

**Primary characteristics**

NAF-HP Stop check valves are made of drop forged steel, and the following properties are some of the distinguishing features of this valve type:

- Pressure absorbing threaded joint between body and yoke, with gland bolts to secure it
- Conical sealing surfaces made of Alloy 6 on disc and seat
- Box packing made of expanding graphite to ensure minimum maintenance
- Easy to remove for servicing and preventive maintenance.

**Design**

NAF-HP Stop check valves are made of both carbon steel and alloy steel. The valve body has a threaded yoke which is secured to the body by means of gland bolts running through between the yoke and gland support in the valve body. The valve type has a rising stem and handwheel. The sealing surfaces in the seat and disc are conical and coated with Alloy 6. The valve disc is controlled in the valve body. This valve type cannot have new packings fitted while pressurised. These Stop check valves have a straight profile and are supplied with welding ends.

**Capacity (Table 1)**

DN	Resistance factor Z	Kv-value
15	19	2
20	10	5
25	16	6,2
32	7,5	14,7
40	12	18,5
50	16	24,5

**Selection table (Table 2)**

NAF-No	PN	DN	Material		Max. Temp °C
			Carbon steel	Alloy steel	
837917	160/250	15-50	C22.8	-	400
837919			-	13 CrMo 44	530

The resistance factors given apply to fully open valves.  
 Kv values are stated in m3/h at a pressure drop of 1 bar over the valve.  
 There is the following link between Kv and Cv:  
 $Kv = 0.86 \times Cv$        $Cv = 1.16 \times Kv$



**Applications**

NAF-HP Stop check valves in accordance with this catalogue sheet are designed for media which will not damage materials included. Here are a few examples: steam, water, air and oil.

**Connections**

As per dimensional drawing on page 3.

**Technical specification**

Material: Carbon steel or alloy steel  
 Dimensions: DN 15—50  
 Pressure class: PN 160/250 (PN 400, contact NAF)  
 Face-to-face: See table, page 2  
 Connections: Welding ends  
 Temperature range: Max. 530°C, see below  
 Test pressure: Open valve 1.5xPN  
 Closed valve 1.1xPN

**Ordering example**

When placing an order, specify the NAF No. and DN as shown in the following example:  
 NAF 837917, DN 25, Stop check valve

### Material specification (Table 3)

Pos	Part	Material	
		NAF837917	NAF837919
1	Body	C22.8	13 CrMo 44
2	Seat	Alloy 6	Alloy 6
3*	Disc	Alloy 6	Alloy 6
4	Washer	Stainless steel W 1.4301	Stainless steel W 1.4301
5*	Stem packing	Graphite	Graphite
7	Gland flange	C22.8	C22.8
8	Gland	Stainless steel W 1.4301	Stainless steel W 1.4301
9	Gland bolt Nut	ASTM A 193 B7 ASTM A 194 2H	ASTM A 193 B7 A ASTM A 194 2H
10	Stem	17Cr 1 Mo W 1.422	17Cr 1 Mo W 1.422
12	Yoke	C22.8	C22.8
13	Stem nut	Al. bronze	Al. bronze
14	Handwheel	Steel	Steel
21	Nut	Steel	Steel
27	Spring washer	Steel	Steel
50	Pin	Steel, tempered	Steel, tempered

\*Recommended spares

### Dimensions and mass (Table 4)

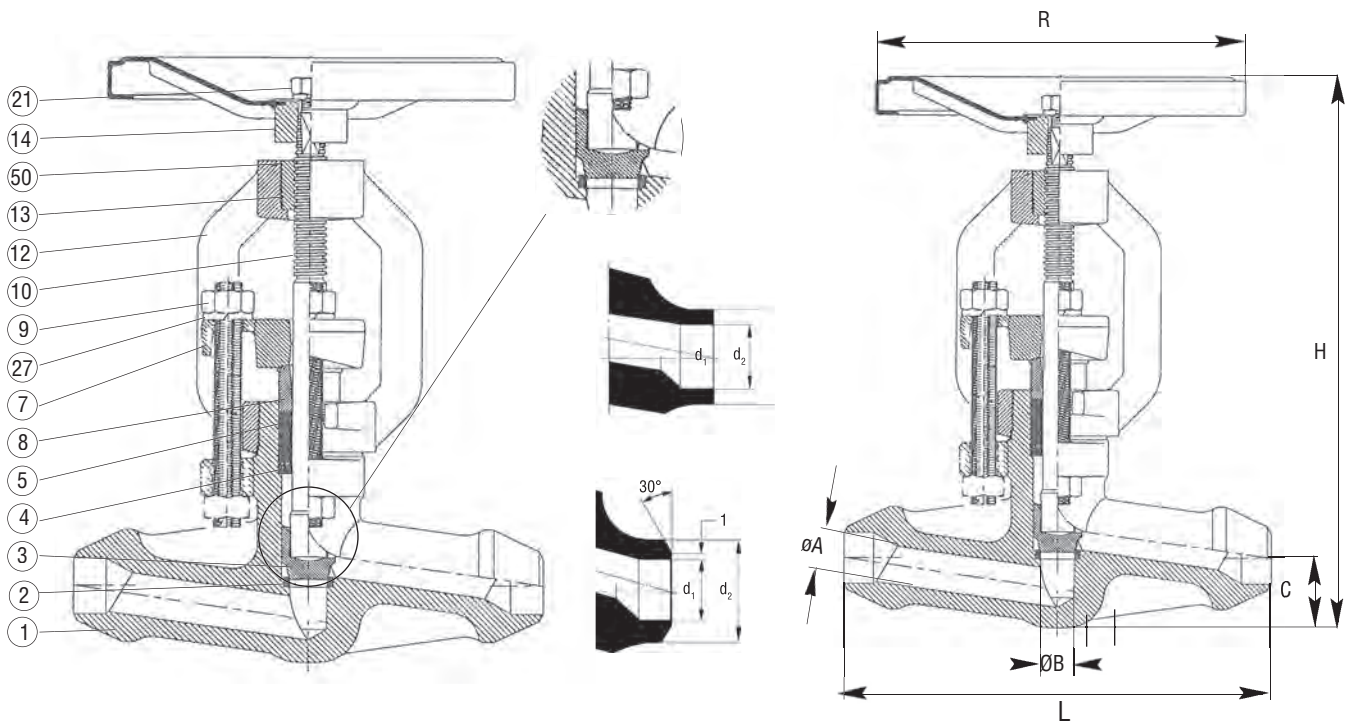
NAF-No	PN	DN	Joint shape	d <sub>1</sub>	d <sub>2</sub>	L	H**	ØA	ØA	C	R	Mass, kg
837917	160/250	15	2	14	22	210	220	11	11	25	150	3,8
837919		20	2	19	28	230	278	16	18	38	200	7,4
		25	2	24	34	230	278	20	18	38	200	7,4
		32	2	31	43	300	455	30	36	72	350	31
		40	2	36	49	300	455	30	36	72	350	31
		50	2	44	61	300	455	40	36	72	350	31

Dimension in mm

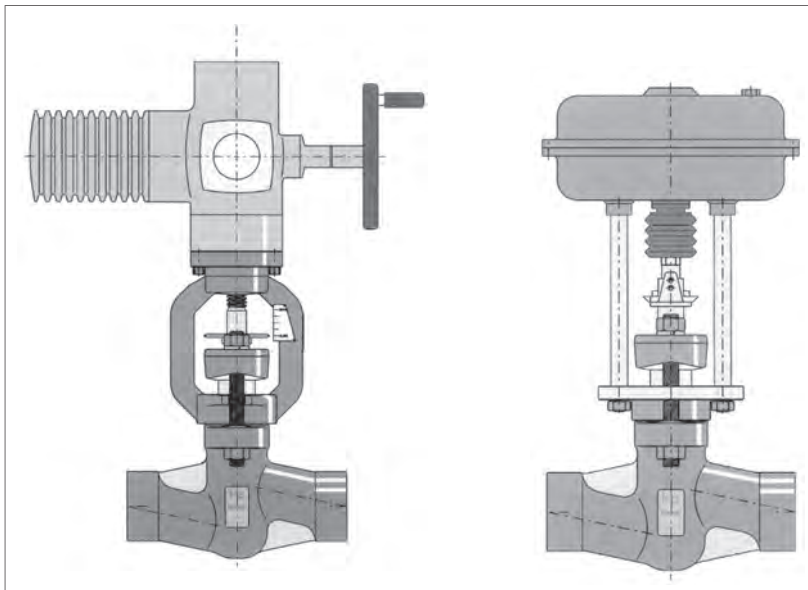
\*\* Open valve

### Working pressure and temperature (Table 5)

NAF-No	PN	Max. temperature °C													
		20	150	200	250	300	350	400	425	450	475	500	510	520	530
		Max. pressure bar (e)													
837917	160/250	250	250	244	228	200	156	112	-	-	-	-	-	-	-
837919	160/250	250	250	250	250	250	238	227	223	217	206	184	154	124	97



## Accessories



This valve type can be supplied with electrical or mechanical position indication, pneumatic or electric actuator, a locking device for open-closed position. See below.

### Variants

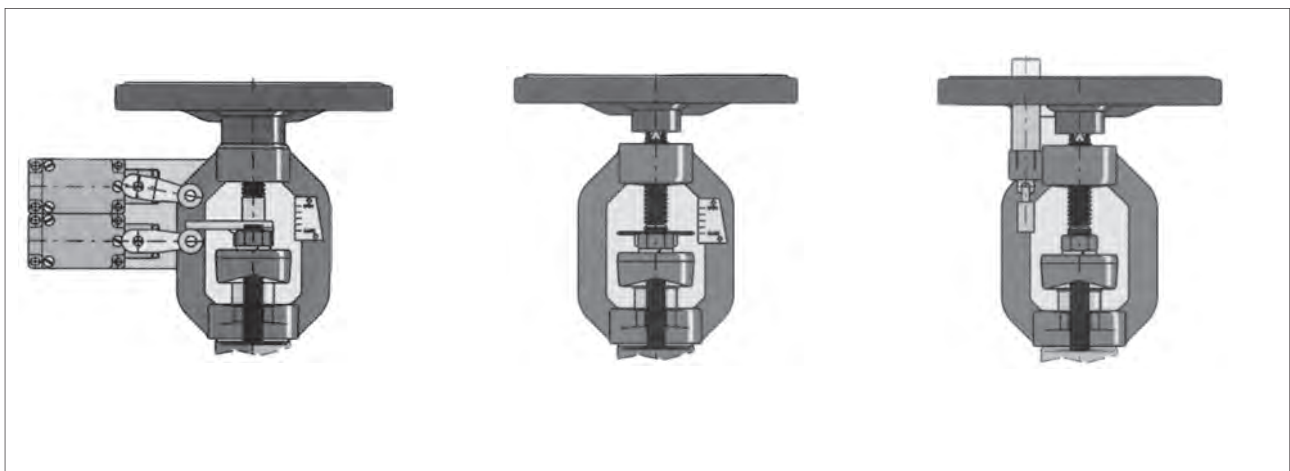
Stop valve version, with control disc and globe check valve, see Fk 20.721, 20.722 and 30.721. All versions are also available in ANSI standard format.

The valves are also available in PN 400 and 640 and in stainless steel.

Contact NAF for further information.

### Marking

The valves are marked with the NAF No., PN, DN, material, part No. and an arrow indicating the direction of flow.



## Installation and maintenance instructions

### Installation

Fit the valve so that it is not subject to abnormal forces from pipelines or the like.

The valve must be fitted in a horizontal pipe with the stem vertical.

### Welding in

Before welding in, check that the pipe system is free of contaminants. After welding in, the pipe must be flushed clear of welding sparks, scale, etc.

During welding in, the valve must be in the open position. Follow the rules applicable to preheating and subsequent heat treatment for the materials.

### Inspection and dismantling

1. Before removing the valve, check that the system is not pressurised.
2. Unscrew the gland nuts from the gland bolts. Then remove the gland bolts.
3. Open the valve fully by turning the handwheel counter-clockwise and thus forcing the loose back seal and box packing out of the stuffing box.
4. Undo the yoke by applying force in the counter-clockwise direction.
5. Unscrew the yoke from the valve body. Approx. 7 turns for DN 15, 10 turns for DN 20-25 and 17 turns for DN 32-50.
6. Lift the yoke out of the valve body together with all inner parts of the valve.
7. Remove the handwheel nut and turn the handwheel clockwise. The stem is then unscrewed from the yoke. Turn the handwheel until the stem and handwheel are separated from one another. Continue unscrewing the stem by taking hold of it underneath the yoke.
8. Remove the gland flange, gland, box packing and the loose washer from the stem by holding it vertical against a solid base and keeping the threaded part downwards. Press the loose back seal.
9. Examine the inner parts, including the seat in the valve body. Clean them and renovate them if there are any scratches or patches of corrosion. Contact NAF for more detailed information on tools and how to lap the sealing surfaces.

### Mounting

The valve is fitted in reverse order.

1. First, clean all inner parts using a solvent, then wipe them with a clean polishing rag.
2. Lubricate all threads using Molykote HCS or equivalent.
3. After fitting, check that the valve can be moved from Open to Closed position.
4. Pressurise the system and keep an eye on the box packing. Tighten the gland nuts carefully if the box leaks.

