

# Q.Safe

## QUICK COUPLINGS



THE GOLD STANDARD FOR HYDRAULIC QUICK COUPLINGS



# Q.Safe

## WHY QUICK COUPLINGS?

Modern hydraulic equipment is often designed to carry out multiple tasks with just a simple change of tooling. This trend is particularly prevalent in the agriculture and construction industries, where tractors, skid steer loaders, back hoes, telescopic handlers and excavators are typically equipped with auxiliary hydraulic lines to allow the attachment of any of a multitude of different tools.

In order to facilitate quick, safe and repeated connection a suitable coupling for the hydraulic feed and return lines must be used.

Some key requirements of these couplings are:

- High working pressure and safety factor
- Minimal pressure drop across the coupling
- Minimal oil spillage on connection / disconnection
- Low connection / disconnection effort
- Connection under pressure





## Q.SAFE FOR GENERAL HYDRAULIC APPLICATIONS

*Q.Safe is the Manuli Hydraulics offering for quick coupling applications. Composed of more than 1,200 references, accessories and spare parts, the Q.Safe brand has rapidly become an industry byword for quality and performance.*



The majority of the Q.Safe product range is manufactured with an environmentally friendly Cr3+ (trivalent chrome) surface coating, which offers excellent resistance to corrosion; far exceeding ISO 4520 requirements (salt spray resistance: 240 hours for white corrosion and 400 for red corrosion). However, certain products which are expected to have a more severe mission profile now come with a Zinc Nickel (ZnNi) coating as standard - offering up to 3 times the corrosion resistance of the standard coating.

Guaranteeing leak-free performance, the Q.Safe brand is suitable for a wide range of different applications and assures total interchangeability with other quick coupling products on the market.

All Q.Safe products are manufactured and assembled in our world-class facility in Poland, where they are subjected to stringent quality controls including:

- 100% visual check
- 100% functional test
- 100% air sealing test



## Q.SAFE FLAT FACE PROGRAM

One of the cornerstones of the Manuli product range, the Q.Safe range of flat face quick couplings was developed with one clear goal in mind - to push the boundaries of what can be achieved by production model quick couplings.

Thus the Flat Face Program from Manuli was conceived.

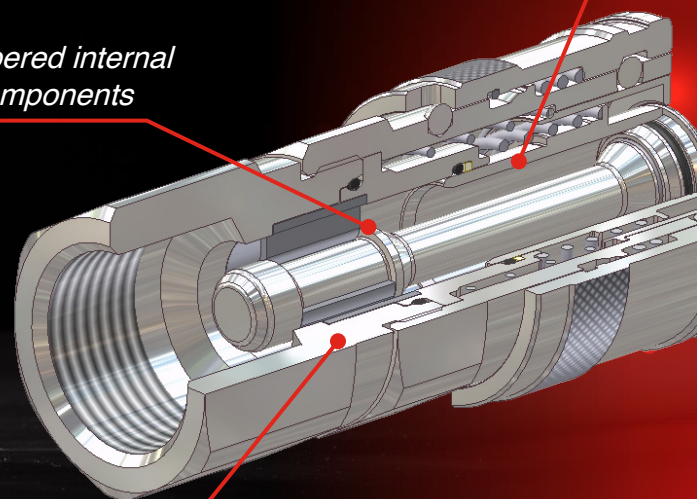
The Q.Safe Flat Face program is comprised of four distinct flat valve models:

- **MQS-F** - Flat face coupling
- **MQS-FH** - High pressure flat face coupling
- **MQS-FP** - Flat face coupling with male connectable under pressure
- **MQS-FS** - Screw type flat face coupling

Each model has been designed to our uniquely high specifications, ensuring that it provides the best possible performance in whatever application it is used for.








*Tempered internal components*



*Compact & robust structure*

*Advanced hydrodynamic inner profile*

	<b>MPa</b>			<b>N</b>			
SIZE	WORKING PRESSURE - CONNECTED (Dynamic)	WORKING PRESSURE - DISCONNECTED (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	CONNECTION EFFORT	OIL SPILLAGE Connection/ Disconnection	MINIMUM BURST PRESSURE	CONNECTION/ DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	MPa	PSI	l/ min	US GPM	N	lb.	cc.	cubic inch	Male		Female		M & F		
													MPa	PSI	MPa	PSI	MPa	PSI	
6.3	1/4	04	35	5075	35	5075	15	4.0	130	29.2	0.005	0.0003	160	23200	140	20300	150	21750	Female only - up to 6 MPa
10	3/8	06	35	5075	25	3625	53	14.0	130	29.2	0.007	0.0004	140	20300	125	18125	145	21025	
12.5	1/2	08	35	5075	25	3625	98	25.9	140	31.5	0.008	0.0005	135	19575	115	16675	145	21025	Female only - up to 4 MPa
16	5/8	10	35	5075	25	3625	109	28.8	150	33.7	0.008	0.0005	150	21750	100	14500	140	20300	Female only - up to 3 MPa
19	3/4	12	35	5075	25	3625	174	46.0	210	47.2	0.009	0.0005	110	15950	102	15225	145	21025	Female only - up to 2 MPa
25	1	16	35	5075	21	3045	203	53.6	230	51.7	0.02	0.0012	100	14500	85	12325	150	21750	

MQS-F technical data



## MQS-F – FLAT FACE COUPLING

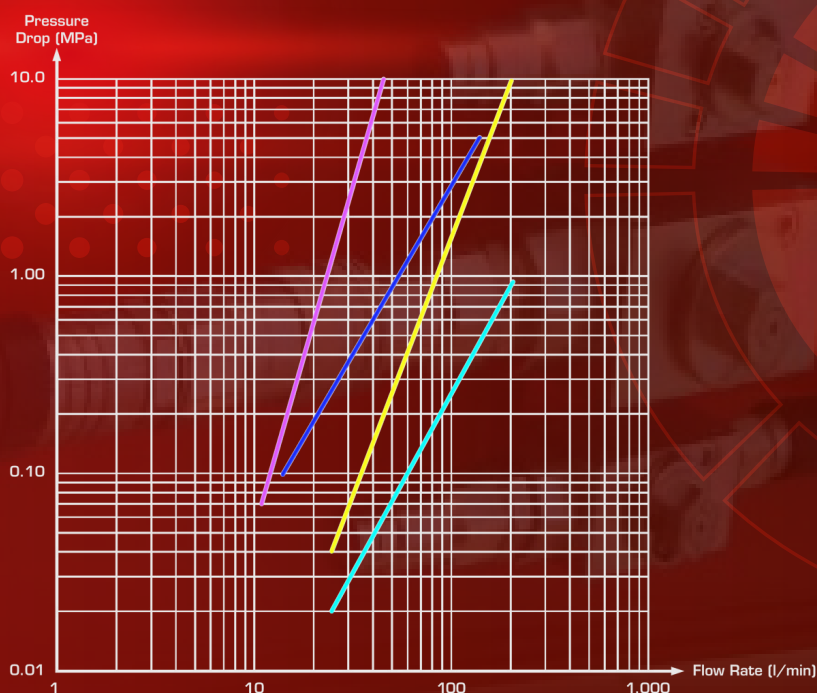
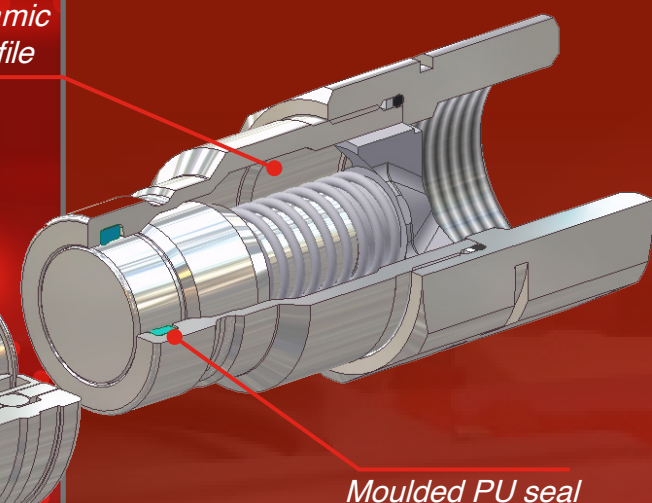
As baseline products go, the MQS-F flat face coupling sets a whole new standard for the quick release coupling industry.

With global interchangeability, high pressure ratings and the lowest pressure drop profile on the market, the MQS-F is a product that our competitors can only aspire to.

**The MQS-F coupling provides the following benefits:**

- Streamlined inner profile provides market-leading pressure drop performance at high flow rates
- Environmentally friendly Cr3+ (Trivalent Chrome) coating with 400+ hours to red rust under salt spray conditions
- Connectable with female under residual pressure up to 6 MPa
- WP of up to 25 MPa (disconnected) and 35 MPa (connected) with a safety factor of 4:1 in all states
- Moulded polyurethane (PU) seal on male coupling
- Almost zero oil spillage during connection / disconnection
- Made from highly resistant materials with selective tempering on most stressed areas
- Working temperature range from -30°C to +110°C (-22°F to +230°F)
- Globally interchangeable according to ISO 16028
- Tested to 1,000,000 cycles at 120% of working pressure
- No oil contamination during connection / disconnection
- Low connection / disconnection effort

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Pressure Drop vs. Flow Rate  
for MQS-F Series vs. Competitors

- Competitor 1 Equivalent Quick Coupling (DN12)
- Competitor 2 Equivalent Quick Coupling (DN12)
- Competitor 3 Equivalent Quick Coupling (DN12)
- Manuli Hydraulics Flat Face Quick Coupling (DN12)

## **MQS-FH – HIGH PRESSURE FLAT FACE COUPLING**

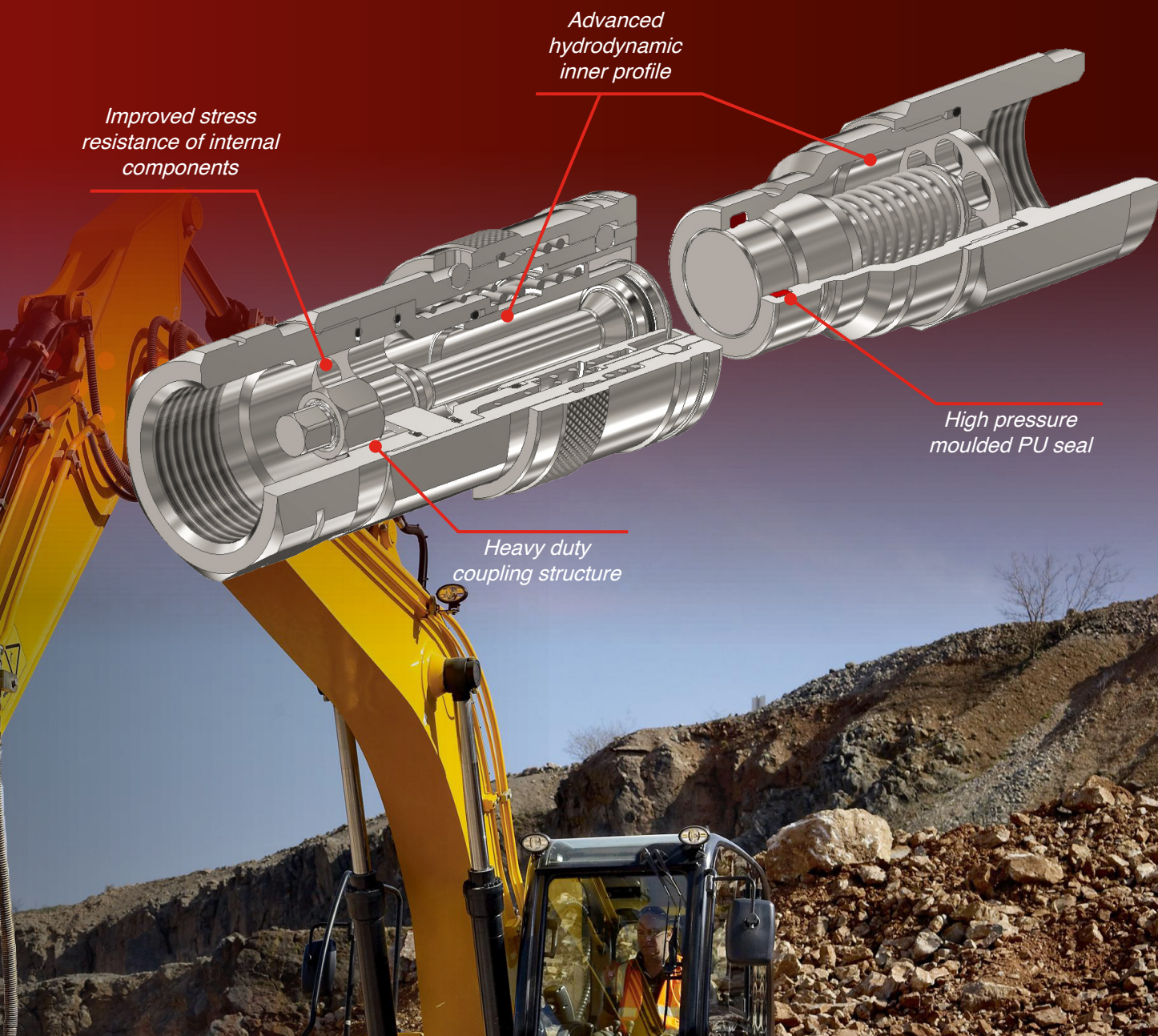
**Designed for continuous service in high-pressure applications, the MQS-FH series couplings have an even more robust outer structure and higher resistance internal components.**






In addition to the properties of the standard MQS-F series, the MQS-FH series also has the following benefits:

- Increased service life in heavy-duty applications
- Zinc Nickel coating for up to 3 times longer corrosion resistance
- Connectable with female under residual pressure up to 6 MPa
- WP of 35 MPa in both connected and disconnected conditions
- Enhanced polyurethane (PU) seal
- More robust construction
- Improved energy efficiency







	<b>MPa</b>			<b>N</b>			
SIZE	WORKING PRESSURE - CONNECTED (Dynamic)	WORKING PRESSURE - DISCONNECTED (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	CONNECTION EFFORT	OIL SPILLAGE Connection/ Disconnection	MINIMUM BURST PRESSURE	CONNECTION/ DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	MPa	PSI	l/ min	US GPM	N	lb.	cc.	cubic inch	Male		Female		M & F		
													MPa	PSI	MPa	PSI	MPa	PSI	
6.3	1/4	04	35	5075	35	5075	15	4.0	130	29.2	0.005	0.0003	160	23200	140	20300	150	21750	Female only - up to 6 MPa
10	3/8	06	35	5075	35	5075	44	11.6	130	29.2	0.007	0.0004	150	21750	140	20300	170	24650	
12.5	1/2	08	35	5075	35	5075	84	22.2	140	31.5	0.008	0.0005	140	20300	140	20300	160	23200	
16	5/8	10	35	5075	35	5075	108	28.5	150	33.7	0.008	0.0005	140	20300	160	23200	160	23200	Not allowed
19	3/4	12	35	5075	35	5075	148	39.1	210	47.2	0.009	0.0005	140	20300	140	20300	160	23200	
25	1	16	35	5075	35	5075	224	59.2	230	51.7	0.02	0.0012	140	20300	140	20300	160	23200	

MQS-FH technical data










## MQS-FP – CONNECT UNDER PRESSURE FLAT FACE COUPLING

Often used on earth-moving machine implements, the MQS-FP can be connected / disconnected with the male coupling under full working pressure. This is achieved by the addition of a micro valve with a mini polyurethane seal, creating a triple valve system.

In addition to the properties of the standard MQS-F series, the MQS-FP series also has the following benefits:

- Ability to be connected with the male coupling at full working pressure of 35 MPa (female must be at 0 MPa)
- Zinc Nickel plating for enhanced corrosion resistance
- WP of 35 MPa in both connected and disconnected conditions
- Low connection effort even when male coupling is pressurised

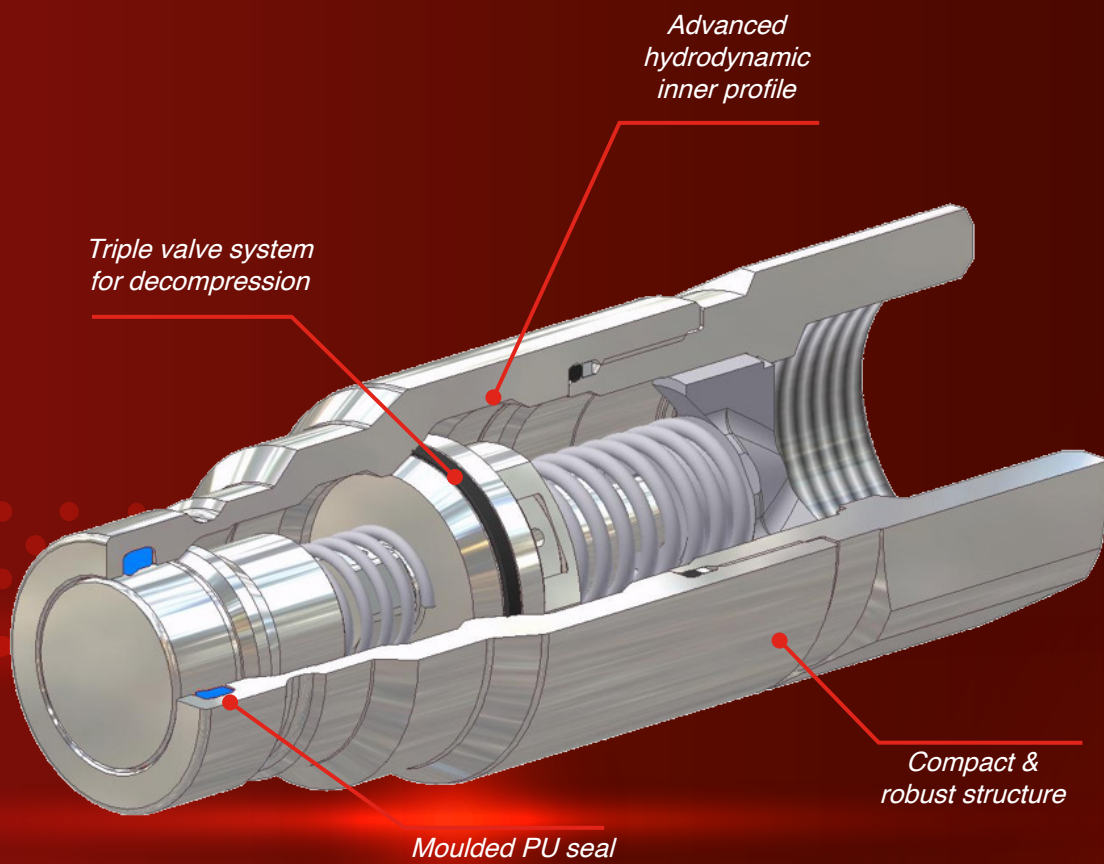


							
SIZE	WORKING PRESSURE - CONNECTED (Dynamic)	WORKING PRESSURE - DISCONNECTED (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	CONNECTION EFFORT	OIL SPILLAGE Connection/ Disconnection	MINIMUM BURST PRESSURE	CONNECTION/ DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	MPa	PSI	I/ min	US GPM	N	lb.	cc.	cubic inch	Male		M & F		
													MPa	PSI	MPa	PSI	
10	3/8	06	35	5075	35	5075	56	14.8	150	33.7	0.007	0.0004	170	24650	140	20300	Connection allowed
12.5	1/2	08	35	5075	35	5075	85	22.5	180	40.5	0.008	0.0005	170	24650	140	20300	Connection allowed
16	5/8	10	35	5075	35	5075	99	26.2	200	45.0	0.008	0.0005	170	24650	140	20300	Connection allowed
19	3/4	12	35	5075	35	5075	131	34.6	200	45.0	0.009	0.0005	140	20300	150	21750	Connection allowed
25	1	16	35	5075	35	5075	170	44.9	220	49.5	0.02	0.0012	140	23200	160	23200	Connection allowed








*MQS-FP technical data*









							
SIZE	WORKING PRESSURE - CONNECTED (Dynamic)	WORKING PRESSURE - DISCONNECTED (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	TIGHTENING TORQUE	OIL SPILLAGE Connection/ Disconnection	MINIMUM BURST PRESSURE	CONNECTION/ DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	MPa	PSI	l/ min	US GPM	Nm	cc.	cubic inch	Male		Female		M & F		
												MPa	PSI	MPa	PSI	MPa	PSI	
10	3/8	06	35	5075	35	5075	43	11.4	60	0.007	0.0004	160	23200	140	20300	170	24650	Allowed
12.5	1/2	08	35	5075	35	5075	70	18.5	100	0.008	0.0005	170	24650	150	21750	150	21750	Allowed
16	5/8	10	35	5075	35	5075	85	22.5	100	0.008	0.0005	200	29000	160	23200	160	23200	Allowed
19	3/4	12	35	5075	35	5075	135	35.7	150	0.009	0.0005	145	21025	145	21025	160	23200	Allowed
25	1	16	35	5075	35	5075	170	44.9	200	0.02	0.0012	145	21025	145	21025	160	23200	Allowed
38	1 1/2	24	32	4640	32	4640	396	104.6	400	0.05	0.0031	130	18850	130	18850	130	18850	Allowed

*MQS-FS technical data*

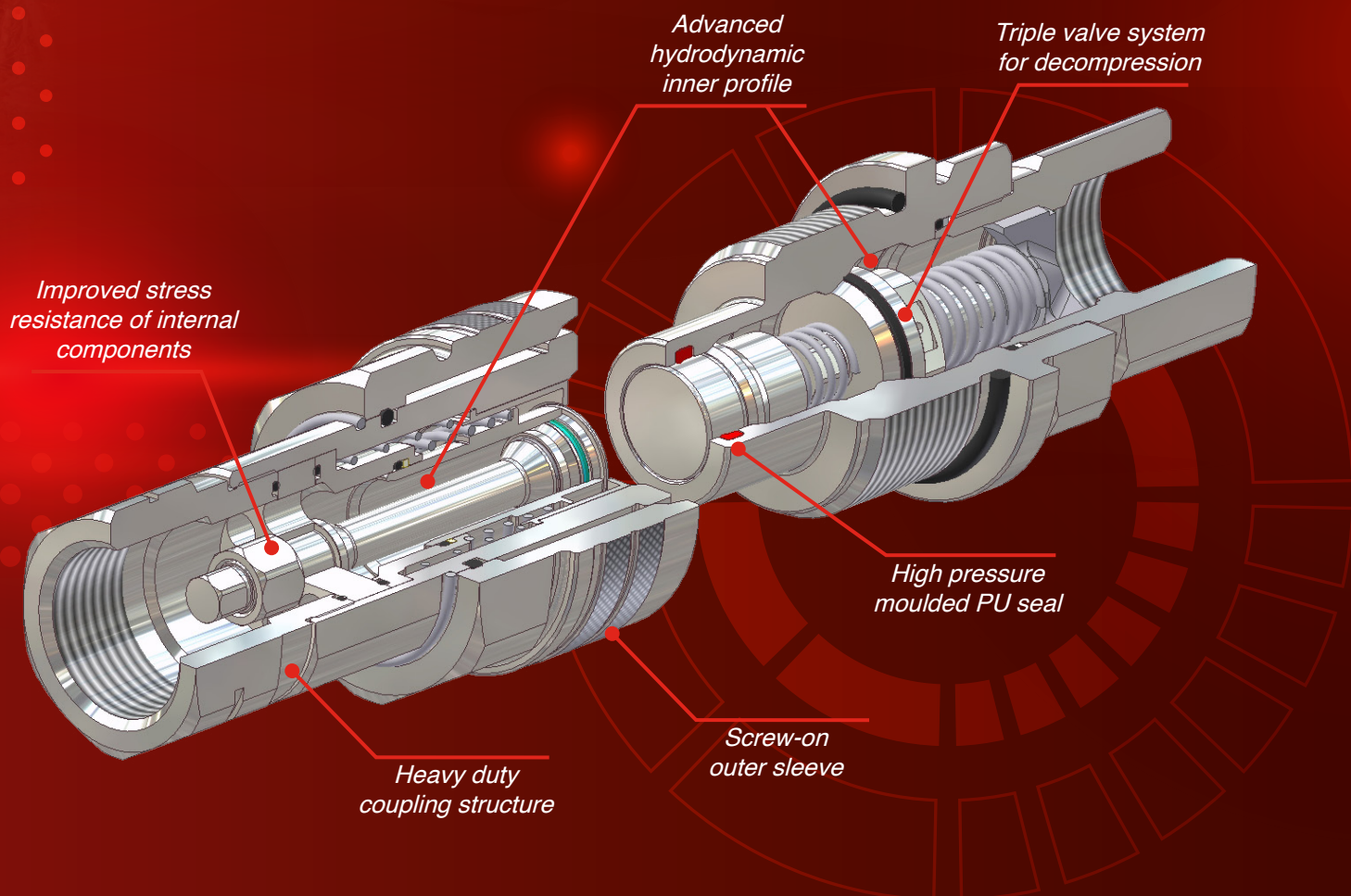


## MQS-FS – SCREW TYPE FLAT FACE COUPLING

Incorporating the best design features of the rest of the flat face series, the MQS-FS is the quintessential coupling of its type. Ruggedly built, but sacrificing none of the hydrodynamic excellence inherent in the rest of the Q.Safe flat face range, the MQS-FS is the ultimate choice for even the most severe of applications,

In addition to the properties of the standard MQS-F series, the MQS-FS series also has the following benefits:

- Ability to be connected with both couplings at full working pressure of 35 MPa
- WP of 35 MPa in both connected and disconnected conditions
- Zinc Nickel coating for corrosion resistance up to 720 hours
- Screw coupling for minimal connection effort even when system is pressurised
- Enhanced polyurethane moulded seal
- Extremely robust construction making it suitable for the toughest applications

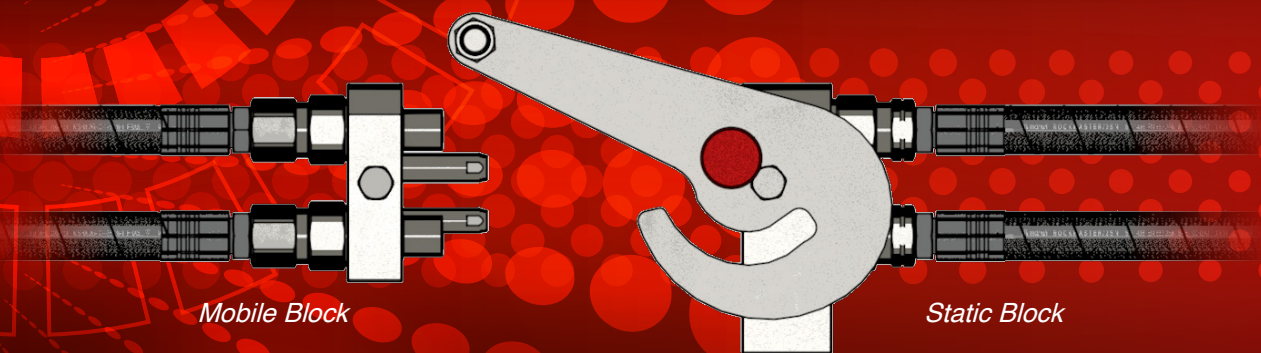


## Q.SAFE FLAT FACE MULTICONNECTORS

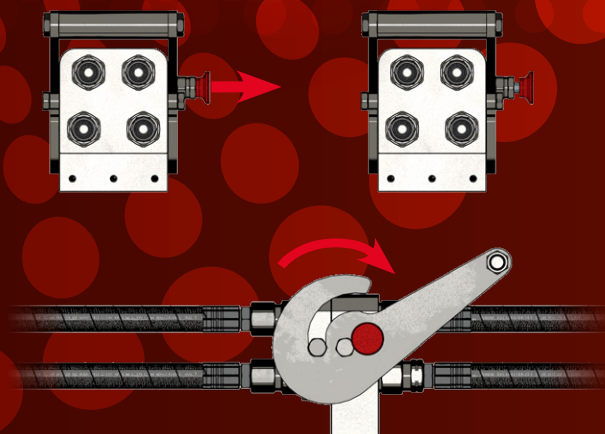
The Q.Safe quick coupling range is widely renowned for representing the Gold Standard in quick coupling quality and performance. The introduction of the Q.Safe Flat Face Multiconnector range combines this superior performance with the added efficiency and safety related benefits of a multiconnector block system.

### Q.SAFE MULTICONNECTOR BENEFITS:

- Reduces connection time when multiple connectors are used
- No risk of incorrect connection
- No misalignment between mobile and static blocks
- Compact design for minimal added weight
- Flat face couplings allow high pressures (350 bar) and high flow rates
- Allows hoses to be arranged closer together whilst still allowing easy access
- Industry leading performance with reduced pressure drop
- Almost zero (between 0.007cc and 0.009cc) oil spillage on connection / disconnection
- Connection under residual pressure
- Easy to clean



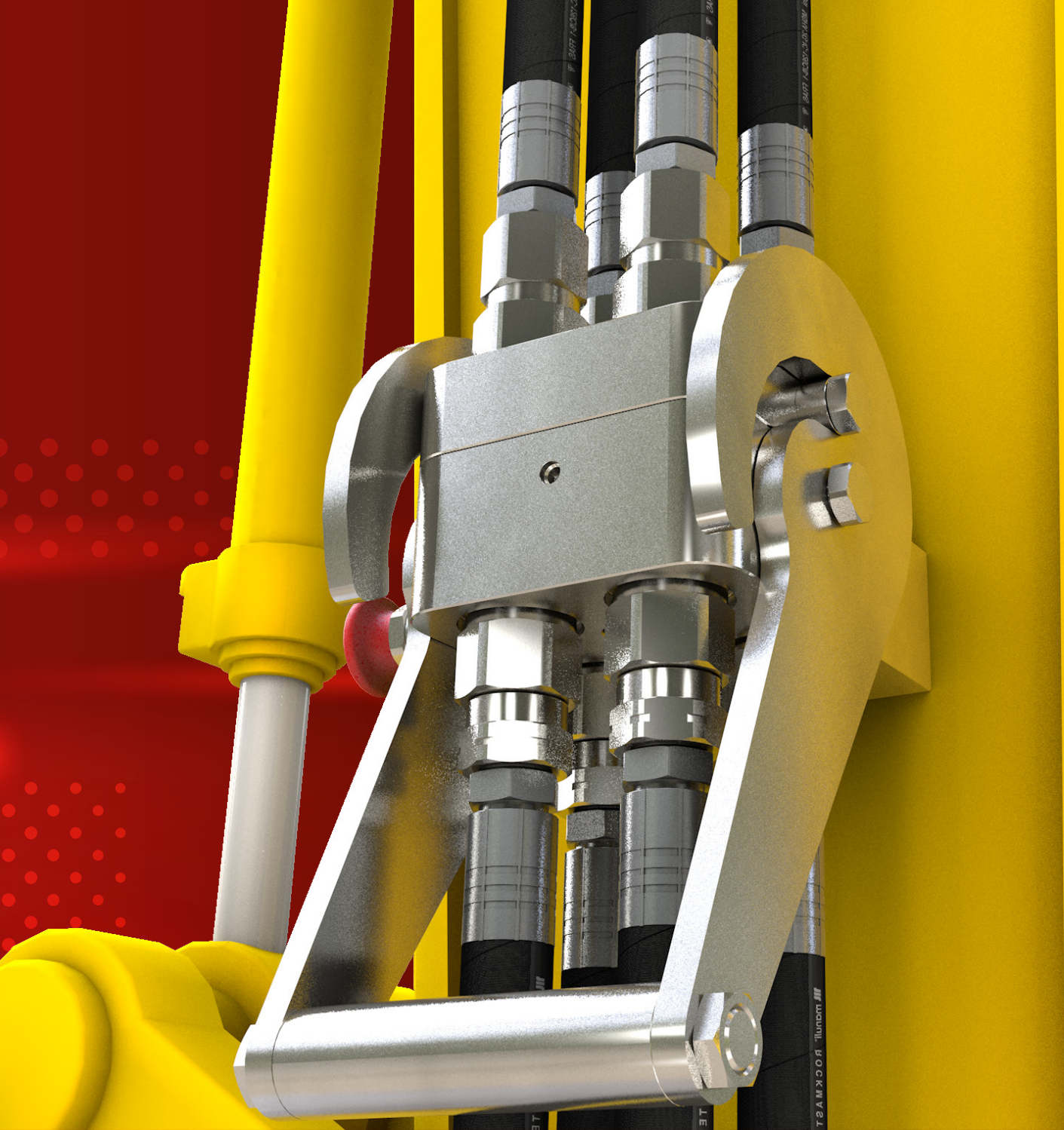
Simply position the mobile block so that the couplings sit against the face of the static block. The extended pins will slide into the mating holes to ensure perfect alignment.









Pull out the red locking pin to allow the handle to move.

Move the handle in the direction shown to pull the mobile block towards the static block, making the connection with the couplings. The red pin will pop back in when the connection is complete, effectively locking the two parts together.





						
SIZE	WORKING PRESSURE - CONNECTED (Dynamic)	WORKING PRESSURE - DISCONNECTED (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	OIL SPILLAGE Connection/ Disconnection	MINIMUM BURST PRESSURE	CONNECTION/ DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	MPa	PSI	l/ min	US GPM	cc.	cubic inch	Male		Female		M & F		
											MPa	PSI	MPa	PSI	MPa	PSI	
10	3/8	06	35	5075	35	5075	44	11.6	0.007	0.0004	170	24650	140	20,300	180	26100	Allowed
12.5	1/2	08	35	5075	35	5075	76	20.1	0.008	0.0005	170	24650	140	20,300	180	26100	Allowed
19	3/4	12	35	5075	35	5075	129	34.1	0.009	0.0005	140	20300	140	20,300	160	23200	Allowed
25	1"	16	35	5075	35	5075	172	45.4	0.02	0.0012	160	23200	150	21,750	160	23200	Allowed

The rated flow represents the normal operating condition. The maximum recommended flow rate is equal to 1.5 times the rated flow

Q.Safe multiconnector flat face coupling technical data



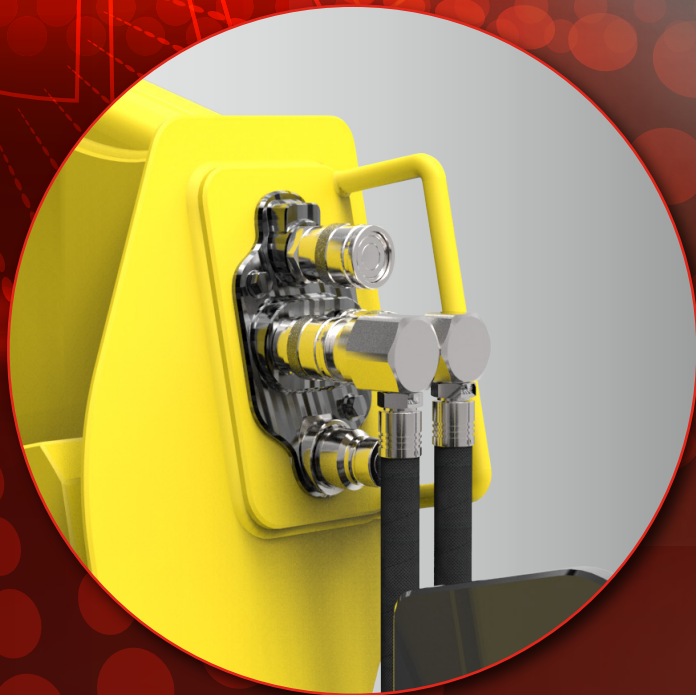
## Q.SAFE FLAT FACE 90° QUICK COUPLINGS

*Finding the optimum position for quick couplings on vehicles can be tricky, especially on equipment that uses multiple tools, such as a skid steer. Sometimes the hose routing necessary for a particular implement just doesn't allow for a standard straight quick coupling. In these cases it is often necessary to change the orientation of the hose connection to the coupling.*








Q.Safe Flat Face 90° quick couplings from Manuli are the perfect solution for this type of situation, as well as for those where space is restricted and a straight coupling just won't fit.

With any 90° quick coupling, the reorientation of the ports causes a certain amount of internal turbulence which increases pressure drop across the coupling. Designed to the same exacting standards as the MQS-F quick coupling series, the 90° version suffers from minimal additional pressure drop ensuring that it is still one of the most efficient couplings of its type.

Available in sizes  $\frac{3}{8}$ " and  $\frac{1}{2}$ ", Q.Safe 90° quick couplings are designed in accordance with ISO 16028 making them fully interchangeable with other flat face coupling brands.





							
SIZE	WORKING PRESSURE - CONNECTED (Dynamic)	WORKING PRESSURE - DISCONNECTED (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	CONNECTION EFFORT	OIL SPILLAGE Connection/ Disconnection	MINIMUM BURST PRESSURE	CONNECTION/ DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	MPa	PSI	I/ min	US GPM	N	lb.	cc.	cubic inch	Male		Female		M & F		
													MPa	PSI	MPa	PSI	MPa	PSI	
10	3/8	06	35	5075	25	3625	53	14.0	130	29.2	0.007	0.0004	140	20300	125	18125	145	21025	Female only - up to 6 MPa
12.5	1/2	08	35	5075	25	3625	98	25.9	140	31.5	0.008	0.0005	135	19575	115	16675	145	21025	Female only - up to 4 MPa

*MQS-F 90° technical data*



## THE BEST OF THE REST – MQS-ARM & MQS-ARB

The MQS-ARM and MQS-ARB are amongst the most advanced non-flat face couplings on the market. Compatible with all standard ISO A male couplings, these products are designed especially for rigid mounting on agricultural vehicles.








### The MQS-ARM coupling provides the following benefits:

- Working pressure up to 30 MPa
- Connectable with male coupling under pressure
- Push-pull connection/disconnection
- Breakaway function according to ISO 5675
- Safety factor of 4:1 for dynamic pressures
- Tested to 500,000 cycles at 120% of WP

### The MQS-ARB coupling also provides the following additional benefit:

- Connectable with both couplings under pressure



						
SIZE	WORKING PRESSURE (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	CONNECTION EFFORT	OIL SPILLAGE Connection/Disconnection	MINIMUM BURST PRESSURE	CONNECTION/DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	Flow direction	l/min	US GPM	N	lb.	cc.	cubic inch	Female		M & F		
												MPa	PSI	MPa	PSI	
12.5	½	08	30	4350	F → M	80	21.1	230	511	2.1	0.128	125	18125	125	18125	Connection only, with male under pressure
					M → F	68	18.0									

MQS-ARM technical data

12.5	½	08	30	4350	F → M	80	21.1	230	511	2.5	0.153	125	18125	125	18125	Connection only, with male and female under pressure
					M → F	68	18.0			With 0 MPa of pressure						

MQS-ARB technical data



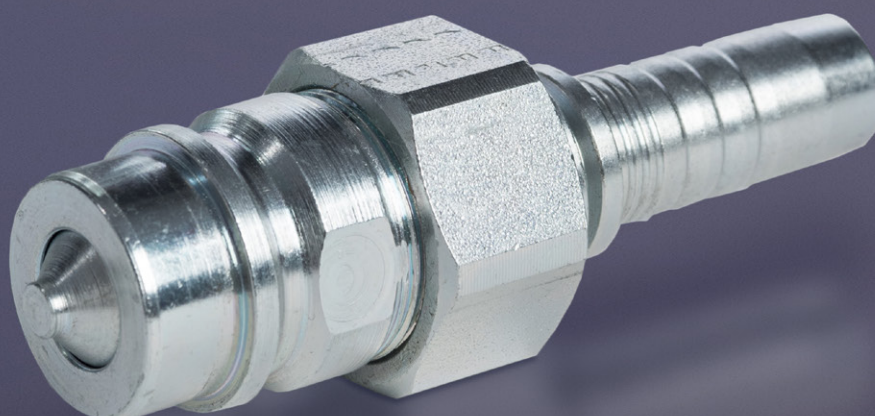
## DHI - DIRECT TO HOSE INTEGRATION








The Q.Safe DHI program from Manuli Hydraulics is an innovative system allowing the quick coupling to be assembled directly to the hose.

Assembly of the quick coupling directly to the hose provides a number of important benefits over the more typical adaptor style fittings.

- Fewer components in the hose assembly reduces the cost of assembly operations and parts
- Reduced number of components also minimises the number of potential leak points
- Reduced risk of assembly operation mistakes
- Easier maintenance and replacement operations
- Quick coupling maintenance is possible without the need to replace the hose
- Eliminates unscrewing problems in the field

DHI solutions are available for ISO A, ISO B and flat face series



						
SIZE	WORKING PRESSURE (Dynamic)	RATED FLOW at 0.2 MPa of pressure drop	CONNECTION EFFORT	OIL SPILLAGE Connection/ Disconnection	MINIMUM BURST PRESSURE	CONNECTION/ DISCONNECTION UNDER PRESSURE

mm	inch	dash	MPa	PSI	l/min	US GPM	N	lb.	cc.	cubic inch	Male		Female		M & F		
											MPa	PSI	MPa	PSI	MPa	PSI	
12.5	1/2	08	30	4350	75	19.8	80	18.0	1.8	0.110	125	18125	150	21750	150	21750	Not allowed

### DHI ISO A technical data

12.5	1/2	08	30	4350	68	18.0	110	244	2	0.122	140	20300	140	20300	-	-	Not allowed
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### DHI ISO A push-pull technical data

6.3	1/4	04	40	5800	16	4.3	40	9.0	0.8	0.049	180	26100	190	27550	165	23925	Not allowed
10	3/8	06	35	5075	51	13.5	40	9.0	1.5	0.092	145	21025	160	23200	160	23200	Not allowed
12.5	1/2	08	35	5075	84	22.0	70	15.7	2.5	0.153	145	21025	145	21025	160	23200	Not allowed

### DHI ISO B technical data

10	3/8	06	25	3625	53	14.0	130	29.2	0.007	0.0004	140	20300	125	18125	145	21025	Not allowed
12.5	1/2	08	25	3625	98	25.9	140	31.5	0.008	0.0005	135	19575	115	16675	145	21025	Not allowed

### DHI flat face technical data

## 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.





## Q.SAFE PRODUCT RANGE

QUICK COUPLINGS SERIES	DESCRIPTION	FEMALE	MALE	SHUT-OFF SYSTEM	SPECIFICATIONS	CONNECTION	SIZE									
							1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
MQS-A	ISO A	Q008	Q002	POPPET VALVE	ISO 7241 SERIES A	LOCKING BALLS										
			Q004	SHIELDED POPPET												
		Q009	Q003	BALL VALVE												
MQS-AP	ISO A CONNECTABLE UNDER PRESSURE	Q010	Q006	POPPET VALVE	ISO 7241 SERIES A	LOCKING BALLS										
MQS-AM	ISO A CONNECTABLE WITH MALE UNDER PRESSURE	Q011	-	POPPET VALVE	ISO 7241 SERIES A	LOCKING BALLS										
MQS-AB	ISO A CONNECTABLE WITH BOTH PARTS UNDER PRESSURE	Q012	-	POPPET VALVE	ISO 7241 SERIES A	LOCKING BALLS										
MQS-B	ISO B	Q024	Q021	POPPET VALVE	ISO 7241 SERIES B	LOCKING BALLS										
MQS-BOP	ISO B FOR DRILLING BOP UNIT	Q026 F	Q021 F	POPPET VALVE	ISO 7241 SERIES B + FLAME TEST RES. TO API 16D	LOCKING BALLS										
MQS-N	STANDARD	Q032	Q029	POPPET VALVE	-	LOCKING BALLS										
		Q033	Q030	BALL VALVE												
MQS-NL	FREE-FLOW	Q038	Q037	WITHOUT	-	LOCKING BALLS										
MQS-NF	STANDARD PUSH-PULL	Q036	-	POPPET VALVE	-	LOCKING BALLS										
MQS-AF	PUSH-PULL	Q013	-	POPPET VALVE	ISO 7421 SERIES A	LOCKING BALLS										
MQS-AFP	PUSH-PULL CONNECTABLE UNDER PRESSURE	Q015	-	POPPET VALVE	ISO 7421 SERIES A	LOCKING BALLS										
MQS-AFM	PUSH-PULL, CONNECTABLE WITH MALE UNDER PRESSURE, FLEXIBLE MOUNTING	Q016	-	POPPET VALVE	ISO 7421 SERIES A	LOCKING BALLS										
MQS-AFB	PUSH-PULL CONNECTABLE WITH MALE UNDER PRESSURE, FLEXIBLE MOUNTING	Q017	-	POPPET VALVE	ISO 7421 SERIES A	LOCKING BALLS										
MQS-ARM	PUSH-PULL, CONNECTABLE WITH MALE UNDER PRESSURE, RIGID MOUNTING	Q018	-	POPPET VALVE	ISO 7421 SERIES A	LOCKING BALLS										
MQS-ARB	PUSH-PULL CONNECTABLE WITH BOTH PARTS UNDER PRESSURE, RIGID MOUNTING	Q019	-	POPPET VALVE	ISO 7421 SERIES A	LOCKING BALLS										
MQS-VB	BRAKING CIRCUIT VALVE	Q048	Q047	FLAT VALVE	ISO 5676	LOCKING BALLS										
MQS-VS	AGRICULTURAL VALVE	Q050	Q049	FLAT VALVE	-	SCREW-ON SLEEVE										

## Q.SAFE PRODUCT RANGE (CONT.)

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## Q.SAFE STAINLESS STEEL QUICK COUPLINGS

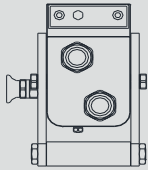
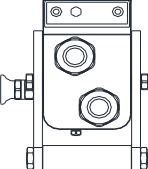
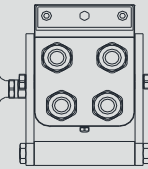
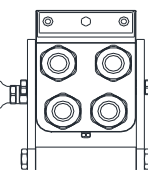
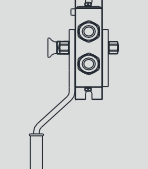
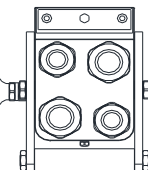
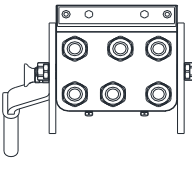
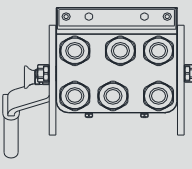
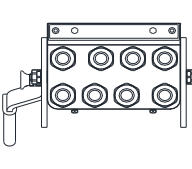
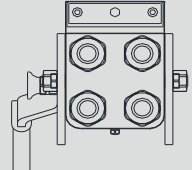
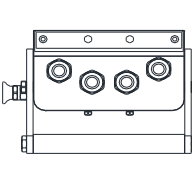
QUICK COUPLINGS SERIES	DESCRIPTION	FEMALE	MALE	SHUT-OFF SYSTEM	SPECIFICATIONS	CONNECTION	SIZE									
							1/8"	1/4"	3/8"	1/2"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
MQS-B SS	ISO B STAINLESS STEEL	Q024	Q021	POPPET VALVE	ISO 7241 SERIES B	LOCKING BALLS										
MQS-F SS	FLAT-FACE STAINLESS STEEL	Q041	Q039	FLAT VALVE	ISO 16028 & HTMA (ONLY 3/8" SIZE)	LOCKING BALLS										
MQS-SH SS	SCREW HEAVY DUTY STAINLESS STEEL	Q054	Q053	POPPET VALVE	-	SCREW-ON SLEEVE										

## Q.SAFE DHI QUICK COUPLINGS

[illegible]



## Q.SAFE MULTICONNECTOR PRODUCT RANGE

MULTI-COUPLING SERIES	CONFIGURATION	NO. OF LINES	SIZE		
			DN	inch	Dash
Q401		2	10	3/8"	-06
Q402		2	12.5	1/2"	-08
Q403		4	10	3/8"	-06
Q404		4	12.5	1/2"	-08
Q405		2	10	3/8"	-06
Q406		2	12.5	1/2"	-08
		2	19	3/4"	-12
Q407		6	10	3/8"	-06
Q408		6	12.5	1/2"	-08
Q409		8	12.5	1/2"	-08
Q410		4	12.5	1/2"	-08
Q411		4	10	3/8"	-06

*Contact your local Manuli Hydraulics representative to find out more about the Q.Safe product range and how it can meet all your quick coupling requirements*



[www.manuli-hydraulics.com/hp-hydraulics](http://www.manuli-hydraulics.com/hp-hydraulics)



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