



Product Range Overview Small Valves, Actuators + Accessories

for radiator, floor heating and chilled ceiling applications

Self-contained thermostatic actuators RTN... without auxiliary power

- CEN-certified and tested to DIN EN215 part 1
- Absolute noiseless actuator technology
- Long service life
- Manual setpoint adjustment, min. and max. limitation

Favorably priced thermal actuators STA..., STP... and STS61... for demanding requirements

- Absolute noiseless actuator technology
- Long service life

Electromotoric actuators SSA... for the most demanding requirements

- Automatic detection of valve stroke
- Long service life
- Low noise
- Plug-in connecting cable

Preadjustable radiator valves VDN..., VEN..., VUN...

- CEN-certified and tested to DIN EN215 part 1
- Insert can be replaced while plant is under pressure

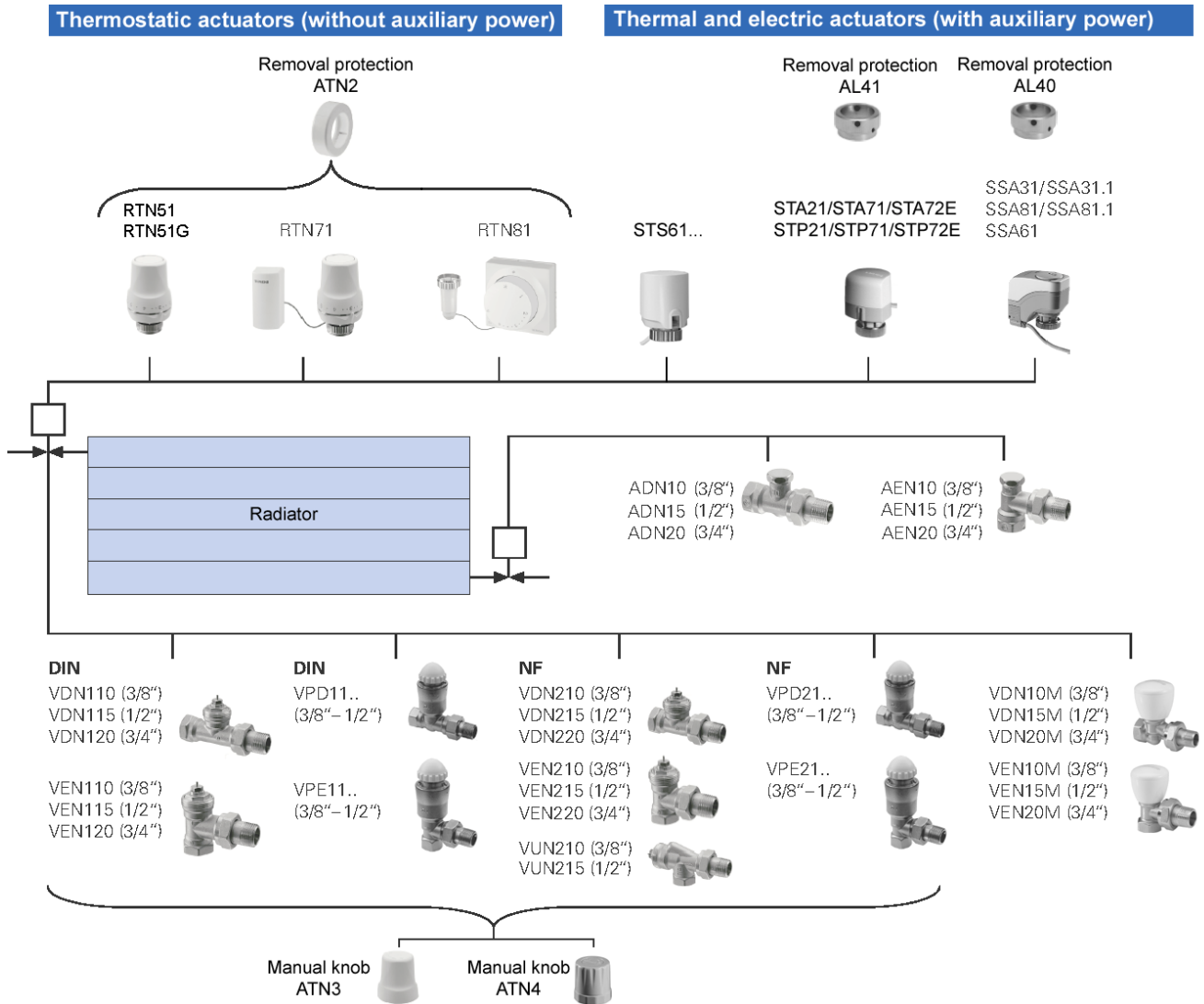
Pressure compensated radiator valves VPD..., VPE... (MCV) for perfect hydraulic balancing

- No noise problems
- No line balancing valves required
- No hydraulic balancing required because of automatic pressure compensation
- Creates comfort and saves energy

Mounting accessories

- Simple and fast mounting
- High operation safety
- Various applications possible

Thermostatic and electronic actuators with valves



Equipment combinations: Valves and fittings

Valves conforming to DIN

VDN110 (3/8")
VDN115 (1/2")
VDN120 (3/4")

VEN110 (3/8")
VEN115 (1/2")
VEN120 (3/4")

Valves conforming to NF

VDN210 (3/8")
VDN215 (1/2")
VDN220 (3/4")

VEN210 (3/8")
VEN215 (1/2")
VEN220 (3/4")

VUN210 (3/8")
VUN215 (1/2")

Lockshield valves

ADN10 (3/8")
ADN15 (1/2")
ADN15 (3/4")

AEN10 (3/8")
AEN15 (1/2")
AEN20 (3/4")

AVN1

AVN10-12
AVN15-12
AVN15-14
AVN15-15
AVN15-16

AVN15P12
AVN15P14

AVN15A14
AVN15A16












Accessories

Adapter (AV...)

For mounting

- thermostatic actuators RTN...
- electromotoric actuators SSA...
- thermal actuators STA...
- thermal actuators STP... (normally open applications)
- thermal actuators STS61...

on radiator valves of other manufacturer according to table:

	AV51	AV52	AV53	AV54	AV55	AV56	AV57	AV58	AV59	AV60	AV61
											
Brand	Beulco	Comap	Danfoss RA-2000	Danfoss RAVL	Danfoss RAV	Giacco- mini	Herz	Oven- trop alt	Vaillant	TA	MMA Markaryd
Adapter thread	M30x1	M28x1.5	-	-	-	-	M28x1.5	M30x1	-	M28x1.5	M28x1.5
Remarks	2)							1)		3)	

The above-mentioned adapters have been tested with the individual types of valves of other manufacture.

Notes

- 1) Oventrop has been using M30 x 1.5 since 2001, requiring no adapter
- 2) Not to be used with RTN...
- 3) TA (Heimeier) has been using M30 x 1.5 since 2003, requiring no adapter

Connection (M30 x 1.5) on valves of other manufacture, without adapter

- Heimeier
- Junkers
- Honeywell Braukmann
- MNG
- Cazzaniga
- Oventrop M30 x 1.5 (as of 2001)
- TA-Type TBV-C
- Beulco new

Differential pressure overflow valves VS9...



Sealing insert AV100-VP1



The sealing insert is suited for use with all radiator valves of the ranges VPD... and VPE....

Type reference (alphabetical)

Type reference	Description	G [in]	Design	Data sheet
ADN10	Lockshield valve	3/8	straight	N2107
ADN15		1/2		
ADN20		3/4		
AEN10		3/8	angle	
AEN15		1/2		
AEN20		3/4		
ATN1	Partner clip			N2100
ATN2	Removal protection			
ATN3	Manual knob			
ATN4	Manual knob			
AVN1	Valve insert			
AVN10-12	Fittings for copper and steel pipes	3/8	Tube Ø 12 mm	
AVN15-12		1/2	Tube Ø 12 mm	
AVN15-14		1/2	Tube Ø 14 mm	
AVN15-15		1/2	Tube Ø 15 mm	
AVN15-16		1/2	Tube Ø 16 mm	
AVN15P12	Fittings for Pex plastic tubing	1/2	Tube Ø 12 x 1.1 mm	
AVN15P14		1/2	Tube Ø 14 x 2 mm	
AVN15A14	Fittings for Alupex tubing	1/2	Tube Ø 14 x 2 mm	
AVN15A16		1/2	Tube Ø 16 x 2 mm	
AV51...AV61	Adapter for valves of other manufacture			
RTN51...	Thermostatic actuator RAL 9016 chrome appearance white glossy appearance			N2111
RTN71	Thermostatic actuator		with remote sensor	
RTN81	Thermostatic actuator		with remote adjuster	
SSA31	Electromotoric actuator		AC 230 V	N4893
SSA81	Electromotoric actuator		AC 24 V	
SSA61	Electromotoric actuator		AC / DC 24 V	
STA21	Thermal actuator		AC 230 V	N4877
STA71	Thermal actuator		AC / DC 24 V	
STA72E	Thermal actuator		AC / DC 24 V	N4875
STP21	Thermal actuator		AC 230 V	N4878
STP71	Thermal actuator		AC / DC 24 V	
STP72E	Thermal actuator		AC / DC 24 V	N4876
STS61...	Thermal actuator		AC 24 V	N4880
VDN110	Valve	3/8	straight, DIN	N2105
VDN115		1/2		
VDN120		3/4		
VDN210		3/8		
VDN215		1/2	straight, NF	N2106
VDN220		3/4		
VEN110	Valve	3/8	angle, DIN	N2105
VEN115		1/2		
VEN120		3/4		
VEN210		3/8	angle, NF	
VEN215		1/2		
VEN220		3/4		
VUN210		3/8	reverse angle, NF	
VUN215		1/2		

Type reference	Description	G [in]	Design	Data sheet	
VDN10M	Manual valve	3/8	straight	N2104	
VDN15M		1/2			
VDN20M		3/4			
VEN10M		3/8	angle		
VEN15M		1/2			
VEN20M		3/4			
VPD110A-45	Mini-Combi-Valve (MCV)	3/8	straight, DIN	N2185	
VPD110A-90		1/2			
VPD110A-145					3/8
VPD115A-45					
VPD115A-90		3/8			
VPD115A-145					angle, DIN
VPD110B-60			1/2		
VPD110B-120		3/8			
VPD110B-200					
VPD115B-60			3/8		
VPD115B-120		1/2			
VPD115B-200					angle, DIN
VPE110A-45			3/8		
VPE110A-90		1/2			
VPE110A-145					
VPE115A-45			1/2		
VPE115A-90		3/8			
VPE115A-145					
VPE110B-60			3/8		
VPE110B-120		1/2			
VPE110B-200					
VPE115B-60			1/2		
VPE115B-120		3/8			
VPE115B-200					1/2
VPD210A-45	Mini-Combi-Valve (MCV)		3/8	straight, NF	
VPD210A-90		1/2			
VPD210A-145			3/8		
VPD215A-45					1/2
VPD215A-90		3/8			
VPD215A-145			angle, NF		
VPD210B-60				1/2	
VPD210B-120		3/8			
VPD210B-200					1/2
VPD215B-60				3/8	
VPD215B-120		1/2			
VPD215B-200			angle, NF		
VPE210A-45				3/8	
VPE210A-90		1/2			
VPE210A-145					3/8
VPE215A-45				1/2	
VPE215A-90		3/8			
VPE215A-145					1/2
VPE210B-60				3/8	
VPE210B-120		1/2			
VPE210B-200					3/8
VPE215B-60				1/2	
VPE215B-120		3/8			
VPE215B-200			1/2		

Type reference	Description	G [in]	Design	Data sheet
VS920	Differential pressure overflow valve	3/4	angle	N2181
VS932		1 1/4		
VS920F	Differential pressure overflow valve for district heating house substations	3/4		
VS932F		1 1/4		

Technical notes

NO, NC valves

NO valves	<ul style="list-style-type: none"> fully open when de-energized (normally open). Valve stem extended. Radiator valves like VDN..., VEN..., VUN..., VPD... or VPE... are usually NO valves.
NC valves	<ul style="list-style-type: none"> Closed when de-energized (normally closed). Valve stem extended. Small valves like V...P47... are usually NC valves.

Valve and actuator combinations

NO function	<ul style="list-style-type: none"> Actuator stem is retracted when de-energized. Valve is open.
NC function	<ul style="list-style-type: none"> Actuator stem is extended when de-energized. Valve is closed.

RTN...

The thermostatic RTN... actuators control the heat demand. They control the water flow by opening and closing the radiator valves.

- With increased heat demand the actuator stem retracts and steadily opens the radiator valve.
- With decreasing heat demand the actuator stem extends and steadily closes the radiator valve.

STA..., STP...

	STA...	STP...
Radiator valves (NO valves)	actuator de-energized	
<ul style="list-style-type: none"> VDN..., VEN..., VUN... VPD..., VPE... 	closed (NC function)	open (NO function)

Attention

Use STA72E actuators for DESIGO RX...

STS61...

The STS61... thermal actuator is driven by a DC 0...10 V positioning signal. The actuator can be operated in two directions of actions (Y↑ or Y↓) and can therefore be used with radiator NO valves as well as with small valves NC.

Operation				Breakdown
Direction of action	DC 0...10 V	Actuator stem	Valve behavior	Actuator de-energized
↑	Y↑ increasing	Stem retracts	NO opens	NO radiator valve or MCV closed
↓	Y↓ increasing	Stem extends	NC opens	NC small valves open

SSA31..., SSA81...

The electromotoric the actuator is driven by DC 0...10 V positioning signal or by a 3-position signal. The description of operation in this document applies to the valve versions which are fully open when de-energized (NO).

3-Position control signal

- | | | |
|----------------------------|---|--------------|
| • Voltage at Y1: | Stem retracts | Valve opens |
| • Voltage at Y2: | Stem extends | Valve closes |
| • No voltage at Y1 and Y2: | Actuator maintains its current position | |

DC 0...10 V

- The valve opens / closes in proportion to the control signal at Y.
- At DC 0 V, the valve is fully closed (A → AB), stem extended
- When power supply is removed, the actuator maintains its current position.