



## DISCOVANNE

HIGH PERFORMANCE  
DOUBLE OFFSET  
BUTTERFLY VALVE  
GACHOT®

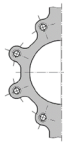


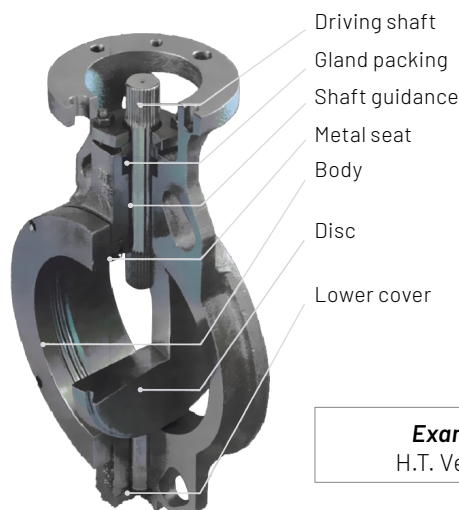
### SAPAG VALVES

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|                                        |                                                                                                                                                                                                                                                                                                                                                                                                         |         |                   |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------|
| Performances                           | The maximum pressures and temperatures depend on the pressure/temperature ratio and the nature of the fluid.                                                                                                                                                                                                                                                                                            |         |                   |
|                                        | Temperature, °C                                                                                                                                                                                                                                                                                                                                                                                         | -196 °C | 550 °C 700 °C     |
|                                        | Pressure, bar                                                                                                                                                                                                                                                                                                                                                                                           | 0*      | 50 100 bar        |
|                                        | Diameter, mm                                                                                                                                                                                                                                                                                                                                                                                            | DN32    | DN50 DN300 DN3000 |
| (*) Standard vacuum resistance: 1 torr |                                                                                                                                                                                                                                                                                                                                                                                                         |         |                   |
| Technology                             | Double offset and, according to the design, Bidirectional.<br>The eccentricity of the shaft, and of the disc with the seat have the following benefits: <ul style="list-style-type: none"> <li>• Low operating torque,</li> <li>• Reduced seat wear,</li> <li>• Lack of retention zone.</li> </ul> Can be used in isolation and setup service.                                                          |         |                   |
| Type of body                           | Wafer  Lug                                                                                                                                                                                                                         |         |                   |
| Face to Face                           | ISO5752 - S16 (DN50-DN300)<br>Option: ISO5752 - S20 (DN50-DN125)                                                                                                                                                                                                                                                                                                                                        |         |                   |
| Design Standard                        | EN593 / ISO10631                                                                                                                                                                                                                                                                                                                                                                                        |         |                   |
| Shaft control                          | The groove assembly allows the distribution of the operating torque on the shaft.                                                                                                                                                                                                                                                                                                                       |         |                   |
| Cable gland                            | <ul style="list-style-type: none"> <li>• Series of compact graphite rings with high temperature resistance, or PTFE, according to the design.</li> <li>• Easily accessible packing gland thanks to a bracket system.</li> </ul>                                                                                                                                                                         |         |                   |
| Guiding                                | Use of self-lubricating rings with low coefficients of friction and large spans ensuring longevity and robustness.                                                                                                                                                                                                                                                                                      |         |                   |
| Seat                                   | <ul style="list-style-type: none"> <li>• Precise positioning of the disc thanks to centering rings.</li> <li>• Metal seat with metal O-ring to reduce valve torque.</li> </ul>                                                                                                                                                                                                                          |         |                   |
| Disc                                   | <ul style="list-style-type: none"> <li>• Built-in stop to limit any over-opening.</li> <li>• Design of studied profile assuring high flow rates and low flow rates pressure losses.</li> <li>• In metal gasket version, treatment increasing surface hardness of the disc.</li> <li>• The valve is a spherical segment whose circumference in contact with the seat ensures perfect sealing.</li> </ul> |         |                   |
| Option                                 | Realization on request : <ul style="list-style-type: none"> <li>• Fire Safe (SNEA / BS6755-2 / ISO10497)</li> <li>• Cryogenics</li> </ul>                                                                                                                                                                                                                                                               |         |                   |



**Example**  
H.T. Version

## Parts List – RTFE Version (220 °C max.)

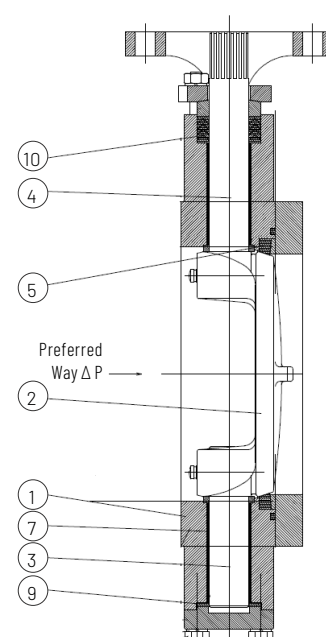
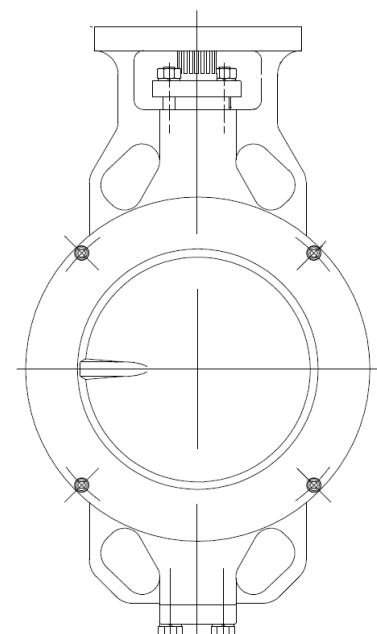
|    | Nb | Name               | Material                                                        |            |                                    |                                                                                  |           |                                       |
|----|----|--------------------|-----------------------------------------------------------------|------------|------------------------------------|----------------------------------------------------------------------------------|-----------|---------------------------------------|
|    |    |                    | Carbon steel                                                    |            |                                    | Stainless steel                                                                  |           |                                       |
|    |    |                    | DN 50                                                           | DN 65-125  | DN 150-300                         | DN 50                                                                            | DN 65-125 | DN 150-300                            |
| 1  | 1  | Body               | 1.6220                                                          | A350 - LF2 | 1.0625                             | 1.4409                                                                           | 1.4404    | 1.4408                                |
| 2  | 1  | Disc               | 1.4006                                                          |            |                                    | 1.4404                                                                           |           |                                       |
| 3  | 1  | Lower stem         | ST : <b>1.4021</b><br>DN50-200 (25 bar) /<br>DN250-300 (20 bar) |            |                                    | ST : <b>1.4404</b> or <b>1.4542</b><br>DN50-200 (25 bar) /<br>DN250-300 (20 bar) |           |                                       |
| 4  | 1  | Driving shaft Seat |                                                                 |            |                                    |                                                                                  |           |                                       |
|    |    |                    | AT : <b>1.4021</b><br>DN50-200 (50 bar) /<br>DN250-300 (25 bar) |            |                                    | AT : <b>1.4542</b><br>DN50-200 (50 bar) /<br>DN250-300 (25 bar)                  |           |                                       |
| 5  | 1  | Bushing            | PTFE 25% Glass (-> 180 °C)<br>PTFE 15% Carbon (-> 220 °C)       |            |                                    |                                                                                  |           |                                       |
| 7  | 2  | Lower gasket       | Nickel Graphite                                                 |            | Carbon steel <sup>(1)</sup> + PTFE | Nickel Graphite                                                                  |           | Stainless steel <sup>(1)</sup> + PTFE |
| 9  | 1  | Gland Packing      | PTFE                                                            |            |                                    |                                                                                  |           |                                       |
| 10 | 1  | Body               | PTFE                                                            |            |                                    |                                                                                  |           |                                       |

AT: 1-PIECE SHAFT / ST: 2-PIECES SHAFT

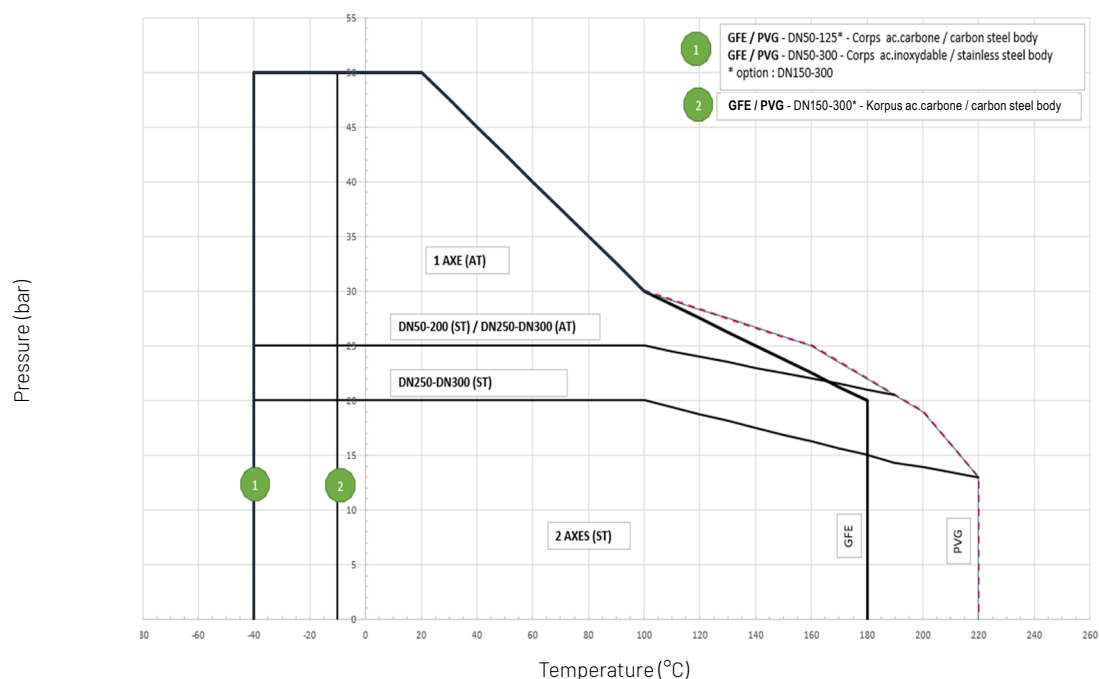
(1) 180 °C max. Hard carbon: 220 °C max.

|                       |                    |                  |
|-----------------------|--------------------|------------------|
| Design Standard       | EN593              | ISO10631         |
| Face to Face Standard | EN558 - S16        | ISO5752 - S16    |
| Test Standard         | EN12266-1 - Rate A | ISO5208 - Rate A |
| Connection Standard   | EN1092<br>EN1759   | ISO7005          |

Note : Face to Face S20 on request DN60-125



### Pressure / Temperature Curves RTFE seat - Construction 220 °C max.



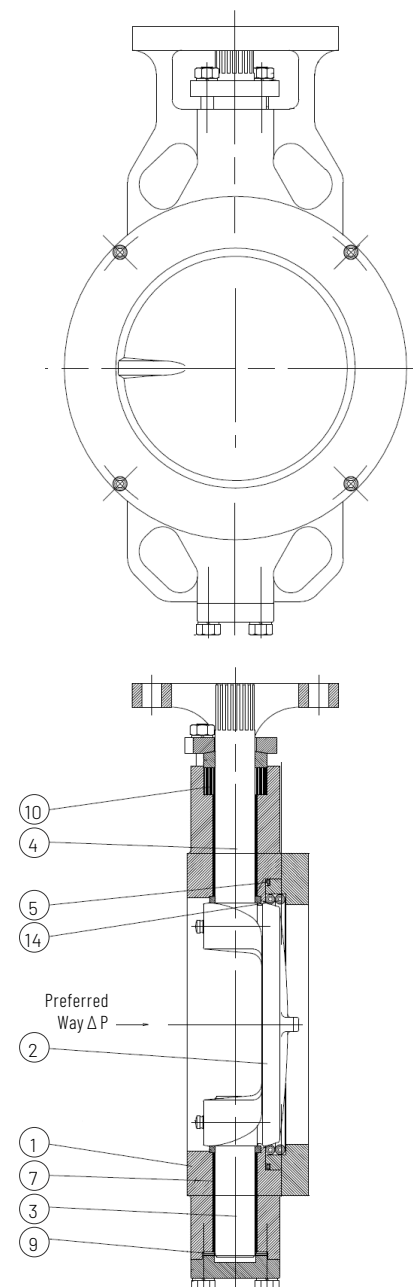
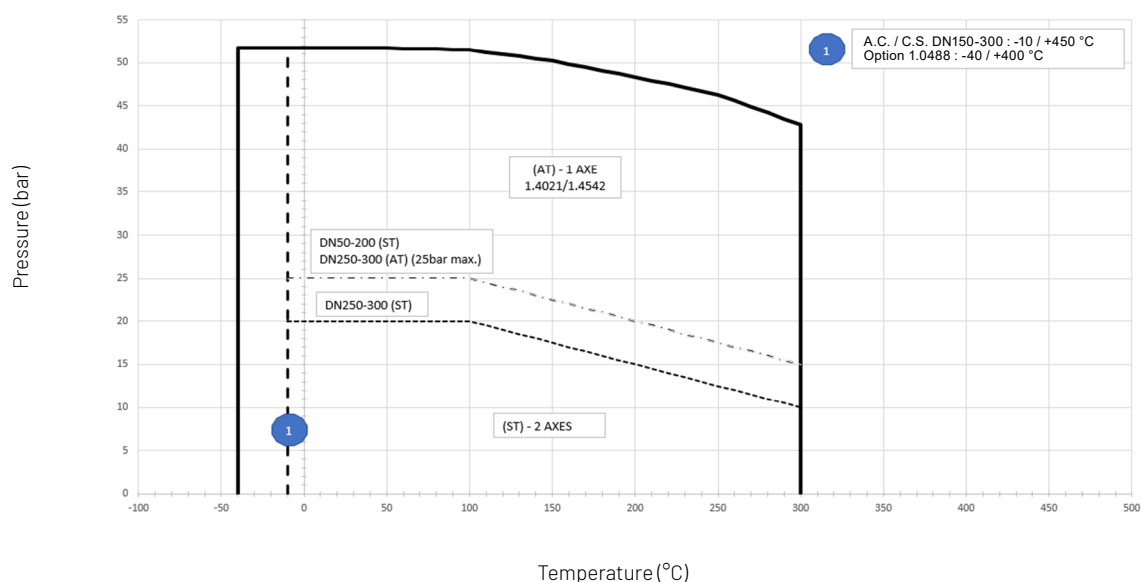
## Part List – Metal HT Version (300 °C max.)

|    | Nb | Name          | Material                                                                                                                               |            |            |                                                                                                                                                         |           |            |
|----|----|---------------|----------------------------------------------------------------------------------------------------------------------------------------|------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|
|    |    |               | Carbon steel                                                                                                                           |            |            | Stainless steel                                                                                                                                         |           |            |
|    |    |               | DN 50                                                                                                                                  | DN 65-125  | DN 150-300 | DN 50                                                                                                                                                   | DN 65-125 | DN 150-300 |
| 1  | 1  | Body          | 1.6220                                                                                                                                 | A350 - LF2 | 1.0625     | 1.4409                                                                                                                                                  | 1.4404    | 1.4408     |
| 2  | 1  | Disc          | 1.4006 + Hard Chrome                                                                                                                   |            |            | 1.4404 + Hard Chrome                                                                                                                                    |           |            |
| 3  | 1  | Lower stem    | ST : <b>1.4021</b><br>DN50-200 (25 bar) /<br>DN250-300 (20 bar)<br><br>AT : <b>1.4021</b><br>DN50-200 (50 bar) /<br>DN250-300 (25 bar) |            |            | ST : <b>1.4404</b> or <b>1.4542</b><br>DN50-200 (25 bar) /<br>DN250-300 (20 bar)<br><br>AT : <b>1.4542</b><br>DN50-200 (50 bar) /<br>DN250-300 (25 bar) |           |            |
| 4  | 1  | Driving shaft |                                                                                                                                        |            |            |                                                                                                                                                         |           |            |
| 5  | 1  | Seat          | 1.4404                                                                                                                                 |            |            |                                                                                                                                                         |           |            |
| 7  | 2  | Bushing       | Hard carbon                                                                                                                            |            |            | Hard carbon                                                                                                                                             |           |            |
| 9  | 1  | Lower gasket  | Nickel Graphite                                                                                                                        |            | 1.4404     | Nickel Graphite                                                                                                                                         |           | 1.4404     |
| 10 | 1  | Gland Packing | Graphite                                                                                                                               |            |            |                                                                                                                                                         |           |            |
| 14 | 1  | Gaflex O-ring | 1.4404                                                                                                                                 |            |            |                                                                                                                                                         |           |            |

AT: 1-PIECE SHAFT / ST: 2-PIECES SHAFT

|                       |                    |                  |
|-----------------------|--------------------|------------------|
| Design Standard       | EN593              | ISO10631         |
| Face to Face Standard | EN558 - S16        | ISO5752 - S16    |
| Test Standard         | EN12266-1 - Rate A | ISO5208 - Rate A |
| Connection Standard   | EN1092<br>EN1759   | ISO7005          |

Note : Face to Face S20 on request DN60-125

Pressure / Temperature Curves  
Metal Seat – Design 300 °C max

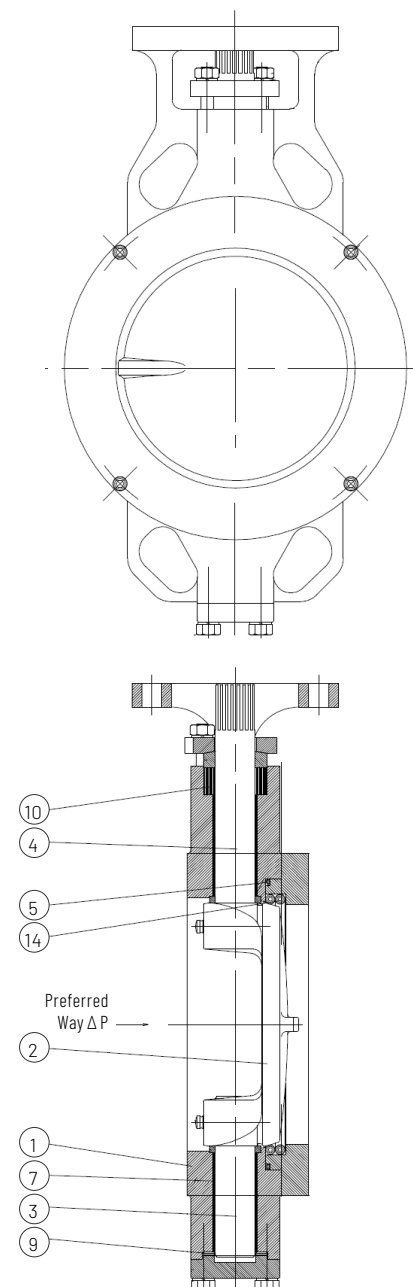
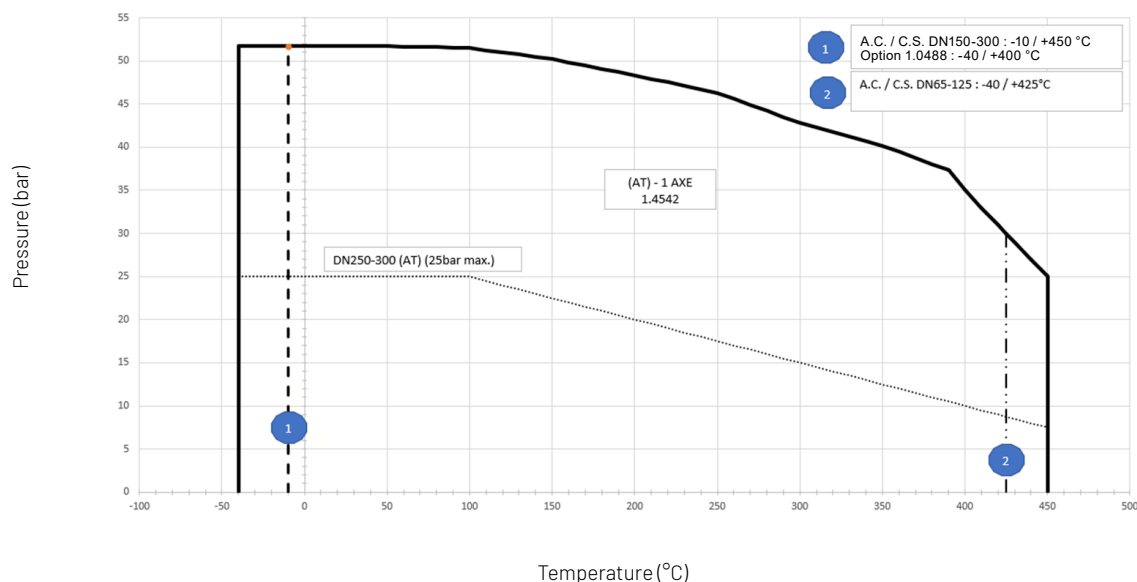
## Part List – Metal HT Version (450 °C max.)

|    | Nb | Name          | Material                                             |            |            |                                                        |           |            |
|----|----|---------------|------------------------------------------------------|------------|------------|--------------------------------------------------------|-----------|------------|
|    |    |               | Carbon steel                                         |            |            | Stainless steel                                        |           |            |
|    |    |               | DN 50                                                | DN 65-125  | DN 150-300 | DN 50                                                  | DN 65-125 | DN 150-300 |
| 1  | 1  | Body          | 1.6220                                               | A350 - LF2 | 1.0625     | 1.4409                                                 | 1.4404    | 1.4408     |
| 2  | 1  | Disc          | 1.4006 + Hard Chrome                                 |            |            | 1.4404 + Hard Chrome                                   |           |            |
| 3  | 1  | Lower stem    | AT : 1.4542<br>DN50-200(50 bar)<br>DN250-300(25 bar) |            |            | AT : 1.4542<br>DN50-200(50 bar) /<br>DN250-300(25 bar) |           |            |
| 4  | 1  | Driving shaft |                                                      |            |            |                                                        |           |            |
| 5  | 1  | Seat          | 1.4404                                               |            |            |                                                        |           |            |
| 7  | 2  | Bushing       | Hard carbon                                          |            |            | Hard carbon                                            |           |            |
| 9  | 1  | Lower gasket  | Nickel Graphite                                      |            | 1.4404     | Nickel Graphite                                        |           | 1.4404     |
| 10 | 1  | Gland Packing | Graphite                                             |            |            |                                                        |           |            |
| 14 | 1  | Gaflex O-ring | 1.4404                                               |            |            |                                                        |           |            |

AT: 1-PIECE SHAFT

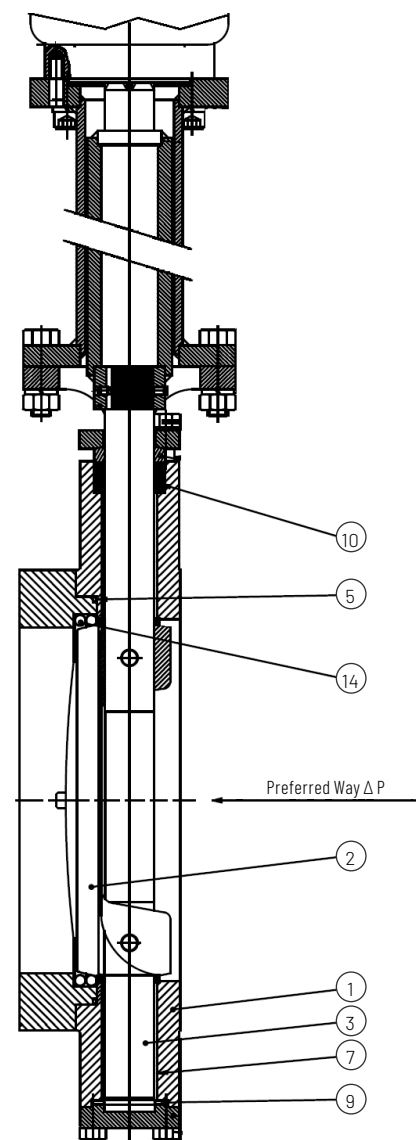
|                       |                    |                  |
|-----------------------|--------------------|------------------|
| Design Standard       | EN593              | ISO10631         |
| Face to Face Standard | EN558 - S16        | ISO5752 - S16    |
| Test Standard         | EN12266-1 - Rate A | ISO5208 - Rate A |
| Connection Standard   | EN1092<br>EN1759   | ISO7005          |

Note : Face to Face S20 on request DN65-125

Pressure / Temperature Curves  
Metal Seat – Design 450 °C max.

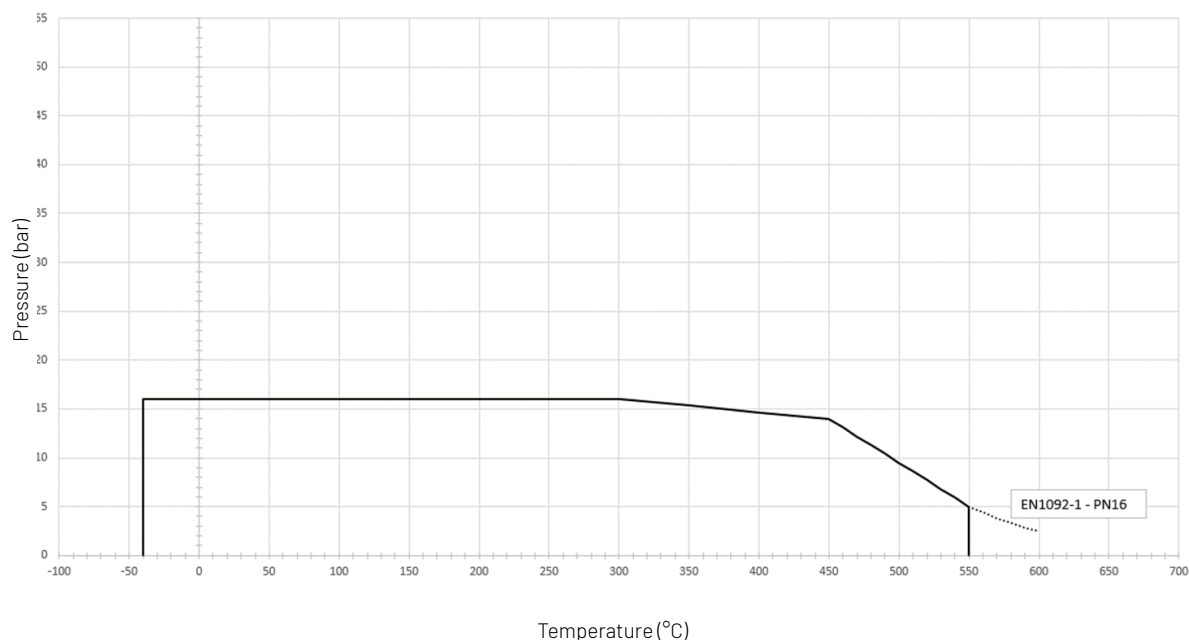
## Part List – Metal THT Version (550 °C max.)

|    | Nb | Name             | Material<br>Stainless steel<br>DN200-250 |
|----|----|------------------|------------------------------------------|
| 1  | 1  | Body             | 1.4408                                   |
| 2  | 1  | Disc             | 1.4006 + Hard Chromium                   |
| 3  | 1  | AT Driving shaft | X50CrWV5 + Balinit                       |
| 5  | 1  | Seat             | 1.4404 (GAFLEX)                          |
| 7  | 2  | Bushing          | Virium12                                 |
| 9  | 1  | Lower gasket     | 1.4404                                   |
| 10 | 1  | Gland Packing    | Graphite                                 |
| 14 | 1  | Gaflex O-ring    | 1.4404                                   |
|    |    | Extension        | YES                                      |
|    |    | Actuator         | High Temperature Version                 |



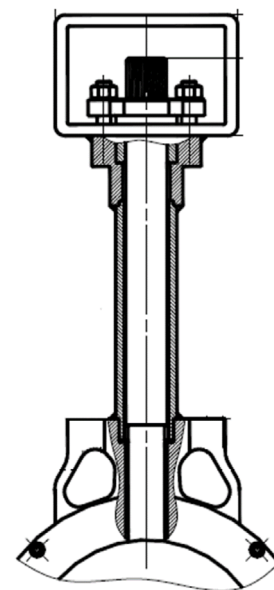
|                       |                    |                  |  |
|-----------------------|--------------------|------------------|--|
| Design Standard       | EN593              | ISO10631         |  |
| Face to Face Standard | EN558 - S16        | ISO5752 - S16    |  |
| Test Standard         | EN12266-1 - Rate D | ISO5208 - Rate D |  |
| Connection Standard   | EN1092<br>EN1759   | ISO7005          |  |

### Pressure / Temperature Curves Metal Seat – Design 550 °C max.



## Part List – CRYOGENIC Version (-196 / +180 °C max.)

|    | Nb | Name             | Matière<br>Acier inoxydable |          |                                     |
|----|----|------------------|-----------------------------|----------|-------------------------------------|
|    |    |                  | DN50                        | DN65-125 | DN150-300                           |
| 1  | 1  | Body             | 1.4409                      | 1.4404   | 1.4408                              |
| 2  | 1  | Disc             | 1.4004 + Hard Chromium      |          |                                     |
| 4  | 1  | AT Driving shaft | 1.4004                      |          |                                     |
| 5  | 1  | Seat             | 1.4404                      |          |                                     |
| 7  | 2  | Bushing          | Nickel Graphite             |          | Stainless steel + RTFE Glass loaded |
| 9  | 1  | Lower gasket     | PTFE                        |          | 1.4404                              |
| 10 | 1  | Gland Packing    | FEP                         |          | FEP                                 |



|                       |                    |                  |  |
|-----------------------|--------------------|------------------|--|
| Design Standard       | EN593              | ISO10631         |  |
| Face to Face Standard | EN558 - S16        | ISO5752 - S16    |  |
| Test Standard         | EN12266-1 - Rate A | ISO5208 - Rate A |  |
| Connection Standard   | EN1092<br>EN1759   | ISO7005          |  |

Pressure / Temperature Curves  
CRYOGENIC Version