



Series: **BIR**

INTERCHANGE: ISO 7241-1 series "A"

MAIN APPLICATIONS

- Agricultural equipment
- Industrial equipment

"BIR" is a poppet valve quick coupling series, interchangeable with international standard ISO 7241-1 "A", the series is manufactured in carbon steel with zinc plated surface treatment. This series offers worldwide interchangeability and the availability of a wide range of sizes from 1/4" thru 2". This makes the "BIR" series one of the most widely used in a range of hydraulic applications mainly in agricultural and industrial fields.

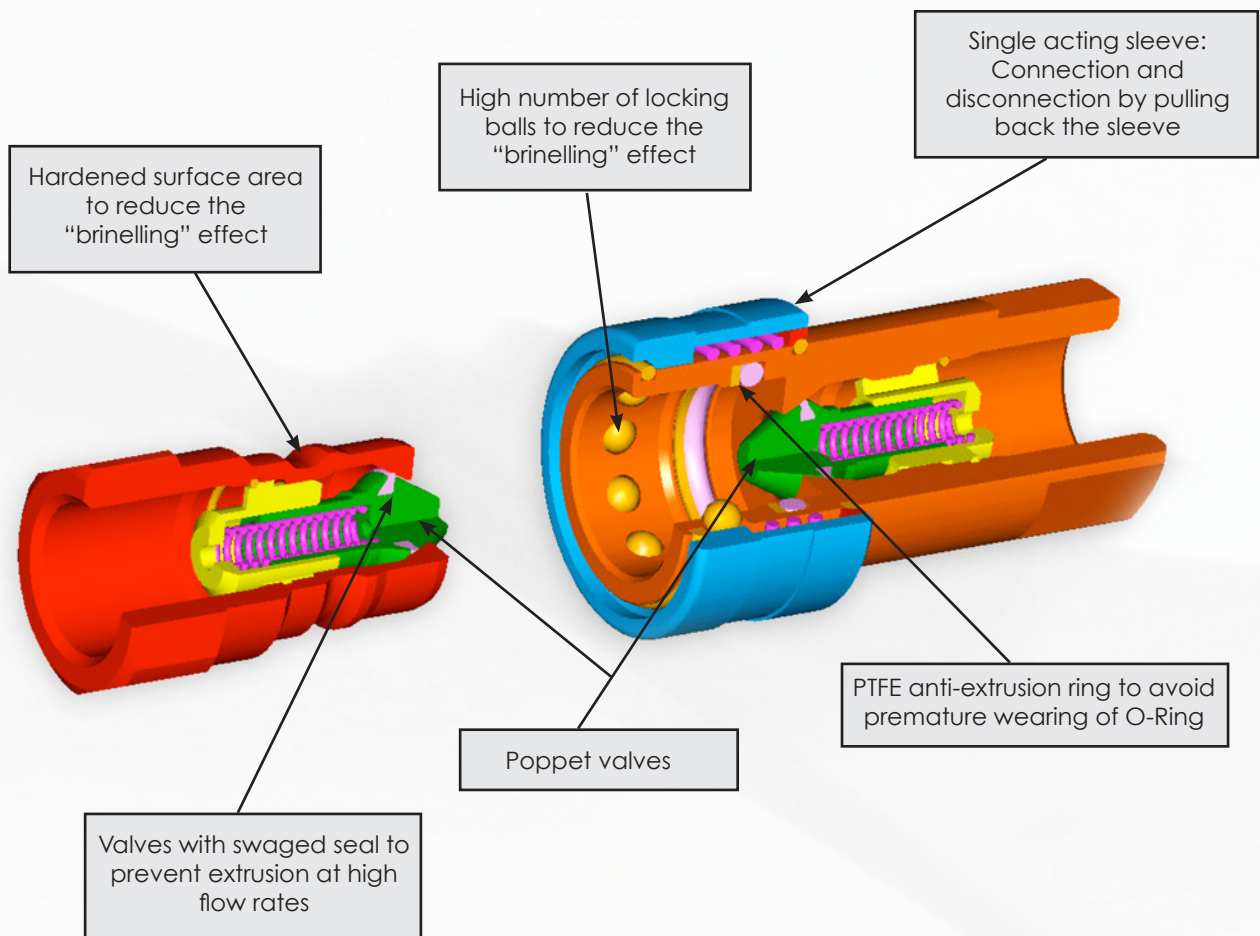


Stucchi[®]

A CONSTANT FLOW OF SOLUTIONS

TECHNICAL FEATURES AND OPTIONS

- Interchangeability: ISO 7241-1 series "A"
- 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).
- When the couplings are disconnected, it is suggested to use the protection caps.

PERFORMANCE

Description	Size	ISO Size	Rated flow		Max. flow suggested		Connect force		Disconnect force		Spillage *
			l/min	GPM	l/min	GPM	N	lbf	N	lbf	
	Inch	mm									ml
BIR14	1/4	6,3	12	3,18	12	3,18	60	13,50	25	5,63	0,70
BIR38	3/8	10,0	23	6,10	46	12,19	90	20,25	30	6,75	1,20
BIR12	1/2	12,5	45	11,93	90	23,85	70	15,75	55	12,38	2,10
BIR34	3/4	20,0	74	19,61	148	39,22	140	31,50	55	12,38	5,20
BIR100	1	25,0	100	26,50	200	53,00	190	42,75	55	12,38	9,00
BIR114	1-1/4	31,5	189	50,09	378	100,17	230	51,75	55	12,38	27,00
BIR112	1 1/2	40	288	76,32	750	198,75	250	56,25	100	22,50	49,00
BIR200	2	50	379	100,44	1000	265,00	280	63,00	35	7,88	75,00

Description	Max. operating pressure						Burst pressure					
	Coupled		Male		Female		Coupled		Male		Female	
	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi
BIR14	35	5075	35	5075	35	5075	126	18270	126	18270	126	18270
BIR38	30	4350	30	4350	30	4350	100	14500	100	14500	100	14500
BIR12	25	3625	25	3625	25	3625	80	11600	80	11600	100	14500
BIR34	25	3625	25	3625	25	3625	100	14500	100	14500	100	14500
BIR100	23	3335	23	3335	23	3335	80	11600	80	11600	80	11600
BIR114	23	3335	23	3335	23	3335	80	11600	80	11600	80	11600
BIR112	18	2610	18	2610	13	1885	64	9280	64	9280	64	9280
BIR200	13	1885	13	1885	13	1885	40	5800	40	5800	40	5800

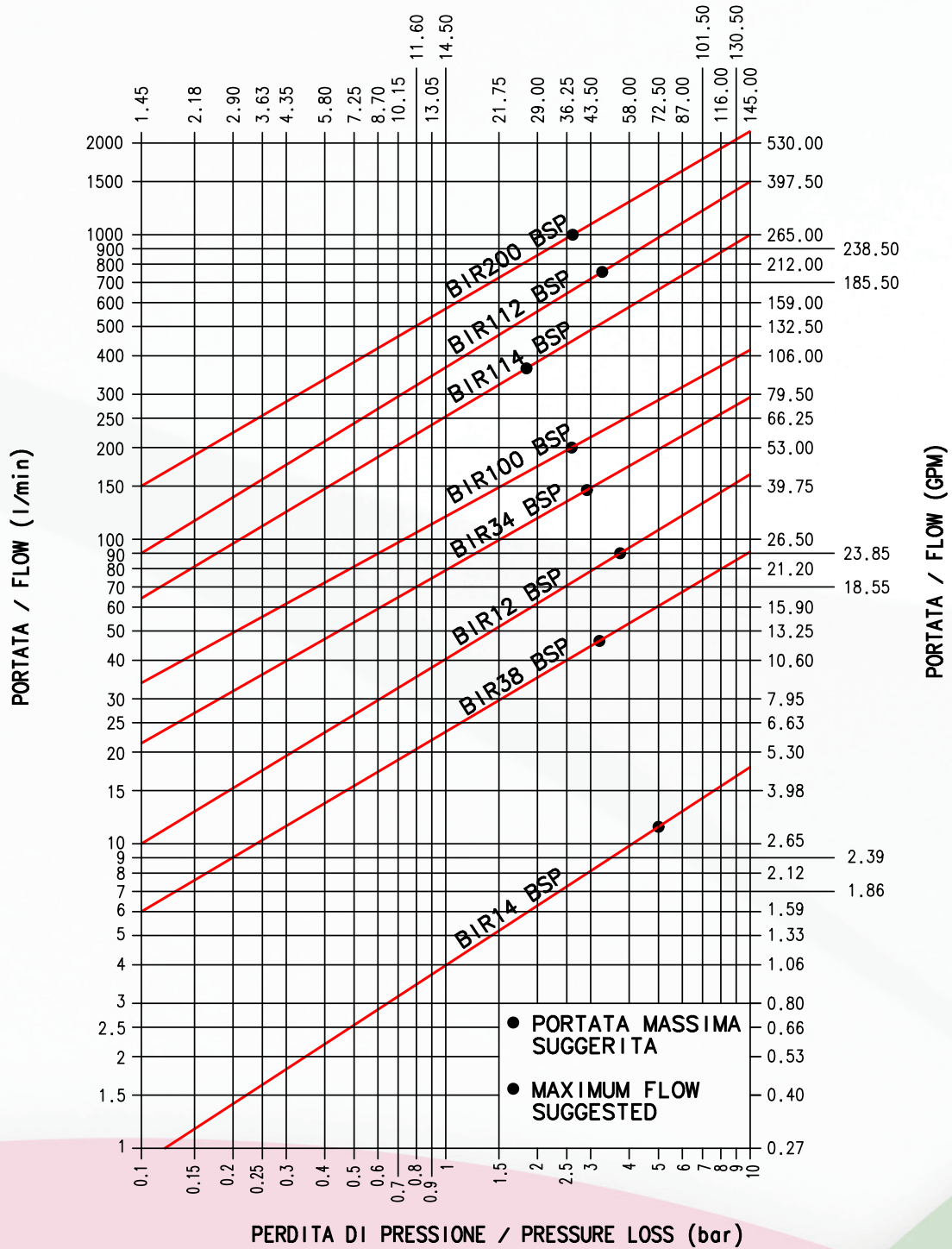
* Spillage is an indicative value of the fluid loss per couple-uncouple cycle.

- 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

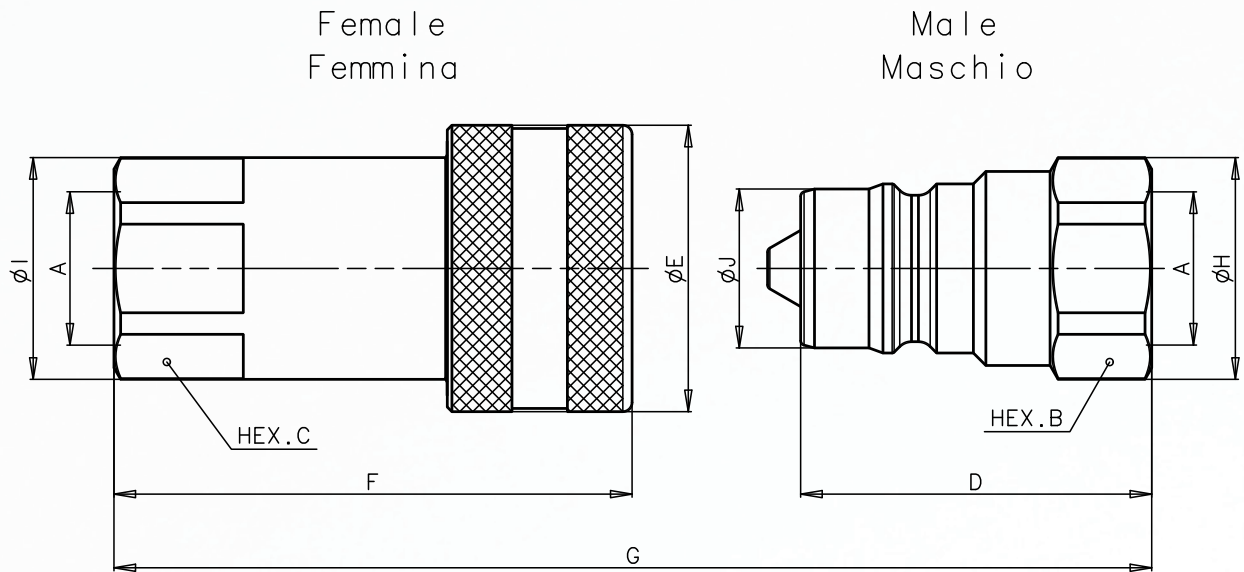
PERDITA DI PRESSIONE / PRESSURE LOSS (psi)



FLUIDO: OLIO ISO VG32
 TEMPERATURA: 40°C
 VISCOSITA': 28.8-35.2 mm²/s

FLUID: OIL ISO VG32
 TEMPERATURE: 40°C
 VISCOSITY: 28.8-35.2 mm²/s

OVERALL DIMENSIONS



FEMALE BSPB THREAD (DIN 3852)

Description	A	Unit	B	C	D	E	F	G	H	I	J	Unit	Weight	
													Male	Female
BIR14 BSP	1/4	mm Inch	19 0,75	19 0,75	32 1,26	26 1,02	47,1 1,85	64,8 2,55	20,8 0,82	22 0,87	11,8 0,46	Kg lb	0,031 0,07	0,095 0,21
BIR38 BSP	3/8	mm Inch	22 0,87	22 0,87	38 1,50	31 1,22	56,1 2,21	76,8 3,02	24 0,94	24 0,94	17,3 0,68	Kg lb	0,052 0,11	0,144 0,32
BIR12 BSP	1/2	mm Inch	27 1,06	27 1,06	44,5 1,75	38 1,50	63,3 2,49	86,3 3,40	29 1,14	30 1,18	20,5 0,81	Kg lb	0,084 0,19	0,245 0,54
BIR34 BSP	3/4	mm Inch	36 1,42	38 1,50	55 2,17	48 1,89	82,2 3,24	111,1 4,37	38,5 1,52	44 1,73	29,1 1,15	Kg lb	0,205 0,45	0,494 1,09
BIR100 BSP	1	mm Inch	41 1,61	45 1,77	63,1 2,48	54 2,13	97,1 3,82	127,3 5,01	44,8 1,76	52 2,05	34,3 1,35	Kg lb	0,275 0,61	0,760 1,68
BIR114 BSP	1-1/4	mm Inch	55 2,17	50 1,97	75 2,95	65 2,56	117,2 4,61	151,2 5,95	60 2,36	55,5 2,19	45 1,77	Kg lb	0,593 1,31	1,252 2,76
BIR112 BSP	1-1/2	mm Inch	60 2,36	60 2,36	85 3,35	80 3,15	135,3 5,33	171,3 6,74	65,5 2,58	65,5 2,58	55 2,17	Kg lb	0,880 1,94	2,130 4,70
BIR200 BSP	2	mm Inch	75 2,95	75 2,95	100 3,94	100 3,94	160,2 6,31	201,2 7,92	82,5 3,25	83,7 3,30	65 2,56	Kg lb	1,438 3,17	4,130 9,10

FEMALE NPT THREAD (ANSI B.1.20.3)

Description	A	Unit	B	C	D	E	F	G	H	I	J	Unit	Weight	
													Male	Female
BIR14 NPT	1/4	mm Inch	19 0,75	19 0,75	32 1,26	26 1,02	47,1 1,85	64,8 2,55	20,8 0,82	22 0,87	11,8 0,46	Kg lb	0,033 0,07	0,094 0,21
BIR38 NPT	3/8	mm Inch	22 0,87	22 0,87	38 1,50	31 1,22	56,1 2,21	76,8 3,02	24 0,94	24 0,94	17,3 0,68	Kg lb	0,053 0,12	0,145 0,32
BIR12 NPT	1/2	mm Inch	27 1,06	27 1,06	44,5 1,75	38 1,50	63,3 2,49	86,3 3,40	29 1,14	30 1,18	20,5 0,81	Kg lb	0,084 0,19	0,245 0,54
BIR34 NPT	3/4	mm Inch	36 1,42	38 1,50	55 2,17	48 1,89	82,2 3,24	111,1 4,37	38,5 1,52	44 1,73	29,1 1,15	Kg lb	0,210 0,46	0,502 1,11
BIR100 NPT	1	mm Inch	41 1,61	45 1,77	63,1 2,48	54 2,13	97,1 3,82	127,3 5,01	44,8 1,76	52 2,05	34,3 1,35	Kg lb	0,284 0,63	0,772 1,70
BIR114 NPT	1-1/4	mm Inch	55 2,17	50 1,97	75 2,95	65 2,56	117,2 4,61	151,2 5,95	60 2,36	55,5 2,19	45 1,77	Kg lb	0,615 1,36	1,244 2,74
BIR112 NPT	1-1/2	mm Inch	60 2,36	60 2,36	85 3,35	80 3,15	135,3 5,33	171,3 6,74	65,5 2,58	65,5 2,58	55 2,17	Kg lb	0,878 1,94	2,130 4,70
BIR200 NPT	2	mm Inch	75 2,95	75 2,95	100 3,94	100 3,94	160,2 6,31	201,2 7,92	82,5 3,25	83,7 3,30	65 2,56	Kg lb	1,440 3,17	4,130 9,10

PROTECTION CAPS FOR BIR, SERIES

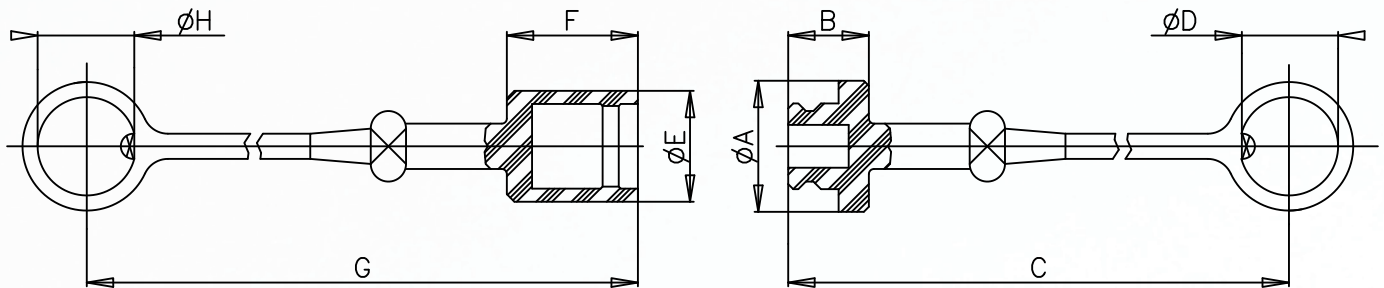
Protective caps are always recommended to protect the couplings from damage or dirt inclusion, and increase the product life. This is particularly important in mobile applications where contamination can enter the coupling and compromise the function. The caps for BIR, IR-V and IR series are manufactured in PVC rubber and they are available in several colors.



OVERALL DIMENSIONS PROTECTION CAPS FOR "BIR" SERIES

CAP FOR MALE COUPLING
Tappo per innesto maschio

CAP FOR FEMALE COUPLING
Tappo per innesto femmina



PVC CAPS

- Available in following colors: Red, yellow, blue, black and green.
- Temperature range: from -20 °C to +100 °C (from -4 °F to +212 °F).

Description	Coupling	Unit	A	B	C	D	E	F	G	H	Unit	Weight
T.M.B. 1/4	F-BIR14	mm Inch	20 0,79	16 0,63	223 8,78	19,5 0,77	- -	- -	- -	- -	Kg lb	0,014 0,03
T.F.B. 1/4	M-BIR14	mm Inch	- -	- -	- -	- -	18 0,71	23 0,91	230 9,06	19,5 0,77	Kg lb	0,013 0,03
T.M.B. 3/8	F-BIR38	mm Inch	26 1,02	16 0,63	223 8,78	22,5 0,89	- -	- -	- -	- -	Kg lb	0,018 0,04
T.F.B. 3/8	M-BIR38	mm Inch	- -	- -	- -	- -	24 0,94	27 1,06	234 9,21	22,5 0,89	Kg lb	0,015 0,03
T.M. 1/2	F-BIR12 F-IR12	mm Inch	33 1,30	20 0,79	273 10,75	28 1,10	- -	- -	- -	- -	Kg lb	0,020 0,04
T.F. 1/2	M-BIR12 M-IR12	mm Inch	- -	- -	- -	- -	29 1,14	32 1,26	239 9,41	28 1,10	Kg lb	0,022 0,05
T.M.B. 3/4	F-BIR34	mm Inch	40 1,57	19 0,75	266 10,47	32 1,26	- -	- -	- -	- -	Kg lb	0,025 0,06
T.F.B. 3/4	M-BIR34	mm Inch	- -	- -	- -	- -	36 1,42	41 1,61	288 11,34	32 1,26	Kg lb	0,027 0,06
T.M.B. 1	F-BIR100	mm Inch	45 1,77	24 0,94	271 10,67	38 1,50	- -	- -	- -	- -	Kg lb	0,040 0,09
T.F.B. 1	M-BIR100	mm Inch	- -	- -	- -	- -	42 1,65	48 1,89	295 11,61	38 1,50	Kg lb	0,037 0,08