



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)**

REV.	DATE	DESCRIPTION	DRAWN	CHECKED	APPROVED
03	06-12-2023	Issued for Approval	S.K.	J.J.	S.K.
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Piping & Instrument Diagram

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



















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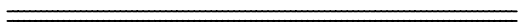



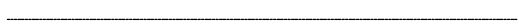






ABBREVIATIONS

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
 SIDE 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

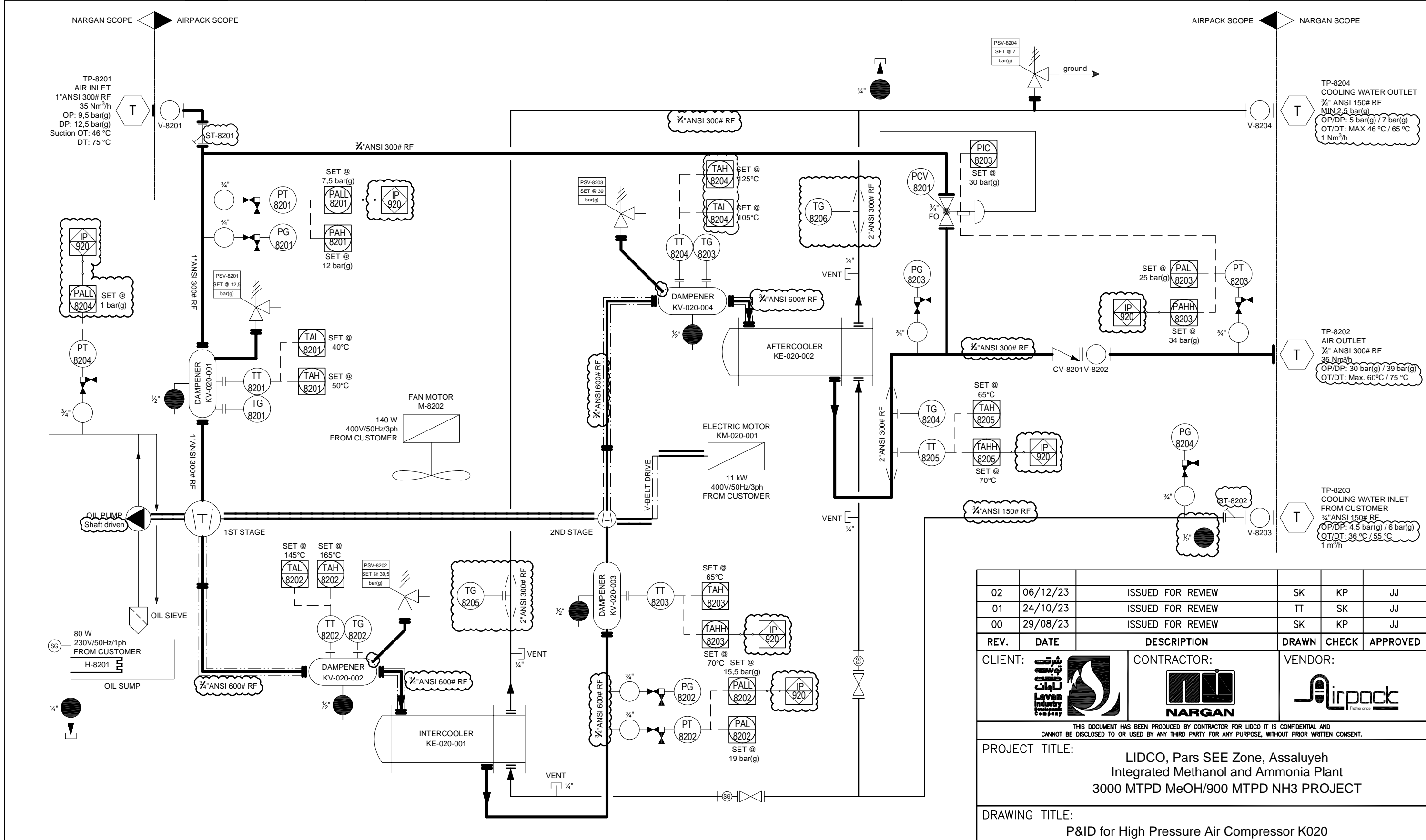
LINES

 BELT
 SHAFT
 MECHANICAL CONNECTION
 COOLING WATER LINE
 ELECTRICAL LINE
 GAS/AIR LINE
 HEAT TRACING
 OIL LINE
 PURGE AIR
 INSULATION
 SIGNAL

REV.	DATE	DESCRIPTION	DRAWN	CHECK	APPROVED
02	06/12/23	ISSUED FOR REVIEW	SK	KP	JJ
01	24/10/23	ISSUED FOR REVIEW	TT	SK	JJ
00	29/08/23	ISSUED FOR REVIEW	SK	KP	JJ

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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: RBV-130 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 Design: 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 Design: 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 Design: 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 Design: ASME VIII Div. 1 Material: CS	Tagnumber: KV-020-003 Volume: 30 L OP / DP: 22.1 bar(g) / 30.5 bar(g) OT / DT: 60 °C / 157 °C Design: 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 Design: ASME VIII Div. 1 Material: CS



- NOTES
- 1) All tagnumbers have prefix '320'
 - 2) Instrument / control air tubing size: 12mm
 - 3) TT and TG process connection is 3/4" NPT
 - 4) TW process connection is 1 1/2" flange
 - 5) PT and PG process connection is 1/2" NPT
 - 6) Process connection of control valve is 300# flanged ANSI
 - 7) Main process line piping material is SS316
 - 8) Cooling water process line piping material is carbon steel

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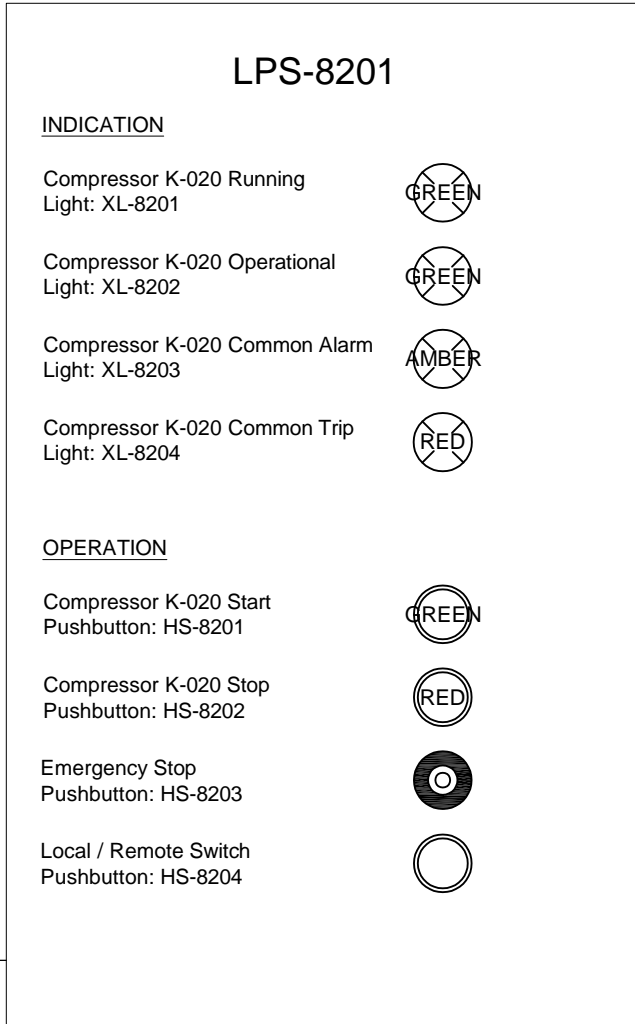
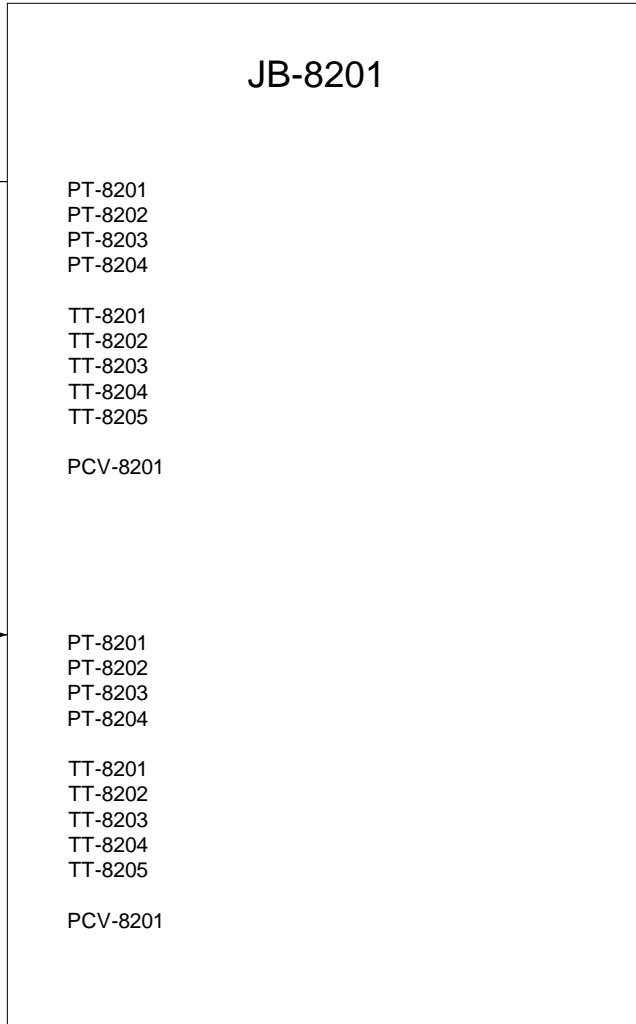
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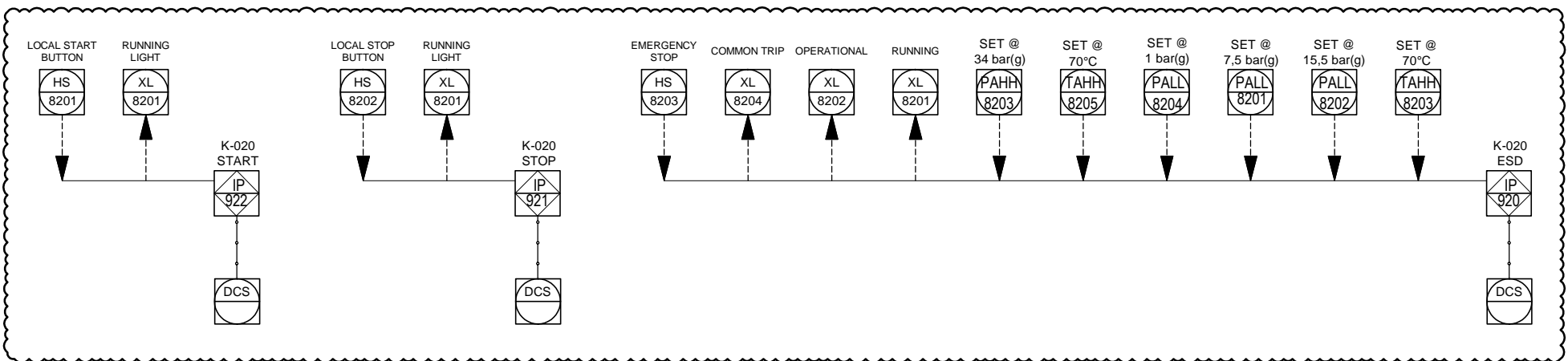





Multi-pair cable by NARGAN
TO DCS

Individual Signal Cable by Airpack
FROM COMPRESSOR

Multi-pair cable by NARGAN

By AIRPACK



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- NOTES
- 1) All tagnumbers have prefix '320'
 - 2) Package will be DCS controlled (by others)

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