



## Series: **IRB**

**INTERCHANGE:** ISO 7241-1 series "B"

### MAIN APPLICATIONS

- Industrial equipment

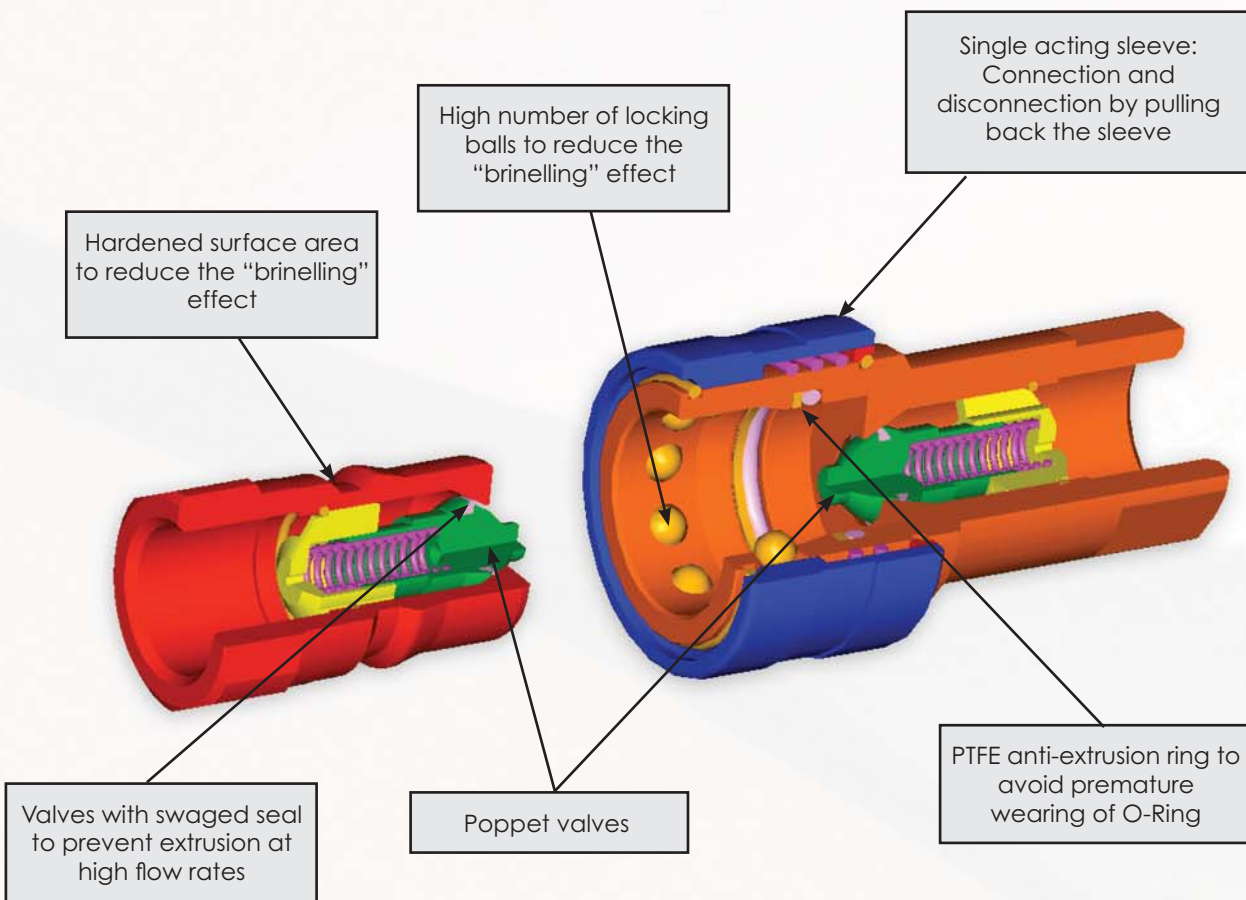
"IRB" is a poppet valve quick couplings series interchangeable with international standard ISO 7241-1 "B", manufactured in carbon steel with zinc plated surface treatment. Based on the worldwide interchangeability, "IRB" is used in a variety of industrial hydraulic applications.



**Stucchi**<sup>®</sup>  
A CONSTANT FLOW OF SOLUTIONS

## TECHNICAL FEATURES AND OPTIONS

- Interchangeability: ISO 7241-1 series "B"
- Valve system: Poppet valve
- Mechanical connection: Locking balls
- Connection system: Pulling back the sleeve and pushing one half towards the other
- Disconnection system: Pulling back the sleeve
- Connection with residual pressure: Not allowed
- Disconnection with residual pressure: Not allowed
- Threads available: BSP, NPT
- On request: Free flow version (no valving)
- Construction material: Carbon steel
- Surface treatment: CrIII zinc plated
- Springs: C72 steel
- Balls: Hard steel 100 C6
- Seals: standard in NBR (Nitrile)
- Seals on request: VITON
- Anti-extrusion rings: PTFE



## BENEFITS

- The poppet valve with elastomer seal provides maximum sealing of the couplings when disconnected.
- Shape of internal parts is designed to reduce turbulence and pressure drop.
- Compact slim design.
- Simple to use.

## HOW TO USE

- Before connecting clean the mating parts of the couplings to avoid contamination in the circuit.
- To couple pull back the sleeve of the female coupling, align the female with the male coupling and push one into the other until both halves are fully connected and release the sleeve.
- To uncouple pull back the sleeve of the female coupling, pull out the mating half.

## WARNING!

- Do not couple-uncouple with flow and/or pressure in the circuit.
- Use protection whenever connecting or disconnecting with high temperature (max. allowed 80°C, 176 °F).

## PERFORMANCE

Description	Size		Rated flow		Max. flow suggested		Connect force		Disconnect force		Spillage *
	Inch	mm	l/min	GPM	l/min	GPM	N	lbf	N	lbf	
IRB18	1/8	5,0	3	0,80	6	1,59	75	16,88	35	7,88	0,18
IRB14	1/4	6,3	12	3,18	24	6,36	50	11,25	35	7,88	0,33
IRB38	3/8	10,0	23	6,10	46	12,19	80	18,00	45	10,13	2,20
IRB12	1/2	12,5	45	11,93	90	23,85	105	23,63	35	7,88	3,00
IRB34	3/4	20,0	74	19,61	148	39,22	125	28,13	40	9,00	9,40
IRB100	1	25,0	100	26,50	200	53,00	130	29,25	45	10,13	14,00

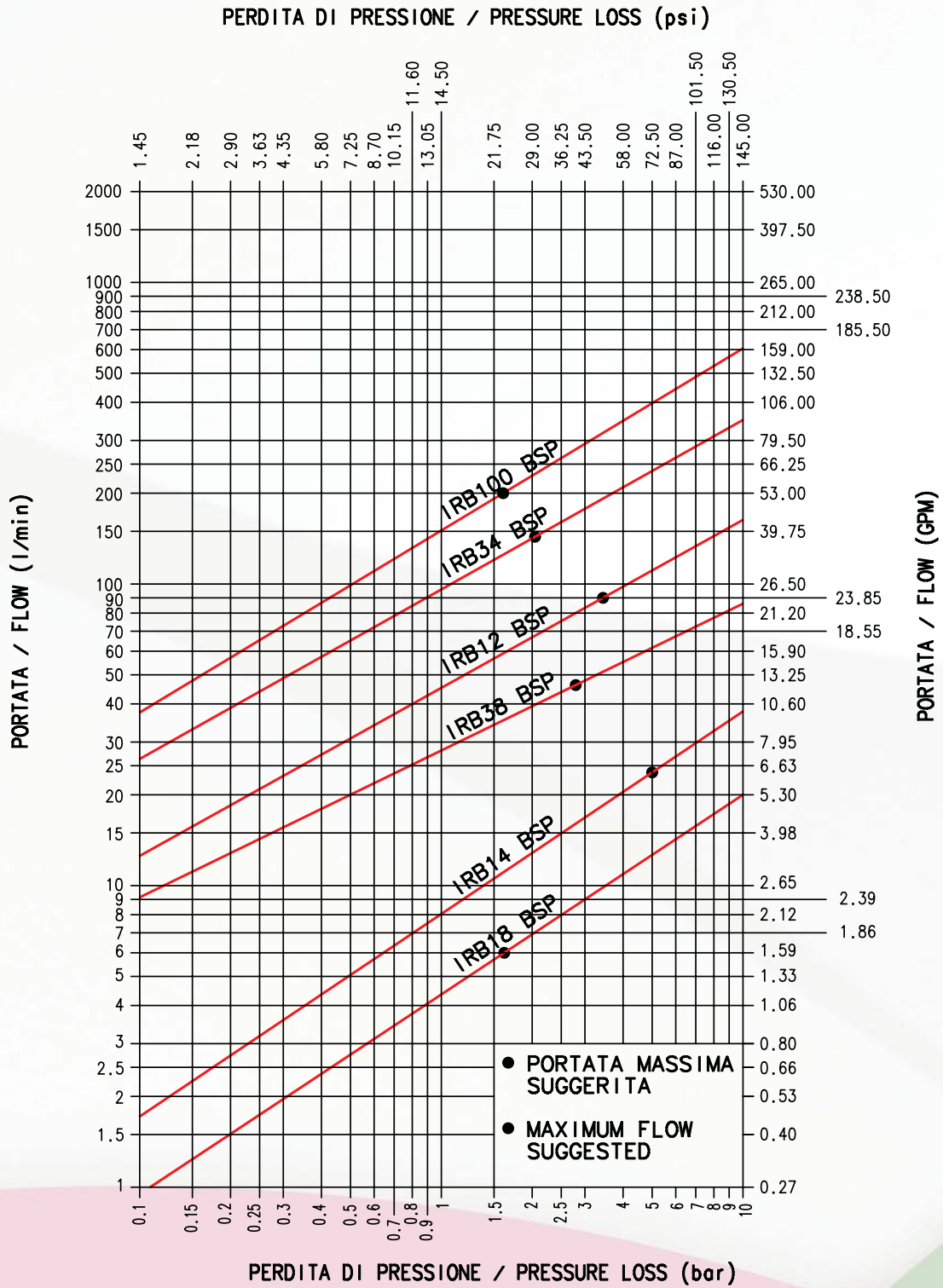
Description	Max. operating pressure						Burst pressure					
	Coupled		Male		Female		Coupled		Male		Female	
	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi
IRB18	35	5075	35	5075	35	5075	120	17400	120	17400	120	17400
IRB14	35	5075	35	5075	35	5075	100	14500	100	14500	100	14500
IRB38	30	4350	30	4350	30	4350	100	14500	100	14500	100	14500
IRB12	28	4060	28	4060	28	4060	100	14500	100	14500	100	14500
IRB34	23	3335	23	3335	23	3335	100	14500	100	14500	100	14500
IRB100	18	2610	18	2610	18	2610	80	11600	80	11600	80	11600

\* Spillage is an indicative value of the fluid loss per couple-uncouple cycle.

- Temperature range:
  - Standard seals NBR (Nitrile): from -20 °C to +100 °C ( from -4 °F to +212 °F).
  - VITON seals: from -15°C to +180°C ( from +5 °F to +356 °F).

**PRESSURE DROP**

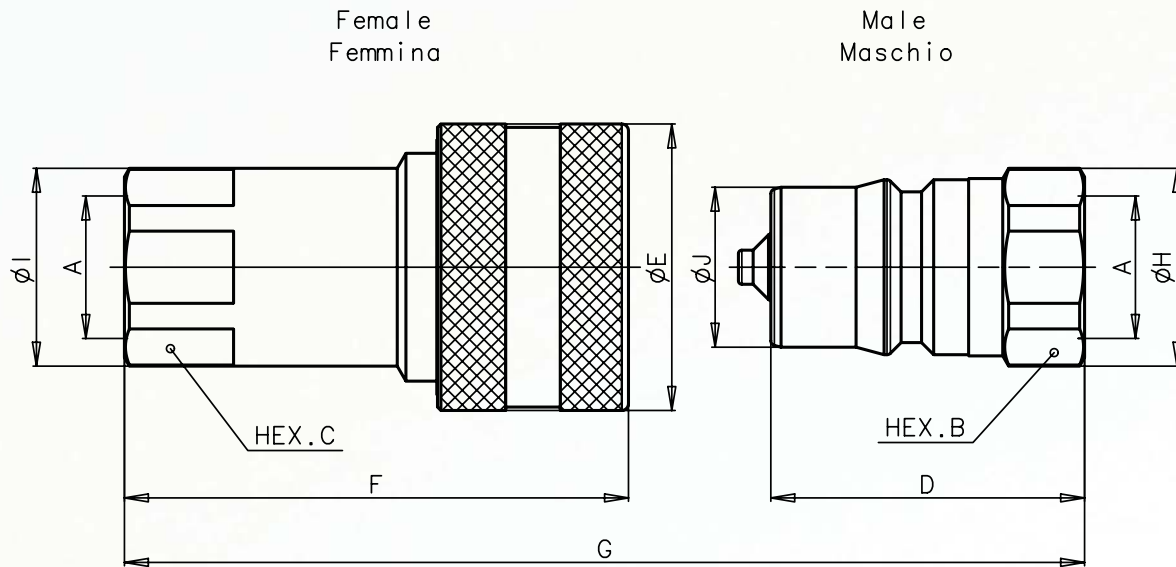
TESTS ESEGUITI IN CONFORMITA' A ISO 7241-2  
 TESTS IN ACCORDANCE WITH ISO 7241-2



FLUIDO: OLIO ISO VG32  
 TEMPERATURA: 40°C  
 VISCOSITA': 28.8-35.2 mm<sup>2</sup>/s

FLUID: OIL ISO VG32  
 TEMPERATURE: 40°C  
 VISCOSITY: 28.8-35.2 mm<sup>2</sup>/s

**OVERALL DIMENSIONS**



**FEMALE BSP THREAD (DIN 3852)**

Description	A	Unit	B	C	D	E	F	G	H	I	J	Unit	Weight	
													Male	Female
IRB18 BSP	1/8	mm Inch	14 0,55	14 0,55	30 1,18	23 0,91	48,8 1,92	60,5 2,38	15,8 0,62	15,8 0,62	10,8 0,43	Kg lb	0,018 0,04	0,068 0,15
IRB14 BSP	1/4	mm Inch	19 0,75	19 0,75	35 1,38	27 1,06	57 2,24	70,7 2,78	20,8 0,82	21,2 0,83	14,2 0,56	Kg lb	0,035 0,08	0,120 0,26
IRB38 BSP	3/8	mm Inch	24 0,94	24 0,94	41 1,61	34 1,34	66 2,60	82,7 3,26	26 1,02	27 1,06	19,1 0,75	Kg lb	0,068 0,15	0,220 0,49
IRB12 BSP	1/2	mm Inch	27 1,06	27 1,06	46 1,81	42 1,65	73,9 2,91	92,6 3,65	29 1,14	29 1,14	23,5 0,93	Kg lb	0,102 0,22	0,323 0,71
IRB34 BSP	3/4	mm Inch	36 1,42	36 1,42	55 2,17	50 1,97	90,1 3,55	111,1 4,37	38,5 1,52	38,5 1,52	31,4 1,24	Kg lb	0,203 0,45	0,562 1,24
IRB100 BSP	1	mm Inch	41 1,61	41 1,61	66 2,60	60 2,36	106,2 4,18	133,2 5,24	44,8 1,76	44,8 1,76	37,7 1,48	Kg lb	0,328 0,72	0,863 1,90

**FEMALE NPT THREAD (ANSI B.1.20.3)**

Description	A	Unit	B	C	D	E	F	G	H	I	J	Unit	Weight	
													Male	Female
IRB18 NPT	1/8	mm Inch	14 0,55	14 0,55	30 1,18	23 0,91	48,8 1,92	60,5 2,38	15,8 0,62	15,8 0,62	10,8 0,43	Kg lb	0,018 0,04	0,068 0,15
IRB14 NPT	1/4	mm Inch	19 0,75	19 0,75	35 1,38	27 1,06	57 2,24	70,7 2,78	20,8 0,82	21,2 0,83	14,2 0,56	Kg lb	0,036 0,08	0,120 0,26
IRB38 NPT	3/8	mm Inch	24 0,94	24 0,94	41 1,61	34 1,34	6 2,60	82,7 3,26	26 1,02	27 1,06	19,1 0,75	Kg lb	0,068 0,15	0,220 0,49
IRB12 NPT	1/2	mm Inch	27 1,06	27 1,06	46 1,81	42 1,65	73,9 2,91	92,6 3,65	29 1,14	29 1,14	23,5 0,93	Kg lb	0,105 0,23	0,322 0,71
IRB34 NPT	3/4	mm Inch	36 1,42	36 1,42	55 2,17	50 1,97	90,1 3,55	111,1 4,37	38,5 1,52	38,5 1,52	31,4 1,24	Kg lb	0,207 0,46	0,564 1,24
IRB100 NPT	1	mm Inch	41 1,61	41 1,61	66 2,60	60 2,36	106,2 4,18	133,2 5,24	44,8 1,76	44,8 1,76	37,7 1,48	Kg lb	0,342 0,75	0,880 1,94