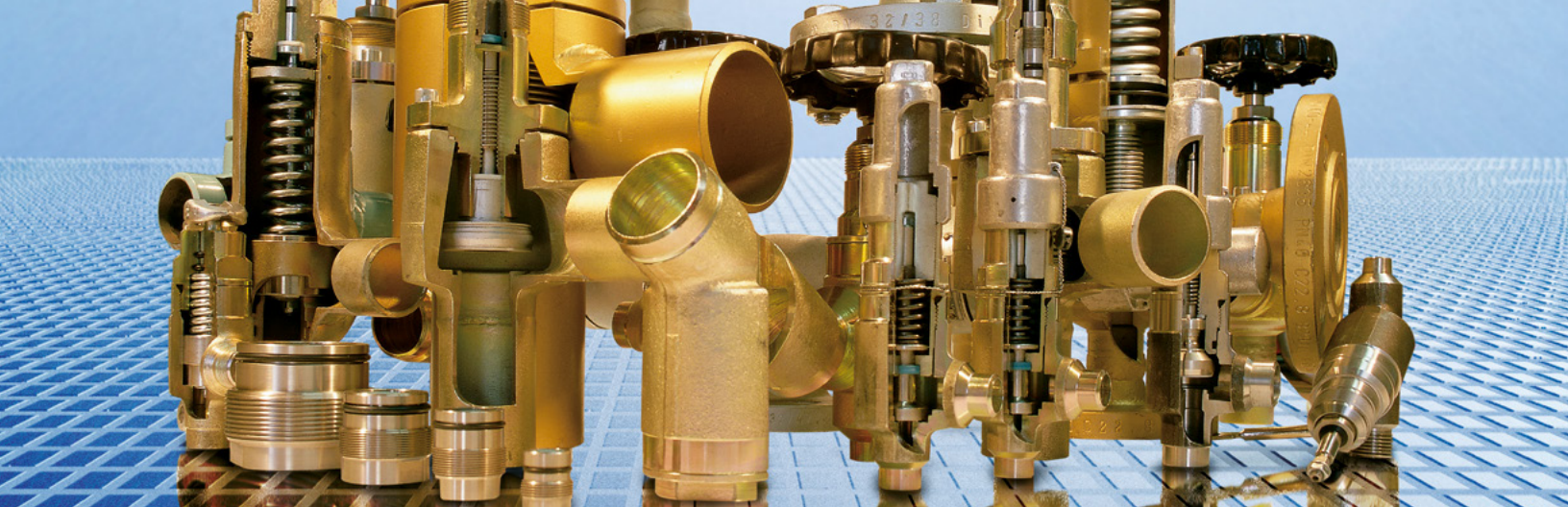




# GEA AWP PRODUCT PROGRAM

Individual Engineering Solutions  
for Industrial Refrigeration and Heating  
and Marine Applications



# EFFECTIVE CUSTOMER SOLUTIONS FROM A VERSATILE PROGRAM

As specialists for the development and manufacture of key components and solutions for industrial refrigeration and heating, GEA AWP has a comprehensive product portfolio of valves, oil regulation systems and additional equipment.



## Industrial Solutions with High Standards of Safety and Reliability

GEA AWP's components are used in facilities such as food and beverage processing, cold storage, industrial chemical plants, concrete cooling, oil, gas, chemical processing, marine equipment and also leisure facilities such as ice rinks and indoor ski slopes. Through close and committed collaboration with our customers and together with leading research institutes world-wide, we supply industrial valves and regulation equipment with a particular emphasis on the durability and reliability required to meet the rigors of industrial plant operation.

To this end, GEA AWP is certified by many of the world's leading certification and accreditation organizations serving industries based on all continents around the globe, meeting obligations in respect of regional and national standards of safety and performance reliability. International customers may have production and safety requirements tailored to individual applications which we are happy to provide.

The following is a selection of major international standards authorities who have awarded over fifty certification and accreditation approvals to GEA AWP's valves and regulation equipment.



Lloyd's  
Register



# STANDARD OR INDIVIDUAL SOLUTIONS

## Five Decades of Experience in Designing and Manufacturing of Refrigeration Equipment

The engineering design and development department at GEA AWP works closely with customers on individual solutions and their performance requirements. The company commands a complete in-house manufacturing process using CNC machinery and state-of-the-art welding technologies. The innovative stem-sealing system is based on extremely high surface finishing and precision manufacturing to maintain a smooth operation over the long term and less than 5 grams (0.18 ounces) leakage per year. The materials used to manufacture our valves include steel, stainless steel, low temperature steel and aluminum. We are certified with the ISO 9001 and Pressure Equipment Directive 2014/68/EU to ensure customers of our commitment to international standards.

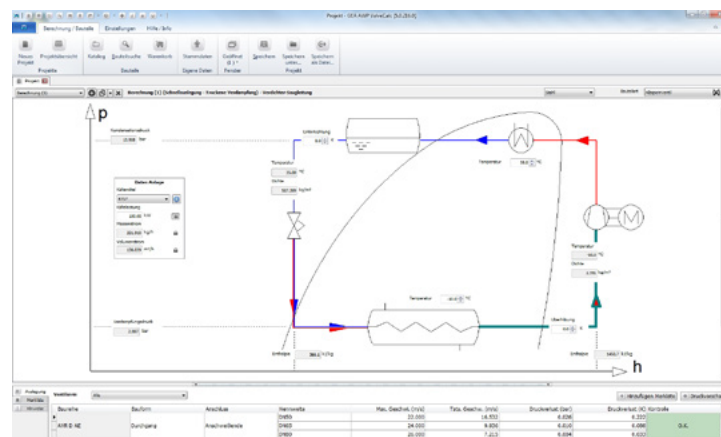
## Personal Customer Service and Support

- Design, development and manufacturing in accordance with the customer's requirements
- Materials according to DIN/EN, ASME/ASTM and/or NACE
- Design, testing and official acceptance in accordance with ASME Pressure Vessel Directives, U- and UM-Stamp and Pressure Equipment Directive 2014/68/EU
- Certification according to classification authorities ATEX and/or TA Luft
- Documentation includes material certificates, quality and inspection plans, welding processes and testing results (non-destructive testing by x-ray, ultrasonic and dye-penetration)

## Dimensioning Made Easy – with GEA AWP ValveCalc

Our design engineers are happy to assist customers with the dimensioning of valves, however, with GEA AWP's ValveCalc, an in-house developed software which is available free of charge, it is possible for our customers to accurately and independently select valves and piping including supply and blow-off lines for safety valve assemblies. The selection of the best-suited valves and equipment is made considerably easier with regard to the operating processes and conditions.

- Intuitive program operation
- Safety valves and overflow valves, optionally with supply and blow-off lines
- Dual safety-valves, optionally with supply and blow-off lines
- Different calculation standards for safety valves (AD2000 A2 / DIN EN 13136:2020 / API 520/521 / SR 09-592(595)-03)
- Calculation of branched lines as well as different fire zones possible
- Dry and flooded evaporation
- Brine circuits
- Extensive media database for refrigerants and natural gases
- Also available as a web-based application on our homepage



## GEA AWP safety valves to easily replace third-party products

GEA AWP offers safety valves with dimensions especially adapted to meet those of third-party products. This makes a simple exchange in the system possible without any additional efforts.





|                              | <b>HRS Service Valves<br/>Stem-sealing<br/>with Screwed-in Bush</b> | <b>HRSB Service Valves<br/>Stem-sealing<br/>with Metal Bellows</b> | <b>HRSN Needle Valves<br/>Stem-sealing<br/>with Screwed-in Bush</b>               |
|------------------------------|---------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Design                       | straightway or angle type                                           | straightway or angle type                                          | straightway or angle type                                                         |
| Material                     | steel or stainless steel                                            | stainless steel                                                    | steel or stainless steel                                                          |
| Nominal Pipe Size            | 0.25-0.5 inches                                                     | 0.25-0.5 inches                                                    | 0.25-0.5 inches                                                                   |
| Nominal Pressure Level       | 913 psi                                                             | 580 psi                                                            | 913 psi                                                                           |
| Temperature Range standard   | -76°F up to 302°F                                                   | -76°F up to 302°F                                                  | -76°F up to 302°F                                                                 |
| Temperature Range HT-ventile | 14°F up to 392°F                                                    | 14°F up to 392°F                                                   | 14°F up to 392°F                                                                  |
| Connections                  | butt welding ends<br>as per DIN and ANSI,<br>threaded ends          | butt welding ends<br>as per DIN and ANSI,<br>threaded ends         | butt welding ends<br>as per DIN and ANSI,<br>threaded ends                        |
| Additional Information       | various fittings available                                          | various fittings available                                         | with pointed regulating cone<br>for fine regulation<br>various fittings available |



|                              | <b>AVR Shut-off Valves<br/>Stem-sealing<br/>with Screwed-in Bush</b>             | <b>AVB Shut-off Valves<br/>Stem-sealing<br/>with Metal Bellows</b>               | <b>AVR / AVB Shut-off Valves<br/>with Electric Actuator</b> |
|------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------|
| Design                       | straightway or angle type                                                        | straightway or angle type                                                        | straightway or angle type                                   |
| Material                     | steel or stainless steel                                                         | steel or stainless steel                                                         | steel or stainless steel                                    |
| Nominal Pipe Size            | 0.125-20 inches                                                                  | 0.375-12 inches                                                                  | 1-20 inches                                                 |
| Nominal Pressure Level       | 362, 580, 913, 2320 psi                                                          | 362, 580 psi                                                                     | 362, 580, 913 psi                                           |
| Temperature Range standard   | -76°F up to 302°F                                                                | -76°F up to 302°F                                                                | -76°F up to 302°F                                           |
| Temperature Range HT-ventile | 14°F up to 392°F                                                                 | 14°F up to 392°F                                                                 | 14°F up to 392°F                                            |
| Connections                  | butt welding and flanged ends per DIN<br>and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends per DIN<br>and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends<br>as per DIN and ANSI        |
| Additional Information       | available with cover extension                                                   | available with cover extension                                                   | equipped with electric actuator                             |



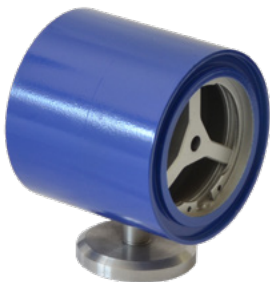
|                        | <b>KV / KVE / KVP<br/>Ball Valves</b>                                                     | <b>AK / AKE / AKP<br/>Butterfly Valves</b> |
|------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------|
| Design                 | straightway type                                                                          | straightway type                           |
| Material               | steel or stainless steel                                                                  | steel or stainless steel                   |
| Nominal Pipe Size      | 0.5-8 inches                                                                              | 1.5-20 inches                              |
| Nominal Pressure Level | 580, 913, 1450 psi                                                                        | 362 psi                                    |
| Temperature Range      | -58°F up to 392°F                                                                         | -58°F up to 302°F                          |
| Connections            | butt welding and flanged ends as per DIN and ANSI                                         | flanged ends as per DIN and ANSI           |
| Additional Information | available with lever for manual operation, as well as with electric or pneumatic actuator |                                            |



|                        | <b>HRAR Regulating Valves<br/>Stem-sealing<br/>with Screwed-in Bush</b>             | <b>HRAB Regulating Valves<br/>Stem-sealing<br/>with Metal Bellows</b>               | <b>SGL Inspection<br/>Sight Glasses<br/>(for Vessels)</b>  |
|------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------|
| Design                 | straightway or angle type                                                           | straightway or angle type                                                           | straightway type                                           |
| Material               | steel or stainless steel                                                            | steel or stainless steel                                                            | steel or stainless steel                                   |
| Nominal Pipe Size      | 0.125-10 inches                                                                     | 0.375-5 inches                                                                      | 0.375-8 inches                                             |
| Nominal Pressure Level | 362, 580, 913, 2320 psi                                                             | 362, 580 psi                                                                        | 362, 580, 913 psi                                          |
| Temperature Range      | -76°F up to 302°F                                                                   | -76°F up to 302°F                                                                   | -58°F up to 392°F                                          |
| Connections            | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends | butt welding ends<br>as per DIN and ANSI,<br>threaded ends |
| Additional Information | available with cover extension                                                      | available with cover extension                                                      |                                                            |



|                              | <b>RV<br/>Check Valves</b>                                                          | <b>RVA<br/>Check and Shut-off Valve</b>                                             | <b>RVAK Check and Shut-off Valve<br/>with Regulating Cone</b>                       |
|------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Design                       | straightway or angle type                                                           | straightway or angle type                                                           | straightway or angle type                                                           |
| Material                     | steel or stainless steel                                                            | steel or stainless steel                                                            | steel or stainless steel                                                            |
| Nominal Pipe Size            | 0.125-6 inches                                                                      | 0.375-10 inches                                                                     | 0.375-6 inches                                                                      |
| Nominal Pressure Level       | 362, 580, 913 psi                                                                   | 362, 580, 913 psi                                                                   | 362, 580, 913 psi                                                                   |
| Temperature Range standard   | -76°F up to 302°F                                                                   | -76°F up to 302°F                                                                   | -76°F up to 302°F                                                                   |
| Temperature Range HT-ventile | 14°F up to 392°F                                                                    | 14°F up to 392°F                                                                    | 14°F up to 392°F                                                                    |
| Connections                  | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends |
| Additional Information       |                                                                                     | available with cover extension<br>and linear ball bearing                           | available with cover extension<br>and linear ball bearing                           |



|                              | <b>RVZ Check Valves</b>                                                 | <b>SS Strainers</b>                                                                 | <b>FT Filter Driers</b>                              |
|------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------|
| Design                       | straightway type (clamped design)                                       | straightway or angle type                                                           |                                                      |
| Material                     | steel or stainless steel                                                | steel or stainless steel                                                            | steel or stainless steel                             |
| Nominal Pipe Size            | 1-16 inches                                                             | 0.375-14 inches                                                                     | 0.75-6 inches                                        |
| Nominal Pressure Level       | 362, 580, 913 psi                                                       | 362, 580, 913, 2320 psi                                                             | 362, 580 psi                                         |
| Temperature Range standard   | -76°F up to 302°F                                                       | -76°F up to 302°F                                                                   | -76°F up to 302°F                                    |
| Temperature Range HT-ventile | 14°F up to 392°F                                                        | 14°F up to 392°F                                                                    | 14°F up to 392°F                                     |
| Connections                  | flanged ends<br>as per DIN and ANSI                                     | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends<br>as per DIN and ANSI |
| Additional Information       | available with hot gas connection,<br>linear ball bearing and oil drain | available mesh sizes (μ):<br>63 / 80 / 100 / 135 /<br>150 / 200 / 250 / 500         |                                                      |



|                              | <b>SF / SFR<br/>Suction Filters</b>                                                                            | <b>SF-AVR / SFR-AVR<br/>Suction Filter Combinations</b> | <b>SFCS<br/>Suction Filters</b>     |
|------------------------------|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------------------|
| Material                     | steel or stainless steel                                                                                       | steel or stainless steel                                | steel or stainless steel            |
| Nominal Pipe Size            | 3-20 inches                                                                                                    | 3-20 inches                                             | 3-20 inches                         |
| Nominal Pressure Level       | 362, 580, 913 psi                                                                                              | 362, 580, 913 psi                                       | 362, 580, 913 psi                   |
| Temperature Range standard   | -76°F up to 302°F                                                                                              | -76°F up to 302°F                                       | -76°F up to 302°F                   |
| Temperature Range HT-ventile | 14°F up to 392°F                                                                                               | 14°F up to 392°F                                        | 14°F up to 392°F                    |
| Connections                  | flanged ends<br>as per DIN and ANSI                                                                            | flanged ends<br>as per DIN and ANSI                     | flanged ends<br>as per DIN and ANSI |
| Additional Information       | available mesh sizes (μ): 63 / 80 / 100 / 135 / 150 / 200 / 250 / 500<br>available with integrated check valve |                                                         |                                     |



|                              | <b>TR Thermostatic 3-way Valves</b>                  | <b>Service and Needle Valves with Electric Actuator</b> |
|------------------------------|------------------------------------------------------|---------------------------------------------------------|
| Material                     | steel or stainless steel                             | steel or stainless steel                                |
| Nominal Pipe Size            | 0.75-6 inches                                        | 0.25-0.5 inches                                         |
| Nominal Pressure Level       | 362, 580, 913 psi                                    | 913 psi                                                 |
| Temperature Range standard   | -76°F up to 302°F                                    | -76°F up to 302°F                                       |
| Temperature Range HT-ventile |                                                      | 14°F up to 392°F                                        |
| Connections                  | butt welding and flanged ends<br>as per DIN and ANSI | butt welding ends as per DIN and ANSI,<br>threaded ends |
| Additional Information       |                                                      | equipped with electric actuator                         |



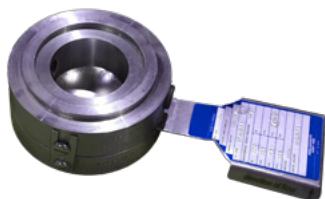
|                              | WVR 3-way Valves<br>Stem-sealing with Screwed-in Bush | WVB 3-way Valves<br>Stem-sealing with Metal Bellows | WVR AL 3-way Valves<br>in Compact Design |
|------------------------------|-------------------------------------------------------|-----------------------------------------------------|------------------------------------------|
| Material                     | steel or stainless steel                              | steel or stainless steel                            | aluminum                                 |
| Nominal Pipe Size            | 0.375-4 inches                                        | 0.375-4 inches                                      | 0.5-4 inches                             |
| Nominal Pressure Level       | 362, 580, 913 psi                                     | 362, 580 psi                                        | 362, 580, 913 psi                        |
| Temperature Range standard   | -76°F up to 302°F                                     | -76°F up to 302°F                                   | -76°F up to 302°F                        |
| Temperature Range HT-ventile | 14°F up to 392°F                                      | 14°F up to 392°F                                    | n/a                                      |
| Connections                  | flanged ends as per DIN and ANSI,<br>threaded ends    | flanged ends as per DIN and ANSI,<br>threaded ends  | flanged ends<br>as per DIN and ANSI      |



|                        | SVA Safety Relief Valves<br>Back-Pressure Dependent<br>Conventional Direct Spring-loaded |
|------------------------|------------------------------------------------------------------------------------------|
| Design                 | angle type                                                                               |
| Material               | steel                                                                                    |
| Nominal Pipe Size      | 0.75/1-0.75/1.25 inches                                                                  |
| Nominal Pressure Level | 362, 580, 913 psi                                                                        |
| Temperature Range      | type A: -76°F up to 356°F<br>type B: -58°F up to 230°F                                   |
| Connections            | threaded NPT per ASME                                                                    |
| Set Pressure Range     | 250-350 psi                                                                              |



|                        | <b>WVR-SVA / -SVU<br/>Dual Safety Valves</b>                                           | <b>WVR AL SVA / SVU<br/>Dual Safety Valves</b>                                         | <b>DA Flow Indicators<br/>(for Dual Safety Valves)</b> |
|------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------------|
| Material               | steel or stainless steel                                                               | aluminum (3-way valve)<br>steel or stainless steel (safety valves)                     | steel                                                  |
| Nominal Pipe Size      | 0.375/0.375 - 4/4 inches                                                               | 0.5/0.5 - 4/4 inches                                                                   | 0.5-2 inches                                           |
| Nominal Pressure Level | 362, 580, 913 psi                                                                      | 362, 580, 913 psi                                                                      | 362, 580, 913 psi                                      |
| Temperature Range      | type A: -76°F up to 356°F<br>type B: -58°F up to 230°F                                 | type A: -76°F up to 248°F<br>type B: -58°F up to 230°F                                 | -58°F up to 392°F                                      |
| Connections            | flanged ends as per DIN and ANSI,<br>threaded ends                                     | flanged ends as per DIN and ANSI                                                       | flanged ends as per DIN and ANSI                       |
| Additional Information | optionally available<br>with bursting disc, bursting disc holder,<br>excess flow valve | optionally available<br>with bursting disc, bursting disc holder,<br>excess flow valve |                                                        |



|                        | <b>KUB Reverse Acting Bursting Discs</b>                                                          |
|------------------------|---------------------------------------------------------------------------------------------------|
| Material               | stainless steel<br>further materials upon request                                                 |
| Nominal Pipe Size      | 0.375-3 inches<br>larger sizes on request                                                         |
| Nominal Pressure Level | 580 psi                                                                                           |
| Temperature Range      | depending on the material,<br>stainless steel: -112°F up to 608°F                                 |
| Connections            | flanged ends as per DIN and ANSI, threaded ends                                                   |
| Additional Information | available for gaseous and liquid mediums,<br>two-phase flow applications and hygiene applications |



|                        | <b>SSO Quick Closing Valves</b>                                        | <b>OF Oil Filters</b>                                                | <b>DOF Double Oil Filters</b>       |
|------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------|-------------------------------------|
| Material               | steel or stainless steel                                               | steel                                                                | steel                               |
| Nominal Pipe Size      | 0.5 inches                                                             | 0.5-4 inches                                                         | 1-3 inches                          |
| Nominal Pressure Level | 362, 580, 913 psi                                                      | 362, 580 psi                                                         | 362, 580 psi                        |
| Temperature Range      | -76°F up to 302°F                                                      | -76°F up to 302°F                                                    | -76°F up to 302°F                   |
| Connections            | butt welding and flanged ends<br>as per DIN and ANSI,<br>threaded ends | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends | flanged ends<br>as per DIN and ANSI |
| Additional Information | optionally available with straightway<br>or angle type shut-off valve  | mesh size: 10-40 $\mu$ ,<br>material: paper / stainless steel        |                                     |



|                        | <b>UVA Overflow Valves<br/>Back-Pressure Dependent</b>                              | <b>UVU Overflow Valves<br/>Back-Pressure Independent</b>                            | <b>ORVA Oil-Pressure<br/>Regulating Valves</b>       |
|------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------|
| Design                 | angle type                                                                          | angle type                                                                          | angle type                                           |
| Material               | steel or stainless steel                                                            | steel or stainless steel                                                            | steel                                                |
| Nominal Pipe Size      | 0.375-1.25 inches                                                                   | 0.375-1.25 inches                                                                   | 0.375-2 inches                                       |
| Nominal Pressure Level | 362, 580, 913 psi                                                                   | 362, 580, 913 psi                                                                   | 362, 580 psi                                         |
| Temperature Range      | type A: -76°F up to 356°F<br>type B: -58°F up to 230°F                              | type A: -76°F up to 356°F<br>type B: -58°F up to 230°F                              | -76°F up to 302°F                                    |
| Connections            | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends<br>as per DIN and ANSI,<br>brazed ends, threaded ends | butt welding and flanged ends<br>as per DIN and ANSI |
| Set Pressure Range     | 14-362 psi                                                                          | 58-913 psi                                                                          | 14-87 psi                                            |



|                        | <b>UVR / UVRK Overflow Valves<br/>for Hot Gas Defrosting,<br/>Back-Pressure Dependent</b> | <b>GPV<br/>Gas-Powered<br/>Valves</b>    | <b>RVD Constant-Pressure Valves<br/>for Compressors without<br/>Separate Oil Pumps</b> |
|------------------------|-------------------------------------------------------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------|
| Design                 | straightway or angle type                                                                 | straightway or angle type                | straightway or angle type                                                              |
| Material               | steel or stainless steel                                                                  | steel or stainless steel                 | steel or stainless steel                                                               |
| Nominal Pipe Size      | 0.75 inches                                                                               | 1-1.25 inches                            | 1.5-6 inches                                                                           |
| Nominal Pressure Level | 362, 580 psi                                                                              | 580 psi                                  | 362, 580 psi                                                                           |
| Temperature Range      | -76°F up to 302°F                                                                         | -76°F up to 302°F                        | -76°F up to 302°F                                                                      |
| Connections            | butt welding ends<br>as per DIN and ANSI                                                  | butt welding ends<br>as per DIN and ANSI | butt welding and flanged ends<br>as per DIN and ANSI                                   |
| Additional Information | optional with control cone (UVRK)                                                         |                                          |                                                                                        |
| Set Pressure Range     | 29-116 psi                                                                                |                                          | 14-130 psi                                                                             |



### GPV Gas-Powered Valves

GPVs are installed in the oil return line between the lowest point of the flooded evaporator and the compressor. By design the valves are open so the oil-refrigerant mixture runs into the oil reservoir. Once filled, hot-gas pressure closes the GPV and concurrently increases the pressure on the reservoir via an overflow bore. This pressure is used to impel the collected oil back to the compressor.

### RVD Constant Pressure Valves

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

### Magnetic Filtration

You can easily expand your system with additional magnetic filtration simply by replacing the covers of the already installed strainers. The illustration shows a strainer cover upside down. The new cover filters magnetic particles out of the medium, which could otherwise flow through the sieve.



|                              | <b>RVR Constant Pressure Valves</b>                  |
|------------------------------|------------------------------------------------------|
| Material                     | steel or stainless steel                             |
| Nominal Pipe Size            | 1.5-6 inches                                         |
| Nominal Pressure Level       | 362, 580 psi                                         |
| Temperature Range standard   | -76°F up to 302°F                                    |
| Temperature Range HT-ventile | 14°F up to 392°F                                     |
| Connections                  | butt welding and flanged ends<br>as per DIN and ANSI |
| Set Pressure Range           | 14-130 psi                                           |

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