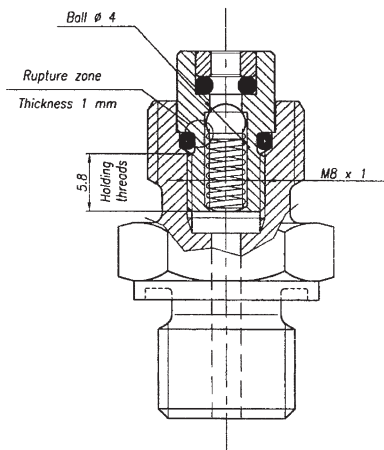


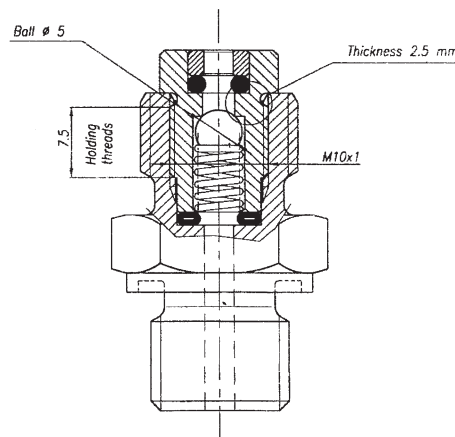
# Test Points MCS™

## Standard test point



BURST PRESSURE = 1500 bar

## “MCS” Test point



BURST PRESSURE = 2520 bar

The norm UNI EN 982 dated July 1997 about “Safety requirements for fluid power” applying to hydraulic systems contains at point 6 a chapter concerning how to check the respect of these requirements as well as of the safety measures.

In order to make pressure tests easier, it is necessary to install the “**TEST POINTS**” (also called check couplings) onto the hydraulic system. The **MCS** test points range represents a simple and inexpensive means to check pressure in hydraulic systems; they replace permanently mounted pressure gauges and shut-off valves, therefore reducing both initial and replacement costs due to gauges broken by system problems or to external causes. A further advantage given by **MCS** test points is to enable you to check pressure while the hydraulic system is working by means of precision gauges or electronic devices. Test points can be also used for obtaining hydraulic fluid samples from various points of the system while it is working as well as to bleed air in an easy and safe way. Test points, like all the hydraulic components, must meet an ISO specification.

In September 1998 the ISO/DIN 15171-2 norm was issued; it specifies the characteristics a test point M 16x2 must have for contact under pressure. The most important features given in the above mentioned norm are:

- Max. working pressure: 63mPa (630 bar)
- Min. burst pressure: 252 mPa (2520 bar)
- Impulse tests according to the norm ISO 8434-5

In order to meet the values indicated in the ISO/DIS 15171-2 norm, the test point must be conceived respecting an appropriate mechanical dimensioning:

In Fig. 1 and Fig. 2 constructive differences are pointed out between a standard and an MCS test point; they show that the standard test point construction (Fig. 1) having an Mx8 thread and a ball with Ø 4mm cannot guarantee the requirements given in the ISO norm from a mechanical point of view, because it can bear a burst pressure equal to 150 mPa (1500 bar). If this value is exceeded:

- the valve M 8x1 is thrown out because of the threads rupture;
- the valve breaks in the O-ring sealing zone because 1 mm thickness is too little.

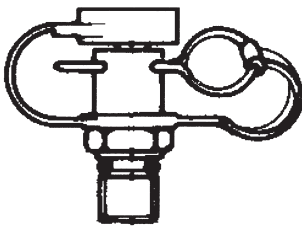
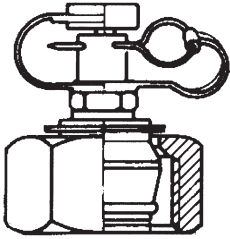
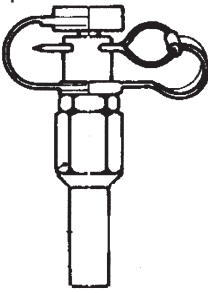
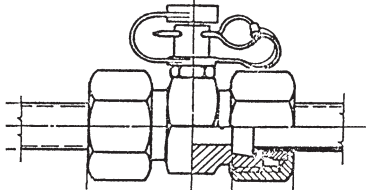
**MCS** has been producing the test point mechanical construction shown in Fig. 2 for several years. It is evident that 2,5 mm thickness in the critical zone, an M 10x1 thread and an appropriate number of holding threads guarantee the respect of the requirements given in the ISO 15171-2 norm.

Burst pressure tests have successfully exceeded the norm values. The impulse test ISO 8434-5 has been stopped after one million cycles without any ruptures.

The care in the construction of the Ø 5 ball sealing zone, the selection of the suppliers, the accurate control of the components according to the ISO 9002 procedures which have been in force at **MCS** since December 1995 and the most advanced mounting and 100% testing technologies enable our customers to work with our **MCS** test points in total safety.

# Test Points

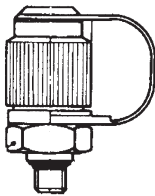
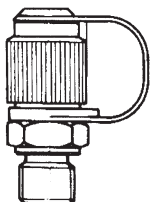
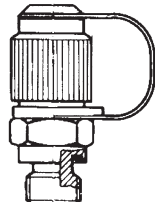
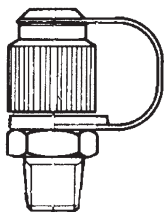
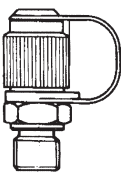
## Series 400, 400 bar

400.01 Plug-in test points	Part number	ø mm	Price	Without valve		
				Part number	Price	
	400.01.008.00	M 8x1	3.54	400.01.008.01	3.54	
	400.01.010.00	M10x1	3.54	400.01.010.01	3.54	
	400.01.202.00	G 1/8" BSPT	3.54	400.01.202.01	3.54	
	400.01.302.00	1/8" NPTF	3.54	400.01.302.01	3.54	
<b>400.02</b> Plug-in test points with 24° conical adapter 	Part number	D mm	ø mm	Price		
	400.02.010.00	10	M16x1.5	4.88		
	400.02.012.00	12	M18x1.5	4.88		
	400.02.015.00	15	M22x1.5	15.61		
	400.02.018.00	18	M26x1.5	POA		
	400.02.022.00	22	M30x2	POA		
	400.02.028.00	28	M36x2	POA		
	400.02.035.00	35	M45x2	POA		
400.02.042.00	45	M52x2	POA			
<b>400.03</b> Plug-in test points with standpipe 	Part number	D mm	ø mm	Price		
	400.03.006.00	6		4.88		
	400.03.008.00	8		4.88		
	400.03.010.00	10		4.88		
	400.03.012.00	12		4.88		
	400.04.018.00		M 26x1.5	15.61		

# Test Points

## Series 620, M 16x2, 640 bar

\*On request in ST/ST

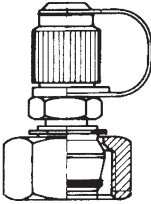
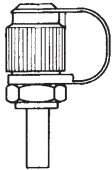
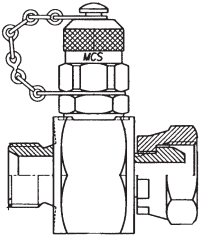
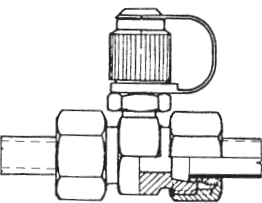
620.01	Form F ISO 6149-1	with plastic cap	G	BAR	with steel cap	Price
		Ref.			Ref.	
		620.01.008.00	M 8x1	250	620.01.008.01	5.20*
		620.01.010.00	M 10x1		620.01.010.01	5.20
		620.01.010.00-S	M 10x1.25		620.01.010.01-S	5.20
		620.01.014.00	M 14x1.5 ISO6149	630	620.01.014.01	5.20
		620.01.403.00	5/16" UNF		620.01.403.01	12.07
		620.01.404.00	7/16" -20 UNF		620.01.404.01	5.20
		620.01.405.00	1/2" -20 UNF		620.01.405.01	5.20
		620.01.406.00	9/16" -18 UNF		620.01.406.01	5.20
		620.01.408.00	3/4" -16UNF		620.01.408.01	6.97
	Form B DIN 3852	620.01.012.10	M 12x1.5	400	620.01.012.11	5.20
		620.01.014.10	M 14x1.5		620.01.014.11	NA
		620.01.016.10	M 16x1.5		620.01.016.11	6.97
		620.01.202.10	1/8" BSP	400	620.01.202.11	5.10
		620.01.204.10	1/4" BSP		620.01.204.11	5.10
		620.01.206.10	3/8" BSP		620.01.206.11	6.97
	Form E DIN 3852	620.01.012.20	M 12x1.5	630	620.01.012.21	5.20
		620.01.014.20	M 14x1.5		620.01.014.21	5.20
		620.01.016.20	M 16x1.5		620.01.016.21	6.97
		620.01.202.20	1/8" BSP	400	620.01.202.21	5.10*
		620.01.204.20	1/4" BSP	630	620.01.204.21	5.10
		620.01.204.80	1/4" BSP 60° CONE		620.01.204.81	5.20
		620.01.206.20	3/8" BSP		620.01.206.21	6.97
	Form C ANSI/ASME B1.20.1-1983 DIN 3852	620.01.202.30	1/8" - 28 BSPT	400	620.01.202.31	5.20
		620.01.204.30	1/4" -19 BSPT	630	620.01.204.31	5.20
		620.01.206.30	3/8" - 19 BSPT	630	620.01.206.31	6.97
		620.01.302.30	1/8" - 27 NPTF	400	620.01.302.31	5.20*
		620.01.304.30	1/4" - 18 NPTF	630	620.01.304.31	5.20*
		620.01.306.30	3/8" - 18 NPTF	630	620.01.306.31	6.97
		STAINLESS STEEL	1/4" - 18 NPTF	630	625.01.304.31	34.32
		M 16x1.5				
		615.01.302.30	1/8" NPTF	630	615.01.302.31	5.20
		615.01.204.20	1/4" BSP		615.01.204.21	5.20
615.01.014.20	M 14x1.5	615.01.014.21	5.20			
	Form A DIN 3852	620.01.010.50	M 10x1	400	620.01.010.51	5.20
		620.01.204.50	1/4" BSP		620.01.204.51	5.20

# Test Points

**Series 620**

**M 16x2**

**640 bar**

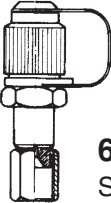

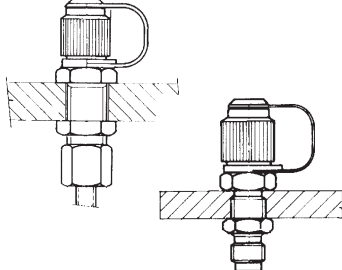
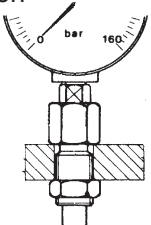
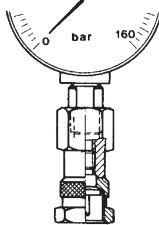
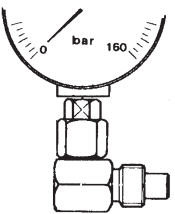
620.02 24° taper DIN 3865	with plastic cap		Tube ø	G	BAR	with steel cap		Price		
	Ref.					Ref				
	620.02.006.60	6L	M 12x1.5	315	315	620.02.006.61	6.97			
	620.02.008.60	8L	M 14x1.5			620.02.008.61	6.75			
	620.02.010.60	10L	M 16x1.5			620.02.010.61	6.97			
	620.02.012.60	12L	M 18x1.5			620.02.012.61	7.31			
	620.02.015.60	15L	M 22x1.5			620.02.015.61	7.76			
	620.02.018.60	18L	M 26x1.5			620.02.018.61	9.41			
	620.02.022.60	22L	M 30x2	160	160	620.02.022.61	10.75			
	620.02.028.60	28L	M 36x2			620.02.028.61	13.44			
	620.02.035.60	35L	M 45x2			620.02.035.61	19.04			
	620.02.042.60	42L	M 52x2			620.02.042.61	23.52			
	620.02.106.60	6S	M 14x1.5			630	630	620.02.106.61	8.74	
	620.02.108.60	8S	M 16x1.5					620.02.108.61	6.87	
	620.02.110.60	10S	M 18x1.5	620.02.110.61	6.95					
	620.02.112.60	12S	M 20x1.5	620.02.112.61	7.97					
	620.02.114.60	14S	M 22x1.5	400	400	620.02.114.61	9.08			
	620.02.116.60	16S	M 24x1.5			620.02.116.61	10.08			
	620.02.120.60	20S	M 30x2	315	315	620.02.120.61	12.19			
	620.02.125.60	25S	M 36x2			620.02.125.61	16.28			
620.02.130.60	30S	M 42x2			620.02.130.61	16.70				
620.02.138.60	38S	M 52x2			620.02.138.61	22.04				
<b>620.03</b> Threaded test points with stand-pipe 	620.03.006.50	6		630	630	620.03.006.51	5.65			
620.03.008.50	8		620.03.008.51			5.65				
620.03.010.50	10		620.03.010.51			5.65				
620.03.012.50	12		620.03.012.51			5.65				
<b>620.16</b> Male/Female swivel 60°x BS 5200 	620.16.204.80	1/4" BSP		400	400	620.16.204.81	11.41			
620.16.206.80	3/8" BSP		400	400	620.16.206.81	12.74				
620.16.208.80	1/2" BSP		515	515	620.16.208.81	15.06				
620.16.212.80	3/4" BSP		430	430	620.16.212.81	16.95				
620.16.216.80	1" BSP		345	345	620.16.216.81	19.27				
<b>620.04</b> Straight tube connection 	DIN 2353 L					DIN 2353 S				
	Tube Light	Metric Thread	Bar	Code	Price	Tube Heavy	Metric Thread	Bar	Code	Price
	6L	M 12x1.5	315	620.04.006.51	8.64	6S	M 14x1.5	630	620.04.106.51	8.97
	8	M 14x1.5		620.04.008.51	9.97	8	M 16x1.5		620.04.108.51	10.08
	10	M 16x1.5		620.04.010.51	10.85	10	M 18x1.5		620.04.110.51	10.97
	12	M 18x1.5		620.04.012.51	11.52	12	M 20x1.5		620.04.112.51	11.52
	15	M 22x1.5		620.04.015.51	12.96	14	M 22x1.5		620.04.114.51	13.62
	18	M 26x1.5		620.04.018.51	15.95	16	M 24x1.5		620.04.116.51	15.40
	22	M 30x2	160	620.04.022.51	17.28	20	M 30x2	620.04.120.51	21.60	
	28	M 36x2		620.04.028.51	21.38	25	M 36x2	620.04.125.51	31.91	
	35	M 45x2		620.04.035.51	36.77	30	M 42x2	620.04.130.51	34.34	
42	M 52x2	620.04.042.51		43.86	38	M 52x2	620.04.138.51	43.42		
								315		

# Test Points

**Series 620**

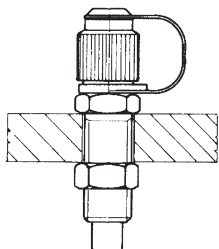
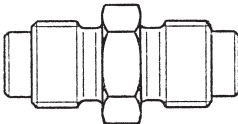
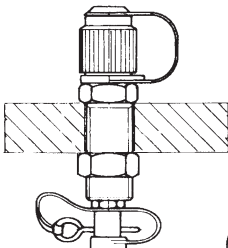
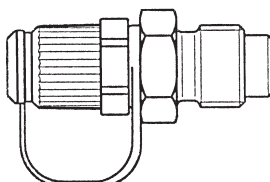
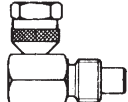
**M 16x2**

**640 bar**

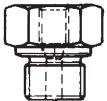




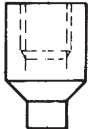
620.05 Check coupling female swivel JIC 37° - SAE J514 	with plastic cap	G	Tube ø	Bar	with steel cap	Price
	Ref.				Ref.	
	620.05.404.00	7/16"-20 JIC37°		450	620.05.404.01	9.28
	620.05.405.00	1/2"-20 JIC37°		420	620.05.405.01	9.51
	620.05.406.00	9/16"-18 JIC37°		350	620.05.406.01	9.98
	620.05.408.00	3/4"-16 JIC37°		350	620.05.408.01	10.67
<b>620.07</b> Swivel 60° 	620.07.204.80	1/4" BSP		630	620.07.204.81	8.58
<b>620.06</b> Bulkhead connection with test point 	620.06.108.50	M 16x1.5	8	630	620.06.108.51	9.05
	620.06.110.50	M 18x1.5	10	630	620.06.110.51	10.97
	620.06.112.50	M 20x1.5	12	630	620.06.112.51	11.70
	620.06.404.00	7/16"-20 JIC SAE J514		400	620.06.404.01	11.70
<b>620.08</b> Bulkhead pressure gauge connection 	Free flow Ref.				with pressure damper Ref.	Price
	620.08.204.00	1/4" BSP		630	620.08.204.00.1	6.97*
	620.08.208.00	1/2" BSP		630	620.08.208.00.1	8.64
	620.08.304.00	1/4" NPTF		630	620.08.304.00.1	8.19
	620.08.308.00	1/2" NPTF		630	620.08.308.00.1	9.28
<b>620.09</b> Pressure gauge adapter 	620.09.204.00	1/4" BSP	M 16x2	630	620.09.204.00.1	6.97
	620.09.208.00	1/2" BSP	M 16x2	630	620.09.208.00.1	12.62
	620.09.304.00	1/4" NPTF	M 16x2	630	620.09.304.00.1	8.19
<b>620.10</b> 90° pressure gauge swivel connection 	620.10.204.00	1/4" BSP	M 16x2	630	620.10.204.00.1	9.86
	620.10.208.00	1/2" BSP	M 16x2	630	620.10.208.00.1	11.41

# Test Points

## Series 620, M 16x2, 640 bar

	Ref.		Price	
<b>620.11</b> Bulkhead check-coupling 	620.11.000.70	with plastic dust cap	11.70	<b>620.14.162.00</b> Free Flow Adaptor M16x2  Price 7.00
	620.11.000.71	with steel dust cap	11.70	
<b>620.12</b> Bulkhead check-coupling 	620.12.000.70	with plastic dust cap	12.48	<b>620.15.162.00</b> Adaptor with Check Valve  Price 7.00
	620.12.000.71	with steel dust cap	12.48	
<b>620.13</b> 	620.13.000.00	90° elbow connection	8.20	
	630 Bar			

# Accessories

	Ref.		Price	
<b>Reducers</b> <b>DIN 3852 Form B</b> 	630.01.204.10	G 1/4"	2.32	
	630.01.206.10	G 3/8" M8x1	2.32	
	630.01.208.10	G 1/2" 1/8" BSP	4.65	
	630.01.212.10	G 3/4"	9.30	
	630.01.216.10	G 1"	P.O.A.	
 	630.03.400.00	Protecting plug with plastic strip	1.00	
	630.03.620.00	Plastic dust cap	1.00	
	630.03.620.01	Steel dust cap	1.00	
	630.02.204.00	Weld bosses	P.O.A.	