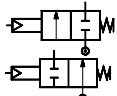


Externally operated valves  
2/2-way angle-seat  
Type AV210

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	Features, technical data and function	3
	Ordering Bronze valve body	4
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	Accessories	8
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	Repair sets	11
	Control valves	12

## Externally operated 2/2-way angle-seat valves



Unpressurized  
closed/ open

**Type AV210**  
**For neutral and aggressive liquids, gases and steam**  
**DN 15-50 G / SS**

G 3/8 - G 2

### Features



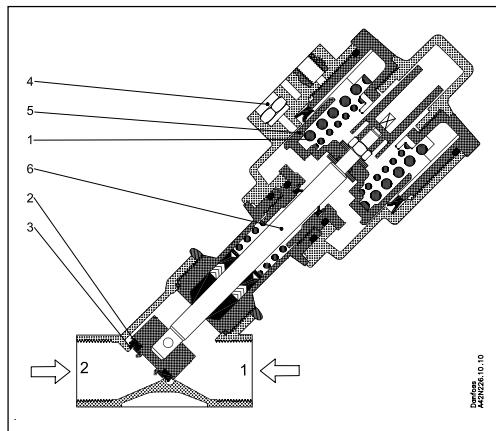
- For robust industrial applications
- Bi - directional NC - version - two flow directions
- Bronze version for water, oil and compressed air or stainless steel version for neutral and aggressive liquid and gaseous media
- Unpressurized closed (NC)bidirectional versions and unpressurized opened (NO) version with closing against the flow direction
- Control connection G 1/4 and NAMUR
- Operating pressure up to 16 bar, depending on valve type
- The valves can be used for rough vacuum
- Valves comply with P.E.D. 97/23/ EC group 1 & 2
- Options: See page 11

### Technical data

Design	Piston-operated; angle-seated		
Installation	Optional		
Pressure range	See ordering		
Tightness	Internally/ Externally: Better than 0.4 mbar l/sec (25 ccm air per min.)		
Ambient temperature	-30 to +60°C		
Medium temperature	-30 to +180°C		
Viscosity	Max. 600 cSt		
Control medium:	Air		
Materials:			
Valve body:	Gun metal	W.no. 2.1096.01	
	Stainless steel	AISI 316	
Intermediate piece:	Bronze body:	W.no. 2.0402	
	Stainless steel body:	AISI 316	
Seat control and nut:	Brass	AISI 316	
Spindle:	Stainless steel	AISI 316	
Spindle gasket:	PTFE	AISI 316	
Gasket	Graphite		
Valve plate unit	PTFE		
Control head:	PA66		

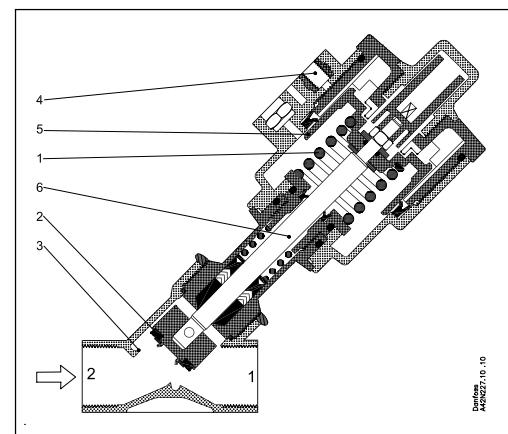
### Function

1. Spring
2. Seat gasket
3. Valve seat
4. Control connection
5. Control piston
6. Spindle



**AV210 unpressurized closed version (NC)**  
The valve is kept closed by the spring (1), which presses the seat gasket (2) against the valve seat (3).

When the pressure is applied to the control connection (4), the control piston (5), the spindle (6) and thus the seat gasket (2) are raised, and the valve opens with or against the pressure of the medium.



**AV210 unpressurized open version (NO)**  
The valve is kept open by the spring (1), which keeps the seat gasket (2) away from the valve seat (3).

When pressure is applied to the control connection (4), the control piston (5), the spindle (6) and thus the seat gasket (2) are lowered, and the valve closes against the pressure of the medium.

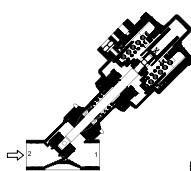
## Externally operated 2/2-way angle-seat valves

G 3/8 - G 2

Type AV210

For neutral and aggressive liquids, gases and steam  
DN 15-50 G

Unpressurized open/closed



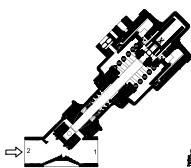
**NC version**  
**Closing against the flow direction**

**Recommended to avoid water hammer**

Connection ISO 228/1	DN	K <sub>v</sub> - value [ m <sup>3</sup> /h]	Diameter control head [mm]	Pressure range <sup>1)</sup> [ bar]	Control pressure		Code no. Bronze		<b>Code no.</b>	
					min. [bar]	max. [bar]	Type designation			
					Main type	Specification				
G 3/8	15	4.5	40 <sup>2)</sup>	0 to 16	4.2	10	AV210A15G	G38T NC000	<b>042N4400</b>	
G 3/8	15	4.9	50	0 to 16	4	10	AV210B15G	G38T NC000	<b>042N4401</b>	
G 1/2	15	5.3	40 <sup>2)</sup>	0 to 16	4.2	10	AV210A15G	G12T NC000	<b>042N4402</b>	
G 1/2	15	5.7	50	0 to 16	4	10	AV210B15G	G12T NC000	<b>042N4403</b>	
G 3/4	20	10	50	0 to 10	4	10	AV210B20G	G34T NC000	<b>042N4404</b>	
G 3/4	20	10	63	0 to 16	4	10	AV210C20G	G34T NC000	<b>042N4405</b>	
G 1	25	20	63	0 to 11	4	10	AV210C25G	G1T NC000	<b>042N4406</b>	
G 1	25	20	90	0 to 16	4	10	AV210D25G	G1T NC000	<b>042N4407</b>	
G 1 1/4	32	29	90	0 to 14	4	10	AV210D32G	G114T NC000	<b>042N4408</b>	
G 1 1/2	40	46	90	0 to 11	4	10	AV210D40G	G112T NC000	<b>042N4409</b>	
G 1 1/2	40	47	110	0 to 16	4	10	AV210E40G	G112T NC00	<b>042N4410</b>	
G 2	50	67	110	0 to 10	4	10	AV210E50G	G2T NC000	<b>042N4411</b>	

<sup>1)</sup> Pressure range can be extended for use in rough vacuum, typically up to 99% vacuum (10mbar), depending on the application

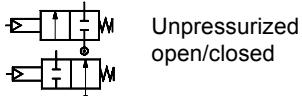
<sup>2)</sup> Without NAMUR interface



**NO version**  
**Closing against the flow direction**

Connection ISO 228/1	DN	K <sub>v</sub> - value [ m <sup>3</sup> /h]	Diameter control head [mm]	Pressure range <sup>1)</sup> [ bar]	Control pressure		Code no. Bronze		<b>Code no.</b>	
					min. [bar]	max. [bar]	Type designation			
					Main type	Specification				
G 3/8	15	4.9	50	See diagram, page 6			AV210B15G	G38T NO000	<b>042N4430</b>	
G 1/2	15	5.7	50	See diagram, page 6			AV210B15G	G12T NO000	<b>042N4431</b>	
G 3/4	20	10	50	See diagram, page 6			AV210B20G	G34T NO000	<b>042N4432</b>	
G 1	25	20	63	See diagram, page 6			AV210C25G	G1T NO000	<b>042N4433</b>	
G 1 1/4	32	29	63	See diagram, page 6			AV210C32G	G114T NO000	<b>042N4434</b>	
G 1 1/2	40	46	90	See diagram, page 6			AV210D40G	G112T NO000	<b>042N4435</b>	
G 2	50	67	110	See diagram, page 6			AV210E50G	G2T NO000	<b>042N4436</b>	

<sup>1)</sup> Pressure range can be extended for use in rough vacuum, typically up to 99% vacuum (10mbar), depending on the application

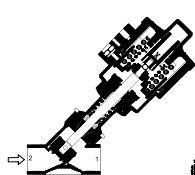
**Externally operated 2/2-way angle-seat valves**


Unpressurized  
open/closed

**Type AV210**

**For neutral and aggressive liquids, gases and steam**  
**DN 15-50 SS**

G 3/8 - G 2

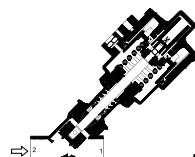


**NC version**  
**Closing against**  
**the flow direction**

**Recommended to avoid water hammer**

Connection ISO 228/1	DN	K <sub>v</sub> - value [ m <sup>3</sup> /h]	Diameter control head [mm]	Pressure range <sup>1)</sup> [ bar]	Control pressure		Code no. <b>Stainless Steel</b>		<b>Code no.</b>	
					min. [bar]	max. [bar]	Type designation			
							Main type	Specification		
G 3/8	15	4.9	50	0 to 16	4	10	AV210B15SS	G38T NC000	<b>042N4450</b>	
G 1/2	15	5.7	50	0 to 16	4	10	AV210B15SS	G12T NC000	<b>042N4451</b>	
G 3/4	20	10	50	0 to 10	4	10	AV210B20SS	G34T NC000	<b>042N4452</b>	
G 3/4	20	10	63	0 to 16	4	10	AV210C20SS	G34T NC000	<b>042N4453</b>	
G 1	25	20	63	0 to 11	4	10	AV210C25SS	G1T NC000	<b>042N4454</b>	
G 1	25	20	90	0 to 16	4	10	AV210D25SS	G1T NC000	<b>042N4455</b>	
G 1 1/4	32	29	90	0 to 14	4	10	AV210D32SS	G114T NC000	<b>042N4456</b>	
G 1 1/2	40	46	90	0 to 11	4	10	AV210D40SS	G112T NC000	<b>042N4457</b>	
G 1 1/2	40	47	110	0 to 16	4	10	AV210E40SS	G112T NC000	<b>042N4458</b>	
G 2	50	67	110	0 to 10	4	10	AV210E50SS	G2T NC000	<b>042N4459</b>	

<sup>1)</sup> Pressure range can be extended for use in rough vacuum, typically up to 99% vacuum (10mbar), depending on the application



**NO version**  
**Closing against**  
**the flow direction**

Connection ISO 228/1	DN	K <sub>v</sub> - value [ m <sup>3</sup> /h]	Diameter control head [mm]	Pressure range <sup>1)</sup> [ bar]	Control pressure		Code no. <b>Stainless Steel</b>		<b>Code no.</b>	
					min. [bar]	max. [bar]	Type designation			
							Main type	Specification		
G 3/8	15	4.9	50	See diagram, page 6			AV210B15SS	G38T NO000	<b>042N4480</b>	
G 1/2	15	5.7	50	See diagram, page 6			AV210B15SS	G12T NO000	<b>042N4481</b>	
G 3/4	20	10	50	See diagram, page 6			AV210B20SS	G34T NO000	<b>042N4482</b>	
G 1	25	20	63	See diagram, page 6			AV210C25SS	G1T NO000	<b>042N4483</b>	
G 1 1/4	32	29	63	See diagram, page 6			AV210C32SS	G114T NO000	<b>042N4484</b>	
G 1 1/2	40	46	90	See diagram, page 6			AV210D40SS	G112T NO000	<b>042N4485</b>	
G 2	50	67	110	See diagram, page 6			AV210E50SS	G2T NO000	<b>042N4486</b>	

<sup>1)</sup> Pressure range can be extended for use in rough vacuum, typically up to 99% vacuum (10mbar), depending on the application

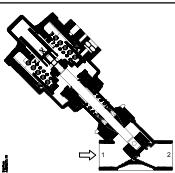
## Externally operated 2/2-way angle-seat valves

Type AV210

For neutral and aggressive liquids, gases and steam

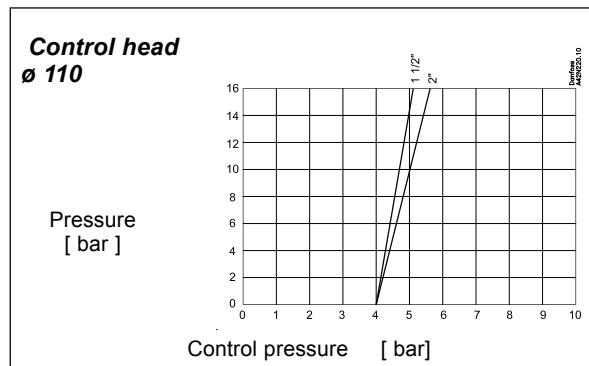
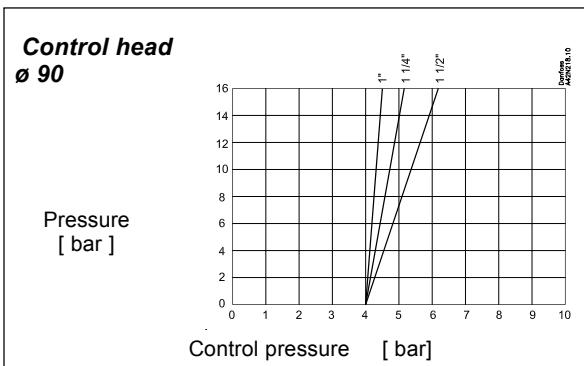
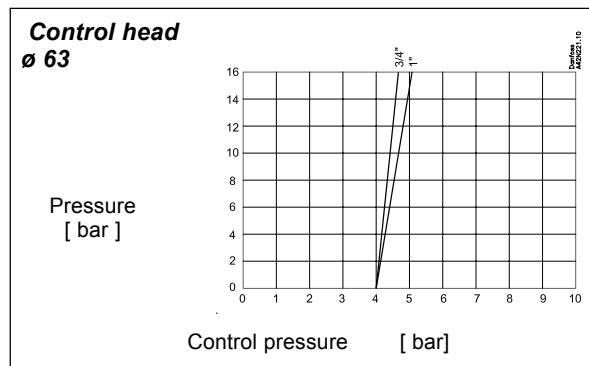
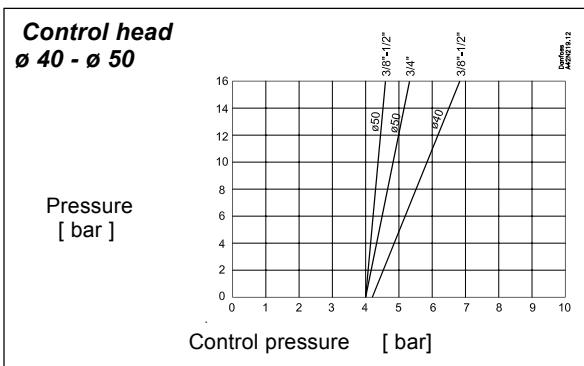
DN 15-50 G / SS

### Diagrams NC

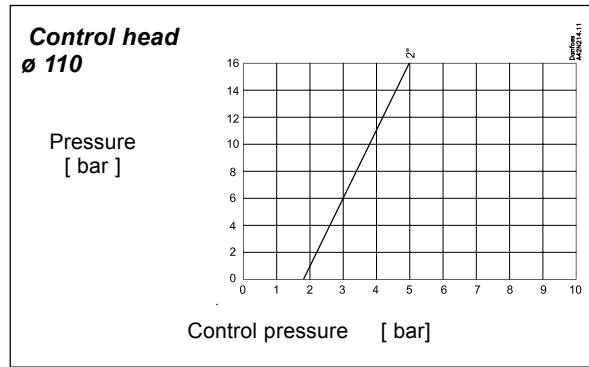
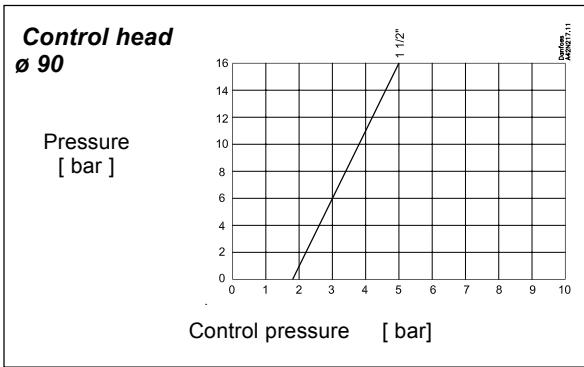
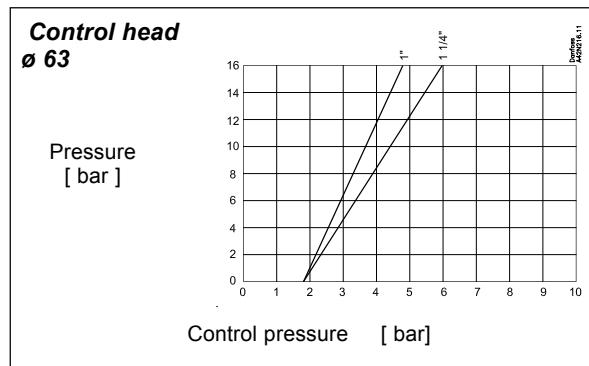
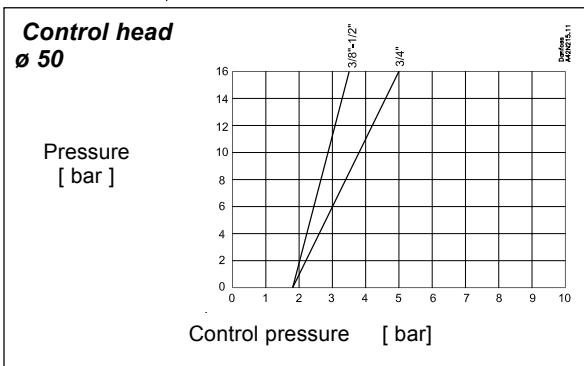
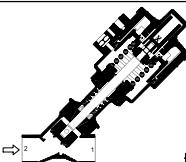


**Closing with  
the flow direction**

**Recommended for compressible fluids for extended pressure range**



### Diagrams NO



## Accessories

**for externally operated valves  
2/2-way angle-seat  
Type AV210 G / SS**

### Position indicator

#### FEATURES

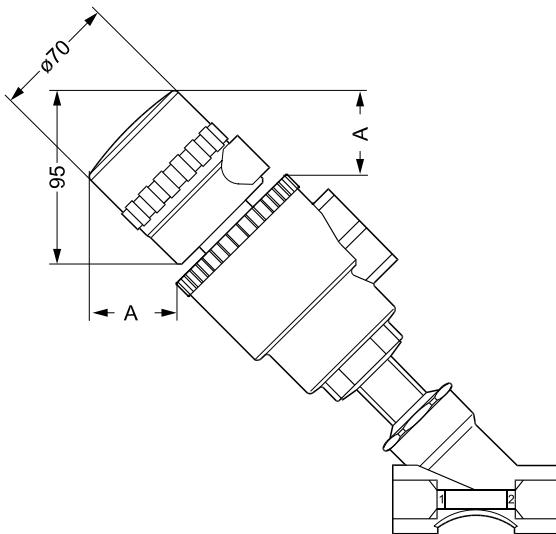
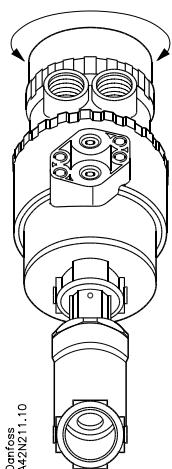
The control box to check the open/closed positions with two mechanical limit switches is suitable for assembling on the whole range of valves.

Level of protection : IP 65.

Ambient temperature:  
from -20°C to +70°C.

Access lead nr.2 PG11.

Body material: polyamide  
(cap in Lexan/polycarbonate)

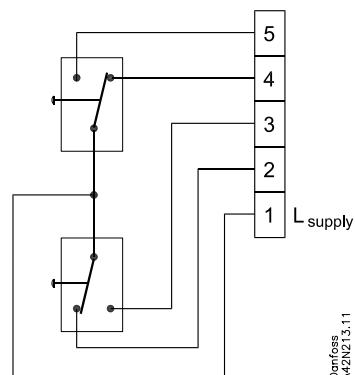


Actuator size	A [ mm]	<sup>1)</sup> Code no.
Ø 50	52,1	<b>042N4820</b>
Ø 63	47,5	<b>042N4821</b>
Ø 90	37,7	<b>042N4822</b>
Ø110	29,5	<b>042N4823</b>

<sup>1)</sup> Limit Switch Box incl. 2 switches

#### Wiring diagram

Limit switch at the top: open valve



Limit switch at the bottom: closed valve

Max.capacity 5A 250 Vac  
1A 250 Vdc

## Accessories

### for externally operated valves

#### 2/2-way angle-seat

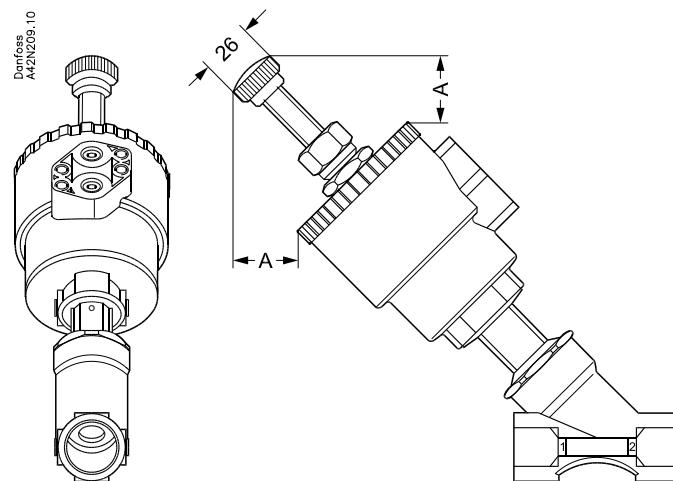
#### Type AV210 G / SS

### Manual override

#### FEATURES

*It permits opening the valve in emergency cases (lack of pilot fluid, machinery damaged, lack of piloting signal)*

*It is available on all the NC - versions.*

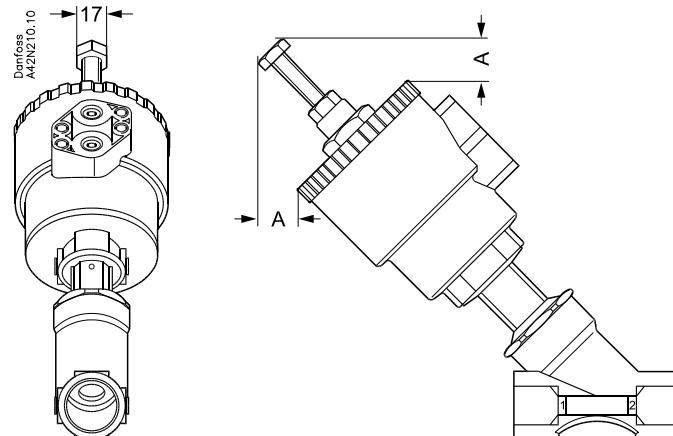


Actuator size	A [ mm ]	Code no.
Ø 50	35,8	042N4840
Ø 63	35,8	042N4841
Ø 90	29,5	042N4842
Ø 110	29,5	042N4843

### Manual capacity control

#### FEATURES

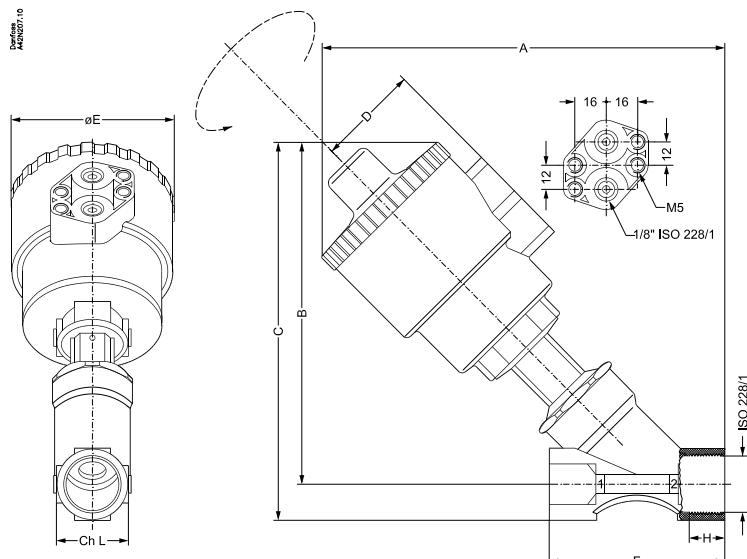
*It limits steplessly the movement of the spindle, and thereby controls the capacity of the valve. Available on all the versions. In NO - version it can be used as manual override.*



Actuator size	A [ mm ]	Code no.
Ø 50	25,5	042N4860
Ø 63	21,5	042N4861
Ø 90	5,2	042N4862
Ø 110	5,9	042N4863

**Externally operated 2/2-way angle-seat valves**
**Type AV210**
**For neutral and aggressive liquids, gases and steam**
**DN 15-50 G / SS**
**Dimensions and weight**
**Bronze valve body**

DN	Connection ISO 228/1	Diameter control head [mm]	A [mm]	B [mm]	C [mm]	D [mm]	øE [mm]	F [mm]	H [mm]	ch.L [mm]	Weight Kg
15	G 3/8	40	144	121	134	35	61	65	12	27	1,1
15	G 3/8	50	163	140	153	44	70	65	12	27	1,1
15	G 1/2	40	144	121	134	35	61	65	13	27	1
15	G 1/2	50	163	140	153	44	70	65	13	27	1
20	G 3/4	50	173	147	163	44	70	75	14,3	27,5	1,2
20	G 3/4	63	191	165	181	50,5	84,4	75	14,3	27,5	1,2
25	G 1	63	206	176	196	50,5	84,4	90	17,5	41	1,6
25	G 1	90	246	216	236	66,2	116,4	90	17,5	41	1,7
32	G 1 1/4	90	255	220	245	66,2	116,4	110	19	50	3
40	G 1 1/2	90	270	235	264	66,2	116,4	120	18	58	3,4
40	G 1 1/2	110	306	271	300	77,4	140,6	120	18	58	4
50	G 2	110	316	276	311	77,4	140,6	150	20	70	5,3

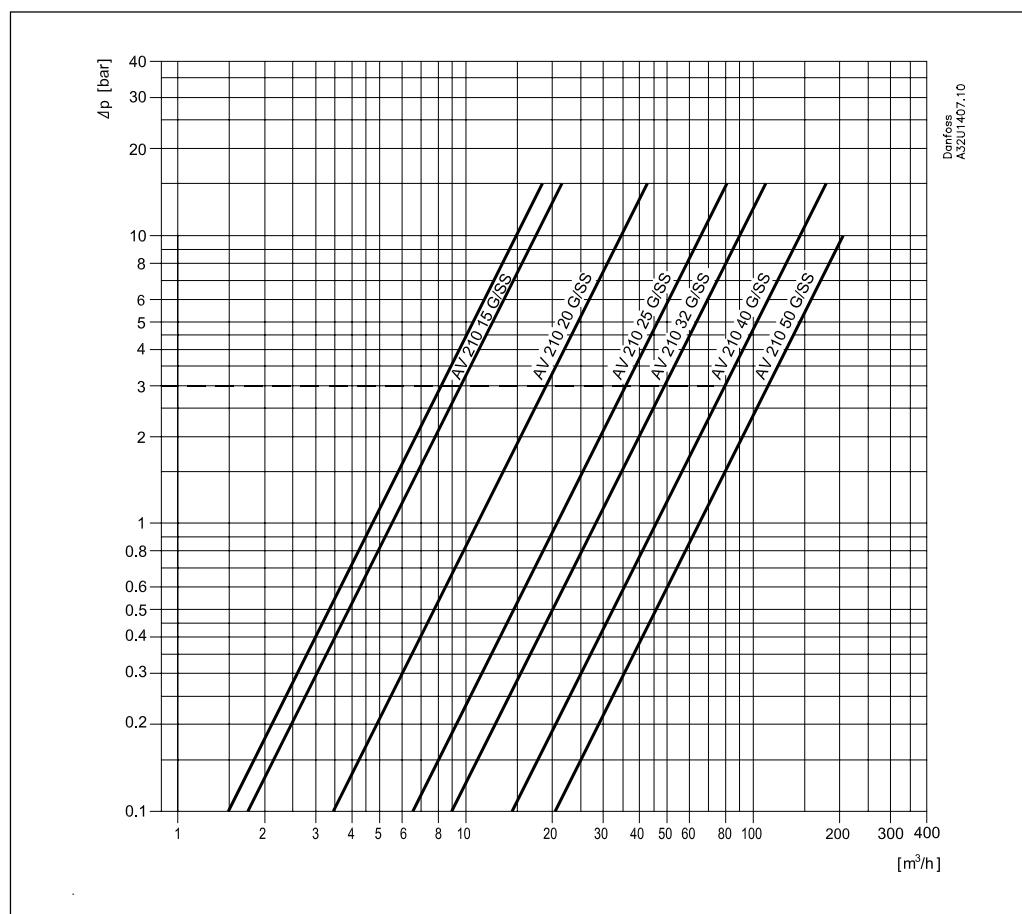

**Stainless Steel valve body**

DN	Connection ISO 228/1	Diameter control head [mm]	A [mm]	B [mm]	C [mm]	D [mm]	øE [mm]	F [mm]	H [mm]	ch. L [mm]	Weight Kg
15	G 3/8	50	190	156	169	44	70	85	12	25	1,1
15	G 1/2	50	190	156	169	44	70	85	15	25	1
20	G 3/4	50	195	160	176	44	70	95	16,3	31	1,2
20	G 3/4	63	213	178	194,4	50,5	84,4	95	16,3	31	1,2
25	G 1	63	219	182	202	50,5	84,4	105	19,5	38	1,6
25	G 1	90	259	222	242	66,2	116,4	105	19,5	38	1,7
32	G 1 1/4	90	266	226	249	66,2	116,4	120	19	47	3
40	G 1 1/2	90	271	230	258	66,2	116,4	130	18	54	3,4
40	G 1 1/2	110	307	266	294	77,4	140,6	130	18	54	4
50	G 2	110	321	276	310	77,4	140,6	150	20	66	5,3

Type AV210

For neutral and aggressive liquids, gases and steam

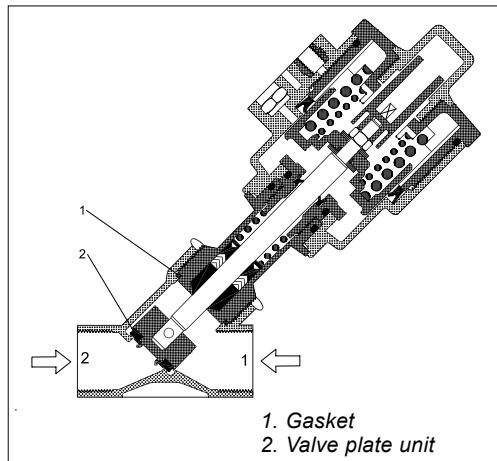
DN 15-50 G / SS

**Capacity diagram**  
Water

## Repair sets

for externally operated valves  
2/2-way angle-seat  
Type AV210

### Repair sets for AV210



### Ordering repair sets for AV 210

Connection	Diameter control head [mm]	Material		Code no.
		Valve plate unit	Gasket	
G 3/8	40	PTFE	Graphite	<b>042N4800</b>
G 3/8	50	PTFE	Graphite	<b>042N4801</b>
G 1/2	40	PTFE	Graphite	<b>042N4802</b>
G 1/2	50	PTFE	Graphite	<b>042N4803</b>
G 3/4	50 - 63	PTFE	Graphite	<b>042N4804</b>
G 1	63	PTFE	Graphite	<b>042N4805</b>
G 1	90	PTFE	Graphite	<b>042N4806</b>
G 11/4	90	PTFE	Graphite	<b>042N4807</b>
G 11/2	90 - 110	PTFE	Graphite	<b>042N4808</b>
G 2	110	PTFE	Graphite	<b>042N4809</b>

The repair set includes 1 valve plate unit and 2 gaskets

### Options for AV210

- NPT, Tri-clamp, welding or flange connection
- Double - acting and "closing with" version
- Stainless steel, compact OEM version
- High ambient temperature version (up to 130°C)
- EEx - approved position indicator

## Accessories

for externally operated valves  
2/2-way angle-seat  
Type AV210 G / SS

### Control valves, types EV310A and EV310B

See separate data sheets DKACV.PD.100.E and DKACV.PD.200.J regarding code numbers, technical data and coil options for Danfoss EV310A and EV310B valves.

Control valves, type EV310A



Control valves, type EV310B



- Valves for industrial applications.
- Available in de-energized closed and de-energized open versions
- Available with or without manual operation

- Valves for industrial application.
- Available in de-energized closed and de-energized open versions
- Available with or without manual operation

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