

VEP-HD SERIES

INTERCHANGE > Stucchi VEP profile



TECHNICAL FEATURES AND OPTIONS



Interchange
Stucchi VEP profile



Sealing description
Nitrile NBR



Connection system
Screw HDL version= lock system



Available sizes
from 3/4" to 1-1/2"



Material/treatment
Carbon steel /QPP



Available threads
BSP - NPT - SAE - FLANGE



Operating pressure
Up to 550 bar



Locking mechanism
Screw to connect



Flow rate
Up to 750 L/Min



Temperature (°C)
-20° / +100°



Valving style
Flat Face



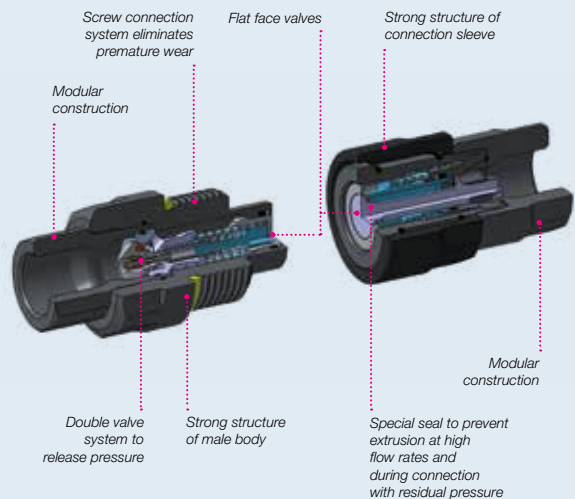
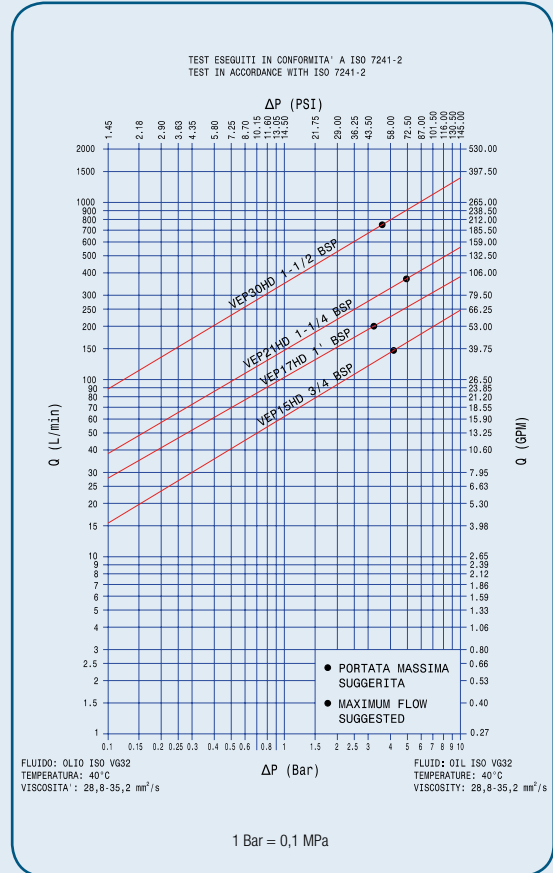
Connection under pressure
Connection: Both side (see Benefits).
Disconnection: Allowed (see Benefits).

BENEFITS

- Easy connection/disconnection with both side under residual pressure thanks to the Stucchi design.
- Flat face is easy to clean, reducing the inclusion of contamination inside the hydraulic circuit.
- All dimensions of Stucchi VEP-HD series are certified with Lloyd Type Approval in accordance with API 16D at specific rating pressure of 345 bar/5000 PSI.
- Minimal fluid spillage during disconnection, reducing fluid spillage to the environment.
- Minimal air inclusion during connection.
- Internal valve design creates minimal pressure drop, maintaining circuit efficiency in the system.
- Internal pressure release valve system allows an easy connection with high internal residual pressure.
- The modular design allows flexibility with a wide range of configurations.
- High resistance to pressure impulses.
- Safe and simple to use.
- HDL version= lock system included.

HOW TO USE

- Before to connect, clean the mating surface of the couplings to avoid dirt inclusion in the circuit.
- To connect pull forward the connection sleeve of the female coupling.
- Align the female and male coupling holding forward the connection sleeve and thread together turning the sleeve.
- Keep couplers aligned during connection process. Do not push to connect couplings.
- The screwing of the threads should be done by hand without the use of the tools for the first part of the connection.
- The use of tools for the second part of connection can be necessary if there is high residual pressure in the circuit.
- Screw the connecting sleeve of the female until metal surface contact with the male coupling is complete.
- Tighten the sleeve to the base of the male using the tightening torque spec. as indicated in the table below.
- To disconnect turn sleeve from contact position using a wrench, then unscrew making sure the couplings stay aligned through the entire process.
- HDL version = in addition to the instruction here above remove external yellow O-ring on the male and when couplings are properly connected (metal to metal contact) insert cotter pin.



MAIN APPLICATIONS



Agriculture



Oil & Gas



Industry



High Pressure



Casting



Refrigeration



Earth Moving



Vehicles



Hydraulic Equipment



Chemical & Food Industry

PERFORMANCES VEP-HD, VEP-HDL & VEP-HD FLANGE

Size	Series/Size	Max. flow suggested		Connect torque		Disconnect torque		Spillage*
Inch		l/min	GPM	Nm	lbf ft	Nm	lbf ft	ml
5/8	VEP15HD	148	39,22	3,0	2,21	1,8	1,33	0,03
3/4	VEP17HD	200	53,00	5,6	4,13	3,6	2,65	0,02
1	VEP21HD	378	100,17	8,2	6,04	5,8	4,27	0,06
1-1/2	VEP30HD	750	198,75	26,0	19,16	12,5	9,21	0,20

PERFORMANCES VEP-HD & VEP-HDL

Size	Series/Size	Max. operating pressure						Burst pressure					
		Coupled		Male		Female		Coupled		Male		Female	
Inch		MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi
5/8	VEP15HD	55	7975	55	7975	33	4785	140	20300	140	20300	100	14500
3/4	VEP17HD	50	7250	50	7250	33	4785	125	18130	125	18130	100	14500
1	VEP21HD	47	6815	47	6815	30	4350	120	17400	120	17400	80	11600
1-1/2	VEP30HD	40	5800	40	5800	27	3915	110	15950	110	15950	80	11600

Size	Series/Size	Tightening torque		Max. residual pressure during connection						Max. residual pressure during disconnection	
				Male, female to drain		Female, male to drain		Male and female			
Inch		Nm	lbt ft	MPa	psi	MPa	psi	MPa	psi	MPa	psi
5/8	VEP15HD	70-80	52-59	25	3625	25	3625	20	2900	20	2900
3/4	VEP17HD	110-130	81-96	25	3625	25	3625	15	2175	15	2175
1	VEP21HD	125-145	92-107	25	3625	25	3625	15	2175	15	2175
1-1/2	VEP30HD	155-175	114-129	25	3625	25	3625	5	725	5	725

PERFORMANCES VEP-HD & VEP-HDL FLANGE

Size	Series/Size	Max. operating pressure						Burst pressure					
		Coupled		Male		Female		Coupled		Male		Female	
Inch		MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi	MPa	psi
3/4	VEP17HD FLANGE	42	6090	42	6090	33	4785	165	24000	165	24000	100	14500
1	VEP21HD FLANGE	42	6090	42	6090	30	4350	165	24000	165	24000	80	11600
1-1/2	VEP30HD FLANGE	42	6090	42	6090	27	3915	165	24000	165	24000	80	11600

Size	Series/Size	Tightening torque		Max. residual pressure during connection						Max. residual pressure during disconnection	
				Male, female to drain		Female, male to drain		Male and female			
	Inch	Nm	lbt ft	MPa	psi	MPa	psi	MPa	psi	MPa	psi
3/4	VEP17HD FLANGE	110-130	81-96	25	3625	25	3625	15	2175	15	2175
1	VEP21HD FLANGE	125-145	92-107	25	3625	25	3625	15	2175	15	2175
1-1/2	VEP30HD FLANGE	155-175	114-129	25	3625	25	3625	5	725	5	725

*Spillage is an indicative value of the fluid loss during disconnection (according to ISO norm test method). Connect torque and disconnect torque without residual pressure. The torque will increase as internal residual pressure increases.

Port configurations include internal female threads:

- BSP, NPT and SAE
- CODE62 flange ports (ISO 6162-2 and SAE J518 interchangeable).

Two ports options are available:

FP "Flange Port" (4 bolt mating configuration)

FH "Flange Head" (head configuration and sealing groove)

All dimensions of Stucchi VEP-HD series are certified with Lloyd Type Approval in accordance with API 16D at specific rating pressure of 345 bar/5000 PSI.
For complete technical information please contact Stucchi Technical Support.

Temperature range:

Standard seals NBR, PUR, POM from -20 °C to +100 °C (from -4 °F to +212 °F). Please read carefully "instruction and warning" for proper selection of the products.

Tests:

The couplings have been tested in according to ISO norm.

The couplings coupled have been tested at max. operating pressure for 1.000.000 impulses (VEP15HD 500.000 impulses).

The couplings uncoupled have been tested at max. operating pressure for 100.000 impulses.



WARNING

A defect, a wrong choice or an improper use of products, can cause injury to persons, animals and objects.
Connect under pressure products are suitable to be connected under residual (static) pressure.
Never connect or disconnect with dynamic pressure (e.g. pump on).
Do not use the female coupling disconnected with high impulse pressure.
Do not couple-uncouple with flow in the circuit.

Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).

Check the maximum allowable working pressure of the port in use.

It is important to limit contamination in the circuit to avoid compromising the function of the internal valves.

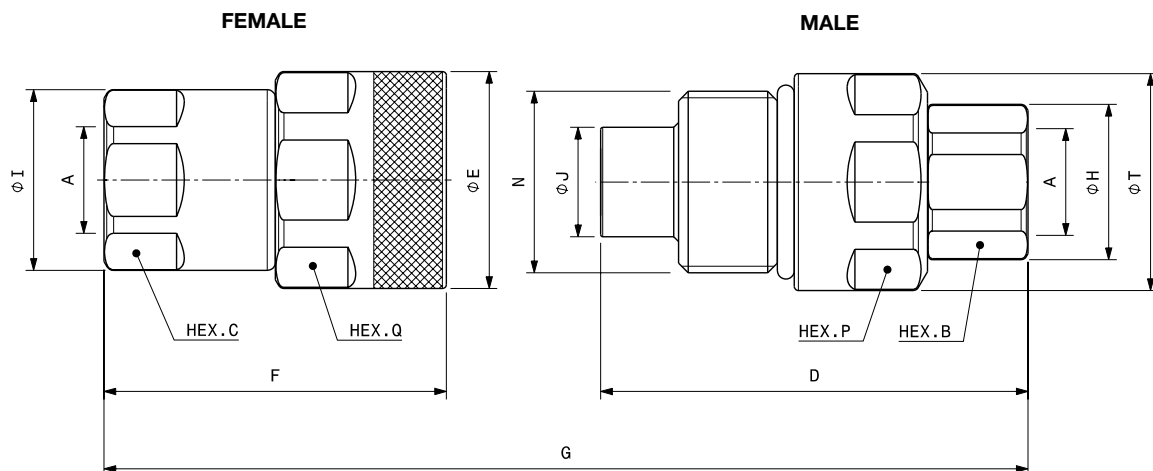
Make sure that the medium used is compatible with seal and material as indicated for each series.

In case of doubt please contact Stucchi Technical Support.

The interchangeability is mentioned under the assumption that the manufacturer of the considered products has not changed any dimension.

It is MANDATORY to read and closely follow the instructions. Last updated version always apply at time of installation, see latest written Instructions on Stucchi website (www.stucchi.it) before selecting or using Stucchi products.

OVERALL DIMENSIONS



Port description: FEMALE THREAD BSPP (ISO 1179-1)

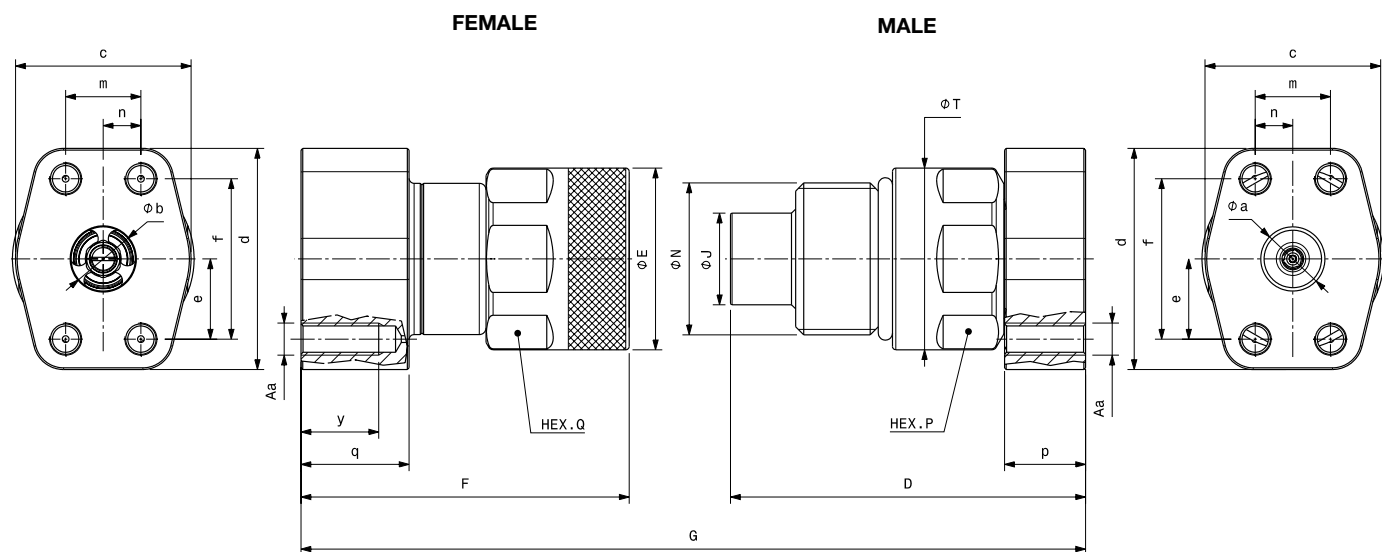
BODY SIZE	Descriptive Code	Item Code	PORT (A)	N		Overall Length		Length		Hex		Hex		Diameter		Weight					
						mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Kg	Lbs				
5/8"	F VEP15HD 3/4 BSP	Female 808100010	3/4"	M45x3	G	172,4	6,79	F	84,9	3,34	C	41,0	1,61	Q	50,0	1,97	E	53,8	2,12	0,92	2,03
	M VEP15HD 3/4 BSP	Male 808100011						D	106	4,17	B	36,0	1,42	P	50,0	1,97	T	53,8	2,12	0,94	2,07
3/4"	F VEP17HD 3/4 BSP	Female 808100018	3/4"	M50x3	G	200,9	7,91	F	99,7	3,93	C	46,0	1,81	Q	55,0	2,17	E	58,8	2,12	1,33	2,93
	M VEP17HD 3/4 BSP	Male 808100019						D	124,0	4,88	B	46,0	1,81	P	55,0	2,17	T	58,8	2,12	1,36	3,00
3/4"	F VEP17HD 1 BSP	Female 808100012	1"	M50x3	G	200,9	7,91	F	99,7	3,93	C	46,0	1,81	Q	55,0	2,17	E	58,8	2,31	1,28	2,82
	M VEP17HD 1 BSP	Male 808100013						D	124,0	4,88	B	46,0	1,81	P	55,0	2,17	T	58,8	2,31	1,30	2,87
1"	F VEP21HD 1-1/4 BSP	Female 808100014	1-1/4"	M58x3	G	216,2	8,51	F	106,8	4,20	C	55,0	2,17	Q	65,0	2,56	E	69,8	2,75	2,02	4,45
	M VEP21HD 1-1/4 BSP	Male 808100015						D	133,4	5,25	B	55,0	2,17	P	65,0	2,56	T	69,8	2,75	1,79	3,95
1-1/2"	F VEP30HD 1-1/2 BSP	Female 808100016	1-1/2"	80x4 TpF	G	253,9	10,00	F	133,5	5,26	C	65,0	2,56	Q	85,0	3,35	E	95,0	3,74	4,36	9,61
	M VEP30HD 1-1/2 BSP	Male 808100017						D	150,0	5,91	B	65,0	2,56	P	75,0	2,95	T	94,4	3,72	3,30	7,28

Port description: FEMALE THREAD NPT (ANSI B.1.20.1)

BODY SIZE	Descriptive Code	Item Code	PORT (A)	N	Overall Length		Length		Hex		Hex		Diameter		Weight						
					mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Kg	Lbs					
5/8"	F VEP15HD 3/4 NPT	Female 808101010	3/4"	M45x3	G	172,4	6,79	F	84,9	3,34	C	41,0	1,61	Q	50,0	1,97	E	53,8	2,12	0,93	2,05
	M VEP15HD 3/4 NPT	Male 808101011						D	106	4,17	B	36,0	1,42	P	50,0	1,97	T	53,8	2,12	0,95	2,09
3/4"	F VEP17HD 1 NPT	Female 808101012	1"	M50x3	G	200,9	7,91	F	99,7	3,93	C	46,0	1,81	Q	55,0	2,17	E	58,8	2,31	1,28	2,82
	M VEP17HD 1 NP	Male 808101013						D	124,0	4,88	B	46,0	1,81	P	55,0	2,17	T	58,8	2,31	1,30	2,87
1"	F VEP21HD 1-1/4 NPT	Female 808101014	1-1/4"	M58x3	G	216,2	8,51	F	106,8	4,20	C	55,0	2,17	Q	65,0	2,56	E	69,8	2,75	2,02	4,45
	M VEP21HD 1-1/4 NPT	Male 808101015						D	133,4	5,25	B	55,0	2,17	P	65,0	2,56	T	69,8	2,75	1,79	3,95
1-1/2"	F VEP30HD 1-1/2 NPT	Female 808101016	1-1/2"	80x4 TpF	G	253,9	10,00	F	133,5	5,26	C	65,0	2,56	Q	85,0	3,35	E	95,0	3,74	4,36	9,61
	M VEP30HD 1-1/2 NPT	Male 808101017						D	150,0	5,91	B	65,0	2,56	P	75,0	2,95	T	94,4	3,72	3,30	7,28

Port description: FEMALE THREAD SAE (ISO 11926-1 & SAE J1926-1)

BODY SIZE	Descriptive Code	Item Code	PORT (A)	N	Overall Length		Length		Hex		Hex		Diameter		Weight						
					mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Kg	Lbs					
5/8"	F VEP15HD 3/4 SAE	Female 808104010	1-1/16-12UN	M45x3	G	172,4	6,79	F	84,9	3,34	C	41,0	1,61	Q	50,0	1,97	E	53,8	2,12	0,91	2,01
	M VEP15HD 3/4 SAE	Male 808104011						D	106	4,17	B	41,0	1,61	P	50,0	1,97	T	53,8	2,12	1,0	2,20
3/4"	F VEP17HD 1 SAE	Female 808104012	1-5/16-12UN	M50x3	G	201,9	7,95	F	100,7	3,96	C	46,0	1,81	Q	55,0	2,17	E	58,8	2,31	1,27	2,80
	M VEP17HD 1 SAE	Male 808104013						D	124,0	4,88	B	46,0	1,81	P	55,0	2,17	T	58,8	2,31	1,29	2,84
1"	F VEP21HD 1-1/4 SAE	Female 808104014	1-5/8-12UN	M58x3	G	216,2	8,51	F	106,8	4,20	C	55,0	2,17	Q	65,0	2,56	E	69,8	2,75	2,01	4,43
	M VEP21HD 1-1/4 SAE	Male 808104015						D	133,4	5,25	B	55,0	2,17	P	65,0	2,56	T	69,8	2,75	1,78	3,92
1-1/2"	F VEP30HD 1-1/2 SAE	Female 808104016	1-7/8-12UN	80x4 TpF	G	253,9	10,00	F	133,5	5,26	C	65,0	2,56	Q	85,0	3,35	E	95,0	3,74	4,34	9,56
	M VEP30HD 1-1/2 SAE	Male 808104017						D	150,0	5,91	B	65,0	2,56	P	75,0	2,95	T	94,4	3,72	3,28	7,23



Port description: FLANGE PORT – 4 THREADED HOLES (ISO 6162-2 6000 psi & SAE J518)

BODY SIZE	Descriptive Code	Item Code	Diameter		N	Overall Length		Length		Hex		Diameter		Weight						
			mm	inch		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch					
3/4"	F VEP17HD 1" FPU CODE 62	Female 808124020	b	22,5	0,89	M50x3	G	217,9	8,58	F	115,7	6,13	Q	55,0	2,16	E	58,8	2,31	1,68	3,70
	M VEP17HD 1" FPU CODE 62	Male 808124021	a	22,0	0,87					D	125,0	6,90	P	55,0	2,16	T	58,8	2,31	1,65	3,64
1"	F VEP21HD 1" FPM CODE62	Female 808124018	b	22,5	0,89	M58x3	G	159,2	6,27	F	116,8	4,6	Q	65,0	2,56	E	69,8	2,75	3,00	6,61
	M VEP21HD 1" FPM CODE62	Male 808124019	a	22,5	0,89					D	135,2	5,32	P	65,0	2,56	T	69,8	2,75	2,97	6,55
1"	F VEP21HD 1-1/4 FPM CODE62	Female 808124026	b	25,6	1,01	M58x3	G	159,2	6,27	F	116,8	4,6	Q	65,0	2,56	E	69,8	2,75	3,39	7,47
	M VEP21HD 1-1/4 FPM CODE62	Male 808124027	a	25,0	0,98					D	135,2	5,32	P	65,0	2,56	T	69,8	2,75	2,97	6,55
1"	F VEP21HD 1-1/4 FPU CODE62	Female 808124022	b	25,6	1,01	M58x3	G	215	8,46	F	115,8	6,72	Q	65,0	2,56	E	69,8	2,75	2,60	5,73
	M VEP21HD 1-1/4 FPU CODE62	Male 808124023	a	25,6	1,01					D	123,2	7,25	P	65,0	2,56	T	69,8	2,75	2,16	4,76
1-1/2"	F VEP30HD 1-1/4 FPM CODE62	Female 808124034	b	32,0	1,26	80x4 Tr	G	266,5	10,49	F	148,5	8,25	Q	85,0	3,35	E	95,0	3,74	5,23	11,53
	M VEP30HD 1-1/4 FPM CODE62	Male 808124035	a	32,0	1,26					D	147,6	8,33	P	75,0	2,95	T	94,4	3,72	3,85	8,49
1-1/2"	F VEP30HD 1-1/2 FPU CODE62	Female 808124024	b	35,0	1,38	80x4 Tr	G	276,6	10,89	F	156,6	6,17	Q	85,0	3,35	E	95,0	3,74	6,91	15,23
	M VEP30HD 1-1/2 FPU CODE62	Male 808124025	a	32,0	1,26					D	149,6	5,89	P	75,0	2,95	T	94,4	3,72	4,81	10,60
1-1/2"	F VEP30HD 1-1/2 FPM CODE62	Female 808124028	b	35,0	1,38	80x4 Tr	G	262,6	10,34	F	150,6	5,93	Q	85,0	3,35	E	95,0	3,74	6,91	15,23
	M VEP30HD 1-1/2 FPM CODE62	Male 808124029	a	32,0	1,26					D	141,6	5,57	P	75,0	2,95	T	94,4	3,72	4,81	10,60
1-1/2"	F VEP30HD 1-1/4 FPU CODE62	Female 808124036	b	32,0	1,26	80x4 Tpf	G	266,5	10,49	F	148,5	5,85	Q	85,0	3,35	E	95,0	3,74	5,91	13,02
	M VEP30HD 1-1/4 FPU CODE62	Male 808124037	a	32,0	1,26					D	147,6	5,81	P	75,0	2,95	T	94,4	3,72	4,17	9,19
1-1/2"	F VEP30HD 1-1/4 FPM CODE62 M12	Female 808124040	b	32,0	1,26	80x4 Tpf	G	266,5	10,49	F	148,5	5,85	Q	85,0	3,35	E	95,0	3,74	5,92	13,05
	M VEP30HD 1-1/4 FPM CODE62 M12	Male 808124041	a	32,0	1,26					D	147,6	5,81	P	75,0	2,95	T	94,4	3,72	4,18	9,22

Designation example VEP17HD1" FPU/M:

VEP-HD (coupling series)

17 (size coupling Stucchi)

1" (size of flange)

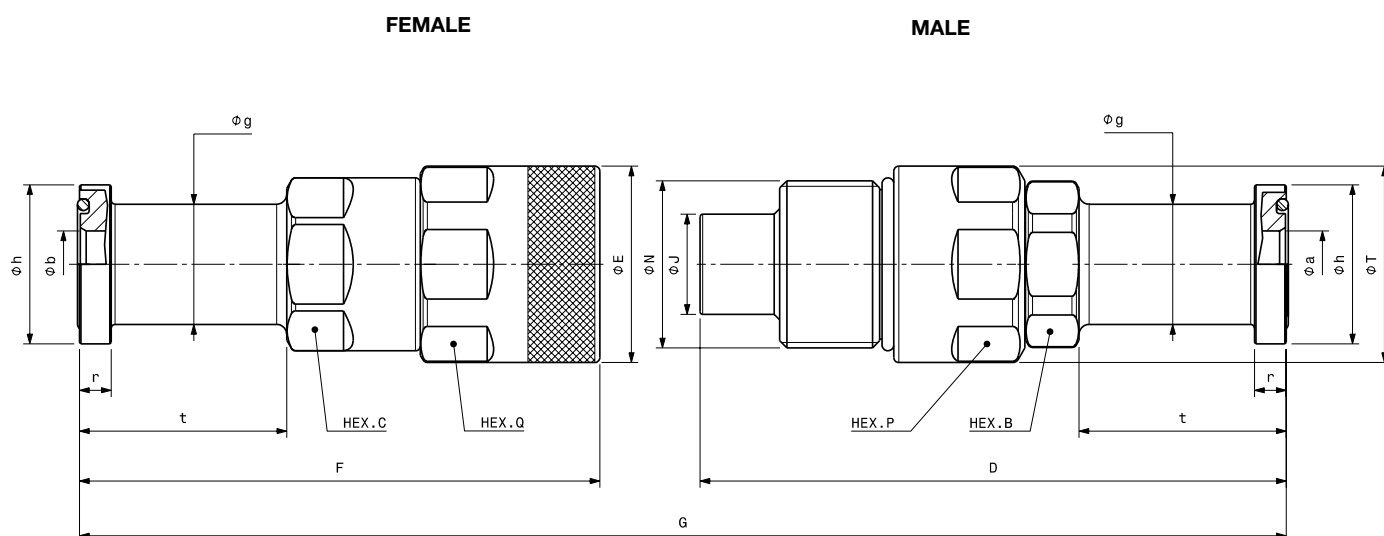
FP (Flange Port)

U (flange threaded holes type UNC;

M in case of metric threaded holes)

CODE 62 (flanged coupling solution)

For complete technical information contact info@stucchi.it



Port description: FLANGE HEAD – WITH O-RING (ISO 6162-2 6000 psi & SAE J518)

BODY SIZE	Descriptive Code	Item Code		Diameter		N	Overall Length		Length		Hex		Hex		Diameter		Weight	
				mm	inch		mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	Kg	Lbs
3/4"	F VEP17HD 1" FH CODE62	Female 808124012	b	20,0	0,79	M50x3	G 308,3	12,14	F 155,7	6,13	C 46,0	1,81	Q 55,0	2,16	E 58,8	2,31	1,68	3,70
	M VEP17HD 1" FH CODE62	Male 808124013	a	20,0	0,79				D 175,4	6,90	B 46,0	1,81	P 55,0	2,16	T 58,8	2,31	1,65	3,63
1"	F VEP21HD 1-1/4 FH CODE 62	Female 808124014	b	25,6	1,01	M58x3	G 331,0	13,03	F 170,8	6,72	C 55,0	2,16	Q 65,0	2,56	E 69,8	2,75	2,60	5,72
	M VEP21HD 1-1/4 FH CODE 62	Male 808124015	a	25,6	1,01				D 184,2	7,25	B 55,0	2,16	P 65,0	2,56	T 69,8	2,75	2,16	4,75
1-1/2"	F VEP30HD 1-1/2 FH CODE 62	Female 808124016	b	32,0	1,26	M80x4	G 391,5	15,41	F 209,5	8,25	C 65,0	2,56	Q 85,0	3,35	E 95,0	3,74	5,23	11,51
	M VEP30HD 1-1/2 FH CODE 62	Male 808124017	a	32,0	1,26				D 211,6	8,33	B 65,0	2,56	P 75,0	2,95	T 94,4	3,72	3,85	8,47
1-1/2"	F VEP30HD 1-1/4 FH CODE62	Female 808124038	b	28,0	1,1	80x4 Tpf	G 171,5	6,75	F 199,5	7,85	-	-	Q 85,0	3,35	E 95,0	3,74	5,04	11,11
	M VEP30HD 1-1/4 FH CODE62	Male 808124039	a	28,0	1,1				D 201,6	7,94	-	-	P 75,0	2,95	T 94,4	3,72	3,66	8,07

Designation example VEP17HD1"FH:

VEP-HD (coupling series)

17 (size coupling Stucchi)

1" (size of flange)

FH (Flange Head)

CODE 62 (flanged coupling solution)

For complete technical information contact info@stucchi.it

VEP-HDL version

VEP-HDL option is a female quick coupling interchangeable with standard VEP-HD series (flat face design, screw connection, connectable with residual pressure system), but equipped with special anti-unscrewing sleeve.

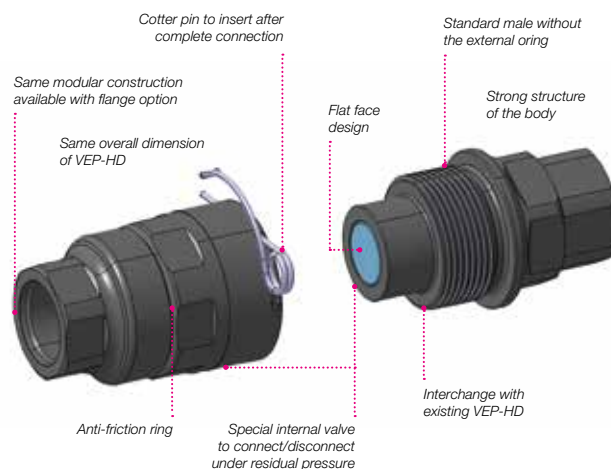
This series is suggested for specific heavy duty applications where the most severe pressure impulses are present, or else where you want to ensure that the operator successfully connect the male in the female coupling.

Female VEP-HDL version is interchangeable with male VEP-HD after removing yellow male external O-ring (upon request male without external O-ring).

Available size 5/8", 3/4", 1".

Tested at 420 bar for 500.000 impulses connected simulating a hoses rotation angle of 5 degrees.

For specific codes and configuration or any other information, please contact Stucchi Technical Support.



90° version

VEP-HD is available upon request also in special configuration with 90° fitting.

This version is ideal for applications with less space that requires a compact design and it guarantees the correct bending of the hose.

For specific codes, configuration or any other information, please contact Stucchi Technical Support.



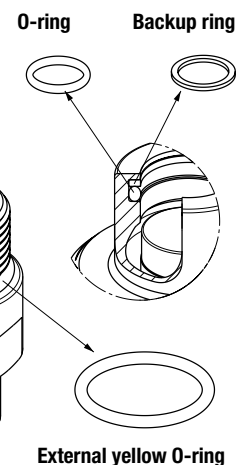
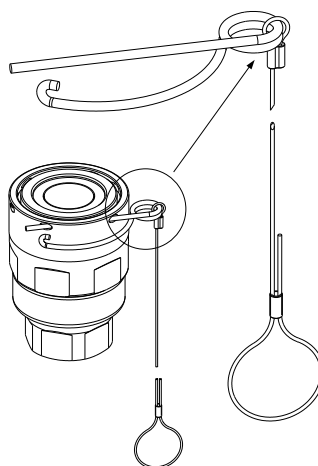


SPARE KIT SEAL & KIT COTTER

Repair kit / OR+BK+EXTERNAL OR		
Body Size	Description	Part Number
5/8"	M VEP15HD	815700738
3/4"	M VEP17HD	815700739
1"	M VEP21HD	815700740
1-1/2"	M VEP30HD*	815700741

* OR + O-Ring holder

O-Ring in Nitrile
BackUp in Teflon®



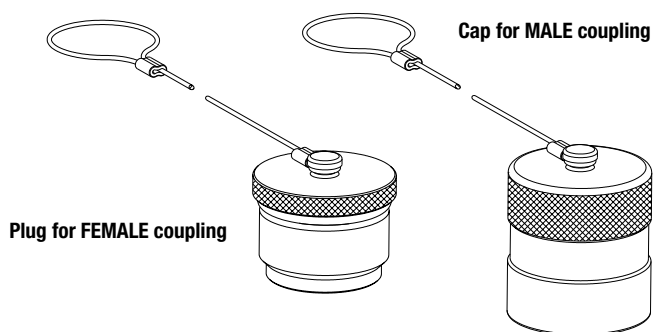
Kit Cotter VEP-HDL version		
Body Size	Description	Part Number
Ask to sales department		

PROTECTIVE CAPS FOR VEP-HD SERIES

Protective caps are always recommended to protect the couplings from damage, dirt inclusion, and will increase the product life. This is particularly important in mobile applications where exposure to weather and aggregate materials are common.

Two solutions are available.

- threaded aluminum caps with lanyard (standard colors: natural aluminum, other colors available upon request)
- threaded plastic caps with lanyard (standard color black).



Protective Cap				
Body Size/Description		Part Number		Material/Color
		Plug for Female	Cap for Male	
5/8"	VEP15	815305076	815305077	Aluminum/Natural
3/4"	VEP17	815305078	815305079	Aluminum/Natural
1"	VEP21	815305080	815305081	Aluminum/Natural
1-1/2"	VEP30	815305082	815305083	Aluminum/Natural

Protective Cap				
Body Size/Description		Part Number		Material/Color
		Plug for Female	Cap for Male	
5/8"	VEP15	815303130	815303131	Plastic/Black
3/4"	VEP17	815303132	815303133	Plastic/Black
1"	VEP21	815303134	815303135	Plastic/Black
1-1/2"	VEP30	815303136	815303137	Plastic/Black