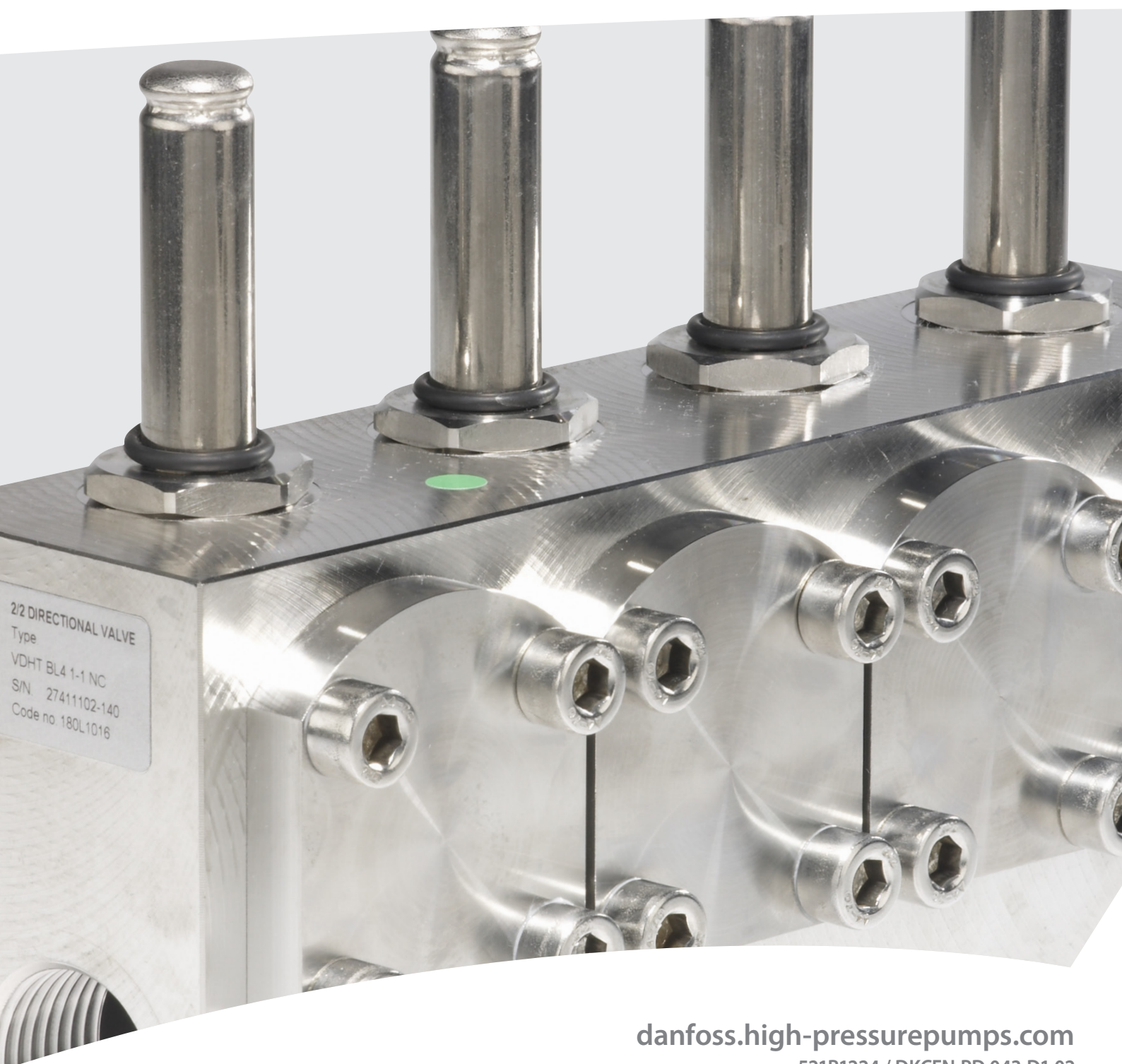


Solenoid valve VDHT Standard NPT (National Pipe Thread)



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17. VDHT 3/4 ED N / VDHT 1 ED N	Drawings / Code numbers / Service instruction
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26. VDHT BL	Service instruction
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28. VDHT BL N	Service instruction
29. VDHT BLM	Drawings / Code numbers
30. VDHT BLM	Service instruction
31. Diagrams	Pressure losses P Inlet to Outlet

VDHT for small flows



VDH 2E 1/4



VDHT 1/4 E

VDHT for small and medium flows


VDHT 3/8 E
VDHT 1/2 E

VDHT 3/8 EA
VDHT 1/2 EA

VDHT for big flows


VDHT 3/4 ED
VDHT 1 ED

VDHT 3/4 EA
VDHT 1 EA

VDHT manifold mounted valves


VDHT 30 C3
G 3/8 / Cetop 3 manifold

VDHT 60 C5
G 1/2 / Cetop 5 manifold

VDHT integrated valve blocks


VDHT B 2-5 stations
Input G 1/2 / G 3/4
Output G 1/2

VDHT BL 2-4 stations
Input G 3/4 / G 1
Output G 3/4 / G 1

VDHT manual bypass



VDHT EAM



VDHT BLM 2-4 stations

Data sheet

Solenoid valve VDHT

Introduction

The VDHT valve series are designed for applications in neutral media compatible with the sealing and O-ring materials used. Typical media are water, cleaning fluids and light heating oil.

The valves are used in applications like car wash systems, stationary high pressure cleaning, mobile cleaning vehicles and dust bindings systems.

Function

The directional valves are pilot operated ON/OFF – seat valves electrically activated by a coil.

Features

- Corrosion-proof
- Easy-to-clean surface
- Reliability
- Dirt tolerant, max. sieve (strainer) width 200 µm or better
- High temperature-resistant
- The seat valve design prevents leakage
- High coil density NEMA 4X / IP67
- Possible to get a compact and simple block solution (Integrated valve block)

Versions

The valve housing, blocks and manifolds are made of stainless steel AISI 304 (W.No. 1.4301), and the piston of stainless steel AISI 316 (W.No. 1.4401). As standard the valves are delivered with PTFE piston sealing and insert and FPM O-Rings.

VDHT inline valves are available with a number of mounting possibilities, flow direction, port size threads: 1/4, 3/8, 1/2, 3/4 and 1" BSPP and more - defining the following designation.

VDHT integrated valve blocks provide a space and cost-saving solution in applications where valves are placed next to each other. Furthermore, integrated valves blocks provide a pressure loss reduction.

VDHT valve designation overview

E	Straight flow direction	N	New version slimline
EA	Angular flow direction	BL N	Block version large / New version stroke
ED	Displaced flow direction	DF	2-Stage dampening system opening stroke
EC3	Cetop 3 manifold	F	Flange port input
EC5	Cetop 5 manifold	NC	Normally closed
HP	High pressure variant	NO	Normally opened
B	Block version small	BSP	British Standard Pipe
BL	Block version large	NPT	National Pipe Thread
BLM	Block version manual bypass	SAE	Unified national fine thread

Temperature

- Medium temperature: 2°C to 90°C
- Ambient temperature: 2°C to 80°C depending on the coil specification
- Storage temperature: -40°C to 80 °C
Provided that the valve is drained from fluid and stored "plugged".

General

P_{in} > P_{out}	For correct functioning of the VDHT valves, always ensure the inlet pressure to be higher than the outlet pressure
Pilot flow	The VDHT pilot operated poppet type (armature + poppet) always needs min. 1 l/min. flow to ensure correct functioning
Viscosity	Max viscosity of fluid: 45mm ² /s. Remark fluid viscosity has influence on pressure drop and opening/closing time of the VDHT valves.

Technical data overview

Note: All mentioned data in this data sheet are typical values with dim water as fluid.

VDHT 1/4"

Valve description		VDHT 2E 1,4 1/4	VDH 2E 3,5 1/4	VDHT 1/4E 1/4
P max (inlet)	psi	1450	435	1450
Q nominal	gpm	0.5	1.3	4.0
Operating pressure	psi	0	0	1.7
Opening time NC (at Q _{nom})	ms	100-200	100-200	100-200
Closing time NC (at Q _{nom})	ms	100-200	100-200	100-200
Weight (incl. of coil)	lbs	1.7	1.7	1.7

VDHT 3/8" and 1/2"

Valve description		VDHT 3/8		VDHT 1/2	
		E	EA	E	EA
P max (inlet) HP version	psi	2400 3000	2400 3000	2400 3000	2400 3000
Q nominal	gpm	8	8	16	16
Operating pressure	psi	51	51	51	51
Opening time NC (at Q _{nom})	ms	100-125	100-125	120-140	120-140
Closing time NC (at Q _{nom})	ms	200-300	200-300	200-300	200-300
Weight (incl. of coil)	lbs	2.6	2.6	2.6	2.6

VDHT 3/4" and 1"

Valve description		VDHT 3/4		VDHT 1	
		E	EA	E	EA
P max (inlet) HP version	psi	2000 3000	2000 3000	2000 3000	2000 3000
Q nominal	gpm	32	32	40	40
Operating pressure	psi	51	51	51	51
Opening time NC (at Q _{nom})	ms	500-700	500-700	500-900	500-900
Closing time NC (at Q _{nom})	ms	900-1200	900-1200	1200-2000	1200-2000
Weight (incl. of coil)	lbs	5.0	5.0	5.0	5.0

VDHT EC manifolds

Valve description		VDHT 30EC 3	VDHT 60EC 5
P max (inlet) HP version	psi	2400 3000	2400 3000
Q nominal (each outlet)	gpm	8	16
Operating pressure	psi	51	51
Opening time NC (at Q _{nom})	ms	100-125	120-140
Closing time NC (at Q _{nom})	ms	200-300	200-300
Flange connection		Cetop 3	Cetop 5
Weight (incl. coil)	lbs	3.7	3.7

VDHT B and BL integrated valve blocks

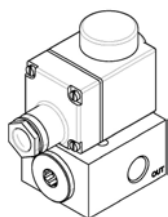
Valve description		VDHT B	VDHT BL
Possible block sizes or no. of stations		2 to 5	2 to 4
P max (inlet) HP version	psi	2400 3000	2000 3000
Q nominal (each outlet)	gpm	16	32-40
Operating pressure	psi	51	51
Inlet port sizes	NPT	1/2 or 3/4	3/4 or 1
Outlet port sizes	NPT	1/2	3/4 or 1

Overview single valves

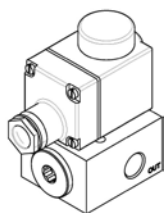
Red codes are phased out



Description	Code no	Q nom gpm	p max psi	T max °F	Connec- tion	Operating pressure/psi	Weight coll lbs	Piston Ø	Orifice kit
VDHT 1/4 E NC NPT	180L0243	4,0	1450	194	NPT 1/4	4,5	1,7	Ø 11,9	-
VDHT 1/4 E NO NPT	180L0244	4,0	1450	194	NPT 1/4	4,5	1,7	Ø 11,9	-



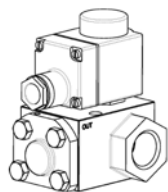
VDHT 3/8 E HP NC NPT	180L0125	8	3000	194	NPT 3/8	51	2,6	Ø 18,1	1
VDHT 3/8 E NO NPT	180L0205	8	2400	194	NPT 3/8	51	2,6	Ø 18,1	1



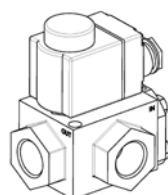
VDHT 1/2 E HP NC NPT	180L0128	16	3000	194	NPT 1/2	51	2,6	Ø 18,1	1
VDHT 1/2 E NO NPT	180L0209	16	2400	194	NPT 1/2	51	2,6	Ø 18,1	1

Overview single valves

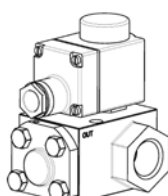
Red codes are phased out



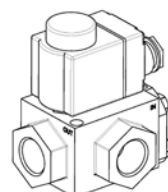
Description	Code no	Q nom gpm	p max psi	T max °F	Connection	Operating pressure/psi	Weight coll lbs	Piston Ø	Orifice kit
VDH 3/4 ED NC NPT	7	32	2000	194	NPT 3/4	51	5,0	Ø 35,1	5



VDHT 3/4 EA NC NPT	9	32	2000	194	NPT 3/4	51	5,0	Ø 35,1	5
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VDHT 1 ED NC NPT	5	40	2000	194	NPT 1	51	5,0	Ø 35,1	6
VDHT 1 ED NC NPT N	3	40	2000	194	NPT1	51	5,0	Ø 35,1 N	1
VDHT 1 ED NO NPT	6	40	2000	194	NPT 1	51	5,0	Ø 35,1 N	5



VDHT 1 EA NC NPT	7	40	2000	194	NPT 1	51	5,0	Ø 35,1	6
VDHT 1 EA NC NPT N	4	40	2000	194	NPT 1	51	5,0	Ø 35,1	1
VDHT SAE-16 NC	3	40	2000	194	SAE 16	51	5,0	Ø 35,1	5

Data sheet

Solenoid valve VDHT

Overview block valves

Red codes are phased out



Description	Code no	Q nom gpm	p max psi	T max °F	Connection	Operating pressure/psi	Weight coll lbs	Piston Ø	Orifice kit
VDHT B2 1/2 NC NPT	180L0269	16	2400	194	NPT 1/2-NPT 1/2	51	8.2	Ø 18,1	1
VDHT B2 1/2 NC-NO NPT	180L0177	16	2400	194	NPT 1/2-NPT 1/2	51	8.2	Ø 18,1	1
VDHT B2 1/2 NO NPT	180L0210	16	2400	194	NPT 1/2-NPT 1/2	51	8.2	Ø 18,1	1
VDHT B3 3/4-1/2 NC NPT	180L0225	16	2400	194	NPT 3/4-NPT 1/2	51	12.2	Ø 18,1	1
VDHT B4 3/4-1/2 NC NPT	180L0207	16	2400	194	NPT 3/4-NPT 1/2	51	16.3	Ø 18,1	1



VDHT BL2 3/4 NC NPT	180L0206	32	2000	194	NPT3/4 - NPT3/4	51	15.5	Ø 35,1	2
VDHT BL2 3/4 NC NPT N	180L1007	32	2000	194	NPT3/4 - NPT3/4	51	15.5	Ø 35,1 N	1
VDHT BL2 3/4 NC-NO NPT	180L0180	32	2000	194	NPT3/4 - NPT3/4	51	15.5	Ø 35,1	2
VDHT BL2 1 NC SAE-16	180L0224	40	2000	194	1 SAE 16-1 SAE 16	51	15.5	Ø 35,1	1
VDHT BL2 1 NC SAE-16 N	180L1026	40	2000	194	1 SAE 16 - 1 SAE 16	51	15.5	Ø 35,1 N	1
VDHT BL25 1 NC NO NPT N	180L1006	40	2000	194	NPT 1 - NPT 1	51	15.5	Ø 35,1 N	1
VDHT BL25 1 NC NPT N	180L1001	40	2000	194	NPT 1 - NPT 1	51	15.5	Ø 35,1 N	1
VDHT BL25 1 NC-NO NPT N	180L0296	40	2000	194	NPT 1 - NPT 1	51	15.5	Ø 35,1 N	1
VDHT BL25 1 NC SAE 16	180L0204	40	2000	194	1 SAE 16 - 1 SAE 16	51	15.5	Ø 35,1	1
VDHT BL25 1-3/4 NC NPT	180L0231	32	2000	194	NPT 1 - NPT 3/4	51	15.5	Ø 35,1	1
VDHT BL3 3/4 NC NPT	180L0204	32	2000	194	NPT 3/4 - NPT 3/4	51	23.2	Ø 35,1	2
VDHT BL3 3/4 NC NPT N	180L1010	32	2000	194	NPT 3/4 - NPT 3/4	51	23.2	Ø 35,1 N	1
VDHT BL3 NC NPT	180L0268	40	2000	194	NPT 3/4 - NPT 3/4	51	23.2	Ø 35,1	1
VDHT BL35 NC SAE-16	180L0266	40	2000	194	1 SAE 16 - 1 SAE 16	51	23.2	Ø 35,1	1
VDHT BL45 1 NC SAE-16	180L0225	40	2000	194	1 SAE 16 - 1 SAE 16	51	30.8	Ø 35,1	1

Data sheet

Solenoid valve VDHT

Overview coils and accessories



Description	Code no	Voltage	Power	Voltage tolerance	T max Ambiente °F	Connec-tion	Enclosure	Weight coil lbs
Type BB / Without LED / for Hirschmann plug / excl. plug								
Coil 240V-50Hz-10W-IP65	018F7906	240 V 50 Hz	10 W	+/- 10-15%	176°F	DIN 43650-A	IP65	0,5
Coil 24V-50Hz-10W-IP65	018F7905	24 V 50 Hz	10 W		176°F	DIN 43650-A	IP65	0,5
Coil 240V-50Hz-10W-IP65	018F7928	24 V DC	18 W	+/- 10%	122°F	DIN 43650-A	IP65	0,5

Type BE / Without LED / incl. Terminal box								
Coil 240V-60Hz-10W-IP67	018F7926	240 V 60 Hz	10 W	+/- 10-15%	176°F	Terminal box	IP67	0,7
Coil 240V-50Hz-10W-IP67	018F7924	240 V 50 Hz	10 W		176°F	Terminal box	IP67	0,7
Coil 220-230V-50Hz-10W-IP67	018F7921	220-230 V 50 Hz	10 W		176°F	Terminal box	IP67	0,7
Coil 220-230V-50-60Hz-10W-IP67	018F7919	220-230 V 50-60 Hz	10 W		122°F	Terminal box	IP67	0,7
Coil 220V-60Hz-10W-IP67	018F7925	220 V 60 Hz	10 W		176°F	Terminal box	IP67	0,7
Coil 220V-50-60Hz-10W-IP67	018F7929	220 V 50/60 Hz	10 W		176°F	Terminal box	IP67	0,7
Coil 110V-50Hz-10W-IP67	018F7923	110 V 50 Hz	10 W		122°F	Terminal box	IP67	0,7
Coil 24V-60Hz-10W-IP67	018F7922	24 V 60 Hz	10 W		176°F	Terminal box	IP67	0,7
Coil 24V-50Hz-10W-IP67	018F7920	24 V 50 Hz	10 W		176°F	Terminal box	IP67	0,7
Coil 42V-50Hz-10W-IP67	018F7927	42 V 50 Hz	10 W		176°F	Terminal box	IP67	0,7
Coil 24V-DC-18W-IP67	018F7914	24 V DC	18 W	+/- 10%	122°F	Terminal box	IP67	0,7
Coil 12V-DC-18W-IP67	018F7913	12 V DC	18 W	+/- 10%	122°F	Terminal box	IP67	0,7

Type BE / Without LED / for Hirschmann plug / prepare for terminal box								
Coil 200V-50-60Hz-10W-IP67	018F7918	200 V 50/60 Hz	10 W	+/- 10-15%	122°F	Terminal box	IP67	0,5
Coil 240V-50Hz-10W-IP67	018F7917	240 V 50 Hz	10 W		176°F	Terminal box	IP67	0,5
Coil 12V-DC-18W-IP67	018F7912	12 V DC	18 W	+/- 10%	122°F	Terminal box	IP67	0,7

Type BY / Without LED / for Hirschmann plug / excl. plug / UL Recognised								
Coil 208-240V-50-60Hz-14W-IP65-UL	018F7908	208-240 V 50/60 Hz	14 W	+/- 10-15%	122°F	DIN43650-A	IP65	0,5
Coil 110V-50-60Hz-14W-IP65-UL	018F7909	110 V 50-60 Hz	14 W		122°F	DIN43650-A	IP65	0,5
Coil 24V-50-60Hz-14W-IP65-UL	018F7907	24 V 50-60 Hz	14 W		122°F	DIN43650-A	IP65	0,5

Type BE / excl. LED / Incl. cable								
Coil 48V-50-60Hz-10W-IP67-4m cable	018F7915	48 V 50 Hz	10 W	+/- 10-15%	176°F	4 mtr. cable	IP67	0,7

Type BO / Eex m II Ta 94/9/EC (ATEX 100A) EN5001 & EN 50014 & EN50028								
Coil Eex m II TA 230V-50-60Hz-10W-IP67	018Z7992	230 V 50-60 Hz	10 W	+/- 10%	104°F	5 mtr. cable	IP67	1,3
Coil Eex m II TA 24V-DC-10W-IP67	180Z7993	24V DC	10 W	+/- 10%	104°F	5 mtr. cable	IP67	1,3

Connecting plug / Typ BY / excl. LED / for Hirschmann connection (DIN 43650-A) UL Recognised								
Plug DIN 43650-A PG11	018Z0183		Excl LED		125°C	BE-BB-BY	IP65	0,3

Connecting plug / Typ BY / incl. LED / for Hirschmann connection (DIN 43650-A) UL Recognised								
Plug EN175301-803 A 230V AC/DC LED	042N0265	230V AC	Incl LED		140°F	BE-BB-BY	IP65	0,3
Plug EN175301-803 A 24V AC/DC LED + PACK	042N0263	24V AC/DC	Incl LED		140°F	BE-BB-BY	IP65	0,3

Connection terminal box / Permanent magnet								
Terminal box excl. LED pack unit 100 Pe	018Z0279		Excl LED 100 PE		176°F	BE	IP67	0,3
Terminal box incl. LED 48-220 V DC 24-250V-50Hz / only BE	018Z0089	48-220V DC24-250V 50/60 Hz	Incl. LED		176°F	BE	IP67	0,3
Permanent magnet	180Z0212	for testing						0,7

Overview spare parts



Valve typ	Code no	Other	Pos. no. explosion drawing	T max °F	Weight lb	Piston diameter	Orifice kit
Piston kit Ø 11,9 VDHT 1/4 E	180Z0251		3	194°F	0,2	Ø 11,9	-
Piston kit Ø 18,1 VDHT 3/8 to 1/2 VDHT B VDHT EC	180Z0024		10/11	194°F	0,2	Ø 18,1	-
Piston kit Ø 35,1 VDHT 3/4 to 1 VDHT BL VDHT BLM	180Z0026		10/11	194°F	0,4	Ø 35,1	-
Piston kit Ø 35,1 N VDHT 3/4 to 1 N VDHT BL N	180Z0138	Slimline	10/11	194°F	0,4	Ø 35,1 N	-



Orifice kit 1 VDHT 1,0	180Z0098	standard	6/7	194°F	0,2	-	1
Orifice kit 2 VDHT 1,0	180L4015	BLM	6/7	194°F	0,2	-	2
Orifice kit 3 VDHT DF 1,4	180L4003	DF/F	6/7	194°F	0,2		3
Orifice kit 4 VDHT 2E 1,4	180Z0097	1,4	6/7	194°F	0,2		4
Orifice kit 5 VDHT 2E 3,5	180L4014	3,5	6/7	194°F	0,2		5
Orifice kit 6 VDHT 1,0	180L4016	formerly	6/7	194°F	0,2		6

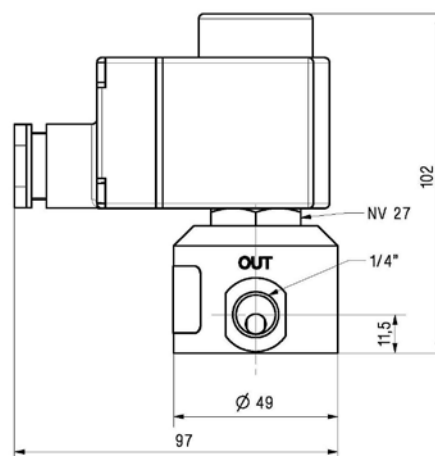
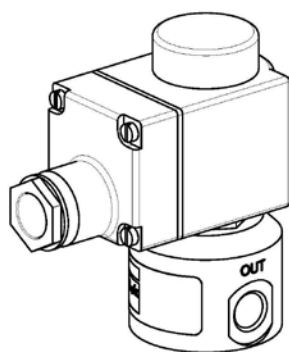


Armature kit NC VDHT 1/4 to 1	180L5002		1/5	194°F	0,4	-	
Armature kit NC HP VDHT 3/8 to 1	180L5011		1/5	194°F	0,4	-	--



Armature kit NO VDHT 3/8 to 1	180L5010		4/5	194°F	0,4	-	
Armature kit NO HP VDHT 1/4	180L5013		4/5	194°F	0,4	-	--

VDH 2E 1/4
Drawings
Spare parts



Code no. valves

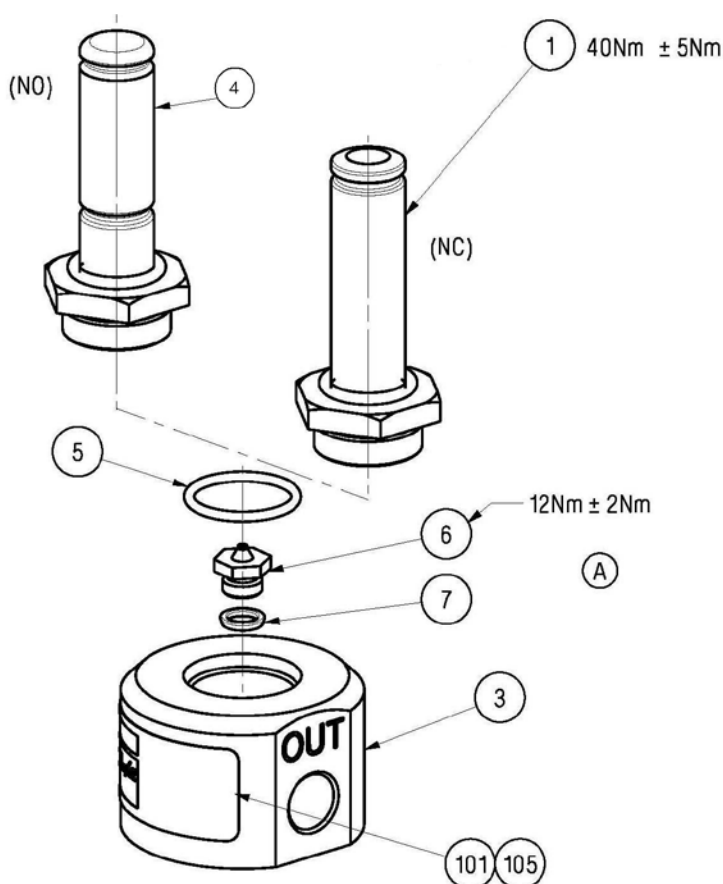
180L0018 / VDH 2E 1/4 NC 1,4 BSP
180L0019 / VDH 2E 1/4 NO 1,4 BSP

Spare parts

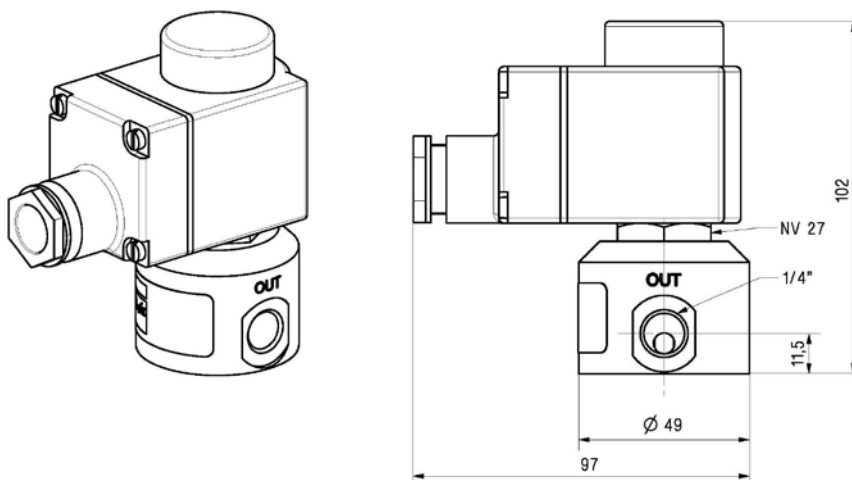
Armature kit NC 180L5002 / Pos.: 1, 5
Armature kit NO 180L5010 / Pos.: 4, 5
Orifice kit 4 180Z0097 / Pos.: 6, 7

180L1018 / VDH 2E 1/4 NC 3,5 BSP

Armature kit NC 180L5002 / Pos.: 1, 5
Armature kit NO 180L5010 / Pos.: 4, 5
Orifice kit 5 180L4014 / Pos.: 6, 7



VDHT 1/4 E
Drawings
Spare parts

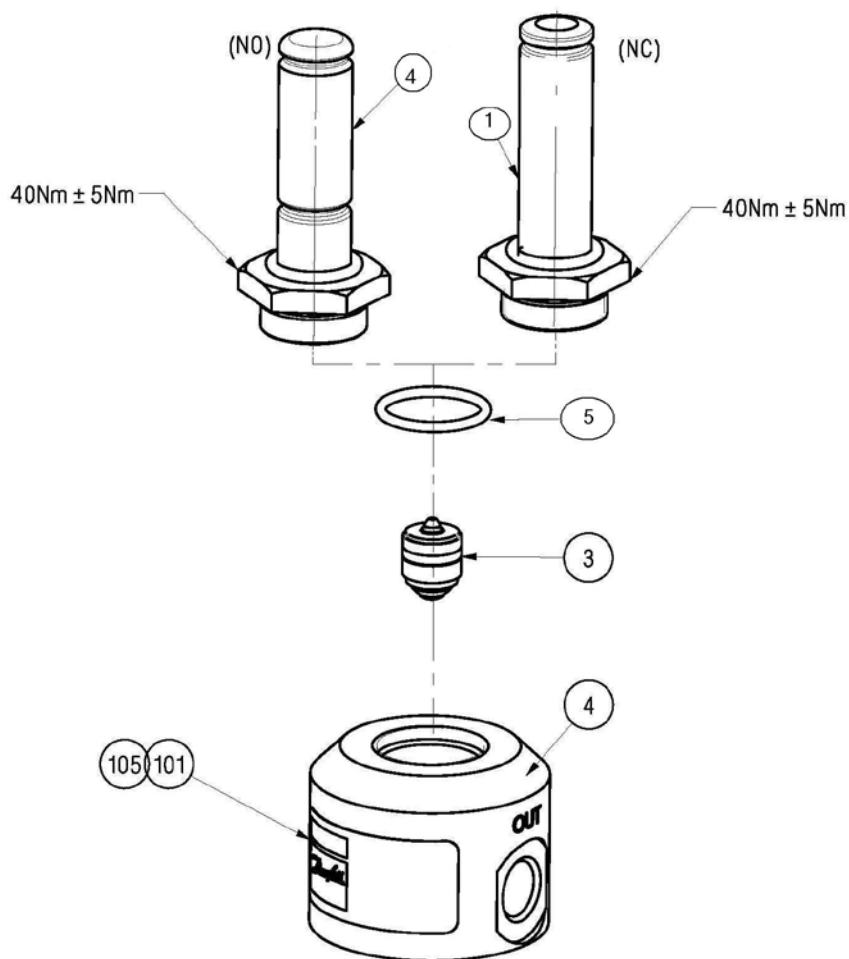


Code no. valves

180L0241 / VDHT 1/4 E NC BSP
 180L0243 / VDHT 1/4 E NC NPT
 180L0242 / VDHT 1/4 E NO BSP
 180L0244 / VDHT 1/4 E NO NPT

Spare parts

Armature kit NC	180L5002 / Pos.: 1, 2
Armature kit NO VDHT 1/4	180L5013 / Pos.: 1, 2
Orifice kit 4	180Z0097 / Pos.: 6, 7
Piston kit Ø 11,9	180Z0251 / Pos.: 3



VDHT 3/8 E
VDHT 1/2 E
Drawings
Spare parts

Code no. valves:

180L0086 VDHT 3/8 E NC BSP FPM
180L0092 VDHT 3/8 E NC BSP

180L0125 VDHT 3/8 E HP NC BSP FPM
180L0178 VDHT 3/8 E HP NC BSP

180L0295 VDHT 3/8 E NO BSP FPM
180L0093 VDHT 3/8 E NO BSP

180L0127 VDHT 3/8 E HP NC NPT
180L0205 VDHT 3/8 E NO NPT

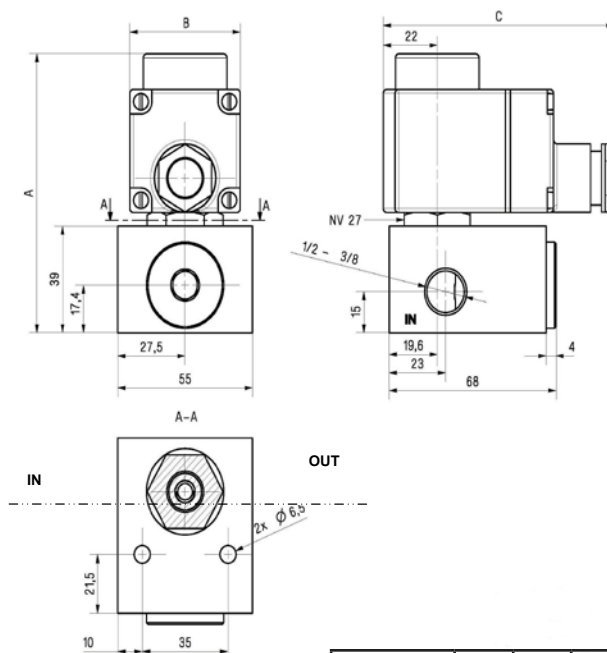
180L0087 VDHT 1/2 E NC BSP FPM
180L0094 VDHT 1/2 E NC BSP

180L0179 VDHT 1/2 E HP NC BSP NBR
180L0126 VDHT 1/2 E HP NC BSP

180L0095 VDHT 1/2 E NO BSP

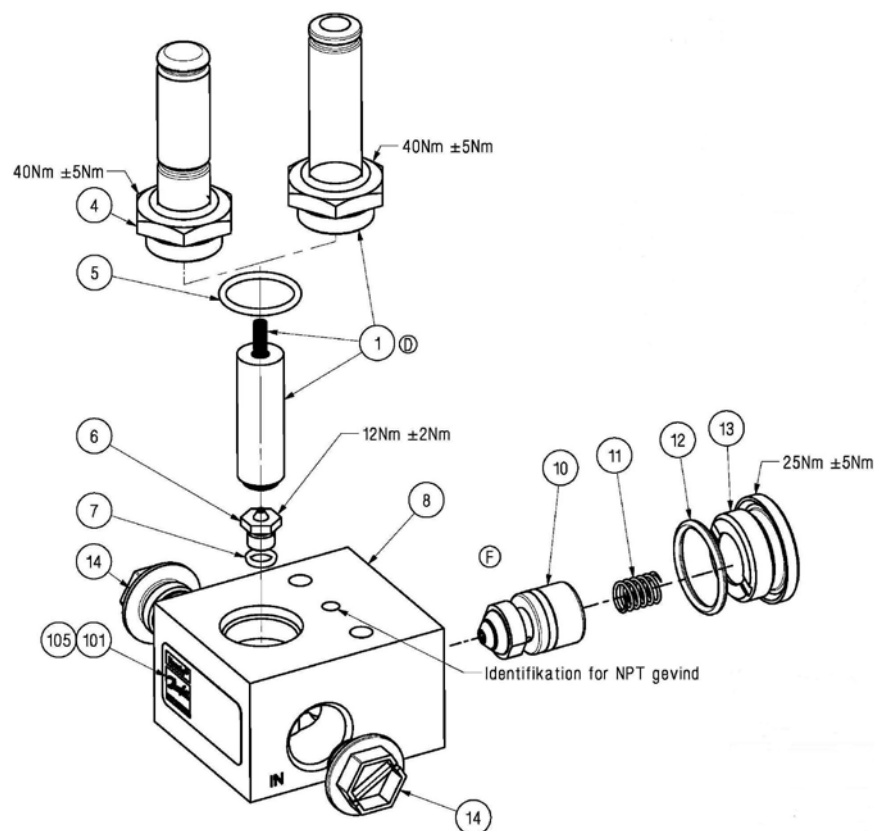
180L0209 VDHT 1/2 E NO NPT
180L0128 VDHT 1/2 E HP NC NPT

180L0171 VDHT 3/4 - 1/2 E NC BSP
(slightly different installation dimensions)



Valve type	A	B	C
NO / NC	102	45	94
EEX	112	68	125

(red part numbers are being phased out)



Spare parts

Armature kit NC
Armature kit NC HP
Armature kit NO
Orifice kit 1
Piston kit Ø 18,1

180L5002 / Pos.: 1, 5
180L5011 / Pos.: 1, 5
180L5010 / Pos.: 4, 5
180Z0098 / Pos.: 6, 7
180Z0024 / Pos.: 10, 11

VDHT 3/8 EA
VDHT 1/2 EA
Drawings
Spare parts

Code no. valves:

180L0249 VDHT 3/8 EA NC BSP FPM
 180L0100 VDHT 3/8 EA NC BSP

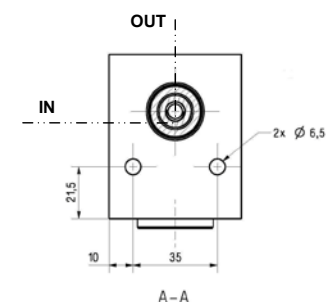
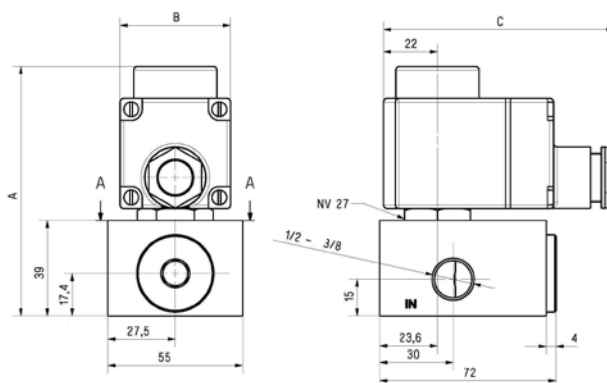
180L0101 VDHT 3/8 EA NO BSP

180L0102 VDHT 1/2 EA NC BSP NBR
 180L0188 VDHT 1/2 EA NC BSP

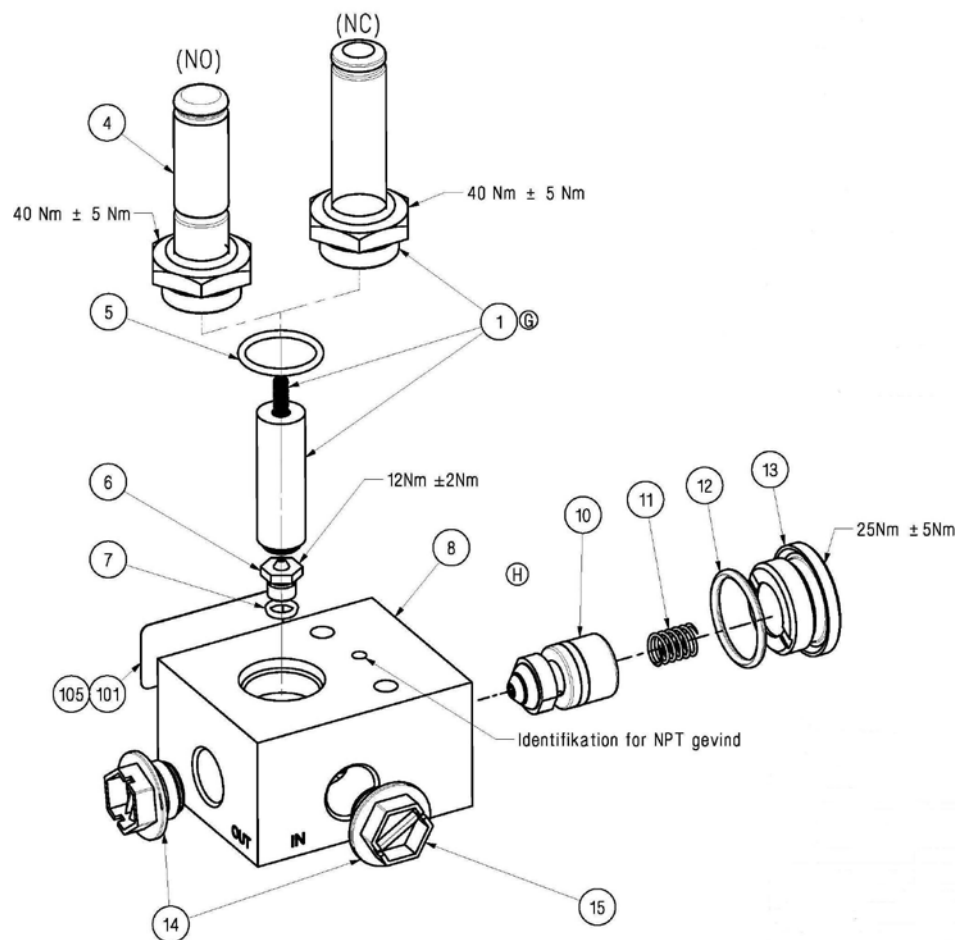
180L0234 VDHT 1/2 EA HP NC BSP

180L0103 VDHT 1/2 EA NO BSP

(red part numbers are being phased put)



Ventiltype	A	B	C
NO/NC	102	45	94
EEX	112	68	125

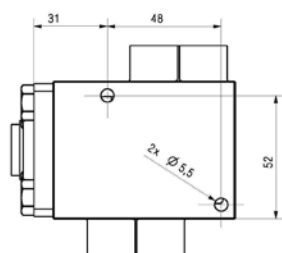


Spare parts

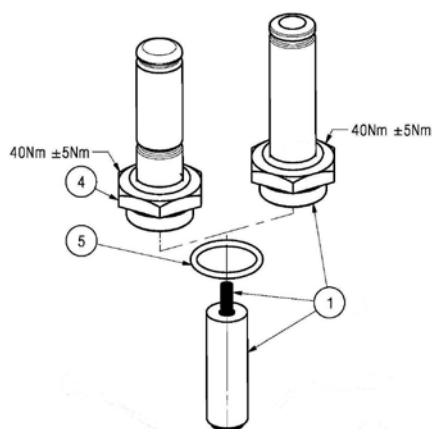
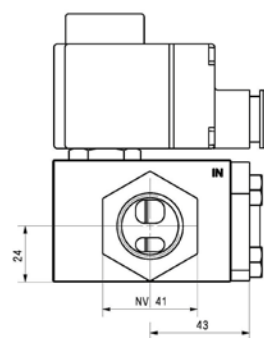
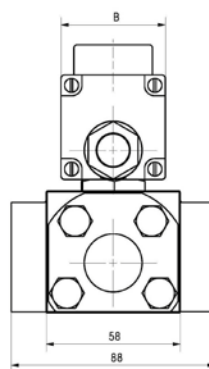
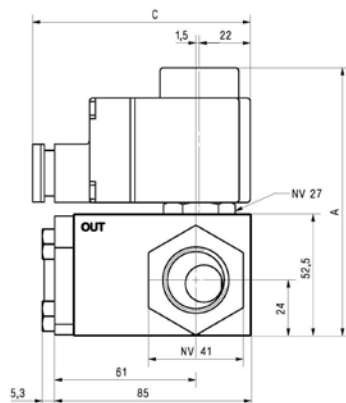
Armature kit NC
 Armature kit NC HP
 Armature kit NO
 Orifice kit 1
 Piston kit Ø 18,1

180L5002 / Pos.: 1, 5
 180L5011 / Pos.: 1, 5
 180L5010 / Pos.: 4, 5
 180Z0098 / Pos.: 6, 7
 180Z0024 / Pos.: 10, 11

**VDHT 3/4 ED and
VDHT 1 ED
Drawings
Spare parts**



Ventiltype	A	B	C
NC/NO	115,5	45	94
EEX	125,5	68	125

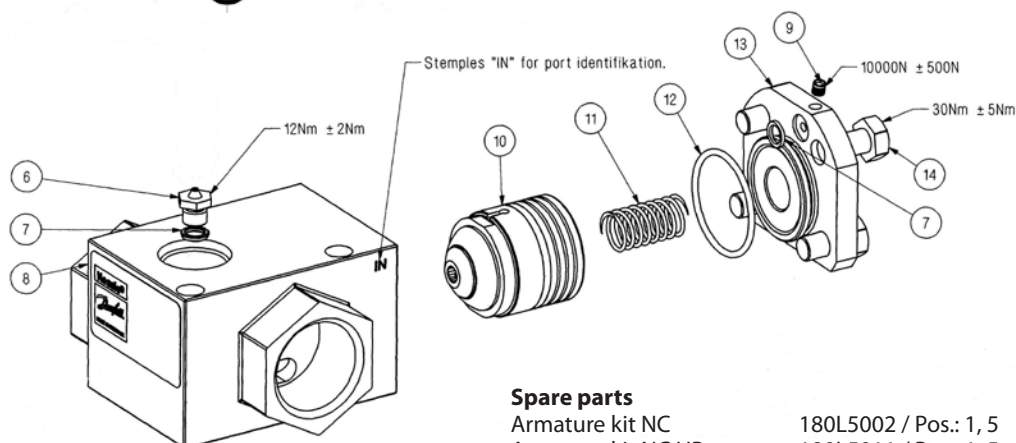


Code no. valves:

180L0120 VDHT 3/4 ED NC BSP NBR
180L0116 VDHT 3/4 ED NC BSP FPM
180L0117 VDHT 3/4 ED NC NPT NBR
180L0282 VDHT 3/4 ED HP NC BSP FPM

180L0104 VDHT 1 ED NC BSP FPM
180L0105 VDHT 1 ED NC NPT FPM
180L0108 VDHT 1 ED NC BSP NBR
180L0115 VDHT 1 ED NO BSP FPM
180L0176 VDHT 1 ED NO NPT FPM

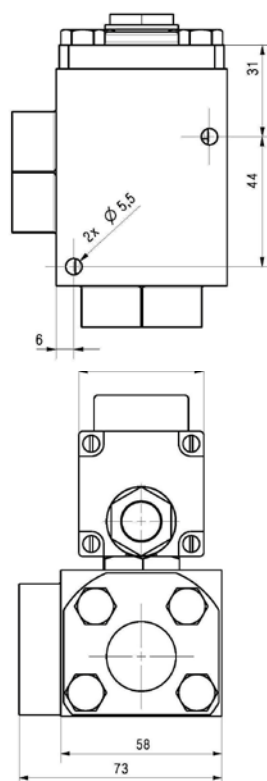
(red part numbers are being phased out)



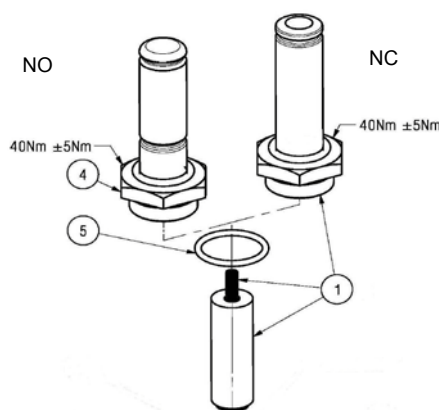
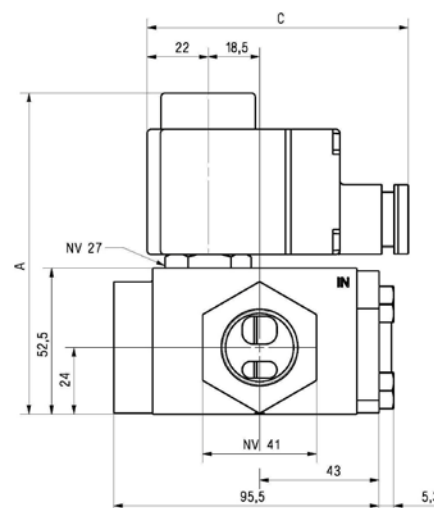
Spare parts

Armature kit NC	180L5002 / Pos.: 1, 5
Armature kit NC HP	180L5011 / Pos.: 1, 5
Armature kit NO	180L5010 / Pos.: 4, 5
Orifice kit 1 (see page 8)	180Z0098 / Pos.: 6, 7
Orifice kit 6 (see page 8)	180L4016 / Pos.: 6, 7
Piston kit Ø 35,1	180Z0026 / Pos.: 10, 11

**VDHT 3/4 EA and
VDHT 1 EA
Drawings
Spare parts**



Ventiltype	A	B	C
NC/NO	115,5	45	94
EEX	125,5	68	125



Code no. valves:

180L0118 VDHT 3/4 EA NC BSP FPM

180L0119 VDHT 3/4 EA NC NPT

180L0121 VDHT 3/4 EA NC BSP NBR

180L0198 VDHT 3/4 EA NO BSP FPM

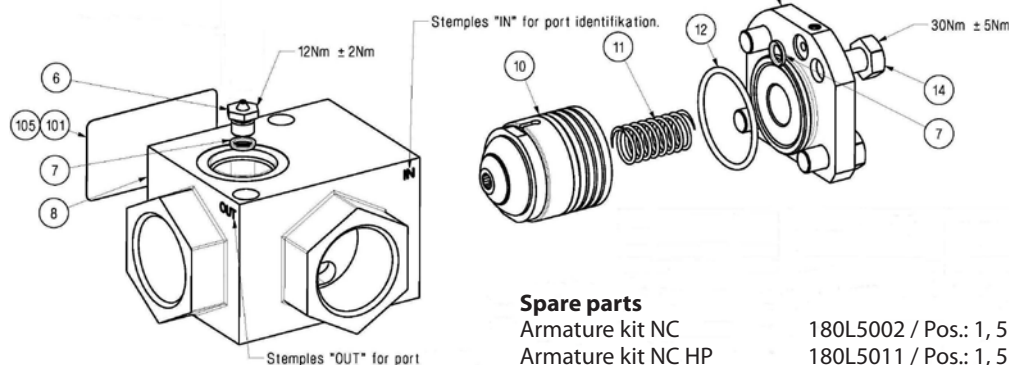
180L0106 VDHT 1 EA NC BSP FPM

180L0107 VDHT 1 EA NC NPT FPM

180L0109 VDHT 1 EA NC BSP NBR

180L0223 VDHT SAE-16 EA NC FPM

(red part numbers are being phased put)

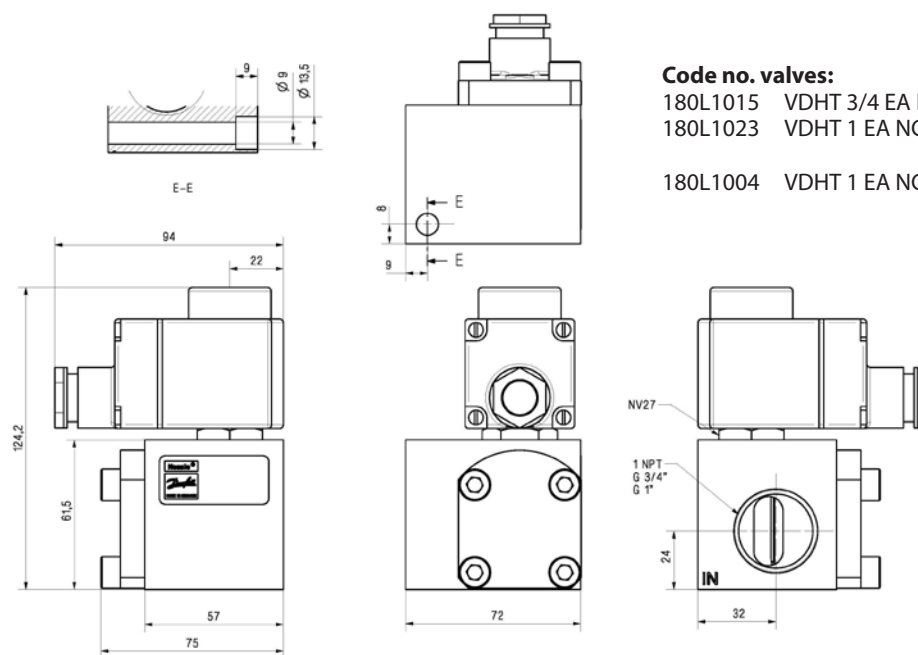


Spare parts

Armature kit NC
Armature kit NC HP
Armature kit NO
Orifice kit 1 (see page 8)
Orifice kit 6 (see page 8)
Piston kit Ø 35,1

180L5002 / Pos.: 1, 5
180L5011 / Pos.: 1, 5
180L5010 / Pos.: 4, 5
180Z0098 / Pos.: 6, 7
180L4016 / Pos.: 6, 7
180Z0026 / Pos.: 10, 11

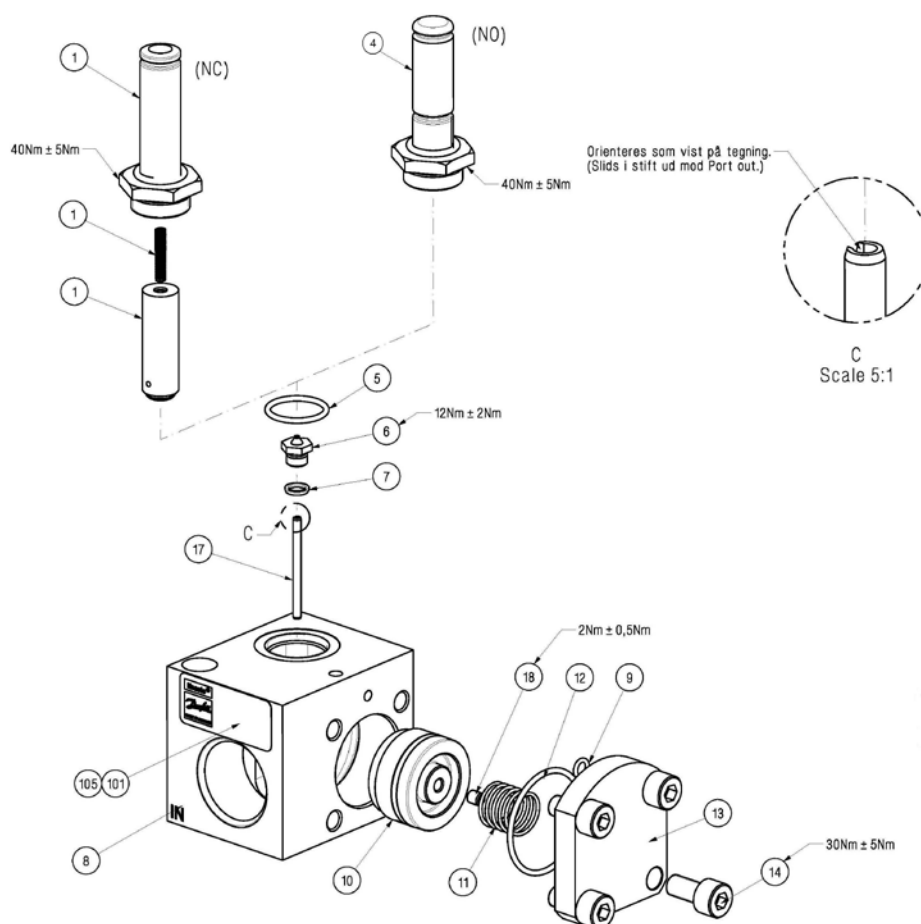
**VDHT 3/4 EA N and
VDHT 1 EA N
Drawings
Spare parts**



Code no. valves:

180L1015 VDHT 3/4 EA NC BSP N
180L1023 VDHT 1 EA NC BSP N

180L1004 VDHT 1 EA NC NPT N

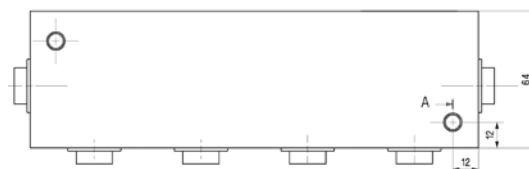
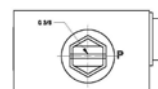
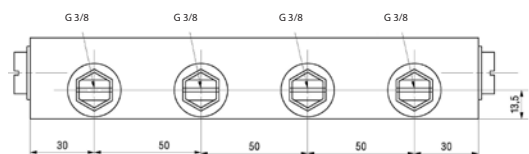
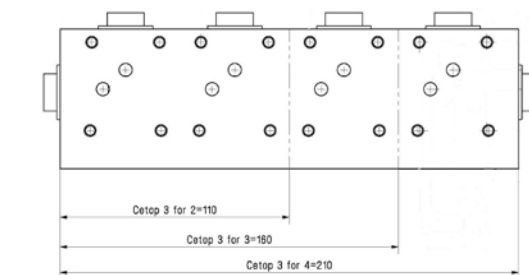
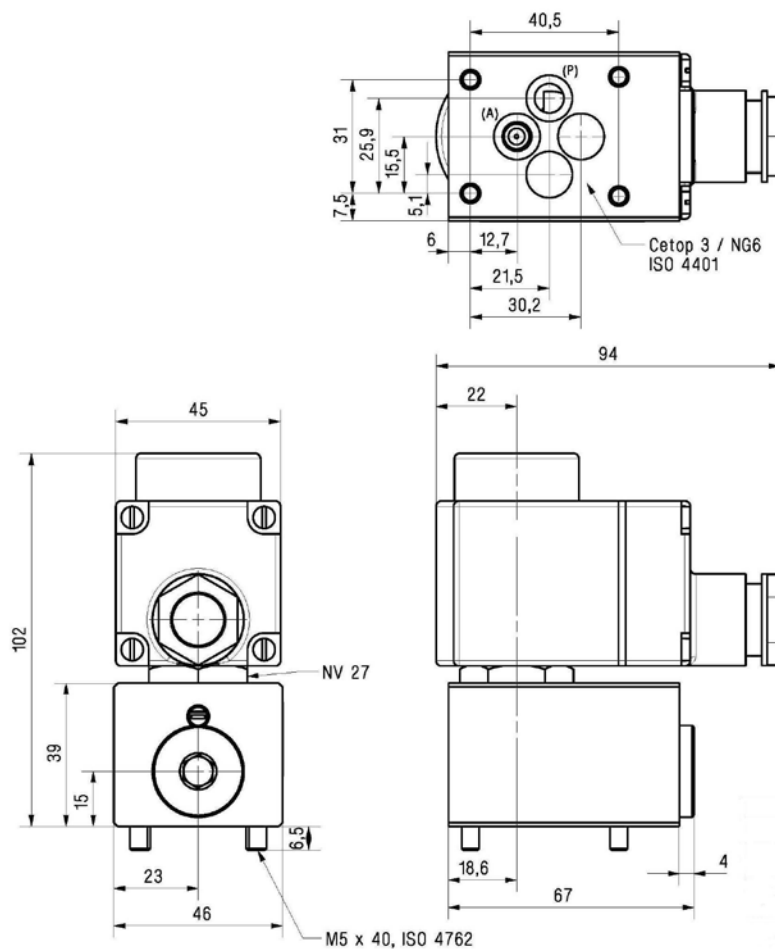


Spare parts

Armature kit NC
Armature kit NC HP
Armature kit NO
Orifice kit 1
Piston kit Ø 35,1 N

180L5002 / Pos.: 1, 5
180L5011 / Pos.: 1, 5
180L5010 / Pos.: 4, 5
180Z0098 / Pos.: 6, 7
180Z0138 / Pos.: 10, 11, 18

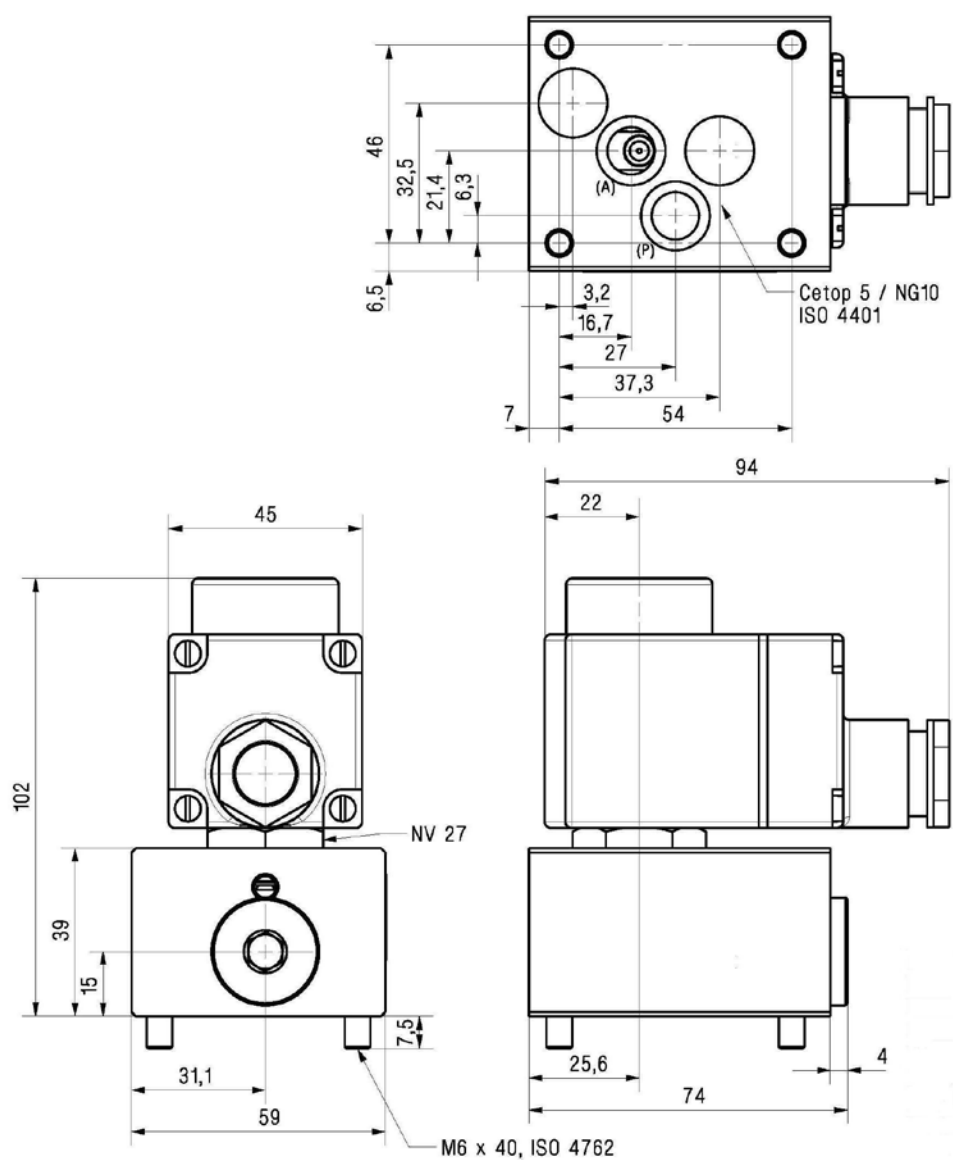
VDHT 30 EC3
Drawings



Cetop 3 block for VDH / VDHT 30 EC3

- 1 Manifold 180L0061
- 2 Manifold 180L0062
- 3 Manifold 180L0063
- 4 Manifold 180L0064

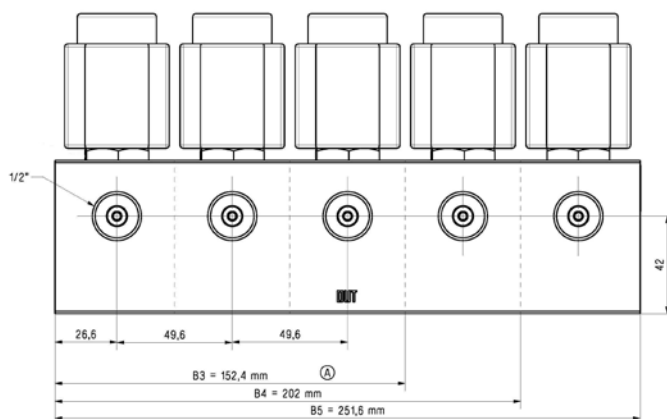
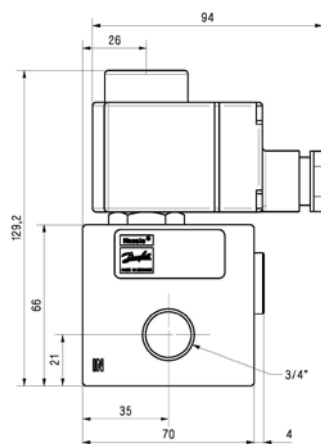
VDHT 60 EC5
Drawings



Cetop 5 block for VDHT 60 EC5

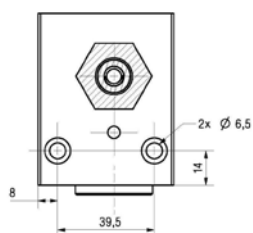
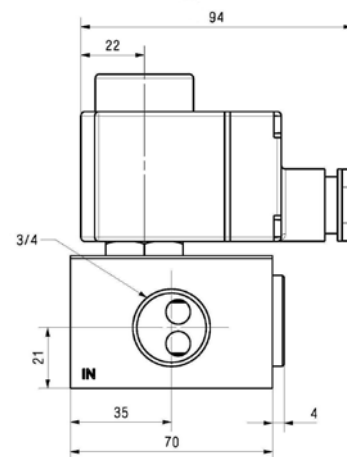
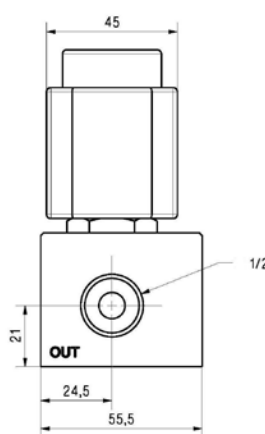
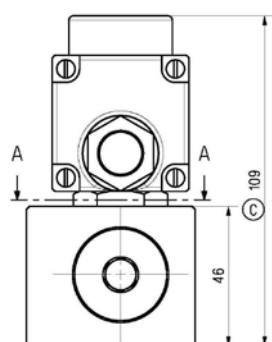
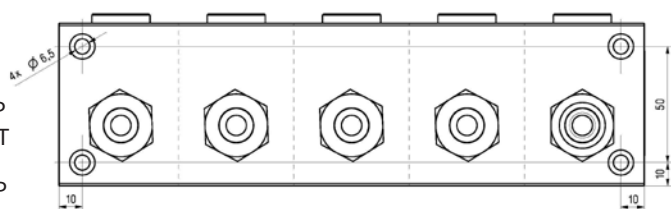
- 1 Manifold On request
- 2 Manifold On request
- 3 Manifold On request
- 4 Manifold On request

VDHT B
Drawings



Code no. valves:

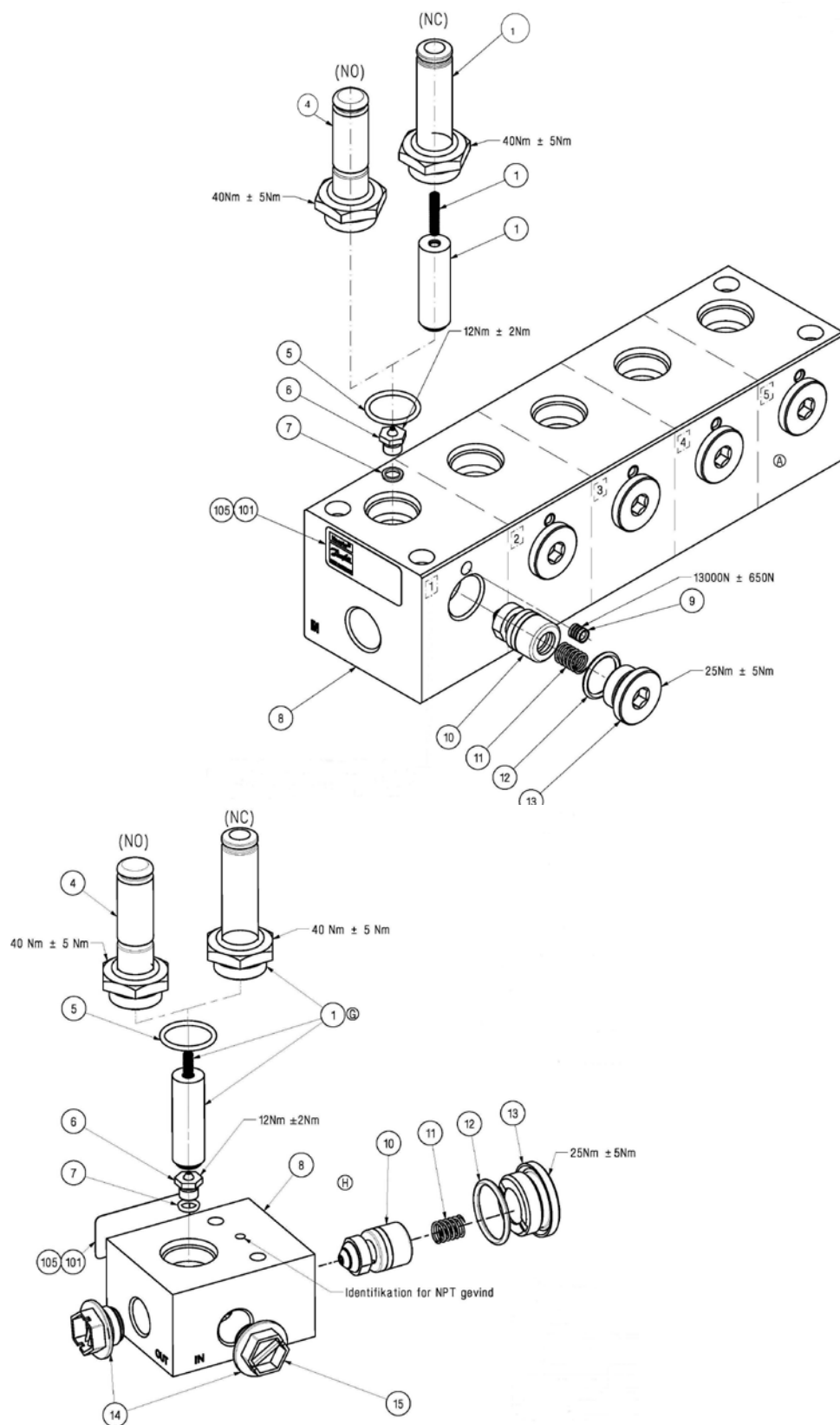
180L0270	VDHT B2 1/2 NC BSP
180L0269	VDHT B2 1/2 NC NPT
180L0258	VDHT B2 1/2 NC-NO BSP
180L0177	VDHT B2 1/2 NC-NO NPT
180L0210	VDHT B2 1/2 NO NPT
180L0124	VDHT B2 3/4 - 1/2 NC BSP
180L0088	VDHT 3/4 - 1/2 NC BSP
180L0255	VDHT B3 3/4 - 1/2 NC NPT
180L0123	VDHT B4 3/4 - 1/2 BSP
180L0207	VDHT B4 3/4 - 1/2 NC NPT
180L0091	VDHT B5 3/4 - 1/2 NC BSP



Extension module:

180L0090 VDHT 3/4 - 1/2 EA NC BSP

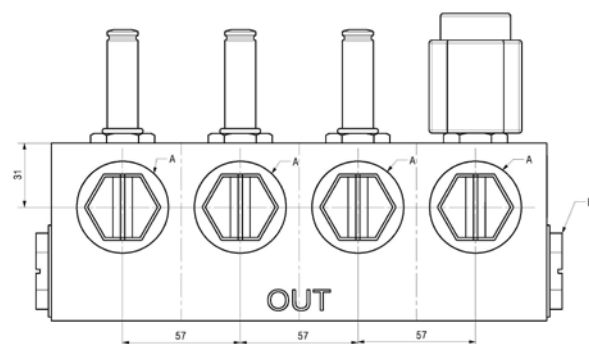
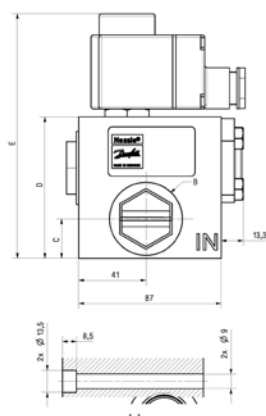
VDHT B
Spare parts



Spare parts

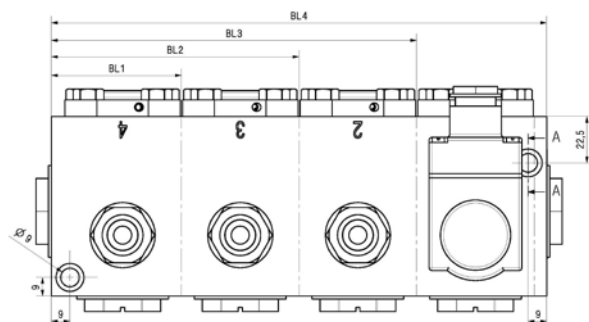
Armature kit NC	180L5002 / Pos.: 1, 5
Armature kit NC HP	180L5011 / Pos.: 1, 5
Armature kit NO	180L5010 / Pos.: 4, 5
Orifice kit 1	180Z0098 / Pos.: 6, 7
Piston kit Ø 18,1	180Z0024 / Pos.: 10, 11

**VDHT BL
Drawings**



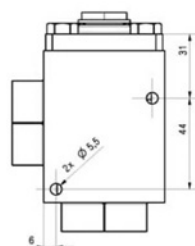
Code no. valves:

- 180L0265 VDHT BL 1 1-3/4 NC BSP
- 180L0290 VDHT BL 1S 28-3/4 NC BSP
- 180L0202 VDHT BL2 3/4 NC BSP
- 180L0285 VDHT BL2 HP 3/4 NC BSP
- 180L0206 VDHT BL2 3/4 NC NPT
- 180L0273 VDHT BL2 3/4 NC-NO BSP
- 180L0180 VDHT BL2 3/4 NC-NO NPT
- 180L0275 VDHT BL2 1 NC BSP
- 180L0224 VDHT BL2 1 NC SAE-16
- 180L0220 VDHT BL2S 1 NC SAE-16
- 180L0274 VDHT BL2 NC-NO BSP
- 180L0231 VDHT BL2S 1-3/4 NC NPT
- 180L0267 VDHT BL2S 3/4 NC BSP
- 180L0238 VDHT BL2S 3/4 NC NO BSP
- 180L0089 VDHT BL3 3/4 NC BSP
- 180L0286 VDHT BL3 HP 3/4 NC BSP
- 180L0204 VDHT BL3 3/4 NC NPT
- 180L0189 VDHT BL3 1 NC BSP
- 180L0268 VDHT BL3 1 NC NPT
- 180L0266 VDHT BL3S 1 NC SAE-16
- 180L0232 VDHT BL3S 1-3/4 NC NPT
- 180L0172 VDHT BL4 1 NC BSP
- 180L0287 VDHT BL4 HP 1 NC BSP
- 180L0225 VDHT BL4S 1 NC SAE-16
- 180L0272 VDHT BL4S NC



	A	B	C	D	E	BL1	BL2	BL3	BL4
180L0089	3/4"	3/4"	23 mm	81 mm	143 mm			183 mm	
180L0204	3/4 NPT	3/4 NPT	23 mm	81 mm	143 mm			183 mm	
180L0172	1"	1"	24 mm	86 mm	148 mm				240 mm
180L0287	1"	1"	24 mm	86 mm	148 mm				240 mm
180L0180	3/4"	3/4"	23 mm	81 mm	143 mm		126 mm		
180L0189	1"	1"	24 mm	86 mm	148 mm			183 mm	
180L0268	1"	1"	24 mm	86 mm	148 mm			183 mm	
180L0265	3/4"	1"	24 mm	86 mm	148 mm	69 mm			
180L0267	3/4"	3/4"	24 mm	82 mm	144 mm		126 mm		
180L0202	3/4"	3/4"	24 mm	82 mm	144 mm		126 mm		
180L0285	3/4"	3/4"	24 mm	82 mm	144 mm		126 mm		
180L0274	1"	1"	24 mm	86 mm	144 mm		126 mm		
180L0275	1"	1"	24 mm	86 mm	144 mm		126 mm		
180L0289	1"	3/4"	24 mm	86 mm	144 mm		126 mm		

(red part numbers are being phased out)

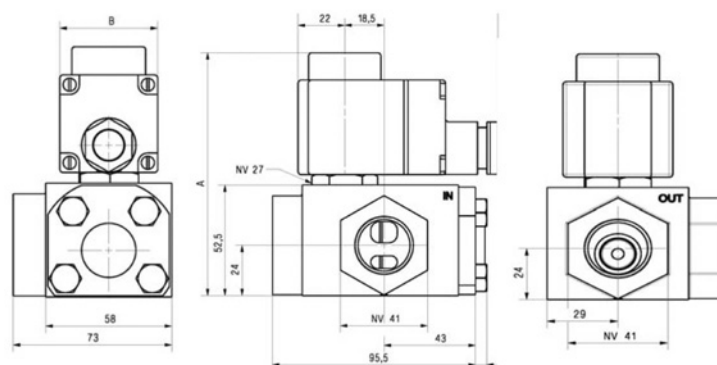


Valve type	A	B	C
NC/NO	115,5	45	94
EEX	125,5	68	125

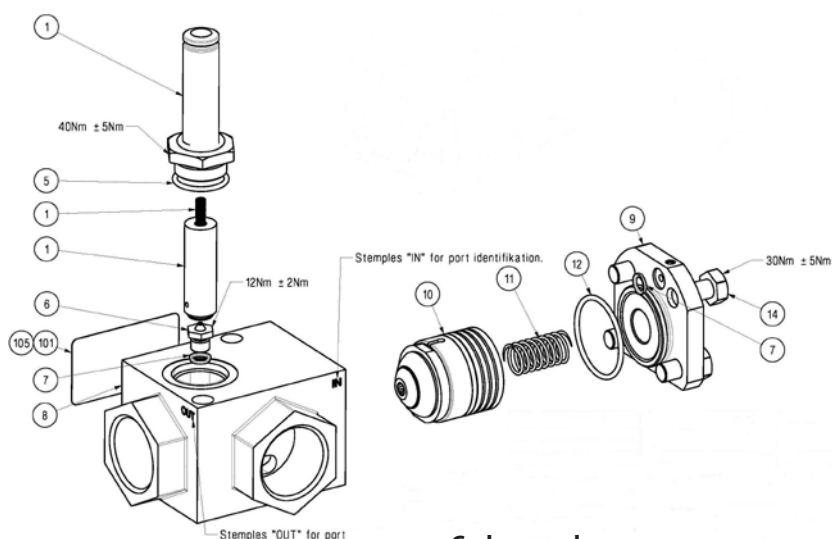
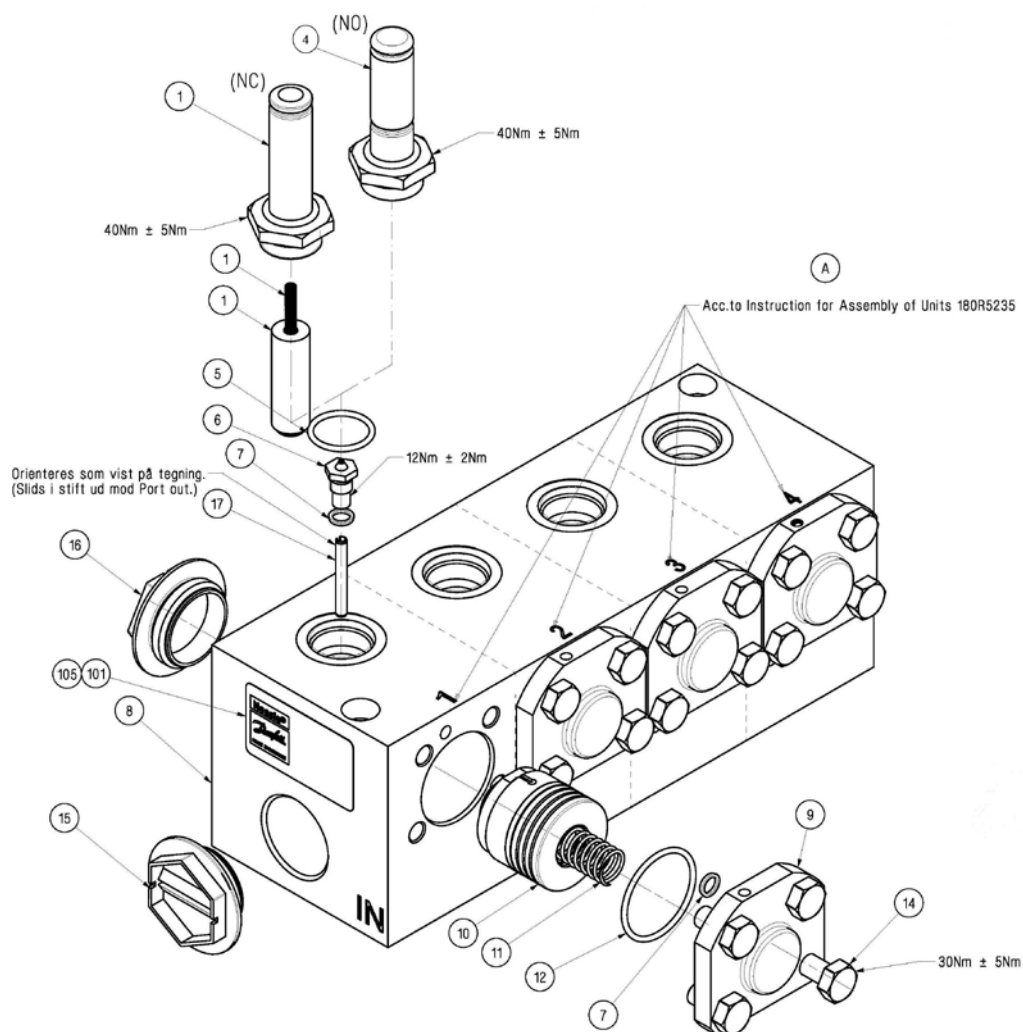
Extension module:

- 180L0118 VDHT 3/4 EA NC BSP
- 180L0119 VDHT 3/4 EA NC NPT
- 180L0106 VDHT 1 EA NC BSP
- 180L0107 VDHT 1 EA NC NPT

(red part numbers are being phased out)



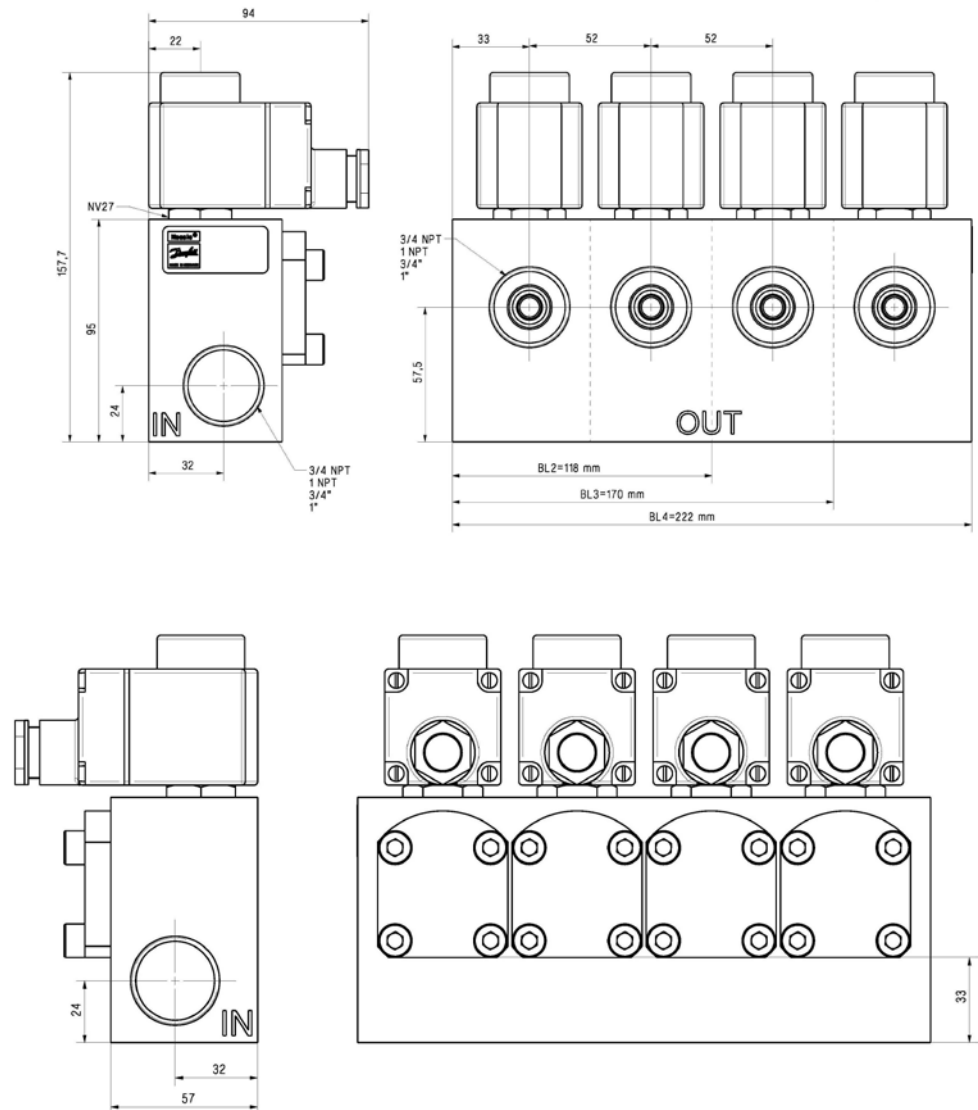
VDHT BL
Spare parts



Code no. valves

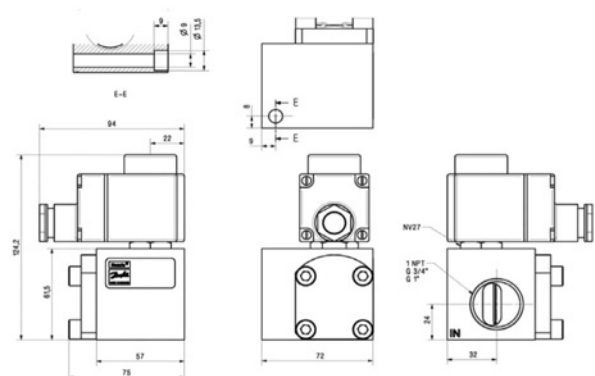
Armature kit NC	180L5002 / Pos.: 1, 5
Armature kit NC HP	180L5011 / Pos.: 1, 5
Armature kit NO	180L5010 / Pos.: 4, 5
Orifice kit 1 (see page 8/9)	180Z0098 / Pos.: 6, 7
Orifice kit 2 (see page 8/9)	180L4015 / Pos.: 6, 7
Orifice kit 6 (see page 8/9)	180L4015 / Pos.: 6, 7
Piston kit Ø 35,1	180Z0138 / Pos.: 10, 11

VDHT BL N
Drawings



Code no. valves:

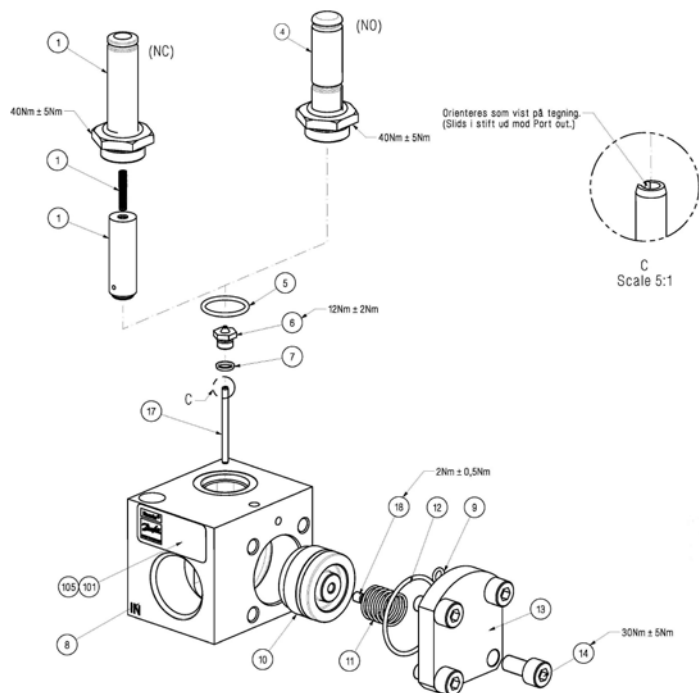
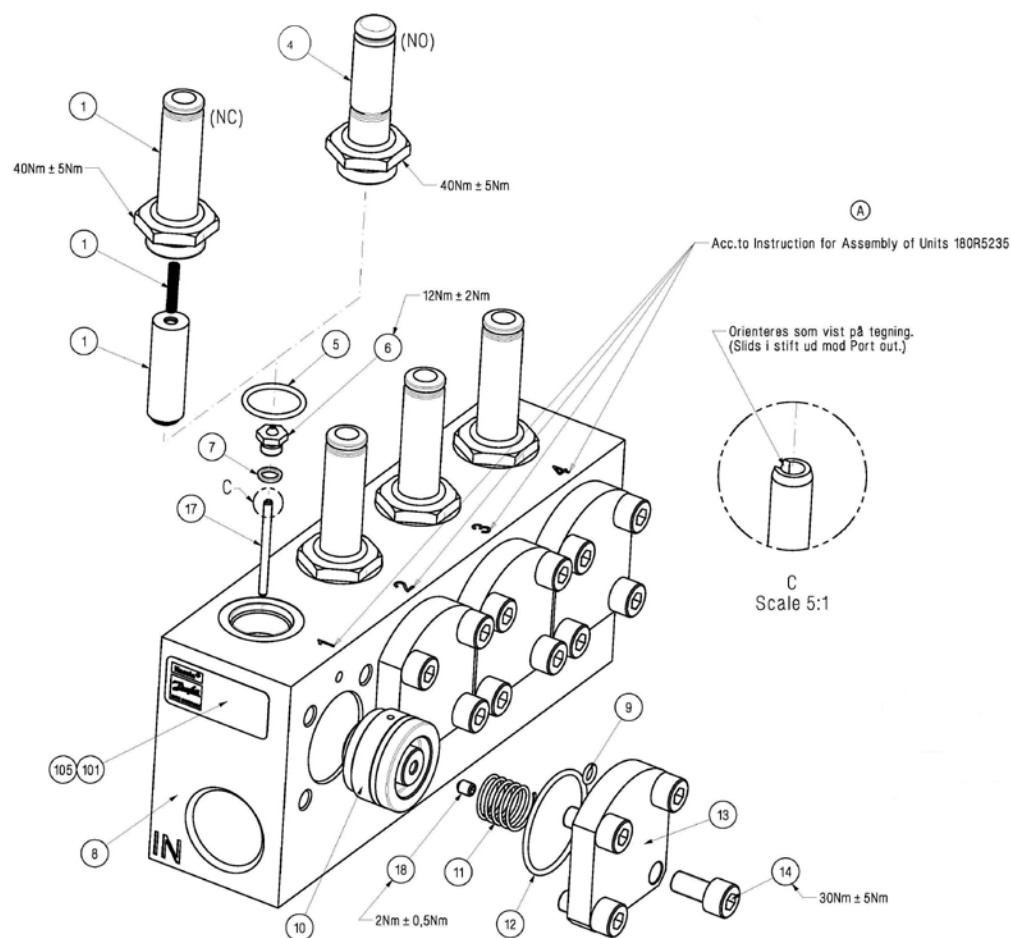
180L1003	VDHT BL2 3/4 NC BSP N
180L1027	VDHT BL2 HP 3/4 NC BSP N
180L1007	VDHT BL2 3/4 NC NPT N
180L1024	VDHT BL2 3/4 NC-NO BSP N
180L1002	VDHT BL 1 NC BSP N
180L1026	VDHT BL2 1 NC SAE-16 N
180L1000	VDHT BL2S 3/4 NC BSP N
180L1025	VDHT BL3 3/4 NC BSP N
180L1028	VDHT BL3 HP 3/4 NC BSP N
180L1010	VDHT BL3 3/4 NC NPT N
180L1011	VDHT BL3 1 NC BSP N
180L1016	VDHT BL4 1 NC BSP N
180L1029	VDHT BL4 HP 1 NC BSP N



Extension module:

180L1015	VDHT 3/4 - EA NC BSP N
180L1023	VDHT 1 EA NC BSP N
180L1004	VDHT1 EA NC NPT N

VDHT BL N
Spare parts

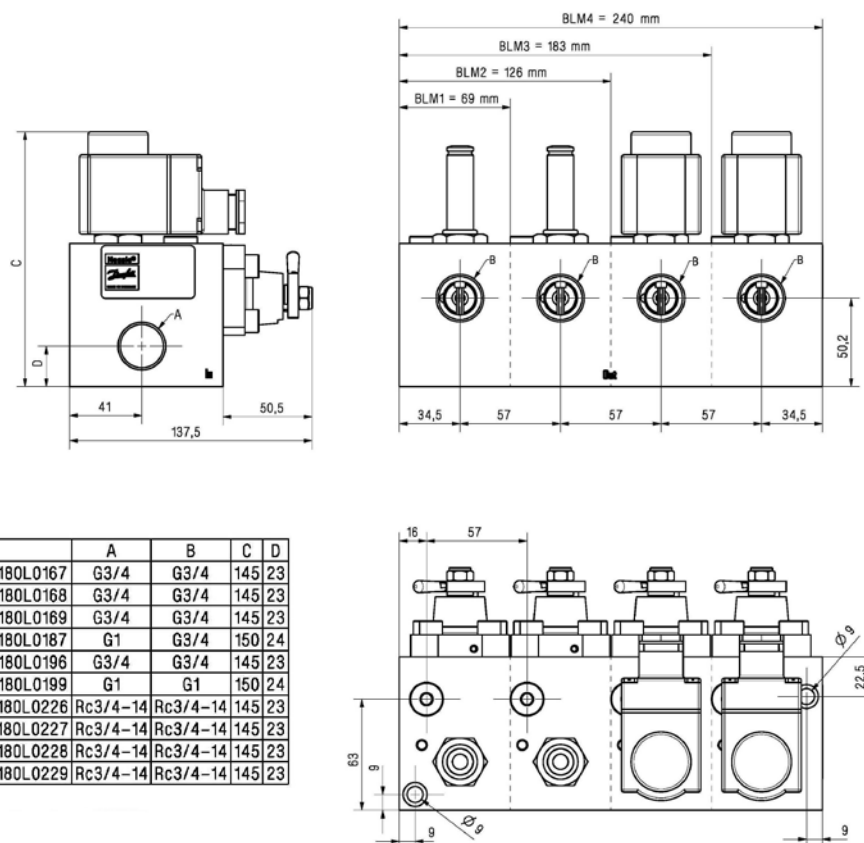


Spare parts

Armature kit NC
Armature kit NC HP
Armature kit NO
Orifice kit 1
Piston kit Ø 35,1 N

180L5002 / Pos.: 1, 5
180L5011 / Pos.: 1, 5
180L5010 / Pos.: 4, 5
180Z0098 / Pos.: 6, 7
180Z0138 / Pos.: 10, 11, 18

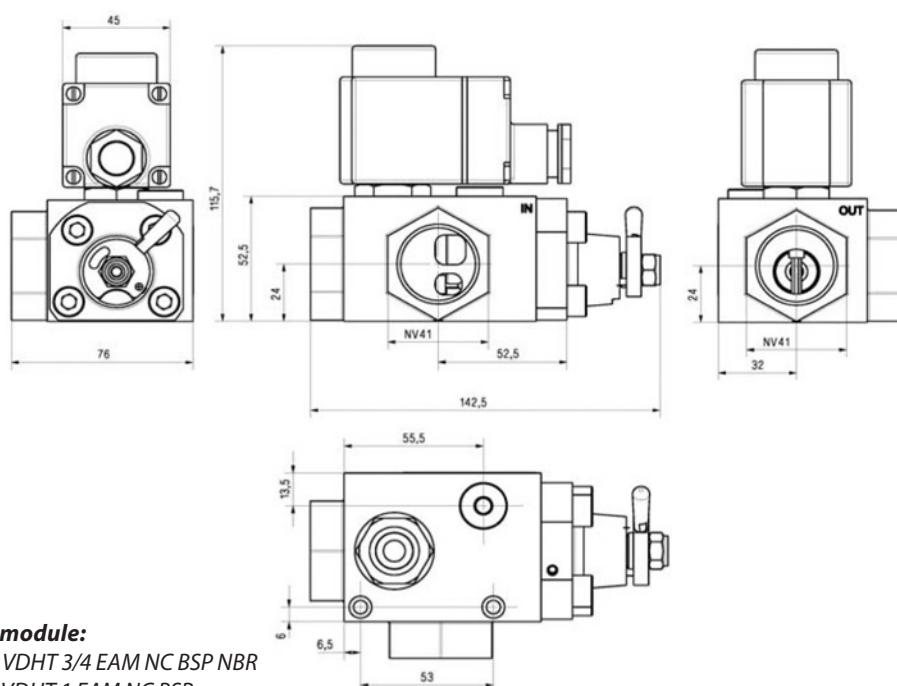
**VDHT BLM
Drawings**



Code no. valves:

180L0196	VDHT BLM 1-3/4 NC BSP NBR
180L0167	VDHT BLM2 3/4 NC BSP NBR
180L0199	VDHT BLM2 1 NC BSP NBR
180L0168	VDHT BLM3 3/4 NC BSP NBR
180L0187	VDHT BLM3 1-3/4 NC BSP NBR
180L0169	VDHT BLM 4 3/4 NC BSP NBR

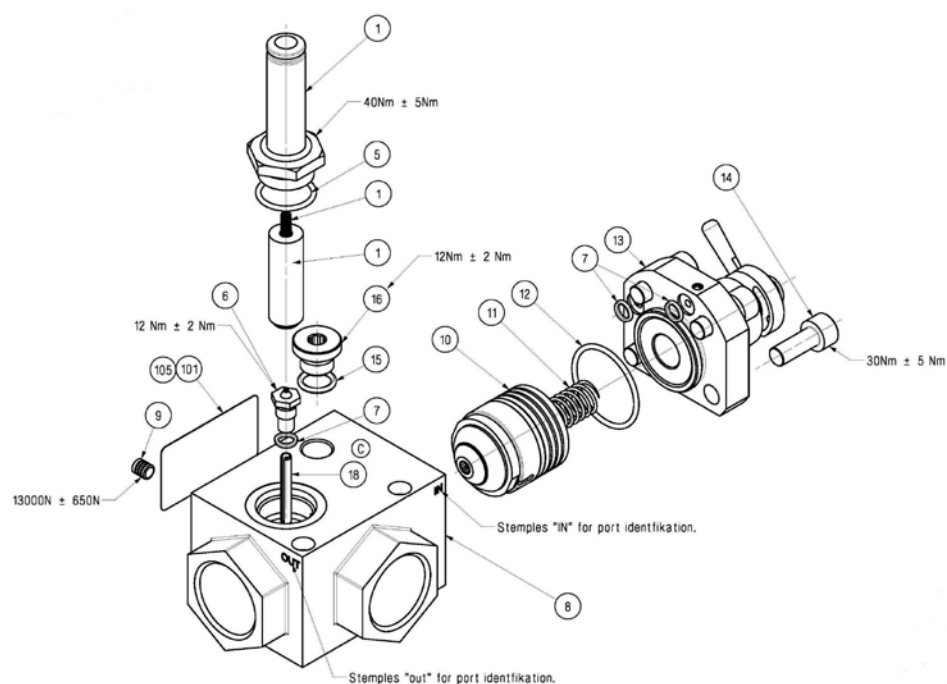
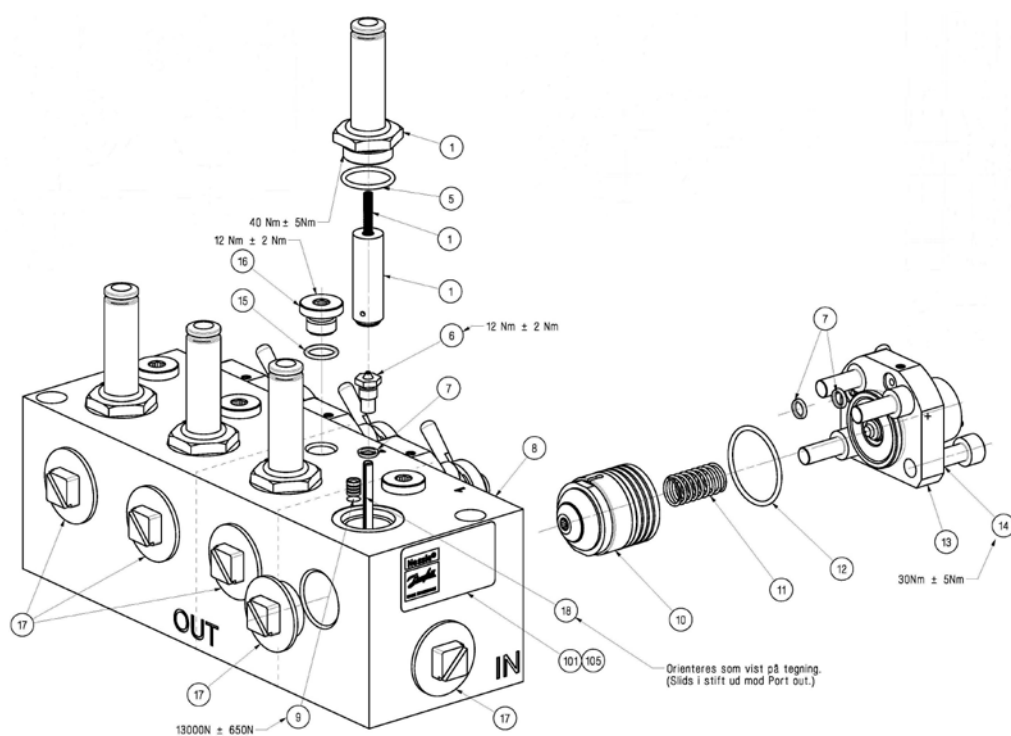
(red part numbers are being phased put)



Extension module:

180L0122	VDHT 3/4 EAM NC BSP NBR
180L0110	VDHT 1 EAM NC BSP

VDHT BLM
Spare parts



Spare parts

Armature kit NC

Orifice kit 1 (see page 9)

Orifice kit 2 (see page 9)

Piston kit Ø 35,1

180L5002 / Pos.: 1, 5

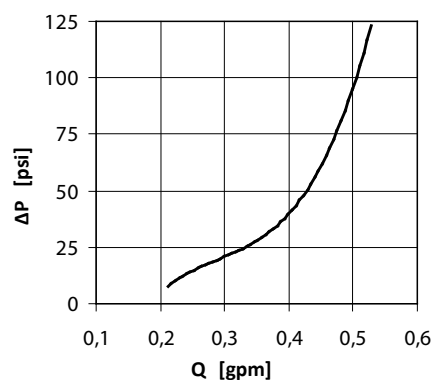
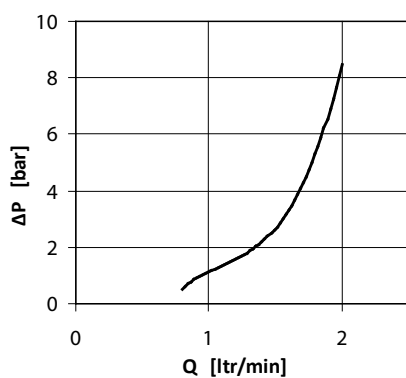
180Z0098 / Pos.: 6, 7

180L4015 / Pos.: 6, 7

180Z0026 / Pos.: 10, 11

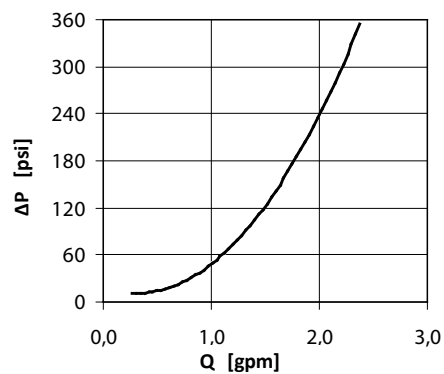
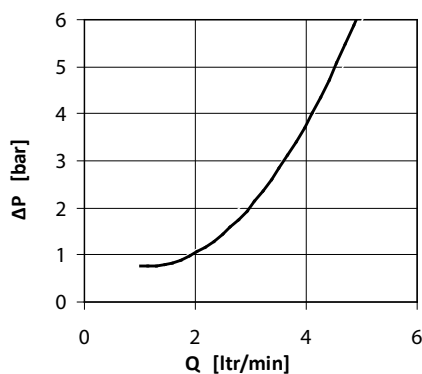
**Pressure losses p
INLET to OUTLET**

VDH 2E ¼ 1,4



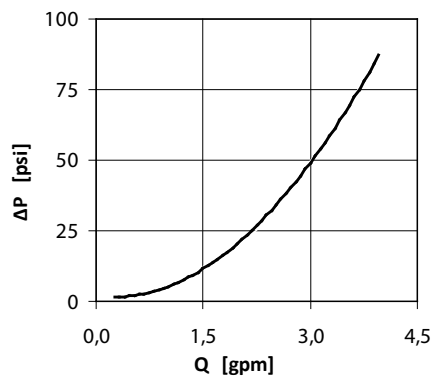
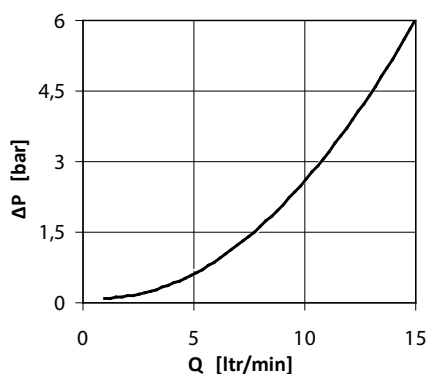
**Pressure losses p
INLET to OUTLET**

VDH 2E ¼ 3,5



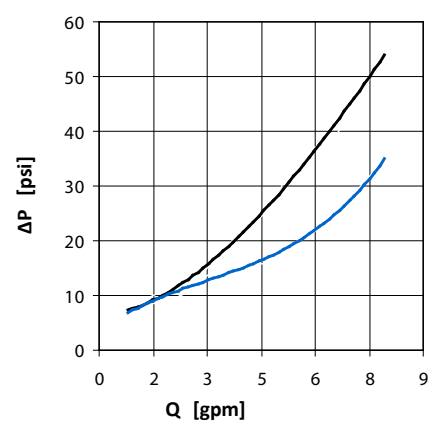
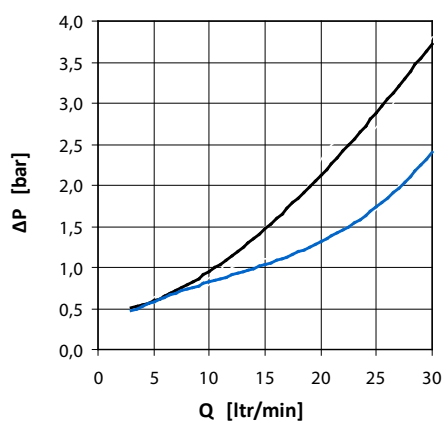
**Pressure losses p
INLET to OUTLET**

VDHT ¼ E



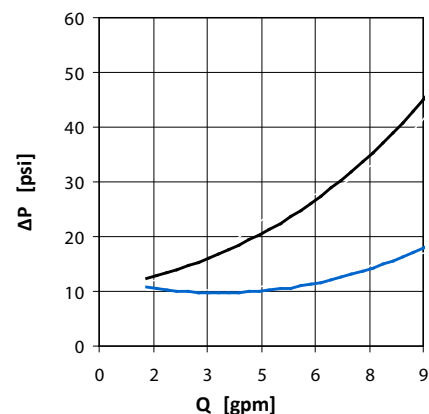
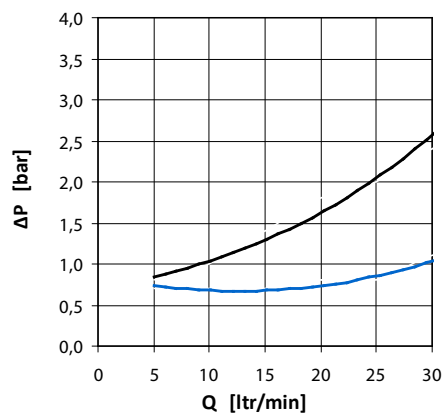
Pressure losses p
INLET to OUTLET

VDHT 3/8 E
VDHT 3/8 EA



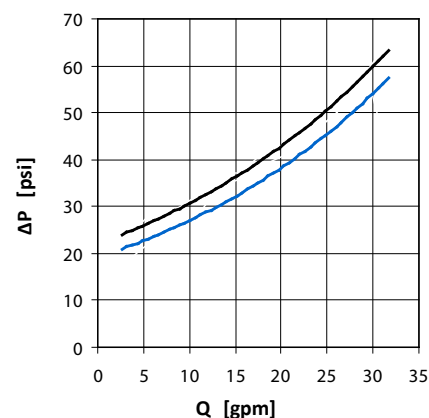
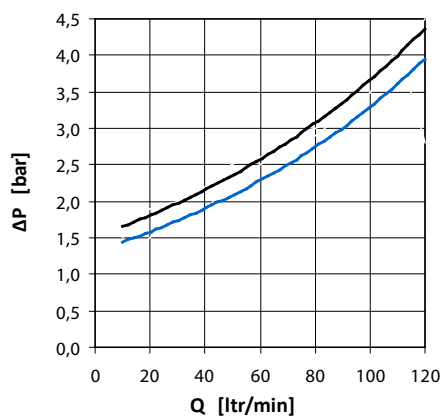
Pressure losses p
INLET to OUTLET

VDHT 1/2 E
VDHT 1/2 EA
VDHT B



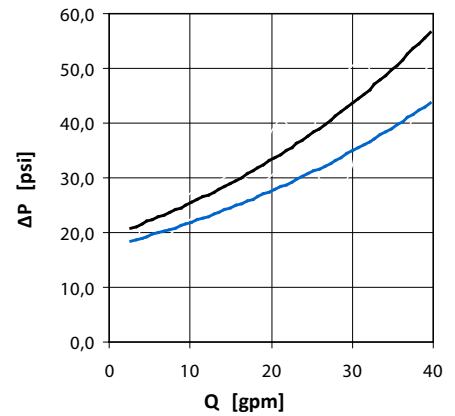
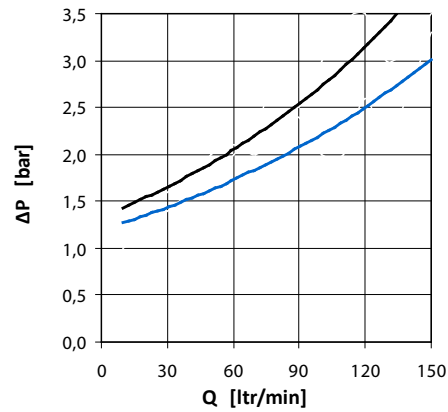
Pressure losses p
INLET to OUTLET

VDHT 3/4 ED
VDHT 3/4 ED N
VDHT 3/4 EA
VDHT 3/4 EA N
VDHT 3/4 EAM
VDHT BL
VDHT BL N
VDHT BLM



Pressure losses p
INLET to OUTLET

VDHT 1 ED
VDHT 1 ED N
VDHT 1 EA
VDHT 1 EA N
VDHT 1 EAM
VDHT BL
VDHT BL N
VDHT BLM



Pressure losses p
INLET to OUTLET

VDHT 30 EC3
VDHT 60 EC5

