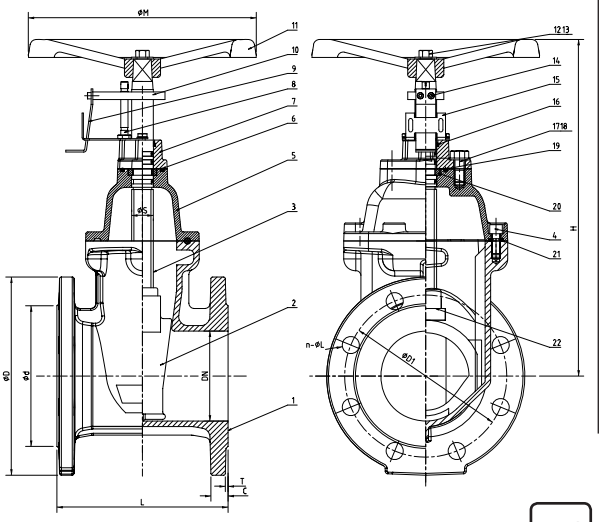
Non-Rising Stem (NRS) EN1171 Gate Valve - Flanged

NRF11

Control Valves

Technical Features

- **Sizes available (Nominal)** : DN50/2", DN65/2 1/2", DN80/3", DN100/4", DN125/5", DN150/6", DN200/8", DN250/10" and DN300/12"
- **Working Pressure** : 16 bar (232 psi)
- **Wedge type** : Resilient EPDM fully encapsulated
- **Finish** : Fusion bonded epoxy inside and outside
- **Approvals** : VdS Approved
- **Connections** : Flange diameter and thickness according to EN1092-2 PN16, and flange drilling can be in accordance with EN1092-2 PN10 for size 8"/DN200, 10"/DN250 and 12"/DN300 according to request
- **Specification** : Design and dimensions conform to EN1171
- **Supervision** : Integral bracket allows monitoring of valve in open position using supervisory switch, P/N 880214. For monitoring closed position part number NRF-SB is required



VdS

Non-Rising Stem (NRS) EN1171 Gate Valve - Flanged - NRF11

Physical Data

Nominal Pipe Size		Flange Type and Drilling	Dimensions (mm)									Reference	Weight (kg)
Metric	inch		L(F4)	H	D	D1	d	C	T	ØM	n-ØL		
DN50	2"	PN10	150	282	165	125	99	19	3	180	4-Ø19	NRF11-0200PN	10.25
		PN16											
DN65	2 1/2"	PN10	170	290	185	145	118	19	3	180	4-Ø19	NRF11-0250PN	12.27
		PN16											
DN80	3"	PN10	180	331	200	160	132	19	3	200	8-Ø19	NRF11-0300PN	16.31
		PN16											
DN100	4"	PN10	190	336	220	180	156	19	3	254	8-Ø19	NRF11-0400PN	21.12
		PN16											
DN125	5"	PN10	200	447	250	210	184	19	3	280	8-Ø19	NRF11-0500PN	32.60
		PN16											
DN150	6"	PN10	210	490	285	240	211	19	3	305	8-Ø23	NRF11-0600PN	42.21
		PN16											
DN200	8"	PN10	230	560	340	295	266	20	3	350	8-Ø23	NRF11-0800PN10	57.28
		PN16									12-Ø23	NRF11-0800PN16	
DN250	10"	PN10	250	706	405	350	319	22	3	450	12-Ø23	NRF11-1000PN10	105.62
		PN16				355					12-Ø28	NRF11-1000PN16	
DN300	12"	PN10	270	802	460	400	370	24.5	4	450	12-Ø23	NRF11-1200PN10	169.02
		PN16				410					12-Ø28	NRF11-1200PN16	

Non-Rising Stem (NRS) EN1171 Gate Valve - Flanged - NRF11

Materials List

Item	Description	Material	Specification	Item	Description	Material	Specification
1	Valve Body	Ductile Iron	EN-GJS-450-10	13	Flat Washer	Carbon Steel	Zinc Plated
2	Wedge Disc	Ductile Iron	EN-GJS-450-10 & EPDM	14	Bolt	Stainless Steel	SS304
3	Stem	Stainless Steel	2Cr13	15	Fixed Plate	Stainless Steel	SS316
4	Bolt	Carbon Steel	Zinc Plated	16	Ring Wiper	EPDM	Commercial
5	Bonnet	Ductile Iron	EN-GJS-450-10	17	Bolt	Carbon Steel	Zinc Plated
6	O-Ring	NBR	Commercial	18	Flat Washer	Carbon Steel	Zinc Plated
7	Gland	Ductile Iron	EN-GJS-450-10	19	O-Ring	EPDM	Commercial
8	Position Fixing Spindle	Stainless Steel	SS316 / See 23	20	Thrust Washer	Brass	HPb59-1
9	Limit Plate	Stainless Steel	SS316	21	Bonnet Gasket	EPDM	Commercial
10	Position Fixing Plate	Stainless Steel	SS316	22	Wedge Nut	Brass	C95400
11	Handwheel	Ductile Iron	EN-GJS-450-10	23	Switch bracket for NRF11 Valve - Part Number: **NRF-SB**		
12	Bolt	Carbon Steel	Zinc Plated				

Datasheet updates the datasheet of 20-01-2016 (Added ØM measurment to Physical Data table).

23-05-2016

Non-Rising Stem (NRS) EN1171 Gate Valve - Flanged

NRF11

Control Valves

Installation

1. Piping systems and valves should be thoroughly cleaned and free from ingress of foreign materials.
2. Visually inspect the valve seating and ports for cleanliness immediately prior to installation.
3. All valves should be independently supported against movement and stress from the connected piping system.
4. Ensure that the valve pressure rating is compatible with service conditions.
5. Operate the valve at least once from the open to closed position.
6. Verify that packing nuts are tight before pressurizing the system.
7. Gate valves are not suitable for throttling applications.
8. Gate valves should be installed in the vertical position on horizontal pipework and in the horizontal position on vertical pipework.

Operation

Gate valves are manually operated multi-turn valves and are opened by a handwheel or other operating device, generally in a counter clockwise direction and then closed clockwise.

Closing Torque for Gate Valve Handwheel		
Size		Closing Torque Nm
2"	DN50	27
2½"	DN65	38
3"	DN80	65
4"	DN100	80
5"	DN125	100
6"	DN150	125
8"	DN200	160
10	DN250	240
12"	DN300	300

Inspection and Maintenance

1. Valves should be inspected periodically and should be cycled to prevent buildup of foreign materials in the piping system and valve body.
2. Always shut down the system before repacking the valve. Valves are designed with backseats for repacking under pressure but this is not recommended.

23-05-2016 Datasheet updates the datasheet of 20-01-2016 (Added ØM measurment to Physical Data table).

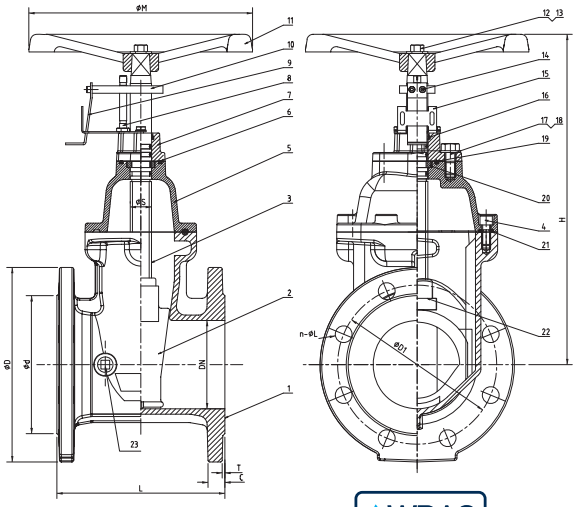
Non-Rising Stem (NRS) BS5163 Gate Valve - Flanged

NRF5WRAS

Control Valves

Technical Features

- **Sizes available (Nominal) :** DN50/2", DN65/2 1/2", DN80/3", DN100/4", DN125/5", DN150/6", DN200/8", DN250/10", DN300/12" & DN350/14"
- **Working Pressure :** 16 bar (232 psi)
- **Working Temperature :** 0.0°C to 70°C
- **Seat type :** Resilient wedge, EPDM encapsulated
- **Finish :** Fusion bonded epoxy coated internal & external
- **Connections :** Flange diameter and thickness according to EN1092-2 PN16, ASME B16.1 CL125 or EN1092-2 PN10
- **Specifications :** Design in accordance with BS 5163; Face to face dimension in accordance with EN 558-1, basic series 3.
- **Supervision :** Integral bracket allows monitoring of valve in open position using supervisory switch, P/N 880214. For monitoing closed position part number NRF-SB is required



WRAS APPROVED PRODUCT
CERTIFICATION MARK

Non-Rising Stem (NRS) BS5163 Gate Valve - Flanged - NRF5WRAS

Physical Data

Nominal Pipe Size		PN	Dimensions (mm)								Reference*			Weight (kg)
Metric	inch		L	H	D	D1	d	C	T	n-d	ANSI	PN10	PN16	
DN50	2"	10/16	178	282	165	125	99	19	3	4-Ø19	NRF5-0200W	NRF5-0200PNW		10.6
DN65	2 1/2"	10/16	190	290	185	145	118	19	3	4-Ø19	NRF5-0250W	NRF5-0250PNW		12.6
DN80	3"	10/16	203	331	200	160	132	19	3	8-Ø19	NRF5-0300W	NRF5-0300PNW		16.7
DN100	4"	10/16	229	366	220	180	156	19	3	8-Ø19	NRF5-0400W	NRF5-0400PNW		21.3
DN125	5"	10/16	254	437	250	210	184	19	3	8-Ø19	NRF5-0500W	NRF5-0500PNW		38.4
DN150	6"	10/16	267	490	285	240	211	19	3	8-Ø23	NRF5-0600W			42.5
DN200	8"	10	292	560	340	295	266	20	3	8-Ø23	NRF5-0800W	NRF5-0800PN10W	NRF5-0800PN16W	62.6
		16								12-Ø23				
DN250	10"	10	330	706	405	350	319	22	3	12-Ø23	NRF5-1000W	NRF5-1000PN10W	NRF5-1000PN16W	117.1
		16				355				12-Ø28				
DN300	12"	10	356	802	460	400	370	24.5	4	12-Ø23	NRF5-1200W	NRF5-1200PN10W	NRF5-1200PN16W	164.9
		16				410				12-Ø28				
DN350**	14"	10	381	1005	520	460	429	26.5	4	16-Ø23	NRF5-1400W	NRF5-1400PN10W	NRF5-1400PN16W	316.1
		16				470				16-Ø28				

* Valve flange drilling (size and location of bolt holes and pitch circle diameter) allows mating with the following flange types :
ANSI = ANSI B16.1 Class 125 | PN10 = DIN 2501, BS 4504, EN 1092 - PN10 | PN16 = DIN 2501, BS 4504, EN 1092 - PN16

** DN350/14" is not WRAS approved

Non-Rising Stem (NRS) BS5163 Gate Valve - Flanged - NRF5WRAS

Materials List

Item	Description	Material	Specification	Item	Description	Material	Specification
1	Valve Body	Ductile Iron	EN-GJS-450-10	13	Flat Washer	Carbon Steel	Zinc Plated
2	Wedge Disc	Ductile Iron	EN-GJS-450-10 & EPDM	14	Bolt	Carbon Steel	Zinc Plated
3	Stem	Stainless Steel	SS420	15	Fixed Plate	Stainless Steel	SS316
4	Bolt	Carbon Steel	Zinc Plated	16	Ring Wiper	EPDM	Commercial
5	Bonnet	Ductile Iron	EN-GJS-450-10	17	Bolt	Carbon Steel	Zinc Plated
6	O-Ring	NBR	Commercial	18	Flat Washer	Carbon Steel	Zinc Plated
7	Gland	Ductile Iron	EN-GJS-450-10	19	O-Ring	EPDM	Commercial
8	Position Fixing Spindle	Stainless Steel	SS316	20	Thrust Washer	Brass	HPb59-1
9	Limit Plate	Stainless Steel	SS316 See 24	21	Bonnet Gasket	EPDM	Commercial
10	Position Fixing Plate	Stainless Steel	SS316	22	Wedge Nut	Brass	HPb59-1
11	Handwheel	Ductile Iron	EN-GJS-450-10	23	1/2" Plug	Bronze	ASTM B584 C83600
12	Bolt	Carbon Steel	Zinc Plated	24	Switch bracket for NRF5 Valve - Part Number: **NRF-SB**		

20-01-2016 Updates datahseet of 02-12-2015 (Supervision part of technical features)

Non-Rising Stem (NRS) BS5163 Gate Valve - Flanged

NRF5WRAS

Control Valves

Installation

1. Piping systems and valves should be thoroughly cleaned and free from ingress of foreign materials.
2. Visually inspect the valve seating and ports for cleanliness immediately prior to installation.
3. All valves should be independently supported against movement and stress from the connected piping system.
4. Ensure that the valve pressure rating is compatible with service conditions.
5. Operate the valve at least once from the open to closed position.
6. Gate valves are not suitable for throttling applications.
7. Gate valves should be installed in the vertical position on horizontal pipework and in the horizontal position on vertical pipework.

Operation

Gate valves are manually operated multi-turn valves and are opened by a handwheel or other operating device, generally in a counter clockwise direction and then closed clockwise.

Closing Torque for Gate Valve Handwheel		
Size		Closing Torque Nm
2"	DN50	27
2½"	DN65	38
3"	DN80	71
4"	DN100	102
5"	DN125	122
6"	DN150	149
8"	DN200	203
10	DN250	251
12"	DN300	305
14"	DN350	306

Inspection and Maintenance

1. Valves should be inspected periodically and should be cycled to prevent buildup of foreign materials in the piping system and valve body.

WRAS APPROVED PRODUCT
CERTIFICATION MARK

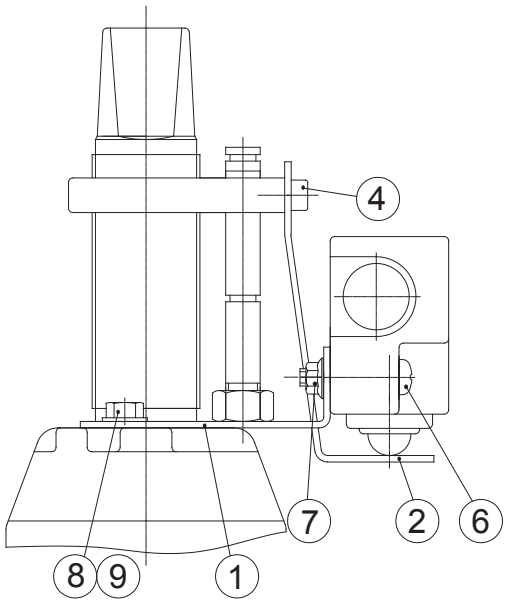
20-01-2016 Updates datahseet of 02-12-2015 (Supervision part of technical features)

Bracket Kits for the Supervision of NRF5, NRF11 & NRG11 Gate Valves

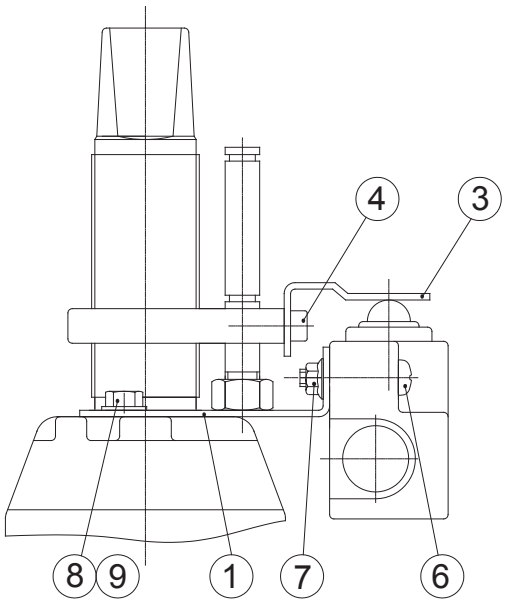
NRF-SB

Control Valves

Normally Open Bracket Kit*



Normally Closed Bracket Kit



Bracket Kits — Materials List

Item	Description		Material	Quantity
1*	Fixed plate		SS316	1
2*	Limit Plate (normally open gate valve)		SS316	1
3	Limit Plate (normally closed gate valve)		SS316	1
4*	Socket Head Cap Bolt M4 x 10		SS304	2
6	Bolt M4 x 30 (ISO 7045)		SS304	2
7	Serrated Flange Nut M4 (ISO 4161)		SS304	2
8*	Hexagon Bolt	For 2"-6" Valve M6 x 10	SS304	2
		For 8"-12" Valve M8 x 10	SS304	2
9*	Washer	For 2"-6" Valve Ø6	SS304	2
		For 8"-12" Valve Ø8	SS304	2

* Bracket supplied with valve (excludes the 2 switch attaching bolts)

Bracket Kit — Part Numbers

Valve Size	Part Number
DN50 to DN300	**NRF-SB**

Each kit contains:
2 x Limit Plates (1 x DN50-DN100 + 1 x DN125-DN350) (Item 2)
2 x Bolts M4 x 30 (Item 6)
2 x Serrated Flange Nuts M4 (Item 7)
1 x Datasheet

Notes

1. When the bracket kit for a normally open gate valve is used, the switch will signal when the valve starts to be closed. This is supplied as standard with the NRF5, NRF11 & NRG11 gate valves.
2. When the bracket kit for a normally closed gate valve is used, the switch will signal when the valve starts to be opened.
3. Brackets are intended to be used with the NRF5 (DN50-DN350), NRF11 & NRG11 (DN50-DN300) gate valves; please refer to separate datasheet for information regarding the valves.
4. The brackets are intended to mount the supervisory switch 880214 or 790400, please refer to separate datasheet for further information.

30-11-2015 Datasheet updates datasheet of 30-11-2015 (drawings modified, valve model added, Limit Plate added to kit contents and changed supervisory switch part number)