ø24,5	22		
12.5	1/2"	-08	Q2B1112525A-10-10	35 kPa	7/8"-14 UNF	7/8"-14 UNF	51.3	ø30	27		
20	3/4"	-12	Q2B1112525A-12-12	35 kPa	1.1/16"-12 UN	1.1/16"-12 UN	56.5	ø35,5	32		
25	1"	-16	Q2B1112525A-16-16	35 kPa	1.5/16"-12 UN	1.5/16"-12 UN	62	ø42	38		

Q2B1112532

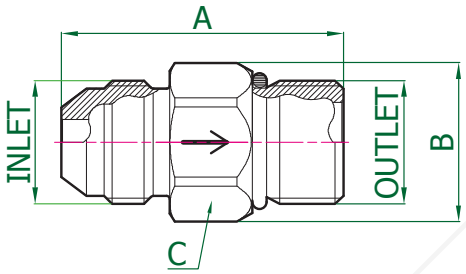
MALE-MALE, COMPACT

INLET: JIC MALE (37° CONE)
ISO 8434-2 / SAE J514

OUTLET: MALE O'RING BOSS
(NON-ADJUSTABLE HEAVY) SAE J1926-2

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING-PRESSURE	THREADS		DIMENSIONS mm				
DN	inch	Size			INLET	OUTLET	A	B	C	D	E
10	3/8"	-06	Q2B1112532A-06-06	35 kPa	9/16"-18 UNF	9/16"-18 UNF	37.3	ø21	19		
12.5	1/2"	-08	Q2B1112532A-08-08	35 kPa	3/4"-16 UNF	3/4"-16 UNF	43.4	ø24,5	22		
12.5	1/2"	-08	Q2B1112532A-10-10	35 kPa	7/8"-14 UNF	7/8"-14 UNF	48	ø30	27		
20	3/4"	-12	Q2B1112532A-12-12	35 kPa	1.1/16"-12 UN	1.1/16"-12 UN	53.1	ø35,5	32		
25	1"	-16	Q2B1112532A-16-16	35 kPa	1.5/16"-12 UN	1.5/16"-12 UN	57.4	ø42	38		

TECHNICAL DATA FOR BI-DIRECTIONAL CHECK VALVES

NOMINAL SIZE			WORKING PRESSURE (Dynamic)		RATED FLOW at 0.2 MPa of pressure drop		MINIMUM BURST PRESSURE (MPa)	
DN	inch	Size	MPa	psi	L/min	US G/min	MPa	psi
10	3/8"	06	35	5075	39	10	150	21750
12.5	1/2"	08	35	5075	84	22	140	20300
19	3/4"	-12	35	5075	119	31	140	20300

Q2D1110505

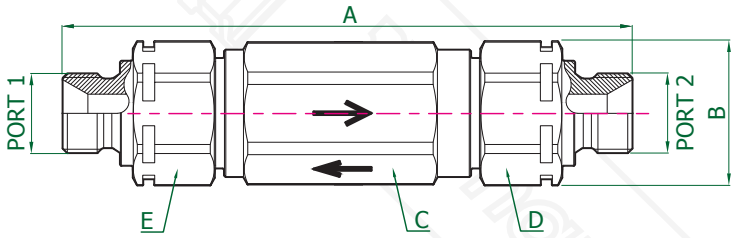
MALE-MALE, BI-DIRECTIONAL

INLET: BSP MALE 60° CONE SEAT BS5200 / ISO 8434-6

OUTLET: BSP MALE 60° CONE SEAT BS5200 / ISO 8434-6

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING PRESSURE		THREADS		DIMENSIONS mm				
DN	inch	Size		1 → 2	2 → 1	INLET	OUTLET	A	B	C	D	E
10	3/8"	-06	Q2D1110505N-06-06A	500 kPa	35 kPa	3/8"	3/8"	103.5	Ø30	27	27	27
10	3/8"	-06	Q2D1110505R-06-06A	800 kPa	35 kPa	3/8"	3/8"	103.5	Ø30	27	27	27
12.5	1/2"	-08	Q2D1110505N-08-08A	500 kPa	35 kPa	1/2"	1/2"	137.5	Ø38	34	34	34
12.5	1/2"	-08	Q2D1110505R-08-08A	800 kPa	35 kPa	1/2"	1/2"	137.5	Ø38	34	34	34
19	3/4"	-12	Q2D1110505N-12-12A	500 kPa	35 kPa	3/4"	3/4"	173.8	Ø45	41	41	41
19	3/4"	-12	Q2D1110505R-12-12A	800 kPa	35 kPa	3/4"	3/4"	173.8	Ø45	41	41	41

Q2D2110404

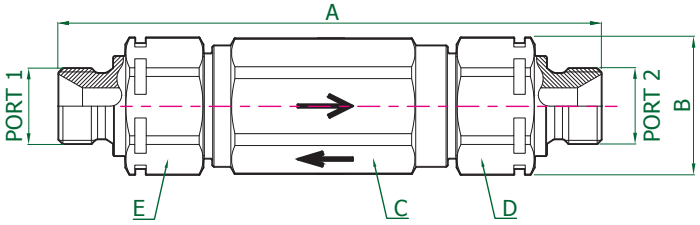
FEMALE-FEMALE, BI-DIRECTIONAL

INLET: BSP FIXED FEMALE
DIN 3852-2 'FORM X' / ISO 1179-1

OUTLET: BSP FIXED FEMALE
DIN 3852-2 'FORM X' / ISO 1179-1

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING PRESSURE		THREADS		DIMENSIONS mm				
DN	inch	Size		1 → 2	2 → 1	INLET	OUTLET	A	B	C	D	E
10	3/8"	-06	Q2D2110404N-06-06A	500 kPa	35 kPa	3/8"	3/8"	104	Ø30	27	27	27
10	3/8"	-06	Q2D2110404R-06-06A	800 kPa	35 kPa	3/8"	3/8"	104	Ø30	27	27	27
12.5	1/2"	-08	Q2D2110404N-08-08A	500 kPa	35 kPa	1/2"	1/2"	135.5	Ø38	34	34	34
12.5	1/2"	-08	Q2D2110404R-08-08A	800 kPa	35 kPa	1/2"	1/2"	135.5	Ø38	34	34	34
19	3/4"	-12	Q2D2110404N-12-12A	500 kPa	35 kPa	3/4"	3/4"	163.4	Ø45	41	41	41
19	3/4"	-12	Q2D2110404R-12-12A	800 kPa	35 kPa	3/4"	3/4"	163.4	Ø45	41	41	41

MQS-CVB BI-DIRECTIONAL CHECK VALVES

Q2D311M108

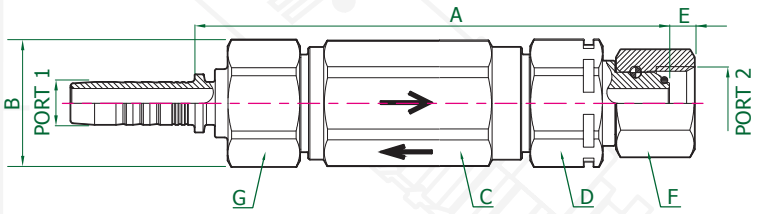
AIL-FEMALE, BI-DIRECTIONAL

INLET: MULTIFIT TAIL, STRAIGHT

OUTLET: BSP O'RING FEMALE 60° CONE BS5200 / ISO 8434-6

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING PRESSURE		THREADS		DIMENSIONS mm						
DN	inch	Size		1 → 2	2 → 1	INLET	OUTLET	A	B	C	D	E	F	G
10	3/8"	-06	Q2D311M108N-06-06A	500 kPa	35 kPa	3/8"	3/8"	100.2	Ø30	27	27	6	22	27
10	3/8"	-06	Q2D311M108R-06-06A	800 kPa	35 kPa	3/8"	3/8"	100.2	Ø30	27	27	6	22	27
12.5	1/2"	-08	Q2D311M108N-08-08A	500 kPa	35 kPa	1/2"	1/2"	129.3	Ø38	34	34	6.3	27	34
12.5	1/2"	-08	Q2D311M108R-08-08A	800 kPa	35 kPa	1/2"	1/2"	129.3	Ø38	34	34	6.3	27	34
19	3/4"	-12	Q2D311M108N-12-12A	500 kPa	35 kPa	3/4"	3/4"	163.7	Ø45	41	41	8.5	32	41
19	3/4"	-12	Q2D311M108R-12-12A	800 kPa	35 kPa	3/4"	3/4"	163.7	Ø45	41	41	8.5	32	41

Q2D41108M1

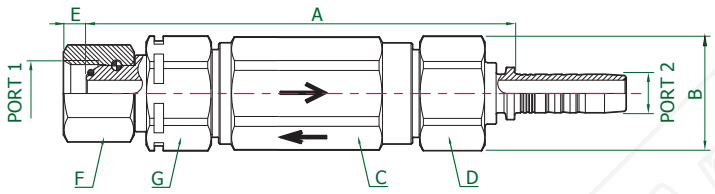
FEMALE-TAIL, BI-DIRECTIONAL

INLET: BSP O'RING FEMALE 60° CONE BS5200 / ISO 8434-6

OUTLET: MULTIFIT TAIL, STRAIGHT

MATERIAL: STEEL

SEALS: NBR (NITRILE)



NOMINAL SIZE			PART NUMBER	OPENING PRESSURE		THREADS		DIMENSIONS mm						
DN	inch	Size		1 → 2	2 → 1	INLET	OUTLET	A	B	C	D	E	F	G
10	3/8"	-06	Q2D41108M1N-06-06A	500 kPa	35 kPa	3/8"	3/8"	97.8	Ø30	27	27	6	22	27
10	3/8"	-06	Q2D41108M1R-06-06A	800 kPa	35 kPa	3/8"	3/8"	97.8	Ø30	27	27	6	22	27
12.5	1/2"	-08	Q2D41108M1N-08-08A	500 kPa	35 kPa	1/2"	1/2"	127.3	Ø38	34	34	6.3	27	34
12.5	1/2"	-08	Q2D41108M1R-08-08A	800 kPa	35 kPa	1/2"	1/2"	127.3	Ø38	34	34	6.3	27	34
19	3/4"	-12	Q2D41108M1N-12-12A	500 kPa	35 kPa	3/4"	3/4"	173.8	Ø45	41	41	8.5	32	41
19	3/4"	-12	Q2D41108M1R-12-12A	800 kPa	35 kPa	3/4"	3/4"	173.8	Ø45	41	41	8.5	32	41

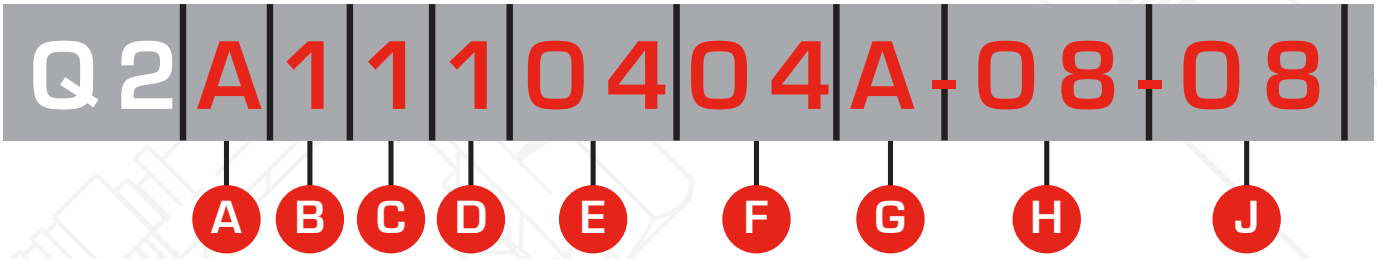
BESPOKE SOLUTIONS TO UNIQUE PROBLEMS

Hydraulics applications are so many and varied that it would be pretty much impossible to develop industrialised products for every possible situation. However, at Manuli Hydraulics we are fully prepared to meet any application challenge that our OEM partners can present us with, which is why we offer our Bespoke Solutions Program (BSP).

The BSP is just one way that Manuli Hydraulics provides an added value service to our OEM partners. Manuli Hydraulics is structured in such a way that we can tailor solutions to the specific requirements of our customers in a way that our competitors never could. We are small enough to be agile and responsive, yet large enough to have the design and manufacturing capabilities to produce bespoke products at a reasonable price. Used by some of the largest and most respected OEMs around the world, the Manuli Bespoke Solutions Program means that you never have to compromise on your hydraulic system design again.

HOW TO SPECIFY YOUR BESPOKE CHECK VALVE

Specifying the required properties of your check valve is simply a matter of constructing an appropriate part number. The following pages explain how to construct the part number using the Manuli Hydraulics part numbering system



A - CHECK VALVE TYPE - See Table 1

B - INPUT/OUTPUT CONFIGURATION - See Table 2

C - VALVE MATERIAL - See Table 3

D - SEAL MATERIAL - See Table 4

E - INPUT TERMINATION END TYPE - See Table 5

F - OUTPUT TERMINATION END TYPE - See Table 5

G - CRACK PRESSURE - See Table 6

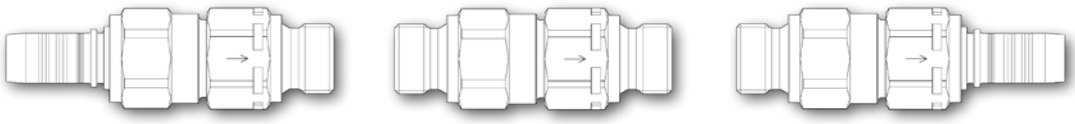
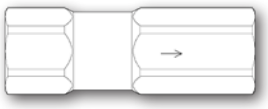
H - INPUT TUBE SIZE - See Table 7

J - OUTPUT TUBE SIZE - See Table 7

1 - CHECK VALVE TYPE

Digit	Check Valve Type
A	Standard
B	Compact
C	Calibrated
D	Bi-directional

2 - INLET / OUTLET CONFIGURATION

Digit	INLET	OUTLET
1	Male / Tail*	Male / Tail*
		
2	Female	Female
		
3	Male / Tail*	Female
		
4	Female	Male / Tail*
		

*** Use Table 5a for male termination ends, and Table 5b for DHI tails**

3 - VALVE MATERIAL

Digit	Material
1	Steel
2	AISI 316
3	AISI 303
4	Brass
5	Aluminium

4 - SEAL MATERIAL

Digit	INLET
0	None
1	NBR (Nitrile)
2	HNBR
3	FKM (Viton, FPM)
4	CR (Neoprene)
5	EPDM
6	FFPM (Kalrez)
7	PTFE
8	VMQ (Silicone Rubber)
9	AU (Polyurethane)

5 - INLET / OUTLET TERMINATION END TYPE

Digit	Male Termination End	Female Termination End
01	BSP Male DIN 3852-11 - ISO 1179-2 Heavy Duty “form E”	Fixed Female GAS JIS B 2351 “type O”
02	BSP Male Tapered Thread Long	BSP Female Tapered
04	BSP Male Bulkhead	BSP Fixed Female DIN 3852-2 “form X” / ISO 1179-1
05	BSP Male 60° cone seat BS5200 / ISO 8434-6	BSP Female 60° cone BS5200 / ISO 8434-6
08	Metric Bolt DIN 7643	BSP O-Ring Female 60° cone BS5200 / ISO 8434-6
11	Metric male 24° cone seat light type DIN 3861 / ISO 8434-1	-
12	Metric male 24° cone seat heavy type DIN 3861 / ISO 8434-1	Metric Female 24° cone O'Ring heavy type DIN 3865 / ISO 8434-1 Long Drop
14	Metric Male DIN 3852-11 “form E” b/ ISO 9974-2	Metric Fixed Female DIN 3852-1 “form X” and “form Y”
19	Metric Male ISO 6149-2 / DIN 3852-3 “form F” (only for Fittings and Q.Safe) Metric Male with Retaining Ring (Adjustable + Non-Adjustable Heavy) ISO 9974 port compatible (only for Adaptors)	Metric Fixed Female ISO 6149-1
23	JIC Bulkhead male 37° cone ISO 8434-2 / SAE J514	-
24	ORFS male ISO 8434-3 / SAE J1453	ORFS female ISO 8434-3 / SAE J1453
25	JIC male (37° cone) ISO 8434-2 / SAE J514	JIC female (37° cone seat) ISO 8434-2 / SAE J514
27	ORFS Bulkhead male ISO 8434-3 / SAE J1453	JIC female double hexagon 37° cone seat
28	NPTF Male 60° cone seat SAE J476a	NPSM Swivel Female 60° cone SAE J514
30	Male O'Ring Boss type SAE J1926-3	Female Port SAE J1926-1
32	Male O'Ring Boss (Adjustable + Non-Adjustable Heavy) SAE J1926-2	-
34	API Male	NPTF Fixed Female SAE J476a
37	Metric male 60° cone superlight DIN 3863 Bulkhead	Flange ISO/SAE 62 Plus / Flange (A/C)
77	DIN Bulkhead Male 24° cone Light type ISO 8434-1	ASME B16.5 Ring Joint Type Flange
82	French GAZ Bulkhead metric male 24° cone seat	Staple Lock Swivel Female
87	DIN Bulkhead Male 24° cone Heavy type ISO 8434-1	ASME B16.5 FLANGE / SDB compressor (A/C)

Table 5a - Termination End Options

Digit	DHI Tail Type
M1	Multifit tail, straight
M4	Multifit tail, 45° swept
M9	Multifit Plus tail, 90° swept
I1	Interlock Plus tail, straight
I4	Interlock Plus tail, 45° swept
I9	Interlock Plus tail, 90° swept
S1	Spiralfit tail, straight
S4	Spiralfit tail, 45° swept
S9	Spiralfit tail, 90° swept

Table 5b - DHI Tail Options

6 - CRACK PRESSURE

Digit	Pressure (kPa)	Pressure (psi)
A	35	5.1
B	10	1.5
C	20	2.9
D	50	7.3
E	100	14.5
F	150	21.8
G	200	29.0
H	250	36.3
J	300	43.5
K	350	50.8
L	400	58.0
M	450	65.3
N	500	72.5
P	600	87.0
Q	700	101.5
R	800	116.0
S	900	130.5
T	1000	145.0
X	Without Spring	

7 - INLET / OUTLET TUBE SIZE

Digit	DN	Inch	Dash
04	6	1/4”	-04
06	10	3/8”	-06
08	12	1/2”	-08
10	16	5/8”	-10
12	19	3/4”	-12
16	25	1”	-16
20	31	1-1/4”	-20
22	35	1-3/8”	-22
24	38	1-1/2”	-24
32	51	2”	-32
36	57	2-1/4”	-36

Note: When specifying the crack pressure for a bi-directional check valve the digit value would refer to the crack pressure in the B-A direction. A-B direction crack pressure is always 35kPa

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