



GEA AWP product program

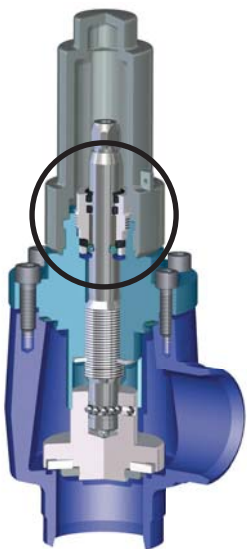
Valves and components
for industrial refrigeration



GEA Refrigeration Technologies is a specialist for the development and manufacture of key components and technical solutions for industrial refrigeration systems. Its product portfolio includes valves and other components as found in such facilities as food and beverage processing plants, cold stores, industrial chemical plants, shipboard equipment, ice rinks, and indoor ski slopes.

In touch – competence and diversity to meet your requirements

Highly effective and economical solutions from a versatile program



GEA Refrigeration Technologies continuously develops future-oriented technologies. In this effort, the company depends on close and trusting collaboration with its customers and with leading research institutes. In addition, our engineers place particular emphasis on reliability, cost effectiveness, and sustainability. This is apparent, for example, with our stem-sealing (see illustration left), which remains tight over the long term, with smooth operational movement. As a result, we can guarantee refrigerant loss of less than 5 grams per year.

GEA AWP valves and components are suitable for use with natural refrigerants, non-corrosive gases and liquids, and cooling brine. These valves and components are perfectly designed, developed, and manufactured in accordance with your specifications. GEA AWP valves have been certified by the following internationally recognized classification authorities:

- German Technical Inspection Agencies (TÜV)
- Lloyd's Register of Shipping (LRS)
- Bureau Veritas Certification (BV)
- Russian Maritime Register of Shipping (RS)
- Urząd Dozoru Technicznego (UDT)
- NIPPON KAIJI KYOKAI (ClassNK)
- Rostechndisor (RTN)
- Gosudarstvenny Standart (GOST)
- Germanischer Lloyd (GL)
- Det Norske Veritas (DNV)

Our certification in accordance with ISO 9001 and Pressure Equipment Directive 97/23/EC proves our orientation to quality in all areas of our work. Our customers profit from highly competent consulting and support as well as from our high-quality products. Despite our love of detail, GEA Refrigeration Technologies keeps an overview of the individual characteristics of a facility: i.e., flawlessly adapting individual components to the customer's systems.

In touch – innovations for your industrial applications

GEA AWP valves and components – more than just a standard program



With the GEA AWP ValveCalc software, developed in-house at GEA, it is possible to effectively select valves and piping, including the supply and blow-off lines for safety valves. This makes selection of the best-suited valves considerably easier. The respective component can be optimally selected in accordance with actual operating conditions. The GEA AWP ValveCalc software enables design for the following plant-facility areas:

- Dry expansion
- Pump and gravity circulation systems
- Brine circuits
- Safety valves and overflow valves, optionally with supply and blow-off lines
- Dual safety-valve combinations, optionally with supply and blow-off lines
- Oil management

Our performance is your gain

- Highly competent consulting and selection from a diversified product range
- Design, development, and manufacturing in accordance with the customer's requirements
- Provision of our GEA AWP ValveCalc software for optimal choice of product
- Materials available: steel, stainless steel, and low-temperature steel in accordance with DIN/EN, ASME/ASTM, and/or NACE
- Engineering design, testing, and official acceptance in accordance with requirements: e.g., ASME VIII Div. 1, Pressure Equipment Directive 97/23/EC
- Certification according to classification authorities, ATEX, and/or TA Luft
- Documentation involving confirmation of the following: materials, quality and inspection plans, welding regulations, welding-technique testing, as well as non-destructive testing such as X-ray, ultrasonic, and dye-penetration tests
- Guarantee of stem-sealing with refrigerant loss of less than 5 grams per year

HRS service valves
stem-sealing screwed-in bush

HRSB service valves
stem-sealing metal bellows



design	straightway or angle type	straightway or angle type
material	steel or stainless steel	stainless steel
nominal size	DN 8-15	DN 8-15
nominal pressure level	PS 63	PS 40
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI screwed ends	butt welding ends DIN, ANSI screwed ends
other	variable connections	variable connections

AVR shut-off valves
stem-sealing screwed-in bush

AVB shut-off valves
stem-sealing metal bellows



design	straightway or angle type	straightway or angle type
material	steel or stainless steel	steel or stainless steel
nominal size	DN 6-500	DN 10-300
nominal pressure level	PS 25, PS 40, PS 63, PS 160	PS 25, PS 40
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends
other	cover extension	cover extension

KV / KVE / KVP
ball valves

AK / AKE / AKP
butterfly valves



design	straightway type	straightway type
material	steel or stainless steel	steel or stainless steel
nominal size	DN 15-150	DN 40-350
nominal pressure level	PS 40	PS 25
temperature range	-60 °C up to +150 °C	-50 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI	flanged ends DIN, ANSI
other	lever electric actuator pneumatic actuator	lever electric actuator pneumatic actuator

HRAR regulating valves
stem-sealing screwed-in bush

HRAB regulating valves
stem-sealing metal bellows



design	straightway or angle type	straightway or angle type
material	steel or stainless steel	steel or stainless steel
nominal size	DN 6-250	DN 10-125
nominal pressure level	PS 25, PS 40, PS 63, PS 160	PS 25, PS 40
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends
other	cover extension	cover extension

RV check valves

RVZ check valves



design	straightway or angle type	straightway type
material	steel or stainless steel	steel or stainless steel
nominal size	DN 6-150	DN 40-350
nominal pressure level	PS 25, PS 40, PS 63	PS 25, PS 40, PS 63
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends	flanged connection acc. to AWP-Standard
other		hot-gas connection linear ball bearing oil drain

RVA stop check valves
shut-off

RVAK stop check valves
with control cone



design	straightway or angle type	straightway or angle type
material	steel or stainless steel	steel or stainless steel
nominal size	DN 10-200	DN 10-150
nominal pressure level	PS 25, PS 40, PS 63	PS 25, PS 40, PS 63
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends
other	cover extension linear ball bearing	cover extension linear ball bearing

SS strainers

FT filter driers



design	straightway or angle type	
material	steel or stainless steel	steel or stainless steel
nominal size	DN 10-300	DN 20-80
nominal pressure level	PS 25, PS 40, PS 63, PS 160	PS 25, PS 40
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends	butt welding ends DIN, ANSI flanged ends DIN, ANSI
other	mesh size: 63 / 80 / 100 / 135 / 150 / 200 / 250 / 500	

SF + SFR
suction filters

SF-AVR / SFR-AVR
suction filter combinations



material	steel	steel
nominal size	DN 80-500	DN 80-500
nominal pressure level	PS 25	PS 25
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	flanged ends DIN, ANSI	flanged ends DIN, ANSI
other	mesh size: 100 / 120 / 200 / 250 / 500 materials, connections, certificates on customer request integrated check valve (SFR)	mesh size: 100 / 120 / 200 / 250 / 500 materials, connections, certificates on customer request integrated check valve (SFR) shut-off valve (AVR)

SVA safety relief valves
depending on back-pressure

SVU safety overflow valves
independent of back-pressure



design	angle type	angle type
material	steel or stainless steel	steel or stainless steel
nominal size	DN 15/25-65/65	DN 10/10-65/100
nominal pressure level	PS 25, PS 40, PS 63	PS 25, PS 40, PS 63
temperature range	A: -60 °C up to +180 °C B: -50 °C up to +110 °C	A: -60 °C up to +180 °C B: -50 °C up to +110 °C
connection	flanged ends DIN, ANSI screwed ends	flanged ends DIN, ANSI screwed ends
set pressure	5-63 bar	4-63 bar

WVR 3-way valves
stem-sealing screwed-in bush

WVB 3-way valves
stem-sealing metal bellows



material	steel or stainless steel	steel or stainless steel
nominal size	DN 10-100	DN 10-125
nominal pressure level	PS 25, PS 40, PS 63	PS 25, PS 40
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	flanged ends DIN, ANSI screwed ends	flanged ends DIN, ANSI screwed ends

WVR-SVA dual safety-valve combinations
depending on back-pressure

WVR-SVU dual safety-valve combinations
independent of back-pressure



material	steel or stainless steel	steel or stainless steel
nominal size	DN 15-65	DN 15-65
nominal pressure level	PS 25, PS 40, PS 63	PS 25, PS 40, PS 63
Temperaturbereich	A: -60 °C up to +180 °C B: -50 °C up to +110 °C	A: -60 °C up to +180 °C B: -50 °C up to +110 °C
connection	flanged ends DIN, ANSI screwed ends	flanged ends DIN, ANSI screwed ends
other	optional with bursting disc, bursting disc holder, excess flow valve	optional with bursting disc, bursting disc holder, excess flow valve

SGL inspection sight glasses

DA flow indicators



design	straightway type	
material	steel or stainless steel	steel
nominal size	DN 10-100	DN 15-50
nominal pressure level	PS 25, PS 40	PS 25
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	flanged ends DIN, ANSI screwed ends	flanged ends DIN, ANSI

SSO quick-closing valves



OF oil filters



DOF double oil filters



material	steel or stainless steel	steel	steel
nominal size	DN 15	DN 15-100	DN 25-80
nominal pressure level	PS 25, PS 40	PS 25, PS 40	PS 25, PS 40
temperature range	-60 °C up to +150 °C	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends	flanged ends DIN, ANSI
other	optional with straightway or angle type shut-off valve	optional with stainless steel mesh or fibrous web paper	

UVU overflow valves
independent of back-pressureORVA oil-pressure
regulating valves

TR thermostatic 3-way valves



design	angle type	angle type	
material	steel or stainless steel	steel	steel
nominal size	DN 10-32	DN 40-50	DN 20-150
nominal pressure level	PS 25, PS 40, PS 63	PS 25, PS 40	PS 25, PS 40
temperature range	A: -60 °C up to +180 °C B: -50 °C up to +110 °C	-60 °C up to +150 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends	butt welding ends DIN, ANSI flanged ends DIN, ANSI	butt welding ends DIN, ANSI flanged ends DIN, ANSI
set pressure	4-63 bar	1-6 bar	

**UVA overflow valves
depending on back-pressure**

**UVR / UVRK overflow valves
for hot-gas defrosting
depending on back-pressure**



design	angle type	straightway and angle type
material	steel or stainless steel	steel or stainless steel
nominal size	DN 10-32	DN 20
nominal pressure level	PS 25, PS 40, PS 63	PS 25, PS 40
temperature range	A: -60 °C up to +180 °C B: -50 °C up to +110 °C	-60 °C up to +150 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI solder ends screwed ends	butt welding ends DIN, ANSI
other		optional with control cone (UVRK)
set pressure	1-25 bar	2-8 bar

**RVD*¹⁾ constant-pressure valves
for compressors without separate oil pumps**

GPV*²⁾ gas-powered valves



design	straightway and angle type	straightway and angle type
material	steel	steel or stainless steel
nominal size	DN 40-150	DN 25-32
nominal pressure level	PS 25, PS 40	PS 40
temperature range	-20 °C up to +100 °C	-60 °C up to +180 °C
connection	butt welding ends DIN, ANSI flanged ends DIN, ANSI	butt welding ends DIN, ANSI
set pressure	1-25 bar	

*¹⁾ RVDs increase the pressure on the discharge side of the compressor during the start phase and first open when the complete oil circulation has been secured.

*²⁾ GVPs are installed in the oil return line between the lowest points of the flooded evaporator and the compressor. The valves are opened to the receiver tank for the collection of the oil/refrigerant mixture. When the tank is filled, hot-gas pressure closes the GPV and concurrently increases the pressure on the reservoir via a transfer passage. This pressure is used to impel the collected oil back into the compressor system.



We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

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