



RECOMMENDED FOR:

RYCO R1620 Easy Test Series is a complete system of Test Points, Inline Test Adaptors, Test Hose Assemblies, Pressure Gauges, Adaptors and Test Point Kits. The system is designed to allow fast, direct connection of pressure measuring gauges and transducers to a hydraulic system. Other applications include; switching, control, and pilot lines; venting/bleeding points; and sample points.

Once installed, connection to the Test Point can be made at up to 400 bar system pressure without the need for tools, and without leakage or spillage. Connection at pressures between 400 bar and Maximum Working Pressure of 630 bar may require tools.

Typical applications include mobile plant, agricultural equipment, industrial equipment, power packs and cylinders, logging and mining, oil processing and exploration, and steel production.

RYCO R1620 Easy Test Test Points can be installed into hydraulic circuits as permanent original equipment, or can be installed temporarily while testing is performed. Inline Test Adaptors also allow quick and easy retrofitting of Test Points between hoses, or hoses and ports.

RYCO R1620 Easy Test Series utilise the M16x2,0 connection system. Adaptors that enable connection to other connection systems are available:

M16x1,5; M12x1,5; S12,65x1,5; and Stake.

FEATURES:

- Connect, and disconnect, under system pressure; up to 400 bar by hand, and up to 630 bar with tools.
- Maximum Working Pressure 630 bar.
- No leakage or spillage when connections are made. The probe in the hose or gauge connection seals into the coupling before the ball check valve is opened.
- Metal protective cap, with captive chain.
- Anti vibration O Ring on body fitted as standard, stops chain collar from rattling.

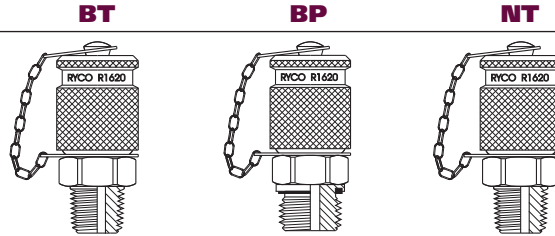
TECHNICAL DATA

- **Test Points and Caps:**
Steel, zinc-nickel plated for corrosion resistance.
- **Inline Test Adaptors:**
Steel, RYCOTE CrVI free plated for corrosion resistance.
- **Valve in Test Point:**
Metal Ball, sealing on metal seat.
- **Seals:**
Nitrile (Buna N).
- **Operating Temperature Range:**
From -20°C to +90°C (-4°F to +194°F).
- **Maximum Working Pressure:**
630 bar/9135 psi.
- **Maximum Connection Pressure:**
Up to 400 bar/5800 psi by hand.
Between 400 bar and 630 bar requires tools.
- **Fluid Compatibility:**
Mineral/petroleum based hydraulic oils.

TEST POINT COUPLINGS

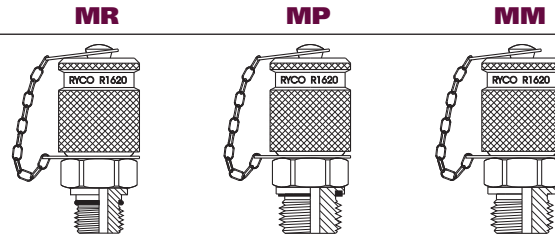
RYCO R1620 EASY TEST Test Points Couplings can be installed into hydraulic circuits as permanent original equipment, or can be installed temporarily while testing is performed.

BSPP/NPT



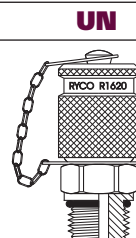
THREAD SIZE		DASH SIZE	BSPT MALE	BSPP MALE RUBBER SEAL	NPT MALE
TEST POINT	MALE		PART NO	PART NO	PART NO
M16x2,0	1/8	-02	R1620-BT02	R1620-BP02	R1620-NT02
M16x2,0	1/4	-04	R1620-BT04	R1620-BP04	R1620-NT04

METRIC



THREAD SIZE		DASH SIZE	METRIC MALE O RING SEAL	METRIC MALE RUBBER SEAL	METRIC MALE METAL SEAL
TEST POINT	MALE		PART NO	PART NO	PART NO
M16x2,0	M8x1,0	-08	R1620-MR08		
M16x2,0	M10x1,0	-10	R1620-MR10		
M16x2,0	M12x1,5	-12		R1620-MP12	
M16x2,0	M14x1,5	-14			R1620-MM14

UNO (O RING BOSS)



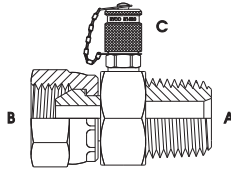
THREAD SIZE		DASH SIZE	UN O RING MALE (O RING BOSS)
TEST POINT	MALE		PART NO
M16x2,0	7/16	-07	R1620-UN07
M16x2,0	1/2	-08	R1620-UN08
M16x2,0	9/16	-09	R1620-UN09

INLINE TEST POINT ADAPTORS

RYCO R1620 EASY TEST Inline Test Point Adaptors can be installed into circuits as permanent original equipment, or can be installed temporarily while testing is performed. InLine Test Point Adaptors also allow quick and easy retro-fitting of Test Points between hoses, or hoses and ports.

BSP

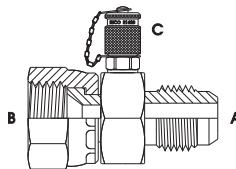
S160



THREAD SIZE			DASH SIZE	BSPT MALE BSPP FEMALE SWIVEL M16x2,0 TEST POINT
A	B	C		PART NO
1/4	1/4	M16x2,0	-040416	S160-040416
3/8	3/8	M16x2,0	-060616	S160-060616
1/2	1/2	M16x2,0	-080816	S160-080816
3/4	3/4	M16x2,0	-121216	S160-121216
1	1	M16x2,0	-161616	S160-161616
1.1/4	1.1/4	M16x2,0	-202016	S160-202016

JIC

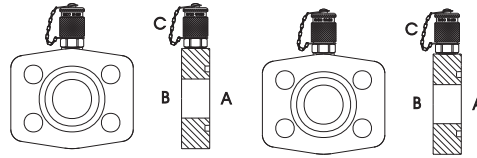
S159



THREAD SIZE			DASH SIZE	JIC MALE JIC FEMALE SWIVEL M16x2,0 TEST POINT
A	B	C		PART NO
7/16	7/16	M16x2,0	-070716	S159-070716
9/16	9/16	M16x2,0	-090916	S159-090916
3/4	3/4	M16x2,0	-121216	S159-121216
7/8	7/8	M16x2,0	-141416	S159-141416
1.1/16	1.1/16	M16x2,0	-171716	S159-171716
1.5/16	1.5/16	M16x2,0	-212116	S159-212116
1.5/8	1.5/8	M16x2,0	-262616	S159-262616

INLINE TEST POINT ADAPTORS

SAE FLANGE	S961	S962
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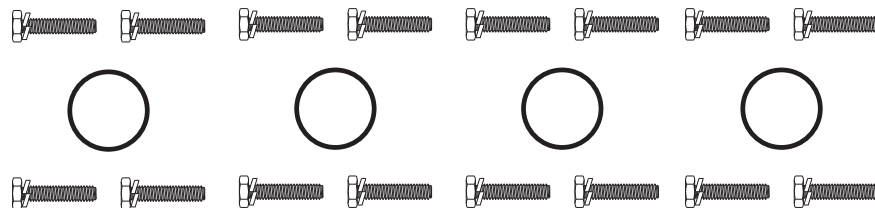
NOMINAL FLANGE SIZE	NOMINAL FLANGE SIZE	THREAD SIZE	DASH SIZE	CODE 61 CODE 61 FLAT M16x2,0 TEST POINT	CODE 62 CODE 62 FLAT M16x2,0 TEST POINT
A	B	C		PART NO	PART NO
3/4	3/4	M16x2,0	-121216		S962-121216
1	1	M16x2,0	-161616	S961-161616	S962-161616
1.1/4	1.1/4	M16x2,0	-202016	S961-202016	S962-202016
1.1/2	1.1/2	M16x2,0	-242416	S961-242416	S962-242416
2	2	M16x2,0	-323216	S961-323216	S962-323216

NOTE:

Longer bolts are required when mounting **S961** and **S962** Inline Test Adaptors between an SAE Flange Hose Coupling and an SAE Flange Port.

Fastening Kits, consisting of the four hex head Long Bolts, four Spring Washers, and O Ring are available. See table below:

FASTENING KITS	FK61L	FK62L	FK61LM	FK62LM
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NOMINAL FLANGE SIZE	DASH SIZE	CODE 61 FASTENING KIT UNC BOLTS	CODE 62 FASTENING KIT UNC BOLT	CODE 61 FASTENING KIT METRIC BOLT	CODE 62 FASTENING KIT METRIC BOLTS
		PART NO	PART NO	PART NO	PART NO
3/4	-12		FK62L-12		FK62LM-12
1	-16	FK61L-16	FK62L-16	FK61LM-16	FK62LM-16
1.1/4	-20	FK61L-20	FK62L-20	FK61LM-20	FK62LM-20
1.1/2	-24	FK61L-24	FK62L-24	FK61LM-24	FK62LM-24
2	-32	FK61L-32	FK62L-32	FK61LM-32	FK62LM-32

TEST HOSE and HOSE ASSEMBLIES

RECOMMENDED FOR:

Connections between Test Points and pressure measuring gauges and transducers; or between Test Points and control, charging or pilot lines.

TECHNICAL DATA

Tube:

Black, oil resistant seamless thermoplastic (Polyamide).

Reinforcement:

One braid of synthetic yarn (Polyester).

Cover:

Black, oil and abrasion resistant thermoplastic (Polyamide).

Temperature Range:

From -20°C to +100°C (-4°F to +212°F) continuous.
From -20°C to +120°C (-4°F to +248°F) intermittent.

Working Pressure:

Maximum Working Pressures as shown below are dependent on temperature.
Refer to chart below for adjustment factors.

Couplings:

7200 Series Two Piece Crimp page 315.

Contact RYCO Hydraulics Technical Department for assembly instructions.

RT7 Hose Working Pressures and Dimensions

1 bar = 14.5 psi

1 MPa = 10 bar

PART NO	HOSE SIZE ID			MAXIMUM WORKING PRESSURE*		MINIMUM BURST PRESSURE*		MIN. BENDS RADIUS	AV. WEIGHT	NOM. HOSE OD
	DN	inch	Dash	bar	psi	bar	psi	mm	kg/m	mm
RT7-M02	2	5/64	-02	630	9135	1900	27500	20	0,016	5,0
RT7-M04	4	5/32	-04	340	4930	850	13300	40	0,042	8,6

*NOTE: PRESSURES are for temperature of +30°C to +50°C (+86°F to +122°F).

If working temperature is not in this range, use the working pressures as shown in the table below.

PART NO	From -20°C to 0°C (-4°F to +32°F)		From 0°C to 30°C (+32°F to +86°F)		From +30°C to +50°C (+86°F to +122°F)		From +50°C to +80°C (+122°F to +176°F)		From +80°C to +100°C (+176°F to +212°F)	
	bar	psi	bar	psi	bar	psi	bar	psi	bar	psi
RT7-M02	768	11140	693	10050	630	9135	542	7860	485	7030
RT7-M02	463	6710	418	6060	340	4930	327	4740	293	4250

HOSE ASSEMBLIES

Two combinations of hose couplings with **RT7-M02** Test Hose Assemblies are available as easy to order assemblies:

R1621-xxxx
7262-M0216 (M16x2,0)
swivels both ends

(replace xxxx with the length required in mm)

Standard lengths available are: **R1621-200, 400, 600, 800, 1000, 1200, 1500, 2000, 2500, 3000, 4000, 5000,6000**

R1622-xxxx
7262-M0216 (M16x2,0)
swivel one end,
7202G-M0204 (1/4" BSP Gauge)
swivel other end

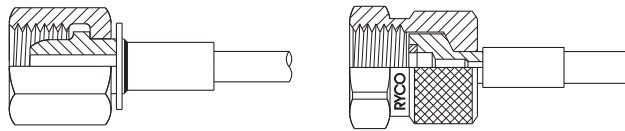
(replace xxxx with the length required in mm)

Standard lengths available are: **R1622-200, 400, 600, 800, 1000, 1200, 1500, 2000, 2500, 3000, 4000, 5000, 6000**

Other couplings combinations can be ordered as hose assemblies using, **Hose Part No*Length*Coupling End 1*Coupling End 2;** for example **RT7-M02*3000*7204-M0207*7262-M0216**

BSP/BSP GAUGE **7202** **7202G**

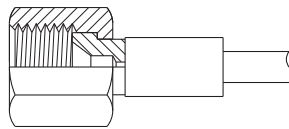
PLASTIC PLUG INCLUDED



HOSE PART NO	THREAD SIZE	DASH SIZE	BSP FEMALE SWIVEL 60° CONE SEAT	BSP FEMALE SWIVEL GAUGE SEAT
	inch		PART NO	PART NO
RT7-M02	1/4	-M0204	7202-M0204	7202G-M0204
RT7-M02	1/2	-M0208		7202G-M0208
RT7-M04	1/4	-M0404	7202-M0404	7202G-M0404

JIC **7204**

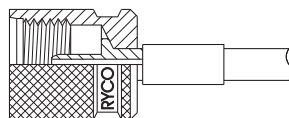
PLASTIC PLUG INCLUDED



HOSE PART NO	THREAD SIZE	DASH SIZE	JIC FEMALE SWIVEL 37° SEAT
	inch		PART NO
RT7-M02	7/16	-M0207	7024-M0207
RT7-M02	9/16	-M0209	7204-M0209
RT7-M04	7/16	-M0407	7204-M0407
RT7-M04	9/16	-M0409	7204-M0409

METRIC M16x2,0 **7262**

CP01-M02 PLASTIC PLUG INCLUDED



HOSE PART NO	THREAD SIZE	DASH SIZE	METRIC SUITS M16x2,0 TEST POINT
	mm		PART NO
RT7-M02	M16x2,0	-M0216	7262-M0216
RT7-M04	M16x2,0	-M0416	7262-M0416

ACCESSORIES **750** **CP01**



HOSE PART NO	BEND RESTRICTOR SPRING	PLASTIC PLUG M16x2,0 WITH PLASTIC COLLAR
	PART NO	PART NO
RT7-M02	750-M02	CP01-M02
RT7-M04	750-M04	

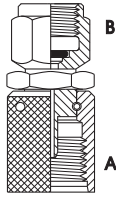
NOTE: CP01-M02 is included with 7262-M0216. 750 Spring must be ordered separately.

DIRECT GAUGE ADAPTORS

Direct Gauge Adaptors allow the connection of a Pressure Gauge directly to a Test Point. The Pressure Gauge can be oriented to face any particular direction by adjustment of the Swivel Nut.

DIRECT GAUGE

C81/C81N



THREAD SIZE		DASH SIZE	M16x2,0 FEMALE BSPP or NPT FEMALE
A	B		PART NO
M16x2,0	1/4 BSPP	-1604	C81-1604
M16x2,0	1/2 BSPP	-1608	C81-1608
M16x2,0	1/4 NPT	-1604	C81N-1604

JOINER AND CONVERSION ADAPTORS

Joiners allow the connection of two female hose couplings with M16x2,0 threads.

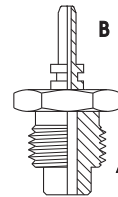
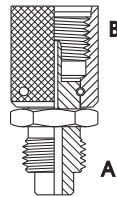
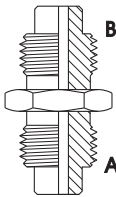
Conversion Adaptors allow the inter connection of other series of Test Points with threads other than M16x2,0.

JOINER/CONVERSION

C27

C80

C99



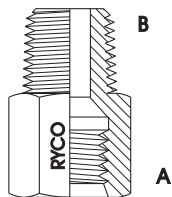
THREAD SIZE		DASH SIZE	JOINER	CONVERSION ADAPTOR	CONVERSION ADAPTOR
A	B		PART NO	PART NO	PART NO
M16x2,0	M16x2,0	-1616	C27-1616		
S12,65x1,5	M16x2,0	-1216		C80-1216	
M16x2,0	S12,65x1,5	-1612		C80-1612	
M16x2,0	M16x1,5	-1615		C80-1615	
M16x2,0	PLUG IN	-16SK			C99-16SK

REDUCING ADAPTORS

C24-1004 can be used with many other **RYCO M** and **S** Series adaptors, allowing **R1620-MR10** Test Points to be plumbed into the hydraulic system.

REDUCING ADAPTOR

C24

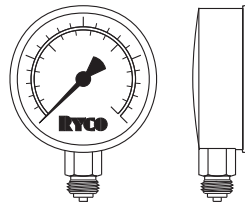


THREAD SIZE		DASH SIZE	M10x1,0 FIXED FEMALE BSPT MALE
A	B		PART NO
M10x1,0	1/4	-1004	C24-1004

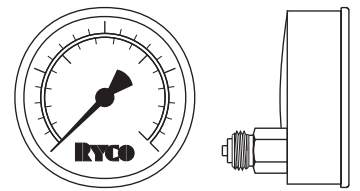
PRESSURE GAUGES

63 mm & 100 mm

Meet Germanischer Lloyd Approval requirements.



RG01 & RG11 BOTTOM ENTRY



RG02 & RG12 REAR ENTRY

TECHNICAL DATA

Case:

Stainless Steel.
O Ring seal between case and entry stem.
Pressure relief in case top.
RG01 & RG02: 63 mm; **RG11 & RG12:** 100 mm.

Window:

Clear plastic.

Scale Markings:

Dual scale. Marked in bar (outer scale) and psi (inner scale).

Connecting Thread:

RG01: Brass, bottom entry 1/4" BSPP.
RG02: Brass, rear entry 1/4" BSPP.
RG11: Brass, bottom entry 1/2" BSPP.
RG12: Brass, rear entry 1/2" BSPP.

Damping:

Glycerine filled.

Accuracy Class:

RG01 & RG02: ±1.6% of full scale, per EN 837-1/6
RG11 & RG12: ±1.0% of full scale, per EN 837-1/6

Operating Temperature Range:

From -20°C to +60°C (-4°F to +140°F).

Working Pressure:

	63 mm Gauges	100 mm Gauges
Steady:	3/4 of full scale value	full scale value
Fluctuating:	2/3 of full scale value	90% of full scale value
Short time:	full scale value	130% of full scale value

NOTE: A Triangle symbol is marked on the face of the Pressure Gauge at the reading for steady operation. The Pressure Gauge must not be continually subjected to pressures above this reading in accordance with the guidelines above, or damage to the Bourdon Tube may occur.

PRESSURE RANGE	DASH SIZE	63 mm DIAMETER 1/4" BSPP		100 mm DIAMETER 1/2" BSPP	
		BOTTOM ENTRY	REAR ENTRY	BOTTOM ENTRY	REAR ENTRY
bar		PART NO	PART NO	PART NO	PART NO
-1 to 3	-003	RG01-003	RG02-003	RG11-003	RG12-003
0 to 10	-010	RG01-010	RG02-010	RG11-010	RG12-010
0 to 16	-016	RG01-016	RG02-016	RG11-016	RG12-016
0 to 25	-025	RG01-025	RG02-025	RG11-025	RG12-025
0 to 40	-040	RG01-040	RG02-040	RG11-040	RG12-040
0 to 60	-060	RG01-060	RG02-060	RG11-060	RG12-060
0 to 100	-100	RG01-100	RG02-100	RG11-100	RG12-100
0 to 160	-160	RG01-160	RG02-160	RG11-160	RG12-160
0 to 250	-250	RG01-250	RG02-250	RG11-250	RG12-250
0 to 400	-400	RG01-400	RG02-400	RG11-400	RG12-400
0 to 600	-600	RG01-600	RG02-600	RG11-600	RG12-600

CASE PRESSURE RELIEF

RYCO Pressure Gauges feature a Case Pressure Relief to allow the Bourdon Tube to expand and contract during operation.

During normal operation, the yellow 'Vent Lever' needs to be moved to the 'Open' position to allow the case to 'breathe', see picture on right.



CLOSED



OPEN

NOTE: On initial supply the indicator may not be on 'zero', to correct this simply open the 'Vent Lever' to relieve the case pressure.

GAUGE COVER

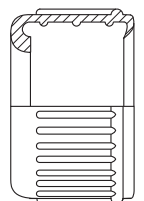
Recommended For:

Helps protect RYCO Pressure Gauges in situations where they may be subjected to knocks in harsh environments. The cover easily fits over the Pressure Gauge; installation can be prior to, or after connecting the Pressure Gauge.

RG01-COVER suits **RG01 & RG02** Series 63 mm Gauges,
RG11-COVER suits **RG11 & RG12** Series 100 mm Gauges.

Construction:

Blue, synthetic rubber.



PRESSURE TEST KITS

Pressure Test Kits containing:

R1620 EASY TEST Test Points, InLine Test Point Adaptors, Test Hoses, Adaptors and Pressure Gauges supplied in a Protective Case are available.

Contact RYCO Hydraulics Customer Service Department for details.