**Description:**

- compact design
- reduced passageway
- ball with L-bore
- flange acc. to EN1092-1 - PN16
- top flange acc. to EN ISO 5211
- antistatic device starting from DN40
- blow out safe, spindle mounted from inside
- stainless steel hand lever
- any installation position

**Range of application:**

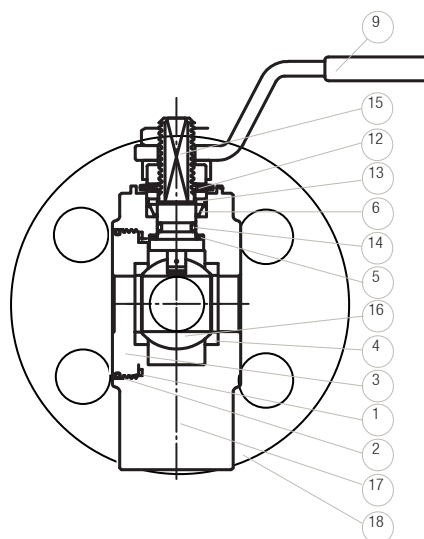
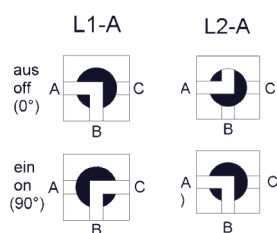
- material optimized 3-way ball valve with flanges for industrial applications
- space-saving installation by compact construction
- top flange for direct actuator mounting
- pneumatic and electric automatable
- working pressure PN16
- temperature range: -20°C up to +180°C (see pressure temperature diagram)

**Comments**

Optionally we can supply the **stainless steel design** starting from DN32 made of solid material. All types are also available with **flanges acc. to ANSI150 and ANSI300**.

From DN15 to DN32 the ball valves are available with an antistatic device.

**L-bore:** Different switch positions are possible, please specify with your order. The ball position is marked on the spindle! (L=L-bore, A=automation)



pos.	part	standard VA	standard ST	optional material
1	primary sealing	PTFE	PTFE	
2	secondary sealing	NBR	NBR	
3	body screw connection	1.4401 / 1.4408	A 105	
4	seat sealing	PTFE	T PTFE	T PTFE-fibre glass reinforced* PTFE/graphite/carbon
5	friction ring	PTFE	PTFE	
6	sealing for spindle	PTFE	T PTFE	T
9	hand lever	1.4301	St 37 coated	
12	disc spring	1.4310	50CrV4	
13	thrust ring	1.4305	1.4305	
14	o-ring	FKM	FKM	
15	spindle	1.4401	1.4301	
16	ball	1.4401	O 1.4301	O
17	body	1.4401	O A 105	J
18	flange	1.4541	1.0037	

\*higher temperature resistance with other seat sealing:

- PTFE fibre-glass reinforced: -10°C up to 195°C medium temperature
- PTFE graphite/carbon: -10°C up to +210°C medium temperature

**options:**

- SV: spindle extension
- SP: gland extension
- EB: relief well
- OF: free of oil and grease
- SF: free of silicone
- ZG: certificate 3.1
- FW: free spindle

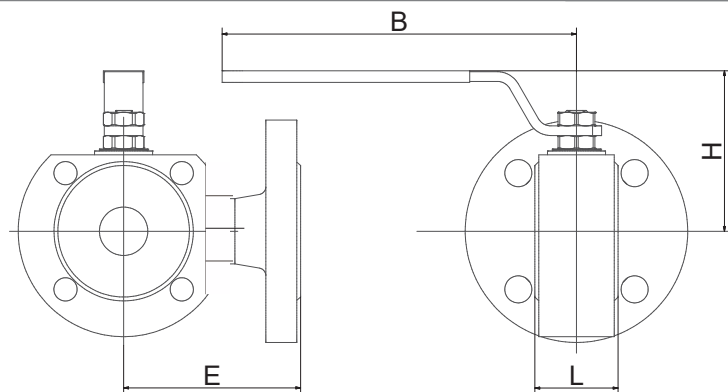
**For electric actuated valves only:**

- AP: accumulator security pack
- PT: potentiometer
- PO: positioning system

**For pneumatic actuated valves only:**

- SD: sound absorber
- AD: exhaust air regulator
- PV: pilot valve For details see data sheet "GMV3197", "GMV3163" (3/2 way) and "MVA01" (5/2 way). Other types on request.
- PS: positioning indicator For details see data sheet "MCM2" (mechanical), "MCN2" (inductive, with ATEX 94/9/EC) and "MCS2" (inductive). Other types on request.

For details about the order code see "Order information". An overview of the complete material code you can find at the beginning of each product section of the product catalogue.



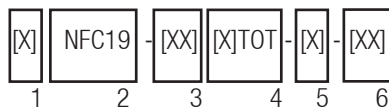
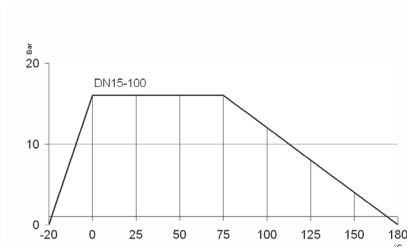
match code	size [inch]	nominal pressure	nominal size [mm]	L [mm]	E [mm]	H [mm]	B [mm]	CV* [m³/h]	brea- kaway torque Nm]	weight [kg]
NFC19-52-1xTOT	DN15	PN16	10	35	on request	65	140	n/a	4.8	2.2
NFC19-53-1xTOT	DN20	PN16	15	38	on request	70	140	n/a	8.5	3
NFC19-54-1xTOT	DN25	PN16	20	43	on request	82	180	n/a	11.3	4
NFC19-55-1xTOT	DN32	PN16	25	54	105	85	180	n/a	19	6
NFC19-56-1xTOT	DN40	PN16	32	66	105	102	230	n/a	28	8.5
NFC19-57-1xTOT	DN50	PN16	40	83	on request	110	230	n/a	39	8.8
NFC19-58-1xTOT	DN65	PN16	50	103	on request	137.5	333	n/a	59	20.5
NFC19-59-1xTOT	DN80	PN16	65	122	on request	150	333	n/a	84.5	27
NFC19-60-1xTOT	DN100	PN16	78	153	on request	165	370	n/a	168	41

\*CV value: The nominal flow rate CVs acc. to VDI/VDE 2173 shows the water quantity in cubic meter per hour with the valve fully opened,  $\Delta p=1$  and the water temperature between 5°C and 30°C.

\*\*Breakaway torque: all data is determined with water at max  $\Delta p$  and normal ambient temperature. Multiplier for frictional media is 1.3. If your configuration has special sealing material or your application has critical media consultation is obligatory.

### Pressure temperature diagram

The pressure temperature diagram refers to the ball valve of this type. For the actuated units the actuator limits the permissible pressure range to the operating pressure as indicated above, as long as this is lower than the pressure range of the ball valve. If your application has strong temperature variations, you may need additional options like a relief well, to meet the figures. Please tell us your temperature variations with your order.



### Order information:

#### 1: automation:

- no specification: manually operated
- D: pneumatic double acting
- S: pneumatic single acting
- E: electric actuated

#### 2: type: NFC19

#### 3: connection size:

- 52-60 (DIN, see table)
- 82-90 (ANSI, on request)

#### 4: materials:

- 1. digit: body material  
O = stainless steel  
J = steel

- 2. digit: sealing for spindle

T = PTFE

- 3. digit: ball material

O = stainless steel

- 4. digit: seat sealing

T = PTFE

G = PTFE fibre-glass reinforced

U = PTFE graphite / carbon

#### 5: actuator:

- no specification: steel hand lever
- automated: see column "actuator"

#### 6: options (see "options")

Please ask for field specifications that are not listed in this data sheet.

Before installation please consider the installation and maintenance manual, especially the safety indications!

**DNFC19 / SNFC19**

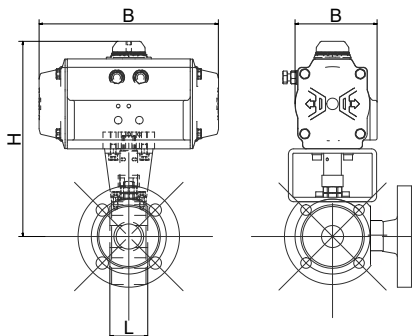
High quality pneumatic actuator made of alloy with air connection according to NAMUR and positioning indicator. The actuator works with the rack/bevel method. For further details see the technical data sheet "DR/SC".

Types double acting (the actuator opens and closes with compressed air) and single acting (the actuator opens with compressed air and closes with spring pressure).

The actuators are configured for use with fluid, gas and antifriction medium. **For critical media it is strictly recommended to inform us!**

**Description:**

- working pressure: 0 - 16 bar
- pilot pressure: 6 - 8 bar
- medium temperature: -20°C up to +120°C (at max. ambient temperature 40°C)

**Attention!**

To avoid corrosion inside the spring chamber for single acting actuators caused by aggressive ambient air we recommend pilot valves with integrated air recirculation.

match code	double acting: DKFA19				single acting: SKFA19					
	actuator	H [mm]	B [mm]	D [mm]	weight [kg]	actuator	H [mm]	B [mm]	D [mm]	weight [kg]
xNFC19-52-1xTOT-	DR010	165	118	62	3.15	SC010-K	165	118	62	3.3
xNFC19-53-1xTOT-	DR010	170	118	62	3.95	SC030-G	187	153.5	84.5	5
xNFC19-54-1xTOT-	DR015	178.5	136	72	5.3	SC030-I	194.5	153.5	84.5	6
xNFC19-55-1xTOT-	DR030	201	153.5	84.5	7.9	SC060-G	228	203.5	93	9.6
xNFC19-56-1xTOT-	DR030	215	153.5	84.5	10.6	SC060-K	232	203.5	93	12.1
xNFC19-57-3xTOT-	DR060	239	203.5	93	12	SC100-I	252	241	106	13.6
xNFC19-58-1xTOT-	DR060	262	203.5	93	23.8	SC150-I	287	259	118	27.2
xNFC19-59-1xTOT-	DR100	285	241	106	31.3	SC220-H	325	304	136	36.9
xNFC19-60-1xTOT-	DR220	356	304	136	50.3	SC450-I	605.5	394.5	166	59.3

**ENFC19**

High-quality electric actuator in compact design with a body made of high-strength plastics. It has a high-performance motor and a gear drive made of metal. A central control room heater and an electronic torque limiter are equipped as standard. For further details see the technical data sheet "J".

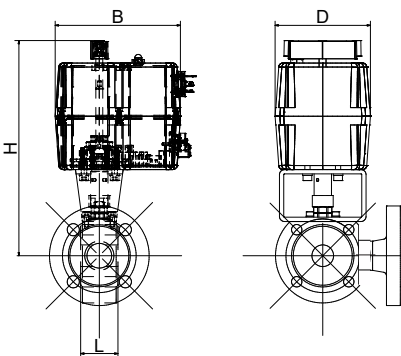
**Description:**

- working pressure: 0 - 16 bar
- deviating medium temperature -20°C up to +100°C (at max. ambient temperature of 40°C)

match code	actuator	H [mm]	B [mm]	D [mm]	weight [kg]
ENFC19-52-3xTOT-	J210-	157.5	169	104	3.15
ENFC19-53-3xTOT-	J210-	160.5	169	104	3.95
ENFC19-54-3xTOT-	J210-	166	169	104	5.05
ENFC19-55-3xTOT-	J420-	195	177	110	7.7
ENFC19-56-3xTOT-	J435-	221	177	110	10.7
ENFC19-57-3xTOT-	J455-	253	177	110	11.6
ENFC19-58-1xTOT-	J485-	276	177	110	23.9
ENFC19-59-3xTOT-	J2140-	354	235	214	32.8
ENFC19-60-1xTOT-	J2140-	365	235	214	47.5

**connection voltage type:**

- 19: 24V AC/DC up to 240V AC/ DC
- other voltages on request



AC/DC Beschaltung  
(3 Draht):

