



The VOF Series Threaded Poppet Couplers provide high resistance to pressure impulses in a compact design. The VOF's internal parts are designed to reduce turbulence and pressure drop, and its poppet valve with elastomer seal provides maximum sealing of the couplings when disconnected. A wrench flat on the bodies facilitates the fitting assembly, and the retainer is high resistance carbon steel.



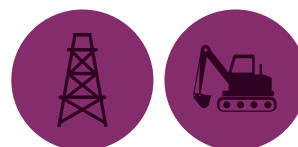
Protective Caps & Plugs – page 115

### FEATURES

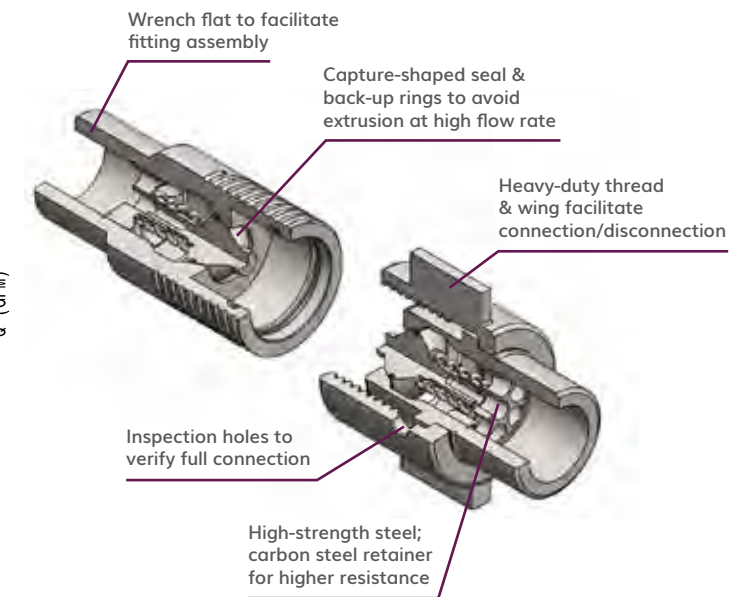
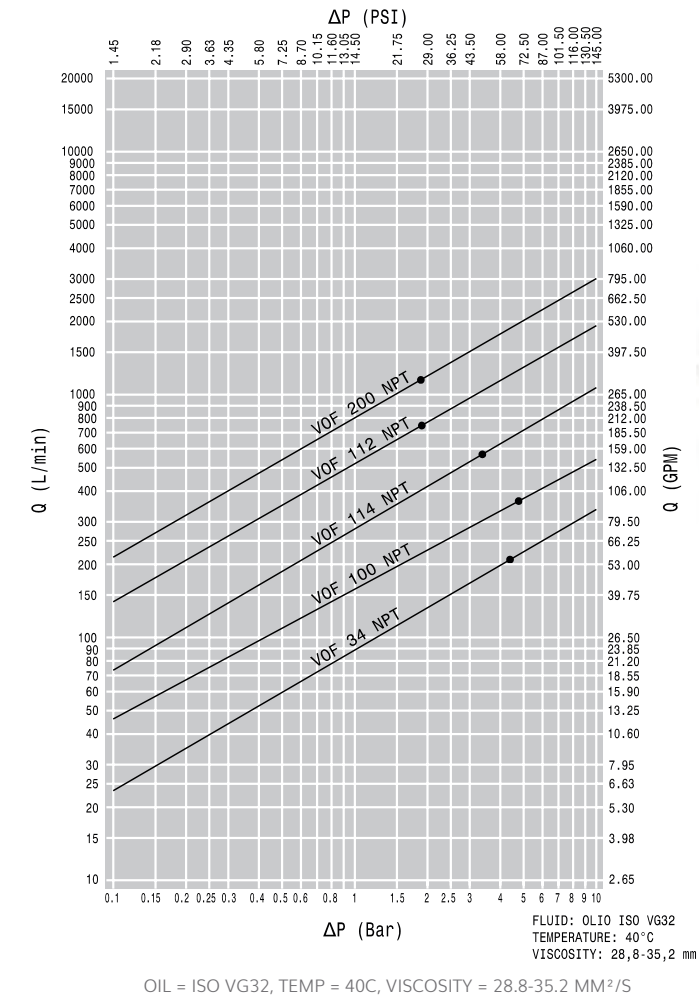
- Size range: 3/4" thru 2"
- Port options: NPT
- Interchanges with Hydraulics Inc 5TV, Snap-Tite 75, Dixon WS, Faster OGV
- Connection under residual pressure is allowed on one side
- Positive-stop valving prevents flow checking
- Large-diameter steel sleeves resist deformation for maximum life
- Inspection hole to visually confirm complete connection

### APPLICATIONS

- Excavators w/ auxiliary line for attachments: piling hammers and augers
- Oil & gas applications needing high resistance to pressure impulses, such as BOPs and top drives
- Suitable for open- or closed-center hydraulic systems



### PRESSURE DROP



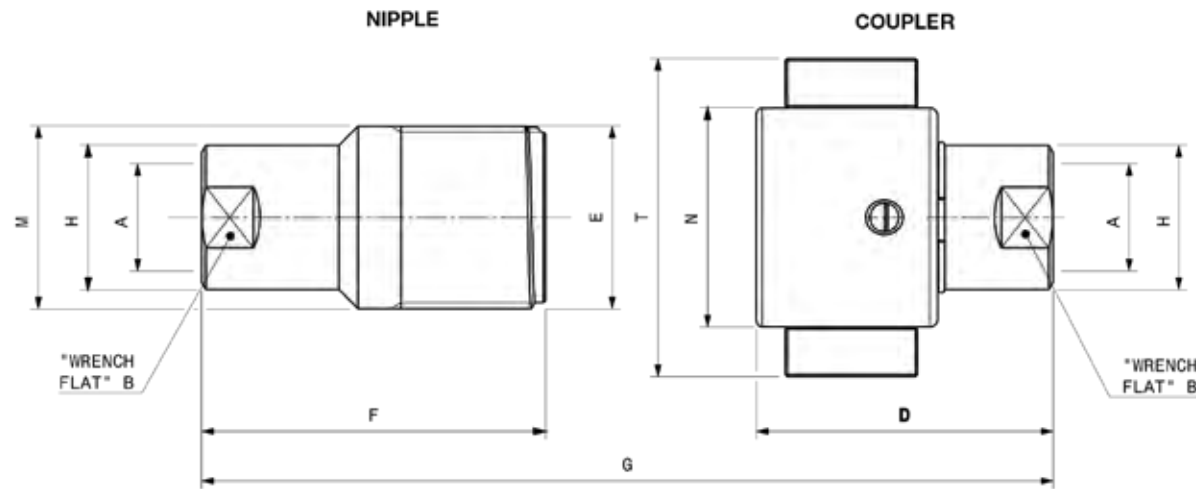
### PERFORMANCE

DESCRIPTION	SIZE	MAX. OPERATING PRESSURE COUPLED		COUPLED		BURST PRESSURE		FEMALE	SPILLAGE*	
		MPa	psi	MPa	psi	MALE	psi			
VOF 34	3/4	34.5	5000	137.9	20000	137.9	20000	100	14500	11.5
VOF 100	1	34.5	5000	137.9	20000	137.9	20000	100	14500	21.2
VOF 114	1 1/4	34.5	5000	137.9	20000	137.9	20000	100	14500	42.3
VOF 112	1 1/2	34.5	5000	137.9	20000	137.9	20000	82.8	12000	86.5
VOF 200	2	34.5	5000	137.9	14500	90	13050	75.9	11000	166

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



### SIZE DIAGRAM

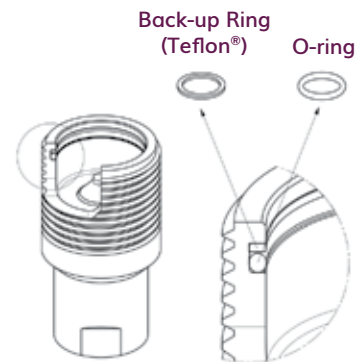


DESCRIPTION	BODY SIZE	A	UNIT	B	F	G	D	T	N	M	H	UNIT	WEIGHT	
													NIPPLE	COUPLER
VOF 34	3/4	3/4	mm	31.75	83.2	123.6	71.8	77	53	44.3	35	kg	0.477	0.61
			inch	1 1/4	3.28	4.87	2.83	3.03	2.09	1.74	1.38	lbs	1.052	1.345
VOF 100	1	1	mm	41.28	105.8	152.9	87.3	105	69	57.15	45	kg	1.189	1.375
			inch	1 5/8	4.17	6.02	3.44	4.13	2.72	2.25	1.77	lbs	2.621	3.031
VOF 114	1 1/4	1 1/4	mm	50.8	136.7	197.9	112.4	116	80	66.67	54.5	kg	1.951	2.273
			inch	2	5.38	7.79	4.43	4.57	3.15	2.62	2.15	lbs	4.301	5.011
VOF 112	1 1/2	1 1/2	mm	57.15	151.2	220.3	126.9	145	95	82.55	63.5	kg	3.223	3.841
			inch	2 1/4	5.95	8.67	5	5.71	3.74	3.25	2.5	lbs	7.105	8.468
VOF 200	2	2	mm	76.2	179	255.2	154.2	182.5	122.5	101.6	82.6	kg	6.042	8.103
			inch	3	7.05	10.05	6.07	7.19	4.82	4.00	3.25	lbs	13.32	17.864

### Spare Kit Seal for Nipple

BODY SIZE	DESCRIPTION	ORDER CODE
3/4	VOF 34 KIT	8155700956
1	VOF 100 KIT	8155700958
1 1/4	VOF 114 KIT	8155700960
1 1/2	VOF 112 KIT	8155701122
2	VOF 200 KIT	8155700964

O-ring in Nitrile  
Back-up in Teflon®



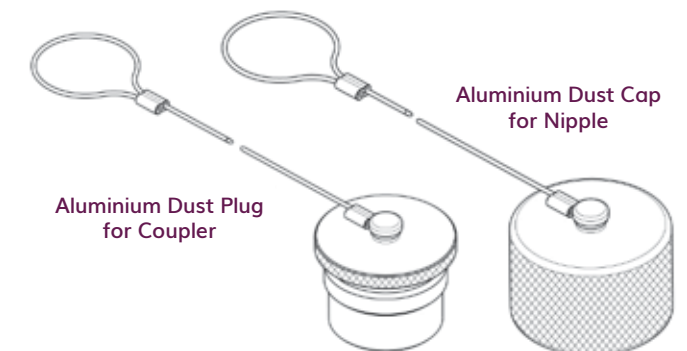
### VOF Interchange NPT Thread Threaded Poppet

PART	BODY SIZE	PORT SIZE	THREAD TYPE	ORDER CODE	DESCRIPTION
<b>VOF NPT THREAD</b>					
NIPPLE	3/4	3/4	NPT	811201002	M. VOF 34 NPT
COUPLER	3/4	3/4	NPT	811201003	F. VOF 34 NPT
NIPPLE	1	1	NPT	811201000	M. VOF 100 NPT
COUPLER	1	1	NPT	811201001	F. VOF 100 NPT
NIPPLE	1 1/4	1 1/4	NPT	811201004	M. VOF 114 NPT
COUPLER	1 1/4	1 1/4	NPT	811201005	F. VOF 114 NPT
NIPPLE	1 1/2	1 1/2	NPT	811201006	M. VOF 112 NPT
COUPLER	1 1/2	1 1/2	NPT	811201007	F. VOF 112 NPT
NIPPLE	2	2	NPT	811201008	M. VOF 200 NPT
COUPLER	2	2	NPT	811201009	F. VOF 200 NPT

### VOF Series Accessories Protective Caps and Plugs

BODY SIZE	ORDER CODE		MATERIAL / COLOR
	PLUG FOR COUPLER	CAP FOR NIPPLE	
3/4	815405013	815405012	ALUMINUM / NATURAL
1	815405011	815405010	ALUMINUM / NATURAL
1 1/4	815405015	815405014	ALUMINUM / NATURAL
1 1/2	815405017	815405016	ALUMINUM / NATURAL
2	815405019	815405018	ALUMINUM / NATURAL

Protective caps, which can increase the product life, are always recommended to protect the couplings from damage and dirt. This is particularly important in oil & gas and mobile applications, where exposure to weather and aggregate materials are common. The protective caps for VOF couplings are manufactured in aluminum (natural color).





The VOFX Series Threaded Poppet Couplers provide high resistance to pressure impulses and are manufactured with corrosion-resistant 316 stainless steel, in a compact design. As with the VOF, the internal parts of the VOFX are designed to reduce turbulence and pressure drop, and its poppet valve with elastomer seal provides maximum sealing of the couplings when disconnected. A wrench flat on the bodies facilitates the fitting assembly.



Repair Kits – page 118

Protective Caps & Plugs – page 119

### FEATURES

Size range: 3/4" thru 2"

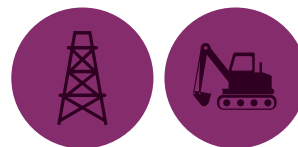
Port options: NPT

Interchanges with Snap-Tite 75, Dixon WS

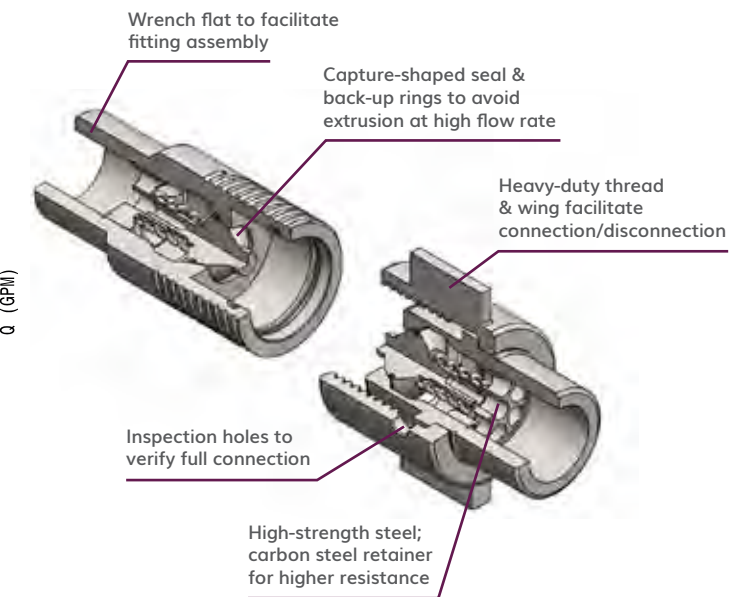
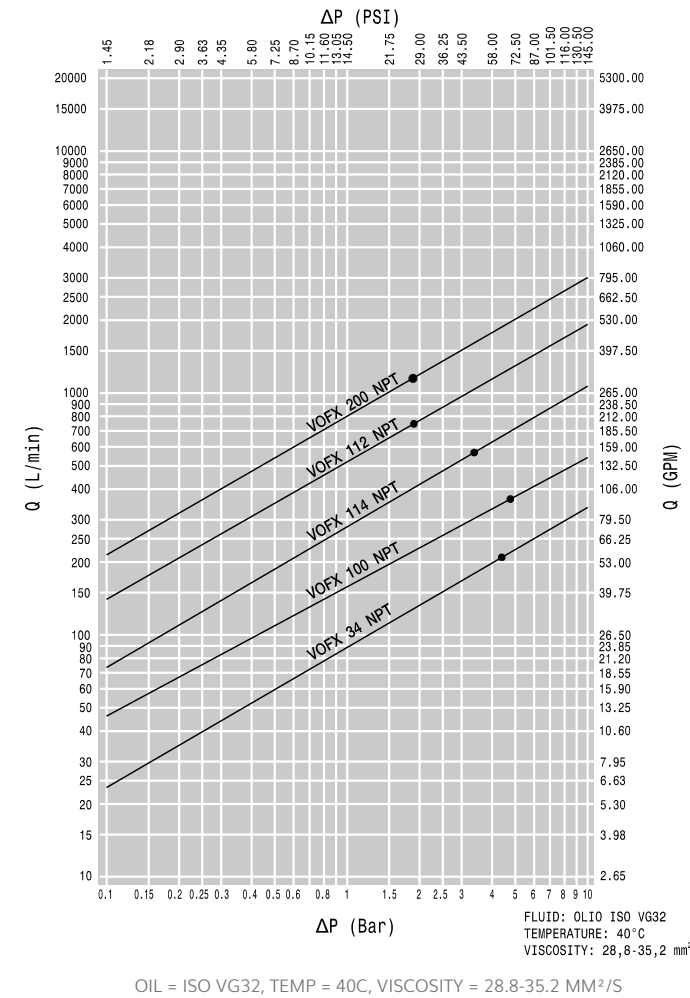
- 316 stainless steel material to resist corrosion
- Positive-stop valving prevents flow checking
- Large-diameter sleeves resist deformation for maximum life
- Inspection hole to visually confirm complete connection

### APPLICATIONS

- Oil & gas applications needing high resistance to pressure impulses, such as BOPs and top drives
- Suitable for open- or closed-center hydraulic system



### PRESSURE DROP



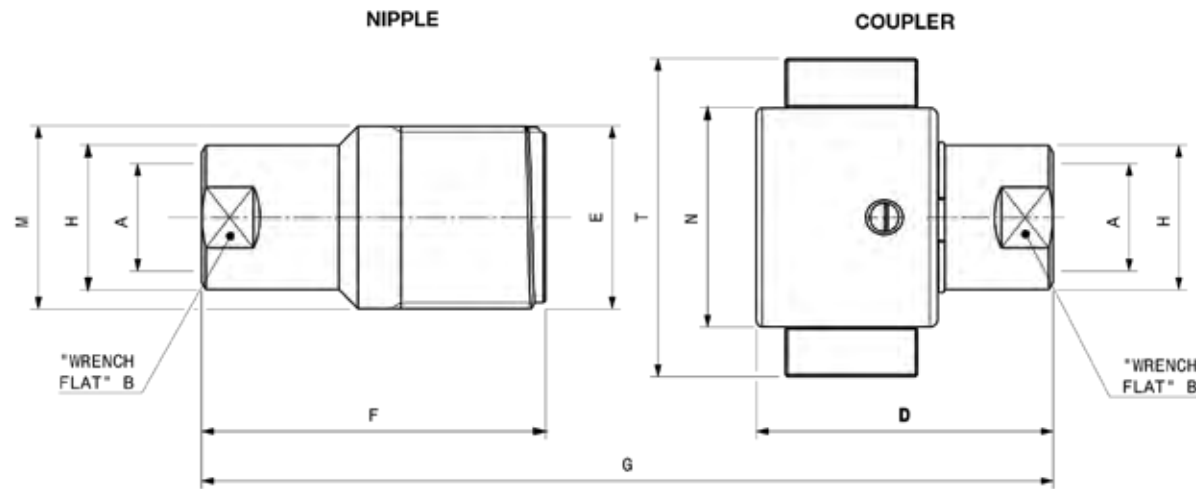
### PERFORMANCE

DESCRIPTION	SIZE	MAX. OPERATING PRESSURE COUPLED		COUPLED		BURST PRESSURE				SPILLAGE*
		MPa	psi	MPa	psi	MALE		FEMALE		
						MPa	psi	MPa	psi	ml
VOFX 34	3/4	20.7	3000	82.8	12000	62.1	9000	62.1	9000	11.5
VOFX 100	1	20.7	3000	82.8	12000	62.1	9000	62.1	9000	21.2
VOFX 114	1 1/4	20.7	3000	82.8	12000	62.1	9000	62.1	9000	42.3
VOFX 112	1 1/2	20.7	3000	82.8	12000	62.1	9000	62.1	9000	86.5
VOFX 200	2	20.7	3000	82.8	12000	62.1	9000	62.1	9000	166

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



### SIZE DIAGRAM

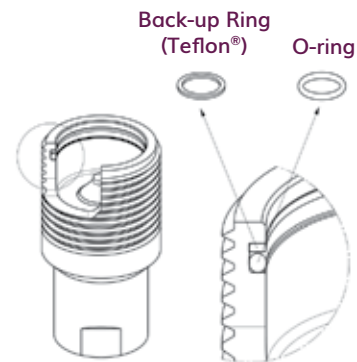


DESCRIPTION	BODY SIZE	A	UNIT	B	F	G	D	T	N	M	H	UNIT	WEIGHT	
													NIPPLE	COUPLER
VOFX 34	3/4	3/4	mm	31.75	83.2	123.6	71.8	77	53	44.3	35	kg	0.477	0.61
			inch	1 1/4	3.28	4.87	2.83	3.03	2.09	1.74	1.38	lbs	1.052	1.345
VOFX 100	1	1	mm	41.28	105.8	152.9	87.3	105	69	57.15	45	kg	1.189	1.375
			inch	1 5/8	4.17	6.02	3.44	4.13	2.72	2.25	1.77	lbs	2.621	3.031
VOFX 114	1 1/4	1 1/4	mm	50.8	136.7	197.9	112.4	116	80	66.67	54.5	kg	1.951	2.273
			inch	2	5.38	7.79	4.43	4.57	3.15	2.62	2.15	lbs	4.301	5.011
VOFX 112	1 1/2	1 1/2	mm	57.15	151.2	220.3	126.9	145	95	82.55	63.5	kg	3.223	3.841
			inch	2 1/4	5.95	8.67	5	5.71	3.74	3.25	2.5	lbs	7.105	8.468
VOFX 200	2	2	mm	76.2	179	255.2	154.2	182.5	122.5	101.6	82.6	kg	6.042	8.103
			inch	3	7.05	10.05	6.07	7.19	4.82	4.00	3.25	lbs	13.32	17.864

### Spare Kit Seal for Nipple

BODY SIZE	DESCRIPTION	ORDER CODE
3/4	VOFX 34 KIT	8155700956
1	VOFX 100 KIT	8155700958
1 1/4	VOFX 114 KIT	8155700960
1 1/2	VOFX 112 KIT	8155701122
2	VOFX 200 KIT	8155700964

O-ring in Nitrile  
Back-up in Teflon®



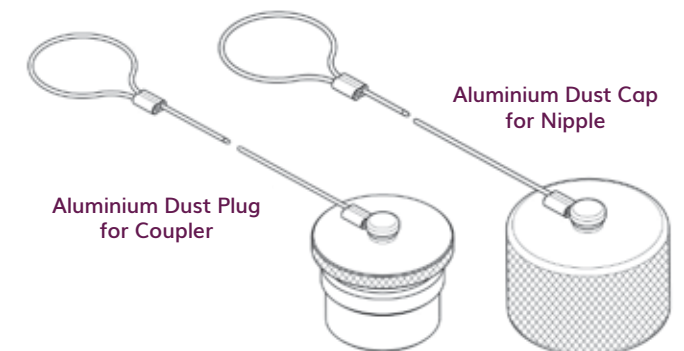
### VOFX Stainless Interchange NPT Thread Threaded Poppet

PART	BODY SIZE	PORT SIZE	THREAD TYPE	ORDER CODE	DESCRIPTION
<b>VOFX NPT THREAD</b>					
NIPPLE	3/4	3/4	NPT	811201050	M. VOFX 34 NPT
COUPLER	3/4	3/4	NPT	811201051	F. VOFX 34 NPT
NIPPLE	1	1	NPT	811201052	M. VOFX 100 NPT
COUPLER	1	1	NPT	811201053	F. VOFX 100 NPT
NIPPLE	1 1/4	1 1/4	NPT	811201054	M. VOFX 114 NPT
COUPLER	1 1/4	1 1/4	NPT	811201055	F. VOFX 114 NPT
NIPPLE	1 1/2	1 1/2	NPT	811201056	M. VOFX 112 NPT
COUPLER	1 1/2	1 1/2	NPT	811201057	F. VOFX 112 NPT
NIPPLE	2	2	NPT	811201058	M. VOFX 200 NPT
COUPLER	2	2	NPT	811201059	F. VOFX 200 NPT

### VOFX Series Accessories Protective Caps and Plugs

BODY SIZE	ORDER CODE		MATERIAL / COLOR
	PLUG FOR COUPLER	CAP FOR NIPPLE	
3/4	815405013	815405012	ALUMINUM / NATURAL
1	815405011	815405010	ALUMINUM / NATURAL
1 1/4	815405015	815405014	ALUMINUM / NATURAL
1 1/2	815405017	815405016	ALUMINUM / NATURAL
2	815405019	815405018	ALUMINUM / NATURAL

Protective caps, which can increase the product life, are always recommended to protect the couplings from damage and dirt. This is particularly important in oil & gas and mobile applications, where exposure to weather and aggregate materials are common. The protective caps for VOFX couplings are manufactured in aluminum (natural color). Upon request, caps can also be manufactured in a stainless steel version.





### The VLS Series Heavy-Duty Screw Coupler

is a durable product using heavy-duty poppet style valves for the sealing mechanism and threads as the mechanical connection. The VLS series couplings feature a rugged design, making them particularly well-suited for heavy-duty service conditions, including construction equipment used in extreme off-highway conditions.



Aluminum Screw Caps – page 125

### FEATURES

Size range: 1/2" thru 1"

Port options: BSP, DIN

Screw-on system interchangeable with German market couplings

- Internal components designed to reduce turbulence and handle impulse applications
- Zinc plated steel coupling body with zinc plated hardened steel nipple
- Nitrile seals and Teflon anti-extrusion rings
- Inspection hole to visually confirm complete connection

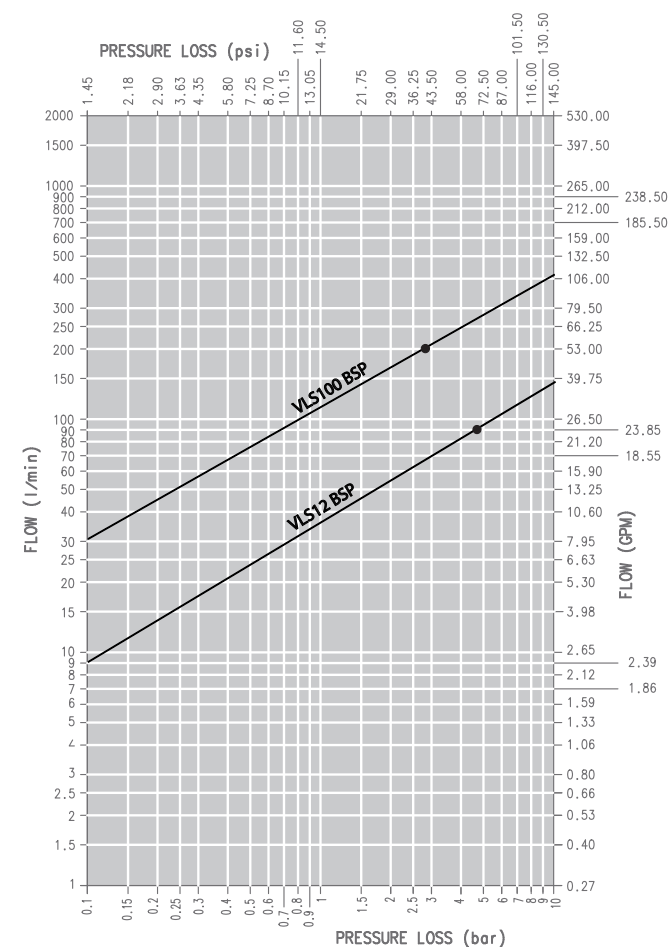
### APPLICATIONS

Particularly well-suited for heavy-duty service conditions

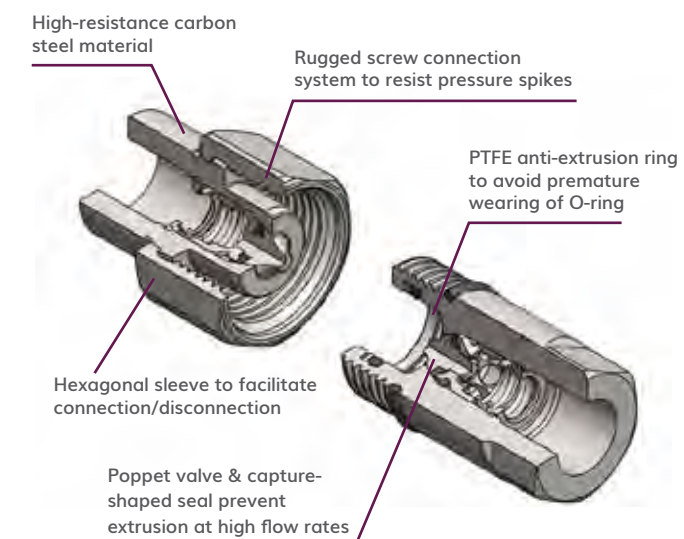
- Off-highway applications, especially in construction equipment under extreme conditions
- Wherever turbulence must be reduced and impulses must be managed



### PRESSURE DROP



OIL = ISO VG32, TEMP = 40C, VISCOSITY = 28.8-35.2 MM<sup>2</sup>/S



### PERFORMANCE

DESCRIPTION	MAX. OPERATING PRESSURE						BURST PRESSURE					
	COUPLED		MALE		FEMALE		COUPLED		MALE		FEMALE	
	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi
VLS12	46.5	6743	46.5	6743	46.5	6743	200	29000	130	18850	170	24650
VLS100	46.5	6743	46.5	6743	46.5	6743	140	20300	140	20300	140	20300

DESCRIPTION	SIZE	RATED FLOW		MAX. FLOW SUGGESTED		CONNECT TORQUE*		DISCONNECT TORQUE*		SPILLAGE**
		L/min	GPM	L/min	GPM	NM	LBF FT	NM	LBF FT	
VLS12	1/2	45	11.93	90	23.85	3.2	2.36	3.2	2.36	2.5
VLS100	1	100	26.50	200	53.00	1.3	0.96	0.6	0.44	15

\* Connect torque and disconnect torque without residual pressure. Torque will increase with residual pressure.

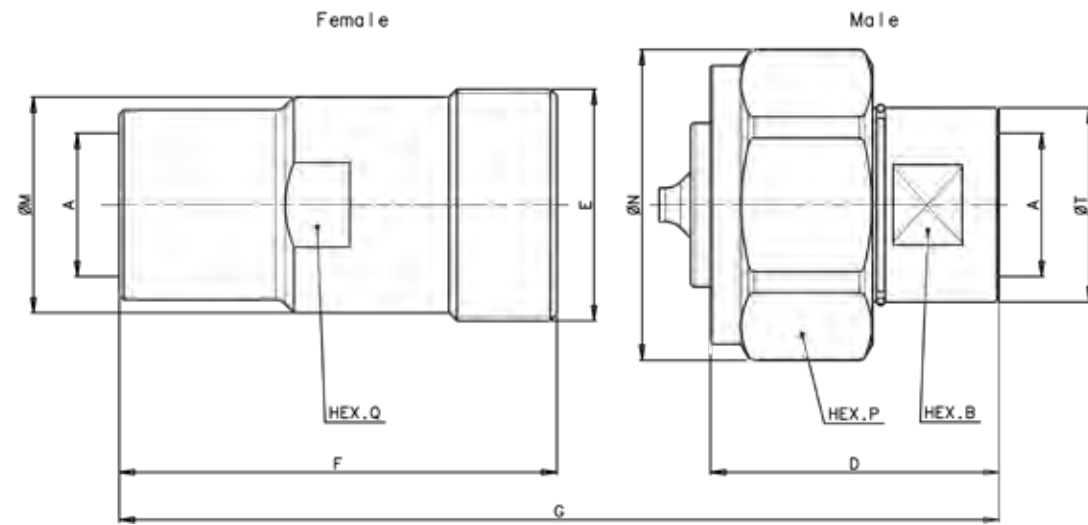
\*\* Spillage is an indicative value of the fluid loss per couple-uncouple cycle without residual pressure.

# VLS SERIES

THREADED POPPET COUPLERS Heavy Duty Screw Coupler



## SIZE DIAGRAM



DESCRIPTION	BODY SIZE	ISO	A	E	UNIT	HEX B	D	F	G	M	N	HEX P	HEX Q	T
VLS 12 BSP	1/2	12,5	G 1/2'	35X2 SP	mm	27	50,3	62	92.6	35.5	45	41	32	29.8
					inch	1.06	1.98	2.44	3.65	1.40	1.77	1.61	1.26	1.17
VLS 100 BSP	1	25	G 1'	54X3 SP	mm	41	66.9	101.5	143	50	72	65	46	54
					inch	1.61	2.63	4.00	5.63	1.97	2.83	2.56	1.81	2.13

DESCRIPTION	UNIT	WEIGHT	
		MALE	FEMALE
VLS 12 BSP	kg	0.245	0.315
	lbs	0.111	0.143
VLS 100 BSP	kg	0.92	0.88
	lbs	0.417	0.399

DESCRIPTION	BODY SIZE	ISO	A	E	UNIT	HEX B	D	F	G	M	N	HEX P	HEX Q	T
VLS 12 M22X1.5 ISO	1/2	12.5	M22X1.5	35X2 SP	mm	27	50.3	62	92.6	35.5	45	41	32	29.8
					inch	1.06	1.98	2.44	3.65	1.40	1.77	1.61	1.26	1.17
VLS 100 M30X1.5 ISO	1	25	M30X1.5	54X3 SP	mm	41	66.9	101.5	143	50	72	65	46	54
					inch	1.61	2.63	4.00	5.63	1.97	2.83	2.56	1.81	2.13

DESCRIPTION	UNIT	WEIGHT	
		MALE	FEMALE
VLS 12 M22X1.5 ISO	kg	0.24	0.305
	lbs	0.109	0.138
VLS 100 M30X1.5 ISO	kg	0.94	0.9
	lbs	0.426	0.408

## VLS BSP and DIN Thread

PART	BODY SIZE	THREAD TYPE	THREAD SIZE	PORT SERIES	PORT THREAD	ORDER CODE	DESCRIPTION
<b>VLS BSP THREAD</b>							
COUPLER	1/2	BSP	1/2	FEMALE	1/2-14	809900004	F. VLS 12 BSP
NIPPLE	1/2	BSP	1/2	FEMALE	1/2-14	809900005	M. VLS 12 BSP
COUPLER	1	BSP	1	FEMALE	1-11	809900008	F. VLS 100 BSP
NIPPLE	1	BSP	1	FEMALE	1-11	809900009	M. VLS 100 BSP
<b>VLS DIN THREAD</b>							
COUPLER	1/2	DIN	M 22X1.5	FEMALE	-	809912004	F. VLS M22X1.5 ISO
NIPPLE	1/2	DIN	M 22X1.5	FEMALE	-	809912005	M. VLS M22X1.5 ISO
COUPLER	1	DIN	M 30X1.5	FEMALE	-	809912008	F. VLS 100 M30X1.5 ISO
NIPPLE	1	DIN	M 30X1.5	FEMALE	-	809912009	M. VLS 100 M30X1.5 ISO

## VLS Series Accessories Aluminum Screw Caps

DESCRIPTION	ORDER CODE	
	PLUG FOR FEMALE	CAP FOR MALE
VLS12	814906022	814906023
VLS100	814906024	814906025

THREADED POPPET COUPLERS

# VD SERIES

THREADED POPPET COUPLERS European Screw Coupler



The VD Series European Screw Coupler uses a poppet style valve as the sealing mechanism and threads as the mechanical connection, to ensure connection under residual pressure. The highly versatile, rugged design with highly visible O-ring connected marker makes the VD series ideally suited for heavy-duty service conditions and hydraulic systems experiencing pressure spikes or impulses.



Protective Caps & Plugs – page 127

## FEATURES

Size range: 1/4" thru 1 1/4"  
 Port options: BSP, NPT, DIN  
 Interchangeable with German market couplings

- Hardened valve body for impulse applications and friction ring prevents accidental disconnection
- Internal components purposely designed to reduce turbulence
- Metal shoulder to protect the O-ring seal on female coupling

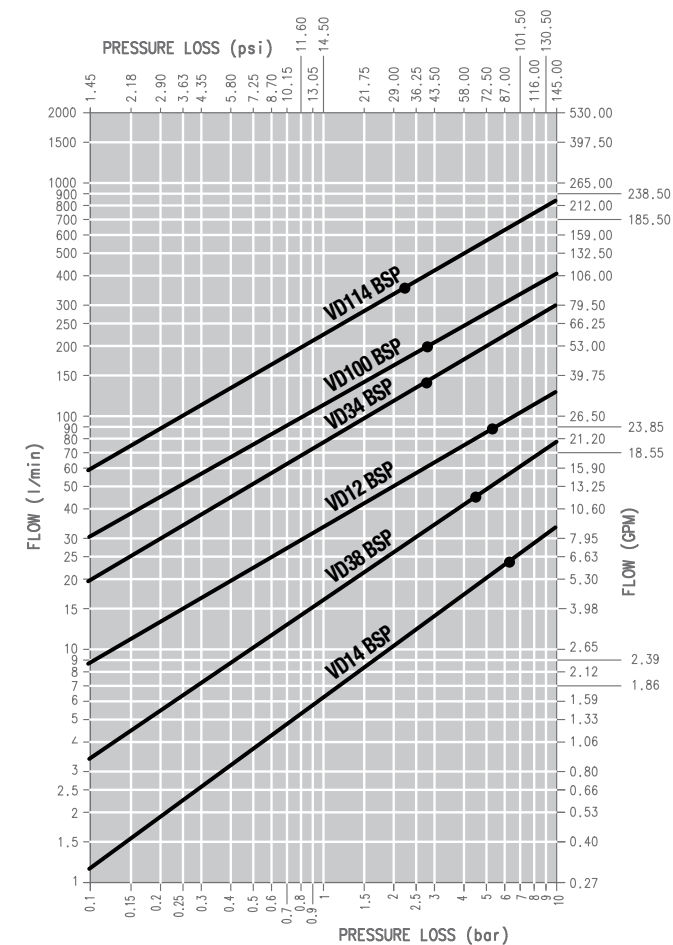
## APPLICATIONS

Ideally suited for hydraulic systems experiencing pressure spikes or impulses

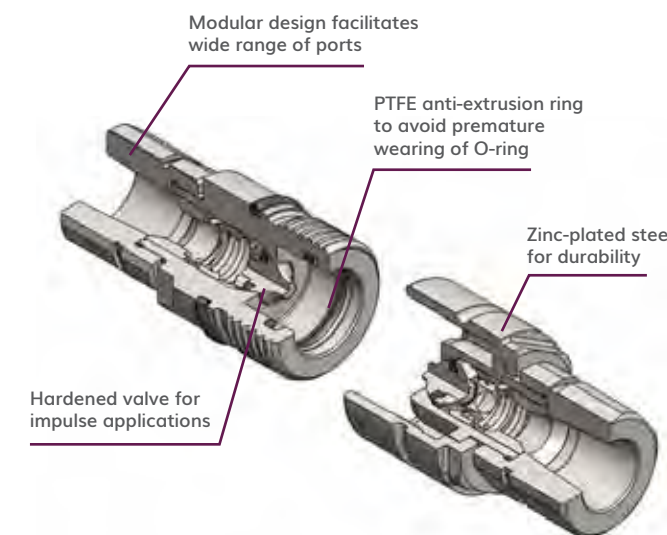
- Serve variety of hydraulic needs in mobile crane, vibratory hammer, oil patch, and industrial plant applications
- Suited for heavy-duty service conditions



## PRESSURE DROP



OIL = ISO VG32, TEMP = 40C, VISCOSITY = 28.8-35.2 MM<sup>2</sup>/S



## PERFORMANCE

DESCRIPTION	SIZE	MAX. WORKING PRESSURE CONNECTED	
		MPa	psi
VD14	1/4	45	6527
VD38	3/8	45	6527
VD12	1/2	40	5801
VD34	3/4	40	5801
VD100	1	30	4351
VD114	1 1/4	30	4351

### VD Series Accessories Protective Caps and Plugs | Color Red

DESCRIPTION	SIZE	ORDER CODE	
		PLUG FOR FEMALE	CAP FOR MALE
VD14	1/4	814900000	814900001
VD38	3/8	814900002	814900003
VD12	1/2	814900004	814900005
VD34	3/4	814900006	814900007
VD100	1	814900008	814900009
VD114	1 1/4	814900010	814900011



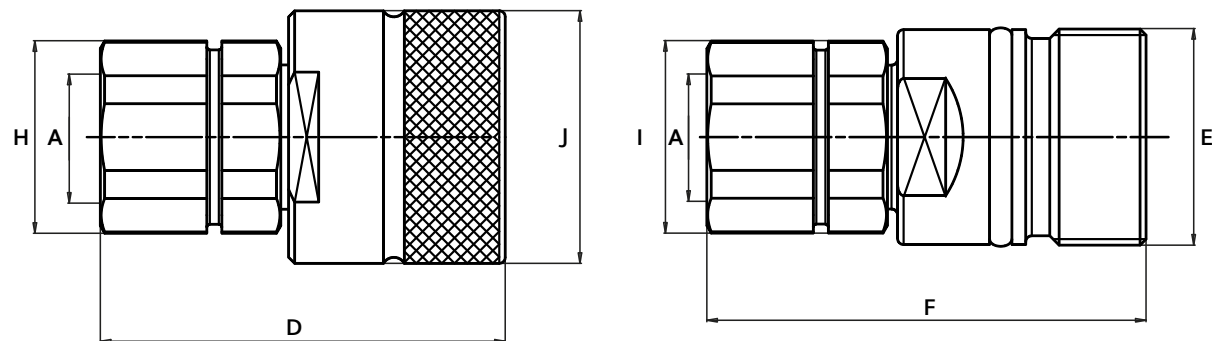
THREADED POPPET COUPLERS

# VD SERIES

THREADED POPPET COUPLERS European Screw Coupler



## SIZE DIAGRAM



DESCRIPTION	BODY SIZE	A	DIMENSION	D	E	F	H	I	J
VD38	3/8	3/8	mm	60.7	28	63.3	24	24	34
			inch	2.39	1.1	2.49	0.94	0.94	1.34
VD12	1/2	1/2	mm	67.3	36	73	32	32	42
			inch	2.65	1.42	2.87	1.26	1.26	1.65
VD34	3/4	3/4	mm	72.5	42	82	40	40	48
			inch	2.85	1.65	3.23	1.57	1.57	1.89
VD100	1	1	mm	82.5	48	99	45	45	55
			inch	3.25	1.89	3.9	1.77	1.77	2.17
VD114	1 1/4	1 1/4	mm	121	70	117.2	61	61	85 / 80*
			inch	4.76	2.76	4.61	2.40	2.40	3.35 / 3.15*

\* Hexagon Sleeve

## VD BSP Thread Screw Poppet Interchange

PART	BODY SIZE	THREAD TYPE	THREAD SIZE	PORT THREAD	ORDER CODE	DESCRIPTION
<b>VD BSP THREAD</b>						
COUPLER	3/8	BSP	1/4	1/4-9	809500008	F. VD38 1/4 BSP
NIPPLE	3/8	BSP	1/4	1/4-9	809500009	M. VD38 1/4 BSP
COUPLER	3/8	BSP	3/8	3/8-19	809500010	F. VD38 3/8 BSP
NIPPLE	3/8	BSP	3/8	3/8-19	809500011	M. VD38 3/8 BSP
COUPLER	3/8	BSP	3/8	3/8-19	809500012	F. VD38 3/8 BSP EST DIN3852-2-A
NIPPLE	3/8	BSP	3/8	3/8-19	809500013	M. VD38 3/8 BSP EST DIN3852-2-A
COUPLER	1/2	BSP	3/8	3/8-19	809500000	F. VD12 3/8 BSP
NIPPLE	1/2	BSP	3/8	3/8-19	809500001	M. VD12 3/8 BSP
COUPLER	1/2	BSP	1/2	1/2-4	809500002	F. VD12 1/2 BSP
NIPPLE	1/2	BSP	1/2	1/2-4	809500003	M. VD12 1/2 BSP
COUPLER	1/2	BSP	1/2	1/2-4	809500004	F. VD12 1/2 BSP EST
NIPPLE	1/2	BSP	1/2	1/2-4	809500005	M. VD12 1/2 BSP EST
COUPLER	3/4	BSP	1/2	1/2-4	809500014	F. VD34 1/2 BSP
NIPPLE	3/4	BSP	1/2	1/2-4	809500015	M. VD34 1/2 BSP
COUPLER	3/4	BSP	3/4	3/4-14	809500016	F. VD34 3/4 BSP
NIPPLE	3/4	BSP	3/4	3/4-14	809500017	M. VD34 3/4 BSP
COUPLER	1	BSP	3/4	3/4-14	809500018	F. VD100 3/4 BSP
NIPPLE	1	BSP	3/4	3/4-14	809500019	M. VD100 3/4 BSP
COUPLER	1	BSP	1	1-11	809500020	F. VD100 1 BSP
NIPPLE	1	BSP	1	1-11	809500021	M. VD100 1 BSP
COUPLER	1 1/4	BSP	1 1/4	1 1/4-11	809500022	F. VD114 1 1/4 BSP
NIPPLE	1 1/4	BSP	1 1/4	1 1/4-11	809500023	M. VD114 1 1/4 BSP
COUPLER	1 1/4	BSP	1 1/2	1 1/2-11	809500024	F. VD114 1 1/2 BSP
NIPPLE	1 1/4	BSP	1 1/2	1 1/2-11	809500025	M. VD114 1 1/2 BSP

## VD NPT Thread Screw Poppet Interchange

PART	BODY SIZE	THREAD TYPE	THREAD SIZE	PORT THREAD	ORDER CODE	DESCRIPTION
<b>VD NPT THREAD</b>						
COUPLER	3/8	NPT	1/4	1/4-18	809501008	F. VD38 1/4 NPT
NIPPLE	3/8	NPT	1/4	1/4-18	809501009	M. VD38 1/4 NPT
COUPLER	3/8	NPT	3/8	3/8-18	809501010	F. VD38 3/8 NPT
NIPPLE	3/8	NPT	3/8	3/8-18	809501011	M. VD38 3/8 NPT
COUPLER	1/2	NPT	3/8	3/8-18	809501000	F. VD12 3/8 NPT
NIPPLE	1/2	NPT	3/8	3/8-18	809501001	M. VD12 3/8 NPT
COUPLER	1/2	NPT	1/2	1/2-14	809501002	F. VD12 1/2 NPT
NIPPLE	1/2	NPT	1/2	1/2-14	809501003	M. VD12 1/2 NPT
COUPLER	3/4	NPT	1/2	1/2-14	809501014	F. VD34 1/2 NPT
NIPPLE	3/4	NPT	1/2	1/2-14	809501015	M. VD34 1/2 NPT
COUPLER	3/4	NPT	3/4	3/4-14	809501016	F. VD34 3/4 NPT
NIPPLE	3/4	NPT	3/4	3/4-14	809501017	M. VD34 3/4 NPT
COUPLER	1	NPT	3/4	3/4-14	809501018	F. VD100 3/4 NPT
NIPPLE	1	NPT	3/4	3/4-14	809501019	M. VD100 3/4 NPT
COUPLER	1	NPT	1	1 11 1/2	809501020	F. VD100 1 NPT
NIPPLE	1	NPT	1	1 11 1/2	809501021	M. VD100 1 NPT
COUPLER	1 1/4	NPT	1 1/4	1 1/4-11 1/2	809501022	F. VD114 1 1/4 NPT
NIPPLE	1 1/4	NPT	1 1/4	1 1/4-11 1/2	809501023	M. VD114 1 1/4 NPT
COUPLER	1 1/4	NPT	1 1/2	1 1/2-11 1/2	809501024	F. VD114 1 1/2 NPT
NIPPLE	1 1/4	NPT	1 1/2	1 1/2-11 1/2	809501025	M. VD114 1 1/2 NPT



Coupler



Nipple

## VD DIN Thread SCHOTT (DIN Bulkhead) | Screw Poppet Interchange

PART	BODY SIZE	THREAD TYPE	PORT SERIES	TUBE OD	THREAD SIZE	ORDER CODE	DESCRIPTION
<b>VD DIN THREAD</b>							
COUPLER	1/2	DIN	FEMALE	22	M22X1.5	809512000	F. VD12 M22X1.5
NIPPLE	1/2	DIN	FEMALE	22	M22X1.5	809512001	M. VD12 M22X1.5
COUPLER	1/2	DIN	L	12	M 18X1.5	809508000	F. VD12 L12
NIPPLE	1/2	DIN	L	12	M 18X1.5	809508001	M. VD12 L12
COUPLER	1/2	DIN	L	15	M 22X1.5	809508004	F. VD12 L15
NIPPLE	1/2	DIN	L	15	M 22X1.5	809508005	M. VD12 L15
COUPLER	1/2	DIN	L	18	M 26X1.5	809508008	F. VD12 L18
NIPPLE	1/2	DIN	L	18	M 26X1.5	809508009	M. VD12 L18
COUPLER	1/2	DIN	L	12	M 18X1.5 SCHOTT	809510000	F. VD12 L12 SCHOTT
NIPPLE	1/2	DIN	L	12	M 18X1.5 SCHOTT	809510001	M. VD12 L12 SCHOTT
COUPLER	1/2	DIN	L	15	M 22X1.5 SCHOTT	809510004	F. VD12 L15 SCHOTT
NIPPLE	1/2	DIN	L	15	M 22X1.5 SCHOTT	809510005	M. VD12 L15 SCHOTT
COUPLER	3/4	DIN	S	16	M 24X1.5	809509014	F. VD34 S16
NIPPLE	3/4	DIN	S	16	M 24X1.5	809509015	M. VD34 S16
COUPLER	3/4	DIN	S	16	M 24X1.5 SCHOTT	809511014	F. VD34 S16 SCHOTT
COUPLER	3/4	DIN	S	20	M 30X1.5 SCHOTT	809511016	F. VD34 S20 SCHOTT
NIPPLE	3/4	DIN	S	20	M 30X1.5 SCHOTT	809511017	M. VD34 S20 SCHOTT
COUPLER	3/4	DIN	FEMALE	22	M 22X1.5	809512002	F. VD34 M22X1.5
NIPPLE	3/4	DIN	FEMALE	22	M 22X1.5	809512003	M. VD34 M22X1.5
COUPLER	1	DIN	S	20	M 30X2	809509018	F. VD100 S20
NIPPLE	1	DIN	S	20	M 30X2	809509019	M. VD100 S20
COUPLER	1	DIN	S	25	M 36X2	809509020	F. VD100 S25
NIPPLE	1	DIN	S	25	M 36X2	809509021	M. VD100 S25
COUPLER	1	DIN	S	30	M 42X2	809509022	F. VD100 S30
NIPPLE	1	DIN	S	30	M 42X2	809509023	M. VD100 S30
COUPLER	1	DIN	S	20	M 30X2 SCHOTT	809511018	F. VD100 S20 SCHOTT
NIPPLE	1	DIN	S	20	M 30X2 SCHOTT	809511019	M. VD100 S20 SCHOTT
COUPLER	1	DIN	S	25	M 36X2 SCHOTT	809511020	F. VD100 S25 SCHOTT
NIPPLE	1	DIN	S	25	M 36X2 SCHOTT	809511021	M. VD100 S25 SCHOTT
COUPLER	1	DIN	S	30	M 42X2 SCHOTT	809511022	F. VD100 S30 SCHOTT
NIPPLE	1	DIN	S	30	M 42X2 SCHOTT	809511023	M. VD100 S30 SCHOTT
COUPLER	1	DIN	S	38	M 52X2 SCHOTT	809511024	F. VD100 S38 SCHOTT
COUPLER	1 1/4	DIN	S	38	M 52X2	809509028	F. VD114 S38
NIPPLE	1 1/4	DIN	S	38	M 52X2	809509029	M. VD114 S38
COUPLER	1 1/4	DIN	S	38	M 52X2 SCHOTT	809511028	F. VD114 S38 SCHOTT
NIPPLE	1 1/4	DIN	S	38	M 52X2 SCHOTT	809511029	M. VD114 S38 SCHOTT

THREADED POPPET COUPLERS

# VR SERIES

## THREADED POPPET COUPLERS German Screw Coupler



### The VR Series German Screw Coupler

uses a low leakage-style valve for the sealing mechanism and threads as the mechanical connection, to ensure connection with some residual pressure. The rugged design makes the VR particularly well-suited for heavy-duty service conditions and a variety of hydraulic applications, including the mobile construction and industrial fields.



Protective Caps & Plugs – page 135

### FEATURES

Size range: 3/8" thru 1 1/4"

Port options: BSP, DIN

Interchangeable with German market couplings

- Internal components purposely designed to reduce turbulence
- Friction ring prevents accidental disconnection
- Various seals and wide range of ports on request

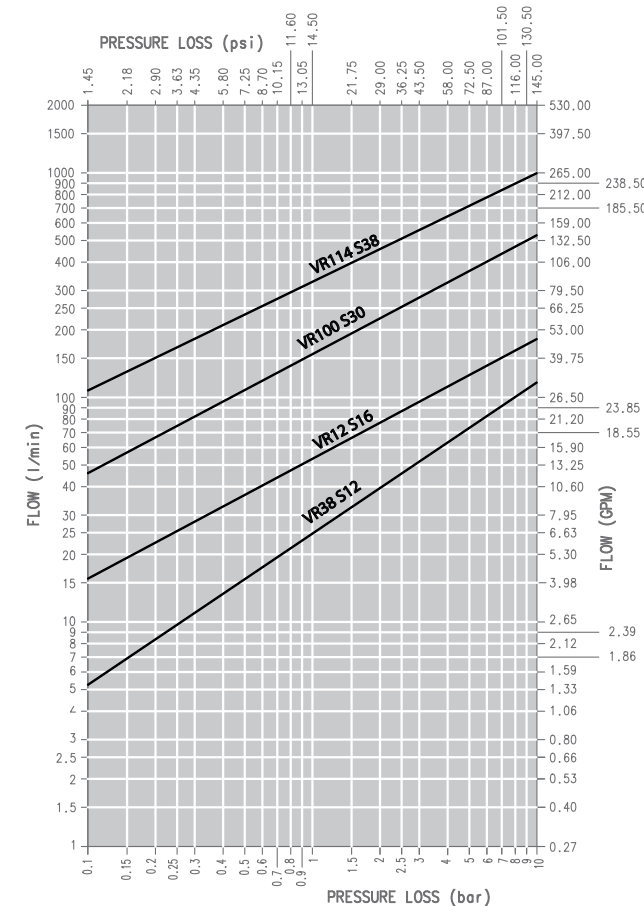
### APPLICATIONS

Particularly well-suited for heavy-duty service conditions

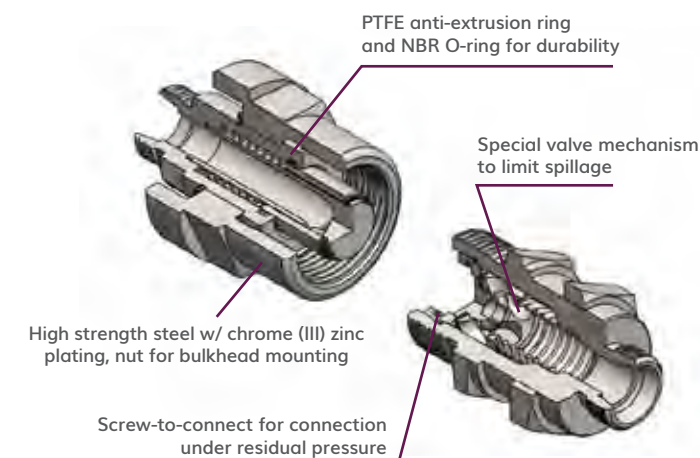
- Cover various fields of hydraulic applications
- Used in mobile cranes, trucks and industrial plant applications



### PRESSURE DROP



OIL = ISO VG32, TEMP = 40C, VISCOSITY = 28.8-35.2 MM<sup>2</sup>/S



### PERFORMANCE

DESCRIPTION	MAX. OPERATING PRESSURE						BURST PRESSURE					
	COUPLED		MALE		FEMALE		COUPLED		MALE		FEMALE	
	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi
VR38	40	5800	20	2900	40	5800	200	29000	70	10150	100	14500
VR12	30	4350	17	2465	30	4350	200	29000	70	10150	100	14500
VR34	35	5075	20	2900	35	5075	150	21750	80	11600	100	14500
VR100	30	4350	20	2900	30	4350	120	17400	80	11600	120	17400
VR114	42	6090	42	6090	42	6090	120	17400	90	13050	100	14500

DESCRIPTION	SIZE	RATED FLOW		MAX. FLOW SUGGESTED		CONNECT TORQUE*		DISCONNECT TORQUE*		SPILLAGE**
		L/min	GPM	L/min	GPM	NM	LBF FT	NM	LBF FT	ml
VR38	3/8	23	6.10	46	12.19	2	1.47	1.8	1.33	0.012
VR12	1/2	45	11.93	90	23.85	1.3	0.96	0.7	0.52	0.02
VR34	3/4	106	28.10	212	56.20	2.2	1.62	1.7	1.25	0.4
VR100	1	189	50.11	378	100.21	4.3	3.17	2.5	1.84	1
VR114	1 1/4	288	76.35	576	152.7	6.0	4.42	4.0	2.95	1

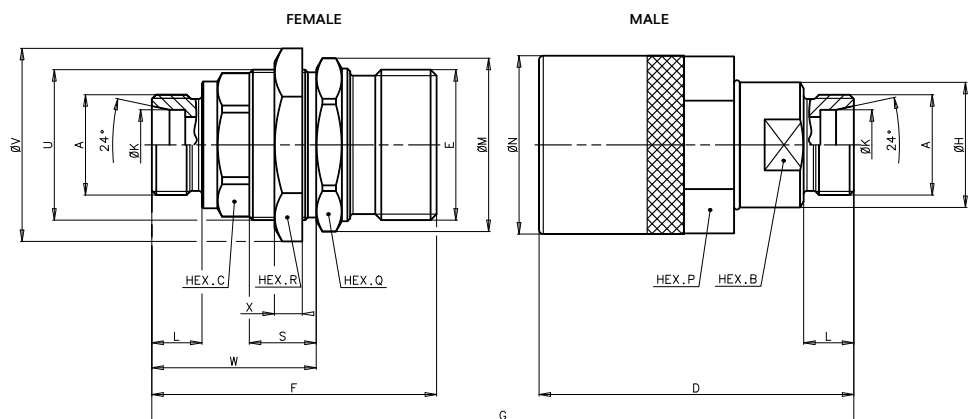
\* Connect and disconnect torque without residual pressure. Torque will increase with residual pressure.

\*\* Spillage is an indicative value of the fluid loss per couple-uncouple cycle without residual pressure.

THREADED POPPET COUPLERS



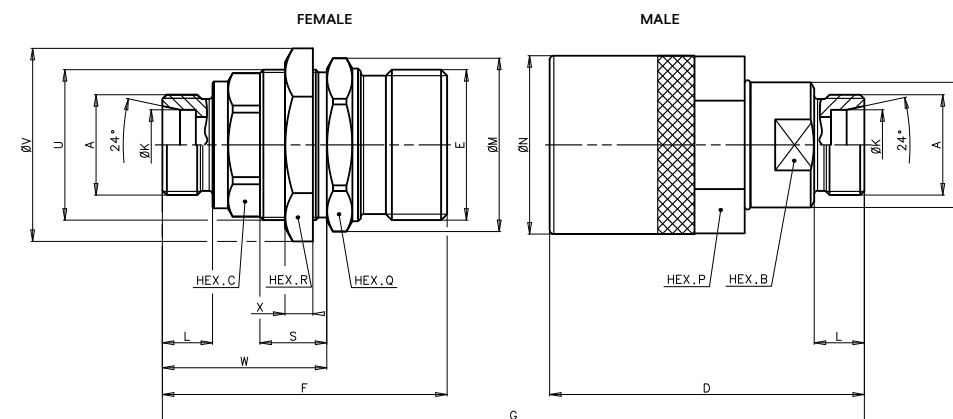
### SIZE DIAGRAM DIN THREAD (LIGHT)



DESCRIPTION	BODY SIZE	BG	A	E	U	UNIT	HEX B	HEX C	D	F	G	H	K
VR38 L10	3/8	2	M16X1.5	32X3 SP	M30X1	mm	22	-	61.6	60	107.5	25	10.2
						inch	0.87	-	2.43	2.36	4.23	0.98	0.40
VR38 L12	3/8	2	M18X1.5	32X3 SP	M30X1	mm	22	-	61.6	60	107.5	25	12.2
						inch	0.87	-	2.43	2.36	4.23	0.98	0.48
VR38 L15	3/8	2	M22X1.5	32X3 SP	M30X1	mm	22	-	62.6	61	109.5	25	15.2
						inch	0.87	-	2.46	2.40	4.31	0.98	0.60
VR12 L15	1/2	3	M22X1.5	36X3 SP	M36X1	mm	24	-	71.6	69.7	123.8	28	15.2
						inch	0.94	-	2.82	2.74	4.87	1.10	0.60
VR100 L18	1	6	M26X1.5	54X4 SP	M54X1.5	mm	41	46	107	96.2	174.5	44.9	18.2
						inch	1.61	1.81	4.21	3.79	6.87	1.77	0.72
VR100 L22	1	6	M30X2	54X4 SP	M54X1.5	mm	41	46	109	98.2	178.5	44.9	22.2
						inch	1.61	1.81	4.29	3.87	7.03	1.77	0.87
VR100 L28	1	6	M36X2	54X4 SP	M54X1.5	mm	41	46	109	98.2	178.5	44.9	28.2
						inch	1.61	1.81	4.29	3.87	7.03	1.77	1.11

DESCRIPTION	BODY SIZE	BG	L	M	N	HEX P	HEX Q	HEX R	S	V	W	X
VR38 L10	3/8	2	11	41.4	38.7	32	36	36	19	41.4	36	7
			0.43	1.63	1.52	1.26	1.42	1.52	1.26	1.42	1.42	1.42
VR38 L12	3/8	2	11	41.4	38.7	32	36	36	19	41.4	36	7
			0.43	1.63	1.52	1.26	1.42	1.52	1.26	1.42	1.42	1.42
VR38 L15	3/8	2	12	41.4	38.7	32	36	36	19	41.4	37	7
			0.47	1.63	1.52	1.26	1.42	1.52	1.26	1.42	1.42	1.42
VR12 L15	1/2	3	12	47.2	54	46	41	41	22.4	47.15	40.1	8
			0.47	1.86	2.13	1.81	1.61	2.13	1.81	1.61	1.61	0.88
VR100 L18	1	6	12	62.2	64	55	55	60	22.75	69	53	10
			0.47	2.45	2.52	2.17	2.17	2.52	2.17	2.17	2.36	0.90
VR100 L22	1	6	14	62.2	64	55	55	60	22.75	69	55	10
			0.55	2.45	2.52	2.17	2.17	2.52	2.17	2.17	2.36	0.90
VR100 L28	1	6	14	62.2	64	55	55	60	22.75	69	55	10
			0.55	2.45	2.52	2.17	2.17	2.52	2.17	2.17	2.36	0.90

### SIZE DIAGRAM DIN THREAD (HEAVY)



DESCRIPTION	BODY SIZE	BG	A	E	U	UNIT	HEX B	HEX C	D	F	G	H	K
VR38 S10	3/8	2	M18X1.5	32X3 SP	M30X1	mm	-	-	-	61	-	-	12
						inch	-	-	-	2.40	-	-	0.47
VR38 S12	3/8	2	M20X1.5	32X3 SP	M30X1	mm	22	-	62.6	61	109.5	25	12
						inch	0.87	-	2.46	2.40	4.31	0.98	0.47
VR38 S14	3/8	2	M22X1.5	32X3 SP	M30X1	mm	22	-	64.6	63	113.5	25	14
						inch	0.87	-	2.54	2.48	4.47	0.98	0.55
VR12 S16	1/2	3	M24X1.5	36X3 SP	M36X1	mm	24	-	73.6	71.7	127.8	28	14
						inch	0.94	-	2.90	2.82	5.03	1.10	0.55
VR100 S20	1	6	M30X2	54X4 SP	M54X1.5	mm	41	46	111	100.2	182.5	44.9	16
						inch	1.61	1.81	4.37	3.94	7.19	1.77	0.63
VR100 S25	1	6	M36X2	54X4 SP	M54X1.5	mm	41	46	113	102.2	186.5	44.9	18
						inch	1.61	1.81	4.45	4.02	7.34	1.77	0.71
VR100 S30	1	6	M42X2	54X4 SP	M54X1.5	mm	41	46	115	104.2	190.5	44.9	20
						inch	1.61	1.81	4.53	4.10	7.50	1.77	0.79
VR114 S38	1 1/4	8	M52X2	79X4 SP	M80X2	mm	55	55	136.4	129	-	60.8	22
						inch	2.17	2.17	5.37	5.08	8.86	2.39	0.87

DESCRIPTION	BODY SIZE	BG	L	M	N	HEX P	HEX Q	HEX R	S	V	W	X
VR38 S10	3/8	2	41.4	41.4	-	-	36	36	19	41.4	37	7
			1.63	1.63	-	-	1.42	1.42	0.75	1.63	1.46	0.28
VR38 S12	3/8	2	41.4	41.4	38.7	32	36	36	19	41.4	37	7
			1.63	1.63	1.52	1.26	1.42	1.42	0.75	1.63	1.46	0.28
VR38 S14	3/8	2	41.4	41.4	38.7	32	36	36	19	41.4	39	7
			1.63	1.63	1.52	1.26	1.42	1.42	0.75	1.63	1.54	0.28
VR12 S16	1/2	3	47.2	47.2	54	46	41	41	22.4	47.15	42.1	8
			1.86	1.86	2.13	1.81	1.61	1.61	0.88	1.86	1.66	0.31
VR100 S20	1	6	62.2	62.2	64	55	55	60	22.75	69	57	10
			2.45	2.45	2.52	2.17	2.17	2.36	0.90	2.72	2.24	0.39
VR100 S25	1	6	62.2	62.2	64	55	55	60	22.75	69	59	10
			2.45	2.45	2.52	2.17	2.17	2.36	0.90	2.72	2.32	0.39
VR100 S30	1	6	62.2	62.2	64	55	55	60	22.75	69	61	10
			2.45	2.45	2.52	2.17	2.17	2.36	0.90	2.72	2.40	0.39
VR114 S38	1 1/4	8	90	90	89.7	-	85	90,5*	35	100	71	14
			3.54	3.54	3.53	-	3.35	3,56*	1.38	3.94	2.80	0.55

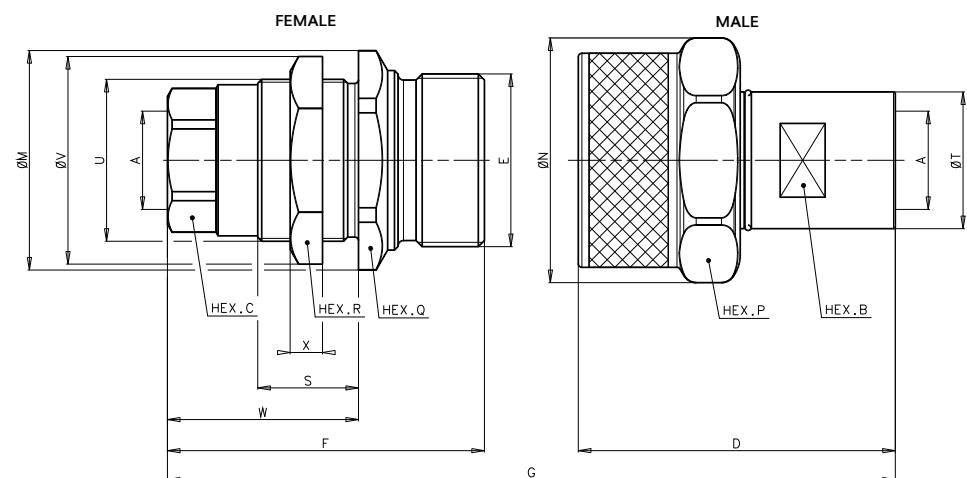
THREADED POPPET COUPLERS

# VR SERIES

THREADED POPPET COUPLERS German Screw Coupler



## SIZE DIAGRAM DIN THREAD (LIGHT)



DESCRIPTION	BODY SIZE	BG	A	E	U	UNIT	HEX B	HEX C	D	F	G	M
VR34 BSP	3/8	4	G 3/4"	M48X3 SP	M45X1.5	mm	32	36	88,1	88,1	152,1	61
						inch	1.26	1.42	3.47	3.47	5.99	2.40

DESCRIPTION	BODY SIZE	BG	A	N	HEX P	HEX Q	HEX R	S	T	V	W	X
VR34 BSP	3/8	4	G 3/4"	68	60	55	50	26.9	38	57.5	53.1	9
				2.68	2.36	2.17	1.97	1.06	1.50	2.26	2.09	0.35

## VR DIN Thread SCHOTT (DIN Bulkhead) | Screw Poppet Interchange

PART	BODY SIZE	THREAD TYPE	PORT SERIES	PORT THREAD	ORDER CODE	DESCRIPTION
COUPLER	3/8	DIN	L	M 16X1.5	809608002	F. VR38 L10
NIPPLE	3/8	DIN	L	M 16X1.5	809608003	M. VR38 L10
COUPLER	3/8	DIN	L	M 18X1.5	809608004	F. VR38 L12
NIPPLE	3/8	DIN	L	M 18X1.5	809608005	M. VR38 L12
COUPLER	3/8	DIN	L	M 22X1.5	809608006	F. VR38 L15
NIPPLE	3/8	DIN	L	M 22X1.5	809608007	M. VR38 L15
COUPLER	3/8	DIN	S	M 18X1.5	809609002	F. VR38 S10
COUPLER	3/8	DIN	S	M 20X1.5	809609004	F. VR38 S12
NIPPLE	3/8	DIN	S	M 20X1.5	809609005	M. VR38 S12
COUPLER	3/8	DIN	S	M 22X1.5	809609006	F. VR38 S14
NIPPLE	3/8	DIN	S	M 22X1.5	809609007	M. VR38 S14
COUPLER	3/8	DIN	S	M 24X1.5	809609016	F. VR38 S16
NIPPLE	3/8	DIN	S	M 24X1.5	809609017	M. VR38 S16
COUPLER	1/2	DIN	L	M 22X1.5	809608000	F. VR12 L15
NIPPLE	1/2	DIN	L	M 22X1.5	809608001	M. VR12 L15
COUPLER	1/2	DIN	S	M 24X1.5	809609000	F. VR12 S16
NIPPLE	1/2	DIN	S	M 24X1.5	809609001	M. VR12 S16
COUPLER	3/4	DIN	S	M 30X2	809609018	F. VR34 S20
NIPPLE	3/4	DIN	S	M 30X2	809609019	M. VR34 S20
COUPLER	1	DIN	L	M 26X1.5	809608008	F. VR100 L18
NIPPLE	1	DIN	L	M 26X1.5	809608009	M. VR100 L18
COUPLER	1	DIN	L	M 30X2	809608010	F. VR100 L22
NIPPLE	1	DIN	L	M 30X2	809608011	M. VR100 L22
COUPLER	1	DIN	L	M 36X2	809608012	F. VR100 L28
NIPPLE	1	DIN	L	M 36X2	809608013	M. VR100 L28
COUPLER	1	DIN	S	M 30X2	809609008	F. VR100 S20
NIPPLE	1	DIN	S	M 30X2	809609009	M. VR100 S20
COUPLER	1	DIN	S	M 36X2	809609010	F. VR100 S25
NIPPLE	1	DIN	S	M 36X2	809609011	M. VR100 S25
COUPLER	1	DIN	S	M 42X2	809609012	F. VR100 S30
NIPPLE	1	DIN	S	M 42X2	809609013	M. VR100 S30
COUPLER	1 1/4	DIN	S	M 52X2	809609014	F. VR114 S38
NIPPLE	1 1/4	DIN	S	M 52X2	809609015	M. VR114 S38



Coupler



Nipple

THREADED POPPET COUPLERS

## VR BSP Thread

PART	BODY SIZE	THREAD TYPE	PORT SERIES	PORT THREAD	ORDER CODE	DESCRIPTION
COUPLER	3/4	BSP	3/4	FEMALE	809600000	F. VR34 BSP
NIPPLE	3/4	BSP	3/4	FEMALE	809600001	M. VR34 BSP

## VR Series Accessories Protective Caps and Plugs

PART	BODY SIZE	ORDER CODE		MATERIAL
		PLUG FOR FEMALE	CAP FOR MALE	
VR38	3/8	814900012	814900013	PLASTIC - RED
VR12	1/2	814900014	814900015	ALUMINUM
VR34	3/4	814906016	814906017	ALUMINUM
VR100	1	814906018	814906019	ALUMINUM
VR114	1 1/4	814906020	814906021	ALUMINUM