



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
02	02-11-2023	Issued for Approval	T.T.	S.K.	J.J.
01	14-09-2023	Issued for Approval	S.K.	J.J.	S.K.

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Piping & Instrument Diagram

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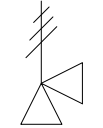
VALVE



BLOCK AND BLEED 2-WAY MANIFOLDS



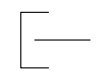
Y-STRAINER



PRESSURE SAFETY VALVE



TUBING VALVE



VENT



SIDE GLASS



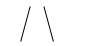
COMPRESSOR STAGE



VALVE (CLOSED)



GATE VALVE



REDUCER



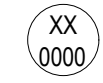
PRESSURE CONTROL VALVE



CHECK VALVE



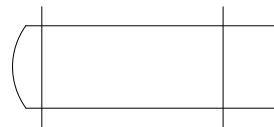
SIGNAL



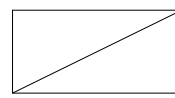
INSTRUMENT



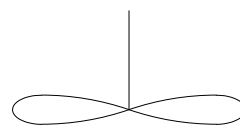
VESSEL



TUBE COOLER



MOTOR



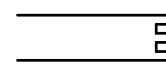
FAN



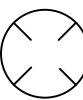
PUMP



OIL SIEVE



OIL HEATER



LIGHT



PUSH BUTTON

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<small>THIS DOCUMENT HAS BEEN PRODUCED BY CONTRACTOR FOR LIDCO IT IS CONFIDENTIAL AND CANNOT BE DISCLOSED TO OR USED BY ANY THIRD PARTY FOR ANY PURPOSE, WITHOUT PRIOR WRITTEN CONSENT.</small>							
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							
DOCUMENT No: 17735-03 P&ID				SC.			
				SIZE: A3			
PROJECT No.	VENDOR DOC.	P.O. No.	DEPARTMENT	DOC. TYPE	SERIAL No.	REV.	SHEET No.
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ABBREVIATIONS

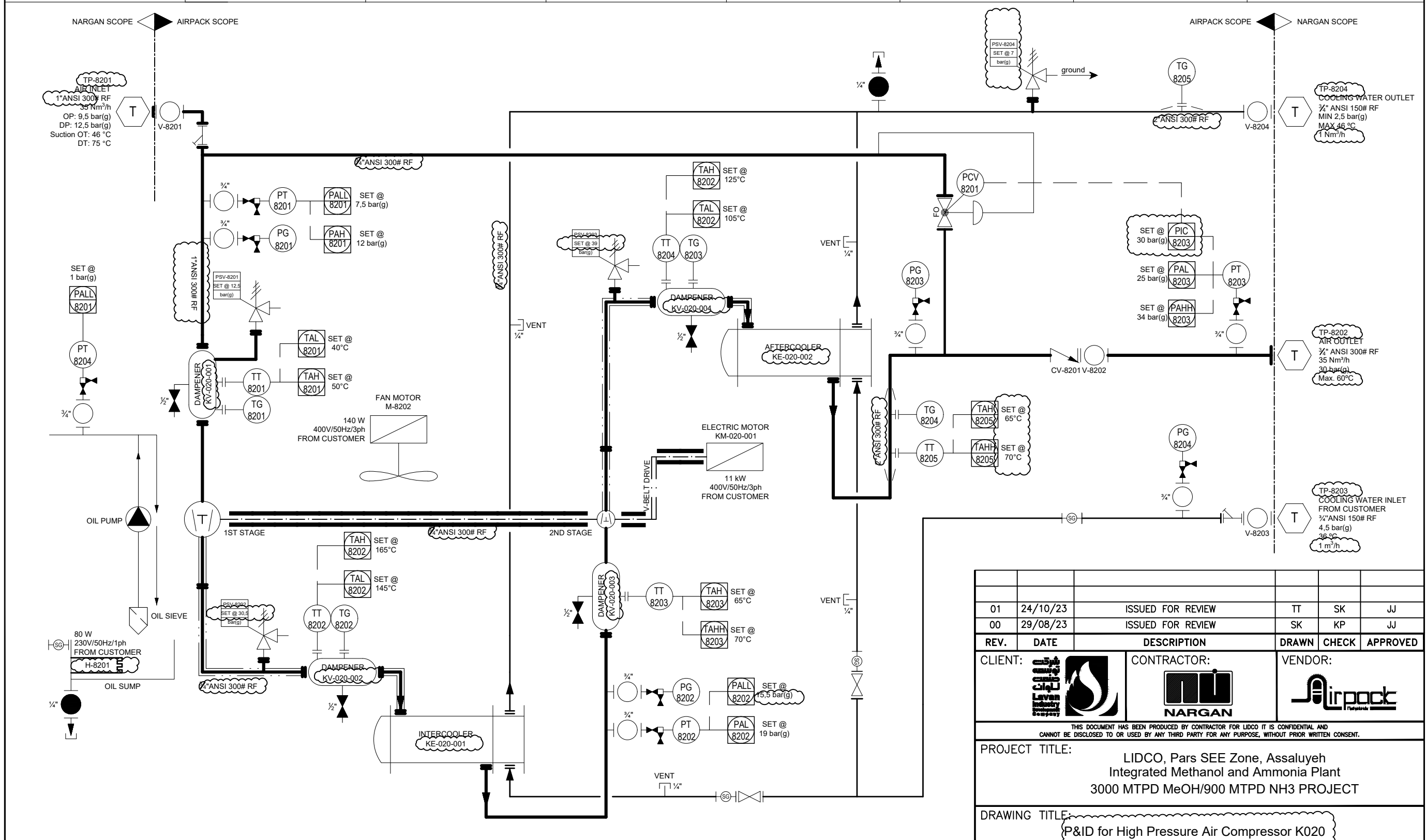
AAH = HIGH DEWPOINT ALARM
 AC = ANALYZER CONTROLLER
 AI = DEWPOINT INDICATOR
 AT = DEWPOINT TRANSMITTER
 BPV = BACK PRESSURE VALVE
 CV = CHECK VALVE
 DI = DIRT INDICATOR
 FG = FLOW GAUGE
 FO = FLOW ORIFICE
 FT = FLOW TRANSMITTER
 FH = FLEXIBLE HOSE
 LCP = LOCAL CONTROL PANAL
 LG = LEVEL GAUGE
 LSH = HIGH LEVEL SWITCH
 LSHH = HIGH / HIGH LEVEL SWITCH
 LSL = LOW LEVEL SWITCH
 LSLL = LOW / LOW LEVEL SWITCH
 MSP = MOTOR STARTER PANEL
 PAH = HIGH PRESSURE ALARM (TRANSMITTER)
 PAHH = HIGH PRESSURE TRIP (TRANSMITTER)
 PAHL = PRESSURE SWITCH POINT HIGH LOW (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
 PDSL = LOW PRESSURE DIFFERENTIAL SWITCH
 PDSLL = LOW / LOW PRESSURE DIFFERENTIAL SWITCH
 PDT = PRESSURE DIFFERENTIAL TRANSMITTER
 PG = PRESSURE GAUGE
 PIT = PRESSURE INDICATING TRANSMITTER
 PRV = PRESSURE REDUCING VALVE
 PSH = HIGH PRESSURE SWITCH
 PSHH = HIGH / HIGH PRESSURE SWITCH
 PSL = LOW PRESSURE SWITCH

PSLL = LOW / LOW PRESSURE SWITCH
 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
 TSH = HIGH TEMPERATURE SWITCH
 TSHH = HIGH / HIGH TEMPERATURE SWITCH
 TT = TEMPERATURE TRANSMITTER
 TW = THERMOWELL
 VSH = HIGH VIBRATION SWITCH
 VSHH = HIGH / HIGH VIBRATION SWTICH
 HE = HEATER
 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

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

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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: .. Nm ³ /hr OP / DP: 23,3 bar(g) / 30,5 bar(g) OT / DT: 157 °C / 75 °C Design: TEMA C, ASME VIII Div. 1 Material: CS shell, SS316 tubes	Tagnumber: KE-020-002 Flow air side: 35 Nm ³ /hr Flow water side: .. 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: CS shell, SS316 tubes	Tagnumber: KV-020-001 Volume: 30 L OP / DP: 9,5 bar(g) / 12,5 bar(g) OT / DT: 46 °C / 65 °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 / 75 °C Design: ASME VIII Div. 1 Material: CS	Tagnumber: KV-020-003 Volume: 30 L OP / DP: 22,1 bar(g) / 29 bar(g) OT / DT: 60 °C / 75 °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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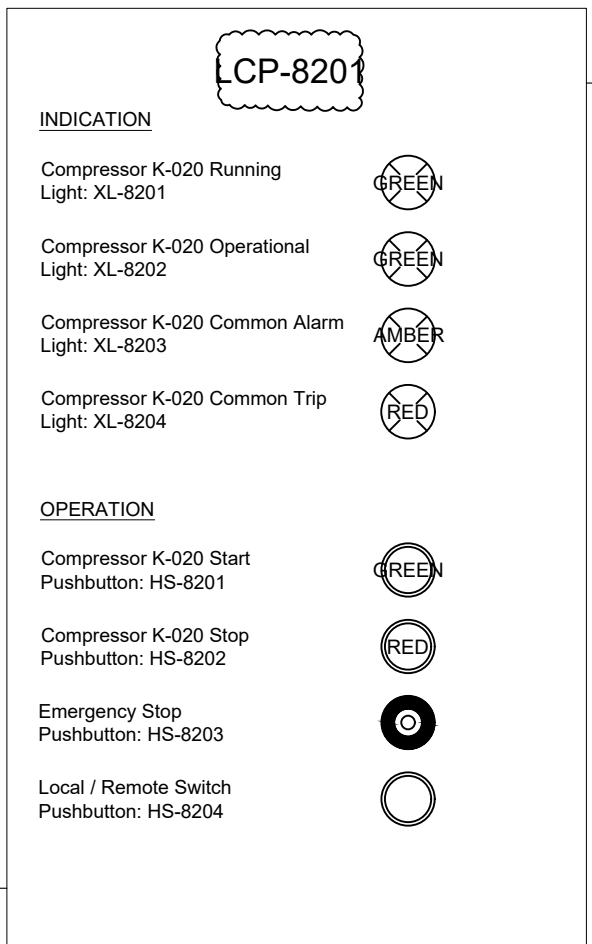
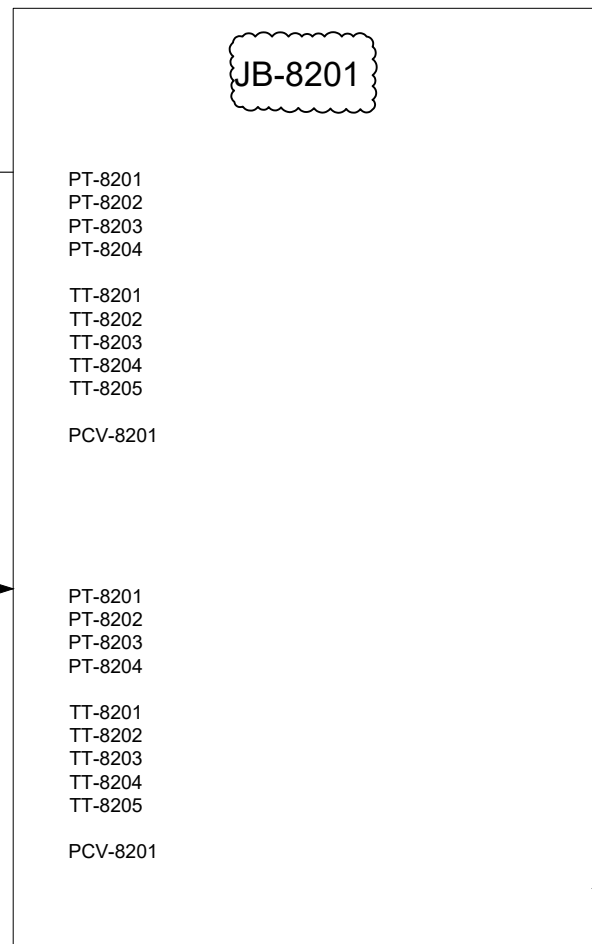
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By AIRPACK

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NOTES

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