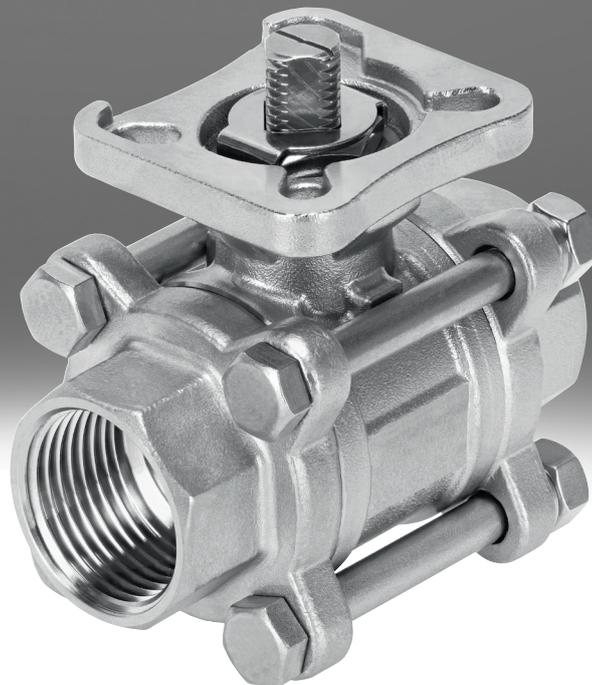


Ball valve VZBE

FESTO



Characteristics

At a glance

- Extremely flexible in use thanks to good media resistance
- 2-piece, 2-way without ISO 5211, with lockable hand lever
- 3-piece, 2-way
- 3-way, L- and T-bores as a horizontal design
- Threaded connection according to ASME B1.20.1
- CRN certification
- Stainless steel design
- Several connection options
- Lockable hand levers
- Flange hole pattern according to ISO 5211

Design type

[D] Two-part

Manual ball valves that are bonded and cannot be taken apart to replace the seal

[F] Four-part

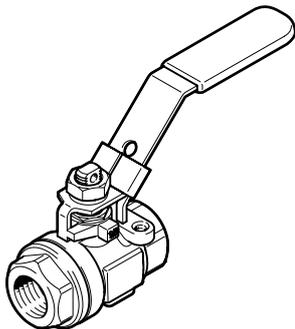
Ball valves with T-drilled hole, consisting of a middle part and 3 end caps, can be taken apart to replace the seal

[T] Three-part

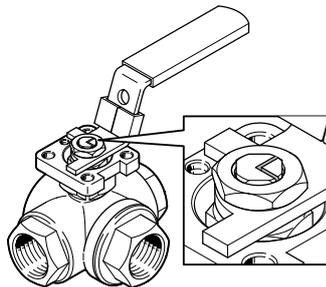
Ball valves with a middle part and 2 end caps (held together on the outside by tie rods), can be taken apart to replace the seal

Valve function

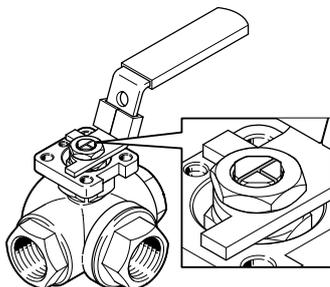
[2] 2/2-way



[3L] 3/2-way, L-bore



[3T] 3/2-way, T-bore



Type code

001	Series
VZBE	Ball valve

002	Nominal diameter DN
1/4	1/4"
3/8	3/8"
1/2	1/2"
3/4	3/4"
1	1"
1 1/4	1 1/4"
1 1/2	1 1/2"
2	2"
2 1/2	2 1/2"
3	3"
4	4"

003	Process valve connection
T	NPT female thread
WA	Welding socket

004	Nominal pressure [bar]
63	63

005	Design type
D	Two-part
T	Three-part
F	Four-part

006	Valve function
2	2/2-way
3L	3/2-way, L-bore
3T	3/2-way, T-bore

007	Flanged connection
	Standard
F0304	Hole pattern 03 and 04
F04	Hole pattern 04
F0405	Hole pattern 04 and 05
F05	Hole pattern 05
F0507	Hole pattern 05 and 07
F0710	Hole pattern 07 and 10
F1012	Hole pattern 10 and 12

008	Actuation type
	Via drive
M	With hand lever

009	Housing material
V15	Stainless steel ASTM A351-CF8M

010	Shut-off element material
V15	Stainless steel ASTM A351-CF8M
V16	Stainless steel ASTM A240-316 / 1.4401

Datasheet

General technical data, 2-way, with pipe thread, process valve connection 1/4-1 NPT

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT
Nominal size DN	8	10	15	20	25
Valve function	2/2				
Design	2-way ball valve				
Sealing principle	Soft				
Type of actuation	Mechanical				
Switching position indicator	Slot direction = flow direction				
Flow direction	Reversible				
Type of mounting	In-line installation				
Mounting position	optional				
Based on standard	ASME B1.20.1, ISO 5211				
Breakaway torque at differential pressure, nominal pressure, process valve PN	7 Nm		9 Nm		15 Nm
Inside diameter	11.6 mm	12.5 mm	15 mm	20 mm	25 mm
Flow rate Kv	19 m ³ /h	22 m ³ /h	32 m ³ /h	59 m ³ /h	94 m ³ /h

General technical data, 2-way, with pipe thread, process valve connection 1 1/4-4 NPT

Connection Process valve	1 1/4 NPT	1 1/2 NPT	2 NPT	2 1/2 NPT	3 NPT	4 NPT
Nominal size DN	32	40	50	65	80	100
Valve function	2/2					
Design	2-way ball valve					
Sealing principle	Soft					
Type of actuation	Mechanical					
Switching position indicator	Slot direction = flow direction					
Flow direction	Reversible					
Type of mounting	In-line installation					
Mounting position	optional					
Based on standard	ASME B1.20.1, ISO 5211					
Breakaway torque at differential pressure, nominal pressure, process valve PN	23 Nm	30 Nm	44 Nm	79 Nm	103 Nm	138 Nm
Inside diameter	32 mm	38 mm	50 mm	63 mm	76 mm	96 mm
Flow rate Kv	160 m ³ /h	247 m ³ /h	420 m ³ /h	684 m ³ /h	995 m ³ /h	1,637 m ³ /h

General technical data, 2-way, with hand lever and pipe thread, process valve connection 1/4-1 NPT

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT
Nominal size DN	8	10	15	20	25
Valve function	2/2				
Design	2-way ball valve, 2-way ball valve with hand lever				
Sealing principle	Soft				
Type of actuation	Mechanical				
Switching position indicator	Slot direction = flow direction				
Flow direction	Reversible				
Type of mounting	In-line installation				
Mounting position	optional				
Based on standard	ASME B1.20.1, ISO 5211				
Inside diameter	11.6 mm	12.5 mm	15 mm	20 mm	25 mm
Breakaway torque at differential pressure, nominal pressure, process valve PN	3.5 Nm 7 Nm	4 Nm 7 Nm	5.5 Nm 7 Nm	7.5 Nm 9 Nm	11 Nm 15 Nm
Flow rate Kv	5.1 m ³ /h 19 m ³ /h	5.8 m ³ /h 22 m ³ /h	8.5 m ³ /h 32 m ³ /h	15.6 m ³ /h 59 m ³ /h	25.1 m ³ /h 94 m ³ /h

Datasheet

General technical data, 2-way, with hand lever and pipe thread, process valve connection 1 1/4-4 NPT						
Connection Process valve	1 1/4 NPT	1 1/2 NPT	2 NPT	2 1/2 NPT	3 NPT	4 NPT
Nominal size DN	32	40	50	65	80	100
Valve function	2/2					
Design	2-way ball valve, 2-way ball valve with hand lever					2-way ball valve
Sealing principle	Soft					
Type of actuation	Mechanical					
Switching position indicator	Slot direction = flow direction					
Flow direction	Reversible					
Type of mounting	In-line installation					
Mounting position	optional					
Based on standard	ASME B1.20.1, ISO 5211					
Inside diameter	32 mm	38 mm	50 mm	63 mm	76 mm	96 mm
Breakaway torque at differential pressure, nominal pressure, process valve PN	15 Nm 18 Nm	20 Nm 25 Nm	35 Nm 40 Nm	55 Nm 60 Nm	70 Nm 85 Nm	90 Nm
Flow rate Kv	42.6 m ³ /h 160 m ³ /h	61.6 m ³ /h 232 m ³ /h	111.8 m ³ /h 420 m ³ /h	181.9 m ³ /h 684 m ³ /h	264.5 m ³ /h 995 m ³ /h	435.2 m ³ /h

General technical data, 2-way, with weld end, nominal width DN 8-25					
Nominal size DN	8	10	15	20	25
Valve function	2/2				
Design	2-way ball valve				
Sealing principle	Soft				
Type of actuation	Mechanical				
Switching position indicator	Slot direction = flow direction				
Flow direction	Reversible				
Type of mounting	In-line installation				
Mounting position	optional				
Based on standard	ASME B16.11, ISO 5211				
Flange hole pattern	F03, F04				F04, F05
Breakaway torque at differential pressure, nominal pressure, process valve PN	7 Nm			9 Nm	15 Nm
Inside diameter	11.6 mm	12.5 mm	15 mm	20 mm	25 mm
Flow rate Kv	19 m ³ /h	22 m ³ /h	32 m ³ /h	59 m ³ /h	94 m ³ /h

General technical data, 2-way, with weld end, nominal width DN 32-100						
Nominal size DN	32	40	50	65	80	100
Valve function	2/2					
Design	2-way ball valve					
Sealing principle	Soft					
Type of actuation	Mechanical					
Switching position indicator	Slot direction = flow direction					
Flow direction	Reversible					
Type of mounting	In-line installation					
Mounting position	optional					
Based on standard	ASME B16.11, ISO 5211					
Flange hole pattern	F04, F05	F05, F07		F07, F10		F10, F12
Breakaway torque at differential pressure, nominal pressure, process valve PN	23 Nm	30 Nm	44 Nm	79 Nm	103 Nm	138 Nm
Inside diameter	32 mm	40 mm	50 mm	63 mm	76 mm	96 mm
Flow rate Kv	160 m ³ /h	247 m ³ /h	420 m ³ /h	684 m ³ /h	995 m ³ /h	1,637 m ³ /h

Datasheet

General technical data, 2-way, with hand lever and weld end, nominal width DN 8-25

Nominal size DN	8	10	15	20	25
Valve function	2/2				
Design	2-way ball valve with hand lever				
Sealing principle	Soft				
Type of actuation	Mechanical				
Switching position indicator	Slot direction = flow direction				
Flow direction	Reversible				
Type of mounting	In-line installation				
Mounting position	optional				
Based on standard	ASME B16.11, ISO 5211				
Flange hole pattern	F03, F04				F04, F05
Breakaway torque at differential pressure, nominal pressure, process valve PN	7 Nm			9 Nm	15 Nm
Inside diameter	11.6 mm	12.5 mm	15 mm	20 mm	25 mm
Flow rate Kv	19 m ³ /h	22 m ³ /h	32 m ³ /h	59 m ³ /h	94 m ³ /h

General technical data, 2-way, with hand lever and weld end, nominal width DN 32-100

Nominal size DN	32	40	50	65	80	100
Valve function	2/2					
Design	2-way ball valve with hand lever					
Sealing principle	Soft					
Type of actuation	Mechanical					
Switching position indicator	Slot direction = flow direction					
Flow direction	Reversible					
Type of mounting	In-line installation					
Mounting position	optional					
Based on standard	ASME B16.11, ISO 5211					
Flange hole pattern	F04, F05	F05, F07	F07, F10		F10, F12	
Breakaway torque at differential pressure, nominal pressure, process valve PN	23 Nm	30 Nm	44 Nm	79 Nm	103 Nm	138 Nm
Inside diameter	32 mm	40 mm	50 mm	63 mm	76 mm	96 mm
Flow rate Kv	160 m ³ /h	247 m ³ /h	420 m ³ /h	684 m ³ /h	995 m ³ /h	1,637 m ³ /h

General technical data, 3-way, with pipe thread

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Nominal size DN	8	10	15	20	25	32	40	50
Valve function	3/2							
Design	3-way ball valve, L-hole, T-hole							
Sealing principle	Soft							
Type of actuation	Mechanical							
Switching position indicator	Slot direction = flow direction							
Flow direction	Reversible							
Type of mounting	In-line installation							
Mounting position	optional							
Based on standard	ASME B1.20.1, ISO 5211							
Breakaway torque at differential pressure, nominal pressure, process valve PN	9.6 Nm			14.3 Nm	25.2 Nm	33 Nm	45.5 Nm	85 Nm
Inside diameter	11 mm		12.7 mm	16 mm	20 mm	25 mm	32 mm	38.1 mm
Flow rate Kv L hole	4 m ³ /h		10 m ³ /h	12 m ³ /h	16 m ³ /h	37 m ³ /h	73 m ³ /h	78 m ³ /h
Flow rate Kv T hole angled	5 m ³ /h		10 m ³ /h	14 m ³ /h	17 m ³ /h	40 m ³ /h	76 m ³ /h	85 m ³ /h

Datasheet

General technical data, 3-way, with hand lever and pipe thread

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Nominal size DN	8	10	15	20	25	32	40	50
Valve function	3/2							
Design	3-way ball valve, L-hole, T-hole							
Sealing principle	Soft							
Type of actuation	Mechanical							
Switching position indicator	Slot direction = flow direction							
Flow direction	Reversible							
Type of mounting	In-line installation							
Mounting position	optional							
Based on standard	ASME B1.20.1, ISO 5211							
Breakaway torque at differential pressure, nominal pressure, process valve PN	9.6 Nm			14.3 Nm	25.2 Nm	33 Nm	45.5 Nm	85 Nm
Inside diameter	11 mm		12.7 mm	16 mm	20 mm	25 mm	32 mm	38.1 mm
Flow rate Kv L hole	1.2 m ³ /h		2.5 m ³ /h	3.2 m ³ /h	4.1 m ³ /h	9.9 m ³ /h	19.3 m ³ /h	20.7 m ³ /h
Flow rate Kv T hole angled	1.4 m ³ /h		2.8 m ³ /h	3.7 m ³ /h	4.6 m ³ /h	10.6 m ³ /h	20.2 m ³ /h	22.5 m ³ /h

Operating and environmental conditions, 2-way, with pipe thread

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT	2 1/2 NPT	3 NPT	4 NPT
Nominal pressure PN	63										
Media temperature	-20 ... 200°C										
Medium	Vapour, Compressed air to ISO 8573-1:2010 [-:--], Inert gases, Water, Neutral fluids										
Approval	CRN										
Corrosion resistance class CRC ¹⁾	4 - Very high corrosion stress										
CE mark (see declaration of conformity)	-					In accordance with EU Pressure Equipment Directive					

1) More information www.festo.com/catalogue/kkb

Operating and environmental conditions, 2-way, with hand lever and pipe thread

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT	2 1/2 NPT	3 NPT	4 NPT
Medium ¹⁾	Vapour, Compressed air to ISO 8573-1:2010 [-:--], Inert gases, Water, Neutral fluids										
Nominal pressure PN	63										
Media temperature	-20 ... 200°C										
Approval	CRN										
Corrosion resistance class CRC ²⁾	3 - high corrosion stress, 4 - Very high corrosion stress										4 - Very high corrosion stress
CE mark (see declaration of conformity)	-					In accordance with EU Pressure Equipment Directive					

1) Other flow media on request

2) More information www.festo.com/catalogue/kkb

Operating and environmental conditions, 2-way, with weld end

Nominal size DN	8	10	15	20	25	32	40	50	65	80	100
Medium ¹⁾	Vapour, Compressed air to ISO 8573-1:2010 [-:--], Inert gases, Water, Neutral fluids										
Nominal pressure PN	63										
Media temperature	-20 ... 200°C										
Approval	CRN										
Corrosion resistance class CRC ²⁾	4 - Very high corrosion stress										
CE mark (see declaration of conformity)	-					In accordance with EU Pressure Equipment Directive					

1) Other flow media on request

2) More information www.festo.com/catalogue/kkb

Datasheet

Operating and environmental conditions, 2-way, with hand lever and weld end

Nominal size DN	8	10	15	20	25	32	40	50	65	80	100
Medium ¹⁾	Vapour, Compressed air to ISO 8573-1:2010 [---], Inert gases, Water, Neutral fluids										
Nominal pressure PN	63										
Media temperature	-20 ... 200°C										
Approval	CRN										
Corrosion resistance class CRC ²⁾	4 - Very high corrosion stress										
CE mark (see declaration of conformity)	-					In accordance with EU Pressure Equipment Directive					

1) Other flow media on request

2) More information www.festo.com/catalogue/ukb**Operating and environmental conditions, 3-way, with pipe thread**

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Media temperature	-20 ... 200°C							
Medium	Vapour, Compressed air to ISO 8573-1:2010 [---], Inert gases, Water, Neutral fluids							
Approval	CRN							
Corrosion resistance class CRC ¹⁾	4 - Very high corrosion stress							
CE mark (see declaration of conformity)	-					In accordance with EU Pressure Equipment Directive		

1) More information www.festo.com/catalogue/ukb**Operating and environmental conditions, 3-way, with hand lever and pipe thread**

Connection Process valve	1/4 NPT	3/8 NPT	1/2 NPT	3/4 NPT	1 NPT	1 1/4 NPT	1 1/2 NPT	2 NPT
Media temperature	-20 ... 200°C							
Medium	Vapour, Compressed air to ISO 8573-1:2010 [---], Inert gases, Water, Neutral fluids							
Approval	CRN							
Corrosion resistance class CRC ¹⁾	4 - Very high corrosion stress							
CE mark (see declaration of conformity)	-					In accordance with EU Pressure Equipment Directive		

1) More information www.festo.com/catalogue/ukb**Materials, 2-way, with pipe thread**

Material housing	Stainless steel casting
Material number housing	1.4408
Material ball	Stainless steel casting, High-alloy stainless steel
Material number ball	1.4401, 1.4408
Material shaft	High-alloy stainless steel
Material number shaft	1.4401
Material seat seal	PTFE
Material seals	FPM, PTFE
Note on materials	RoHS-compliant

Materials, 2-way, with hand lever and pipe thread

Material housing	Stainless steel casting
Material number housing	1.4408
Material ball	Stainless steel casting, High-alloy stainless steel
Material number ball	1.4401, 1.4408
Material shaft	High-alloy stainless steel
Material number shaft	1.4401
Material seat seal	PTFE, PTFE, modified
Material seals	FPM, PTFE
Note on materials	RoHS-compliant

Datasheet

Materials, 2-way, with welded end

Material housing	Stainless steel casting
Material number housing	1.4408/CF8M
Material ball	Stainless steel casting
Material number ball	1.4408/CF8M
Material shaft	High-alloy stainless steel
Material number shaft	1.4401
Material seat seal	PTFE, modified
Material seals	FPM, PTFE
Note on materials	RoHS-compliant

Materials, 2-way, with hand lever and welded end

Material housing	Stainless steel casting
Material number housing	1.4408/CF8M
Material ball	Stainless steel casting
Material number ball	1.4408/CF8M
Material shaft	High-alloy stainless steel
Material number shaft	1.4401
Material seat seal	PTFE, modified
Material seals	FPM, PTFE
Note on materials	RoHS-compliant

Materials, 3-way, with pipe thread

Material housing	Stainless steel casting
Material number housing	1.4408
Material ball	Stainless steel casting
Material number ball	1.4408
Material shaft	High-alloy stainless steel
Material number shaft	1.4401
Material seat seal	PTFE
Material seals	PTFE
Note on materials	RoHS-compliant

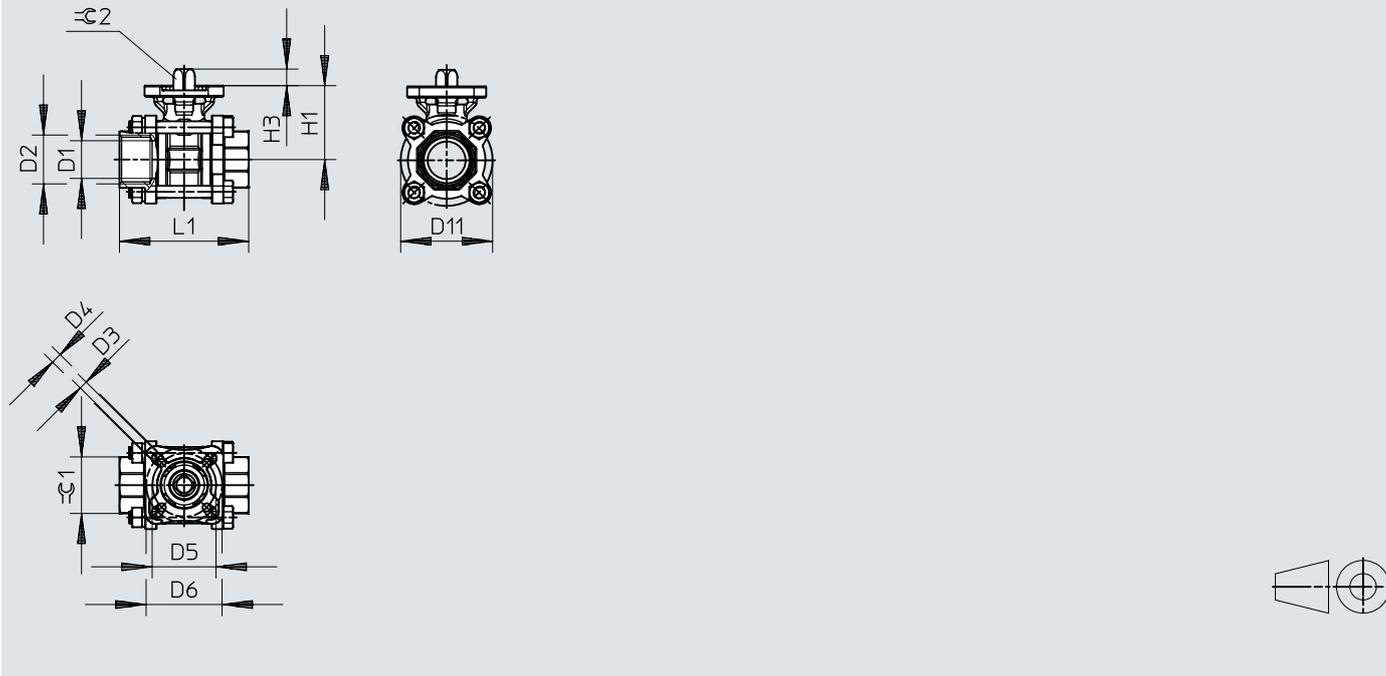
Materials, 3-way, with hand lever and pipe thread

Material housing	Stainless steel casting
Material number housing	1.4408
Material ball	Stainless steel casting
Material number ball	1.4408
Material shaft	High-alloy stainless steel
Material number shaft	1.4401
Material seat seal	PTFE
Material seals	PTFE
Note on materials	RoHS-compliant

Dimensions

Dimensions – Ball valves VZBE, 2-way, with pipe thread

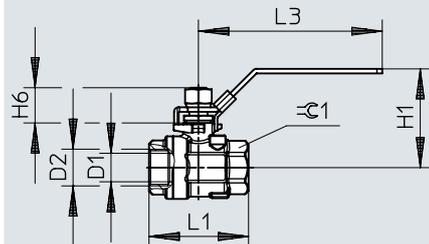
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	D1 ∅	D2	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D11 ∅	H1	H3	L1 ±2	≈C1	≈C2
VZBE-1/4-...	11,6	1/4 NPT	5,5	5,5	36	42	38	35,3	7,5	65	19,2	9
VZBE-3/8-...	12,5	3/8 NPT	5,5	5,5	36	42	38	35,3	7,5	65	22,5	9
VZBE-1/2-...	15	1/2 NPT	5,5	5,5	36	42	44	36,4	7,1	65	26	9
VZBE-3/4-...	20	3/4 NPT	5,5	5,5	36	42	52	39,5	7,3	75	32	9
VZBE-1-...	25	1 NPT	5,5	7	42	50	60,5	49	11	85	37,5	11
VZBE-1 1/4-...	32	1 1/4 NPT	5,5	7	42	50	74	54,2	11,5	101	48	11
VZBE-1 1/2-...	38	1 1/2 NPT	7	9	50	70	86	64,6	12,4	112	55	14
VZBE-2-...	50	2 NPT	7	9	50	70	102,5	72,5	13,6	130	67	14
VZBE-2 1/2-...	63	2 1/2 NPT	9	11	70	102	129	92	16,3	162	85	17
VZBE-3-...	76	3 NPT	9	11	70	102	146,5	100	16,3	188	100	17
VZBE-4-...	96	4 NPT	11	13	102	125	186,4	130	20,5	224	130	22

Dimensions

Dimensions – Ball valves VZBE, 2-way, with hand lever and pipe thread

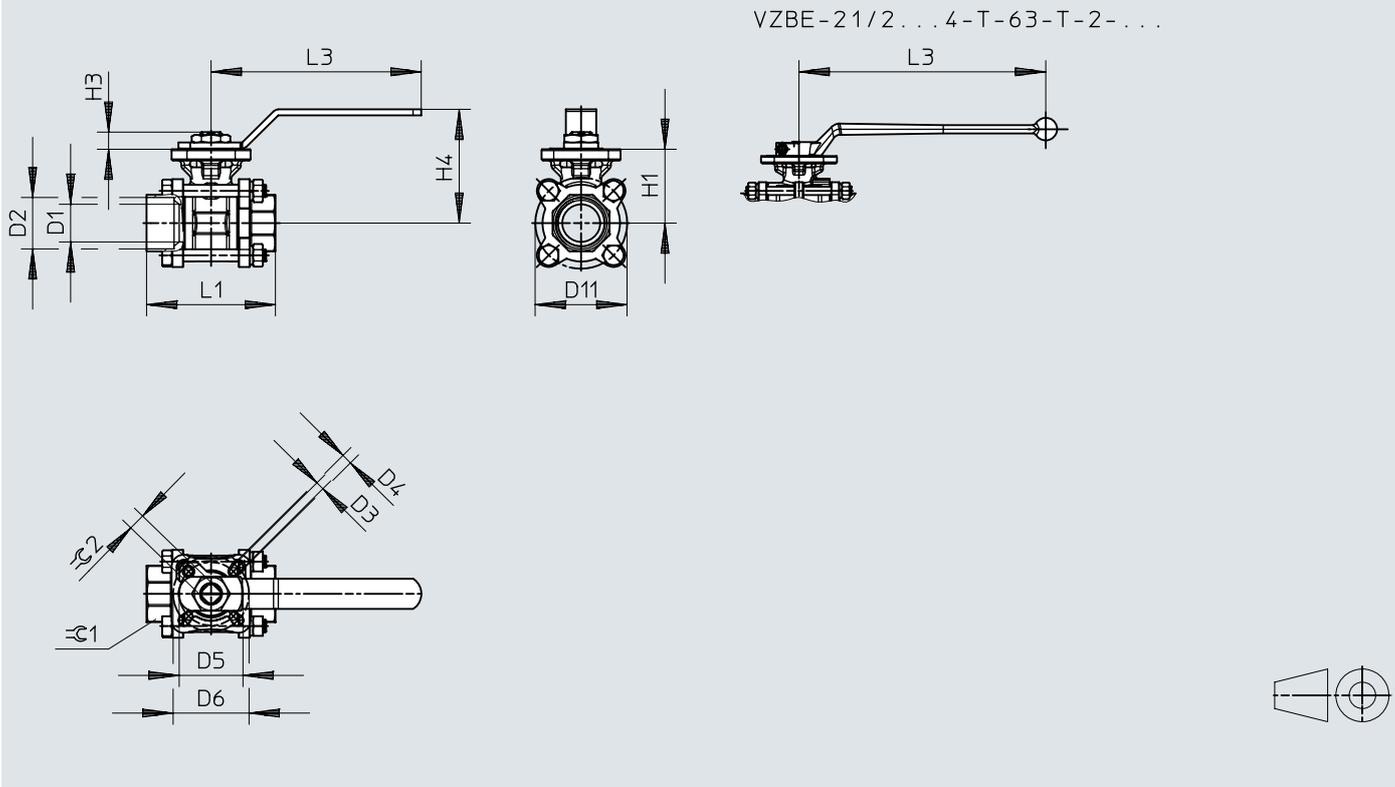
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	D1 ∅	D2	H1	H6	L1 ±2	L3	∅C1
VZBE-1/4-...	11,6	1/4 NPT	58,5	18,5	50,8	99,5	19
VZBE-3/8-...	12,5	3/8 NPT	58,5	18,5	50,8	99,5	22,5
VZBE-1/2-...	15	1/2 NPT	60,5	18,8	58	99,5	26
VZBE-3/4-...	20	3/4 NPT	63	23,4	65,6	123	32
VZBE-1-...	25	1 NPT	79,5	26,2	78,7	149	38
VZBE-1 1/4-...	32	1 1/4 NPT	86	23,6	90	149	48
VZBE-1 1/2-...	38	1 1/2 NPT	101,7	28,2	105	190	54,8
VZBE-2-...	50	2 NPT	109,3	28,2	124	190	67
VZBE-2 1/2-...	63	2 1/2 NPT	140	39,4	146	247	85
VZBE-3-...	76	3 NPT	148,5	39,4	163,2	247	100

Dimensions

Dimensions – VZBE-1/4-...-4

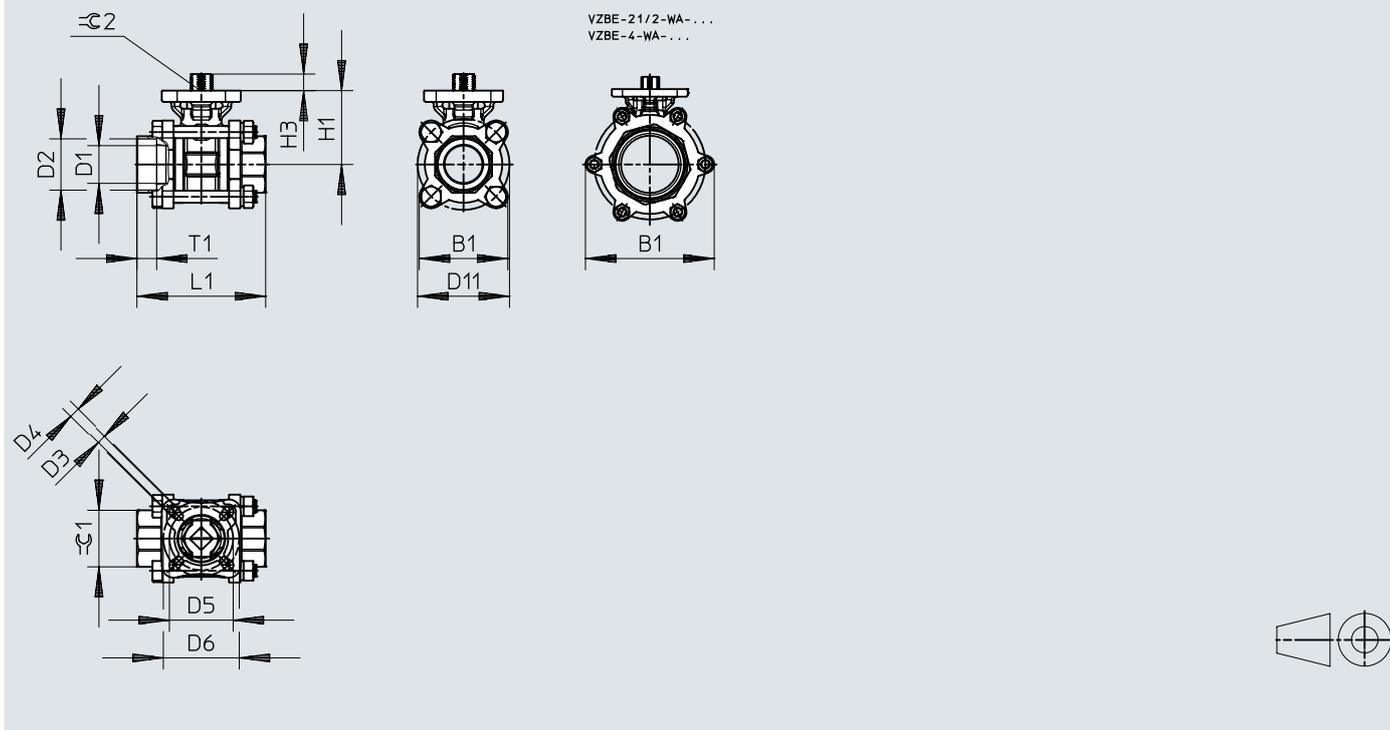
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	D1 ø	D2	D3 ø	D4 ø	D5 ø	D6 ø	D11 ø	H1	H3	H4	L1 ±2	L3	$\approx\text{C}1$	$\approx\text{C}2$
VZBE-1/4-...	11,6	1/4 NPT	5,5	5,5	36	42	38	35,3	7,5	61	65	114,5	19,2	9
VZBE-3/8-...	12,5	3/8 NPT	5,5	5,5	36	42	38	35,3	7,5	61	65	114,5	22,5	9
VZBE-1/2-...	15	1/2 NPT	5,5	5,5	36	42	44	36,4	7,1	62,7	65	114,5	26	9
VZBE-3/4-...	20	3/4 NPT	5,5	5,5	36	42	52	39,5	7,3	65,1	75	114,5	32	9
VZBE-1-...	25	1 NPT	5,5	7	42	50	60,5	49	11	76,5	85	140	37,5	11
VZBE-1 1/4-...	32	1 1/4 NPT	5,5	7	42	50	74	54,2	11,5	82	101	140	48	11
VZBE-1 1/2-...	38	1 1/2 NPT	7	9	50	70	86	64,6	12,4	102	112	172	55	14
VZBE-2-...	50	2 NPT	7	9	50	70	102	72,5	13,6	110,1	130	172	67	14
VZBE-2 1/2-...	63	2 1/2 NPT	9	11	70	102	129	92	16,3	127,3	162	325	85	17
VZBE-3-...	76	3 NPT	9	11	70	102	146,5	100	16,3	136,3	188	325	100	17
VZBE-4-...	96	4 NPT	11	13	102	125	186,4	130	20,5	168	224	325	130	22

Dimensions

Dimensions – Ball valves VZBE, 2-way, with weld-on end

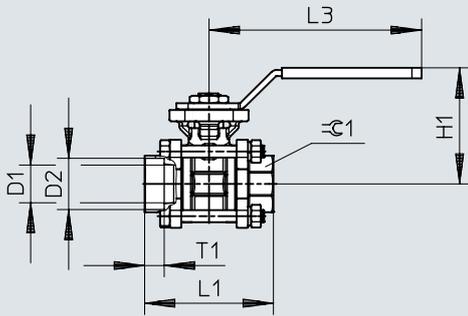
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	B1	D1 ∅	D2 ∅	D3 ∅	D4 ∅	D5 ∅	D6 ∅	D11 ∅	H1	H3	L1	T1	≈C1 ±2	≈C2
VZBE-1/4-...	40	11,6	14,5	5,5	5,5	36	42	38	35,3	7,5	65	10	19	9
VZBE-3/8-...	40	12,5	18	5,5	5,5	36	42	38	35,3	7,5	65	10	23	9
VZBE-1/2-...	47	15	22	5,5	5,5	36	42	44	36,4	7,1	65	10	26	9
VZBE-3/4-...	52	20	27,5	5,5	5,5	36	42	52	39,5	7,3	75	13	32	9
VZBE-1-...	58	25	34	5,5	7	42	50	60,5	49	11	85	13	38	11
VZBE-1 1/4-...	70	32	43	5,5	7	42	50	74	54,2	9,5	101	13	48	11
VZBE-1 1/2-...	78	38	49	7	9	50	70	86	64,6	12,4	112	13	55	14
VZBE-2-...	91	50	61,5	7	9	50	70	102,5	72,5	13,6	130	16	67	14
VZBE-2 1/2-...	114	63	74	9	11	70	102	129	92	16,3	162	16	85	17
VZBE-3-...	170	76	90	9	11	70	102	146,5	100	16,3	188	16	100	17
VZBE-4-...	216	96	115,5	11	13	102	125	186,4	130	20,5	224	20	130	22

Dimensions

Dimensions – Ball valves VZBE-1/4-...-2, 2-way, with hand lever and weld-on end

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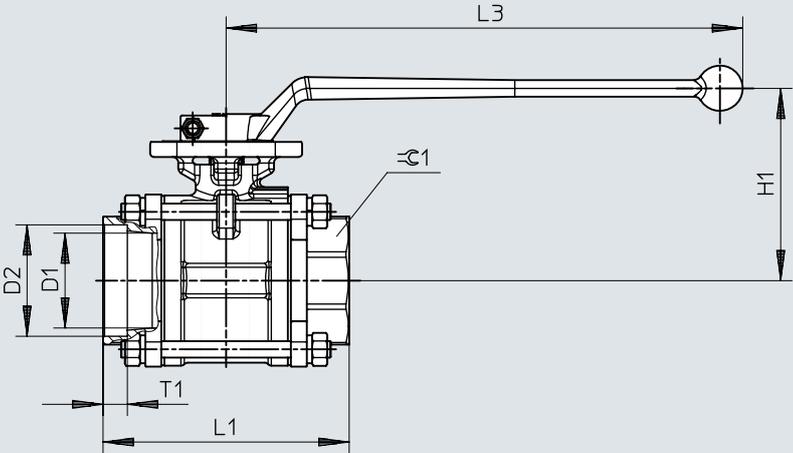


	D1 ∅	D2 ∅	H1	L1	L3 ±3	T1	$\approx C1$ ±2
VZBE-1/4-...	11,6	14,5	61	65	114,5	10	19
VZBE-3/8-...	12,5	18	61	65	114,5	10	23
VZBE-1/2-...	15	22	62,7	65	114,5	10	26
VZBE-3/4-...	20	27,5	65,1	75	114,5	13	32
VZBE-1-...	25	34	76,5	85	140	13	38
VZBE-1 1/4-...	32	43	82	101	140	13	48
VZBE-1 1/2-...	38	49	102	112	172	13	55
VZBE-2-...	50	61,5	110,1	130	172	16	67

Dimensions

Dimensions – Ball valves VZBE-2 1/2-...-4, 2-way, with hand lever and weld-on end

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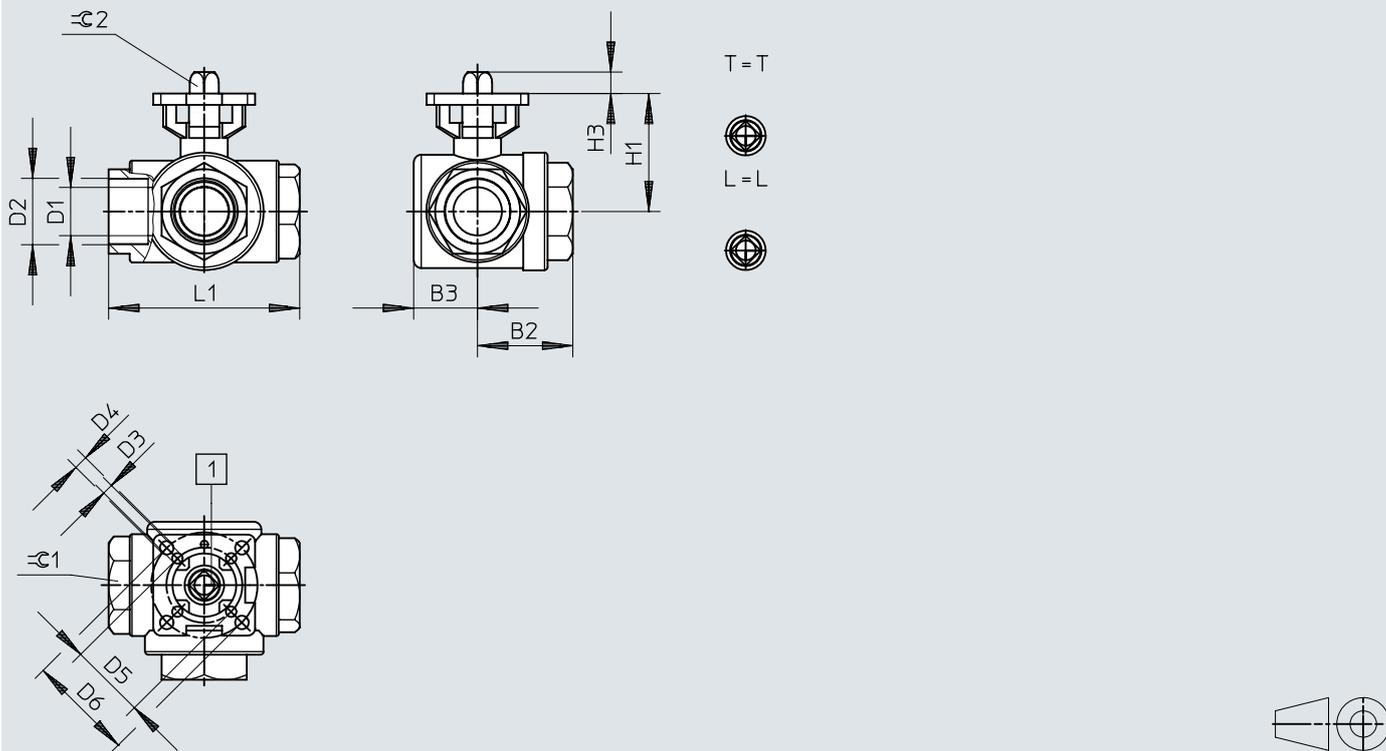


	D1 ∅	D2 ∅	H1	L1	L3 ±3	T1	± 0.1 ±2
VZBE-2 1/2-...	63	74	127,3	162	340	16	85
VZBE-3-...	76	90	136,3	188	340	16	100
VZBE-4-...	96	115,5	168	224	340	20	130

Dimensions

Dimensions – Ball valves VZBE, 3-way, with pipe thread

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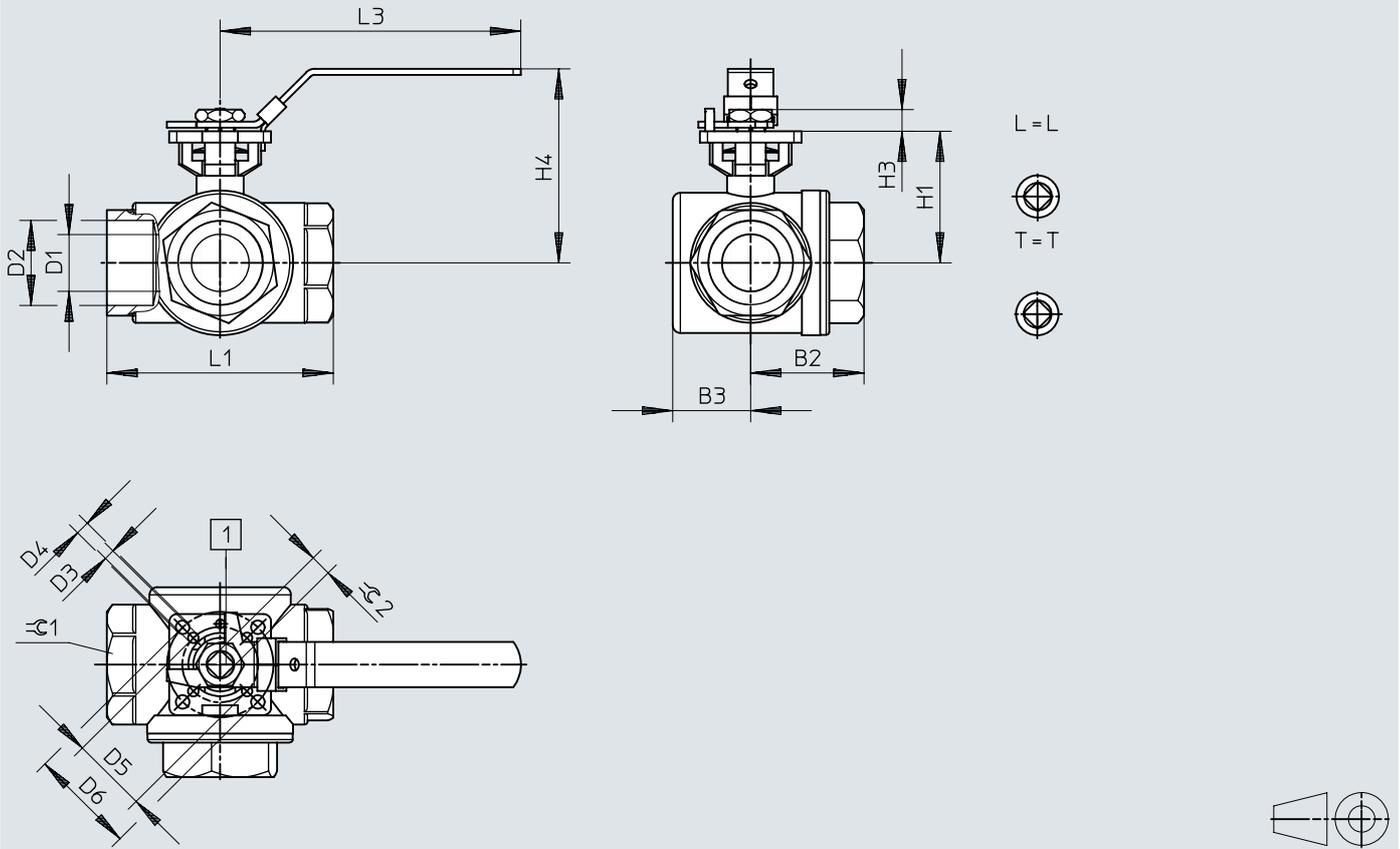
[1] Switching position indicator: the slot direction corresponds to the flow direction

	B2	B3	D1 ø	D2	D3 ø	D4 ø	D5 ø	D6 ø	H1	H3	L1 ±2	≙C1	≙C2
VZBE-1/4-...-F04-...	37,3	22,5	11	1/4 NPT	-	6	-	42	38,2	9	75,7	26	9
VZBE-3/8-...-F04-...	37,3	22,5	11	3/8 NPT	-	6	-	42	38,2	9	75,7	26	9
VZBE-1/2-...-F04-...	37,3	22,5	12,7	1/2 NPT	-	6	-	42	38,2	9	75,7	26	9
VZBE-3/4-...-F04-...	44,7	28	16	3/4 NPT	-	6	-	42	45,2	9	86,6	33	9
VZBE-1-...-F05-...	51,4	32,7	20	1 NPT	-	7	-	50	56,5	11,1	102,4	39	11
VZBE-1 1/4-...-F05-...	57,7	37	25	1 1/4 NPT	-	7	-	50	60,9	11,1	118,2	53	11
VZBE-1 1/2-...-F0507-...	62,7	42,5	32	1 1/2 NPT	7	9	50	70	78,3	14,2	125,8	60	14
VZBE-2-...-F0507-...	74,6	50,5	38,1	2 NPT	7	9	50	70	87,4	14,2	149	72	14

Dimensions

Dimensions – Ball valves VZBE, 3-way, with hand lever and pipe thread

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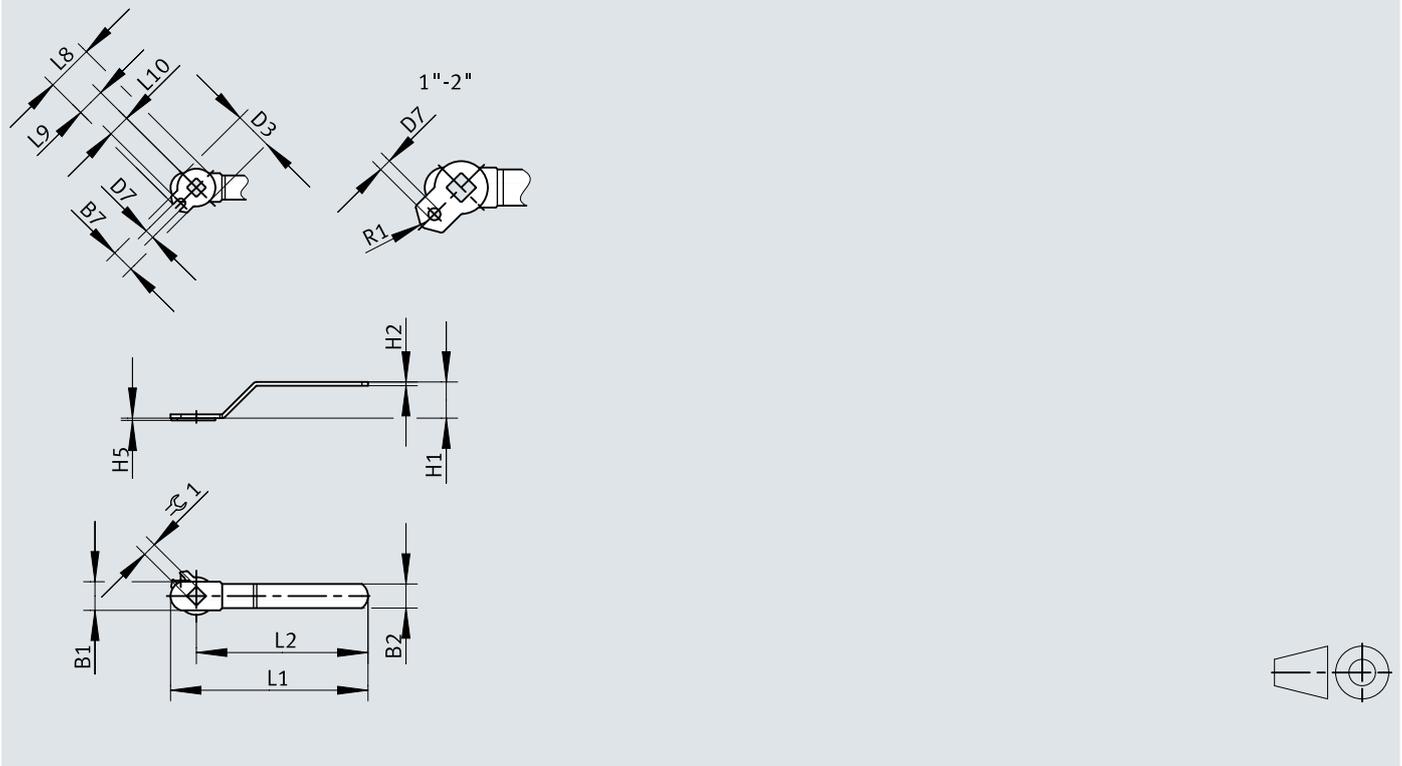
[1] Switching position indicator: the slot direction corresponds to the flow direction

	B2	B3	D1	D2	D3	D4	D5	D6	H1	H3	H4	L1	L3	≡G1	≡G2
	±2		∅		∅	∅	∅	∅				±2			
VZBE-1/4-...	37,3	22,5	11	1/4 NPT	-	6	-	42	38,2	9	75,7	75,7	114,5	26	9
VZBE-3/8-...	37,3	22,5	11	3/8 NPT	-	6	-	42	38,2	9	75,7	75,7	114,5	26	9
VZBE-1/2-...	37,3	22,5	12,7	1/2 NPT	-	6	-	42	38,2	9	75,7	75,7	114,5	26	9
VZBE-3/4-...	44,7	28	16	3/4 NPT	-	6	-	42	45,2	9	82,7	86,6	114,5	33	9
VZBE-1-...	51,4	32,7	20	1 NPT	-	7	-	50	56,5	11,1	95	102,4	139,5	39	11
VZBE-1 1/4-...	57,7	37	25	1 1/4 NPT	-	7	-	50	60,9	11,1	104,4	118,2	186,5	53	11
VZBE-1 1/2-...	62,7	42,5	32	1 1/2 NPT	7	9	50	70	78,3	14,2	119,8	125,8	200,5	60	14
VZBE-2-...	74,6	50,5	38,1	2 NPT	7	9	50	70	87,4	14,2	128,9	149	200,5	72	14

Dimensions

Dimensions – Hand lever VAOH 1/4" ... 2"

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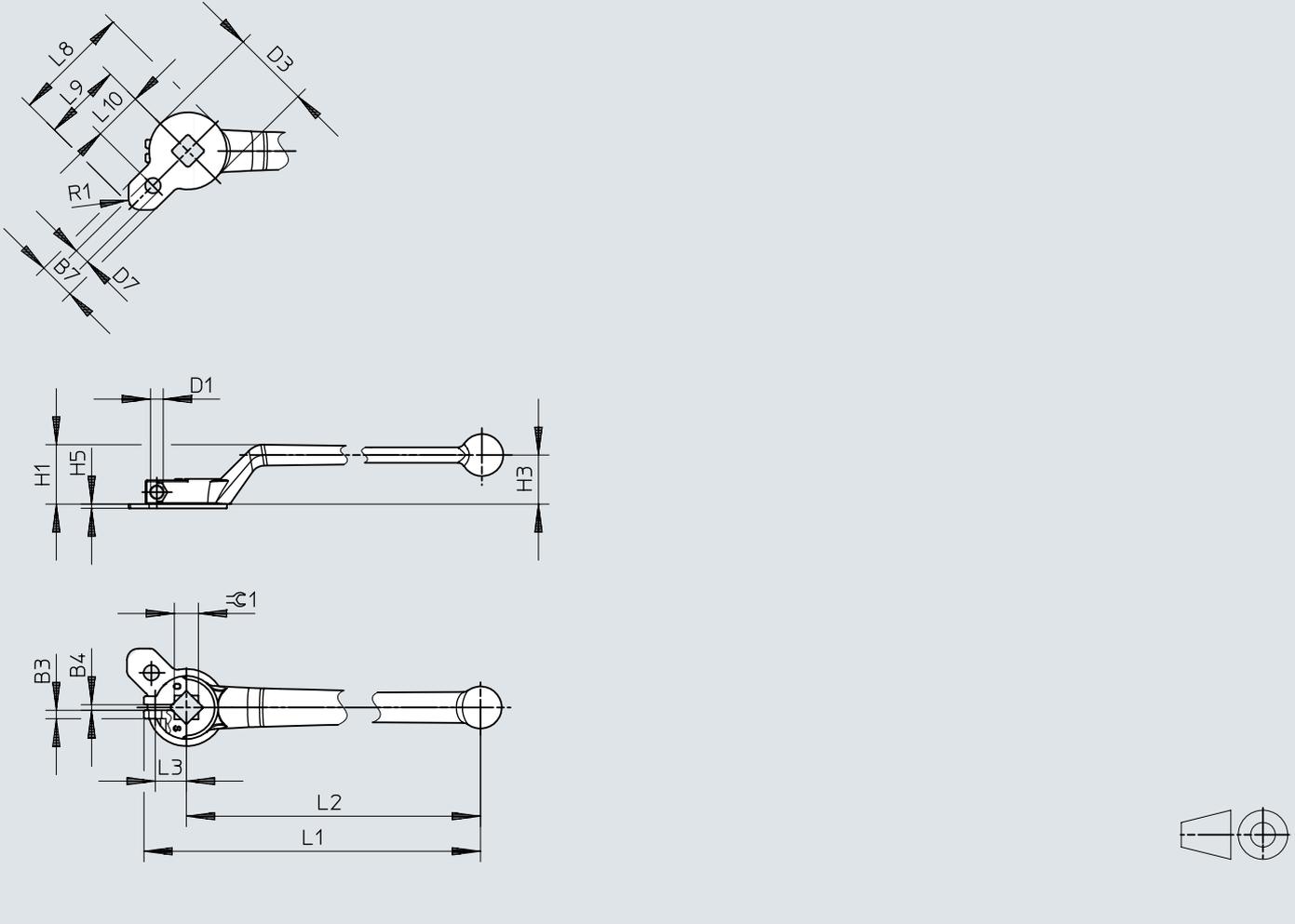


		B1	B2	B7	D3	D7	H1	H2	H5	L1	L2	L8	L9	L10	R1	≙G1 ±0,5
VAOH-F7-9-H9-A-22	1/4" ... 3/4"	19	16	15,8	25	6	24	2,5	1,5	130	113	33,5	21,1	18	–	9
VAOH-F7-11-H9-A-22	1" ... 1 1/4"	22,5	20	17,8	29	7	26	4	1,8	160	138,5	41,5	27	21	6	11
VAOH-F7-14-H9-A-22	1 1/2" ... 2"	26,5	24	26	35	8	34,5	5	2	194	170	54	36,5	25	5	14

Dimensions

Dimensions – Hand lever VAOH 2 1/2" ... 4"

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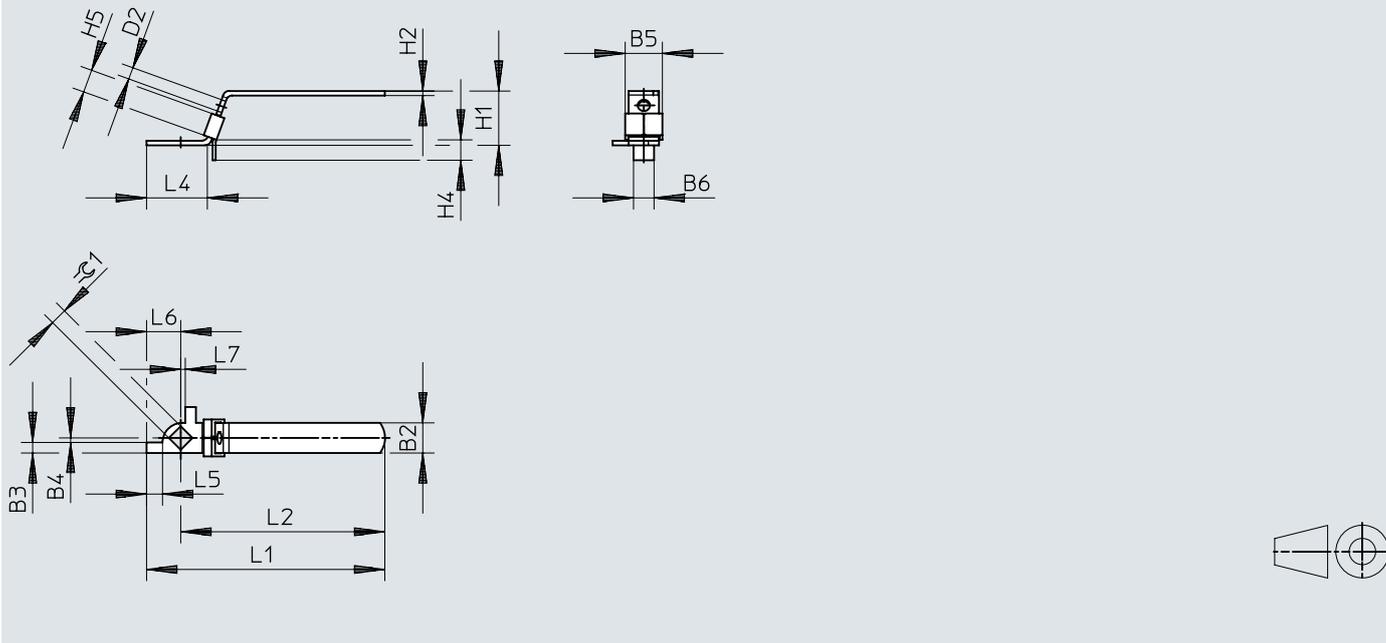


		B3	B4	B7	D1	D3	D7	H1	H3	H5	L1	L2	L3	L8	L9	L10	R1	≈C1 ±0,5
VAOH-F7-17-H9-A-22	2 1/2" ... 3"	6	4	27,5	9	55	11	42,5	35	3	355	325	22	83,6	56,1	35	8	17
VAOH-F7-22-H9-A-22	4"	6	4	27,5	9	70	12	42,5	38	3	355	325	22	102,7	67,7	51	7	22

Dimensions

Dimensions – Hand lever VAOH

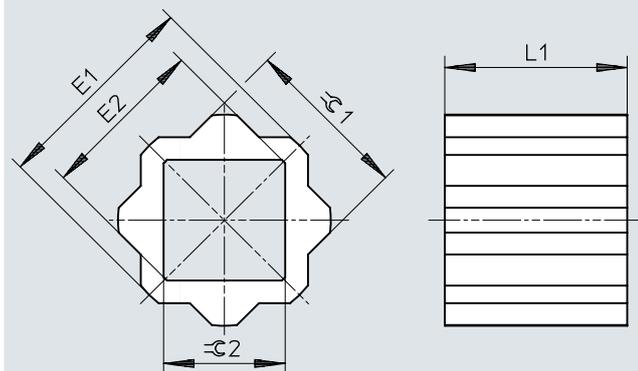
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		B2	B3	B4	B5	B6	D2 ø	H1	H2	H4	H5	L1	L2	L4	L5	L6	L7	≡G1
VAOH-F7-9-H9-A-32	1/4" ... 3/4"	20	7	3	25	14,5	8	35	3	15	15,2	131	112	39	8,5	19	3	9
VAOH-F7-11-H9-A-32	1"	20	7	3	24,5	13,5	8	36	3	13,5	15,3	157	134,5	40	10,5	25,5	3	11
VAOH-F7-11-211-H9-A-32	1 1/4"	25	9,5	3	30	15	8	38	4	11,5	15	211	186	48	10,5	25	3	11
VAOH-F7-14-H9-A-32	1 1/2" ... 2"	30	12	3	35	22	8	39	4	17	17	233	197,9	59	19,5	35,1	3	14

Dimensions

Dimensions – Reducing sleeve DARQ

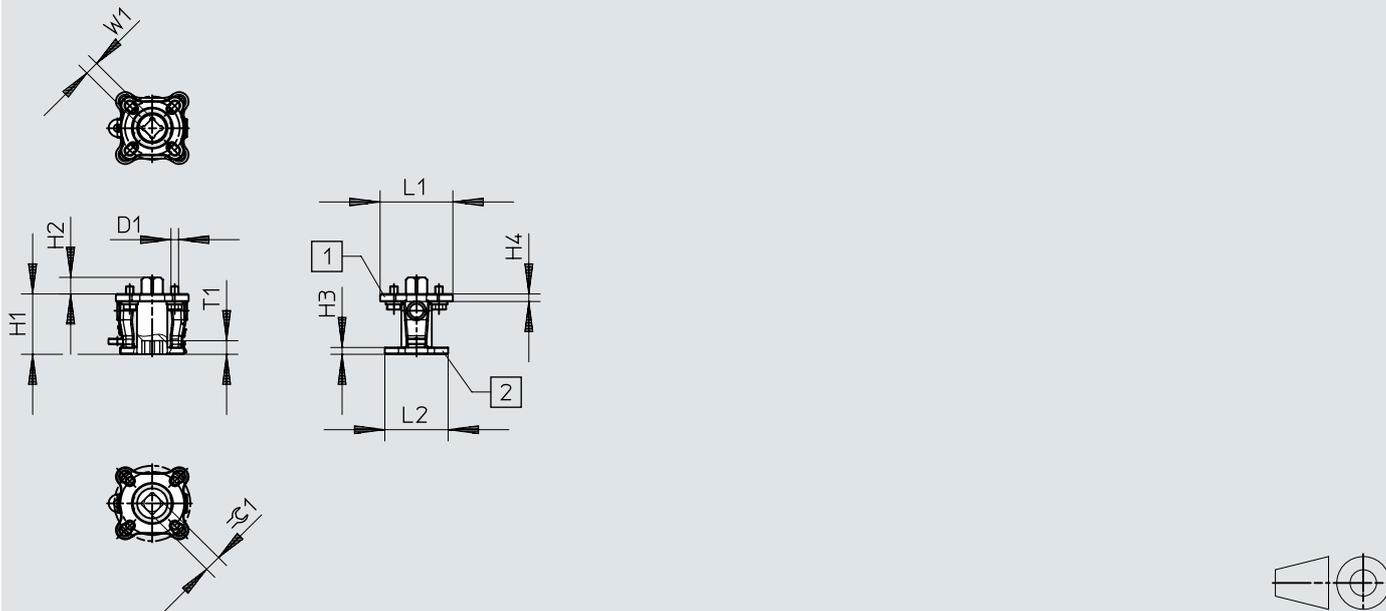
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	E1 +0,1/-0,3	E2 +0,3/-0,1	L1 $\pm 0,2$	$\varnothing 1$ -0,02/-0,12	$\varnothing 2$ +0,04/+0,18
DARQ-R-A-S11-S8-...	14	11	12	11	8
DARQ-R-A-S11-S9-...	14	12,3	11	11	9
DARQ-R-A-S14-S8-...	18	11	16	14	8
DARQ-R-A-S14-S9-...	18	12,3	16	14	9
DARQ-R-A-S14-S10-...	18	13,3	16	14	10
DARQ-R-A-S14-S11-...	18	14,3	16	14	11
DARQ-R-A-S14-S12-...	18	16,3	16	14	12
DARQ-R-A-S17-S8-...	22	11	17	17	8
DARQ-R-A-S17-S9-...	22	12,3	17	17	9
DARQ-R-A-S17-S11-...	22	14,3	17	17	11
DARQ-R-A-S17-S12-...	22	16,3	17	17	12
DARQ-R-A-S17-S14-...	22	18,3	17	17	14
DARQ-R-A-S22-S11-...	28	14,3	22	22	11
DARQ-R-A-S22-S14-...	28	18,3	22	22	14
DARQ-R-A-S22-S16-...	28	21,3	22	22	16
DARQ-R-A-S22-S17-...	28	22,3	22	22	17
DARQ-R-A-S27-S14-...	36	18,3	27	27	14
DARQ-R-A-S27-S17-...	36	22,3	27	27	17
DARQ-R-A-S27-S22-...	36	28,5	27	27	22
DARQ-R-A-S36-S22-...	48	28,5	36	36	22
DARQ-R-A-S36-S27-...	48	36,1	36	36	27
DARQ-R-A-S46-S36-...	59	48	46	46	36

Dimensions

Dimensions – Mounting kit DARQ

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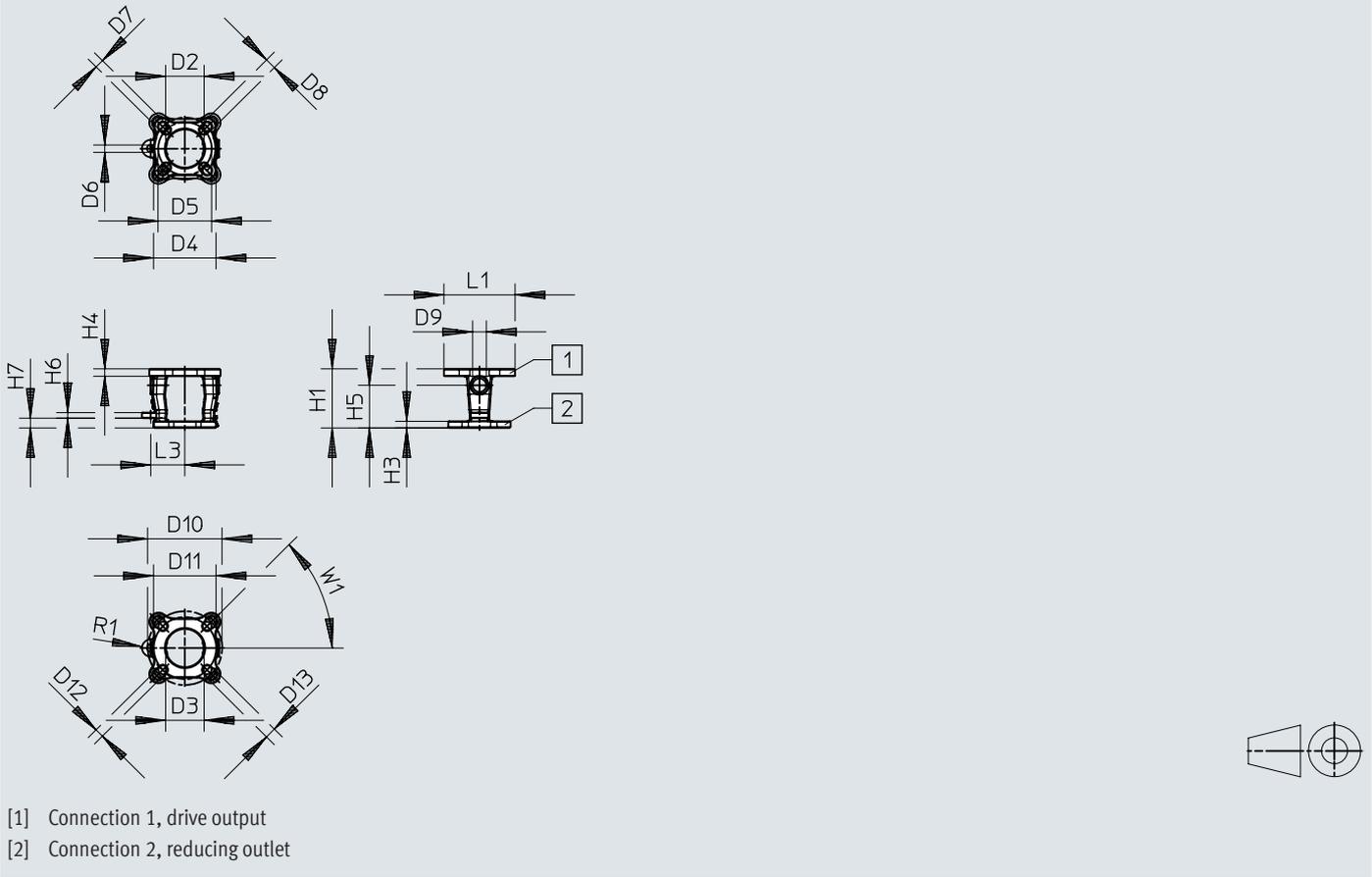
- [1] Connection 1, drive output
- [2] Connection 2, reducing outlet

	D1	H1	H2	H3	H4	L1	L2	T1	W1 H11	⊙ 1 h11
DARQ-K-V-F04S11-F03S9-...	M5	40	11	3,2	5	46	23	9	9	11
DARQ-K-V-F05S14-F03S9-...	M6	40	15	3,2	5	46	23	9	9	14
DARQ-K-V-F05S14-F04S11-...	M6	40	15	3,2	5	46	23	11	11	14
DARQ-K-V-F07S17-F04S11-...	M8	50	18	6	6	66	30,5	11	11	17
DARQ-K-V-F07S17-F05S14-...	M8	50	18	6	6	66	30,5	15	14	17
DARQ-K-V-F10S22-F05S14-...	M10	75	23	10	9,5	132,1	63	15	14	22
DARQ-K-V-F10S22-F07S17-...	M10	75	23	10	9,5	132,1	63	18	17	22

Dimensions

Dimensions – Mounting adapter DARQ

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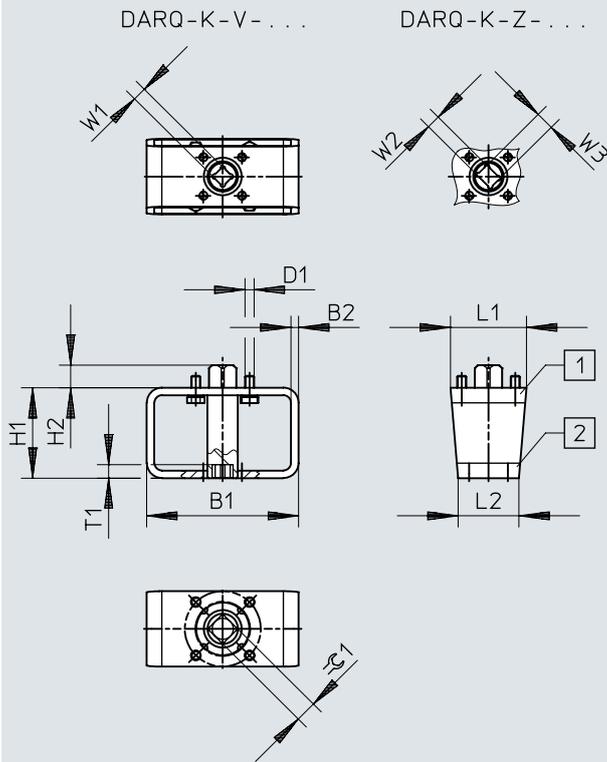
	D2 ø	D3 ø	D4 ø	D5 ø	D6 ø	D7 ø	D8 ø	D9 ø	D10 ø	D11 ø
DARQ-B-F0405-F0304-...	25,9	25,9	42	36	5,1	6,1	6,1	9,4	50	42
DARQ-B-F0507-F0405-...	30,5	36,8	50	42	5,1	7,6	6,6	10,9	70	50
DARQ-B-F0710-F0507-...	38,6	50	70	50	5,1	8,9	7,1	14	102	70
DARQ-B-F1012-F10-...	69,9	76,2	–	102	5,1	–	11,2	17,3	125	102

	D12 ø	D13 ø	H1	H3	H4	H5	H6	H7	L1	L3	W1
DARQ-B-F0405-F0304-...	6,1	7,6	39,9	3,2	5	28,2	3,8	7,1	46	22,9	45°
DARQ-B-F0507-F0405-...	7,6	10,2	50	6	6	36,3	3,8	7,1	66	30,5	45°
DARQ-B-F0710-F0507-...	8,9	10,9	74,9	9,5	9,5	50,5	3,8	7,1	102,1	39,1	45°
DARQ-B-F1012-F10-...	11,2	13	80	10	9,5	58,4	3,8	7,1	132,1	63	45°

Dimensions

Dimensions – Mounting kit DARQ-K-V/DARQ-K-Z

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- [1] Connection 1, drive output
- [2] Connection 2, reducing outlet

Dimensions

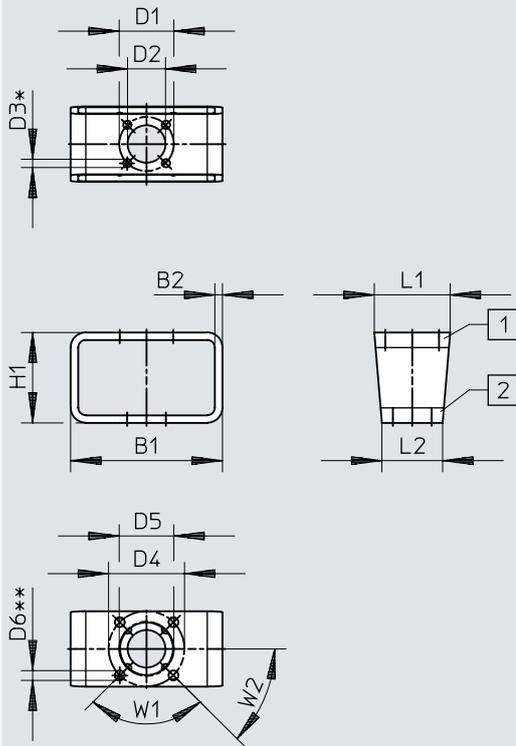
	B1	B2	D1	H1	H2	L1	L2	T1	W1 H11	≈ 1 h11
DARQ-K-V-F03S9-F03S9-...	80	4	M5	50	9	40	40	9	9	9
DARQ-K-V-F04S11-F03S9-...	80	4	M5	50	11	45	40	9	9	11
DARQ-K-V-F04S11-F04S11-...	80	4	M5	50	11	45	45	11	11	11
DARQ-K-V-F05S14-F03S9-...	100	5	M6	60	15	50	40	9	9	14
DARQ-K-V-F05S14-F04S11-...	100	5	M6	60	15	50	45	11	11	14
DARQ-K-V-F05S14-F05S14-...	100	5	M6	60	15	50	50	15	14	14
DARQ-K-V-F07S17-F03S9	100	5	M8	60	18	70	45	9	9	17
DARQ-K-V-F07S17-F04S11-...	100	5	M8	60	18	70	45	11	11	17
DARQ-K-V-F07S17-F05S14-...	100	5	M8	60	18	70	50	15	14	17
DARQ-K-V-F07S17-F07S14-...	100	5	M8	60	18	70	70	15	14	17
DARQ-K-V-F07S22-F05S11-...	100	5	M8	60	23	70	50	11	11	22
DARQ-K-V-F10S22-F04S11	120	5	M10	80	22,5	95	50	11	11	22
DARQ-K-V-F10S22-F05S14-...	120	5	M10	80	22,5	95	50	15	14	22
DARQ-K-V-F10S22-F07S17-...	120	5	M10	80	22,5	95	70	18	17	22
DARQ-K-V-F10S22-F10S22-...	120	5	M10	80	22,5	95	95	22,5	22	22
DARQ-K-V-F10S27-F05S14-...	120	5	M10	80	27,5	95	50	15	14	27
DARQ-K-V-F10S27-F07S14-...	120	5	M10	80	27,5	95	70	15	14	27
DARQ-K-V-F10S27-F07S17-...	120	5	M10	80	27,5	95	70	18	17	27
DARQ-K-V-F12S27-F05S14	160	6	M12	80	27	115	70	15	14	27
DARQ-K-V-F12S27-F07S14	160	6	M12	80	27	115	70	15	14	27
DARQ-K-V-F12S27-F07S17-...	160	6	M12	80	27	115	70	18	17	27
DARQ-K-V-F12S27-F10S22-...	160	6	M12	80	27	115	95	22,5	22	27
DARQ-K-V-F12S27-F12S27-...	160	6	M12	80	27	115	115	27,5	27	27

	B1	B2	D1	H1	H2	L1	L2	T1	W2 -0,1	W3 H11	≈ 1 h11
DARQ-K-Z-F03S9-F03S9-...	80	4	M5	50	9	40	40	14	9	12,1	9
DARQ-K-Z-F04S11-F03S9-...	80	4	M5	50	11	45	40	14	9	12,1	11
DARQ-K-Z-F04S11-F04S11-...	80	4	M5	50	11	45	45	17	11	14,1	11
DARQ-K-Z-F05S14-F03S9-...	100	5	M6	60	15	50	40	14	9	12,1	14
DARQ-K-Z-F05S14-F04S11-...	100	5	M6	60	15	50	45	17	11	14,1	14
DARQ-K-Z-F05S14-F05S14-...	100	5	M6	60	15	50	50	21	14	18,1	14
DARQ-K-Z-F07S17-F04S11-...	100	5	M8	60	18	70	45	17	11	14,1	17
DARQ-K-Z-F07S17-F05S14-...	100	5	M8	60	18	70	50	21	14	18,1	17
DARQ-K-Z-F07S17-F07S14-...	100	5	M8	60	18	70	70	21	14	18,1	17
DARQ-K-Z-F10S22-F05S14-...	120	5	M10	80	22,5	95	50	21	14	18,1	22
DARQ-K-Z-F10S22-F07S17-...	120	5	M10	80	22,5	95	70	26	17	22,2	22
DARQ-K-Z-F10S22-F10S22-...	120	5	M10	80	22,5	95	95	33	22	28,2	22

Dimensions

Dimensions – Mounting adapter DARQ-B

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- [1] Drive outlet flange 1
- [2] Reducing outlet flange 2
- [3] * = N1 (number of holes flange 1)
- [4] ** = N2 (number of holes flange 2)

Dimensions

	B1	B2	D1 ∅	D2 ∅	D3 ∅	D4 ∅	D5 ∅	D6 ∅	H1	L1	L2	*N1	**N2	W1	W2
DARQ-B-F03-F03-...	80	4	36	25	5,5	36	25	5,5	50	40	40	4	4	90°	45°
DARQ-B-F04-F03-...	80	4	36	25	5,5	42	30	5,5	50	45	40	4	4	90°	45°
DARQ-B-F04-F04-...	80	4	42	30	5,5	42	30	5,5	50	45	45	4	4	90°	45°
DARQ-B-F05-F03-...	100	5	36	25	5,5	50	35	6,5	60	50	40	4	4	90°	45°
DARQ-B-F05-F04-...	100	5	42	30	5,5	50	35	6,5	60	50	45	4	4	90°	45°
DARQ-B-F05-F05-...	100	5	50	35	6,5	50	35	6,5	60	50	50	4	4	90°	45°
DARQ-B-F07-F04-...	100	5	42	30	5,5	70	55	9	60	70	45	4	4	90°	45°
DARQ-B-F07-F05-...	100	5	50	35	6,5	70	55	9	60	70	50	4	4	90°	45°
DARQ-B-F07-F07-...	100	5	70	55	9	70	55	9	60	70	70	4	4	90°	45°
DARQ-B-F10-F05-...	120	5	50	35	6,5	102	70	11	80	95	50	4	4	90°	45°
DARQ-B-F10-F07-...	120	5	70	55	9	102	70	11	80	95	70	4	4	90°	45°
DARQ-B-F10-F10-...	120	5	102	70	11	102	70	11	80	95	95	4	4	90°	45°
DARQ-B-F12-F07-...	160	6	70	55	9	125	85	13	80	115	70	4	4	90°	45°
DARQ-B-F12-F10-...	160	6	102	70	11	125	85	13	80	115	95	4	4	90°	45°
DARQ-B-F12-F12-...	160	6	125	85	13	125	85	13	80	115	115	4	4	90°	45°

	B1	B2	D1 ∅	D2 ∅	D3 ∅	D4 ∅	D5 ∅	D6 ∅	H1	L1	L2	*N1	**N2	W1	W2
DARQ-B-F14-F10-...	160	6	102	70	11	140	100	17	80	135	95	4	4	90°	45°
DARQ-B-F14-F12-...	160	6	125	85	13	140	100	17	80	135	115	4	4	90°	45°
DARQ-B-F14-F14-...	160	6	140	100	17	140	100	17	80	135	135	4	4	90°	45°
DARQ-B-F16-F12-...	200	6	125	85	13	165	130	21	100	160	115	4	4	90°	45°
DARQ-B-F16-F14-...	200	6	140	100	17	165	130	21	100	160	135	4	4	90°	45°
DARQ-B-F16-F16-...	200	6	165	130	21	165	130	21	100	160	160	4	4	90°	45°
DARQ-B-F25-F14-...	400	10	140	100	17	254	200	17	200	270	135	8	4	45°	22,5°
DARQ-B-F25-F16-...	400	10	165	130	21	254	200	17	200	270	160	8	4	45°	22,5°
DARQ-B-F25-F25-...	400	10	254	200	17	254	200	17	200	270	270	8	4	45°	22,5°
DARQ-B-F30-F16-...	400	10	165	130	21	298	230	21	200	320	160	8	4	45°	22,5°
DARQ-B-F30-F25-...	400	10	254	200	17	298	230	21	200	320	270	8	4	45°	22,5°
DARQ-B-F30-F30-...	400	10	298	200	21	298	230	21	200	320	320	8	4	45°	22,5°

Ordering data

2-way, with pipe thread

	Connection Process valve	Product weight	Part no.	Type
	1/4 NPT	460 g	4836917	VZBE-1/4-T-63-T-2-F0304-V15V15
	3/8 NPT		4836918	VZBE-3/8-T-63-T-2-F0304-V15V15
	1/2 NPT	560 g	4809117	VZBE-1/2-T-63-T-2-F0304-V15V15
	3/4 NPT	660 g	4809118	VZBE-3/4-T-63-T-2-F0304-V15V15
	1 NPT	1,000 g	4809119	VZBE-1-T-63-T-2-F0405-V15V15
	1 1/4 NPT	1,600 g	4809120	VZBE-11/4-T-63-T-2-F0405-V15V15
	1 1/2 NPT	2,420 g	4809121	VZBE-11/2-T-63-T-2-F0507-V15V15
	2 NPT	3,520 g	4809122	VZBE-2-T-63-T-2-F0507-V15V15
	2 1/2 NPT	5,050 g	4809123	VZBE-21/2-T-63-T-2-F0710-V15V16
	3 NPT	7,750 g	4809124	VZBE-3-T-63-T-2-F0710-V15V16
4 NPT	15,800 g	4809126	VZBE-4-T-63-T-2-F1012-V15V16	

2-way, with hand lever and pipe thread

	Connection Process valve	Product weight	Part no.	Type
	1/4 NPT	200 g	4745214	VZBE-1/4-T-63-D-2-M-V15V15
		500 g	8096663	VZBE-1/4-T-63-T-2-F0304-M-V15V15
	3/8 NPT	200 g	4745215	VZBE-3/8-T-63-D-2-M-V15V15
		500 g	8096664	VZBE-3/8-T-63-T-2-F0304-M-V15V15
	1/2 NPT	300 g	4745216	VZBE-1/2-T-63-D-2-M-V15V15
		600 g	8096665	VZBE-1/2-T-63-T-2-F0304-M-V15V15
	3/4 NPT	500 g	4745218	VZBE-3/4-T-63-D-2-M-V15V15
		700 g	8096666	VZBE-3/4-T-63-T-2-F0304-M-V15V15
	1 NPT	800 g	4745219	VZBE-1-T-63-D-2-M-V15V15
		1,100 g	8096667	VZBE-1-T-63-T-2-F0405-M-V15V15
	1 1/4 NPT		4745220	VZBE-11/4-T-63-D-2-M-V15V15
		1,700 g	8096668	VZBE-11/4-T-63-T-2-F0405-M-V15V15
	1 1/2 NPT	1,800 g	4745221	VZBE-11/2-T-63-D-2-M-V15V15
		2,600 g	8096669	VZBE-11/2-T-63-T-2-F0507-M-V15V15
	2 NPT	2,700 g	4745223	VZBE-2-T-63-D-2-M-V15V15
		3,700 g	8096670	VZBE-2-T-63-T-2-F0507-M-V15V15
	2 1/2 NPT	5,600 g	4745224	VZBE-21/2-T-63-D-2-M-V15V16
		5,900 g	8096671	VZBE-21/2-T-63-T-2-F0710-M-V15V16
	3 NPT	7,500 g	4745225	VZBE-3-T-63-D-2-M-V15V16
		8,600 g	8096672	VZBE-3-T-63-T-2-F0710-M-V15V16
4 NPT	16,700 g	8096673	VZBE-4-T-63-T-2-F1012-M-V15V16	

2-way, with weld end

	Nominal size DN	Product weight	Part no.	Type
	8	400 g	8089038	VZBE-1/4-WA-63-T-2-F0304-V15V15
	10		8089039	VZBE-3/8-WA-63-T-2-F0304-V15V15
	15	500 g	8089040	VZBE-1/2-WA-63-T-2-F0304-V15V15
	20	700 g	8089041	VZBE-3/4-WA-63-T-2-F0304-V15V15
	25	1,000 g	8089042	VZBE-1-WA-63-T-2-F0405-V15V15
	32	1,600 g	8089043	VZBE-11/4-WA-63-T-2-F0405-V15V15
	40	2,400 g	8089044	VZBE-11/2-WA-63-T-2-F0507-V15V15
	50	3,500 g	8089045	VZBE-2-WA-63-T-2-F0507-V15V15
	65	6,500 g	8089046	VZBE-21/2-WA-63-T-2-F0710-V15V15
	80	9,400 g	8089047	VZBE-3-WA-63-T-2-F0710-V15V15
100	18,900 g	8089048	VZBE-4-WA-63-T-2-F1012-V15V15	

2-way, with hand lever and weld end

	Nominal size DN	Product weight	Part no.	Type
	8	500 g	8089055	VZBE-1/4-WA-63-T-2-F0304-M-V15V15

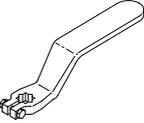
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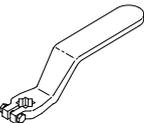
2-way, with hand lever and weld end				
	Nominal size DN	Product weight	Part no.	Type
	10	500 g	8089056	VZBE-3/8-WA-63-T-2-F0304-M-V15V15
	15	600 g	8089057	VZBE-1/2-WA-63-T-2-F0304-M-V15V15
	20	700 g	8089058	VZBE-3/4-WA-63-T-2-F0304-M-V15V15
	25	1,100 g	8089059	VZBE-1-WA-63-T-2-F0405-M-V15V15
	32	1,700 g	8089060	VZBE-11/4-WA-63-T-2-F0405-M-V15V15
	40	2,600 g	8089061	VZBE-11/2-WA-63-T-2-F0507-M-V15V15
	50	3,700 g	8089062	VZBE-2-WA-63-T-2-F0507-M-V15V15
	65	7,400 g	8089063	VZBE-21/2-WA-63-T-2-F0710-M-V15V15
	80	10,300 g	8089064	VZBE-3-WA-63-T-2-F0710-M-V15V15
	100	19,900 g	8089065	VZBE-4-WA-63-T-2-F1012-M-V15V15

3-way, with pipe thread				
	Connection Process valve	Product weight	Part no.	Type
	1/4 NPT	724 g	4834296	VZBE-1/4-T-63-F-3T-F04-V15V15
			4834288	VZBE-1/4-T-63-F-3L-F04-V15V15
	3/8 NPT	624 g	4834289	VZBE-3/8-T-63-F-3L-F04-V15V15
			4834297	VZBE-3/8-T-63-F-3T-F04-V15V15
			4834290	VZBE-1/2-T-63-F-3L-F04-V15V15
	1/2 NPT	1,024 g	4834298	VZBE-1/2-T-63-F-3T-F04-V15V15
			4834291	VZBE-3/4-T-63-F-3L-F04-V15V15
	3/4 NPT	1,618 g	4834299	VZBE-3/4-T-63-F-3T-F04-V15V15
			4834292	VZBE-1-T-63-F-3L-F05-V15V15
	1 NPT	2,212 g	4834300	VZBE-1-T-63-F-3T-F05-V15V15
	1 1/4 NPT		4834301	VZBE-11/4-T-63-F-3T-F05-V15V15
	1 1/2 NPT	3,360 g	4834293	VZBE-11/4-T-63-F-3L-F05-V15V15
			4834302	VZBE-11/2-T-63-F-3T-F0507-V15V15
	2 NPT	5,560 g	4834294	VZBE-11/2-T-63-F-3L-F0507-V15V15
			4834303	VZBE-2-T-63-F-3T-F0507-V15V15
4834295			VZBE-2-T-63-F-3L-F0507-V15V15	

3-way, with hand lever and pipe thread				
	Connection Process valve	Product weight	Part no.	Type
	1/4 NPT	800 g	8096951	VZBE-1/4-T-63-F-3T-F04-M-V15V15
			8096943	VZBE-1/4-T-63-F-3L-F04-M-V15V15
	3/8 NPT	700 g	8096944	VZBE-3/8-T-63-F-3L-F04-M-V15V15
			8096952	VZBE-3/8-T-63-F-3T-F04-M-V15V15
			8096945	VZBE-1/2-T-63-F-3L-F04-M-V15V15
	1/2 NPT	1,100 g	8096953	VZBE-1/2-T-63-F-3T-F04-M-V15V15
			8096954	VZBE-3/4-T-63-F-3T-F04-M-V15V15
	3/4 NPT	1,700 g	8096946	VZBE-3/4-T-63-F-3L-F04-M-V15V15
			8096955	VZBE-1-T-63-F-3T-F05-M-V15V15
	1 NPT	2,400 g	8096947	VZBE-1-T-63-F-3L-F05-M-V15V15
	1 1/4 NPT		8096956	VZBE-11/4-T-63-F-3T-F05-M-V15V15
	1 1/2 NPT	3,600 g	8096948	VZBE-11/4-T-63-F-3L-F05-M-V15V15
			8096949	VZBE-11/2-T-63-F-3L-F0507-M-V15V15
	2 NPT	5,800 g	8096957	VZBE-11/2-T-63-F-3T-F0507-M-V15V15
			8096950	VZBE-2-T-63-F-3L-F0507-M-V15V15
8096958			VZBE-2-T-63-F-3T-F0507-M-V15V15	

Accessories

Hand lever VAOH 1/4" ... 4"				
	Description	Product weight	Part no.	Type
	For connection 1/4" ... 3/4"	40 g	4895383	VAOH-F7-9-H9-A-22
	For connection 1" ... 1 1/4"	100 g	4895384	VAOH-F7-11-H9-A-22
	For connection 1 1/2" ... 2"	180 g	4895385	VAOH-F7-14-H9-A-22
	For connection 2 1/2" ... 3"	850 g	4895386	VAOH-F7-17-H9-A-22
	For connection 4"	900 g	4895387	VAOH-F7-22-H9-A-22

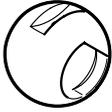
Hand lever VAOH 1/4" ... 2"				
	Description	Product weight	Part no.	Type
	For connection 1/4" ... 3/4"	76 g	4896014	VAOH-F7-9-H9-A-32
	For connection 1"	82 g	4896015	VAOH-F7-11-H9-A-32
	For connection 1 1/4"	188 g	4896017	VAOH-F7-11-211-H9-A-32
	For connection 1 1/2" ... 2"	240 g	4896016	VAOH-F7-14-H9-A-32

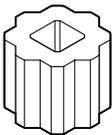
V-port ball VAVC-F7-B-V30				
	Nominal size DN	Product weight	Part no.	Type
	8	38.5 g	8083049	VAVC-F7-B-V30-1/4"
	10		8083050	VAVC-F7-B-V30-3/8"
	15		8083051	VAVC-F7-B-V30-1/2"
	20	69.3 g	8083052	VAVC-F7-B-V30-3/4"
	25	119.1 g	8083053	VAVC-F7-B-V30-1"
	32	253.1 g	8083054	VAVC-F7-B-V30-1 1/4"
	40	440.9 g	8083055	VAVC-F7-B-V30-1 1/2"
	50	863.5 g	8083056	VAVC-F7-B-V30-2"
	65	1,720 g	8083057	VAVC-F7-B-V30-2 1/2"
	80	2,725.8 g	8083058	VAVC-F7-B-V30-3"
100	6,003.3 g	8083059	VAVC-F7-B-V30-4"	

V-port ball VAVC-F7-B-V60				
	Nominal size DN	Product weight	Part no.	Type
	8	37.2 g	8083060	VAVC-F7-B-V60-1/4"
	10		8083061	VAVC-F7-B-V60-3/8"
	15		8083062	VAVC-F7-B-V60-1/2"
	20	66.4 g	8083063	VAVC-F7-B-V60-3/4"
	25	114 g	8083064	VAVC-F7-B-V60-1"
	32	244 g	8083065	VAVC-F7-B-V60-1 1/4"
	40	426.6 g	8083066	VAVC-F7-B-V60-1 1/2"
	50	835.7 g	8083067	VAVC-F7-B-V60-2"
	65	1,667.1 g	8083068	VAVC-F7-B-V60-2 1/2"
	80	2,637.6 g	8083069	VAVC-F7-B-V60-3"
100	5,862.8 g	8083070	VAVC-F7-B-V60-4"	

V-port ball VAVC-F7-B-V90				
	Nominal size DN	Product weight	Part no.	Type
	8	36 g	8083071	VAVC-F7-B-V90-1/4"
	10		8083072	VAVC-F7-B-V90-3/8"
	15		8083073	VAVC-F7-B-V90-1/2"
	20	64.1 g	8083074	VAVC-F7-B-V90-3/4"
	25	110 g	8083075	VAVC-F7-B-V90-1"
	32	236.8 g	8083076	VAVC-F7-B-V90-1 1/4"
	40	415.4 g	8083077	VAVC-F7-B-V90-1 1/2"
	50	813.9 g	8083078	VAVC-F7-B-V90-2"
	65	1,626.2 g	8083079	VAVC-F7-B-V90-2 1/2"

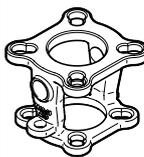
Accessories

V-port ball VAVC-F7-B-V90				
	Nominal size DN	Product weight	Part no.	Type
	80	2,568.9 g	8083080	VAVC-F7-B-V90-3"
	100	5,757.1 g	8083081	VAVC-F7-B-V90-4"

Reducing sleeve DARQ				
	Length	Product weight	Part no.	Type
	11 mm	5 g	8082117	DARQ-R-A-S11-S9-11
		25 g	8082131	DARQ-R-A-S11-S9-11-P5
		50 g	8082140	DARQ-R-A-S11-S9-11-P10
		250 g	8082145	DARQ-R-A-S11-S9-11-P50
	12 mm	7 g	8082116	DARQ-R-A-S11-S8-12
		35 g	8082130	DARQ-R-A-S11-S8-12-P5
	16 mm	10 g	8082121	DARQ-R-A-S14-S12-16
		13 g	8082120	DARQ-R-A-S14-S11-16
		16 g	8082119	DARQ-R-A-S14-S10-16
		18 g	8082118	DARQ-R-A-S14-S9-16
		20 g	8086383	DARQ-R-A-S14-S8-16
		65 g	8082133	DARQ-R-A-S14-S11-16-P5
		90 g	8082132	DARQ-R-A-S14-S9-16-P5
		100 g	8086388	DARQ-R-A-S14-S8-16-P5
		130 g	8082142	DARQ-R-A-S14-S11-16-P10
		180 g	8082141	DARQ-R-A-S14-S9-16-P10
		650 g	8082147	DARQ-R-A-S14-S11-16-P50
	900 g	8082146	DARQ-R-A-S14-S9-16-P50	
	17 mm	19 g	8082123	DARQ-R-A-S17-S14-17
		25 g	8086385	DARQ-R-A-S17-S12-17
		29 g	8082122	DARQ-R-A-S17-S11-17
		34 g	8096914	DARQ-R-A-S17-S9-17
		36 g	8086384	DARQ-R-A-S17-S8-17
		95 g	8082135	DARQ-R-A-S17-S14-17-P5
		125 g	8086389	DARQ-R-A-S17-S12-17-P5
		145 g	8082134	DARQ-R-A-S17-S11-17-P5
		190 g	8082143	DARQ-R-A-S17-S14-17-P10
		1,450 g	8082148	DARQ-R-A-S17-S11-17-P50
	22 mm	46 g	8082126	DARQ-R-A-S22-S17-22
		52 g	8082125	DARQ-R-A-S22-S16-22
		62 g	8082124	DARQ-R-A-S22-S14-22
		75 g	8086386	DARQ-R-A-S22-S11-22
		230 g	8082137	DARQ-R-A-S22-S17-22-P5
		310 g	8082136	DARQ-R-A-S22-S14-22-P5
		460 g	8082144	DARQ-R-A-S22-S17-22-P10
		2,300 g	8082149	DARQ-R-A-S22-S17-22-P50
	27 mm	80 g	8082127	DARQ-R-A-S27-S22-27
		121 g	8086387	DARQ-R-A-S27-S17-27
		400 g	8082138	DARQ-R-A-S27-S22-27-P5
	36 mm	140 g	8096913	DARQ-R-A-S27-S14-27
		215 g	8082128	DARQ-R-A-S36-S27-36
		286 g	8096915	DARQ-R-A-S36-S22-36
		1,075 g	8082139	DARQ-R-A-S36-S27-36-P5
	46 mm	410 g	8082129	DARQ-R-A-S46-S36-46

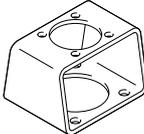
Accessories

Mounting kit DARQ			
	Product weight	Part no.	Type
	232 g	8088299	DARQ-K-V-F04S11-F03S9-R1
	255 g	8088301	DARQ-K-V-F05S14-F03S9-R1
	342 g	8088297	DARQ-K-V-F05S14-F04S11-R1
	563 g	8088302	DARQ-K-V-F07S17-F04S11-R1
	771 g	8088303	DARQ-K-V-F07S17-F05S14-R1
	1,515 g	8088300	DARQ-K-V-F10S22-F05S14-R1
	2,010 g	8088298	DARQ-K-V-F10S22-F07S17-R1

Mounting adapter DARQ			
	Product weight	Part no.	Type
	120 g	8087462	DARQ-B-F0405-F0304-R1
	300 g	8087463	DARQ-B-F0507-F0405-R1
	950 g	8087464	DARQ-B-F1012-F10-R1
	1,610 g	8087465	DARQ-B-F0710-F0507-R1

Mounting kit DARQ-K-V/DARQ-K-Z				
	Design	Product weight	Part no.	Type
	Square socket and square drive, Mounting kit	392 g	8084186	DARQ-K-V-F03S9-F03S9-R13
		410 g	8084187	DARQ-K-V-F04S11-F03S9-R13
		480 g	8084188	DARQ-K-V-F04S11-F04S11-R13
		630 g	8084189	DARQ-K-V-F05S14-F03S9-R13
		725 g	8084190	DARQ-K-V-F05S14-F04S11-R13
		823 g	8084192	DARQ-K-V-F07S17-F04S11-R13
		830 g	8084191	DARQ-K-V-F05S14-F05S14-R13
		866 g	8132814	DARQ-K-V-F07S17-F03S9-R13
		926 g	8084193	DARQ-K-V-F07S17-F05S14-R13
		980 g	8084194	DARQ-K-V-F07S17-F07S14-R13
		986 g	8084195	DARQ-K-V-F07S22-F05S11-R13
		1,410 g	8133487	DARQ-K-V-F10S22-F04S11-R13
		1,432 g	8084196	DARQ-K-V-F10S22-F05S14-R13
		1,935 g	8084199	DARQ-K-V-F10S27-F05S14-R13
		2,045 g	8084197	DARQ-K-V-F10S22-F07S17-R13
		2,113 g	8084198	DARQ-K-V-F10S22-F10S22-R13
		2,116 g	8084200	DARQ-K-V-F10S27-F07S17-R13
		2,134 g	8086439	DARQ-K-V-F10S27-F07S14-R13
		2,615 g	8084201	DARQ-K-V-F12S27-F07S17-R13
		2,655 g	8131545	DARQ-K-V-F12S27-F07S14-R13
	2,728 g	8133486	DARQ-K-V-F12S27-F05S14-R13	
	2,753 g	8084202	DARQ-K-V-F12S27-F10S22-R13	
	3,552 g	8084203	DARQ-K-V-F12S27-F12S27-R13	
	Two-flats and male square, Mounting kit	385 g	8085017	DARQ-K-Z-F03S9-F03S9-R13
		400 g	8085016	DARQ-K-Z-F04S11-F03S9-R13
		465 g	8085018	DARQ-K-Z-F04S11-F04S11-R13
		620 g	8085019	DARQ-K-Z-F05S14-F03S9-R13
		710 g	8085020	DARQ-K-Z-F05S14-F04S11-R13
		795 g	8085021	DARQ-K-Z-F05S14-F05S14-R13
		810 g	8085022	DARQ-K-Z-F07S17-F04S11-R13
		890 g	8085023	DARQ-K-Z-F07S17-F05S14-R13
		945 g	8085024	DARQ-K-Z-F07S17-F07S14-R13
		1,396 g	8085026	DARQ-K-Z-F10S22-F05S14-R13
1,970 g		8085027	DARQ-K-Z-F10S22-F07S17-R13	
1,980 g		8085025	DARQ-K-Z-F10S22-F10S22-R13	

Accessories

Mounting adapter DARQ					
	Connection 1, design	Connection 2, design	Product weight	Part no.	Type
	HoleDrilling pattern 03	Hole pattern 03	260 g	8082977	DARQ-B-F03-F03-R13
	HoleDrilling pattern 04	Hole pattern 03	270 g	8082978	DARQ-B-F04-F03-R13
		Hole pattern 04	275 g	8082979	DARQ-B-F04-F04-R13
	Hole pattern 05	Hole pattern 03	1,375 g	8083004	DARQ-B-F04-F04-R13-P5
			442 g	8082980	DARQ-B-F05-F03-R13
		Hole pattern 04	461 g	8082981	DARQ-B-F05-F04-R13
			2,305 g	8083005	DARQ-B-F05-F04-R13-P5
	Hole pattern 07	HoleDrilling pattern 05	478 g	8082982	DARQ-B-F05-F05-R13
			2,390 g	8083006	DARQ-B-F05-F05-R13-P5
		Hole pattern 04	514 g	8082983	DARQ-B-F07-F04-R13
			530 g	8082984	DARQ-B-F07-F05-R13
	HoleDrilling pattern 10	Hole pattern 07	2,650 g	8083007	DARQ-B-F07-F05-R13-P5
			583 g	8082985	DARQ-B-F07-F07-R13
		Hole pattern 07	2,915 g	8083008	DARQ-B-F07-F07-R13-P5
	HoleDrilling pattern 10	HoleDrilling pattern 05	836 g	8082986	DARQ-B-F10-F05-R13
			920 g	8082987	DARQ-B-F10-F07-R13
		Hole pattern 07	4,600 g	8083009	DARQ-B-F10-F07-R13-P5
			1,037 g	8082988	DARQ-B-F10-F10-R13
	Hole pattern 12	HoleDrilling pattern 10	5,185 g	8083010	DARQ-B-F10-F10-R13-P5
			1,504 g	8082989	DARQ-B-F12-F07-R13
		HoleDrilling pattern 12	1,688 g	8082990	DARQ-B-F12-F10-R13
	Hole pattern 14	HoleDrilling pattern 12	1,802 g	8082991	DARQ-B-F12-F12-R13
			1,775 g	8082992	DARQ-B-F14-F10-R13
		HoleDrilling pattern 14	1,889 g	8082993	DARQ-B-F14-F12-R13
	HoleDrilling pattern 16	HoleDrilling pattern 14	1,976 g	8082994	DARQ-B-F14-F14-R13
			2,648 g	8082995	DARQ-B-F16-F12-R13
		HoleDrilling pattern 16	2,792 g	8082996	DARQ-B-F16-F14-R13
	Hole pattern 25	HoleDrilling pattern 16	2,844 g	8082997	DARQ-B-F16-F16-R13
			14,734 g	8082998	DARQ-B-F25-F14-R13
		HoleDrilling pattern 25	15,384 g	8082999	DARQ-B-F25-F16-R13
HoleDrilling pattern 30	HoleDrilling pattern 25	18,895 g	8083000	DARQ-B-F25-F25-R13	
		16,740 g	8083001	DARQ-B-F30-F16-R13	
	HoleDrilling pattern 30	20,250 g	8083002	DARQ-B-F30-F25-R13	
		HoleDrilling pattern 30	21,644 g	8083003	DARQ-B-F30-F30-R13