



LIDCO, Pars SEE Zone, Assaluyeh,
Integrated Methanol and Ammonia
Plant 3000 MTPD MeOH / 900 MTPD NH3 PROJECT



Piping & Instrument Diagram

Document No. 17735-03

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**Airpack B.V. - Air Compressor –
Integrated Methanol and Ammonia Plant
17735-COM Piping & Instrument Diagram (K020)**

code-2
M. Vakili

07	13-02-2024	Issued for Approval	S.K.	J.J.	S.K.
06	01-02-2024	Issued for Approval	S.K.	J.J.	S.K.
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Piping & Instrument Diagram

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




















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4	X	X	X	X	X	29	X					54						79					
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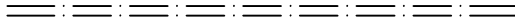




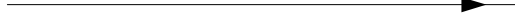


ABBREVIATIONS




CV = CHECK VALVE
 FG = FLOW GAUGE
 FT = FLOW TRANSMITTER
 LPS = LOCAL PUSHBUTTON STATION
 LG = LEVEL GAUGE
 PAH = HIGH PRESSURE ALARM (TRANSMITTER)
 PAHH = HIGH PRESSURE TRIP (TRANSMITTER)
 PAL = LOW PRESSURE ALARM (TRANSMITTER)
 PALL = LOW PRESSURE TRIP (TRANSMITTER)
 PCV = PRESSURE CONTROL VALVE
 PDAH = HIGH PRESSURE DIFFERENTIAL ALARM (TRANSMITTER)
 PDAH= HIGH PRESSURE DIFFERENTIAL TRIP (TRANSMITTER)
 PDAL = LOW PRESSURE DIFFERENTIAL ALARM (TRANSMITTER)
 PDALL = LOW PRESSURE DIFFERENTIAL TRIP (TRANSMITTER)
 PDG = PRESSURE DIFFERENTIAL GAUGE
 PDIT = PRESSURE DIFFERENTIAL INDICATING TRANSMITTER
 PDT = PRESSURE DIFFERENTIAL TRANSMITTER
 PG = PRESSURE GAUGE
 PIT = PRESSURE INDICATING TRANSMITTER
 PRV = PRESSURE REDUCING VALVE
 PSV = PRESSURE SAFETY VALVE
 PT = PRESSURE TRANSMITTER
 SG = SIGHT GLASS
 XY = SOLENOID VALVE
 TAH = HIGH TEMPERATURE ALARM (TRANSMITTER)
 TAHH = HIGH TEMPERATURE TRIP (TRANSMITTER)
 TAL = LOW TEMPERATURE ALARM (TRANSMITTER)
 TALL = LOW TEMPERATURE TRIP (TRANSMITTER)
 TCV = TEMPERATURE CONTROL VALVE
 TG = TEMPERATURE GAUGE
 TIT = TEMPERATURE INDICATING TRANSMITTER
 TRV = THERMAL RELIEF VALVE
 TT = TEMPERATURE TRANSMITTER
 TW = THERMOWELL
 HE = HEATER
 JB = JUNCTION BOX
 B = BLOWER
 VAH = HIGH VIBRATION ALARM (TRANSMITTER)
 VAHH = HIGH VIBRATION TRIP (TRANSMITTER)
 XI = ANNUNCIATOR (HORN)
 VT = VIBRATION TRANSMITTER
 FIT = FLOW INDICATED TRANSMITTER
 TIC = TEMPERATURE INDICATED CONTROL
 PIC = PRESSURE INDICATED CONTROL

SYMBOLS

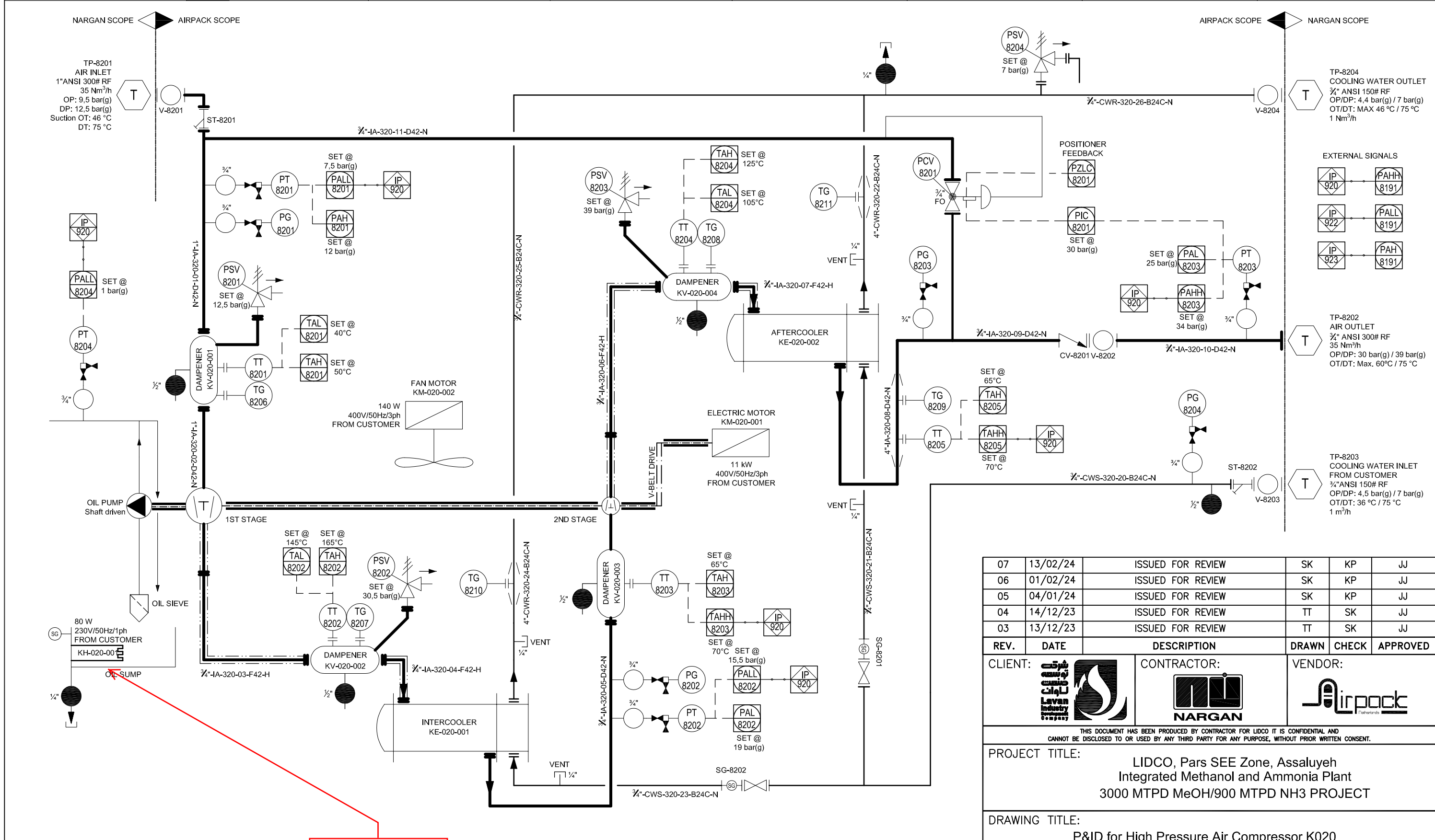
 BALL VALVE
 BLOCK AND BLEED 2-WAY MANIFOLDS
 Y-STRAINER
 PRESSURE SAFETY VALVE
 VENT
 SIGHT GLASS
 COMPRESSOR STAGE
 GATE VALVE
 REDUCER
 PRESSURE CONTROL VALVE
 CHECK VALVE
 SIGNAL
 INSTRUMENT
 OIL SIEVE
 PUMP
 FAN
 OIL HEATER
 VESSEL
 SHELL / TUBE WATER COOLER
 MOTOR
 ELECTRICAL PANEL LIGHT INDICATOR
 ELECTRICAL PANEL PUSH BUTTON
 SELECTOR SWITCH

LINES

 BELT
 SHAFT
 COOLING WATER LINE
 ELECTRICAL LINE
 GAS/AIR LINE
 OIL LINE
 HEAT PROTECTED PIPING
 SIGNAL

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PROJECT TITLE: LIDCO, Pars SEE Zone, Assaluyeh Integrated Methanol and Ammonia Plant 3000 MTPD MeOH/900 MTPD NH3 PROJECT							
DRAWING TITLE: P&ID for High Pressure Air Compressor K020							
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COMPRESSOR	MAIN MOTOR	INTERCOOLER	AFTERCOOLER	PULSATION DAMPER INLET	PULSATION DAMPER 1ST STAGE DISCHARGE	PULSATION DAMPER 2ND STAGE SUCTION	PULSATION DAMPER 2ND STAGE DISCHARGE
Tagnumber: K-020 Type: 2-stage oilfree piston Modelnumber: TRZ-400 Discharge capacity: 35 Nm ³ /h Operating pressure: 30 bar(g) Speed: 410 rpm	Tagnumber: KM-020 Rated power: 11 kW Speed: 1485 rpm Power supply: 400 V/ 50 Hz/ 3 ph Ingress protection: IP-55 Hazardous area class: Safe Area	Tagnumber: KE-020-001 Flow air side: 35 Nm ³ /hr Flow water side: 1 Nm ³ /hr OP / DP: 23,3 bar(g) / 30,5 bar(g) OT / DT: 157 °C / 175 °C Deslgn: TEMA C, ASME VIII Div. 1 Material: SS316	Tagnumber: KE-020-002 Flow air side: 35 Nm ³ /hr Flow water side: 1 Nm ³ /hr OP / DP: 30 bar(g) / 39 bar(g) OT / DT: 116 °C / 135 °C Deslgn: TEMA C, ASME VIII Div. 1 Material: SS316	Tagnumber: KV-020-001 Volume: 30 L OP / DP: 9,5 bar(g) / 12,5 bar(g) OT / DT: 46 °C / 75 °C Deslgn: ASME VIII Div. 1 Material: CS	Tagnumber: KV-020-002 Volume: 30 L OP / DP: 23,3 bar(g) / 30,5 bar(g) OT / DT: 157 °C / 175 °C Deslgn: ASME VIII Div. 1 Material: CS	Tagnumber: KV-020-003 Volume: 30 L OP / DP: 22,1 bar(g) / 39 bar(g) OT / DT: 60 °C / 157 °C Deslgn: ASME VIII Div. 1 Material: CS	Tagnumber: KV-020-004 Volume: 30 L OP / DP: 30 bar(g) / 39 bar(g) OT / DT: 116 °C / 135 °C Deslgn: ASME VIII Div. 1 Material: CS



To be corrected based on comment on consumption list

- NOTES
- All instruments have prefix '320'.
 - Instrument / control air tubing size: 12mm
 - TT and TG process connection is 3/4" NPT
 - TW process connection is 1 1/2" flange
 - PT and PG process connection is 1/2" NPT
 - Process connection of control valve is 300# flanged ANSI
 - Main process line piping material is SS316
 - Cooling water process line piping material is carbon steel
 - All signals is LIDCO scope and are connected to battery limit

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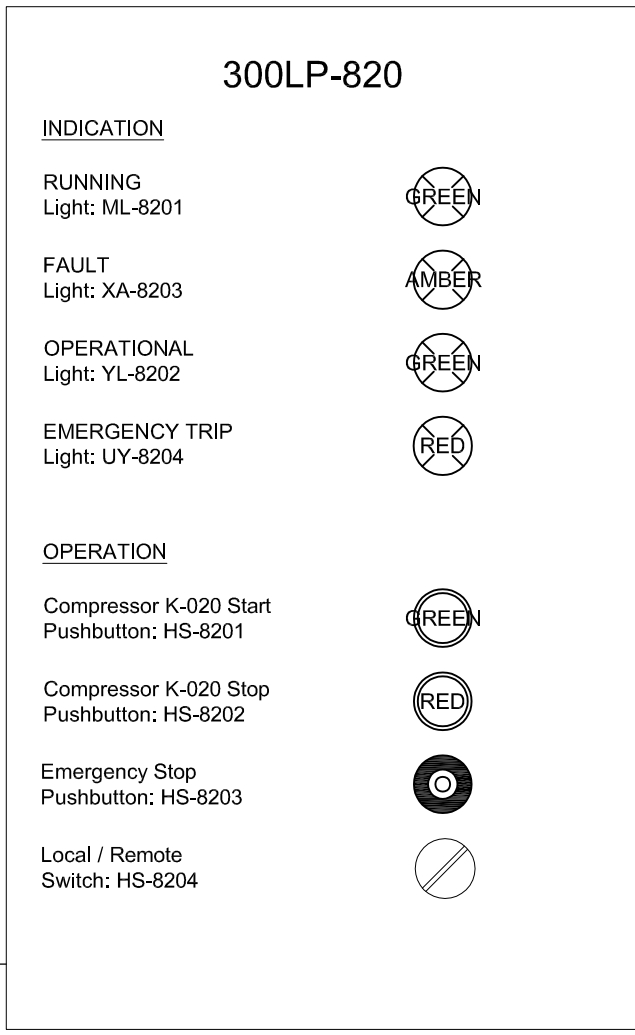
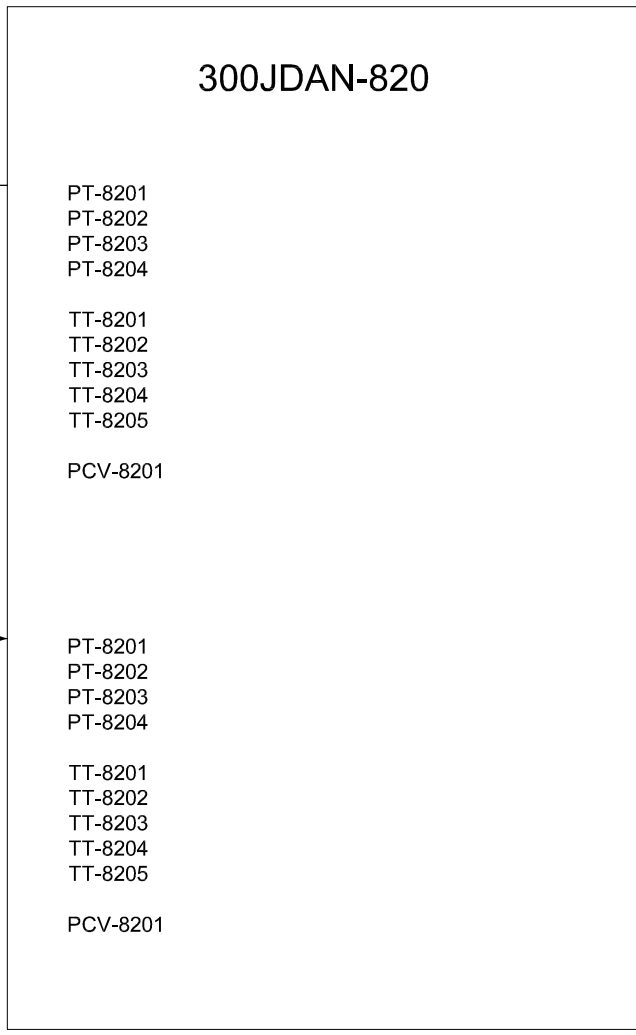
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DRAWING TITLE: P&ID for High Pressure Air Compressor K020

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Multi-pair cable by NARGAN
TO DCS

Individual Signal Cable by Airpack
FROM COMPRESSOR

Multi-pair cable by NARGAN

By AIRPACK

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P&ID for High Pressure Air Compressor K020

- NOTES
- All instruments have prefix '320-'.
 - Package will be DCS controlled (by others)

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