

OWNER:



MC :



**BUSHEHR PETROCHEMICAL COMPANY
MEG PLANT**

**INSTRUMENT DATA SHEET FOR
EMERGENCY INSTRUMENT AIR
COMPRESSOR**

EPC CONTRACTOR:




| Owner Document Number: 17811-12B | Project | Area | Phase | Unit | Dis. | Doc. | Seq. | Contract No : 52-98/445 | |
|-------------------------------------|---------|------|-------|------|------|------|------|-------------------------|---------|
| | Rev.: | Page | | | | | | | |
| | BU | 20 | VD | 303 | IN | DSH | 0090 | 01 | 1 of 22 |

**INSTRUMENT DATA SHEET FOR EMERGENCY INSTRUMENT AIR
COMPRESSOR**

| | | | | | | | | |
|-------------|-------------|-------------------------|--|--|-----------------|----------------|-----------------|-----------------|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 01 | 21/09/2021 | For approval | | | TvT | KP | LdM | |
| 00 | 19/11/2020 | For approval | | | TvT | KP | LdM | |
| Rev. | Date | Purpose of Issue | | | Prepared | Checked | Approved | AC Code |
| | | | | | | | Class: 1 | Phase: P |


| INDEX | | | |
|-------|-------------------------|--------------------|------|
| No. | Device | Tag Number | Page |
| 1 | Diff. Pressure Gauge | PDG-71101 | 4 |
| 2 | Pressure Gauge | PG-71102 | 5 |
| 3 | Pressure Gauge | PG-71105 | 6 |
| 4 | Pressure Gauge | PG-71106 | 7 |
| 5 | Temperature Gauge | TG-71104 | 8 |
| 6 | Thermowell | TW-71104 | 9 |
| 7 | Temperature Gauge | TG-71103 | 10 |
| 8 | Thermowell | TW-71103 | 11 |
| 9 | Level Gauge | LG-71101 | 12 |
| 10 | Pressure Transmitter | PIT-71103 | 13 |
| 11 | Pressure Transmitter | PIT-71104 | 14 |
| 12 | Pressure Transmitter | PIT-71107 | 15 |
| 13 | Temperature Transmitter | TIT-71101 | 16 |
| 14 | Thermowell + Element | TW-71101 | 17 |
| 15 | Temperature Transmitter | TIT-71102 | 18 |
| 16 | Thermowell + Element | TW-71102 | 19 |
| 17 | Flow Transmitter | FIT-71101 | 20 |
| 18 | Vibration Transmitter | VT-71101 | 21 |
| 19 | Solenoid Valve | XY-71101, XY-71102 | 22 |
| 20 | | | |
| 21 | | | |
| 22 | | | |
| 23 | | | |
| 24 | | | |
| 25 | | | |
| 26 | | | |
| 27 | | | |
| 28 | | | |
| 29 | | | |
| 30 | | | |
| 31 | | | |
| 32 | | | |
| 33 | | | |
| 34 | | | |
| 35 | | | |
| 36 | | | |
| 37 | | | |
| 38 | | | |
| 39 | | | |
| 40 | | | |
| 41 | | | |
| 42 | | | |
| 43 | | | |
| 44 | | | |
| 45 | | | |
| 46 | | | |
| 47 | | | |
| 48 | | | |
| 49 | | | |
| 50 | | | |
| 51 | | | |
| 52 | | | |
| 53 | | | |
| 54 | | | |
| 55 | | | |

Notes:

| | | | | | |
|-----|----|------------|--------------|--|---------------|
| | | | | INSTRUMENT AND VALVE DATASHEET Index | |
| | | | | | |
| 01 | TT | 21/09/2021 | For Approval |  | Sheet 3 of 22 |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Based on P&ID | Rev.B |


| | | | | | |
|--------------------|----|-------------------------------|---------------|-------------------------------------|-----------------------|
| GENERAL | 1 | Tag Number | | PDG-71101 | |
| | 2 | Service | | Differential Pressure | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | Compressor Inlet strainer | |
| | 5 | Ingress Protection | | IP65 | |
| | 6 | Line/equipment number | | 2"-INA-7001-511C(N) | |
| | 7 | | | | |
| PROCESS CONDITIONS | 8 | Fluid | State | Air | Dry Gas |
| | 9 | Pressure | Norm. Max. | 8 Bar(a) | 8.5 Bar(a) |
| | 10 | Temperature | Norm. Max. | 45°C | 65°C |
| | 11 | Design | Press. Temp. | 13.5 Bar(a) | 80°C |
| | 12 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 13 | | | | |
| | 14 | | | | |
| GAUGE | 15 | Type | | Diaphragm type | |
| | 16 | Range | Unit | -100 ... 100 | mbar |
| | 17 | Mounting | | Remote mounted | |
| | 18 | Dial Size | Dial Color | 150 mm | White. Black numbers |
| | 19 | Case Material | | SS 316 | |
| | 20 | Ring Construction | Ring Material | Bayonet | SS 316 |
| | 21 | Blow-Out Protection | | Yes @ back | |
| | 22 | Lens Material | | Shatterproof laminated safety glass | |
| | 23 | Pressure Element Type | | Diaphragm | |
| | 24 | Pressure Element Material | | SS 316 | |
| | 25 | Socket Material | | SS 316 | |
| | 26 | Connection Size | | 2 x 1/4" NPT-F | |
| | 27 | Connection Location | | Bottom | |
| | 28 | Movement Material | | SS 316 | |
| | 29 | Nominal Accuracy | | ±1.0% of full scale | |
| | 30 | Gauge Filling | | Glycerine | |
| | 31 | Over Range Protection | | 1,3 x full scale value | |
| | 32 | | | | |
| | 33 | | | | |
| | 34 | | | | |
| | 35 | | | | |
| 36 | | | | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| OPTIONS | 43 | Snubber | Material | Yes | SS316 |
| | 44 | Gauge Savers | Material | N/A | N/A |
| | 45 | Manifold (Block & Bleed) | | 1/2" NPTF, 5-way B&B manifold | SS316 (Airpack Scope) |
| | 46 | Block valve (Hand ball valve) | | Yes | SS316 (Airpack scope) |
| | 47 | | | | |
| 48 | | | | | |
| CERTIFICATES | 49 | Calibration certificate | | Yes | |
| | 50 | 3.1 Material certificate | | Yes | |
| | 51 | IP certificate | | No | |
| | 52 | | | | |
| | 53 | | | | |
| PURCHASE | 54 | Manufacturer | | According to approved vendor list | |
| | 55 | Model | | Supplier to advise | |
| | 56 | | | | |
| | 57 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Diff. Pressure Gauge | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | |
| | | | | Sheet 4 of 22 | |
| | | | | Based on P&ID Rev.B | |


| | | | | | |
|--------------------|----|-------------------------------|---------------|-------------------------------------|------------------------|
| GENERAL | 1 | Tag Number | | PG-71102 | |
| | 2 | Service | | Air pressure | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | Compressor Inlet | |
| | 5 | Ingress Protection | | IP65 | |
| | 6 | Line/equipment number | | 2"-INA-7001-511C(N) | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas |
| | 10 | Pressure | Norm. Max. | 8 Bar(a) | 8,5 Bar(a) |
| | 11 | Temperature | Norm. Max. | 5°C | 65°C |
| | 12 | Design | Press. Temp. | 13,5 Bar(a) | 80°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 14 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| | 17 | | | | |
| | 18 | | | | |
| GAUGE | 19 | Type | | Bourdon tube | |
| | 20 | Range | Unit | 016 | bar(a) |
| | 21 | Mounting | | Remote mounted | |
| | 22 | Dial Size | Dial Color | 150 mm | White. Black numbers |
| | 23 | Case Material | | SS 316 | |
| | 24 | Ring Construction | Ring Material | Bayonet | SS 316 |
| | 25 | Blow-Out Protection | | Yes @ Back | |
| | 26 | Lens Material | | Shatterproof laminated safety glass | |
| | 27 | Pressure Element Material | | SS 316 | |
| | 28 | Socket Material | | SS 316 | |
| | 29 | Connection Size | | 1/2" NPT-M | |
| | 30 | Connection Location | | Bottom | |
| | 31 | Movement Material | | SS 316 | |
| | 32 | Nominal Accuracy | | ±1,0 % of span | |
| | 33 | Gauge Filling | | Glycerine | |
| | 34 | Over Range Protection | | 1,3 x full scale value | |
| | 35 | | | | |
| 36 | | | | | |
| 37 | | | | | |
| OPTIONS | 38 | Snubber | Material | Yes | SS316 |
| | 39 | Gauge Savers | Material | N/A | N/A |
| | 40 | Manifold (Block & Bleed) | | 1/2" NPTF, 2-way B&B manifold | SS316 (Airpack Scope) |
| | 41 | Block valve (Hand ball valve) | | Yes | SS316 (Airpack supply) |
| | 42 | | | | |
| | 43 | | | | |
| CERTIFICATES | 44 | | | | |
| | 45 | Calibration certificate | | Yes | |
| | 46 | 3.1 Material certificate | | Yes | |
| | 47 | IP certificate | | No | |
| | 48 | | | | |
| PURCHASE | 49 | | | | |
| | 50 | | | | |
| | 51 | Manufacturer | | According to aproved vendor list | |
| | 52 | Model | | Supplier to advise | |
| | 53 | | | | |
| | 54 | | | | |
| | 55 | | | | |
| 56 | | | | | |
| 57 | | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Pressure Gauge | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 5 of 22 Based on P&ID Rev.B | |


| | | | | | |
|--------------------|----|-------------------------------|---------------|-------------------------------------|------------------------|
| GENERAL | 1 | Tag Number | | PG-71105 | |
| | 2 | Service | | Nitrogen pressure | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | Compressor Upstream After-Cooler | |
| | 5 | Ingress Protection | | IP65 | |
| | 6 | Line/equipment number | | 2"-INA-7002-539D(N) | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas |
| | 10 | Pressure | Norm. Max. | 21 Bar(a) | 26 Bar(a) |
| | 11 | Temperature | Norm. Max. | 190°C | 195°C |
| | 12 | Design | Press. Temp. | 26 Bar(a) | 200°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 14 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| | 17 | | | | |
| | 18 | | | | |
| GAUGE | 19 | Type | | Bourdon tube, solid front | |
| | 20 | Range | Unit | 1...35 | bar(a) |
| | 21 | Mounting | | Remote mounted | |
| | 22 | Dial Size | Dial Color | 150 mm | White. Black numbers |
| | 23 | Case Material | | SS 316 | |
| | 24 | Ring Construction | Ring Material | Bayonet | SS 316 |
| | 25 | Blow-Out Protection | | Yes @ Back | |
| | 26 | Lens Material | | Shatterproof laminated safety glass | |
| | 27 | Pressure Element Material | | SS 316 | |
| | 28 | Socket Material | | SS 316 | |
| | 29 | Connection Size | | 1/2" NPT-M | |
| | 30 | Connection Location | | Bottom | |
| | 31 | Movement Material | | SS 316 | |
| | 32 | Nominal Accuracy | | ±1,0 % of span | |
| | 33 | Gauge Filling | | Glycerine | |
| | 34 | Over Range Protection | | 1,3 x full scale value | |
| | 35 | | | | |
| | 36 | | | | |
| | 37 | | | | |
| OPTIONS | 38 | Snubber | Material | Yes | SS316 |
| | 39 | Gauge Savers | Material | N/A | N/A |
| | 40 | Manifold (Block & Bleed) | | 1/2" NPTF, 2-way B&B manifold | SS316 (Airpack Scope) |
| | 41 | Block valve (Hand ball valve) | | Yes | SS316 (Airpack supply) |
| | 42 | | | | |
| | 43 | | | | |
| | 44 | | | | |
| CERTIFICATES | 45 | Calibration certificate | | Yes | |
| | 46 | 3.1 Material certificate | | Yes | |
| | 47 | IP certificate | | No | |
| | 48 | | | | |
| | 49 | | | | |
| PURCHASE | 51 | Manufacturer | | According to aproved vendor list | |
| | 52 | Model | | Supplier to advise | |
| | 53 | | | | |
| | 54 | | | | |
| | 55 | | | | |
| | 56 | | | | |
| | 57 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Pressure Gauge | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 6 of 22 Based on P&ID Rev.B | |


| | | | | | |
|--------------------|----|-------------------------------|---------------|-------------------------------------|------------------------|
| GENERAL | 1 | Tag Number | | PG-71106 | |
| | 2 | Service | | Water pressure | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | Compressor Cooling water Inlet | |
| | 5 | Ingress Protection | | IP65 | |
| | 6 | Line/equipment number | | 1 1/2"-CWS-7003-501C(N) | |
| | 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 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| | 17 | | | | |
| | 18 | | | | |
| GAUGE | 19 | Type | | Bourdon tube | |
| | 20 | Range | Unit | 0 ...6 | bar(a) |
| | 21 | Mounting | | Remote mounted | |
| | 22 | Dial Size | Dial Color | 150 mm | White. Black numbers |
| | 23 | Case Material | | SS 316 | |
| | 24 | Ring Construction | Ring Material | Bayonet | SS 316 |
| | 25 | Blow-Out Protection | | Yes @ Back | |
| | 26 | Lens Material | | Shatterproof laminated safety glass | |
| | 27 | Pressure Element Material | | SS 316 | |
| | 28 | Socket Material | | SS 316 | |
| | 29 | Connection Size | | 1/2" NPT-M | |
| | 30 | Connection Location | | Bottom | |
| | 31 | Movement Material | | SS 316 | |
| | 32 | Nominal Accuracy | | ±1,0 % of span | |
| | 33 | Gauge Filling | | Glycerine | |
| | 34 | Over Range Protection | | 1,3 x full scale value | |
| | 35 | | | | |
| 36 | | | | | |
| 37 | | | | | |
| OPTIONS | 38 | Snubber | Material | No | N/A |
| | 39 | Gauge Savers | Material | N/A | N/A |
| | 40 | Manifold (Block & Bleed) | | 1/2" NPTF, 2-way B&B manifold | SS316 (Airpack Scope) |
| | 41 | Block valve (Hand ball valve) | | Yes | SS316 (Airpack supply) |
| | 42 | | | | |
| | 43 | | | | |
| | 44 | | | | |
| CERTIFICATES | 45 | Calibration certificate | | Yes | |
| | 46 | 3.1 Material certificate | | Yes | |
| | 47 | IP certificate | | No | |
| | 48 | | | | |
| | 49 | | | | |
| PURCHASE | 51 | Manufacturer | | According to aproved vendor list | |
| | 52 | Model | | Supplier to advise | |
| | 53 | | | | |
| | 54 | | | | |
| | 55 | | | | |
| | 56 | | | | |
| | 57 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Pressure Gauge | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 7 of 22 Based on P&ID Rev.B | |


| | | | | | | |
|--------------------|----|--------------------------|--------------------|---|----------------------|--|
| GENERAL | 1 | Tag Number | | TG-71104 | | |
| | 2 | Service | | Water temperature | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor Cooling water Inlet | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 1 1/2"-CWS-7003-501C(N) | | |
| | 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 | | | | | |
| | 15 | | | | | |
| | 16 | | | | | |
| | 17 | | | | | |
| | 18 | | | | | |
| GAUGE | 19 | Type | | Bi-metal | | |
| | 20 | Range | Unit | 0...60 | °C | |
| | 21 | Dial Size | Dial Color | 150 mm | White. Black numbers | |
| | 22 | Case material | | SS 316 | | |
| | 23 | Stem Material | | SS 316 | | |
| | 24 | Mounting | | Remote | | |
| | 25 | Lens Material | | Shatterproof laminated safety glass | | |
| | 26 | Stem length | Stem Diameter | To fit in TW | 6 mm | |
| | 27 | External Calibrator | | Yes | | |
| | 28 | Nominal Accuracy | | ±1.0% of full scale | | |
| | 29 | Connection | | 1/2" NPT-M x 6 mm OD compression fitting, sliding on stem | | |
| | 30 | Liquid filling | | Glycerine | | |
| | 31 | Element case | | Hermetically sealed | | |
| | 32 | | | | | |
| | 33 | FILLED SYSTEM | Compensation | | - | |
| | 34 | | Capillary Length | | 5 meter | |
| | 35 | | Capillary Material | | SS 316 | |
| | 36 | | Armor Material | | SS 316 | |
| | 37 | | | | | |
| | 38 | | | | | |
| | 39 | | | | | |
| | 40 | | | | | |
| | 41 | | | | | |
| | 42 | | | | | |
| 43 | | | | | | |
| 44 | | | | | | |
| CERTIFICATES | 45 | Calibration certificate | | Yes | | |
| | 46 | 3.1 Material certificate | | Yes | | |
| | 47 | IP certificate | | No | | |
| | 48 | | | | | |
| | 49 | | | | | |
| PURCHASE | 51 | Manufacturer | | According to aproved vendor list | | |
| | 52 | Model | | Supplier to advise | | |
| | 53 | | | | | |
| | 54 | | | | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Temperature Gauge | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 8 of 22 Based on P&ID Rev.B | |


| | | | | | |
|--------------------|----|----------------------------|--------------|---------------------------------------|----------|
| GENERAL | 1 | Tag Number | | TW-71104 | |
| | 2 | Service | | Water temperature | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | TG-71104 | |
| | 5 | | | | |
| | 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 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| THERMOWELL | 19 | Material | | SS 316 | |
| | 20 | Construction | | Solid bar stock | |
| | 21 | Process Connection | | 1 1/2" ANSI RF #300 (Ra 125-250 AARH) | |
| | 22 | Instrument Connection | | 1/2" NPT-F | |
| | 23 | Tip Diameter | | To be advised by supplier | |
| | 24 | Bore Diameter | | To house a 6 mm OD element | |
| | 25 | U-length | | Check with Engineering Department | |
| | 26 | | | | |
| | 27 | | | | |
| | 28 | | | | |
| | 29 | | | | |
| | 30 | | | | |
| | 31 | | | | |
| | 32 | | | | |
| | 33 | | | | |
| | 34 | | | | |
| | 35 | | | | |
| | 36 | | | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| 46 | | | | | |
| 47 | | | | | |
| 48 | | | | | |
| CERTIFICATES | 49 | 3.1 Material certificate | | Yes | |
| | 50 | | | | |
| | 51 | | | | |
| | 52 | | | | |
| CALCULATIONS | 53 | Wake frequency calculation | | No | |
| | 54 | | | | |
| | 55 | | | | |
| | 56 | | | | |
| | 57 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Thermowell | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | |
| | | | | Sheet 9 of 22 Based on P&ID Rev.B | |


| | | | | | | |
|--------------------|----|--------------------------|--------------------|---|----------------------|--|
| GENERAL | 1 | Tag Number | | TG-71103 | | |
| | 2 | Service | | Water temperature | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor Cooling water Outlet | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 1 1/2"-CWR-7008-501C(N) | | |
| | 7 | | | | | |
| | 8 | | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Water | Liquid | |
| | 10 | Pressure | Norm. Max. | 2,5 Bar(g) | 3 Bar(g) | |
| | 11 | Temperature | Norm. Max. | 45°C | 55°C | |
| | 12 | Design | Press. Temp. | 5 Bar(g) | 60°C | |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C | |
| | 14 | | | | | |
| | 15 | | | | | |
| | 16 | | | | | |
| | 17 | | | | | |
| | 18 | | | | | |
| GAUGE | 19 | Type | | Bi-metal | | |
| | 20 | Range | Unit | 0...60 | °C | |
| | 21 | Dial Size | Dial Color | 150 mm | White. Black numbers | |
| | 22 | Case material | | SS 316 | | |
| | 23 | Stem Material | | SS 316 | | |
| | 24 | Mounting | | Remote | | |
| | 25 | Lens Material | | Shatterproof laminated safety glass | | |
| | 26 | Stem length | Stem Diameter | To fit in TW | 6 mm | |
| | 27 | External Calibrator | | Yes | | |
| | 28 | Nominal Accuracy | | ±1.0% of full scale | | |
| | 29 | Connection | | 1/2" NPT-M x 6 mm OD compression fitting, sliding on stem | | |
| | 30 | Liquid filling | | Glycerine | | |
| | 31 | Element case | | Hermetically sealed | | |
| | 32 | | | | | |
| | 33 | FILLED SYSTEM | Compensation | | - | |
| | 34 | | Capillary Length | | 5 meter | |
| | 35 | | Capillary Material | | SS 316 | |
| | 36 | | Armor Material | | SS 316 | |
| | 37 | | | | | |
| | 38 | | | | | |
| | 39 | | | | | |
| | 40 | | | | | |
| | 41 | | | | | |
| | 42 | | | | | |
| 43 | | | | | | |
| 44 | | | | | | |
| CERTIFICATES | 45 | Calibration certificate | | Yes | | |
| | 46 | 3.1 Material certificate | | Yes | | |
| | 47 | IP certificate | | No | | |
| | 48 | | | | | |
| | 49 | | | | | |
| PURCHASE | 51 | Manufacturer | | According to aproved vendor list | | |
| | 52 | Model | | Supplier to advise | | |
| | 53 | | | | | |
| | 54 | | | | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Temperature Gauge | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | |
| | | | | Sheet 10 of 22 | |
| | | | | Based on P&ID Rev.B | |


| | | | | | |
|--------------------|----|----------------------------|--------------|---------------------------------------|----------|
| GENERAL | 1 | Tag Number | | TW-71103 | |
| | 2 | Service | | Water temperature | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | TG-71103 | |
| | 5 | | | | |
| | 6 | | | | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Water | Liquid |
| | 10 | Pressure | Norm. Max. | 2,5 Bar(g) | 3 Bar(g) |
| | 11 | Temperature | Norm. Max. | 45°C | 55°C |
| | 12 | Design | Press. Temp. | 5 Bar(g) | 60°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 14 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| THERMOWELL | 19 | Material | | SS 316 | |
| | 20 | Construction | | Solid bar stock | |
| | 21 | Process Connection | | 1 1/2" ANSI RF #300 (Ra 125-250 AARH) | |
| | 22 | Instrument Connection | | 1/2" NPT-F | |
| | 23 | Tip Diameter | | To be advised by supplier | |
| | 24 | Bore Diameter | | To house a 6 mm OD element | |
| | 25 | U-length | | Check with Engineering Department | |
| | 26 | | | | |
| | 27 | | | | |
| | 28 | | | | |
| | 29 | | | | |
| | 30 | | | | |
| | 31 | | | | |
| | 32 | | | | |
| | 33 | | | | |
| | 34 | | | | |
| | 35 | | | | |
| | 36 | | | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| 46 | | | | | |
| 47 | | | | | |
| 48 | | | | | |
| CERTIFICATES | 49 | 3.1 Material certificate | | Yes | |
| | 50 | | | | |
| | 51 | | | | |
| | 52 | | | | |
| CALCULATIONS | 53 | Wake frequency calculation | | No | |
| | 54 | | | | |
| | 55 | | | | |
| | 56 | | | | |
| | 57 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Thermowell | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | |
| | | | | Sheet 11 of 22 Based on P&ID Rev.B | |


| | | | | | |
|--------------------|---------|--------------------------|--------------|---------------------|--------|
| GENERAL | 1 | Tag Number | | LG-71101 | |
| | 2 | Service | | Oil level | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | Compressor oil sump | |
| | 5 | Ingress Protection | | IP65 | |
| | 6 | Line/equipment number | | 20-C-7080 | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Oil | Liquid |
| | 10 | Pressure | Norm. Max. | Ambient | - |
| | 11 | Temperature | Norm. Max. | 45°C | 65°C |
| | 12 | Design | Press. Temp. | 5 Bar(a) | 80°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 14 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| | 17 | | | | |
| GAUGE | 19 | Type | | Bull-Eye | |
| | 20 | | | | |
| | 21 | Mounting | | Locally | |
| | 22 | Case Material | | SS316 | |
| | 23 | Lens Material / Scale | | Pyrex glass | |
| | 24 | | | | |
| | 25 | | | | |
| | 26 | | | | |
| | 27 | | | | |
| | 28 | | | | |
| | 29 | | | | |
| | 30 | | | | |
| | 31 | | | | |
| | 32 | | | | |
| | 33 | | | | |
| | 34 | | | | |
| | 35 | | | | |
| | OPTIONS | 38 | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| CERTIFICATES | 45 | 3.1 Material certificate | | No | |
| | 46 | | | | |
| | 47 | | | | |
| | 48 | | | | |
| | 49 | | | | |
| | 50 | | | | |
| PURCHASE | 51 | Manufacturer | | TBA | |
| | 52 | | | | |
| | 53 | | | | |
| | 54 | | | | |
| | 55 | | | | |
| | 56 | | | | |
| | 57 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Sight glass | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 12 of 22 Based on P&ID Rev.B | |


| | | | | | | |
|--------------------|----|--------------------------------|----------------|---|----------------------------|------------|
| GENERAL | 1 | Tag Number | | PIT-71103 | | |
| | 2 | Service | | Air Pressure | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor Inlet | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 2"-INA-7001-511C(N) | | |
| | 7 | | | | | |
| | 8 | | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas | |
| | 10 | Pressure | Norm. Max. | 8 Bar(a) | 8,5 Bar(a) | |
| | 11 | Temperature | Norm. Max. | 45°C | 65°C | |
| | 12 | Design | Press. Temp. | 13,5 Bar(a) | 80°C | |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C | |
| | 14 | Setpoint | LL | L | 6,9 Bar(a) | |
| | 15 | | H | HH | | 8,6 Bar(a) |
| | 16 | | | | | |
| | 17 | | | | | |
| 18 | | | | | | |
| TRANSMITTER | 19 | Function | | Field mounted Transmitter | | |
| | 20 | Element Type | | Diaphragm | | |
| | 21 | Element Material | | SS 316L | | |
| | 22 | Housing Material | | Aluminium, epoxy coated | | |
| | 23 | Power Supply | | 24 VDC, 2-wire, loop powered | | |
| | 24 | Process Conn. | Electric Conn. | ½" NPTM | ISO M20 x 1,5 | |
| | 25 | Accuracy | | ± 0.1% of span | | |
| | 26 | Calibrated Range | Unit | 0...13,5 | bar(a) | |
| | 27 | Adjustable Range | Unit | VTA | bar(a) | |
| | 28 | Allow. Press. | Allow. Temp. | To be informed by supplier | To be informed by supplier | |
| | 29 | Area Classification | | Zone 2, Eex'ia | | |
| | 30 | Communication Protocol | | Smart , HART 5 | | |
| | 31 | Output Signal | | 4 - 20 mA | | |
| | 32 | Sensor Fill Fluid | | To be informed by supplier | | |
| 33 | | | | | | |
| 34 | | | | | | |
| 35 | | | | | | |
| 36 | | | | | | |
| OPTIONS | 37 | Integral Meter | Scale | Yes, LCD | bar(a) | |
| | 38 | Lightning And Surge Protection | | N/A | | |
| | 39 | Mounting facilities | | Bracket | | |
| | 40 | Manifold (Block & Bleed) | | 1/2" NPTF, 3-way B&B manifold SS316 (Airpack Scope) | | |
| | 41 | Housing ground connection | | Yes, external (tightened with screws) | | |
| | 42 | Cable Gland | | Yes, Eex 'd' certified (Airpack scope) | | |
| | 43 | Block valve (Hand ball valve) | | Yes SS316 (Airpack supply) | | |
| CERTIFICATES | 44 | Calibration certificate | | Yes | | |
| | 45 | 3.1 Material certificate | | Yes | | |
| | 46 | ATEX | | No | | |
| | 47 | SIL certificate | | No | | |
| | 48 | IP certificate | | No | | |
| | 49 | | | | | |
| PURCHASE | 51 | Manufacturer | | According to aproved vendor list | | |
| | 52 | Model | | Supplier to advise | | |
| | 53 | | | | | |
| | 54 | | | | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Pressure Transmitter | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 13 of 22 Based on P&ID Rev.B | |


| | | | | | | |
|--------------------|----|--------------------------------|----------------|--|----------------------------|--|
| GENERAL | 1 | Tag Number | | PIT-71104 | | |
| | 2 | Service | | Oil Pressure | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor Oil system | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 20-C-7080 | | |
| | 7 | | | | | |
| | 8 | | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Oil | Liquid | |
| | 10 | Pressure | Norm. Max. | 3 Bar(a) | 3,5 Bar(a) | |
| | 11 | Temperature | Norm. Max. | 45°C | 65°C | |
| | 12 | Design | Press. Temp. | 5 Bar(a) | 80°C | |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C | |
| | 14 | Setpoint | LL | L | 1,5 Bar(a) | |
| | 15 | | H | HH | | |
| | 16 | | | | | |
| | 17 | | | | | |
| 18 | | | | | | |
| TRANSMITTER | 19 | Function | | Field mounted Transmitter | | |
| | 20 | Element Type | | Diaphragm | | |
| | 21 | Element Material | | SS 316L | | |
| | 22 | Housing Material | | Aluminium, epoxy coated | | |
| | 23 | Power Supply | | 24 VDC, 2-wire, loop powered | | |
| | 24 | Process Conn. | Electric Conn. | ½" NPTM | ISO M20 x 1,5 | |
| | 25 | Accuracy | | ± 0.1% of span | | |
| | 26 | Calibrated Range | Unit | 0...5 | bar(a) | |
| | 27 | Adjustable Range | Unit | VTA | bar(a) | |
| | 28 | Allow. Press. | Allow. Temp. | To be informed by supplier | To be informed by supplier | |
| | 29 | Area Classification | | Zone 2, Eex'ia | | |
| | 30 | Communication Protocol | | Smart , HART 5 | | |
| | 31 | Output Signal | | 4 - 20 mA | | |
| | 32 | Sensor Fill Fluid | | To be informed by supplier | | |
| | 33 | | | | | |
| 34 | | | | | | |
| 35 | | | | | | |
| 36 | | | | | | |
| OPTIONS | 37 | Integral Meter | Scale | Yes, LCD | bar(a) | |
| | 38 | Lightning And Surge Protection | | N/A | | |
| | 39 | Mounting facilities | | Bracket | | |
| | 40 | Manifold (Block & Bleed) | | 1/2" NPTF, 3-way B&B manifold, lock. SS316 (Airpack Scope) | | |
| | 41 | Housing ground connection | | Yes, external (tightened with screws) | | |
| | 42 | Cable Gland | | Yes, Eex 'd' certified (Airpack scope) | | |
| | 43 | Block valve (Hand ball valve) | | Yes SS316 (Airpack supply) | | |
| CERTIFICATES | 44 | Calibration certificate | | Yes | | |
| | 45 | 3.1 Material certificate | | Yes | | |
| | 46 | ATEX | | No | | |
| | 47 | SIL certificate | | No | | |
| | 48 | IP certificate | | No | | |
| | 49 | | | | | |
| PURCHASE | 51 | Manufacturer | | According to aproved vendor list | | |
| | 52 | Model | | Supplier to advise | | |
| | 53 | | | | | |
| | 54 | | | | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Pressure Transmitter | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 14 of 22 Based on P&ID Rev.B | |


| | | | | | | |
|--------------------|----|--------------------------------|----------------|---|----------------------------|----------------------|
| GENERAL | 1 | Tag Number | | PIT-71107 | | |
| | 2 | Service | | Air Pressure | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor Outlet | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 2"-INA-7002-539D(N) | | |
| | 7 | | | | | |
| | 8 | | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas | |
| | 10 | Pressure | Norm. Max. | 21 Bar(a) | 26 Bar(a) | |
| | 11 | Temperature | Norm. Max. | 40°C | 55°C | |
| | 12 | Design | Press. Temp. | 26 Bar(a) | 60°C | |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C | |
| | 14 | Setpoint | LL | L | 18,5 Bar(a) | 19 Bar(a) load/start |
| | 15 | | H | HH | 21 Bar(a) unload/stop | 21,5 Bar(a) |
| | 16 | | | | | |
| | 17 | | | | | |
| 18 | | | | | | |
| TRANSMITTER | 19 | Function | | Field mounted Transmitter | | |
| | 20 | Element Type | | Diaphragm | | |
| | 21 | Element Material | | SS 316L | | |
| | 22 | Housing Material | | Aluminium, epoxy coated | | |
| | 23 | Power Supply | | 24 VDC, 2-wire, loop powered | | |
| | 24 | Process Conn. | Electric Conn. | ½" NPTM | ISO M20 x 1,5 | |
| | 25 | Accuracy | | ± 0.1% of span | | |
| | 26 | Calibrated Range | Unit | 1...36 | bar(a) | |
| | 27 | Adjustable Range | Unit | VTA | bar(a) | |
| | 28 | Allow. Press. | Allow. Temp. | To be informed by supplier | To be informed by supplier | |
| | 29 | Area Classification | | Zone 2, Eex'ia | | |
| | 30 | Communication Protocol | | Smart , HART 5 | | |
| | 31 | Output Signal | | 4 - 20 mA | | |
| | 32 | Sensor Fill Fluid | | To be informed by supplier | | |
| 33 | | | | | | |
| 34 | | | | | | |
| 35 | | | | | | |
| 36 | | | | | | |
| OPTIONS | 37 | Integral Meter | Scale | Yes, LCD | bar(a) | |
| | 38 | Lightning And Surge Protection | | N/A | | |
| | 39 | Mounting facilities | | Bracket | | |
| | 40 | Manifold (Block & Bleed) | | 1/2" NPTF, 3-way B&B manifold SS316 (Airpack Scope) | | |
| | 41 | Housing ground connection | | Yes, external (tightened with screws) | | |
| | 42 | Cable Gland | | Yes, Eex 'd' certified (Airpack scope) | | |
| | 43 | Block valve (Hand ball valve) | | Yes SS316 (Airpack supply) | | |
| CERTIFICATES | 44 | Calibration certificate | | Yes | | |
| | 45 | 3.1 Material certificate | | Yes | | |
| | 46 | ATEX | | No | | |
| | 47 | SIL certificate | | No | | |
| | 48 | IP certificate | | No | | |
| | 49 | | | | | |
| PURCHASE | 51 | Manufacturer | | According to aproved vendor list | | |
| | 52 | Model | | Supplier to advise | | |
| | 53 | | | | | |
| | 54 | | | | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Pressure Transmitter | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 15 of 22 Based on P&ID Rev.B | |


| | | | | | | |
|--------------------|----|-----------------------------------|--------------|--|------------|--|
| GENERAL | 1 | Tag Number | | TIT-71101 | | |
| | 2 | Service | | Nitrogen Temperature | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor Inlet | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 2"-INA-7001-511C(N) | | |
| | 7 | | | | | |
| | 8 | | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas | |
| | 10 | Pressure | Norm. Max. | 8 Bar(a) | 8.5 Bar(a) | |
| | 11 | Temperature | Norm. Max. | 45°C | 65°C | |
| | 12 | Design | Press. Temp. | 13.5 Bar(a) | 80°C | |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C | |
| | 14 | Setpoint | LL | L | | |
| | 15 | | H | HH | 56 °C | |
| 16 | | | | | | |
| TRANSMITTER | 17 | Function | | Field mounted Transmitter | | |
| | 18 | Transmitter Type | | Temperature | | |
| | 19 | RTD Types Supported | | N/A | | |
| | 20 | Thermocouples Types Supported | | Yes, TC type 'K' | | |
| | 21 | MV Type Supported | | N/A | | |
| | 22 | Cold Junction Compensation | | Internal compensation | | |
| | 23 | Housing Material | | Aluminium, epoxy coated | | |
| | 24 | Power supply | | 24 VDC, 2 wire, loop powered | | |
| | 25 | Electric Conn. | | ISO M20 x 1,5 | | |
| | 26 | Accuracy | | ± 0.1% of span | | |
| | 27 | Calibrated Range | Unit | 0...80 | °C | |
| | 28 | Burn-out Protection/Loss of Input | | Overrange | | |
| | 29 | Area Classification | | Zone 2, Eex'ia | | |
| | 30 | Communication Protocol | | Smart , HART 5 | | |
| | 31 | Output Signal | | 4-20 mA | | |
| | 32 | Adjustable Range | | Yes | | |
| | 33 | | | | | |
| | 34 | | | | | |
| | 35 | | | | | |
| | 36 | | | | | |
| | 37 | | | | | |
| 38 | | | | | | |
| 39 | | | | | | |
| 40 | | | | | | |
| 41 | | | | | | |
| OPTIONS | 42 | Integral Meter | Scale | Yes, LCD | °C | |
| | 43 | Lightning And Surge Protection | | N/A | | |
| | 44 | Mounting facilities | | Bracket | | |
| | 45 | Housing ground connection | | Yes, external (tightened with screws) | | |
| | 46 | Cable Gland | | Yes, Eex 'd' certified (Airpack scope) | | |
| CERTIFICATES | 47 | Calibration certificate | | Yes | | |
| | 48 | ATEX | | No | | |
| | 49 | IP certificate | | No | | |
| | 50 | SIL certificate | Level | No | | |
| | 51 | | | | | |
| | 52 | | | | | |
| PURCHASE | 53 | Manufacturer | | According to aproved vendor list | | |
| | 54 | Model | | Supplier to advise | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |

Notes:

| | | | | | |
|-----|----|------------|--------------|--|---------------------------------------|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Temperature Transmitter | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | Sheet 16 of 22 Based on P&ID Rev.B |


| | | | | | |
|--------------------|----|--|--------------|---|------------|
| GENERAL | 1 | ThermowellTag Number | | TW-71101 | |
| | 2 | Service | | Temperature Transmitter | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | TIT-71101 | |
| | 5 | | | | |
| | 6 | | | | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas |
| | 10 | Pressure | Norm. Max. | 8 Bar(a) | 8.5 Bar(a) |
| | 11 | Temperature | Norm. Max. | 45°C | 65°C |
| | 12 | Design | Press. Temp. | 13.5 Bar(a) | 80°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 14 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| THERMOWELL | 19 | Material | | SS 316 | |
| | 20 | Construction | | Solid bar stock | |
| | 21 | Process Connection | | 1 1/2" ANSI RF #300 (Ra 125-250 AARH) | |
| | 22 | Instrument Connection | | 1/2" NPT-F | |
| | 23 | Stem Diameter | | To be advised by supplier | |
| | 24 | Bore Diameter | | To house a 6 mm OD element | |
| | 25 | U-length | | Check with Engineering Department | |
| | 26 | | | | |
| ELEMENT | 30 | ElementTag Number | | TE-71101 | |
| | 31 | Construction | | Sensor with lead wire, transition and relief spring | |
| | 32 | Type Of Element | | TC type 'K' / Simplex | |
| | 33 | Accuracy Class | | DIN - IEC-EN 60584 Class 1 | |
| | 34 | Outside Diameter Sensor | | 6 mm | |
| | 35 | Connection | | 1/2" NPT-M x 6,0 mm OD coupling sliding on stem | |
| | 36 | Element Length | | To fit in Thermowell | |
| | 37 | Type Of Cable | | Armoured | |
| | 38 | Cable Length | | 5 m | |
| | 39 | Special construction | | No | |
| | 40 | Sheat Material | | SS 316 | |
| | 41 | Element case | | Hermetically sealed | |
| OPTIONS | 42 | | | | |
| | 43 | | | | |
| | 44 | | | | |
| CERTIFICATES | 45 | | | | |
| | 46 | | | | |
| | 47 | | | | |
| CALCULATIONS | 48 | | | | |
| | 49 | 3.1 Material certificate | | Yes | |
| | 50 | Functional test report (up-down) for element | | Yes | |
| NOTES : | 51 | Calibration certificate | | Yes | |
| | 52 | | | | |
| | 53 | Wake frequency calculation | | No | |
| | 54 | | | | |
| | 55 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Thermowell + Element | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | |
| | | | | Sheet 17 of 22 Based on P&ID Rev.B | |


| | | | | | | |
|--------------------|----|-----------------------------------|--------------|--|-----------|--------|
| GENERAL | 1 | Tag Number | | TIT-71102 | | |
| | 2 | Service | | Nitrogen Temperature | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor upstream after cooler | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 2"-INA-7002-539D(N) | | |
| | 7 | | | | | |
| | 8 | | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas | |
| | 10 | Pressure | Norm. Max. | 21 Bar(a) | 26 Bar(a) | |
| | 11 | Temperature | Norm. Max. | 190°C | 195°C | |
| | 12 | Design | Press. Temp. | 26 Bar(a) | 200°C | |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C | |
| | 14 | Setpoint | LL | L | | |
| | 15 | | H | HH | | 195 °C |
| TRANSMITTER | 17 | Function | | Field mounted Transmitter | | |
| | 18 | Transmitter Type | | Temperature | | |
| | 19 | RTD Types Supported | | N/A | | |
| | 20 | Thermocouples Types Supported | | Yes, TC type 'K' | | |
| | 21 | MV Type Supported | | N/A | | |
| | 22 | Cold Junction Compensation | | Internal compensation | | |
| | 23 | Housing Material | | Aluminium, epoxy coated | | |
| | 24 | Power supply | | 24 VDC, 2 wire, loop powered | | |
| | 25 | Electric Conn. | | ISO M20 x 1,5 | | |
| | 26 | Accuracy | | ± 0.1% of span | | |
| | 27 | Calibrated Range | Unit | 0...200 | | °C |
| | 28 | Burn-out Protection/Loss of Input | | Overrange | | |
| | 29 | Area Classification | | Zone 2, Eex'ia | | |
| | 30 | Communication Protocol | | Smart , HART 5 | | |
| | 31 | Output Signal | | 4-20 mA | | |
| | 32 | Adjustable Range | | Yes | | |
| | 33 | | | | | |
| | 34 | | | | | |
| | 35 | | | | | |
| | 36 | | | | | |
| 37 | | | | | | |
| 38 | | | | | | |
| 39 | | | | | | |
| 40 | | | | | | |
| 41 | | | | | | |
| OPTIONS | 42 | Integral Meter | Scale | Yes, LCD | °C | |
| | 43 | Lightning And Surge Protection | | N/A | | |
| | 44 | Mounting facilities | | Bracket | | |
| | 45 | Housing ground connection | | Yes, external (tightened with screws) | | |
| | 46 | Cable Gland | | Yes, Eex 'd' certified (Airpack scope) | | |
| CERTIFICATES | 47 | Calibration certificate | | Yes | | |
| | 48 | ATEX | | No | | |
| | 49 | IP certificate | | No | | |
| | 50 | SIL certificate | Level | No | | |
| | 51 | | | | | |
| PURCHASE | 53 | Manufacturer | | According to aproved vendor list | | |
| | 54 | Model | | Supplier to advise | | |
| | 55 | | | | | |
| | 56 | | | | | |
| | 57 | | | | | |

Notes:

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Temperature Transmitter | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | |
| | | | | Sheet 18 of 22 | |
| | | | | Based on P&ID Rev.B | |


| | | | | | |
|--------------------|----|--|--------------|---|-----------|
| GENERAL | 1 | ThermowellTag Number | | TW-71102 | |
| | 2 | Service | | Temperature Transmitter | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | TIT-71102 | |
| | 5 | | | | |
| | 6 | | | | |
| | 7 | | | | |
| | 8 | | | | |
| PROCESS CONDITIONS | 9 | Fluid | State | Air | Dry Gas |
| | 10 | Pressure | Norm. Max. | 21 Bar(a) | 26 Bar(a) |
| | 11 | Temperature | Norm. Max. | 190°C | 195°C |
| | 12 | Design | Press. Temp. | 26 Bar(a) | 200°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52°C |
| | 14 | | | | |
| | 15 | | | | |
| | 16 | | | | |
| THERMOWELL | 19 | Material | | SS 316 | |
| | 20 | Construction | | Solid bar stock | |
| | 21 | Process Connection | | 1 1/2" ANSI RF #300 (Ra 125-250 AARH) | |
| | 22 | Instrument Connection | | 1/2" NPT-F | |
| | 23 | Stem Diameter | | To be advised by supplier | |
| | 24 | Bore Diameter | | To house a 6 mm OD element | |
| | 25 | U-length | | Check with Engineering Department | |
| | 26 | | | | |
| ELEMENT | 30 | ElementTag Number | | TE-71102 | |
| | 31 | Construction | | Sensor with lead wire, transition and relief spring | |
| | 32 | Type Of Element | | TC type 'K' / Simplex | |
| | 33 | Accuracy Class | | DIN - IEC-EN 60584 Class 1 | |
| | 34 | Outside Diameter Sensor | | 6 mm | |
| | 35 | Connection | | 1/2" NPT-M x 6,0 mm OD coupling sliding on stem | |
| | 36 | Element Length | | To fit in Thermowell | |
| | 37 | Type Of Cable | | Armoured | |
| | 38 | Cable Length | | 5 m | |
| | 39 | Special construction | | No | |
| | 40 | Sheat Material | | SS 316 | |
| | 41 | Element case | | Hermetically sealed | |
| OPTIONS | 46 | | | | |
| | 47 | | | | |
| | 48 | | | | |
| CERTIFICATES | 49 | 3.1 Material certificate | | Yes | |
| | 50 | Functional test report (up-down) for element | | Yes | |
| | 51 | Calibration certificate | | Yes | |
| CALCULATIONS | 52 | | | | |
| | 53 | Wake frequency calculation | | No | |
| | 54 | | | | |
| | 55 | | | | |
| 56 | | | | | |
| 57 | | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Thermowell + Element | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | | |
| | | | | Sheet 19 of 22 Based on P&ID Rev.B | |


| | | | | | |
|--------------------|----|--------------------------------|--------------|---|----------|
| GENERAL | 1 | Tag Number | | FIT-71101 | |
| | 2 | Service | | Water Flow | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | Compressor cooling water outlet | |
| | 5 | Ingress Protection | | IP65 | |
| | 6 | Line/equipment number | | 1 1/2"-CWR-7008-501C(N) | |
| PROCESS CONDITIONS | 7 | Fluid | State | Water | Liquid |
| | 8 | Pressure | Norm. Max. | 2,5 Bar(g) | 3 Bar(g) |
| | 9 | Temperature | Norm. Max. | 45°C | 55°C |
| | 10 | Flow | | 3,5 m³/hr | |
| | 11 | Density | Viscosity | 990 kg/m³ | 0.597 Cp |
| | 12 | Design | Press. Temp. | 5 Bar(g) | 60°C |
| | 13 | Ambient Temp. | Min. Max. | 5 °C | 52 °C |
| | 14 | Set Point | LL L | 2,3 m3/hr | - |
| | 15 | | H HH | - | - |
| | 16 | | | | |
| TRANSMITTER | 17 | Function | | Transmitter | |
| | 18 | Transmitter Type | | Flow | |
| | 19 | Calibrated Range | Unit | 0...5 | m³/hr |
| | 20 | Instrument Range | Unit | To be advised by supplier | m³/hr |
| | 21 | Transmitter Housing | | Integral | |
| | 22 | Cable Entry | | ISO M20 x 1.5 | |
| | 23 | Power Supply | | 24 VDC, 2 wire, loop powered | |
| | 24 | Enclosure Material | | Aluminium, epoxy coated | |
| | 25 | Meter To Transmitter Cable | | N/A, | |
| | 26 | Internal Compensation | | Yes, pressure & temperature | |
| | 27 | Accuracy | | ±1.0% of span | |
| | 28 | Area Classification | | Zone 2, Eex'ia | |
| | 29 | Communication Protocol | | Smart , HART 5 | |
| | 30 | Output Signal | | 4-20 mA | |
| 31 | | | | | |
| 32 | | | | | |
| METER | 33 | Type | | Variable Area | |
| | 34 | Meter Size | | To be advised, 1 1/2" line size available | |
| | 35 | Size & Rating | | ANSI 150# RF | |
| | 36 | Body Material | | Carbon Steel | |
| | 37 | Flange Material | | Carbon Steel | |
| | 38 | Bluff Body Material | | SS 316 / SS 316L | |
| | 39 | O-ring Material | | - | |
| | 40 | Other Wetted Parts | | SS 316 / SS 316L | |
| | 41 | Permanent Pressure Loss | | To be advised by supplier | |
| | 42 | Mounting/ direction | | horizontal | |
| OPTIONS | 43 | Integral Meter | Scale | Yes, | m³/hr |
| | 44 | Lightning And Surge Protection | | N/A | |
| | 45 | Mounting facilities | | N/A | |
| | 46 | Block Valve | | N/A | |
| | 47 | Housing ground connection | | Yes, external (tightened with screws) | |
| | 48 | Cable Gland | | Yes, Eex 'd' certified (Airpack scope) | |
| CERTIFICATES | 49 | Calibration certificate | | Yes | |
| | 50 | 3.1 Material certificate | | Yes | |
| | 51 | ATEX | | No | |
| | 52 | SIL certificate | Level | No | |
| | 53 | IP certificate | | No | |
| 54 | | | | | |
| PURCHASE | 55 | Manufacturer | | According to aproved vendor list | |
| | 56 | Model | | Supplier to advise | |
| | 57 | | | | |

NOTES :

| | | | | | |
|-----|----|------------|--------------|--|----------|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Flow Transmitter | |
| | | | |  | |
| 00 | XX | 06/03/2015 | For Approval | Sheet | 20 of 22 |
| Rev | By | Date | Description | Based on P&ID | Rev.XX |

| | | | | | | |
|--------------------|----|--------------------------------|--------|--|---------------------------|-------------|
| GENERAL | 1 | Tag Number | | VT-71101 | | |
| | 2 | Service | | Vibration level | | |
| | 3 | P&ID No. | | 17811-03 | | |
| | 4 | Location | | Compressor | | |
| | 5 | Ingress Protection | | IP65 | | |
| | 6 | Line/equipment number | | 20-C-7080 | | |
| PROCESS CONDITIONS | 7 | Fluid | State | | Air | Wet Air |
| | 8 | Pressure | Norm. | Max. | Atmospheric | Atmospheric |
| | 9 | Temperature | Norm. | Max. | 190°C | 195°C |
| | 10 | Design | Press. | Temp. | Atmospheric | 200°C |
| | 11 | Ambient Temp. | Min. | Max. | 5 °C | 52 °C |
| | 12 | Set Point | LL | L | - | - |
| | 13 | | H | HH | - | 8 mm/sec |
| TRANSMITTER | 14 | | | | | |
| | 15 | Function | | Compressor vibration transmitter | | |
| | 16 | Case Material | | SS 316L | | |
| | 17 | Calibrated Range | Unit | | To be advised by supplier | mm/sec |
| | 18 | Frequency Response | | 10 Hz to 1000 Hz (600 to 60,000 cpm) ±1.0 dB | | |
| | 19 | Area Classification | | Zone 2, Eex'ia | | |
| | 20 | Communication Protocol | | Smart, HART 5 | | |
| | 21 | Output Signal | | 4-20 mA | | |
| | 22 | | | | | |
| | 23 | | | | | |
| | 24 | | | | | |
| | 25 | | | | | |
| | 26 | | | | | |
| | 27 | | | | | |
| | 28 | | | | | |
| | 29 | | | | | |
| | 30 | | | | | |
| | 31 | | | | | |
| | 32 | | | | | |
| | 33 | | | | | |
| | 34 | | | | | |
| 35 | | | | | | |
| 36 | | | | | | |
| 37 | | | | | | |
| 38 | | | | | | |
| 39 | | | | | | |
| OPTIONS | 40 | Integral Meter | Scale | | No | N/A |
| | 41 | Lightning And Surge Protection | | N/A | | |
| | 42 | Mounting facilities | | Plate Stud 3/8-24 to M8x1 | | |
| | 43 | Housing ground connection | | Yes, external (tightened with screws) | | |
| | 44 | Cable Gland | | Yes, Eex 'd' certified (Airpack scope) | | |
| CERTIFICATES | 45 | | | | | |
| | 46 | Calibration certificate | | Yes | | |
| | 47 | 3.1 Material certificate | | No | | |
| | 48 | ATEX | | No | | |
| | 49 | SIL certificate | Level | | No | No |
| | 50 | IP certificate | | No | | |
| | 51 | | | | | |
| PURCHASE | 52 | | | | | |
| | 53 | | | | | |
| | 54 | Manufacturer | | According to approved vendor list | | |
| | 55 | Model | | Supplier to advise | | |
| 56 | | | | | | |
| 57 | | | | | | |


NOTES :

| | | | | | |
|-----|----|------------|--------------|--|--|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Vibration Transmitter | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet 21 of 22 Based on P&ID Rev.B | |

| | | | | | |
|--------------------|----|--------------------------------|--------|---|-------------------|
| GENERAL | 1 | Tag Number | | XY-71101, XY-71102 | |
| | 2 | Service | | Solenoid Valve | |
| | 3 | P&ID No. | | 17811-03 | |
| | 4 | Location | | Compressor inlet | |
| | 5 | Ingress Protection | | IP65 | |
| | 6 | Line/equipment number | | Instrument air line | |
| | 7 | | | | |
| | 8 | | | | |
| | 9 | | | | |
| PROCESS CONDITIONS | 10 | Fluid | State | | Air Dry Gas |
| | 11 | Pressure | Norm. | Max. | 8 Bar(a) 9 Bar(a) |
| | 12 | Temperature | Norm. | Max. | 55°C 65°C |
| | 13 | Design | Press. | Temp. | 13,5 Bar(a) 80°C |
| | 14 | Ambient Temp. | Min. | Max. | 5 °C 52 °C |
| | 15 | | | | |
| | 16 | | | | |
| | 17 | | | | |
| VALVE BODY | 18 | Type | | Direct acting | |
| | 19 | Configuration | | 3 way 2 position | |
| | 20 | Fail position | | To be used as FO (Fail open) | |
| | 21 | Ports | | 1/4" NPT-F | |
| | 22 | Body Material | | SS316 | |
| | 23 | Seat Sealing Material | | To be advised by the manufacturer | |
| | 24 | | | | |
| | 25 | | | | |
| | 26 | | | | |
| | 27 | | | | |
| | 28 | | | | |
| | 29 | | | | |
| | 30 | | | | |
| | 31 | | | | |
| | 32 | | | | |
| ELECTRICAL | 33 | Voltage | | 24 VDC | |
| | 34 | Power consumption | | < 3W | |
| | 35 | Class of Coil Insulation | | H | |
| | 36 | Connection | | ISO M20 x 1.5 | |
| | 37 | Lightning and Surge Protection | | No | |
| | 38 | Cable Gland | | Yes, Eex 'de' certified (Airpack scope) | |
| | 39 | Housing material | | SS316 | |
| | 40 | Area Classification | | Zone 2, Exd | |
| | 41 | | | | |
| | 42 | | | | |
| | 43 | | | | |
| CERTIFICATES | 44 | 3.1 Material certificate | | Yes | |
| | 45 | ATEX | | Yes | |
| | 46 | SIL certificate | Level | No | |
| | 47 | IP certificate | | No | |
| | 48 | | | | |
| PURCHASE | 50 | Manufacturer | | According to aproved vendor list | |
| | 51 | Model | | Supplier to advise | |
| | 52 | | | | |
| | 53 | | | | |
| | 54 | | | | |

NOTES:

1. This solenoid valve is an universal 3/2 way, direct operated valve, also suitable for 2/2 way operation.

| | | | | | |
|-----|----|------------|--------------|--|----------|
| | | | | INSTRUMENT AND VALVE DATASHEET | |
| | | | | Solenoid Valve | |
| | | | |  | |
| 01 | TT | 21/09/2021 | For Approval | | |
| 00 | TT | 19/11/2020 | For Approval | | |
| Rev | By | Date | Description | Sheet | 22 of 22 |
| | | | | Based on P&ID Rev.B | |