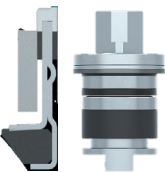
















# VALUE SELLING

## Ball valve series Ballostar KHA, DN 15 - DN 125

| KHA   | KEY FEATURES   | USP  | CUSTOMER VALUE   | BENEFIT  |
|---|--|--|--|--|
|    | Wide range of sealing elements and stuffing boxes                              | Excellent adaptation to the application. Valid for abrasive media and high operating cycles. High temperature range. Sealing elements are insensitive to solids. | One-stop solution for various situations.  | No product mix – many applications can be implemented with one ball valve model. No blocking of the sealing elements due to impurities. Standard version leakage rate A. |
|    | V-Port balls for control applications  | Easy upgrade of a standard to a control KHA version by just changing the ball.   | Calculation of control process using CONVAL and specification of the correct V-port ball.  | Ensuring functionality through background calculations.  |
|   | Body construction & process connection. Body materials: 1.0619, 1.4408, duplex | Casted housing with integrated ISO TOP flange and short housing screws. Flanged, weld end and threaded connection possible.                                      | Robust housing is insensitive to pressure shocks and thermal influences. High mechanical stability due to short body screws. Easy automation thanks to ISO TOP flange. Different process connections in one design possible. | Sustainable, durable and flexible construction.  |
|  | Double block & bleed version   | Available in all line sizes DN15 to DN125.   | Possibility of draining the cavity and tightness check of the upstream sealing element.  | Maximum plant safety and security during maintenance work.   |
|  | Maintenance  | Easy maintenance possible because of 3-piece construction.   | Various spare part kits quick available.   | Cost savings in spare parts inventory.   |
|  | Service Life   | High-quality parts and flexible construction.  | Durable product when correctly designed and spare parts are readily available.   | Cost savings through long service life and shorter maintenance cycles.   |
|  | Certification  | Fire Safe acc. EN 10497/API 607, ISO 15848-1, TA Luft and VDI2440 certification in standard version (Gas certification and oxygen BAM available).                | Fire safe and Emissions Certification (ISO 15848) in one construction.   | High availability in case of ignition of the media and increased tightness to atmosphere.  |
|  | Standard and special applications  | Customised solutions for critical media/applications. Ideally suited also for standard applications.   | Regardless of the application, a ball valve solution is always available.  | Maximum coverage of requirements with one ball valve model.  |




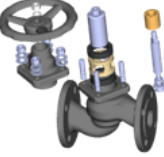


# VALUE SELLING

## Ball valve series Ballostar KHI-F, DN 150 - DN 400

| KHI-F   | KEY FEATURES  | USP  | CUSTOMER VALUE   | BENEFIT  |
|---|---|--|--|--|
|    | <p>Different types of shaft O-rings depending on the process.</p> <p>Soft and metal sealing elements.</p> | <p>Excellent adaptation to the application and various processes. Valid for corrosive/abrasive media and high operating cycles. High standard temperature range. Sealing elements are insensitive to solids.</p> | <p>One-stop solution for various situations in different industries.</p>   | <p>Maximum flexibility and adaptability.<br/>Standard version leakage rate A.<br/>No blocking of the sealing elements due to impurities.</p>   |
|   | <p>Body and ball construction.<br/>Body materials: 1.4581, duplex</p>                                     | <p>Weight-optimised, casted housing and ball.<br/>When metal seats are used, the ball is chrome coated.</p>  | <p>The robust casted housing and ball are insensitive to pressure shocks and thermal influences. Due to weight optimisation, easy handling during installation is ensured. The chrome layer ensures max. hardness and min. surface roughness → no sticking particles</p> | <p>Sustainable, durable and highly available ball valve construction.<br/>Time savings during installation due to low weight.<br/>High service life of the seats when the ball is chrome coated.</p> |
|  | <p>Double block &amp; bleed version</p>   | <p>Drain/test valve available for all line sizes.</p>  | <p>Possibility of draining the cavity and tightness check of the upstream sealing element.</p>   | <p>Maximum plant safety and security during maintenance work.</p>  |
|  | <p>Maintenance</p>  | <p>Simple parts – easy to maintain.</p>  | <p>Easy handling due to simple construction.</p>   | <p>Saving effort and time for maintenance.</p>   |
|  | <p>Service Life</p>   | <p>High-quality parts and good workmanship.</p>  | <p>Durable product when correctly designed and spare parts are readily available.</p>  | <p>Cost savings through long service life and shorter maintenance cycles.</p>  |
|  | <p>Certification</p>  | <p>Fire Safe acc. EN 10497/ API 607 and ISO 15848-1 certification in standard version (Gas certificate and oxygen BAM approval available).</p>   | <p>Fire safe and Emissions Certification (ISO 15848) in one construction.</p>  | <p>High availability in case of ignition of the media and increased tightness to atmosphere.</p>   |
|  | <p>Standard and special applications</p>  | <p>Customised solutions for critical media/applications. Ideally suited also for standard applications.</p>  | <p>Regardless of the application, a ball valve solution is always available.</p>   | <p>Maximum coverage of requirements with one ball valve model.</p>   |



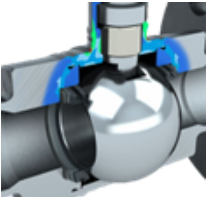


# VALUE SELLING

## Piston valve series KVN, DN 15 - DN 200

| KVN   | KEY FEATURES                                 | USP  | CUSTOMER VALUE  | BENEFIT   |
|---|--|--|---|---|
|    | Valve ring type KX-GT<br>Valve ring type KX1 | Extremely robust due to serrated stainless steel layers in the ring. Pressure and temperature shock resistant.   | Applicable for high service temperatures up to +400°C.  | Long service life. Leakage rate A. KX1 type is TA Luft approved.  |
|    | Body construction                            | Casted housing and bonnet. Different housing materials available.  | The robust casted housing and bonnet are insensitive not only to pressure and temperature shocks but also to pipeline forces. | Sustainable, durable and long life construction.  |
|  | Valve ring / piston construction             | The piston is moving through the valve rings and lantern – there is no “classic” seat. The valve rings are not directly in the media flow. Regulating piston or lantern on demand. | Constant torque from open to close.<br><br>No seat erosion.<br><br>Inline change of piston/lantern for control use.           | Hand wheel is easy to operate. Longer service life of the valve rings. Easy and time saving modification. |
|  | Maintenance                                  | Easy maintenance due to simple construction and quick available spare parts.   | Inline service possible. The valve don't have to be dismantled during maintenance. Wide range of spare parts available.       | Saving effort and time for maintenance. Cost savings in spare parts inventory.                            |
|  | Service Life                                 | Robust casted housing parts in combination with resilient valve ring – piston construction.  | Durable and robust product.   | Cost savings through long service life and shorter maintenance cycles.                                    |
|  | Certification                                | Fire Safe acc. EN10497/ API 607 in standard version with KX-GT valve rings. TA Luft certificate with KX1 valve rings. Oxygen BAM approval available.                               | A standard valve with KX-GT rings can be easily upgraded to TA Luft version by just changing the valve rings to KX1 type.     | Easy and time saving modification.  |

# VALUE SELLING

## Ball valve series Monoball KHO, DN 15 - DN 250

| KHO   | KEY FEATURES  | USP   | CUSTOMER VALUE  | BENEFIT  |
|---|---|---|---|--|
|    | Pre-stressed sealing system   | Unsusceptible to variation in temperature and pressure surge.   | No blocking or failure under thermal and mechanical influence.  | Long service life of the seats.<br>High availability even under low operations.<br>Stable high leakage rate A.                         |
|    | V-Port balls for control applications   | Easy upgrade of a standard to a control KHA version by just changing the ball.  | Inline change of the top O-Rings.   | Simple sealing allows time saving and easy trouble shooting.   |
|   | Body construction & process connection.<br>Body materials: 1.0619, 1.4408, duplex | Casted housing with integrated ISO TOP flange and short housing screws. Flanged, weld end and threaded connection possible. | Insensitive to water hammers, pressure shocks or pipeline forces.   | Increased service life.<br>Low maintenance.<br>Saving of maintenance costs.  |
|  | Double block & bleed version  | Available in all line sizes DN15 to DN125.  | Tension free and durable body construction.   | No occurrence of crack corrosion on the body welds caused by the influence of housing stresses. Significant extension of service life. |
|  | Maintenance   | Easy maintenance possible because of 3-piece construction.  | Valve must be ready even with limited actuations. Tested forces not only according to EN488, but as well according to the higher demand of the FW401. | High availability ensures low maintenance costs and down time.   |