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|---|--|------|-------|------|------|------|------|--|---------|
| OWNER:  شرکت سست و سویی توهمه ایران (سهامی عامه) MC :  شرکت سست و سویی توهمه ایران (سهامی عامه) | BUSHEHR PETROCHEMICAL COMPANY MEG PLANT | | | | | | | EPC CONTRACTOR:  Chagalesh-Enerchimi-Steam Joint Venture BUPC-MEG PLANT PROJECT | |
| | CALCULATION & DATA SHEET OF CONTROL VALVES / ON-OFF VALVES FOR NITROGEN GAS BOOSTER | | | | | | |  Contract No : 52-98/445 | |
| Owner Document Number: 17811-45A | Project | Area | Phase | Unit | Dis. | Doc. | Seq. | Rev.: | Page |
| | BU | 20 | VD | 303 | IN | DSH | 0041 | 02 | 1 of 14 |

CALCULATION & DATA SHEET OF CONTROL VALVES / ON-OFF VALVES FOR NITROGEN GAS BOOSTER

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| | | | | | | | |
| 02 | 25/10/2021 | Approved for Construction | TvT | KP | LdM | | |
| 01 | 20/09/2021 | For approval | TvT | KP | LdM | | |
| 00 | 25/02/2021 | For approval | TvT | KP | LdM | | |
| Rev | Date | Purpose of Issue | Prepared | Checked | Approved | AC Code | |
| | | | | | | Class: 1 | Phase: P |

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| 4 | Hand Ball Valve | No Tag.no.: Qty 2 pcs | 7 |
| 5 | Hand Ball Valve | No Tag.no.: Qty 7 pcs | 8 |
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Notes:

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| | | | | CALCULATION & DATA SHEET OF CONTROL VALVES / ON-OFF VALVES FOR NITROGEN GAS BOOSTER | |
| 02 | TT | 25/10/2021 | Approve For Construction | | |
| 01 | TT | 20/09/2021 | For Approval | | Sheet 3 of 14 Based on P&ID rev.A |
| 00 | TT | 25/02/2021 | For Approval | | |
| Rev | By | Date | Description | | |

| | | | | | |
|--------------------|----|--------------------------|----------------|--|-----------|
| GENERAL | 1 | Tag Number | | No Tag.no.: Qty 1 pc | |
| | 2 | Service | | Hand Ball valve | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | Compressor Inlet | |
| | 5 | Line/equip. No. | | 2"-INL-1001-511C(N) | |
| | 6 | | | | |
| | 7 | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | Nitrogen | Dry Gas |
| | 9 | Pressure | Norm. Max. | 8 Bar(a) | 9 Bar(a) |
| | 10 | Temperature | Norm. Max. | 55°C | 65°C |
| | 11 | Design | Press. Temp. | 13.5 Bar(a) | 80°C |
| | 12 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 13 | Oper. Flow | | 707 Kg/hr / 565 Nm3/hr | |
| | 14 | | | | |
| BODY | 16 | Body Type | | Ball valve, bolted type | |
| | 17 | Body Size | Bore | 2" | Full bore |
| | 18 | Guiding | No. Of Ports | - | 2 |
| | 19 | Conn. Type | End Conn. Rat. | RF | 150# |
| | 20 | Body Material | | Carbon steel ASTM A 216 Gr. WCB / A105 | |
| | 21 | Packing Material | | PTFE / Graphite | |
| | 22 | Bonnet Type | | Screwed | |
| | 23 | Trim | Form | Floating ball | |
| | 24 | | Seat Mat. | PTFE / Graphite | |
| | 25 | Ball Mat. | Shaft Mat. | SS 316 | SS316 |
| | 26 | Actuation | Material | Lever handle | CS |
| | 27 | | | | |
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| OPTIONS | 44 | | | | |
| | 45 | | | | |
| | 46 | | | | |
| CERTIFICATES | 47 | 3.1 Material certificate | | Yes | |
| | 48 | Hydrotest certificate | | Yes | |
| | 49 | | | | |
| | 50 | | | | |
| | 51 | | | | |
| PURCHASE | 52 | Manufacturer | | According to aproved vendor list | |
| | 53 | Model | | Supplier to advise | |
| | 54 | | | | |
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NOTES :

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|-----|----|------------|--------------------------|---------------------------------------|--|--------------------------------------|
| | | | | INSTRUMENT AND VALVE DATASHEET | | |
| | | | | Hand Ball Valve | | |
| | | | | | | |
| 02 | TT | 25/10/2021 | Approve For Construction | | | |
| 01 | TT | 20/09/2021 | For Approval | | | |
| 00 | TT | 25/02/2021 | For Approval | | | |
| Rev | By | Date | Description | | | Sheet 4 of 14 Based on P&ID rev.A |

| | | | | | |
|--------------------|----|--------------------------|----------------|--|-----------|
| GENERAL | 1 | Tag Number | | No Tag.no.: Qty 1 pcs | |
| | 2 | Service | | Hand Ball valve | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | Compressor Outlet | |
| | 5 | Line/equip. No. | | 2"-NL-1003-539D(N) | |
| | 6 | | | | |
| | 7 | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | Nitrogen | Dry Gas |
| | 9 | Pressure | Norm. Max. | 23,5 Bar(a) | 25 Bar(a) |
| | 10 | Temperature | Norm. Max. | 40°C | 55°C |
| | 11 | Design | Press. Temp. | 25 Bar(a) | 60°C |
| | 12 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 13 | Oper. Flow | | 50 Kg/hr / 43 Nm3/hr | |
| | 14 | | | | |
| BODY | 16 | Body Type | | Ball valve, bolted type | |
| | 17 | Body Size | Bore | 2" | Full bore |
| | 18 | Guiding | No. Of Ports | - | 2 |
| | 19 | Conn. Type | End Conn. Rat. | RF | 300# |
| | 20 | Body Material | | Carbon steel ASTM A 216 Gr. WCB / A105 | |
| | 21 | Packing Material | | PTFE / Graphite | |
| | 22 | Bonnet Type | | Screwed | |
| | 23 | Trim | Form | Floating ball | |
| | 24 | | Seat Mat. | PTFE / Graphite | |
| | 25 | Ball Mat. | Shaft Mat. | SS 316 | SS316 |
| | 26 | Actuation | Material | Lever handle | CS |
| | 27 | | | | |
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| OPTIONS | 44 | | | | |
| | 45 | | | | |
| | 46 | | | | |
| CERTIFICATES | 47 | 3.1 Material certificate | | Yes | |
| | 48 | Hydrotest certificate | | Yes | |
| | 49 | | | | |
| | 50 | | | | |
| | 51 | | | | |
| PURCHASE | 52 | Manufacturer | | According to aproved vendor list | |
| | 53 | Model | | Supplier to advise | |
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| | | | | INSTRUMENT AND VALVE DATASHEET | | |
| | | | | Hand Ball Valve | | |
| | | | | | | |
| 02 | TT | 25/10/2021 | Approve For Construction | | | |
| 01 | TT | 20/09/2021 | For Approval | | | |
| 00 | TT | 25/02/2021 | For Approval | | | |
| Rev | By | Date | Description | | | Sheet 5 of 14 Based on P&ID rev.A |



| | | | | | |
|--------------------|----|--------------------------|----------------|--|-----------|
| GENERAL | 1 | Tag Number | | No Tag.no.: Qty 2 pcs | |
| | 2 | Service | | Hand Ball valve | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | Compressor Cooling water | |
| | 5 | Line/equip. No. | | 2"-CWS-1004-501C(N)/ 2"-CWR-1011-501C(N) | |
| | 6 | | | | |
| | 7 | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | Water | Liquid |
| | 9 | Pressure | Norm. Max. | 4,5 Bar(g) | 5 Bar(g) |
| | 10 | Temperature | Norm. Max. | 35°C | 45°C |
| | 11 | Design | Press. Temp. | 6 Bar(g) | 60°C |
| | 12 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 13 | Oper. Flow | | 14,5 m3/hr | |
| | 14 | | | | |
| BODY | 16 | Body Type | | Ball valve, bolted type | |
| | 17 | Body Size | Bore | 2" | Full bore |
| | 18 | Guiding | No. Of Ports | - | 2 |
| | 19 | Conn. Type | End Conn. Rat. | RF | 150# |
| | 20 | Body Material | | Carbon steel ASTM A 216 Gr. WCB / A105 | |
| | 21 | Packing Material | | PTFE / Graphite | |
| | 22 | Bonnet Type | | Screwed | |
| | 23 | Trim | Form | Floating ball | |
| | 24 | | Seat Mat. | PTFE / Graphite | |
| | 25 | Ball Mat. | Shaft Mat. | SS 316 | SS316 |
| | 26 | Actuation | Material | Lever handle | CS |
| | 27 | | | | |
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| OPTIONS | 44 | | | | |
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| | 46 | | | | |
| CERTIFICATES | 47 | 3.1 Material certificate | | Yes | |
| | 48 | Hydrotest certificate | | Yes | |
| | 49 | | | | |
| | 50 | | | | |
| | 51 | | | | |
| PURCHASE | 52 | Manufacturer | | According to aproved vendor list | |
| | 53 | Model | | Supplier to advise | |
| | 54 | | | | |
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| | | | | INSTRUMENT AND VALVE DATASHEET | | |
| | | | | Hand Ball Valve | | |
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| 02 | TT | 25/10/2021 | Approve For Construction | | | |
| 01 | TT | 20/09/2021 | For Approval | | | |
| 00 | TT | 25/02/2021 | For Approval | | | |
| Rev | By | Date | Description | | | Sheet 6 of 14 Based on P&ID rev.A |



| | | | | | | |
|--------------------|----|--------------------------|----------------|---|-----------------|------------|
| GENERAL | 1 | Tag Number | | No Tag.no.: Qty 2 pcs | | |
| | 2 | Service | | Hand Ball valve | | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | | |
| | 4 | Location | | Compressor Oil sump drain & block valve | | |
| | 5 | Line/equip. No. | | N/A | | |
| | 6 | | | | | |
| | 7 | | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | | Oil | Liquid |
| | 9 | Pressure | Norm. | Max. | 3 Bar(a) | 3,5 Bar(a) |
| | 10 | Temperature | Norm. | Max. | 45°C | 65°C |
| | 11 | Design | Press. | Temp. | 5 Bar(a) | 80°C |
| | 12 | Ambient Temp. | Min. | Max. | 5 °C | 52 °C |
| | 13 | Oper. Flow | | | | |
| | 14 | | | | | |
| | 15 | | | | | |
| BODY | 16 | Body Type | | Ball valve, screwed type | | |
| | 17 | Body Size | Bore | | 1/2" | Full bore |
| | 18 | Guiding | No. Of Ports | | - | 2 |
| | 19 | Conn. Type | End Conn. Rat. | | NPT-F | 800# |
| | 20 | Body Material | | SS316 | | |
| | 21 | Packing Material | | PTFE / Graphite | | |
| | 22 | Bonnet Type | | Screwed | | |
| | 23 | Trim | Form | | Floating ball | |
| | 24 | | Seat Mat. | | PTFE / Graphite | |
| | 25 | Ball Mat. | Shaft Mat. | | SS 316 | SS316 |
| | 26 | Actuation | Material | | Lever handle | CS |
| | 27 | | | | | |
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| OPTIONS | 44 | | | | | |
| | 45 | | | | | |
| | 46 | | | | | |
| CERTIFICATES | 47 | 3.1 Material certificate | | No | | |
| | 48 | Hydrotest certificate | | No | | |
| | 49 | | | | | |
| | 50 | | | | | |
| | 51 | | | | | |
| PURCHASE | 52 | Manufacturer | | According to aproved vendor list | | |
| | 53 | Model | | Supplier to advise | | |
| | 54 | | | | | |
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| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Hand Ball Valve | |
| | | | |  | |
| 02 | TT | 25/10/2021 | Approve For Construction |  Sheet 7 of 14 Based on P&ID rev.A | |
| 01 | TT | 20/09/2021 | For Approval | | |
| 00 | TT | 25/02/2021 | For Approval | | |
| Rev | By | Date | Description | | |

| | | | | | |
|--------------------|----|--------------------------|----------------|----------------------------------|-----------|
| GENERAL | 1 | Tag Number | | No Tag.no.: Qty 7 pcs | |
| | 2 | Service | | Hand Ball valve | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | Compressor block valve | |
| | 5 | Line/equip. No. | | N/A | |
| | 6 | | | | |
| | 7 | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | Nitrogen/ water | Dry Gas |
| | 9 | Pressure | Norm. Max. | 23,5 Bar(a) | 25 Bar(a) |
| | 10 | Temperature | Norm. Max. | 40°C | 55°C |
| | 11 | Design | Press. Temp. | 25 Bar(a) | 60°C |
| | 12 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 13 | Oper. Flow | | | |
| | 14 | | | | |
| BODY | 16 | Body Type | | Ball valve, screwed type | |
| | 17 | Body Size | Bore | 1/2" | Full bore |
| | 18 | Guiding | No. Of Ports | - | 2 |
| | 19 | Conn. Type | End Conn. Rat. | NPT-F | 800# |
| | 20 | Body Material | | SS316 | |
| | 21 | Packing Material | | PTFE / Graphite | |
| | 22 | Bonnet Type | | Screwed | |
| | 23 | Trim | Form | Floating ball | |
| | 24 | | Seat Mat. | PTFE / Graphite | |
| | 25 | Ball Mat. | Shaft Mat. | SS 316 | SS316 |
| | 26 | Actuation | Material | Lever handle | CS |
| | 27 | | | | |
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| OPTIONS | 44 | | | | |
| | 45 | | | | |
| | 46 | | | | |
| CERTIFICATES | 47 | 3.1 Material certificate | | No | |
| | 48 | Hydrotest certificate | | No | |
| | 49 | | | | |
| | 50 | | | | |
| | 51 | | | | |
| PURCHASE | 52 | Manufacturer | | According to aproved vendor list | |
| | 53 | Model | | Supplier to advise | |
| | 54 | | | | |
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| | | | | INSTRUMENT AND VALVE DATASHEET | |  |
| | | | | Hand Ball Valve | | |
| | | | |  | | |
| 02 | TT | 25/10/2021 | Approve For Construction | | | |
| 01 | TT | 20/09/2021 | For Approval | | | |
| 00 | TT | 25/02/2021 | For Approval | | | |
| Rev | By | Date | Description | | | Sheet 8 of 14 |
| | | | | | | Based on P&ID #REF! |



| | | | | | |
|--------------------|----|----------------------------------|----------------|---------------------------------------|------------|
| GENERAL | 1 | Tag Number | | XV-10002 | |
| | 2 | Service | | Ball valve | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | Compressor Cooling water Inlet | |
| | 5 | Line/equip. No. | | 2"-CWS-1004-501C(N) | |
| | 6 | | | | |
| | 7 | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | Water | Liquid |
| | 9 | Pressure | Norm. Max. | 4,5 Bar(g) | 5 Bar(g) |
| | 10 | Temperature | Norm. Max. | 35°C | 45°C |
| | 11 | Design | Press. Temp. | 6 Bar(g) | 60°C |
| | 12 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 13 | Oper. Flow | | 14,5 m3/hr | |
| | 14 | | | | |
| BODY | 15 | Body Type | | Ball valve, bolted type | |
| | 16 | Body Size | Bore | 2" | Full bore |
| | 17 | Guiding | No. Of Ports | - | 2 |
| | 18 | Conn. Type | End Conn. Rat. | RF | 150# |
| | 19 | Body Material | | Carbon steel ASTM A 216 Gr. WCB/ A105 | |
| | 20 | Packing Material | | PTFE / Graphite | |
| | 21 | Bonnet Type | | Screwed | |
| | 22 | Form | | Floating ball | |
| | 23 | Trim | Seat Mat. | PTFE / Graphite | |
| | 24 | Ball Mat. | Shaft Mat. | SS 316 | SS316 |
| | 25 | Leakage rate | | API 502, zero | |
| 26 | | | | | |
| ACTUATOR | 27 | Type | | Rack & Pinion, single acting | |
| | 28 | Close At | Open At | Spring return | Air supply |
| | 29 | Flow Action To | | FTC | |
| | 30 | Fail Position | | FC | |
| | 31 | Pneumatic connection | | 2 x 1/4" NPT-F | |
| | 32 | Instrument Supply Fluid | | Instrument Air / Nitrogen | |
| | 33 | Instrument Supply Fluid pressure | | 6.0 bar(g) | |
| | 34 | Brackets | Coupling | SS316 | SS316 |
| | 35 | Housing material | | Aluminium, epoxy coated | |
| | 36 | | | | |
| POSITION MONITOR | 37 | | | | |
| | 38 | Type | | N/A | |
| | 39 | Power supply | | N/A | |
| | 40 | Type of switch/transmitter | | N/A | |
| | 41 | Area Classification | | N/A | |
| | 42 | Cable Gland | | N/A | |
| OPTIONS | 43 | | | | |
| | 44 | | | | |
| | 45 | | | | |
| CERTIFICATES | 46 | | | | |
| | 47 | 3.1 Material certificate | | Yes | |
| | 48 | Hydrotest certificate | | Yes | |
| | 49 | ATEX | | No | |
| PURCHASE | 50 | SIL certificate | Level | No | |
| | 51 | IP certificate | | No | |
| PURCHASE | 52 | Valve Manufacturer | | According to aproved vendor list | |
| | 53 | Valve Model | | Supplier to advise | |
| | 54 | Actuator Manufacturer | | Supplier to advise | |
| | 55 | Actuator Model | | Supplier to advise | |
| | 56 | | | | |
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| | | | | INSTRUMENT AND VALVE DATASHEET | | | |
| | | | | Pneumatic Actuated Valve | | | |
| 02 | TT | 25/10/2021 | Approve For Construction | | | | |
| 01 | TT | 20/09/2021 | For Approval | | | | |
| 00 | TT | 25/02/2021 | For Approval | | | | |
| Rev | By | Date | Description | | | Sheet 9 of 14 Based on P&ID rev.A | |



| | | | | | | |
|--------------------|----|--------------------------|----------------|------------|--|----------|
| GENERAL | 1 | Tag Number | | | No Tag.no: Qty 1 pcs | |
| | 2 | Service | | | Globe valve | |
| | 3 | P&ID No. | | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | | Compressor Cooling water | |
| | 5 | Line/equip. No. | | | 1 1/2"-CWS-1006-501C(N) | |
| | 6 | | | | | |
| | 7 | | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | | Water | Liquid |
| | 9 | Pressure | Norm. | Max. | 4,5 Bar(g) | 5 Bar(g) |
| | 10 | Temperature | Norm. | Max. | 35°C | 45°C |
| | 11 | Design | Press. | Temp. | 6 Bar(g) | 60°C |
| | 12 | Ambient Temp. | Min. | Max. | 5 °C | 52 °C |
| | 13 | Oper. Flow | | | 14,5 m3/hr | |
| | 14 | | | | | |
| BODY | 15 | Body Type | | | Globe valve type, OS&Y | |
| | 16 | Body Size | | | 2" | |
| | 17 | Guiding | No. Of Ports | | - | 2 |
| | 18 | Conn. Type | End Conn. Rat. | | RF | 150# |
| | 19 | Body Material | | | Carbon steel ASTM A 216 Gr. WCB/WCC / A105 | |
| | 20 | Packing Material | | | PTFE / Graphite | |
| | 21 | Bonnet Type | | | Bolted | |
| | 22 | Trim | Form | | Disc | |
| | 23 | | Seat Mat. | | PTFE / Graphite | |
| | 24 | | Disc Mat. | Shaft Mat. | SS 316 | SS316 |
| | 25 | | | | | |
| | 26 | | | | | |
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| 43 | | | | | | |
| OPTIONS | 44 | | | | | |
| | 45 | | | | | |
| | 46 | | | | | |
| CERTIFICATES | 47 | 3.1 Material certificate | | | Yes | |
| | 48 | Hydrotest certificate | | | Yes | |
| | 49 | | | | | |
| | 50 | | | | | |
| | 51 | | | | | |
| PURCHASE | 52 | Manufacturer | | | According to aproved vendor list | |
| | 53 | Model | | | Supplier to advise | |
| | 54 | | | | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |




NOTES :



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|-----|----|------------|--------------------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Hand Globe Valve | |
| | | | |  | |
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| Rev | By | Date | Description | | |

| | | | | | | |
|--------------------|----|-----------------------------------|---------------|---|-------------------------------|------------------------|
| GENERAL | 1 | Tag Number | | No Tag.no: Qty 1 pcs | | |
| | 2 | Service | | Pressure Control Valve | | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | | |
| | 4 | Location | | Compressor Inlet & actuator cooling inlet | | |
| | 5 | Line/equip. No. | | N/A | | |
| | 6 | | | | | |
| | 7 | | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | | Nitrogen Dry Gas | |
| | 9 | Pressure | Norm. | Max. | 8 Bar(a) 9 Bar(a) | |
| | 10 | Temperature | Norm. | Max. | 55°C 65°C | |
| | 11 | Design | Press. | Temp. | 13.5 Bar(a) 80°C | |
| | 12 | Ambient Temp. | Min. | Max. | 5 °C 52 °C | |
| BODY | 13 | Valve Type | | Pressure reducing valve | | |
| | 14 | Body Material | | Aluminium | | |
| | 15 | Diaphragm Material | | Will be informed later | | |
| | 16 | Trim | Form | | Disc / Plug / Globe | |
| | 17 | | Seat Mat. | | Will be informed later | |
| | 18 | | Spring Mat. | Disc Mat. | Will be informed later | Will be informed later |
| | 19 | | | | | |
| | 20 | | | | | |
| | 21 | | | | | |
| | 22 | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |
| ACTUATOR | 25 | Type | | Mechanical, spring type | | |
| | 26 | Fail Position | | FC | | |
| | 27 | | | | | |
| | 28 | | | | | |
| | 29 | | | | | |
| CONNECTIONS | 30 | | | | | |
| | 31 | Inlet Size | Outlet Size | | 1/4" 1/4" | |
| | 32 | Inlet Connection | Outlet Conn. | | Threaded NPT-F Threaded NPT-F | |
| | 33 | Inlet Rating | Outlet Rating | | 800# 800# | |
| SIZING CONDITIONS | 34 | | | | | |
| | 35 | Flow Rate | | 10 Nm³/hr | | |
| | 36 | Pressure drop | | To be advised by the manufacturer | | |
| | 37 | Pressure setpoint | | 6,0 bar(g) | | |
| | 38 | | | | | |
| | 39 | | | | | |
| | 40 | | | | | |
| OPTIONS | 41 | Pressure Gauge | | Yes | | |
| | 42 | Material | | Aluminium | | |
| | 43 | Range | | 0...11 bar(g) | | |
| | 44 | Filter Regulator and drip well | | Yes(Mesh 40) | | |
| CERTIFICATES | 45 | 3.1 Material certificate for body | | No | | |
| | 46 | 3.1 Material certificate for stem | | No | | |
| | 47 | | | | | |
| CALCULATIONS | 48 | | | | | |
| | 49 | Sizing calculation | | No | | |
| | 50 | | | | | |
| | 51 | | | | | |
| | 52 | | | | | |
| PURCHASE | 53 | | | | | |
| | 54 | Manufacturer | | According to aproved vendor list | | |
| | 55 | Model | | Supplier to advise | | |
| | 56 | | | | | |
| 57 | | | | | | |

NOTES :

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| | | | | | |
|--------------------|----|--------------------------|--------------------------|---|--|
| GENERAL | 1 | Tag Number | | No Tag.no.: Qty 2 pcs | |
| | 2 | Service | | Check Valve | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | Compressor Outlet | |
| | 5 | Line/equip. No. | | 2"-NL-1003-539D(N) | |
| | 6 | | | | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | | Nitrogen Dry Gas |
| | 10 | Pressure | Norm. | Max. | 23.5 Bar(a) 25 Bar(a) |
| | 11 | Temperature | Norm. | Max. | 40°C 55°C |
| | 12 | Design | Press. | Temp. | 25 Bar(a) 60°C |
| | 13 | Ambient Temp. | Min. | Max. | 5 °C 52 °C |
| | 14 | Oper. Flow | | 707 Kg/hr / 565 Nm3/hr | |
| | 15 | | | | |
| | 16 | | | | |
| | 17 | | | | |
| | 18 | | | | |
| BODY | 20 | Type Of Body | | Wafer type | |
| | 21 | Type Of valve | | Disc style, pulsation service | |
| | 21 | Body Size | | DN 50 (Process line = 2" ANSI 300# RF) | |
| | 22 | Body Material | | Carbon steel | |
| | 23 | Cracking Pressure | | To be stated by supplier | |
| | 24 | Inlet Connection | Outlet Conn. | | RF RF |
| | 25 | Inlet Rating | Outlet Rating | | 300# 300# |
| | 26 | | | | |
| | 27 | | | | |
| | 28 | | | | |
| | 29 | | | | |
| | 30 | | | | |
| | 31 | | | | |
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| 39 | | | | | |
| 40 | | | | | |
| OPTIONS | 41 | | | | |
| | 42 | | | | |
| | 43 | | | | |
| | 44 | | | | |
| | 45 | | | | |
| CERTIFICATES | 46 | 3.1 Material certificate | | Yes | |
| | 47 | | | | |
| | 48 | | | | |
| | 49 | | | | |
| | 50 | | | | |
| | 51 | | | | |
| PURCHASE | 52 | Manufacturer | | Hoerbigger | |
| | 53 | Model | | Supplier to advise | |
| | 54 | | | | |
| | 55 | | | | |
| | 56 | | | | |
| | | | | | |
| 02 | TT | 25/10/2021 | Approve For Construction | |    |
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| | | | | | |
|--------------------|---------|--------------------------|--------------------------|--|---|
| GENERAL | 1 | Tag Number | | No Tag.no.: Qty 1 pcs | |
| | 2 | Service | | Check Valve | |
| | 3 | P&ID No. | | BU-20-VD-303-PR-WG-0013 | |
| | 4 | Location | | Compressor Cooling water inlet | |
| | 5 | Line/equip. No. | | 2"-CWS-1004-501C(N) | |
| | 6 | | | | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Water | Liquid |
| | 10 | Pressure | Norm. Max. | 4,5 Bar(g) | 5 Bar(g) |
| | 11 | Temperature | Norm. Max. | 35°C | 45°C |
| | 12 | Design | Press. Temp. | 6 Bar(g) | 60°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 14 | Oper. Flow | | 14,5 m3/hr | |
| | 15 | | | | |
| | 16 | | | | |
| | 17 | | | | |
| | 18 | | | | |
| BODY | 20 | Type Of Body | | Flanged bolted type | |
| | 21 | Type Of valve | | Swing disc | |
| | 21 | Body Size | | 2" ANSI | |
| | 22 | Body Material | | Carbon steel | |
| | 23 | Cracking Pressure | | To be stated by supplier | |
| | 24 | Inlet Connection | Outlet Conn. | RF | RF |
| | 25 | Inlet Rating | Outlet Rating | 150# | 150# |
| | 26 | | | | |
| | 27 | | | | |
| | 28 | | | | |
| | 29 | | | | |
| | 30 | | | | |
| | 31 | | | | |
| | 32 | | | | |
| | 33 | | | | |
| | 34 | | | | |
| | 35 | | | | |
| | OPTIONS | 41 | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| CERTIFICATES | 46 | 3.1 Material certificate | | Yes | |
| | 47 | | | | |
| | 48 | | | | |
| | 49 | | | | |
| | 50 | | | | |
| | 51 | | | | |
| PURCHASE | 52 | Manufacturer | | According to aproved vendor list | |
| | 53 | Model | | Supplier to advise | |
| | 54 | | | | |
| | 55 | | | | |
| | 56 | | | | |
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| 02 | TT | 25/10/2021 | Approve For Construction |  |  |
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| 00 | TT | 25/02/2021 | For Approval | | |
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