

## As Built Documentation

### Chapter 5.1 Measuring and control technology gauge points

- Instrument list

TAG-NO.		DESIGNATION		INSTRUMENTATION										HOOK UP		REMARKS	
		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
E 13100	CURRENT DCAC PUMP P13100			ET13100	Transmitter, current	S	Siemens										
	EI	0...120 A		E13100_I	Analog Input, passive	PCS	ABB					002					
E 13200	CURRENT DCAC PUMP P13200			ET13200	Transmitter, current	S	Siemens										
	EI	0...120 A		E13200_I	Analog Input, passive	PCS	ABB					002					
E 14100	CURRENT CHILL TOWER PUMP P14100			ET14100	Transmitter, current	S	Siemens										
	EI	0...50 A		E14100_I	Analog Input, passive	PCS	ABB					003					
E 14200	CURRENT CHILL TOWER PUMP P14200			ET14200	Transmitter, current	S	Siemens										
	EI	0...50 A		E14200_I	Analog Input, passive	PCS	ABB					003					
E 24111	EFFECTIVE POWER MG24101			ET24110	Transmitter, effective power	S	Siemens										
	EISLL	0...400 kW		E24110_I	Analog Input, passive	PCS	ABB					007					
E 24211	EFFECTIVE POWER MG24201			ET24210	Transmitter, effective power	S	Siemens										
	EISLL	0...400 kW		E24210_I	Analog Input, passive	PCS	ABB					008					
E 61100	CURRENT LOX PUMP P61100			SC61100	Frequency converter	S											
	EI	0...150 A		E61100_I	Analog Input, passive	PCS	ABB					012					
Legend: F = local, V = local cabinet , S = control room, PCS = process control system														Annotation on column "Hook Up": (FP*) = Frost Protection recommended			
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Annotation on column "Hook Up":  
(FP\*) = Frost Protection recommended

F = local, V = local cabinet, S = control room, PCS = process control system

Legend:


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TAG-NO.	DESIGNATION		INSTRUMENTATION									HOOK UP	REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY			
E 61200	CURRENT LOX PUMP P61200		SC62100	Frequency converter	S								
	EI	0...150 A	E61200_I	Analog Input, passive	PCS	ABB						012	
E 73101	CURRENT LIN PUMP P73101		SC73101	Frequency converter	S								
	EI	0...100 A	E73101_I	Analog Input, passive	PCS	ABB						037	
E 73101	FAULT FREQUENCY CONVERTER		EZL73101	Fault contact	S		EL73101_I	Binary Input	PCS	ABB			
	EZAL		EAT73101_I	Binary Input	PCS	ABB						037	
			ESL73101	Ready Contact	S								
E 73201	CURRENT LIN PUMP P73201		SC73201	Frequency converter	S								
	EI	0...100 A	E73201_I	Analog Input, passive	PCS	ABB						037	
E 73201	FAULT FREQUENCY CONVERTER		EZL73201	Fault contact	S		EL73201_I	Binary Input	PCS	ABB			
	EZAL		EAT73201_I	Binary Input	PCS	ABB						037	
			ESL73201	Ready Contact	S								
E 98012-3	EFFECTIVE POWER BAC		ET16001	Transmitter, effective power	S	Siemens							
	EI	0...10 MW	E16001_I	Analog Input, passive	PCS	ABB						006	
E 98012-4	EFFECTIVE POWER MAC		ET11001	Transmitter, effective power	S	Siemens							
	EI	0...10 MW	E11001_I	Analog Input, passive	PCS	ABB						001	

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TAG-NO.	DESIGNATION		INSTRUMENTATION								HOOK UP		REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
F 11074	ANTI SURGE CONTROLLER		FK11074	Butterfly valve	F	Xomox	US11074_O	Binary Output, relay	PCS		HU_V20		
	FIC	0...150 mbar	FIC11074	Controller, Hardware	S								
			F11074_O	Analog Output	PCS						001		
F 11739	LUBE OIL RETURN PIPE MAC		FO11739	Orifice plate	F	Atlas Copco							
	FO												
											027		
F 11740	LUBE OIL RETURN PIPE MAC		FO11740	Orifice plate	F	Atlas Copco							
	FO												
											027		
F 11745	LUBE OIL RETURN PIPE MAC		FO11745	Orifice plate	F	Atlas Copco							
	FO												
											027		
F 11747	LUBE OIL RETURN PIPE MAC		FO11747	Orifice plate	F	Atlas Copco							
	FO												
											027		
F 11748	LUBE OIL RETURN PIPE MAC		FO11748	Orifice plate	F	Atlas Copco							
	FO												
											027		
F 11840	LUBE OIL RETURN PIPE MAC		FG11840	Sight-glass	F	Atlas Copco							
	FG												
											027		
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FUNCTION		RANGE		TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
F 11846		LUBE OIL RETURN PIPE MAC		FG11846	Sight-glass	F	Atlas Copco										
		FG										027					
F 11848		LUBE OIL RETURN PIPE MAC		FG11848	Sight-glass	F	Atlas Copco										
		FG										027					
F 11850		LUBE OIL RETURN PIPE MAC		FG11850	Sight-glass	F	Atlas Copco										
		FG										027					
F 11892		LUBE OIL RETURN PIPE MAC		FO11892	Orifice plate	F	Atlas Copco										
		FO										027					
F 11893		LUBE OIL RETURN PIPE MAC		FO11893	Orifice plate	F	Atlas Copco										
		FO										027					
F 11894		LUBE OIL RETURN PIPE MAC		FO11894	Orifice plate	F	Atlas Copco										
		FO										027					
F 11895		LUBE OIL RETURN PIPE MAC		FO11895	Orifice plate	F	Atlas Copco										
		FO										027					
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY					
F 12005	CHILLED WATER FROM KA12001		FT12005	Flow meter, magnetic-inductive	F	E+H	FV12005	Globe valve	F	Flowserve	HU_V10				
	FICAL	0...50 m³/h	F12005_I	Analog Input, passive	PCS				F		002				
			F12005_O	Analog Output	PCS	ABB									
F 13006	CHILLED WATER TO DC/AC		FT13006	Flow meter, magnetic-inductive	F	E+H	FK13006	Butterfly valve	F	Xomox	HU_V10				
	FICAL	0...40 m³/h	F13006_I	Analog Input, passive	PCS	ABB					002				
			F13006_O	Analog Output	PCS	ABB									
F 13007	COOLING WATER TO DC/AC		FT13007	Flow meter, magnetic-inductive	F	E+H	FK13007	Butterfly valve	F	Xomox	HU_V10				
	FICAL	0...250 m³/h	F13007_I	Analog Input, passive	PCS	ABB					002				
			F13007_O	Analog Output	PCS	ABB									
F 15035	AIR BEHIND SOL SIEVE		FE15035	Flow sensor, pitot tube	F	Intra Automatic					HU_F06		Y to UY11010		
	FIC	0...120000 Nm³/h 0...22,4 mbar	FT15035	Transmitter, diff.-press.	F						004				
			F15035_I	Analog Input, active	PCS	ABB									
F 15041	INLET REGENERATION GAS HEATERS		FE15041	Flow sensor, pitot tube	F	Intra Automatic					HU_F06		Y to UC15045		
	FICAL	0...22000 Nm³/h 0...13,83 mbar	FT15041	Transmitter, diff.-press.	F	E+H					005				
			F15041_I	Analog Input, active	PCS	ABB									
F 16073	HP-AIR FROM BAC		FE16073	Flow sensor, pitot tube	F	Intra Automatic					HU_F16073				
	FI	0...65000 Nm³/h 0...40,19 mbar	FT16073	Transmitter, diff.-press.	F	E+ H					006				
			F16073_I	Analog Input, active	PCS	ABB									
F 16074	ANTI SURGE CONTROLLER BAC		FIC16074	Controller, electric	S	ABB							X from FT16007		
	FIC (F16007)	0...100 %	FV16074	Globe valve	F	COV					006				
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
F 16842	LUBE OIL RETURN PIPE BAC		FO16842	Orifice plate	F	Atlas Copco							
	FO										028		
F 16846	LUBE OIL RETURN PIPE BAC		FO16846	Orifice plate	F	Atlas Copco							
	FO										028		
F 16849	LUBE OIL RETURN PIPE BAC		FO16849	Orifice plate	F	Atlas Copco							
	FO										028		
F 16852	LUBE OIL RETURN PIPE BAC		FO16852	Orifice plate	F	Atlas Copco							
	FO										028		
F 16855	LUBE OIL RETURN PIPE BAC		FO16855	Orifice plate	F	Atlas Copco							
	FO										028		
F 16867	LUBE OIL MAIN MOTOR BAC		FV16867	Flow regulator	F	Atlas Copco							
	FC										028		
F 16868	LUBE OIL MAIN MOTOR BAC		FV16868	Flow regulator	F	Atlas Copco							
	FC										028		
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F 20001	HP-GAN OUTLET COLDBOX		FE20001	Flow sensor, orifice plate	F	Himpe	F20001_O	Analog Output	PCS	ABB	HU_F01; HU_V20	X from FIC 20001			
	FIC	0...4500 Nm³/h 0...150 mbar	FT20001	Transmitter, diff.-press.	F	E+H	FV20001	Globe valve	F	Flowserve					
			F20001_I	Analog Input, active	PCS	ABB					010				
F 20002	HP-GAN BLOW OFF		FV20002	Globe valve	F	Flowserve					HU_V20	010			
	FIC	0...4500 Nm³/h	F20002_O	Analog Output	PCS	ABB									
F 20003	HP-GAN TO CUSTOMER		FE20003	Flow sensor, orifice plate	F	Himpe					HU_F01	010			
	FI	0...4500 Nm³/h 0...150 mbar	FT20003	Transmitter, diff.-press.	F	E+H									
			F20003_I	Analog Input, active	PCS	ABB									
F 20005	LP-GAN OUTLET COLDBOX		FE20005	Flow sensor, pitot tube	F	Himpe	F20005_O	Analog Output	PCS	ABB	HU_F01; HU_V20	X from FIC 20005			
	FICALSALL	0...35000 Nm³/h 0...16,75 mbar	FT20005	Transmitter, diff.-press.	F	E+ H	FK20005	Butterfly valve	F	Xomox					
			F20005_I	Analog Input, active	PCS	ABB					010				
F 20006	LP-GAN BLOW OFF		FK20006	Butterfly valve	F	Xomox					HU_V20	010			
	FIC	0...35000 Nm³/h	F20006_O	Analog Output	PCS	ABB									
F 20011	GOX OUTLET COLDBOX		FE20011	Flow sensor, orifice plate	F	Himpe	F20011_O	Analog Output	PCS	ABB	HU_F01; HU_V20	X from FIC 20011			
	FICALSALL	0...35000 Nm³/h 0...250 mbar	FT20011	Transmitter, diff.-press.	F	E+ H	FV20011	Globe valve	F	Flowserve					
			F20011_I	Analog Input, active	PCS	ABB					010				
F 20012	GOX BLOW OFF		FV20012	Globe valve	F	Flowserve					HU_V20	010			
	FIC	0...35000 Nm³/h	F20012_O	Analog Output	PCS	ABB									
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
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F 20013	GOX TO CUSTOMER		FE20013	Flow sensor, orifice plate	F	Himpe						HU_F01			
	FI	0...35000 Nm³/h 0...250 mbar	FT20013	Transmitter, diff.-press.	F	E+H									
			F20013_I	Analog Input, active	PCS	ABB						010			
F 22013	ULIN TO LP-COLUMN		FE22013	Flow sensor, orifice plate	CB	Himpe	F22013_O	Analog Output	PCS	ABB	HU_C01; HU_V10				
	FIC	0...35000 Nm³/h 0...125 mbar	FT22013	Transmitter, diff.-press.	F	E + H	FV22013	Globe valve	CB	Flowserve					
			F22013_I	Analog Input, active	PCS	ABB						013			
F 22043	GOX FROM LP-COLUMN		FE22043	Flow sensor, venturi nozzle	CB	Himpe	F22043_O	Analog Output	PCS	ABB	HU_C01; HU_V10				
	FIC	0...500 Nm³/h 0...60 mbar	FT22043	Transmitter, diff.-press.	F	E+H	FV22043	Globe valve	CB	Flowserve					
			F22043_I	Analog Input, active	PCS	ABB						013			
F 23013	LIN PRODUCT TO STORAGE		FT23013	Flow meter, ultrasonic	CB	Siemens	FV23013	Globe valve	F	Flowserve	HU_V10				
	FIC	0...5000 Nm³/h	F23013_I	Analog Input, passive	PCS	ABB									
			F23013_O	Analog Output	PCS	ABB						011			
F 23016	LOX TO STORAGE		FT23016	Flow meter, ultrasonic	CB	Siemens									
	FI	0...5000 Nm³/h	F23016_I	Analog Input, active	PCS	ABB									
												011			
F 23073	LIN PRODUCT TO DUMP		FV23073	Globe valve	CB	Flowserve					HU_V10		X from FIC 23013		
	FIC	0...5000 Nm³/h	F23073_O	Analog Output	PCS	ABB									
												011			
F 24101	AIR TO EXPANDER TURBINE 1		FE24101	Flow sensor, orifice plate	CB	Himpe					HU_C03		Y to HIC 24105		
	FIC	0...15000 Nm³/h 0...100 mbar	FT24101	Transmitter, diff.-press.	F	E+H									
			F24101_I	Analog Input, active	PCS	ABB						007			
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
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F 24152	LUBE OIL TO TURBINE 1		FX24152	Orifice plate	F	Cryostar						
	FX										029	
F 24152	OIL BEHIND GEARBOX TURBINE 1		FO24152	Sight-glass	F							
	FO										029	
F 24153	LUBE OIL TO GEARBOX TURBINE 1		FX24153	Orifice plate	F	Cryostar						
	FX										029	
F 24154	LUBE OIL TO GENERATOR TURBINE 1		FX24154	Orifice plate	F	Cryostar						
	FX										029	
F 24201	AIR TO EXPANDER TURBINE 2		FE24201	Flow sensor, orifice plate	CB	Himpe					HU_C03	Y to HIC 24205
	FIC	0...15000 Nm <sup>3</sup> /h 0...100 mbar	FT24201	Transmitter, diff.-press.	F	E+ H						
			F24201_I	Analog Input, active	PCS	ABB					008	
F 24252	LUBE OIL TO TURBINE 2		FX24252	Orifice plate	F	Cryostar						
	FX										030	
F 24252	OIL BEHIND GEARBOX TURBINE 2		FO24252	Sight-glass	F							
	FO										030	


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			Annotation on column "Hook Up": (FP*) = Frost Protection recommended									
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F 24253	LUBE OIL TO GEARBOX TURBINE 2		FX24253	Orifice plate	F	Cryostar									
	FX											030			
F 24254	LUBE OIL TO GENERATOR TURBINE 2		FX24254	Sight-glass	F										
	FX											030			
F 40011	SIDEARMLIQUID FROM LP-COLUMN		FE40011	Flow sensor, orifice plate	CB	Himpe	F40011_O	Analog Output	PCS	ABB		HU_C01; HU_V10			
			FT40011	Transmitter, diff.-press.	F	E+H	FV40011	Globe valve	CB	Flowserve					
	FIC	0...30000 Nm³/h 0...50 mbar	F40011_I	Analog Input, active	PCS	ABB						016 / 017			
			FT40014	Flow meter, ultrasonic	CB	Siemens	HV40014	Globe valve	CB	Flowserve		HU_V10			
F 40014	LAR TO PURE AR COLUMN		F40014_I	Analog Input, passive	PCS	ABB						017			
	FIC	0...1000 Nm³/h	H40014_O	Analog Output	PCS	ABB									
			FSL40181	Flow monitor	F										
			FL40181_I	Binary Input	PCS	ABB						016			
F 61181	GOX SEALGAS P61100		FSL61181	Flow monitor	F										
			FL61181_I	Binary Input	PCS	ABB						012			
	FSAL														
F 61281	GOX SEALGAS P61200		FSL61281	Flow monitor	F										
			FL61281_I	Binary Input	PCS	ABB						012			
	FSAL														
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F 62030	PURGEGAS LOX TANK B62001		FI62030	Flow meter, variable area	F								
	FI	Nm³/h									032		
	LOX CONVERTER CYCLE												
F 63033	FI	0...6000 Nm³/h 0...450 mbar	FE63033	Flow sensor, venturi nozzle	F	Himpe					HU_F01		
			FT63033	Transmitter, diff.-press.	F	E+H							
			F63033_J	Analog Input, active	PCS	ABB					032		
F 64061	FIC	0...35000 Nm³/h 0...450 mbar	FE63033	Flow sensor, venturi nozzle	F	Himpe							
			FT63033	Transmitter, diff.-press.	F	E+H							
			F63033_J	Analog Input, active	PCS	ABB							
F 70041	IMP-GAN TO CUSTOMER		FE70041	Flow sensor, orifice plate	F	Himpe					HU_F01		
	FIC	0...35000 Nm³/h 0...150 mbar	FT70041	Transmitter, diff.-press.	F	E+H							
			F70041_J	Analog Input, active	PCS	ABB					020		
F 70074	ANTI SURGE CONTROLLER												
	FIC	0...100 %	FIC70074	Controller, Hardware	S								
			FV70074	Globe valve	F	COV					019		
F 70830	BYPASS P70830		FO70830	Orifice plate	F	ATLAS COPCO							
	FO												
											021		
F 70867	LUBE OIL MOTOR GAN COMP. 1		FG70867	Looking glass	F	Atlas Copco							
	FG												
											021		

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F 70868	LUBE OIL MOTOR GAN COMP. 1		FG70868	Looking glass	F	Atlas Copco							
	FG										021		
F 71181	SEALGAS P71100		FSL71181	Flow monitor	F								
	FSAL		FL71181_I	Binary Input	PCS	ABB					015		
F 71281	SEALGAS P71200		FSL71281	Flow monitor	F								
	FSAL		FL71281_I	Binary Input	PCS	ABB					015		
F 72030	PURGEGAS LIN TANK B72001		FI72030	Flow meter, variable area	F								
	FI	Nm³/h									035		
F 72071	PURGE GAS P72001		FI72071	Flow meter, variable area	F								
	FI	Nm³/h									035		
F 77074	ANTI SURGE CONTROLLER												
	FIC	0...100 %	FIC77074	Controller, Hardware	S								
			FV77074	Globe valve	F	COV					020		
F 77830	BYPASS P77830		FOT7830	Orifice plate	F	ATLAS COPCO							
	FO												
											022		
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F 77867	LUBE OIL MOTOR GAN COMP. 2		FG77867	Looking glass	F	Atlas Copco										
	FG										022					
F 77868	LUBE OIL MOTOR GAN COMP. 2		FG77868	Looking glass	F	Atlas Copco										
	FG										022					
F 80001	COOLING WATER		FT80001	Flow meter, magnetic-inductive	F	E+H										
	FIAL	0...2000 m³/h	F80001_J	Analog Input, passive	PCS	ABB					023					
F 87020	BOXPURGE HE-BOX		FI87020	Flow meter, variable area	F	ABB										
	FI	2,5...35 Nm³/h									024					
F 87021	BOXPURGE HE-BOX		FI87021	Flow meter, variable area	F	ABB										
	FI	2,5...35 Nm³/h									024					
F 87060	BOXPURGE COLD-BOX		FI87060	Flow meter, variable area	F	ABB										
	FI	2,5...35 Nm³/h									024					
F 87061	BOXPURGE COLD-BOX		FI87061	Flow meter, variable area	F	ABB										
	FI	2,5...35 Nm³/h									024					
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F 87062	BOXPURGE COLD-BOX		FI87062	Flow meter, variable area	F	ABB									
	FI	2,5...35 Nm <sup>3</sup> /h									024				
F 87063	BOXPURGE COLD-BOX		FI87063	Flow meter, variable area	F	ABB									
	FI	2,5...35 Nm <sup>3</sup> /h									024				
F 87064	BOXPURGE COLD-BOX		FI87064	Flow meter, variable area	F	ABB									
	FI	2,5...35 Nm <sup>3</sup> /h									024				
G 11010	GUIDE VANE MAC		GSL11010	End position switch	F	Arca	G11010_J	Analog Input, active	PCS	ABB					
	GISOL	0...100 %	GL11010_J	Binary Input	PCS	ABB									
			GT11010	Position recopy	F	Arca					001				
G 11074	BLOW OFF VALVE MAC		GT11074	Position recopy	F	Flowserve									
	GISOH	0...100 %	G11074_J	Analog Input, active	PCS	ABB					001				
G 11742	SHAFT POSITION GEARING MAC		GE11742	Position sensor	F	Bently Nevada									
	GIAHLSAHHLL	-2...0...+2 mm	GT11742	Position transducer	S	Bently Nevada									
			G11742_J	Analog Input, passive	PCS	ABB					027				
G 16010	GUIDE VANE BAC STAGE 1		GSL16010	End position switch	F	Arca	GH6010_J	Binary Input	PCS	ABB					
	GISOL	0...100 %	GL16010_J	Binary Input	PCS	ABB	GT16010	Position recopy	F	Arca					
			GSH16010	End position switch	F	Arca	G16010_J	Analog Input, active	PCS	ABB	006				


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G 16074	BLOW OFF VALVE BAC		GSH16074	End position switch	F		GL16074_J	Binary Input	PCS	ABB		
	GOHL	0...100 %	GH16074_J	Binary Input	PCS	ABB						
			GSL16074	End position switch	F						006	
G 16733	POSITION MAIN SHAFT BAC		GE16733	Position sensor	F	Bently Nevada						
	GIAHLSAHLL	-2...+2 mm	GT16733	Position transducer	S	Bently Nevada						
			G16733_J	Analog Input, passive	PCS	ABB					028	
G 24105	NOZZLE RING EXPANDER TURBINE 1		GSL24105	End position switch	F		G24105_J	Analog Input, active	PCS	ABB		
	GIOL	0...100 %	GL24105_J	Binary Input	PCS	ABB						
			GT24105	Position recopy	F							007
G 24205	NOZZLE RING EXPANDER TURBINE 2		GSL24205	End position switch	F		G24205_J	Analog Input, active	PCS	ABB		
	GIOL	0...100 %	GL24205_J	Binary Input	PCS	ABB						
			GT24205	Position recopy	F							008
G 70010	GUIDE VANE GAN COMPR. 1		GSL70010	End position switch	F	Arca	G70010_J	Analog Input, active	PCS	ABB		
	GISOL	0...100 %	GL70010_J	Binary Input	PCS	ABB						
			GT70010	Position recopy	F	Arca						019
G 70074	RECYCLE VALVE GAN COMP. 1		GSH70074	End position switch	F							
	GOH	0...100 %	GH70074_J	Binary Input	PCS	ABB						
												019
G 70738	SHAFT POSITION GEARING NV1		GE70738	Position sensor	F	Bently Nevada						
	GIAHLSAHLL	-0,6...0,6 mm	GT70738	Position transducer	S	Bently Nevada						
			G70738_J	Analog Input, passive	PCS	ABB						021

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G 70743	SHAFT POSITION GEARING NV1			GE70743	Position sensor	F	Bently Nevada										
	GIAHLSAHILL	-0,6...0,6 mm	GT70743	Position transducer	S	Bently Nevada											
			G70743_I	Analog Input, passive	PCS	ABB						021					
G 72008	BOTTOM VALVE B72001			GSH72008	End position switch	F		GL72008_I	Binary Input	PCS	ABB						
	GOHL		GHT2008_I	Binary Input	PCS	ABB											
			GSL72008	End position switch	F							035					
G 72009	BOTTOM VALVE B72001			GSH72009	End position switch	F		GL72009_I	Binary Input	PCS	ABB						
	GOHL		GHT2009_I	Binary Input	PCS	ABB											
			GSL72009	End position switch	F							035					
G 74090	OUTLET MP-GAN			GSHL7490	End position switch	F											
	GOL		GL74090_I	Binary Input	PCS	ABB											
												036					
G 77010	GUIDE VANE GAN COMPR. 2			GSL77010	End position switch	F	Arca	G77010_I	Analog Input, active	PCS	ABB						
	GISOL	0...100 %	GL70010_I	Binary Input	PCS	ABB											
			GT77010	Position recopy	F	Arca						020					
G 77074	RECYCLE VALVE GAN COMP. 2			GSH77074	End position switch	F											
	GOH		GHT77074_I	Binary Input	PCS	ABB											
												020					
G 77738	SHAFT POSITION GEARING NV2			GE77738	Position sensor	F	Bently Nevada										
	GIAHLSAHILL	-0,6...0,6 mm	GT77738	Position transducer	S	Bently Nevada											
			G77738_I	Analog Input, passive	PCS	ABB						022					
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G 77743	SHAFT POSITION GEARING NV2				GE77743	Position sensor	F	Bently Nevada								
	GIAHLSAHHLL	-0,6...0,6 mm			G77743	Position transducer	S	Bently Nevada								
					G77743_I	Analog Input, passive	PCS	ABB					022			
H 11000	RESET TRIP MAC				HS11000_O	Binary Output, relay	PCS	ABB								
	HS															
													001			
H 11001	MAIN MOTOR MAC				MO11001	Switching relay	S	Siemens	ESH11001	Check back signal	S					
	HS / EOH				HH11001_O	Binary Output, relay	PCS	ABB	EH11001_I	Binary Input	PCS	ABB				
					HL11001_O	Binary Output, relay	PCS	ABB					001			
H 11001	EMERGENCY SHUT DOWN MAC				HZ11001	Emergency shut down button	F									
	HZA				HZ11001_I	Binary Input	PCS	ABB								
													001			
H 11803	OIL DEMISTER MAC V11803				MO11803	Switching relay	S	Siemens	EH11803_I	Binary Input	PCS	ABB				
	HS / EOH				HS11803_O	Binary Output, relay	PCS	ABB								
					ESH11803	Check back signal	S						027			
H 11810	OIL HEATING MAC				HE11810	Switching relay	S	Siemens	EH11810_I	Binary Input	PCS	ABB				
	HS / EOH				HS11810_O	Binary Output, relay	PCS	ABB								
					ESH11810	Check back signal	S						027			
H 11820	AUXILIARY OIL PUMP MAC				MO11820	Switching relay	S	Siemens	EH11820_I	Binary Input	PCS	ABB				
	HS / EOH				HS11820_O	Binary Output, relay	PCS	ABB								
					ESH11820	Check back signal	S						027			
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H 12001	CHILLER UNIT KA12001		HS12001_ O	Binary Output, relay	PCS	ABB									
	HS / EOH		ESH	Check back signal	S						002				
			EH12001_I	Binary Input	PCS	ABB									
H 13100	COOLING WATER PUMP P13100		MO13100	Switching relay	S	Siemens	EH13100_I	Binary Input	PCS	ABB					
	HS / EOH		HS13100_ O	Binary Output, relay	PCS	ABB					002				
			ESH13100	Check back signal	S		I								
H 13200	COOLING WATER PUMP P13200		MO13200	Switching relay	S	Siemens	EH13200_I	Binary Input	PCS	ABB					
	HS / EOH		HS13200_ O	Binary Output, relay	PCS	ABB					002				
			ESH13200	Check back signal	S										
H 14100	COOLING WATER PUMP P14100		MO14100	Switching relay	S	Siemens	EH14100_I	Binary Input	PCS	ABB					
	HS / EOH		HS14100_ O	Binary Output, relay	PCS	ABB					003				
			ESH14100	Check back signal	S										
H 14200	COOLING WATER PUMP P14200		MO14200	Switching relay	S	Siemens	EH14200_I	Binary Input	PCS	ABB					
	HS / EOH		HS14200_ O	Binary Output, relay	PCS	ABB					003				
			ESH14200	Check back signal	S										
H 15004	RESET TEMP. SWITCHES MOLE SIEVE		HS15004_ O	Binary Output, relay	PCS	ABB									
	HS										005				
H 16000	RESET TRIP BAC		HS16000_ O	Binary Output, relay	PCS	ABB									
	HS										006				

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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
H 16001	MAIN MOTOR BAC		MO16001	Switching relay	S	Siemens	ESH16001	Check back signal	S						
	HS		HH16001_O	Binary Output, relay	PCS	ABB	EH16001_I	Binary Input	PCS	ABB					
			HL16001_O	Binary Output, relay	PCS	ABB				006					
H 16001	EMERGENCY SHUT DOWN MAC		HZ16001	Emergency shut down button	F										
	HZA		HZ16001_I	Binary Input	PCS	ABB									
									006						
H 16071	BLOW OUT VALVE BAC		HV16071	Globe valve	F	Flowserve					HU_V20				
	HIC	0...100 %	H16071_O	Analog Output	PCS	ABB									
			UV16071	Solenoid valve	F					006					
H 16073	AIR FROM BOOSTER		HV16073	Butterfly valve, electric guide	F	Xomox	GSL16073	End position switch	F	Xomox					
	HIC / GSHL	0...100 %	H16073_O	Analog Output	PCS	ABB	GH16073_I	Binary Input	PCS	ABB					
			GSH16073	End position switch	F	Xomox	GL16073_I	Binary Input	PCS	ABB	006				
H 16803	OIL DEMISTER BAC V16803		MO16803	Switching relay	S	Siemens	EH16803_I	Binary Input	PCS	ABB					
	HS / EOH		HS16803_O	Binary Output, relay	PCS	ABB									
			ESH16803	Check back signal	S					028					
H 16810	OIL HEATING BAC		HE16810	Switching relay	S	Siemens	EH16810_I	Binary Input	PCS	ABB					
	HS / EOH		HS16810_O	Binary Output, relay	PCS	ABB									
			ESH16810	Check back signal	S					028					
H 16820	AUXILIARY OIL PUMP BAC		MO16820	Switching relay	S	Siemens	EH16820_I	Binary Input	PCS	ABB					
	HS / EOH		HS16820_O	Binary Output, relay	PCS	ABB									
			ESH16820	Check back signal	S					028					
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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Legend:										F = local, V = local cabinet , S = control room, PCS = process control system										Annotation on column "Hook Up": (FP*) = Frost Protection recommended			
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H 20003	HP-GAN TO CUSTOMER			HS20003_O	Binary Output, relay	PCS	ABB							HU_V20					
	HS			UV20003	Solenoid valve	F								010					
				HV20003	Globe valve	F	Flowserve												
H 20013	PRESSURISATION GOX TO CUSTOMER 1			HV20013	Globe valve	F	Flowserve							HU_V10					
	HIC		0...100 %	H20013_O	Analog Output	PCS	ABB							010					
H 20014	PRESSURISATION GOX TO CUSTOMER 2			HV20014	Globe valve	F	Flowserve							HU_V10					
	HIC		0...100 %	H20014_O	Analog Output	PCS	ABB							010					
H 20026	AIR TO MAIN HEAT EXCHANGER			UK20026	Butterfly valve	F	Xomox	GSL20026	End position switch	F	Xomox			HU_V20					
	HS / GOSHL			HS20026_O	Binary Output, relay	PCS	ABB	GH20026_I	Binary Input	PCS	ABB			006					
				GSH20026	End position switch	F	Xomox	GL20026_I	Binary Input	PCS	ABB								
H 20027	PRESSURISATION AIR TO MHE			UK20027	Butterfly valve	F	Xomox							HU_V10					
	HIC		0...100 %	H20027_O	Analog Output	PCS	ABB							006					
H 20029	TAG SELECTION			HS20029	Binary Output, relay	PCS	ABB							009					
	HS			DCV20029	Solenoid valve	A									HU_V10				
H 21006	NL FROM B21002			HV21006	Globe valve	CB	Flowserve							014					
	HIC		0...100 %	H21006_O	Analog Output	PCS	ABB												
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H 21014	LIQUID AIR TO HP-COLUMN		HV21014	Globe valve	CB	Flowserve						HU_V10		
	HIC	0...100 %	H21014_O	Analog Output	PCS	ABB								
H 24100	EMERGENCY SHUT DOWN TURBINE 1		HZ24100	Emergency shut down button	F							007		
	HZA		HA24100_I	Binary Input	PCS	ABB								
H 24101	QUICK SHUT OFF VALVE TURBINE 1		UK24101	Butterfly valve	F	ETV	GSL24101	End position switch	F			007		
	HS / GOSL		UV24101	Solenoid valve	F		GL24101_I	Binary Input	PCS	ABB				
			US24101_O	Binary Output, relay	PCS	ABB								
H 24105	NOZZLE RING EXPANDER TURBINE 1		HV24105	Drive unit	F							007		
	HIC	0...100 %	H24105_O	Analog Output	PCS	ABB								
H 24160	OIL HEATING EXPANDER TURBINE 1		HE24160	Switching relay	S	Siemens	EH24160_I	Binary Input	PCS	ABB		029		
	HS / EOH		HS24160_O	Binary Output, relay	PCS	ABB								
			ESH24160	Check back signal	S									
H 24163	AUXILLIARY OIL PUMP TURBINE 1		MO24163	Switching relay	S	Siemens	EH24163_I	Binary Input	PCS	ABB		029		
	HS / EOH		HS24163_O	Binary Output, relay	PCS	ABB								
			ESH24163	Check back signal	S									
H 24182	OIL DEMISTER TURBINE 1		MO24182	Switching relay	S	Siemens	EH24182_I	Binary Input	PCS	ABB		029		
	HS / EOH		HS24182_O	Binary Output, relay	PCS	ABB								
			ESH24182	Check back signal	S									


**Legend:**

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 Annotation on column "Hook Up":  
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H 24200	EMERGENCY SHUT DOWN TURBINE 2		HZ24200	Emergency shut down button	F										
	HZA		HA24200_I	Binary Input	PCS	ABB									
												008			
H 24201	QUICK SHUT OFF VALVE TURBINE 2		UK24201	Butterfly valve	F	ETV	GSL24201	End position switch	F						
	HS / GOL		UV24201	Solenoid valve	F		GL24201_I	Binary Input	PCS	ABB					
			HS24201_O	Binary Output, relay	PCS	ABB						008			
H 24205	NOZZLE RING EXPANDER TURBINE 2		HV24205	Drive unit	F										
	HIC / GIOL	0...100 %	H24205_O	Analog Output	PCS	ABB									
												008			
H 24260	OIL HEATING EXPANDER TURBINE 2		HE24260	Switching relay	S	Siemens	EH24260_I	Binary Input	PCS	ABB					
	HS / EOH		HS24260_O	Binary Output, relay	PCS	ABB									
			ESH24260	Check back signal	S							030			
H 24263	AUXILLIARY OIL PUMP TURBINE 2		MO24263	Switching relay	S	Siemens	EH24263_I	Binary Input	PCS	ABB					
	HS / EOH		HS24263_O	Binary Output, relay	PCS	ABB									
			ESH24263	Check back signal	S							030			
H 24282	OIL DEMISTER TURBINE 2		MO24282	Switching relay	S	Siemens	EH24282_I	Binary Input	PCS	ABB					
	HS / EOH		HS24282_O	Binary Output, relay	PCS	ABB									
			ESH24282	Check back signal	S							030			
H 40005	LAR BLOW OUT CONDENSER B40001		HV40005	Globe valve	CB	Flowserve									
	HIC	0...100 %	H40005_O	Analog Output	PCS	ABB									


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H 40012	CRUDE ARGON BLOW OFF		H40012_O	Analog Output	PCS	ABB						HU_V10			
	PIC		HK40012	Butterfly valve	F	Xomox						017			
H 40100	SPEED LAR PUMP P40100		UC40100	Frequency converter	S		EA40100_J	Binary Input	PCS	ABB					
	HIC / ESAL	0...100 %	H40100_O	Analog Output	PCS	ABB	SL40100_O	Binary Output, relay	PCS	ABB					
			S40100_I	Analog Input, passive	PCS	ABB						016			
H 40100	EMERGENCY SHUT DOWN P40100		HZ40100	Emergency shut down button	F										
	HZ											016			
H 40100	LAR PUMP P40100		MO40100	Switching relay	S	Siemens	EH40100_J	Binary Input	PCS	ABB					
	HS / EOH		HS40100_O	Binary Output, relay	PCS	ABB									
			ESH40100	Check back signal	S							016			
H 40101	P40100 FAN MOTOR		MO40101	Switching relay	S	Siemens	EH40101_J	Binary Input	PCS	ABB					
	US / EOH			Check back signal	S							016			
			ESH40101												
H 40102	BEARING HEATER P40100		HE40110	Switching relay	S		EH40102_J	Binary Input	PCS	ABB					
	HS / EOHAL		HS40102_O	Binary Output, relay	PCS	ABB	EA40102_J	Binary Input	PCS	ABB					
			ESH40102	Check back signal	S							016			
H 40110	LAR FROM K40001		HV40110	Globe valve	CB	Flowserve						HU_V10			
	HS		UV40110	Solenoid valve	F										
			HS40110_O	Binary Output, relay	PCS	ABB						016			

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H 44001	EMERGENCY SHUT DOWN P44001		HZ44001	Emergency shut down button	F										
	HZA		HA44001_I	Binary Input	PCS	ABB						042			
H 44011	DEATH MAN'S HANDLE P44001		HS44011	Local push button	F										
	HS		HS44011_I	Binary Input	PCS	ABB						042			
H 44012	START FILLING ROAD TANKER		HS44012	Local push button	F										
	HS		HS44012_I	Binary Input	PCS	ABB						042			
H 48001	EMERGENCY SHUT DOWN P48001		HZ48001	Emergency shut down button	F										
	HZA		HA48001_I	Binary Input	PCS	ABB						043			
H 48001	HP LAR PUMP P48001		MO48001	Switching relay	S		EH48001_I	Binary Input	PCS	ABB					
	HS / EOH		HS48001_O	Binary Output, relay	PCS	ABB						043			
			ESH48001	Check back signal	S										
H 48010	LAR FROM LP-TANKS		HV48010	Globe valve	F	Flowserve						HU_V10			
	HS		HV48010	Solenoid valve	F							043			
			HS48010_O	Binary Output, relay	PCS	ABB									
H 48050	LIQUID VALVE P44001		HV48050	Globe valve	F	Flowserve						HU_V10			
	HS		UV64150	Solenoid valve	F							043			
			HS48050_O	Binary Output, relay	PCS	ABB									
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
H 48070	COOL DOWN VALVE P48001			HV48070	Globe valve	F	Flowserve					HU_V10				
	HIC		H48070_O	Analog Output	PCS	ABB						043				
H 49020	RESET TEMPERATURE TRIP HP-GAR			HS49020_O	Binary Output, relay	PCS	ABB									
	HS											044				
H 61100	EMERGENCY SHUT DOWN P61100			HZ61100	Emergency shut down button	F										
	HZ											012				
H 61100	SPEED LOX PUMP P61100			UC61100	Frequency converter	S		EA61100_J	Binary Input	PCS	ABB					
	HIC / ESAL	0...100 %	H61100_O	Analog Output	PCS	ABB		SL61100_O	Binary Output, relay	PCS	ABB					
			S61100_J	Analog Input, passive	PCS	ABB						012				
H 61100	LOX PUMP P61100			MO61100	Switching relay	S	Siemens	EH61100_J	Binary Input	PCS	ABB					
	HS		HS61100_O	Binary Output, relay	PCS	ABB										
			ESH61100	Check back signal	S							012				
H 61101	P61100 FAN MOTOR			MO61101	Switching relay	S	Siemens	EH61101_J	Binary Input	PCS	ABB					
	HS / EOH		ESH61101	Check back signal	S							012				
H 61102	BEARING HEATER P61100			HE61110	Switching relay	S		EH61102_J	Binary Input	PCS	ABB					
	HS / EOHAL		HS61102_O	Binary Output, relay	PCS	ABB		EA61102_J	Binary Input	PCS	ABB					
			ESH61102	Check back signal	S							012				
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H 61103	START UP VALVE PUMP P61100		HV61103	Ball valve	F	Xomox						HU_V10	012				
	HS		HS61103_O	Binary Output, relay	PCS	ABB											
H 61110	LOX FROM LP-COLUMN		HV61110	Globe valve	CB	Flowserve						HU_V10	012				
	HS		UV61110	Solenoid valve	F												
			HS61110_O	Binary Output, relay	PCS	ABB											
H 61200	EMERGENCY SHUT DOWN P61200		HZ61200	Emergency shut down button	F								012				
	HZ																
H 61200	SPEED LOX PUMP P61200		UC61200	Frequency converter	S		EA61200_I	Binary Input	PCS	ABB			012				
	HIC / ESAL	0...100 %	H61200_O	Analog Output	PCS	ABB	SL61200_O	Binary Output, relay	PCS	ABB							
			S61200_I	Analog Input, passive	PCS												
H 61200	LOX PUMP P61200		MO61200	Switching relay	S	Siemens	EH61200_I	Binary Input	PCS	ABB			012				
	HS / EOH		HS61200_O	Binary Output, relay	PCS	ABB											
			ESH61200	Check back signal	S												
H 61201	P61200 FAN MOTOR		MO61201	Switching relay	S	Siemens	EH61201_I	Binary Input	PCS	ABB			012				
	HS / EOH		ESH61201	Check back signal	S												
			HE61210	Switching relay	S												
H 61202	BEARING HEATER P61200		HS61202_O	Binary Output, relay	PCS	ABB	EA61202_I	Binary Input	PCS	ABB			012				
	HS / EOHAL		ESH61202	Check back signal	S												
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H 61203	START UP VALVE PUMP P61200		HV61203	Ball valve	F	Xomox							HU_V10		
	HS		HS61203_O	Binary Output, relay	PCS	ABB							012		
H 61210	LOX FROM LP-COLUMN		HV61210	Globe valve	CB	Flowserve							HU_V10		
	HS		UV61210	Solenoid valve	F								012		
			HS61210_O	Binary Output, relay	PCS	ABB									
H 62008	BOTTOM VALVE B62001		HV62008	Bottom valve	F	TV	HZ62008	Emergency shut down button	F				HU_V10		
	HZA		UV62008	Solenoid valve	F		HZ62008_K1	Emergency shut down relay	S	AGS					
			HS62008_O	Binary Output, relay	PCS	ABB	HA62008_J1	Binary Input	PCS	ABB			032		
H 62009	BOTTOM VALVE B62001		HV62009	Bottom valve	F	TV	HZ62009	Emergency shut down button	F				HU_V10		
	HZA		UV62009	Solenoid valve	F		HZ62009_K1	Emergency shut down relay	S	AGS					
			HS62009_O	Binary Output, relay	PCS	ABB	HA62009_J1	Binary Input	PCS	ABB			032		
H 62011	DEATH MAN'S HANDLE P62001		HS62011	Local push button	F										
	HS		HS62011_J1	Binary Input	PCS	ABB							032		
H 62012	START FILLING ROAD TANKER		HS62012	Local push button	F										
	HS		HS62012_J1	Binary Input	PCS	ABB							032		
H 62051	LOX TANK INLET VALVE		HV62051	Globe valve	F	Flowserve							HU_V10		
	HS		UV62051	Solenoid valve	F										
			HS62051_O	Binary Output, relay	PCS	ABB							032		


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H 62052	LOCK FILLING LOX TANK		HV62052	Globe valve	F	Flowserve						HU_V10	
	HS		UV62052	Solenoid valve	F								
				HS62052_O	Binary Output, relay	PCS	ABB						032
H 63001	LOX CONVERTER CYCLE PUMP P63001		MO63001	Switching relay	S		EH63001_I	Binary Input	PCS	ABB			
	HS / EOHAL		HS63001_O	Binary Output, relay	PCS	ABB							
				ESH63001	Check back signal	S							032
H 63016	LOX FROM LP-TANK B62001		HV63016	Globe valve	F	Flowserve						HU_V10	
	HS		UV63016	Solenoid valve	F								
				HS63016_O	Binary Output, relay	PCS	ABB						032
H 63034	LOX CONVERTER CYCLE		HV63034	Globe valve	F	Flowserve						HU_V10	
	HS		UV63034	Solenoid valve	F								
				HS63034_O	Binary Output, relay	PCS	ABB						032
H 64001	RESET GOX TRIP US64001		HS64001_O	Binary Output, relay	PCS	ABB							
	HS		UZ64001	Safety relay	S								
													034
H 64101	LOX BACK UP PUMP P64101		MO64101	Switching relay	S	Siemens	EH64101_I	Binary Input	PCS	ABB			
	HS / EOH		US64101_O	Binary Output, relay	PCS	ABB							
				ESH64101	Check back signal	S							033
H 64110	LOX FROM LP-TANK B62001		HV64110	Globe valve	F	Flowserve						HU_V10	
	US		UV64110	Solenoid valve	F								
				HS64110_O	Binary Output, relay	PCS	ABB						033
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (F-P) = Frost Protection recommended													
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	LOC	P&I SHEET			
H 64150	LIQUID VALVE P64101		HV64150	Globe valve	F	Flowserve						HU_V10			
	HS		UV64150	Solenoid valve	F							033			
			HS64150_O	Binary Output, relay	PCS	ABB									
H 64201	LOX BACK UP PUMP P64201		MO64201	Switching relay	S		EH64201_I	Binary Input	PCS	ABB					
			US64201_O	Binary Output, relay	PCS	ABB						033			
	HS / EOH		ESH64201	Check back signal	S										
H 64210	LOX FROM LP-TANK B62001		HV64210	Globe valve	F	Flowserve						HU_V10			
			UV64210	Solenoid valve	F							033			
	US		HS64210_O	Binary Output, relay	PCS	ABB									
H 64250	LIQUID VALVE P64201		HV64250	Globe valve	F	Flowserve						HU_V10			
			UV64250	Solenoid valve	F							033			
	HS		HS64250_O	Binary Output, relay	PCS	ABB									
H 70001	ENTRANCE GAN COMPRESSOR 1		HK70001	Butterfly valve	F	Xomox						HU_V20			
			HS70001	Binary Output, relay	PCS	ABB						019			
	HS														
H 70035	BLOW OUT VALVE GAN COMP. 1		HV70035	Globe valve	F	Flowserve	U70035_O	Binary Output, relay	PCS	ABB		HU_V10			
	HIC	0...100 %	H70035_O	Analog Output	PCS	ABB						019			
			UV70035	Solenoid valve	F										
H 70036	CHARGE GAN COMP. 1		HK70036	Butterfly valve	F	Xomox						HU_V20			
			H70036_O	Analog Output	PCS	ABB						019			
	HIC	0...100 %													
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY				
H 70041	MP-GAN		HK70041	Butterfly valve	F	Xomox						P&I SHEET		
	HS		UV70041	Solenoid valve	F							HU_V20		
			HS70041_O	Binary Output, relay	PCS	ABB						020		
H 70803	OIL DEMISTER V70803		MO70803	Switching relay	S	Siemens	EH70803_J	Binary Input	PCS	ABB				
	HS / EOH		HS70803_O	Binary Output, relay	PCS	ABB						021		
			ESH701803	Check back signal	S									
H 70810	OIL HEATING 1 GAN COMP. 1		W70810	Switching relay	S	Siemens	EH70810_J	Binary Input	PCS	ABB				
	HS / EOH		HS70810_O	Binary Output, relay	PCS	ABB						021		
			ESH70810	Check back signal	S									
H 70815	OIL HEATING 2 GAN COMP. 1		W70815	Switching relay	S	Siemens	EH70815_J	Binary Input	PCS	ABB				
	HS / EOH		HS70815_O	Binary Output, relay	PCS	ABB						021		
			ESH70815	Check back signal	S									
H 70820	AUXILLIARY OIL PUMP GAN COMP. 1		MO70820	Switching relay	S	Siemens	EH70820_J	Binary Input	PCS	ABB				
	HS / EOH		HS70820_O	Binary Output, relay	PCS	ABB						021		
			ESH70820	Check back signal	S									
H 71100	LIN PUMP P71100		MO71100	Switching relay	S	Siemens	EH71100_J	Binary Input	PCS	ABB				
	HS / EOH		HS71100_O	Binary Output, relay	PCS	ABB						015		
			ESH71100	Check back signal	S									
H 71100	SPEED LIN PUMP P71100		UCT71100	Frequency converter	S		EAT71100_J	Binary Input	PCS	ABB				
	HIC / ESAL	0...100 %	H71100_O	Analog Output	PCS	ABB	SL71100_O	Binary Output, relay	PCS	ABB				
			ST71100_J	Analog Input, passive	PCS	ABB						015		

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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY				
H 71100	EMERGENCY SHUT DOWN P71100		HZ71100	Emergency shut down button	F									
	HZ											015		
H 71101	P71100 FAN MOTOR		MO71101	Switching relay	S	Siemens	EH71101_J	Binary Input	PCS	ABB				
	US / EOH		ESH71101	Check back signal	S							015		
			HE71110	Switching relay	S		EH71102_J	Binary Input	PCS	ABB				
H 71102	BEARING HEATER P71100		HS71102_O	Binary Output, relay	PCS	ABB	EA71102_J	Binary Input	PCS	ABB				
	HS / EOH		ESH71102	Check back signal	S							015		
			HV71103	Ball valve	F	Xonox						HU_V10		
H 71103	START UP VALVE PUMP P71100		HS71103_O	Binary Output, relay	PCS	ABB								
	HS											015		
H 71110	LIN FROM B21002		HV71110	Globe valve	CB	Flowserve								
	HS		UV71110	Solenoid valve	F									
			HS71110_O	Binary Output, relay	PCS	ABB						015		
H 71200	EMERGENCY SHUT DOWN P71200		HZ71200	Emergency shut down button	F									
	HZ											015		
H 71200	LIN PUMP P71200		MO71200	Switching relay	S	Siemens	EH71200_J	Binary Input	PCS	ABB				
	HS / EOH		HS71200_O	Binary Output, relay	PCS	ABB								
			ESH71200	Check back signal	S							015		

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										Annotation on column "Hook Up": (FP*) = Frost Protection recommended									
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H 71200	SPEED LIN PUMP P71200		UCT1200	Frequency converter	S		EA71200_I	Binary Input	PCS	ABB		PCS	ABB			
	HIC /ESAL	0...100 %	H71200_O	Analog Output	PCS	ABB	SL71200_O	Binary Output, relay	PCS	ABB		PCS	ABB			
			ST1200_I	Analog Input, passive	PCS	ABB							015			
H 71201	P71200 FAN MOTOR		MO71201	Switching relay	S	Siemens	EH71201_I	Binary Input	PCS	ABB		PCS	ABB			
	US / EOH						EA71201_I	Binary Input	PCS	ABB		PCS	ABB			
			ESH71201	Check back signal	S								015			
H 71202	BEARING HEATER P71200		HE71210	Switching relay	S		EH71202_I	Binary Input	PCS	ABB		PCS	ABB			
	HS / EOHAL		HS71202_O	Binary Output, relay	PCS	ABB	EA71202_I	Binary Input	PCS	ABB		PCS	ABB			
			ESH71202	Check back signal	S								015			
H 71203	START UP VALVE PUMP P71200		HV71203	Ball valve	F	Xomox								HU_V10		
	HS		HS71203_O	Binary Output, relay	PCS	ABB										
													015			
H 71210	LIN FROM B21002		HV71210	Globe valve	CB	Flowserve								HU_V10		
	HS		UV71210	Solenoid valve	F											
			HS71210_O	Binary Output, relay	PCS	ABB								015		
H 72008	BOTTOM VALVE B72001		HV72008	Bottom valve	F	TV	HZ72008	Emergency shut down button	F					HU_V10		
	HZA		UV72008	Solenoid valve	F		HA72008_I	Binary Input	PCS	ABB		PCS	ABB			
			HS72008_O	Binary Output, relay	PCS	ABB							035			
H 72009	BOTTOM VALVE B72001		HV72009	Bottom valve	F	TV	HZ72009	Emergency shut down button	F					HU_V10		
	HZA		UV72009	Solenoid valve	F		HA72009_I	Binary Input	PCS	ABB		PCS	ABB			
			HS72009_O	Binary Output, relay	PCS	ABB							035			

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H 72011	DEATH MAN'S HANDLE PT72001		HS72011	Local push button	F								
	HS		HS72011_I	Binary Input	PCS	ABB							
										035			
H 72012	START FILLING ROAD TANKER		HS72012	Local push button	F								
	HS		HS72012_I	Binary Input	PCS	ABB							
										035			
H 72051	LIN TANK INLET VALVE 1		HV72051	Globe valve	F	Flowserve					HU_V10		
	HS		UV72051	Solenoid valve	F								
			HS72051_O	Binary Output, relay	PCS	ABB					035		
H 72052	LIN TANK INLET VALVE 2		HV72052	Globe valve	F	Flowserve					HU_V10		
	HS		UV72051	Solenoid valve	F								
			HS72052_O	Binary Output, relay	PCS	ABB					035		
H 72053	LIN CONVERTER CYCLE		HV72053	Globe valve	F	Flowserve					HU_V10		
	HS		UV72053	Solenoid valve	F								
			HS72053_O	Binary Output, relay	PCS	ABB					035		
H 73001	RESET TEMPERATURE TRIP WT3001		HS73001_O	Binary Output, relay	PCS	ABB							
	HS		UZ73001	Emergency shut down relay	S								
											039		
H 73001	LIN LDCC FROM SUBCOOLER		HV73001	Globe valve	CB	Flowserve					HU_V10		
	HIC	0...100 %	HT3001_O	Analog Output	PCS	ABB							
											014		

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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY				
H 73014	MP-LIN TO TOP 10		HV73014	Globe valve	F	Flowserve						HU_V10		
	HS		UV73014	Solenoid valve	F									
			HS73014_O	Binary Output, relay	PCS	ABB						038		
H 73016	RESET MP-LIN TRIP B73001		HS73016_O	Binary Output, relay	PCS	ABB								
	HS		US73016	Emergency shut down relay	S						038			
H 73100	WATER BATH NAT. GAS VAP. LIN		HS73100_O	Binary Output, relay	PCS	ABB								
	HS / EOH		EH73100_I	Binary Input	PCS	ABB								040
				US73107	Safety control	S	NGV							
H 73101	SPEED LIN BACK UP PUMP P73101		SC73101	Frequency converter	S									
	HIC	0...100 %	HT73101_O	Analog Output	PCS	ABB			PCS					037
										PCS				
H 73101	RESET TRIP W73101		HT73101_O	Binary Output, relay	PCS	ABB								
	HS										040			
H 73103	BEARING HEATER P73101		HE73101	Switching relay	S		EH72103_I	Binary Input	PCS	ABB				
	HS / EOH		HS73103_O	Binary Output, relay	PCS	ABB								037
				ESH73103	Check back signal	S								
H 73110	LIN FROM LP-TANK B72001 TO P73101		HV73110	Globe valve	F	Flowserve						HU_V10		
	HS		UV73110	Solenoid valve	F									
				HS73110_O	Binary Output, relay	PCS	ABB					037		

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H 73150	LIQUID VALVE P73101		HV73150	Globe valve	F	Flowserve						HU_V10			
	HS		UV73150	Solenoid valve	F										
			HS73150_O	Binary Output, relay	PCS	ABB								037	
H 73201	SPEED LIN BACK UP PUMP P73201		SC73201	Frequency converter	S										
	HIC	0...100 %	H73201_O	Analog Output	PCS	ABB			PCS						
									PCS			037			
H 73203	BEARING HEATER P73201		HE73201	Switching relay	S		EH72103_J	Binary Input	PCS	ABB					
	HS / EOH		HS73203_O	Binary Output, relay	PCS	ABB									
			ESH73203	Check back signal	S							037			
H 73210	LIN FROM LP-TANK B72001 TO P73201		HV73210	Globe valve	F	Flowserve						HU_V10			
	HS		UV73210	Solenoid valve	F										
			HS73210_O	Binary Output, relay	PCS	ABB						037			
H 73250	LIQUID VALVE P73201		HV73250	Globe valve	F	Flowserve						HU_V10			
	HS		UV73250	Solenoid valve	F										
			HS73250_O	Binary Output, relay	PCS	ABB						037			
H 74090	RESET TEMEPERATURE TRIP MP-GAN		HS74090_O	Binary Output, relay	PCS	ABB									
	HS		UZ74090	Emergency shut down relay	S										
												036			
H 74101	LIN PUMP P74101		MO74101	Switching relay	S		EH74101_J	Binary Input	PCS	ABB					
	US / EOH		US74101_O	Binary Output, relay	PCS	ABB									
			ESH74101	Check back signal	S							036			
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H 74110		LIN FROM LP-TANK B72001		HV74110	Globe valve	F	Flowserve					HU_V10					
		HS		UV74110	Solenoid valve	F						036					
				HS74110_O	Binary Output, relay	PCS	ABB										
H 74150		LIQUID VALVE P74101		HV74150	Globe valve	F	Flowserve					HU_V10					
		HS		UV74150	Solenoid valve	F						036					
				HS74150_O	Binary Output, relay	PCS	ABB										
H 74171		BYPASS RECYCLE HP-LIN PUMP 1		HS74171_O	Binary Output, relay	PCS	ABB					HU_V10					
		HS		H74171_SV	Solenoid valve	F						036					
				HV74171	Globe valve	F	Flowserve										
H 74201		LIN PUMP P74201		MO74201	Switching relay	S		EH74201_I	Binary Input	PCS	ABB						
		US / EOH		US74201_O	Binary Output, relay	PCS	ABB										
				ESH74201	Check back signal	S						036					
H 74210		LIN FROM LP-TANK B72001		HV74210	Globe valve	F	Flowserve					HU_V10					
		HS		UV74210	Solenoid valve	F						036					
				HS74210_O	Binary Output, relay	PCS	ABB										
H 74250		LIQUID VALVE P74200		HV74250	Globe valve	F	Flowserve					HU_V10					
		HS		UV74250	Solenoid valve	F						036					
				HS74250_O	Binary Output, relay	PCS	ABB										
H 74271		BYPASS RECYCLE HP-LIN PUMP 2		HS74271_O	Binary Output, relay	PCS	ABB					HU_V10					
		HS		H74271_SV	Solenoid valve	F						036					
				HV74271	Globe valve	F	Flowserve										
Legend: F = local, V = local cabinet , S = control room, PCS = process control system																	
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
H 77001	ENTRANCE GAN COMPRESSOR 2			HK77001	Butterfly valve	F	Xomox						HU_V20				
	HS			HS77001	Binary Output, relay	PCS	ABB					020					
H 77035	BLOW OUT VALVE GAN COMP. 2			HV77035	Globe valve	F	Flowserve	U77035_O	Binary Output, relay	PCS	ABB	HU_V10					
	HIC	0...100 %		H77035_O	Analog Output	PCS	ABB					020					
				UV77035	Solenoid valve	F											
H 77036	CHARGE GAN COMP. 2			HK77036	Butterfly valve	F	Xomox					HU_V20					
	HIC	0...100 %		H77036_O	Analog Output	PCS	ABB					020					
H 77803	OIL DEMISTER V77803			MO77803	Switching relay	S	Siemens	EH77803_I	Binary Input	PCS	ABB						
	HS / EOH			HS77803_O	Binary Output, relay	PCS	ABB					022					
				ESH771803	Check back signal	S											
H 77810	OIL HEATING 1 GAN COMP. 2			W77810	Switching relay	S	Siemens	EH77810_I	Binary Input	PCS	ABB						
	HS / EOH			HS77810_O	Binary Output, relay	PCS	ABB					022					
				ESH77810	Check back signal	S											
H 77815	OIL HEATING 2 GAN COMP. 2			W77815	Switching relay	S	Siemens	EH77815_I	Binary Input	PCS	ABB						
	HS / EOH			HS77815_O	Binary Output, relay	PCS	ABB					022					
				ESH77815	Check back signal	S											
H 77820	AUXILIARY OIL PUMP GAN COMP. 2			MO77820	Switching relay	S	Siemens	EH77820_I	Binary Input	PCS	ABB						
	HS / EOH			HS77820_O	Binary Output, relay	PCS	ABB					022					
				ESH77820	Check back signal	S											
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H 87017	WN2 TO BOX PURGE		HS87017_O	Binary Output, relay	PCS	ABB						P&I SHEET		
	HS		UV87017	Solenoid valve	F							HU_V20		
			H87017	Ball valve	F	Xomox						024		
H 90013	LIN TO DUMP VAPORIZER		HV90013	Globe valve	F	Flowserve						HU_V10		
	HS		UV90013	Solenoid valve	F									
			HS90013_O	Binary Output, relay	PCS	ABB						026		
H 90014	LOX TO DUMP VAPORIZER		HV90014	Globe valve	F	Flowserve						HU_V10		
	HS		UV90014	Solenoid valve	F									
			HS90014_O	Binary Output, relay	PCS	ABB						026		
H 90015	LAR TO DUMP VAPORIZER		HV90015	Globe valve	F	Flowserve						HU_V10		
	HS		UV90015	Solenoid valve	F									
			HS90015_O	Binary Output, relay	PCS	ABB						026		
L 11080	CONDENSATE TRAP VW11011/012		LOH11080	Contact	F	BEKO								
	LAH		LH11080_I	Binary Input	PCS	ABB								
											001			
L 11081	CONDENSATE TRAP VW11021/022		LOH11081	Contact	F	BEKO								
	LAH		LH11081_I	Binary Input	PCS	ABB								
											001			
L 11082	CONDENSATE TRAP VW11031/032		LOH11082	Contact	F	BEKO								
	LAH		LH11082_I	Binary Input	PCS	ABB								
											001			

<b>Legend:</b> F = local, V = local cabinet, S = control room, PCS = process control system Annotation on column "Hook Up": (FP*) = Frost Protection recommended														
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L 11812	OIL CONTAINER MAC		LL11812	Level switch	F								
	LSAL	0 ... 100 %	LL11812_I	Binary Input	PCS	ABB					027		
L 11813	OIL CONTAINER MAC		LO11813	Sight-glass	F								
	LO										027		
L 13003	LEVEL COOLING WATER DC/AC		LT13003	Transmitter, diff.-press.	F	E+H	LK13008	Butterfly valve	F	Xomox	HU_L03; HU_V10		
	LICAHLSAHH	0 ... 100 %	L13003_I	Analog Input, active	PCS	ABB							
			L13003_O	Analog Output	PCS	ABB					002		
L 13013	LEVEL COOLING WATER DC/AC		LT13013	Transmitter, diff.-press.	F	E+H					HU_L03		
	LIAHLSAHH	0 ... 100 %	L13013_I	Analog Input, active	PCS	ABB					002		
L 14003	LEVEL CHILL TOWER		LT14003	Transmitter, diff.-press.	F	E+H	LK14003	Butterfly valve	F	Xomox	HU_L03; HU_V10		
	LICAHLSAHILL	0 ... 100 %	L14003_I	Analog Input, active	PCS	ABB							
			L14003_O	Analog Output	PCS	ABB					003		
L 15011	CONDENSATE TRAP A15001		LSH15011	Condensate trap	F	BEKO							
	LAH		LH15011_I	Binary Input	PCS	ABB					004		
L 15021	CONDENSATE TRAP A15002		LSH15021	Condensate trap	F	BEKO							
	LAH		LH15021_I	Binary Input	PCS	ABB							
											004		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
L 16812	OIL CONTAINER BAC		LL16812	Level switch	F	Hydac							
	LSAL	0...100 %	LL16812_I	Binary Input	PCS	ABB							
											028		
L 16813	OIL CONTAINER BAC		LI16813	Sight-glass	F								
	LI												
											028		
L 21003	LEVEL SUMP HP-COLUMN		LT21003	Transmitter, diff.-press.	F	E+H	LV21003	Globe valve	F	Flowserve		HU_C03; HU_V10	
	L1CAHLSAHH	0...100 %	L22003_I	Analog Input, active	PCS	ABB							
			L22003_O	Analog Input, passive	PCS	ABB						014 / 017	
L 21060	LIQUID AIR SEPARATOR B21001		LT21060	Transmitter, diff.-press.	F	E+H	LV21060	Globe valve	F	Flowserve		HU_C01; HU_V10	
	L1CAHL	0...100 %	L21060_I	Analog Input, active	PCS	ABB							
			L21060_O	Analog Output	PCS	ABB						009 / 013	
L 22001	LEVEL SUMP LP-COLUMN		LT22001	Transmitter, diff.-press.	F	E+H	LV22001	Globe valve	F	Flowserve		HU_C04; HU_V10	
	L1CAHLSAHHLL	-49...231 %	L22001_I	Analog Input, active	PCS	ABB							
			L22001_O	Analog Output	PCS	ABB						014 / 011	
L 22002	LEVEL SUMP LP-COLUMN		L22030_O	Analog Output	PCS	ABB						HU_V10	
	LIC	-50...223 %	LV22030	Globe valve	F	Flowserve							
											014		
L 22011	LEVEL SUMP LP-COLUMN		LT22011	Transmitter, diff.-press.	F	E+H						HU_C01	
	L1AHSALL	65...130 %	L22011_I	Analog Input, active	PCS	ABB							
												014	
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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L 23076	LOX PRODUCT TO DUMP		LV23076	Globe valve	CB	Flowserve					HU_V10	X from L 22001	
	LIC	-50...223 %	L23076_O	Analog Output	PCS	ABB					011		
L 24160	OIL CONTAINER EXPANDER TURBINE 1		LL24160	Level switch	F								
	LAL		LL24160_I	Binary Input	PCS	ABB					029		
L 24161	OIL CONTAINER EXPANDER TURBINE 1		LO24161	Sight-glass	F								
	LO										029		
L 24260	OIL CONTAINER EXPANDER TURBINE 2		LL24260	Level switch	F								
	LAL		LL24260_I	Binary Input	PCS	ABB					030		
L 24261	OIL CONTAINER EXPANDER TURBINE 2		LO24261	Sight-glass	F								
	LO										030		
L 40007	LEVEL AR-COND. B40001		LT40007	Transmitter, diff.-press.	F	E+H	LV40007	Globe valve	CB	Flowserve	HU_C03; HU_V10		
	LICAHLSAHL	-46...233 %	L40007_I	Analog Input, active	PCS	ABB					017		
L 40017	LEVEL LOX BOILER B40001		LT40017	Transmitter, diff.-press.	F	E+H					HU_C01		
	LIAHLSALL	65...129 %	L40007_I	Analog Input, active	PCS	ABB					017		
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L 40053	LEVEL SUMP CAR COLUMN 1		0...100 %	LT40053	Transmitter, diff.-press.	F	E+H					HU_C03	Y at UY 40170	
	LICAHLSAHHLL	Analog Input, active		PCS	ABB						016			
	PURE AR COLUMN K43001													
L 43023	LICAHLSAHH	-26...138 %	L43023_J	Analog Input, active	PCS	ABB	US43023_O	Binary Output, relay	PCS	ABB	HU_C03; HU_V10			
	L43023_O	Analog Output	PCS	ABB	UV43023	Solenoid valve	F			018				
	LIQ. NITR. SEPARATOR B43001													
L 43027	LICAHLSAHHLL	3...151 %	LT43027	Transmitter, diff.-press.	F	E+H	LV43027	Globe valve	CB	Flowserve	HU_C03; HU_V10			
	L43027_J	Analog Input, active	PCS	ABB						018				
	L43027_O	Analog Output	PCS	ABB										
L 43027-1	LEVEL CONTROL VALVE AR CONDENSER VESSEL		L43026_O	Analog Output	PCS	ABB					HU_V10			
	LIC	3...151 %	LV43026	Globe valve	CB	Flowserve				018				
	PURE AR PRODUCT TO DUMP													
L 43033	LIC	-26...138 %	LV43033	Globe valve	F	Flowserve					HU_V10	X from L 43023		
	L43033_O	Analog Output	PCS	ABB						018				
	LP LAR TANK 1 B44101													
L 44007	LI	0...100 %	LI44007	Level meter	F	TV						041		
	LP LAR TANK 1 B44101													
	LIAHLSAHHLL	0...100 %	LT44105	Transmitter, diff.-press.	F	E+H					HU_C03			
L 44105			L44105_J	Analog Input, active	PCS	ABB						041		
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
L 70813	OIL CONTAINER GAN COMP. 1		LG70813	Sight-glass	F										
	LG										021				
L 72005	LIN TANK B72001		LT72005	Transmitter, diff.-press.	F	E+H					HU_C03				
	LIAHLZAHHSALL	0...100 %	L72005_I	Analog Input, active	PCS	ABB					035				
L 72006	OVERFLOW LIN TANK B72001		LT72006	Transmitter, diff.-press.	F	E+H					HU_C03				
	LAHZAHH	93,6...100 %	L72006_I	Analog Input, active	PCS	ABB					035				
L 73002	MP LIN TANK B73001		LI73002	Level meter	F										
	LI	0...100 %									038				
L 73007	MP LIN TANK B73001		LT73007	Transmitter, diff.-press.	F	E+H					HU_C03				
	LIAHLSAHHLL	0...100 %	L73007_I	Analog Input, active	PCS	ABB					038				
L 73030	WATER BATH VAPORIZER GAN		LZL73030	Level switch, vibration	F	E+H					HU_L05				
	LZAL	mm	LL73030_I	Binary Input	PCS	ABB					039				
L 73130	WATER BATH NAT. GAS VAP.		LSH73130	Level switch	F	NGV									
	LSAH	mm	LH73130_I	Binary Input	PCS	ABB					040				
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
L 73131	WATER BATH NAT. GAS VAP.		LZL73131	Level switch	F	NGV							
	LZAL	mm	LL73131_I	Binary Input	PCS	ABB					040		
L 73132	WATER BATH NAT. GAS VAP.		LZLL73132	Level switch	F	NGV							
	LZALL	mm	LLL73132_I	Binary Input	PCS	ABB					040		
L 77813	OIL CONTAINER GAN COMP. 2		LG77813	Sight-glass	F								
	LG										022		
P 11007	AIR CHARGE 1ST STAGE MAC		PI11007	Transmitter, pressure	F	E+H							
	PI	-1,0...+0,5 bar	PI11007_I	Analog Input, active	PCS	ABB					001		
P 11016	AIR BEHIND INTERCOOLER 1ST STAGE MAC		PT11016	Transmitter, pressure	F	E+H							
	PI	0...2,5 bar	PI11016_I	Analog Input, active	PCS	ABB					001		
P 11026	AIR BEHIND INTERCOOLER 2ST STAGE MAC		PT11026	Transmitter, pressure	F	E+H							
	PI	0...2,5 bar	PI11026_I	Analog Input, active	PCS	ABB					001		
P 11036	AIR BEHIND INTERCOOLER 3RD STAGE MAC		PT11036	Transmitter, pressure	F	E+H							
	PI	0...8 bar	PI11036_I	Analog Input, active	PCS	ABB					001		
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
P 11041	AIR DISCHARGE 4TH STAGE MAC		PT11041	Transmitter, pressure	F							X to FIC11074	
	PICAL	0...8 bar	PY11036	Isolated amplifier	S								
			P11074_I	Analog Input, passive	PCS	ABB					001		
P 11074	SURGE PROTECTION MAC											Signal to U 11074	
	PY	0...2,5 bar									001		
P 11505	COOLING WATER CHARGE MAC		PI11505	Pressure gauge	F	WIKA							
	PI	0...10 bar									001		
P 11590	COOLING WATER DISCHARGE MAC		PI11590	Pressure gauge	F	WIKA							
	PI	0...10 bar									001		
P 11747	LUBE OIL BEARINGS MAC		PT11747	Transmitter, pressure	F								
	PIALSALL	0...2,5 bar	P11747_I	Analog Input, active	PCS	ABB					027		
P 11751	N2 SEAL GAS MAC		PC11751	Pressure regulator	F								
	PC	bar									027		
P 11752	SEAL GAS MAC		PI11752	Pressure gauge	F	WIKA							
	PI	0...6 bar									027		
Legend: F = local, V = local cabinet , S = control room, PCS = process control system													
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P 11753	SEAL GAS MAC		PC11753	Pressure regulator	F								
	PC	bar									027		
P 11754	SEAL CHAMBER PRESSURE		PT11754	Transmitter, pressure	F	MAN							
	PIAL	0...50 mbar	P11754_I	Analog Input, active	PCS	ABB					027		
P 11754	SEAL GAS MAC		PT11754	Transmitter, pressure	F								
	PIAHL	bar	P11754_I	Analog Input, active	PCS	ABB					027		
P 11840	LUBE OIL MAC		PI11840	Pressure gauge	F	WIKA							
	PI	0...6 bar									027		
P 11854	LUBE OIL MAC		PT11854	Transmitter, pressure	F	E+H							
	PIAL	0...,2,5 bar	P11854_I	Analog Input, active	PCS	ABB					027		
P 11873	LUBE OIL MAC		V11872	Pressure regulator	F								
	PC	bar									027		
P 13120	COOLING WATER TO DC/AC		PI13120	Pressure gauge	F	WIKA					HU_P03		
	PI	0...10 bar									002		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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P 13220	COOLING WATER TO DC/AC		PI13220	Pressure gauge	F	WIKA					HU_P03		
	PI	0...16 bar									002		
P 14120	CHILLED WATER TO DC/AC		PI14120	Pressure gauge	F	WIKA					HU_P03		
	PI	0...16 bar									003		
P 14220	CHILLED WATER TO DC/AC		PI14220	Pressure gauge	F	WIKA					HU_P03		
	PI	0...16 bar									003		
P 15010	AIR INLET MOL SIEVE		PT15010	Transmitter, pressure	F	E+H					HU_P01		
	PIAL	0...6 bar	PI15010_I	Analog Input, active	PCS	ABB					004		
P 15012	ADSORBER A15001		PT15012	Transmitter, pressure	F	E+H					HU_P01		
	PISHL	0...6 bar	PI15012_I	Analog Input, active	PCS	ABB					004		
P 15022	ADSORBER A15002		PT15022	Transmitter, pressure	F	E+H					HU_P01		
	PISHL	0...6 bar	PI15022_I	Analog Input, active	PCS	ABB					004		
P 15035	AIR BEHIND MOL SIEVE		PT15035	Transmitter, pressure	F	E+H					HU_P01		
	PIALSALL	0...6 bar	PI15035_I	Analog Input, active	PCS	ABB					004		

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P 15037	AIR TO REGENERATION GAS HEATER		PT15037	Transmitter, pressure	F	E+H	PV15037	Globe valve	F	Flowserve	HU_P01; HU_V10				
	PICAHSAHH	0...400 mbar	P15037_J	Analog Input, active	PCS	ABB									
			P15037_O	Analog Output	PCS	ABB					004				
P 15041	WN2 TO REG. GAS HEATER		PT15041	Transmitter, pressure	F	E+H	PK15041	Butterfly valve	F	Xomox	HU_P01; HU_V20				
	PICAHL	0...450 mbar	P15041_J	Analog Input, active	PCS	ABB									
			P15041_O	Analog Output	PCS	ABB					005 / 003				
P 16007	CHARGE PRESSURE BAC		PT16007	Transmitter, pressure	F	E+H	P16007_O	Analog Output	PCS	ABB	HU_V20	X to FIC16074, Y to HIC16007			
	PICAHLSAHHLL	0...7 bar	PY16007	Isolated amplifier	S		PK16007	Butterfly valve	F	Xomox					
			P16007_J	Analog Input, active	PCS	ABB					006				
P 16011	AIR BEHIND 1ST STAGE BAC		P116011	Pressure gauge	F										
	PE	bar									006				
P 16015	AIR BEHIND INTERCOOLER 1ST STAGE BAC		PT161015	Transmitter, pressure	F	E+H									
	PI	0...15 bar	P16015_J	Analog Input, active	PCS	ABB					006				
P 16021	AIR BEHIND 2ND STAGE BAC		P116021	Pressure gauge	F										
	PE	bar									006				
P 16025	AIR BEHIND INTERCOOLER 2ND STAGE BAC		PT16025	Transmitter, pressure	F	E+H									
	PI	0...25 bar	P16025_J	Analog Input, active	PCS	ABB									
											006				

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F = local, V = local cabinet , S = control room, PCS = process control system

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Legend:										F = local, V = local cabinet , S = control room, PCS = process control system										Annotation on column "Hook Up": (FP*) = Frost Protection recommended										
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**AIR LIQUIDE**  
Fittingsweg 34  
D-47805 Krefeld, Germany

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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
P 16031	AIR BEHIND 3RD STAGE BAC		PI16031	Pressure gauge	F								
	PE	bar									006		
P 16035	AIR BEHIND INTERCOOLER 3RD STAGE BAC		PT16035	Transmitter, pressure	F	E+H							
	PI	0...50 bar	PI6035_I	Analog Input, active	PCS	ABB					006		
P 16041	AIR BEHIND 4TH STAGE BAC		PI16041	Pressure gauge	F								
	PE	bar									006		
P 16045	SURGE PROTECTION BAC											Y to US16045	
	PV	0...70 bar									006		
P 16045-1	AIR DISCHARGE INTERCOOLER 4TH STAGE BAC		PT16045	Transmitter, pressure	F	E+H						X to FIC16074, Y to UY16010	
	PICAHSAHH	0...70 bar	PV16045	Isolated amplifier	S								
			PI6045_I	Analog Input, active	PCS	ABB					006		
P 16073	HP-AIR FROM BAC		PT16073	Transmitter, pressure	F	E+H							
	PISAHLLALL	-1...100 bar	PI6073_I	Analog Input, active	PCS	ABB					006		
P 16505	COOLING WATER BAC		PI16505	Pressure gauge	F	WIKKA							
	PI	0...10 bar									006		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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P 16512	COOLING WATER BEHIND VW16001 BAC		P116512	Pressure gauge	F	WIKA									
	PI	0...10 bar									006				
P 16522	COOLING WATER BEHIND VW16002		P116522	Pressure gauge	F	WIKA									
	PI	0...10 bar									006				
P 16532	COOLING WATER BEHIND VW16003		P116532	Pressure gauge	F	WIKA									
	PI	0...10 bar									006				
P 16542	COOLING WATER BEHIND VW16004		P116542	Pressure gauge	F	WIKA									
	PI	0...10 bar									006				
P 16590	COOLING WATER RETURN BAC		P116590	Pressure gauge	F	WIKA									
	PI	0...10 bar									006				
P 16623	LUBE OIL P16830 BAC		P116623	Pressure gauge	F										
	PI	bar									028				
P 16751	SEAL GAS BAC		PV16751	Pressure regulator	F	Atlas Copco									
	PC	0...250 mbar									028				

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P 16751	SEAL GAS BAC		PT16751	Transmitter, pressure	F	E+H							
	PIAL	0...250 mbar	P16751_I	Analog Input, active	PCS	ABB					028		
P 16752	SEAL GAS BAC		P16752	Pressure gauge	F	WIKA							
	PI	0...1,4 bar									028		
P 16824	LUBE OIL P16820 BAC		PI16824	Pressure gauge	F								
	PI	0... bar									028		
P 16854	LUBE OIL BAC		PT16854	Transmitter, pressure	F	E+H							
	PISAL	0...4 bar	P16854_I	Analog Input, active	PCS	ABB					028		
P 16855	LUBE OIL BAC		PT16855	Transmitter, pressure	F								
	PISAL	0...4 bar	P16855_I	Analog Input, active	PCS	ABB					028		
P 16861	LUBE OIL HEADER		PI16861	Pressure gauge	F	MAN						local indicator	
	PI	0... bar									028		
P 16862	LUBE OIL SUPPLY		PI16862	Pressure gauge	F	MAN						local indicator	
	PI	0... bar									028		

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P 16867	LUBE OIL MAIN MOTOR BAC		PI16867	Pressure gauge	F	WIKA							
	PI	0...6 bar									028		
	LUBE OIL MAIN MOTOR BAC		PI16868	Pressure gauge	F	WIKA							
P 16868	LUBE OIL MAIN MOTOR BAC												
	PI	0...6 bar									028		
	LUBE OIL BAC		PV16873	Pressure regulator	F	AEG-Kanis							
P 16873	LUBE OIL BAC												
	PC	bar									028		
	HP-GAN OUTLET COLDBOX		PT20001	Transmitter, pressure	F	E+H					HU_P01	Y to FIC20001, PIC71170/270	
P 20001	HP-GAN OUTLET COLDBOX		P20001_I	Analog Input, active	PCS	ABB					010		
	PIC-AHL	0...30 bar											
	HP-GAN TO CUSTOMER		PT20003	Transmitter, pressure	F	E+H					HU_P01		
P 20003	HP-GAN TO CUSTOMER		P20003_I	Analog Input, active	PCS	ABB					010		
	PI	0...30 bar											
	LP-GAN OUTLET COLDBOX		PT20005	Transmitter, pressure	F	E+H					HU_P01	Y to FIC20005	
P 20005	LP-GAN OUTLET COLDBOX		P20005_I	Analog Input, active	PCS	ABB					010		
	PICAL	0...250 mbar											
	GOX OUTLET COLDBOX		PT20011	Transmitter, pressure	F	E+H					HU_P01	Y to FIC20011, PIC61170/270	
P 20011	GOX OUTLET COLDBOX		P20011_I	Analog Input, active	PCS	ABB					010		
	PIC-AHL	0...40 bar											
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P 20013	GOX TO CUSTOMER		PT20013	Transmitter, pressure	F	E+H					HU_P01		
	PI	0...40 bar	P20013_I	Analog Input, active	PCS	ABB					010		
P 20015	GOX TO CUSTOMER 1		PT20015	Transmitter, pressure	F						HU_P01		
	PI	0...40 bar	P20015_I	Analog Input, active	PCS	ABB					010		
P 20016	GOX TO CUSTOMER 2		PT20016	Transmitter, pressure	F						HU_P01		
	PI	0...40 bar	P20016_I	Analog Input, active	PCS	ABB					010		
P 21002	HP-COLUMN TOP		PT21002	Transmitter, pressure	F	E+H					HU_C07		
	PISHL	0...6 bar	P21002_I	Analog Input, active	PCS	ABB					014		
P 22001	LP-COLUMN BOTTOM		PT22001	Transmitter, pressure	F	E+H					HU_C07		
	PIAH	0...600 mbar	P22001_I	Analog Input, active	PCS	ABB					013		
P 24010	SEALGAS FOR EXPANDER TURBINES		PCV24010	Pressure regulator	F	Mankenber g							
	PIC										007		
P 24101	AIR TO EXPANDER TURBINE 1		PT24101	Transmitter, pressure	F	E+H					HU_C07		
	PISAH	0...70 bar	P24101_I	Analog Input, active	PCS	ABB					007		
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P 24102	AIR OUTLET EXPANDER TURBINE 1		PT24102	Transmitter, pressure	F	E+H						
	PIAHSBH	0...10 bar	P24102_I	Analog Input, active	PCS	ABB						
											007	
P 24107	AIR INLET EXPANDER TURBINE 1		PT24107	Transmitter, pressure	F	E+H						
	PIAH	0...70 bar	P24107_I	Analog Input, active	PCS	ABB						
											007	
P 24108	AIR INLET EXPANDER TURBINE 1		PI24108	Pressure gauge	F	WIKA						
	PI	0...100 bar										
											007	
P 24110	AIR OUTLET EXPANDER TURBINE 1		PI24110	Pressure gauge	F	WIKA						
	PI	0...100 bar										
											007	
P 24140	SEAL GAS EXPANDER TURBINE 1		PI24140	Pressure gauge	F							
	PI	0...40 bar										
											029	
P 24144	SEAL GAS EXPANDER TURBINE 1		PT24144	Transmitter, pressure	F	E+H					HU_P01	
	PIALSALL	0...25 bar	P24144_I	Analog Input, active	PCS	ABB						
											029	
P 24145	BACK PRESSURE SEAL GAS		PI24145	Pressure gauge	F							
	PI	0...10 bar										
											029	

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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET	
P 24145	BACK PRESSURE SEAL GAS		PV24145	Pressure regulator	F							
	PC	bar									029	
P 24164	LUBE OIL P24163 TURBINE 1		PV24164	Pressure regulator	F							
	PC	bar									029	
P 24168	LUBE OIL EXPANDER TURBINE 1		PSLL24168	Pressure switch	F							
	PSALL		PLL24168_I	Binary Input	PCS	ABB					029	
P 24169	LUBE OIL EXPANDER TURBINE 1		PT24169	Transmitter, pressure	F	E+H						
	PISALSALL	0...6 bar	P24169_I	Analog Input, active	PCS	ABB					029	
P 24169	LUBE OIL EXPANDER TURBINE 1		PI24169	Pressure gauge	F							
	PI	0...6 bar									029	
P 24171	LUBE OIL EXPANDER TURBINE 1		PV24171	Pressure regulator	F							
	PC	bar									029	
P 24172	LUBE OIL EXPANDER TURBINE 1		PV24172	Pressure regulator	F							
	PC	bar									029	
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P 24201		AIR TO EXPANDER TURBINE 2		PT24201	Transmitter, pressure	F	E+H					HU_C07					
		PISAH	0...70 bar	P24201_I	Analog Input, active	PCS	ABB					008					
P 24202		AIR OUTLET EXPANDER TURBINE 2		PT24202	Transmitter, pressure	F	E+H										
		PIAHSHH	0...10 bar	P24202_I	Analog Input, active	PCS	ABB					008					
P 24207		AIR INLET EXPANDER TURBINE 2		PT24207	Transmitter, pressure	F	E+H										
		PIAH	0...70 bar	P24207_I	Analog Input, active	PCS	ABB					008					
P 24208		AIR INLET EXPANDER TURBINE 2		PI24208	Pressure gauge	F	WIKA										
		PI	0...100 bar									008					
P 24210		AIR OUTLET EXPANDER TURBINE 1		PI24210	Pressure gauge	F	WIKA										
		PI	0...10 bar									007					
P 24240		SEAL GAS EXPANDER TURBINE 2		PI24240	Pressure gauge	F	WIKA					HU_P03					
		PI	0...10 bar									030					
P 24244		SEAL GAS EXPANDER TURBINE 2		PT24244	Transmitter, pressure	F	E+H					HU_P01					
		PIALSALL	0...25 bar	P24244_I	Analog Input, active	PCS	ABB					030					
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
P 24245	BACK PRESSURE SEAL GAS		PI24245	Pressure gauge	F								
	PI	0...10 bar											
											030		
P 24245	BACK PRESSURE SEAL GAS		PV24245	Pressure regulator	F								
	PC	bar											
											030		
P 24264	LUBE OIL P24263 TURBINE 2		PV24264	Pressure regulator	F								
	PC	bar											
											030		
P 24268	LUBE OIL EXPANDER TURBINE 2		PSLL24268	Pressure switch	F								
	PSALL		PLL24268_I	Binary Input	PCS	ABB							
											030		
P 24269	LUBE OIL EXPANDER TURBINE 2		PI24269	Pressure gauge	F								
	PI	0...6 bar											
											030		
P 24269	LUBE OIL EXPANDER TURBINE 2		PT24269	Transmitter, pressure	F	E+H							
	PISALSALL	0...6 bar	P24269_I	Analog Input, active	PCS	ABB							
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P 24271	LUBE OIL EXPANDER TURBINE 2		PV24271	Pressure regulator	F								
	PC	bar											
											030		


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P 44057		END PRESSURE P44001		PI44057	Pressure gauge	F	WIKKA					HU_P03		
		PI	0...10 bar									042		
P 44072		PURGE GAS TO P44001		PI44072	Pressure gauge	F								
		PI	0...6 bar									042		
P 44073		PURGE GAS P44001		PV44073	Pressure regulator	F								
		PC	bar									042		
P 44105		LP LAR TANK 1 B44001		PT44105	Transmitter, pressure	F	E+H	PV44105	Globe valve	F	Flowserve	HU_C07; HU_V10		
		PICAHLSAHILL	0...6 bar	P44105_J	Analog Input, active	PCS	ABB							
				P44105_O	Analog Output	PCS	ABB					041		
P 44106		LP LAR TANK 1 B44001		PH44106	Pressure switch	F								
		PSH	0...6 bar	PH44106_J	Binary Input	PCS	ABB					041		
P 44107		LP LAR TANK 1 B44001		PI44107	Pressure gauge	F								
		PI	0...6 bar									041		
P 44205		LP LAR TANK 2 B44201		PT44205	Transmitter, pressure	F	E+H	PV44205	Globe valve	F	Flowserve	HU_C07; HU_V10		
		PICAHSAHILL	0...6 bar	P44205_J	Analog Input, active	PCS	ABB							
				P44205_O	Analog Output	PCS	ABB					042		
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P 44206	PRESSURIZATION LP LAR TANK 2		PV44206	Pressure regulator	F								
	PC	bar									042		
P 44207	LP LAR TANK 2 B44201		PI44207	Pressure gauge	F								
	PI	0...6 bar									042		
P 48004	HP LAR TANK B48001		PH48004	Pressure switch	F								
	PSAH	0...40 bar	PH48004_I	Binary Input	PCS	ABB					044		
P 48005	HP LAR TANK B48001		PT48005	Transmitter, pressure	F	E+H	PV48005	Globe valve	F	Flowserve	HU_C07; HU_V10		
	PICAHSAHLL	0...40 bar	P48005_I	Analog Input, active	PCS	ABB							
			P48005_O	Analog Output	PCS	ABB					044		
P 48006	PRESSURIZATION HP LAR TANK		PV48006	Pressure regulator	F								
	PC	bar									044		
P 48015	HP LAR TANK B48001		PI48015	Pressure gauge	F	WIKA							
	PI	0...60 bar									044		
P 48027	LAR TO HP LAR TANK B48001		PV48027	Globe valve	F	Flowserve					HU_V10		X from P48005
	PIC		P48027_O	Analog Output	PCS	ABB					044		

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P 48050	END PRESSURE LAR PUMP P48001				PT48050	Transmitter, pressure	F	E+H					HU_P01	
	PIAHLSAHILL	0...40 bar			P48050_J	Analog Input, active	PCS	ABB					043	
P 48080	SEAL GAS P48001				PV48080	Pressure regulator	F							
	PIC	bar											043	
P 49020	HP-GAR TO CUSTOMER				PT49020	Transmitter, pressure	F	E+H	PV49020	Globe valve	F	Flowserve	HU_P01; HU_V10	
	PICAL	0...40 bar			P49020_J	Analog Input, active	PCS	ABB					044	
					P49020_O	Analog Output	PCS	ABB						
P 49021	HP-GAR DISCHARGE EVAPORIZERS				PI49021	Pressure gauge	F	WIKA					HU_P03	
	PI	0...40 bar											044	
P 61130	CHARGE PRESSURE P61100				PI61130	Pressure gauge	F	WIKA					HU_C02	
	PI	0...6 bar											012	
P 61170	DISCHARGE LOX PUMP P61100				PT61170	Transmitter, pressure	F	E+H	PV61170	Globe valve	CB	Flowserve	HU_C02; HU_V10	
	PIAHLSAHILL	0...40 bar			P61170_J	Analog Input, active	PCS	ABB					012	
					P61170_O	Analog Output	PCS	ABB						
P 61230	CHARGE PRESSURE P61200				PI61230	Pressure gauge	F	WIKA					HU_C02	
	PI	0...6 bar											012	
Legend: F = local, V = local cabinet, S = control room, PCS = process control system														
Annotation on column "Hook Up": (FP*) = Frost Protection recommended														
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
P 61270	DISCHARGE LOX PUMP P61200			PT61270	Transmitter, pressure	F	E+H	PV61270	Globe valve	CB	Flowserve	HU_C02; HU_V10					
	PICAHLSAHHLL	0...40 bar		P61270_I	Analog Input, active	PCS	ABB										
				P61270_O	Analog Output	PCS	ABB						012				
P 62004	PRESSURIZATION LOX TANK B62001			PV62040	Globe valve	F	Flowserve					HU_V10		X from P 62005			
	PIC	bar		P62004_O	Analog Output	PCS	ABB					032					
P 62005	LOX TANK B62001 BLOW OUT			PT62005	Transmitter, pressure	F	E+H	PV62005	Globe valve	F	Flowserve	HU_C07; HU_V10					
	PICAHLSAHHLL	-10...+250 mbar		P62005_I	Analog Input, active	PCS	ABB										
				P62005_O	Analog Output	PCS	ABB						032				
P 62006	LOX TANK BL62001			PS62006	Pressure switch	F	E+H					HU_C07					
	PSAHH	0...400 mbar		PHH62006_I	Binary Input	PCS	ABB					032					
P 62011	END PRESSURE LOX PUMP P62001			PI62011	Pressure gauge	F	WIKA					HU_P03					
	PI	0...10 bar										032					
P 62012	END PRESSURE LOX PUMP P62001			PT62012	Transmitter, pressure	F	E+H					HU_P01					
	PISAL	0...10 bar		P62012_I	Analog Input, active	PCS	ABB					032					
P 62030	PURGEGAS LOX TANK B62001			PV62030	Pressure regulator	F											
	PC	bar										032					
Legend: F = local, V = local cabinet, S = control room, PCS = process control system																	
Annotation on column "Hook Up": (FP*) = Frost Protection recommended																	
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Annotation on column "Hook Up":  
(FP\*) = Frost Protection recommended

F = local, V = local cabinet, S = control room, PCS = process control system

Legend:

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TAG-NO.	DESIGNATION		INSTRUMENTATION										HOOK UP		REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
P 64101	LOX TO P64101		PI64101	Pressure gauge	F	Wika					HU_P03				
	PI	0...6 bar									033				
	END PRESSURE LOX PUMP P64101		PT64150	Transmitter, pressure	F	E+H	P64150_O	Analog Output	PCS	ABB	HU_P01; HU_V10				
P 64150	0...40 bar		P64150_I	Analog Input, active	PCS	ABB									
	PICAHLAHLL	0...40 bar	HV64170	Globe valve	F	Flowserve					033				
	O2 SEAL GAS P64101		PI64170	Pressure gauge	F	Wika									
P 64170	PI	bar									033				
	O2 SEAL GAS P64101		PIC64171	Pressure regulator	F										
	PIC	bar									033				
P 64201	LOX TO P64201		PI64201	Pressure gauge	F	Wika					HU_P03				
	PI	0...6 bar									033				
	END PRESSURE LOX PUMP P64201		PT64250	Transmitter, pressure	F	E+H	P64250_O	Analog Output	PCS	ABB	HU_P01; HU_V10				
P 64250	0...40 bar		P64250_I	Analog Input, active	PCS	ABB									
	PICAHLAHLL	0...40 bar	HV64270	Globe valve	F	Flowserve					033				
	O2 SEAL GAS P64201		PI64270	Pressure gauge	F	Wika									
P 64270	PI	bar									033				
	Annotation on column "Hook Up": (FP*) = Frost Protection recommended														
	Legend: F = local, V = local cabinet, S = control room, PCS = process control system														
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TAG-NO.	DESIGNATION		INSTRUMENTATION										HOOK UP		REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	LOC	DEVICE	P&I SHEET		
P 64271	O2 SEAL GAS P64201		PIC64271	Pressure regulator	F										
	PIC	bar											033		
P 70001	INLET GAN COMPRESSOR 1		PT70001	Transmitter, pressure	F								HU_P01		
	PIAHL5AHH	0...250 mbar	P70007_I	Analog Input, active	PCS	ABB							019		
P 70007	INLET GAN COMPRESSOR 1		PT70007	Transmitter, pressure	F										
	PIA5SAHH	0...2 bar	PY70007	Isolated amplifier	S										
			P70001_I	Analog Input, passive	PCS	ABB							019		
P 70015	GAN BEH. COOLER 1ST STAGE		PT70015	Transmitter, pressure	F										
	PI	0...2 bar	P70015_I	Analog Input, active	PCS	ABB							019		
P 70025	GAN BEH. COOLER 2ND STAGE		PT70025	Transmitter, pressure	F										
	PI	0...4 bar	P70025_I	Analog Input, active	PCS	ABB							019		
P 70031	GAN BEH. 3RD STAGE		PT70031	Transmitter, pressure	F										
	PISA5SAHH	0...10 Bar	P70031_I	Analog Input, Pt100	PCS	ABB							019		
P 70035	GAN BEH. COOLER 3RD STAGE		PT70035	Transmitter, pressure	F										Y to FIC70074
	PI	0...10 bar	P70035_I	Analog Input, active	PCS	ABB							019		
<b>Legend:</b> F = local, V = local cabinet, S = control room, PCS = process control system Annotation on column "Hook Up": (F-P*) = Frost Protection recommended															
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TAG-NO.		DESIGNATION		INSTRUMENTATION										HOOK UP		REMARKS	
		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
P 70036		GAN DISCHARGE GAN COMP. 1		PT70036	Transmitter, pressure	F						019					
		PI	bar	P70036_I	Analog Input, active	PCS	ABB										
		MP-GAN TO CUSTOMER		PT70041	Transmitter, pressure	F											
P 70041		PICAH	0...10 bar	P70041_I	Analog Input, active	PCS	ABB					020		HU_P01			
		SEAL GAS GAN COMP. 1		PV70751	Pressure regulator	F											
P 70751		PC	0,8...3,5 bar									021					
		SEAL GAS N2 COMP.1		PSL70753	Pressure switch	F	ACE										
P 70753		PIAL	bar	PL70753_I	Binary Input	PCS	ABB					021					
		LUBE OIL GAN COMP. 1		PV70820	Pressure regulator	F											
P 70820		PC	bar									021					
		LUBE OIL GAN COMP. 1		PV70830	Pressure regulator	F											
P 70830		PC	bar									021					
		LUBE OIL GAN COMP. 1		PT70854	Transmitter, pressure	F	E+H										
P 70854		PISALSALL	0...4 bar	P70854_I	Analog Input, active	PCS	ABB					021					
Legend: F = local, V = local cabinet , S = control room, PCS = process control system																	
Annotation on column "Hook Up": (FP*) = Frost Protection recommended																	
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TAG-NO.	DESIGNATION		INSTRUMENTATION									HOOK UP	REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY			
P 70855	LUBE OIL GAN COMP. 1		PI70855	Pressure gauge	F	WIKA							
	PI	0...6 bar											
												021	
P 70867	LUBE OIL MAIN MOTOR GAN COMP. 1		PI70867	Pressure gauge	F	WIKA							
	PI	0...6 bar											
												021	
P 70868	LUBE OIL MAIN MOTOR GAN COMP. 1		PI70868	Pressure gauge	F	WIKA							
	PI	0...6 bar											
												021	
P 71130	CHARGE PRESSURE P71100		PI71130	Pressure gauge	F	WIKA						HU_C02	
	PI	0...6 bar											
												015	
P 71170	DISCHARGE LIN PUMP P71100		PT71170	Transmitter, pressure	F	E+H		PV71170	Globe valve	CB	Flowserve	HU_C02; HU_V10	
	PICAHLSAHLL	0...40 bar	PT71170_I	Analog Input, active	PCS	ABB							
			PT71170_O	Analog Output	PCS	ABB						015	
P 71230	CHARGE PRESSURE P71200		PI71230	Pressure gauge	F	WIKA						HU_C02	
	PI	0...6 bar											
												015	
P 71270	DISCHARGE LIN PUMP P71200		PT71270	Transmitter, pressure	F	E+H		PCV71270	Globe valve	CB	Flowserve	HU_C02; HU_V10	
	PICAHLSAHLL	0...40 bar	PT71270_I	Analog Input, active	PCS	ABB							
			PT71270_O	Analog Output	PCS	ABB						015	

Annotation on column "Hook Up":  
(FP\*) = Frost Protection recommended

F = local, V = local cabinet, S = control room, PCS = process control system

**Legend:**

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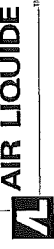
TAG-NO.	DESIGNATION		INSTRUMENTATION								HOOK UP		REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
P 72004	PRESSURIZATION LIN TANK B72001		PV72040	Globe valve	F	Flowsolve					HU_V10	X from P72005	
	PIC		PT2004_O	Analog Output	PCS	ABB					035		
P 72005	LIN TANK B72001 BLOW OUT		PV72005	Globe valve	F	Flowsolve	P72005_I	Analog Input, active	PCS	ABB	HU_C07; HU_V10		
	PICAHLSAHHLL	-10...+250 mbar	PT2005_O	Analog Output	PCS	ABB					035		
			PT72005	Transmitter, pressure	F	E+H							
P 72006	LIN TANK B72001		PSH72006	Pressure switch	F	Pinter					HU_C07		
	PSAHH	0...400 mbar	PH72006_I	Binary Input	PCS	ABB					035		
P 72011	END PRESSURE LIN PUMP P72001		PI72011	Pressure gauge	F	WIKA					HU_P03		
	PI	0...10 bar									035		
P 72012	END PRESSURE LIN PUMP P72001		PT72012	Transmitter, pressure	F	E+H					HU_P01		
	PISAL	0...10 bar	PT2012_I	Analog Input, active	PCS	ABB					035		
P 72030	PURGEGAS LIN TANK B72001		PCV72030	Pressure regulator	F								
	PC	bar									035		
P 72032	TANK SHELL B72001		PI72032	Pressure gauge	F								
	PI	0...15 mbar									035		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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P 73002	REFILL GAN RESERVOIR		PT73002	Transmitter, pressure	F	E+H					HU_P01	038	local indicator		
	PISAL	0...25 bar	P73002_I	Analog Input, active	PCS	ABB									
	MP LIN TANK B73001		PT73002	Pressure gauge	F										
P 73002	PI	0...25 bar									038				
	MP LIN TANK B73001 BLOW OUT		PV73005	Globe valve	F	Flowserve					HU_V10	038	X from P73015		
	PIC	bar	P73005_O	Analog Output	PCS	ABB									
MP LIN TANK B73001		PSH73006	Pressure switch	F											
P 73006	PSAH	0...25 bar	PH73006_I	Binary Input	PCS	ABB					038				
	HP-GAN RESERVOIR B73002		PT73007	Transmitter, pressure	F	E+H					HU_P01	038			
	PISAHL	0...25 bar	P73007_I	Analog Input, active	PCS	ABB									
HP-GAN RESERVOIR B73002		PI73009	Pressure gauge	F	WIKA					HU_P01	038				
P 73009	PI	0...25 bar													
	MP LIN TANK B73001		PT73015	Transmitter, pressure	F	E+H	PV73015	Globe valve	F	Flowserve		HU_C07; HU_V10	038		
	PICAHLSAHH	0...25 bar	P73015_I	Analog Input, active	PCS	ABB	U73015_O	Binary Output, relay	PCS	ABB					
		P73015_O	Analog Output	PCS	ABB	UV73015	Solenoid valve	F							
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (F*) = Frost Protection recommended															
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P 73017	PRESSURIZATION MP LIN TANK		PCV73017	Pressure regulator	F							
	PC	bar									038	
P 73050	GAN BEHIND WATER BATH VAPORIZER		PT73050	Transmitter, pressure	F	E+H	UV73010	Globe valve	F	Flowsolve	HU_P01	
	PICAH	0...25 bar	PT3050_I	Analog Input, active	PCS	ABB						
			PT3050_O	Analog Output	PCS	ABB						039
P 73080	STEAM TO WATER BATH VAPORIZER GAN		PT730180	Transmitter, pressure	F	E+H					HU_P02 heated	
	PIALSALL	0...25 bar	PT3080_I	Analog Input, active	PCS	ABB						039
P 73081	STEAM TO WATER BATH VAPORIZER GAN		PT73081	Pressure gauge	F						HU_P03	
	PI	0...25 bar										039
P 73101	LIN TO P73101		PT73101	Pressure gauge	F						HU_P03	
	PI	0...6 bar										037
P 73150	END PRESSURE LIN PUMP P73101		PT73150	Transmitter, pressure	F	E+H	HV73170	Globe valve	F	Flowsolve	HU_P01; HU_V10	
	PICAHLSAHHLL	0...25 bar	PT3150_I	Analog Input, active	PCS	ABB						
			PT3150_O	Analog Output	PCS	ABB						037
P 73158	GAN BEHIND W73101		PT73158	Transmitter, pressure	F	E+H	PV73101	Globe valve	F	Flowsolve	HU_P01; HU_V10	
	PICAHSAHH	0...25 bar	PT3158_I	Analog Input, active	PCS	ABB	UV73101	Solenoid valve	F			
			PT3158_O	Analog Output	PCS	ABB	US73101_O	Binary Output, relay	PCS	ABB		040
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
P 73201	LIN TO P73201			P173201	Pressure gauge	F						HU_P03					
	PI	0...6 bar										037					
	END PRESSURE LIN PUMP P73201			PT73250	Transmitter, pressure	F	E+H	HV73270	Globe valve	F	Flowserve	HU_P01; HU_V10					
P 73250	PICAHL SAHLL		0...25 bar	P73250_I	Analog Input, active	PCS	ABB										
				P73250_O	Analog Output	PCS	ABB					037					
	OUTLET PRESSURE HP-GAN			PT74090	Transmitter, pressure	F	E+H					HU_P01					
P 74090	PICS AHL		0...40 bar	P74090_I	Analog Input, active	PCS	ABB					036					
				PI74101	Pressure gauge	F						HU_P03					
	LIN TO P74101											036					
P 74101	PI		0...6 bar														
	END PRESSURE LIN PUMP P74101			PT74150	Transmitter, pressure	F	E+H	HV74170	Globe valve	F	Flowserve	HU_P01; HU_V10					
	PICAHL SAHLL		0...40 bar	P74150_I	Analog Input, active	PCS	ABB										
P 74150				P74150_O	Analog Output	PCS	ABB					036					
	N2 SEAL GAS P74101			PI74170	Pressure gauge	F	WIKA										
	PI	bar										036					
P 74170	N2 SEAL GAS P74101			PIC74171	Pressure regulator	F											
	PIC	bar										036					
P 74171																	
												036					
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P 74201	LIN TO P74201		P74201	Pressure gauge	F						HU_P03					
	PI	0...6 bar									036					
	END PRESSURE LIN PUMP P74201		PT74250	Transmitter, pressure	F	E+H	HV74270	Globe valve	F	Flowserve	HU_P01; HU_V10					
P 74250	PIAHL SAHH	0...40 bar	P74250_I	Analog Input, active	PCS	ABB										
			P74250_O	Analog Output	PCS	ABB					036					
P 74270	N2 SEAL GAS P74201		PI74270	Pressure gauge	F	WIKA										
	PI	bar									036					
P 74271	N2 SEAL GAS P74201		PIC74271	Pressure regulator	F											
	PIC	bar									036					
P 77001	INLET GAN COMPRESSOR 2		PT77001	Transmitter, pressure	F						HU_P01					
	PIAHL SAHH	0...250 mbar	PT77007_I	Analog Input, active	PCS	ABB					020					
P 77007	INLET GAN COMPRESSOR 2		PT77007	Transmitter, pressure	F											
	PI	0...2 bar	PY77007	Isolated amplifier	S											
			PT77007_I	Analog Input, passive	PCS	ABB					020					
P 77015	GAN BEH. COOLER 1ST STAGE		PT77015	Transmitter, pressure	F											
	PI	0...2 bar	PT77015_I	Analog Input, active	PCS	ABB					020					
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	LOC	DEVICE	P&I SHEET		
P 77025	GAN BEH. COOLER 2ND STAGE		PT77025	Transmitter, pressure	F										
	PI	0...4 bar	P77025_J	Analog Input, active	PCS	ABB							020		
P 77031	GAN BEH. 3RD STAGE		PT77031	Transmitter, pressure	F										
	PISAHAHH	0...10 bar	P77031_J	Analog Input, active	PCS	ABB							020		
P 77035	GAN BEH. COOLER 3RD STAGE		PT77035	Transmitter, pressure	F										Y to FIC77074
	PI	bar	P77035_J	Analog Input, active	PCS	ABB							020		
P 77036	GAN DISCHARGE GAN COMPR. 2		PT77036	Transmitter, pressure	F										
	PI	bar	P77036_J	Analog Input, active	PCS	ABB							020		
P 77751	SEALGAS GAN COMP. 2		PV77751	Pressure regulator	F										
	PC	bar											022		
P 77753	SEAL GAS N2 COMP.2		PSL77753	Pressure switch	F	ACE									
	PIAL	bar	PL70753_J	Binary Input	PCS	ABB							022		
P 77820	LUBE OIL GAN COMP. 2		PV77820	Pressure regulator	F										
	PC	bar											022		
<b>Legend:</b>			F = local, V = local cabinet, S = control room, PCS = process control system												
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P 77830	LUBE OIL GAN COMP. 2			PV77830	Pressure regulator	F									
	PC	bar										022			
P 77854	LUBE OIL GAN COMP. 2			PT77854	Transmitter, pressure	F	E+H								
	PISALSALL	0...4 bar		P77854_I	Analog Input, active	PCS	ABB					022			
P 77855	LUBE OIL GAN COMP. 2			PI77855	Pressure gauge	F	WIKA								
	PI	0...6 bar										022			
P 77867	LUBE OIL MAIN MOTOR GAN COMP. 2			PI77867	Pressure gauge	F	WIKA								
	PI	0...6 bar										022			
P 77868	LUBE OIL MAIN MOTOR GAN COMP. 2			PI77868	Pressure gauge	F	WIKA								
	PI	0...6 bar										022			
P 80001	COOLING WATER			PT80001	Transmitter, pressure	F	E+H					HU_P01			
	PIAL	0...6 bar		P80001_I	Analog Input, active	PCS	ABB					023			
P 81010	PURGE GAS HEADER			PT81010	Transmitter, pressure	F	E+H					HU_P01			
	PIAL	0...10 bar		P81010_I	Analog Input, active	PCS	ABB					025			
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P 81020		GOX SEALGAS		PV81020	Pressure regulator	F	GHR						
		PC	bar										025
P 81040		GAN TO PURGE GAS		PV81040	Pressure regulator	F	Mankenber g					HU_V30	
		PC	bar										025
P 81041		GAN FROM CUSTOMER		PV81041	Pressure regulator	F	Mankenber g					HU_V30	
		PC	bar										025
P 82010		INSTRUMENT GAS HEADER		PT82010	Transmitter, pressure	F	E+H					HU_P01	
		PIAL	0...10 bar	P82010_I	Analog Input, active	PCS	ABB						025
P 82020		GAN TO INSTRUMENT AIR		PV82020	Pressure regulator	F	Mankenber g					HU_V30	
		PC	bar										025
P 82022		GAN TO INSTRUMENT AIR		PI82022	Pressure gauge	F	WIKA					HU_P03	
		PI	0...6 bar										025
P 84010		STEAM FROM CUSTOMER		PT84010	Transmitter, pressure	F	E+H					HU_P02	
		PIAHL	0...25 bar	P84010_I	Analog Input, active	PCS	ABB						031
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P 87011	PURGEGAS TO COLDBOX		PV87011	Pressure regulator	F	GHR									
	PC	bar									024				
P 87012	PURGEGAS TO COLDBOX		PT87012	Transmitter, pressure	F	E+H					HU_P01				
	PIAL	0...400 mbar	P87012_I	Analog Input, active	PCS	ABB					024				
P 87025	TOP HE-BOX		PT87025	Transmitter, pressure	F	E+H					HU_P01				
	PIAHL	-10...+25 mbar	P87025_I	Analog Input, active	PCS	ABB					024				
P 87065	TOP COLD-BOX		PT87065	Transmitter, pressure	F	E+H					HU_P01				
	PIAHL	-10...+25 mbar	P87065_I	Analog Input, active	PCS	ABB					024				
PD 10000	AIR FILTER MAC		PDT10000	Transmitter, diff.-press.	F	E+H					HU_P04				
	PDIASAHH	0...60 mbar	PD10000_I	Analog Input, active	PCS	ABB					001				
PD 11812	VACUUM MONITOR OIL CONTAINER MAC		PDT11812	Transmitter, diff.-press.	F	E+H							Below atmospheric pressure		
	PDIAL	mbar	PD11812_I	Analog Input, active	PCS	ABB					027				
PD 11846	OIL FILTERS MAC		PDISH11846	Diff.-pressure gauge	F	Atlas Copco									
	PDIAH	mbar	PDH11846_I	Binary Input	PCS	ABB					027				
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Annotation on column "Hook Up": (F-P) = Frost Protection recommended															
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Annotation on column "Hook Up":  
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Legend:

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PD 13004		DIFF.-PRESSURE DC/AC		PDT13004	Transmitter, diff.-press.	F	E+H					HU_P13004		
		PDIASAHH	0...60 mbar	P13004_J	Analog Input, active	PCS	ABB					002		
PD 13110		CW FILTER F13110		PDI13110	Diff.-pressure gauge	F	AGS					002		
		PDI	0...1,6 bar											
PD 13210		CW FILTER F13210		PDI13210	Diff.-pressure gauge	F	AGS					002		
		PDI	0...1,6 bar											
PD 14010		CW FILTER F14010		PDI14010	Diff.-pressure gauge	F	AGS					003		
		PDI	0...1,6 bar											
PD 14110		CW FILTER F14110		PDI14110	Diff.-pressure gauge	F	AGS					003		
		PDI	0...1,6 bar											
PD 14210		CW FILTER F14210		PDI14210	Diff.-pressure gauge	F	AGS					003		
		PDI	0...1,6 bar											
PD 15031		AIR FILTER BEHIND MOL SIEVE		PDT15031	Transmitter, diff.-press.	F	E+H					HU_P04		
		PDI	0...150 mbar	P15031_J	Analog Input, active	PCS	ABB					004		
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TAG-NO.	DESIGNATION		INSTRUMENTATION								HOOK UP		REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
PD 16812	VACUUM MONITOR OIL CONTAINER BAC		PDT16812	Transmitter, diff.-press.	F	E+H						Below atmospheric pressure	
	PDIAL	-15...15 mbar	PD16812_I	Analog Input, active	PCS	ABB					028		
PD 16846	OIL FILTERS BAC		PDISH16846	Diff.-pressure gauge	F	Atlas Copco							
	PDIAH	0...1,6 bar	PDH16846_I	Binary Input	PCS	ABB					028		
PD 20012	GOX BARRIER K20012		PDI20012	Difference pressure gauge	F						HU_P04		
	PDI	0...40 bar									010		
PD 20015	DIFF.-PRESSURE UK20013		PDL20015	Diff.-pressure switch	F	Pinter					HU_P04		
	PDSH	0...40 bar	PDL20015_I	Binary Input	PCS						010		
PD 20016	DIFF.-PRESSURE UK20014		PDL20016	diff.-pressure switch	F	Pinter					HU_P04		
	PDSH	0...40 bar	PDL20016_I	Binary Input	PCS						010		
PD 21003	DIFF. PRESS. HP-COLUMN		PDT21003	Transmitter, diff.-press.	F	E+H					HU_C06		
	PDIAH	0...300 mbar	PD21003_I	Analog Input, active	PCS	ABB					014		
PD 22001	DIFF. PRESS. LP-COLUMN		PDT22001	Transmitter, diff.-press.	F	E+H					HU_C05		
	PDIAH	0...100 mbar	PD22001_I	Analog Input, active	PCS	ABB					013		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	LOC	LOC	P&I SHEET		
PD 24141	DIFF.-PRESS SEAL GAS TURBINE 1		PDT24141	Transmitter, diff.-press.	F	E+H							HU_P04		
	PDIALSALL	0...2000 mbar	P24141_I	Analog Input, active	PCS	ABB									
			PDCV24141	Diff.-pressure regulator	F								029		
PD 24169	DIFF.-PRESS OILFILTER		PDIH24169	Diff.-pressure gauge	F										
			PSH24169	Binary Input	PCS	ABB									
	PDIAH	bar											029		
PD 24241	DIFF.-PRESS SEAL GAS TURBINE 2		PDT24241	Transmitter, diff.-press.	F	E+H							HU_P04		
	PDIALSALL	0...2000 mbar	PD24241_I	Analog Input, active	PCS	ABB									
			PDCV24241	Diff.-pressure regulator	F								030		
PD 24269	DIFF.-PRESS OILFILTER AF24268		PDIH24269	Diff.-pressure gauge	F										
			PDH24269	Binary Input	PCS	ABB									
	PDIAH	bar											030		
PD 40003	CAR COLUMN K40002		PDT40003	Transmitter, diff.-press.	F	E+H							HU_C03		
			PD40003_I	Analog Input, active	PCS	ABB									
	PDIAH	0...150 mbar											017		
PD 40053	DIFF. PRESS. CAR COLUMN K40001		PDT40053	Transmitter, diff.-press.	F	E+H							HU_C05		
			PD40053_I	Analog Input, active	PCS	ABB									
	PDIAH	0...150 mbar											016		
PD 43021	DIFF. PRESS. PURE AR COLUMN C43001		PDT43001	Transmitter, diff.-press.	F	E+H							HU_C06; HU_V10		
			PD40053_I	Analog Input, active	PCS	ABB									
	PDICAH	0...300 mbar	P43021_O	Analog Output	PCS	ABB							018		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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TAG-NO.	DESIGNATION		INSTRUMENTATION										HOOK UP		REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
PD 64060	GOX PRODUCT		PD164060	Diff.-pressure gauge	F							034	Local indicator		
	PDI	0...3 bar													
PD 70846	OIL FILTERS GAN COMP. 1		PDISH70846	Diff.-pressure gauge	F	Atlas Copco						021			
	PDIAH	0...4 bar	PDH70846_I	Binary Input	PCS	ABB									
PD 77846	OIL FILTERS GAN COMP. 2		PDISH77846	Diff.-pressure gauge	F	Atlas Copco						022			
	PDIAH	0...4 bar	PDH77846_I	Binary Input	PCS	ABB									
Q 15038	PPM CO2 IN AIR BEHIND MOL SIEVE		QT15038	Analyzer ppm CO2	A	Servomex	Q15038_FL_1_I	Binary Input	PCS	ABB	HU_Q01	004			
	QIAHAHH	0...5 ppm	Q15038_I	Analog Input, passive	PCS	ABB	Q15038_H_S1	Override switch	A						
			UA15038_I	Binary Input	PCS	ABB	Q15038_H_S1_I	Binary Input	PCS	ABB					
Q 15038_2	PPM CO2 IN AIR BEHIND MOL SIEVE		QT15038	Analyzer ppm CO2	A	Servomex					HU_Q01	004			
	QIAHAHH	0...50 ppm	Q15038_2_I	Analog Input, passive	PCS	ABB									
Q 15043	PPM H2O IN REGENERATION GAS		QT15043	Analyzer ppm H2O	A	Panametric S	Q15043_FL_1_I	Binary Input	PCS	ABB	HU_Q01	005			
	QIAHAHH	0...10 ppm	Q15043_I	Analog Input, passive	PCS	ABB	Q15043_H_S1	Override switch	A						
			UA15043_I	Binary Input	PCS	ABB	Q15043_H_S1_I	Binary Input	PCS	ABB					
Q 16055	PPM H2O IN HPAIR		QT16055	Analyzer ppm H2O	A	Panametric S	Q16055_FL_1_I	Binary Input	PCS	ABB	HU_Q01	006			
	QIAHAHH	0...10 ppm	Q16055_I	Analog Input, passive	PCS	ABB	Q16055_H_S1	Override switch	A						
			UA16055_I	Binary Input	PCS	ABB	Q16055_H_S1_I	Binary Input	PCS	ABB					
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	DEVICE	LOC	SUPPL. BY	P&I SHEET	
Q 20001	PPM O2 IN HP-GAN OUTLET COLDBOX		QT20001	Analyzer ppm 02	A	Servomex	Q20001_PL 1_J	Binary Input	PCS	ABB				HU_Q01	
	QIAHSAHH	0...10 ppm	Q20001_1_I	Analog Input, passive	PCS	ABB	Q20001_H S1	Override switch	A						
			UA20001_I	Binary Input	PCS	ABB	Q20001_H S1_I	Binary Input	PCS	ABB				010	
Q 20001_2	PPM O2 IN HP-GAN OUTLET COLDBOX		QT20001	Analyzer ppm 02	A	Servomex									
	QIAHSAHH	0...1000 ppm	Q20001_2_I	Analog Input, passive	PCS	ABB								010	
Q 20005	PPM O2 IN LP-GAN OUTLET COLDBOX		QT20005	Analyzer ppm 02	A	Servomex	Q20005_PL 1_J	Binary Input	PCS	ABB				HU_Q01	
	QIAHSAHH	0...10 ppm	Q20005_1_I	Analog Input, passive	PCS	ABB	Q20005_H S1	Override switch	A						
			UA20005_I	Binary Input	PCS	ABB	Q20005_H S1_I	Binary Input	PCS	ABB				010	
Q 20005_2	PPM O2 IN LP-GAN OUTLET COLDBOX		QT20005	Analyzer ppm 02	A	Servomex									
	QIAHSAHH	0...1000 ppm	Q20005_2_I	Analog Input, passive	PCS	ABB								010	
Q 20011	% O2 IN GOX OUTLET COLDBOX		QT20011	Analyzer % 02	A	Servomex	Q20011_PL 1_J	Binary Input	PCS	ABB				HU_Q01	
	QIALSALL	98...100 %	Q20011_1_I	Analog Input, passive	PCS	ABB	Q20011_H S1	Override switch	A						
			UA20011_I	Binary Input	PCS	ABB	Q20011_H S1_I	Binary Input	PCS	ABB				010	
Q 20011_2	% O2 IN GOX OUTLET COLDBOX		QT20011	Analyzer % 02	A	Servomex									
	QIALSALL	0...100 %	Q20011_2_I	Analog Input, passive	PCS	ABB								010	
Q 20012	PPM N2 IN GOX OUTLET COLDBOX		QT20012	Analyzer ppm N2	A	Servomex	Q20012_PL 1_J	Binary Input	PCS	ABB				HU_Q01	
	QIAHSAHH	0...100 ppm	Q20012_1_I	Analog Input, passive	PCS	ABB	Q20012_H S1	Override switch	A						
			UA20012_I	Binary Input	PCS	ABB	Q20012_H S1_I	Binary Input	PCS	ABB				010	

**Legend:**
F = local, V = local cabinet, S = control room, PCS = process control system


Annotation on column "Hook Up":  
(FP\*) = Frost Protection recommended

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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET	
Q 20012_2	PPM N2 IN GOX OUTLET COLD BOX		QT20012	Analyzer ppm N2	A	Servomex						
	QIAHSAH	0...1000 ppm	Q20012_2_I	Analog Input, passive	PCS	ABB					010	
Q 20029	%O2 IN WASTE GAS EX MHE		Q20029	Analyzer % O2	A	Servomex	Q20029_FL_1_I	Binary Input	PCS	ABB	HU_Q05	
	QIAH	0...5 %	Q20029_I	Analog Input, passive	PCS	ABB	Q20029_H_S1	Override switch	A			
			UA20029_I	Binary Input	PCS	ABB	Q20029_H_S1_I	Binary Input	PCS	ABB	009	
Q 20029_2	%O2 IN WASTE GAS EX MHE		Q20029	Analyzer % O2	A	Servomex						
	QIAH	0...100 %	Q20029_2_I	Analog Input, passive	PCS	ABB					009	
Q 21002	PPM O2 IN HP-COLUMN		QE212002	Sample Point	F							
	QE										014	
Q 21004	% O2 IN HP-COLUMN		QT21004	Analyzer % O2	A	Servomex	Q21004_PL_1_I	Binary Input	PCS	ABB	HU_Q02	
	QIAH	0...100 %	Q21004_1_I	Analog Input, passive	PCS	ABB	Q21004_H_S1	Override switch	A			
			UA21004_I	Binary Input	PCS	ABB	Q21004_H_S1_I	Binary Input	PCS	ABB	014	
Q 21004_2	% O2 IN HP-COLUMN		QT21004	Analyzer % O2	A	Servomex						
	QIAH	0...100 %	Q21004_2_I	Analog Input, passive	PCS	ABB					014	
Q 22001	% O2 IN LP-COLUMN		QE22001	Sample Point	F						HU_Q06	
	QE										013	
<b>Legend:</b> F = local, V = local cabinet, S = control room, PCS = process control system Annotation on column "Hook Up": (F-P*) = Frost Protection recommended												
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TAG-NO.	DESIGNATION		INSTRUMENTATION								HOOK UP		REMARKS
	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
Q 22002		LP-COLUMN	QE22002	Sample Point	F								
	QE										013		
Q 22003		LP-COLUMN	QE22003	Sample Point	F								
	QE										013		
Q 22004		LP-COLUMN	QE22004	Sample Point	F								
	QE										013		
Q 22005		LP-COLUMN	QE22005	Sample Point	F								
	QE										013		
Q 22008		% O2 IN WN2 FROM LP-COLUMN	QE22008	Sample Point	A						HU_Q06		
	QE										013		
Q 22009		% O2 IN LP-COLUMN	QE22009	Sample Point	F								
	QE										013		
Q 22011		PPM CO2 IN LOX SUMP LP-COLUMN	QE 22011	Sample Point	F						HU_Q03		
	QE	0...100 ppm 0...1000 ppm									014		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
Q 22011_T	ANALYTIC VAPORIZER			Q22011_TE	Pt100, temperature sensor	F	Krytem										
	TIC	0...50 °C	Q22011_T_I	Analog Input, Pt100	PCS	ABB											
												014					
Q 22011_U	HEATING ANALYTIC VAPORIZER			Q223011_US	Switching relay	S	Siemens										
	US		A23013_US_O	Binary Output, relay	PCS	ABB											
												014					
Q 23013	PPM O2 IN LIN TO STORAGE			QT23013	Analyzer ppm 02	A	Servomex	Q23013_PL_1_I	Binary Input	PCS	ABB		HU_Q03				
	QIAHSAHH	0...10 ppm	Q23013_1_I	Analog Input, passive	PCS	ABB		Q23013_H_S1	Override switch	A							
			UA23013_I	Binary Input	PCS	ABB		Q23013_H_S1_I	Binary Input	PCS	ABB		011				
Q 23013_2	PPM O2 IN LIN TO STORAGE			QT23013	Analyzer ppm 02	A	Servomex										
	QIAHSAHH	0...1000 ppm	Q23013_2_I	Analog Input, passive	PCS	ABB											
												011					
Q 23013_T	ANALYTIC VAPORIZER			Q23013_TE	Pt100, temperature sensor	F	Krytem										
	TIC	0...50 °C	Q23013_T_I	Analog Input, Pt100	PCS	ABB											
													011				
Q 23013_U	HEATING ANALYTIC VAPORIZER			Q23013_US	Switching relay	S	Siemens										
	US		Q23013_US_O	Binary Output, relay	PCS	ABB											
													011				
Q 23016	% O2 IN LOX TO STORAGE			QT23016	Analyzer % 02	A	Servomex	Q23016_PL_1_I	Binary Input	PCS	ABB		HU_Q03				
	QIALSALL	98...100 %	Q23016_1_I	Analog Input, passive	PCS	ABB		Q23016_H_S1	Override switch	A							
			UA23016_I	Binary Input	PCS	ABB		Q23016_H_S1_I	Binary Input	PCS	ABB		011				
Legend: F = local, V = local cabinet, S = control room, PCS = process control system																	
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<b>Legend:</b>			F = local, V = local cabinet, S = control room, PCS = process control system										Annotation on column "Hook Up": (F-P*) = Frost Protection recommended		
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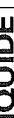
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
Q 40014		PPM O2 IN LAR TO PURE AR-COLUMN		QE40014	Sample Point	A						HU_Q03		
		QE										017		
		ANALYTIC VAPORIZER												
Q 40014_T		TIC	0...50 °C	Q40014_TE	Pt100, temperature sensor	F	Krytem							
				Q40014_T_I	Analog Input, Pt100	PCS	ABB					017		
Q 40014_U		HEATING ANALYTIC VAPORIZER		Q40014_US	Switching relay	S	Siemens							
				Q40014_US_O	Binary Output, relay	PCS	ABB					017		
Q 40022		CAR-COLUMN BLOW OUT		QE40022	Sample Point	F								
		QE										017		
		CAR-COLUMN												
Q 40036				QE40036	Sample Point	F								
		QE										017		
Q 40037		CAR-COLUMN		QE40037	Sample Point	F								
		QE										017		
		CAR COLUMN 1												
Q 40050				QE40050	Sample Point	F								
		QE										016		
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Annotation on column "Hook Up": (FP*) = Frost Protection recommended														
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
Q 40052		CAR COLUMN 1		QE40052	Sample Point	F								
		QE											016	
Q 40053		CAR COLUMN 1		QE40053	Sample Point	F								
		QE											016	
Q 43024		PURE AR-COLUMN		QE43024	Sample Point	F								
		QE											018	
Q 43026		PURE AR-COLUMN		QE43026	Sample Point	F								
		QE											018	
Q 43033		PPM O2 IN LAR PRODUCT		QT43033	Analyzer ppm 02	A	Servomex	Q43033_FL1_I	Binary Input	PCS	ABB	HU_Q03		
		QIAHSAHH		0...10 ppm	Q43033_1_I	Analog Input, passive	PCS	ABB	Q43033_H_S1	Override switch	A			
				UA43033_I	Binary Input	PCS	ABB	Q43033_H_S1_I	Binary Input	PCS	ABB	018		
Q 43033_2		PPM O2 IN LAR PRODUCT		QT43033	Analyzer ppm 02	A	Servomex							
		QIAHSAHH		0...1000 ppm	Q43033_1_I	Analog Input, passive	PCS	ABB					018	
Q 43033_T		ANALYTIC VAPORIZER		Q43033_TE	Pt100, temperature sensor	F	Krytem							
		TIC		0...50 °C	Q43033_T_I	Analog Input, Pt100	PCS	ABB					018	
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
Q 43033_U		HEATING ANALYTIC VAPORIZER		Q43033_U_S	Switching relay	S	Siemens									
		US		Q43033_U_S_O	Binary Output, relay	PCS	ABB						018			
Q 43034		PPM CNHM IN LAR PRODUCT		QE43034	Sample Point	A								see Q92011/Q92012		
		QE	ppm										018			
Q 43034_1		PPM H2 IN LAR		QT43034	Analyzer CnHm	A	Chroma	UA43034_I	Binary Input	PCS	ABB					
		QI	0...10 vpm	Q43034_1_I	Analog Input, passive	PCS	ABB	Q43034_FL_1_I	Binary Input	PCS	ABB					
				UA43034	Fail contact	A		Q43034_H_S1_I	Binary Input	PCS	ABB		018			
Q 43034_2		PPM N2 IN LAR		QT43034	Analyzer CnHm	A	Chroma									
		QIAHSAHH	0...10 ppm	Q43034_2_I	Analog Input, passive	PCS	ABB						018			
					Binary Input	PCS	ABB									
Q 43034_3		PPM CO2 IN LAR		QT43034	Analyzer CnHm	A	Chroma									
		QIAH	0...5 ppm	Q43034_3_I	Analog Input, passive	PCS	ABB						018			
				Q43034_FL_3_I	Binary Input	PCS	ABB									
Q 43034_4		PPM CO IN LAR		QT43034	Analyzer CnHm	A	Chroma									
		QIAHSAHH	0...2 ppm	Q43034_4_I	Analog Input, passive	PCS	ABB						018			
				Q43034_FL_4_I	Binary Input	PCS	ABB									
Q 43034_5		PPM NMHC IN LAR		QT43034	Analyzer CnHm	A	Chroma									
		QIAHSAHH	0...2 ppm	Q43034_5_I	Analog Input, passive	PCS	ABB						018			
				Q43034_FL_5_I	Binary Input	PCS	ABB									
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY				
Q 43034_6		PPM CH4 IN LAR	Q743034	Analyzer CnHm	A	Chroma								
	QI	0...2 ppm	Q43034_6_I	Analog Input, passive	PCS	ABB								
			Q43034_6_FL	Binary Input	PCS	ABB						018		
Q 64051		% O2 IN GOX OUTLET W64001	Q764051	Analyzer % O2	A	Servomex	A64051_PL1_I	Binary Input	PCS	ABB		HU_Q01		
	QI	98...100 %	Q64051_1_I	Analog Input, passive	PCS	ABB	Q64051_H_S1	Override switch	A					
			UA64051_I	Binary Input	PCS	ABB	Q64051_H_S1_I	Binary Input	PCS	ABB		034		
Q 64051_2		% O2 IN GOX OUTLET W64001	Q764051	Analyzer % O2	A	Servomex								
	QI	0...100 %	Q64051_2_I	Analog Input, passive	PCS	ABB						034		
Q 74090		PPM O2 IN MP GAN	Q774090	Analyzer ppm O2	A	Servomex	A74090_FL1_I	Binary Input	PCS	ABB		HU_Q01		
	QI	0...10 ppm	Q74090_1_I	Analog Input, passive	PCS	ABB	Q74090_H_S1	Override switch	A					
			UA74090_I	Binary Input	PCS	ABB	Q74090_H_S1_I	Binary Input	PCS	ABB		036		
Q 74090_2		PPM O2 IN MP GAN	Q774090	Analyzer ppm O2	A	Servomex								
	QI	0...1000 ppm	Q74090_2_I	Analog Input, passive	PCS	ABB						036		
S 24124		SPEED EXPANDER TURBINE 1	SE24124	Speed sensor	F		SSHLL24124	Value limit monitor	V					
	SIS		ST24124	Speed transducer	V		SHH24124_I	Binary Input	PCS	ABB				
		0...50000 rpm	S24124_I	Analog Input, passive	PCS	ABB	SLL24124_I	Binary Input	PCS	ABB		029		
S 24224		SPEED EXPANDER TURBINE 2	SE24224	Speed sensor	F		SSHLL24224	Value limit monitor	V					
	SIS		ST24224	Speed transducer	V		SHH24224_I	Binary Input	PCS	ABB				
		0...50000 rpm/min	S24224_I	Analog Input, passive	PCS	ABB	SLL24224_I	Binary Input	PCS	ABB		030		

Annotation on column "Hook Up":  
(FP\*) = Frost Protection recommended

Legend:										F = local, V = local cabinet , S = control room, PCS = process control system										Annotation on column "Hook Up": (FP*) = Frost Protection recommended									
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FUNCTION		RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET						
S 73101	SPEED LIN BACKUP PUMP P73100		SC73101	Frequency converter	S												
	SISL	0...84 Hz	S73101_J	Analog Input, passive	PCS	ABB											
			SL73101_O	Binary Output, relay	PCS	ABB						037					
S 73201	SPEED LIN BACKUP PUMP P73200		SC73201	Frequency converter	S												
	SISL	0...84 HZ	S73201_J	Analog Input, passive	PCS	ABB											
			SL73201_O	Binary Output, relay	PCS	ABB						037					
T 11007	AIR INLET MAC		TE11007	Pt100, temperature sensor	F	Armatherm											
	TI	-30...60 °C	T11007_J	Analog Input, Pt100	PCS	ABB											
												001					
T 11011	AIR INLET VW11011		TE11011	Pt100, temperature sensor	F	Armatherm											
	TIAH	0...160 °C	T11011_J	Analog Input, Pt100	PCS	ABB											
												001					
T 11012	AIR INLET VW11012		TE11012	Pt100, temperature sensor	F	Armatherm											
	TIAH	0...160 °C	T11012_J	Analog Input, Pt100	PCS	ABB											
												001					
T 11016	AIR OUTLET VW11011		TE11016	Pt100, temperature sensor	F	Armatherm											
	TIAH	0...160 °C	T11016_J	Analog Input, Pt100	PCS	ABB											
												001					
T 11017	AIR OUTLET VW11012		TE11017	Pt100, temperature sensor	F	Armatherm											
	TIAH	0...160 °C	T11017_J	Analog Input, Pt100	PCS	ABB											
												001					
Legend: F = local, V = local cabinet, S = control room, PCS = process control system																	
Annotation on column "Hook Up": (FP) = Frost Protection recommended																	
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T 11021	AIR INLET VW11021		TE11021	Pt100, temperature sensor	F	Armatherm									
	TIAH	0...160 °C	T11021_J	Analog Input, Pt100	PCS	ABB							001		
T 11022	AIR INLET VW11022		TE11022	Pt100, temperature sensor	F	Armatherm									
	TIAH	0...160 °C	T11022_J	Analog Input, Pt100	PCS	ABB							001		
T 11026	AIR OUTLET VW11021		TE11026	Pt100, temperature sensor	F	Armatherm									
	TIAH	0...160 °C	T11026_J	Analog Input, Pt100	PCS	ABB							001		
T 11027	AIR OUTLET VW11022		TE11027	Pt100, temperature sensor	F	Armatherm									
	TIAH	0...160 °C	T11027_J	Analog Input, Pt100	PCS	ABB							001		
T 11031	AIR INLET VW11031		TE11031	Pt100, temperature sensor	F	Armatherm									
	TIAH	0...160 °C	T11031_J	Analog Input, Pt100	PCS	ABB							001		
T 11032	AIR INLET VW11032		TE11032	Pt100, temperature sensor	F	Armatherm									
	TIAH	0...160 °C	T11032_J	Analog Input, Pt100	PCS	ABB							001		
T 11036	AIR OUTLET VW11031		TE11036	Pt100, temperature sensor	F	Armatherm									
	TIAH	0...160 °C	T11036_J	Analog Input, Pt100	PCS	ABB							001		

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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET			
T 11037	AIR OUTLET VW11032			TE11037	Pt100, temperature sensor	F	Armatherm								
	TIAH	0...160 °C		T11037_I	Analog Input, Pt100	PCS	ABB					001			
T 11041	AIR DISCHARGE 4TH STAGE MAC			TE11041	Pt100, temperature sensor	F									
	TIAHSAH	0...160 °C		T11041_I	Analog Input, Pt100	PCS	ABB					001			
T 11505	COOLING WATER MAC			TI11505	Temperature gauge	F	WIKA								
	TI	0...60 °C										001			
T 11515	COOLING WATER BEHIND VW11011			TI11515	Temperature gauge	F	WIKA								
	TI	0...60 °C										001			
T 11516	COOLING WATER BEHIND VW11012			TI11516	Temperature gauge	F	WIKA								
	TI	0...60 °C										001			
T 11525	COOLING WATER BEHIND VW11021			TI11525	Temperature gauge	F	WIKA								
	TI	0...60 °C										001			
T 11526	COOLING WATER BEHIND VW11022			TI11526	Temperature gauge	F	WIKA								
	TI	0...60 °C										001			
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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T 11535		COOLING WATER BEHIND VW11031		TI11535	Temperature gauge	F	WIKA								
		TI	0...60 °C										001		
		COOLING WATER BEHIND VW11032		TI11536	Temperature gauge	F	WIKA								
T 11536		TI	0...60 °C										001		
		COOLING WATER RETURN MOTOR MAC		TI11621	Temperature gauge	F	WIKA								
		TI	0...60 °C										001		
T 11632		COOLING WATER RETURN OIL-COOLER MAC		TI11632	Temperature gauge	F	WIKA								
		TI	0...60 °C										001		
		BEARING MAIN MOTOR MAC		TE11701	Pt100, temperature sensor	F									
T 11701		TIAH	0...150 °C	TI11701_J	Analog Input, Pt100	PCS	ABB						027		
		BEARING MAIN MOTOR MAC		TE11703	Pt100, temperature sensor	F									
		TIAH	0...150 °C	TI11703_J	Analog Input, Pt100	PCS	ABB						027		
T 11703		MOTOR WINDING U MAC		TE11715	Pt100, temperature sensor	F									
		TIAHSAHH	0...200 °C	TI11715_J	Analog Input, Pt100	PCS	ABB								
													027		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
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T 11718		MOTOR WINDING V MAC		TE11718	Pt100, temperature sensor	F								
		TIAHSAHH		T11718_J	Analog Input, Pt100	PCS	ABB					027		
		0 ... 200 °C												
T 11721		MOTOR WINDING W MAC		TE11721	Pt100, temperature sensor	F								
		TIAHSAHH		T11721_J	Analog Input, Pt100	PCS	ABB					027		
		0 ... 200 °C												
T 11730		BEARING MAIN SHAFT MAC		TE11730	Pt100, temperature sensor	F	Dittmer							
		TIAHSAHH		T11730_J	Analog Input, Pt100	PCS	ABB					027		
		0 .. 160 °C												
T 11733		BEARING MAIN SHAFT MAC		TE11733	Pt100, temperature sensor	F	Dittmer							
		TIAHSAHH		T11733_J	Analog Input, Pt100	PCS	ABB					027		
		0 ... 160 °C												
T 11735		BEARING MAIN SHAFT MAC		TE11735	Pt100, temperature sensor	F	Dittmer							
		TIAHSAHH		T11735_J	Analog Input, Pt100	PCS	ABB					027		
		0 ... 160 °C												
T 11737		BEARING MAC		TE11737	Pt100, temperature sensor	F	Dittmer							
		TIAHSAHH		T11737_J	Analog Input, Pt100	PCS	ABB					027		
		0 ... 160 °C												
T 11740		BEARING MAC		TE11740	Pt100, temperature sensor	F	Dittmer							
		TIAHSAHH		T11740_J	Analog Input, Pt100	PCS	ABB					027		
		0 ... 160 °C												
Legend: F = local, V = local cabinet , S = control room, PCS = process control system														
Annotation on column "Hook Up": (FP*) = Frost Protection recommended														
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	LOC	DEVICE	P&I SHEET		
T 11743	BEARING MAC		TE11743	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...160 °C	T11743_J	Analog Input, Pt100	PCS	ABB							027		
T 11745	BEARING MAC		TE11745	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...160 °C	T11745_J	Analog Input, Pt100	PCS	ABB							027		
T 11747	BEARING MAC		TE11747	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...160 °C	T11747_J	Analog Input, Pt100	PCS	ABB							027		
T 11810	OIL HEATING W11810 MAC		TC11810	Thermostat	F	Atlas Copco									
	TCAH		TSH11810	Thermoswitch	F	Atlas Copco							027		
			TH11810_J	Binary Input	PCS	ABB									
T 11814	LUBE OIL TANK MAC		TE11814	Pt100, temperature sensor	F										
	TIAHLSLL	0...120 °C	T11814_J	Analog Input, Pt100	PCS	ABB							027		
T 11845	LUBE OIL BEHIND OILCOOLER MAC		DCV11845	Temp regulator	F										
	TC												027		
T 11854	LUBE OIL MAC		TE11854	Pt100, temperature sensor	F	Armatherm									
	TIAHL	0...100 °C	T11854_J	Analog Input, Pt100	PCS	ABB							027		

<b>Legend:</b>			F = local, V = local cabinet, S = control room, PCS = process control system										Annotation on column "Hook Up": (FP*) = Frost Protection recommended		
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL-BY	TAG	DEVICE	LOC	SUPPL-BY	P&I SHEET		
T 11855	LUBE OIL MAC				T11855	Temperature gauge	F							
	TI	0...60 °C											027	
T 12003	CHILLED WATER TO KA12001				TE12003	Pt100, temperature sensor	F		TV14010	Globe valve	F	Flowserve	HU_T02; HU_V10	
	TICAL	0...60 °C			T12003_J	Analog Input, Pt100	PCS	ABB						
					T12003_O	Analog Output	PCS	ABB					002 / 003	
T 12072	COOLING WATER TO KA12002				T112072	Temperature gauge	F						HU_T04	
	TI	0...60 °C											002	
T 13005	AIR BEHIND DC/AC				TE13005	Pt100, temperature sensor	F	WIKA					HU_T03	
	TIAHSAHH	-30...+50 °C			T13005_J	Analog Input, Pt100	PCS	ABB					002	
T 13026	CHILLED WATER TO DC/AC				TE13026	Pt100, temperature sensor	F	WIKA					HU_T02	
	TIAHL	-30...+50 °C			T13026_J	Analog Input, Pt100	PCS	ABB					002	
T 15011	REGEN GAS DISCHARGE A15001				TE15011	Pt100, temperature sensor	F	WIKA					HU_T03	
	TIAHLSAHH	0...250 °C			T15011_J	Analog Input, Pt100	PCS	ABB					004	
T 15021	REGEN GAS DISCHARGE MS15002				TE15021	Pt100, temperature sensor	F	WIKA					HU_T03	
	TIAHLSAHH	0...250 °C			T15021_J	Analog Input, Pt100	PCS	ABB					004	
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
T 15035	AIR BEHIND MOL SIEVE			TE15035	Pt100, temperature sensor	F	WIKKA					HU_T03					
	TIAHSAHH	0...100 °C		T15035_I	Analog Input, Pt100	PCS	ABB					004					
T 15040	REGENERATION GAS HEATER HE15001			TE15040	Pt100, temperature sensor	F	WIKKA					HU_T03					
	TZHSAAH	0...250 °C		TZH15040	High temp. safety switch	S						005					
				TH1540_I	Binary Input	PCS	ABB										
T 15043	REGENERATION GAS			TE15043	Pt100, temperature sensor	F	WIKKA	TV15043	Globe valve	F	Flowserve	HU_T03; HU_V10					
	TICAHLSAHH	0...250 °C		T15043_I	Analog Input, Pt100	PCS	ABB	US15043_O	Binary Output, relay	PCS	ABB	005					
				T15043_O	Analog Output	PCS	ABB										
T 16007	AIR INLET BAC			TE16007	Pt100, temperature sensor	F		T16007_I	Analog Input, passive	PCS	ABB						
	TIAHLAHH	0...60 °C		TT16007	Transmitter, temperature	S						006					
				TY16007	Isolating amplifier	S											
T 16011	AIR BEHIND 1ST STAGE BAC			TE16011	Pt100, temperature sensor	F	Armatherm										
	TI	0...60 °C		T16011_I	Analog Input, Pt100	PCS	ABB					006					
T 16012	AIR BEHIND 1ST STAGE BAC			TI16012	Temperature gauge	F	WIKKA										
	TI	0...60 °C										006					
T 16015	AIR BEHIND 1ST STAGE VW16001			TE16015	Pt100, temperature sensor	F	Armatherm										
	TIAHSAHH	0...60 °C		T16015_I	Analog Input, Pt100	PCS	ABB					006					

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T 16016	AIR BEHIND 1ST STAGE VW16001			TI16016	Temperature gauge	F	WIKA								
	TI		0...60 °C									006			
	AIR BEHIND 2ND STAGE BAC			TE16021	Pt100, temperature sensor	F	Armatherm								
T 16021	TI		0...200 °C	T16021_J	Analog Input, Pt100	PCS	ABB					006			
	AIR BEHIND 2ND STAGE BAC			TI16022	Temperature gauge	F	WIKA								
	TI		0...60 °C									006			
T 16025	AIR BEHIND 2ND STAGE VW16002			TE16025	Pt100, temperature sensor	F	Armatherm								
	TIAHSAHH		0...60 °C	T16025_J	Analog Input, Pt100	PCS	ABB					006			
	AIR BEHIND 2ND STAGE VW16002			TI16026	Temperature gauge	F	WIKA								
T 16026	TI		0...60 °C									006			
	AIR BEHIND 3RD STAGE BAC			TE16031	Pt100, temperature sensor	F	Armatherm								
	TI		0...200 °C	T16031_J	Analog Input, Pt100	PCS	ABB					006			
T 16032	AIR BEHIND 3RD STAGE BAC			TI16032	Temperature gauge	F	WIKA								
	TI		0...60 °C									006			

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T 16035	AIR BEHIND 3RD STAGE VW16003		TE16035	Pt100, temperature sensor	F	Armatherm									
	TIAHSAHH	0...60 °C	T16035_I	Analog Input, Pt100	PCS	ABB						006			
T 16036	AIR BEHIND 3RD STAGE VW16003		TI16036	Temperature gauge	F	WIKA									
	TI	0...60 °C										006			
T 16041	AIR BEHIND 4TH STAGE BAC		TE16041	Pt100, temperature sensor	F	Armatherm									
	TI	0...200 °C	T16041_I	Analog Input, Pt100	PCS	ABB						006			
T 16042	AIR BEHIND 4TH STAGE BAC		TI16042	Temperature gauge	F	WIKA									
	TI	0...60 °C										006			
T 16045	AIR BEHIND 4TH STAGE VW16004		TE16045	Pt100, temperature sensor	F	Armatherm	T16045_I	Analog Input, passive	ABB	ABB					
	TIAHSAHH	0...60 °C	TT16045	Transmitter, temperature	S							006			
			TY16045	Isolating amplifier	S										
T 16046	AIR BEHIND 4TH STAGE VW16004		TI16046	Temperature gauge	F	WIKA									
	TI	0...60 °C										006			
T 16512	COOLING WATER BEHIND VW16001		TI16512	Temperature gauge	F	WIKA									
	TI	0...60 °C										006			
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET			
T 16522	COOLING WATER BEHIND VW16002		TI	0...60 °C	TI16522	Temperature gauge	F	WIKA						006	
T 16532	COOLING WATER BEHIND VW16003		TI	0...60 °C	TI16532	Temperature gauge	F	WIKA						006	
T 16542	COOLING WATER BEHIND VW16004		TI	0...60 °C	TI16542	Temperature gauge	F	WIKA						006	
T 16632	COLLING WATER BEHIND W16842		TI	0...60 °C	TI16632	Temperature gauge	F	WIKA						028	
T 16701	BEARING MAIN MOTOR BAC					TE16701	Pt100, temperature sensor	F						028	
	TIAHSAHH		0...150 °C			T16701_J	Analog Input, Pt100	PCS	ABB						
T 16703	BEARING MAIN MOTOR BAC					TE16703	Pt100, temperature sensor	F						028	
	TIAHSAHH		0...150 °C			T16703_J	Analog Input, Pt100	PCS	ABB						
T 16715	MOTOR WINDING U BAC					TE16715	Pt100, temperature sensor	F						028	
	TIAHSAHH		0...200 °C			T16715_J	Analog Input, Pt100	PCS	ABB						
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T 16718	MOTOR WINDING V BAC		TE16718	Pt100, temperature sensor	F										
	TIAHSAHH	0...200 °C	T16718_J	Analog Input, Pt100	PCS	ABB							028		
T 16721	MOTOR WINDING W BAC		TE16721	Pt100, temperature sensor	F										
	TIAHSAHH	0...200 °C	T16721_J	Analog Input, Pt100	PCS	ABB							028		
T 16730	BEARING MAIN SHAFT BAC		TE16730	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16730_J	Analog Input, Pt100	PCS	ABB							028		
T 16733	BEARING MAIN SHAFT BAC		TE16733	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16733_J	Analog Input, Pt100	PCS	ABB							028		
T 16734	BEARING MAIN SHAFT BAC		TE16734	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16734_J	Analog Input, Pt100	PCS	ABB							028		
T 16735	BEARING MAIN SHAFT BAC		TE16735	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16735_J	Analog Input, Pt100	PCS	ABB							028		
T 16736	BEARING 1ST STAGE BAC		TE16736	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16736_J	Analog Input, Pt100	PCS	ABB							028		

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T 16738	BEARING 2ND STAGE BAC		TE16738	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16738_J	Analog Input, Pt100	PCS	ABB					028				
T 16740	BEARING 3RD STAGE BAC		TE16740	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16740_J	Analog Input, Pt100	PCS	ABB					028				
T 16743	BEARING 4TH STAGE BAC		TE16743	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...150 °C	T16743_J	Analog Input, Pt100	PCS	ABB					028				
T 16810	OIL HEATING W16810 BAC		TC16810	Thermostat	F	Atlas Copco									
	TCAHSHH	0...100 °C	TSHH16810	Thermoswitch	F	Atlas Copco					028				
			TH16810_J	Binary Input	PCS	ABB									
T 16812	LUBE OIL TANK BAC		TE16812	Pt100, temperature sensor	F										
	TI	°C	T16812_J	Analog Input, Pt100	PCS	ABB					028				
T 16813	LUBE OIL TANK BAC		TI16813	Temperature gauge	F	WIKA									
	TI	0...60 °C									028				
T 16845	LUBE OIL BEHIND OILCOOLER BAC		TCV16845	Temp regulator	F	Atlas Copco									
	TC										028				
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
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T 16854	LUBE OIL BAC		TE16854	Pt100, temperature sensor	F	Armatherm									
	TIAHLSAHH	0...100 °C	T16854_I	Analog Input, Pt100	PCS	ABB					028				
T 16855	LUBE OIL BAC		TI16855	Temperature gauge	F	WIKA									
	TI	0...60 °C									028				
T 20001	HP-GAN OUTLET COLDBOX		TE20001	Pt100, temperature sensor	F	WIKA					HU_T02				
	TIALSLL	-50...+50 °C	T20001_I	Analog Input, Pt100	PCS	ABB					010				
T 20003	HP-GAN TO CUSTOMER		TE20003	Pt100, temperature sensor	F	WIKA					HU_T02				
	TI	-20...+40 °C	T20003_I	Analog Input, Pt100	PCS	ABB					010				
T 20004	HP-LIN FROM LIN-PUMPS		TE20004	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T20004_I	Analog Input, Pt100	PCS	ABB					009				
T 20005	LP-GAN OUTLET COLDBOX		TE20005	Pt100, temperature sensor	F	WIKA					HU_T03				
	TIALSALL	-50...+50 °C	T20005_I	Analog Input, Pt100	PCS	ABB					010				
T 20006	AIR TO HP-COLUMN C21001		TE20006	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T20006_I	Analog Input, Pt100	PCS	ABB					009				
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T 20007	HP-LOX FROM LOX-PUMPS		TE20007	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T20007_I	Analog Input, Pt100	PCS	ABB						009			
T 20008	HP-AIR OUTLET MHE		TE20008	Pt100, temperature sensor	CB	ABB	TV20008	Globe valve	CB	Flowserve		HU_V10			
	TIC	-200...+50 °C	T20008_I	Analog Input, Pt100	PCS	ABB						009			
			T20008_O	Analog Output	PCS	ABB									
T 20009	WASTE N2 INLET MHE		TE20009	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T20009_I	Analog Input, Pt100	PCS	ABB						009			
T 20010	GAN FROM W2301		TE20010	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T20010_I	Analog Input, Pt100	PCS	ABB						009			
T 20011	GOX OUTLET COLDBOX		TE20011	Pt100, temperature sensor	F	WIKA						HU_T03			
	TIALSALL	-50...+50 °C	T20011_I	Analog Input, Pt100	PCS	ABB						010			
T 20013	GOX TO CUSTOMER		TE20013	Pt100, temperature sensor	F	WIKA						HU_T03			
	TI	-20...+40 °C	T20013_I	Analog Input, Pt100	PCS	ABB						010			
T 20023	LP-GAN OUTLET COLDBOX		TE20023	Pt100, temperature sensor	F	WIKA						HU_T03			
	TIAL	-50...+50 °C	T20023_I	Analog Input, Pt100	PCS	ABB						009			
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T 20025	HP-GAN OUTLET COLDBOX			TE20025	Pt100, temperature sensor	F	WIKA	T20025_I	Analog Input, passive	PCS	ABB	HU_T07		009		
	TIALZALL			TT20025	Transmitter, temperature	S	ABB	UZ20025_I	Binary Input	PCS	ABB					
				TZLL20025	Limit value switch	S										
T 20026	HP-GAN OUTLET COLDBOX			TE20026	Pt100, temperature sensor	F	WIKA	T20026_I	Analog Input, passive	PCS	ABB	HU_T07		009		
	TIALZALL			TT20026	Transmitter, temperature	S	ABB	UZ20026_I	Binary Input	PCS	ABB					
				TZLL20026	Limit value switch	S										
T 20027	GOX OUTLET COLDBOX			TE20027	Pt100, temperature sensor	F	WIKA	T20027_I	Analog Input, passive	PCS	ABB	HU_T07		009		
	TIALZALL			TT20027	Transmitter, temperature	S	ABB	UZ20027_I	Binary Input	PCS	ABB					
				TZLL20027	Limit value switch	S										
T 20028	GOX OUTLET COLDBOX			TE20028	Pt100, temperature sensor	F	WIKA	T20028_I	Analog Input, passive	PCS	ABB	HU_T07		009		
	TIALZALL			TT20028	Transmitter, temperature	S	ABB	UZ20028_I	Binary Input	PCS	ABB					
				TZLL20028	Limit value switch	S										
T 20029	WASTE N2 OUTLET MHE			TE20029	Pt100, temperature sensor	F	WIKA					HU_T03		009		
	TIAL			T20029_I	Analog Input, Pt100	PCS	ABB									
T 21006	LIN TO B21002			TE21006	Pt100, temperature sensor	CB	ABB					014				
	TI			T21006_I	Analog Input, Pt100	PCS	ABB									
T 23013	LIN PRODUCT TO STORAGE			TE23013	Pt100, temperature sensor	CB	ABB							011		
	TI			T23013_I	Analog Input, Pt100	PCS	ABB									
Legend: F = local, V = local cabinet, S = control room, PCS = process control system																
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T 23014	CRUDE LOX BEHIND SUBCOOLER		TE23014	Pt100, temperature sensor	CB	ABB						
	TI	-200...+50 °C	T23014_J	Analog Input, Pt100	PCS	ABB						
											011	
T 23015	LIQUID AIR BEHIND SUBCOOLER		TE23015	Pt100, temperature sensor	CB	ABB						
	TI	-200...+50 °C	T23015_J	Analog Input, Pt100	PCS	ABB						
											011	
T 24101	AIR TO EXPANDER TURBINE 1		TE24101	Pt100, temperature sensor	CB	ABB						
	TIALSLL	-150...+50 °C	T24101_J	Analog Input, Pt100	PCS	ABB						
											007	
T 24102	AIR OUTLET EXPANDER TURBINE 1		TE24102	Pt100, temperature sensor	CB	ABB						
	TIAL	-200...+50 °C	T24102_J	Analog Input, Pt100	PCS	ABB						
											007	
T 24105	HEATING NOZZLE RING DRIVE TURB. 1		TSHH24105	Thermoswitch	F							
	TAHSHH		THH24105_I	Binary Input	PCS	ABB						
											007	
T 24120	BEARING EXPANDER TURBINE 1		TE24120	Pt100, temperature sensor	F							
	TIAHLSAHH	-50...+150 °C	T24120_J	Analog Input, Pt100	PCS	ABB						
											029	
T 24121	BEARING EXPANDER TURBINE 1		TE24121	Pt100, temperature sensor	F							
	TIAHLSAHH	-50...+150 °C	T24121_J	Analog Input, Pt100	PCS	ABB						
											029	

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T 24122	BEARING EXPANDER TURBINE 1			TE24122	Pt100, temperature sensor	F									
	TIAHSAHH	-50...+150 °C	T24122_J	Analog Input, Pt100	PCS	ABB						029			
T 24123	BEARING EXPANDER TURBINE 1			TE24123	Pt100, temperature sensor	F									
	TIAHLSAHH	-50...+150 °C	T24123_J	Analog Input, Pt100	PCS	ABB						029			
T 24130	COOLING WATER REFLUX TURBINE 1			TI24130	Temperature gauge	F	WIKA								
	TI	0...60 °C										029			
T 24151	OIL BEHIND GEARBOX TURBINE 1			TE24151	Pt100, temperature sensor	F									
	TI	0...100 °C	T24151_J	Analog Input, Pt100	PCS	ABB						029			
T 24160	OIL HEATING W24160 TURBINE 1			TC24160	Thermostat	F									
	TCAHSAHH	0...100 °C	TSHH24160_0	Thermoswitch	F							029			
			THH24160_I	Binary Input	PCS	ABB									
T 24161	OIL CONTAINER EXPANDER TURBINE 1			TE24161	Pt100, temperature sensor	F									
	TAL	0...100 °C	T24161_J	Analog Input, Pt100	PCS	ABB						029			
T 24162	OIL CONTAINER EXPANDER TURBINE 1			TI24162	Temperature gauge	F									
	TI	0...120 °C										029			
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T 24166	LUBE OIL BEHIND OIL COOLER TURBINE 1		TC		TCV24166	Temp regulator	F								
													029		
T 24168	OIL BEHIND OIL FILTER TURBINE 1		TI	0...120 °C	TI24168	Temperature gauge	F								
													029		
T 24169	LUBE OIL EXPANDER TURBINE 1		TIAHLSAHLL	0...100 °C	TE24169	Pt100, temperature sensor	F								
					T24169_I	Analog Input, Pt100	PCS	ABB							
													029		
T 24171	BEARING MOTOR TURBINE 1		TIAHSAHH	0...+150 °C	TE24171	Pt100, temperature sensor	F								
					T24171_I	Analog Input, Pt100	PCS	ABB							
													029		
T 24173	BEARING MOTOR TURBINE 1		TIAHSAHH	0...+150 °C	TE24173	Pt100, temperature sensor	F								
					T24173_I	Analog Input, Pt100	PCS	ABB							
													029		
T 24175	MOTOR WINDING U TURBINE 1		TIAHSAHH	0...+200 °C	TE24175	Pt100, temperature sensor	F								
					T24175_I	Analog Input, Pt100	PCS	ABB							
													029		
T 24176	MOTOR WINDING V TURBINE 1		TIAHSAHH	0...+200 °C	TE24176	Pt100, temperature sensor	F								
					T24176_I	Analog Input, Pt100	PCS	ABB							
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T 24177	MOTOR WINDING W TURBINE 1		TE24177	Pt100, temperature sensor	F										
	TIAHSAHH	0...+200 °C	T24177_J	Analog Input, Pt100	PCS	ABB						029			
T 24201	AIR TO EXPANDER TURBINE 2		TE24201	Pt100, temperature sensor	CB	ABB									
	TIALSLL	-150...+50 °C	T24201_J	Analog Input, Pt100	PCS	ABB						008			
T 24202	AIR OUTLET EXPANDER TURBINE 2		TE24202	Pt100, temperature sensor	CB	ABB									
	TIAL	-200...+50 °C	T24202_J	Analog Input, Pt100	PCS	ABB						008			
T 24205	HEATING NOZZLE RING DRIVE TURB. 2		TSHH24205	Thermoswitch	F										
	TAHSHH		THH24205_J	Binary Input	PCS	ABB						008			
T 24220	BEARING EXPANDER TURBINE 2		TE24220	Pt100, temperature sensor	F										
	TIAHLSAHH	-50...+150 °C	T24220_J	Analog Input, Pt100	PCS	ABB						030			
T 24221	BEARING EXPANDER TURBINE 2		TE24221	Pt100, temperature sensor	F										
	TIAHLSAHH	-50...+150 °C	T24221_J	Analog Input, Pt100	PCS	ABB						030			
T 24222	BEARING EXPANDER TURBINE 2		TE24222	Pt100, temperature sensor	F										
	TIAHLSAHH	-50...+150 °C	T24222_J	Analog Input, Pt100	PCS	ABB						030			
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T 24223	BEARING EXPANDER TURBINE 2		TE24223	Pt100, temperature sensor	F								
	TIAHLSAHH	0...+150 °C	T24223_I	Analog Input, Pt100	PCS	ABB					030		
T 24230	COOLING WATER REFLUX TURBINE 2		TI24230	Temperature gauge	F	Wika							
	TI	0...60 °C									030		
T 24251	OIL BEHIND GEARBOX TURBINE 2		TE24251	Pt100, temperature sensor	F								
	TIAHLSHH	0...100 °C	T24251_I	Analog Input, Pt100	PCS	ABB					030		
T 24260	OIL HEATING W24260 TURBINE 2		TC24260	Thermostat	F								
	TCAHSAHH	°C	TSHH24260_0	Thermoswitch	F						030		
			THH24260_I	Binary Input	PCS	ABB							
T 24261	OIL CONTAINER EXPANDER TURBINE 2		TI24261	Temperature gauge	F								
	TIAL	0...120 °C									030		
T 24262	OIL CONTAINER EXPANDER TURBINE 2		TE24262	Pt100, temperature sensor	F								
	TI	0...100 °C	T24261_I	Analog Input, Pt100	PCS	ABB					030		
T 24266	LUBE OIL BEHIND OIL COOLER TURBINE 2		TCV24266	Temp regulator	F								
	TC										030		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
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T 24268	OIL BEHIND OILFILTER TURBINE 2		T124268	Temperature gauge	F							
	TI	0...100 °C									030	
T 24269	LUBE OIL EXPANDER TURBINE 2		TE24269	Pt100, temperature sensor	F							
	TIAHLSAHL	0...100 °C	T24269_I	Analog Input, Pt100	PCS	ABB					030	
T 24271	BEARING MOTOR TURBINE 2		TE24271	Pt100, temperature sensor	F							
	TIAHSAH	0...+150 °C	T24271_I	Analog Input, Pt100	PCS	ABB					030	
T 24273	BEARING MOTOR TURBINE 2		TE24273	Pt100, temperature sensor	F							
	TIAHSAH	0...+150 °C	T24273_I	Analog Input, Pt100	PCS	ABB					030	
T 24275	MOTOR WINDING U TURBINE 2		TE24275	Pt100, temperature sensor	F							
	TIAHSAH	0...+200 °C	T24275_I	Analog Input, Pt100	PCS	ABB					030	
T 24276	MOTOR WINDING V TURBINE 2		TE24276	Pt100, temperature sensor	F							
	TIAHSAH	0...+200 °C	T24276_I	Analog Input, Pt100	PCS	ABB					030	
T 24277	MOTOR WINDING W TURBINE 2		TE24277	Pt100, temperature sensor	F							
	TIAHSAH	0...+200 °C	T24277_I	Analog Input, Pt100	PCS	ABB					030	

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T 40009	CR-LOX BEHIND B40001		TE40009	Pt100, temperature sensor	CB	ABB									
	TIAH	-200...+50 °C	T40009_I	Analog Input, Pt100	PCS	ABB							017		
T 40011	SIDEARM LIQUID FROM LP-COLUMN		TE40011	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T40011_I	Analog Input, Pt100	PCS	ABB							016		
T 40013	LAR PREPRODUCT DISCHARGE CAR-COLUMN		TE40013	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T40013_I	Analog Input, Pt100	PCS	ABB							017		
T 40014	LAR BEHIND CONDENSER BL40001		TE40014	Pt100, temperature sensor	CB	ABB									
	TI	-200...+50 °C	T40014_I	Analog Input, Pt100	PCS	ABB							017		
T 40130	COOLING DOWN TEMP. P40100		TE40130	Pt100, temperature sensor	F										
	TISL	-200...+50 °C	T40130_I	Analog Input, Pt100	PCS	ABB							016		
T 40140	BEARING TEMP. P40100		TE40140	Pt100, temperature sensor	F										
	TALSLL	-100...+50 °C	T40140_I	Analog Input, Pt100	PCS	ABB							016		
T 40141	BEARING TEMP. P40100		TE40141	Pt100, temperature sensor	F										
	TIAHLSHLL	-100...+100 °C	T40141_I	Analog Input, Pt100	PCS	ABB							016		

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T 43034		LAR PRODUCT TO STORAGE		TE43034	Pt100, temperature sensor	CB	ABB							
		TI	-200...+50 °C	T43034_I	Analog Input, Pt100	PCS	ABB							
											018			
T 44104		OVERFLOW LP LAR TANK 1 B44101		TE44104	Pt100, temperature sensor	F	WIKA					HU_T01		
		TISAL	-200...+50 °C	T44104_I	Analog Input, Pt100	PCS	ABB							
											041			
T 44204		OVERFLOW LP LAR TANK 2 B44201		TE44204	Pt100, temperature sensor	F	WIKA					HU_T01		
		TISAL	-200...+50 °C	T44204_I	Analog Input, Pt100	PCS	ABB							
											042			
T 48004		OVERFLOW HP LAR TANK B48001		TE48004	Pt100, temperature sensor	F	WIKA			PCS	ABB	HU_T01		
		TISAL	-200...+50 °C	TT48004	Transmitter, temperature	S								
				TSL48004	Limit value switch	S						044		
T 48050		COOL DOWN TEMP. P48001		TE48050	Pt100, temperature sensor	F						HU_T01		
		TISL	-200...+50 °C	T48050_I	Analog Input, Pt100	PCS	ABB							
											043			
T 49020		HP-GAR DISCHARGE EVAPORIZERS		TE49020	Pt100, temperature sensor	F				PCS	ABB			
		TICALZALL	-40...+60 °C	TT49020	Transmitter, temperature	S				PCS	ABB			
				TZLL49020	Limit value switch	S						044		
T 49021		HP-GAR DISCHARGE EVAPORIZERS		TE49021	Pt100, temperature sensor	F				PCS	ABB			
		TIALZLL	-40...+60 °C	TT49021	Transmitter, temperature	S				PCS	ABB			
				TZLL49021	Limit value switch	S						044		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system														
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T 61130	COOLING DOWN TEMP. P61100			TE61130	Pt100, temperature sensor	F										
	TISL	-200...+50 °C		T61130_J	Analog Input, Pt100	PCS	ABB					012				
T 61140	BEARING TEMP. P61100			TE61140	Pt100, temperature sensor	F										
	TALSLL	-200...+50 °C		T61140_J	Analog Input, passive	PCS	ABB					012				
T 61141	BEARING TEMP. P61100			TE61141	Pt100, temperature sensor	F										
	TIAHLSHLL	-100...+150 °C		T61141_J	Analog Input, Pt100	PCS	ABB					012				
T 61142	MOTOR TEMP. P61100			TE61142	Thermistor	S	Cryostar									
	TSHH			TSHH6114_2	Thermal cutout	S						012				
				THH61142_1	Binary Input	PCS	ABB									
T 61230	COOLING DOWN TEMP. P61200			TE61230	Pt100, temperature sensor	F										
	TISL	-200...+50 °C		T61230_J	Analog Input, Pt100	PCS	ABB					012				
T 61240	BEARING TEMP. P61200			TE61240	Pt100, temperature sensor	F										
	TALSLL	-200...+50 °C		T61240_J	Analog Input, passive	PCS	ABB					012				
T 61241	BEARING TEMP. P61200			TE61241	Pt100, temperature sensor	F										
	TIAHLSHLL	-100...+150 °C		T61241_J	Analog Input, Pt100	PCS	ABB					012				
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T 61242	MOTOR TEMP. P61200		TE61242	Thermistor	S	Cryostar									
	TSHH		TSHH61242_2	Thermal cutout	S										
			THH61242_1	Binary Input	PCS	ABB							012		
T 62001	COOLING DOWN TEMP. P62001		TE62001	Pt100, temperature sensor	F										
	TISL	-200...+50 °C	T62001_J	Analog Input, Pt100	PCS	ABB									
													032		
T 62020	LOX TANK B62001		TE62020	Pt100, temperature sensor	F										
	TI	-200...+50 °C	T62020_J	Analog Input, Pt100	PCS	ABB									
													032		
T 62021	BOTTOM LOX TANK B62001		TE62021	Pt100, temperature sensor	F										
	TI	-200...+50 °C	T62021_J	Analog Input, Pt100	PCS	ABB									
													032		
T 62022	OVERFLOW PIPE LOX TANK B62001		TE62022	Pt100, temperature sensor	F	WIKA	T62022_J	Analog input, active	PCS	ABB			HU_T01		
	TALZALL	-200...+50 °C	TV62022	Transmitter, temperature	S	ABB									
			TSL62022	Limit value switch	S	AGS							032		
T 62041	SEAL LEAKAGE		TE62041	Pt100, temperature sensor	F										
	TIALSALL	-200...+50 °C	T62041_J	Analog Input, Pt100	PCS	ABB									
													032		
T 63001	COOL DOWN TEMP. P63001		TE63001	Pt100, temperature sensor	F										
	TISL	-200...+50 °C	T63001_J	Analog Input, Pt100	PCS	ABB									
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	LOC	DEVICE	P&I SHEET		
T 64140	SEAL LEAKAGE LOX PUMP P64101		TE64140	Pt100, temperature sensor	F										
	TIALSALL	-200...+100 °C	T64140_I	Analog Input, Pt100	PCS	ABB							033		
T 64141	SEAL LEAKAGE LOX PUMP P64101		TE64141	Pt100, temperature sensor	F										
	TIALSALL	-200...+50 °C	T64141_I	Analog Input, Pt100	PCS	ABB							033		
T 64230	COOL DOWN TEMP. P64201		TE64230	Pt100, temperature sensor	F										
	TISLAH	-200...+50 °C	T64230_I	Analog Input, Pt100	PCS	ABB							033		
T 64240	SEAL LEAKAGE LOX PUMP P64201		TE64240	Pt100, temperature sensor	F										
	TIALSALL	-200...+50 °C	T64240_I	Analog Input, Pt100	PCS	ABB							033		
T 64241	SEAL LEAKAGE LOX PUMP P64201		TE64241	Pt100, temperature sensor	F										
	TIALSALL	-200...+50 °C	T64241_I	Analog Input, Pt100	PCS	ABB							033		
T 70001	INLET GAN COMPRESSOR 1		TE70001	Pt100, temperature sensor	F								HU_T03		
	TI	0...60 °C	T70001_I	Analog Input, Pt100	PCS	ABB							019		
T 70015	GAN BEH. COOLER 1ST STAGE		TE70015	Pt100, temperature sensor	F										
	TIAHSAH	0...200 °C	T70015_I	Analog Input, Pt100	PCS	ABB							019		

Annotation on column "Hook Up":  
(FP\*) = Frost Protection recommended

F = local, V = local cabinet, S = control room, PCS = process control system


Legend:

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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET					
T 70025		GAN BEH. COOLER 2ND STAGE		TE70025	Pt100, temperature sensor	F						019					
		TIAHSAHH	0...200 °C	T70025_I	Analog Input, Pt100	PCS	ABB										
T 70035		GAN BEH. COOLER 3RD STAGE		TE70035	Pt100, temperature sensor	F						019					
		TIAHSAHH	0...200 °C	T70035_I	Analog Input, Pt100	PCS	ABB										
T 70041		MP-GAN TO CUSTOMER		TE70041	Pt100, temperature sensor	F						HU_T03					
		TIAL	-20...+40 °C	T70041_I	Analog Input, passive	PCS	ABB										
T 70512		COOLING WATER BEH. VW70001		TI70512	Temperature gauge	F						019					
		TI	0...60 °C														
T 70522		COOLING WATER BEH. VW70002		TI70522	Temperature gauge	F						019					
		TI	0...60 °C														
T 70532		COOLING WATER BEH. VW70003		TI70532	Temperature gauge	F						019					
		TI	0...60 °C														
T 70621		COOLING WATER BEH. MOTOR		TI70621	Temperature gauge	F						019					
		TI	0...60 °C														
Legend: F = local, V = local cabinet, S = control room, PCS = process control system														Annotation on column "Hook Up": (FP*) = Frost Protection recommended			
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
T 70701	BEARING MAIN MOTOR GAN COMP. 1		TE70701	Pt100, temperature sensor	F								
	TIAHSAHH	0...150 °C	T70701_I	Analog Input, Pt100	PCS	ABB							
											021		
T 70703	BEARING MAIN MOTOR GAN COMP. 1		TE70703	Pt100, temperature sensor	F								
	TIAHSAHH	0...150 °C	T70703_I	Analog Input, Pt100	PCS	ABB							
											021		
T 70715	MOTOR WINDING U COMP. 1		TE70715	Pt100, temperature sensor	F								
	TIAHSAHH	0...200 °C	T70715_I	Analog Input, Pt100	PCS	ABB							
											021		
T 70718	MOTOR WINDING V COMP. 1		TE70718	Pt100, temperature sensor	F								
	TIAHSAHH	0...200 °C	T70718_I	Analog Input, Pt100	PCS	ABB							
											021		
T 70721	MOTOR WINDING W COMP. 1		TE70721	Pt100, temperature sensor	F								
	TIAHSAHH	0...200 °C	T70721_I	Analog Input, Pt100	PCS	ABB							
											021		
T 70736	BEARING 1.ST STAGE GAN COMP. 1		TE70736	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T70736_I	Analog Input, Pt100	PCS	ABB							
											021		
T 70737	BEARING 1.ST STAGE GAN COMP. 1		TE70737	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T70737_I	Analog Input, Pt100	PCS	ABB							
											021		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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T 70738	BEARING 2.ND STAGE GAN COMP. 1		TE70738	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...200 °C	T70738_J	Analog Input, Pt100	PCS	ABB						021			
T 70739	BEARING 2.ND STAGE GAN COMP. 1		TE70739	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...200 °C	T70739_J	Analog Input, Pt100	PCS	ABB						021			
T 70740	BEARING 3.RD STAGE GAN COMP. 1		TE70740	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...200 °C	T70740_J	Analog Input, Pt100	PCS	ABB						021			
T 70741	BEARING 3.RD STAGE GAN COMP. 1		TE70741	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...200 °C	T70741_J	Analog Input, Pt100	PCS	ABB						021			
T 70742	BEARING 4.TH STAGE GAN COMP. 1		TE70742	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...200 °C	T70742_J	Analog Input, Pt100	PCS	ABB						021			
T 70743	BEARING 4.TH STAGE GAN COMP. 1		TE70743	Pt100, temperature sensor	F	Dittmer									
	TIAHSAHH	0...200 °C	T70743_J	Analog Input, Pt100	PCS	ABB						021			
T 70810	OIL HEATING W11810 GAN COMP. 1		TC70810	Thermostat	F	Atlas Copco									
	TCSAH	°C	TSH70810	Thermoswitch	F	Atlas Copco									
			TH70810_J	Binary Input	PCS	ABB						021			
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
T 70815	OIL HEATING W70815 GAN COMP. 1		TC70815	Thermostat	F	Atlas Copco									
	TCSAH	°C	TSH70815	Thermoswitch	F	Atlas Copco									
			TH70815_I	Binary Input	PCS	ABB					021				
T 70845	LUBE OIL BEHIND OIL COOLER NV1		TCV70845	Temp regulator	F										
	TC														
											021				
T 70854	LUBE OIL GAN COMP. 1		TE70854	Pt100, temperature sensor	F	Armatherm									
	TIAHLSAHH	0...100 °C	T70854_I	Analog Input, Pt100	PCS	ABB									
											021				
T 71130	COOLING DOWN TEMP. P71100		TE71130	Pt100, temperature sensor	F										
	TISL	-200...+50 °C	T71130_I	Analog Input, Pt100	PCS	ABB									
											015				
T 71140	BEARING TEMP. P71100		TE71140	Pt100, temperature sensor	F										
	TALSLL	-200...+50 °C	T71140_I	Analog Input, passive	PCS	ABB									
											015				
T 71141	BEARING TEMP. P71100		TE71141	Pt100, temperature sensor	F										
	TIAHLSHLL	-100...+150 °C	T71141_I	Analog Input, Pt100	PCS	ABB									
											015				
T 71142	MOTOR TEMP. P71100		TE71142	Thermistor	S	Cryostar									
	TSHH		TSHH7112_42	Thermal cutout	S										
			THH71142_I	Binary Input	PCS	ABB						015			
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
T 71230		COOLING DOWN TEMP. P71200		TE71230	Pt100, temperature sensor	F							015			
		TISL	-200...+50 °C	T71230_I	Analog Input, Pt100	PCS	ABB									
T 71240		BEARING TEMP. P71200		TE71240	Pt100, temperature sensor	F						015				
		TALSLL	-200...+50 °C	T71240_I	Analog Input, passive	PCS	ABB									
T 71241		BEARING TEMP. P71200		TE71241	Pt100, temperature sensor	F						015				
		TIAHLSHILL	-100...+150 °C	T71241_I	Analog Input, Pt100	PCS	ABB									
T 71242		MOTOR TEMP. P71200		TE71242	Thermistor	S	Cryostar					015				
		TSHH		TSHH71242_2	Thermal cutout	S										
				THH71242_I	Binary Input	PCS	ABB									
T 72001		COOLING DOWN TEMP. P72101		TE72001	Pt100, temperature sensor	F						035				
		TISL	-200...+50 °C	T72001_I	Analog Input, Pt100	PCS	ABB									
T 72022		OVERFLOW PIPE LIN TANK B72001		TE72022	Pt100, temperature sensor	F	Wika	T72022_I	Analog Input, active	PCS	ABB	HU_T01	035			
		TALZALL	-200...+50 °C	TY72022	Transmitter, temperature	S	ABB									
				TSL72022	Limit value switch	S	AGS									
T 73005		OVERFLOW MP LIN TANK BL73001		TE73005	Pt100, temperature sensor	F		T73005_I	Analog Input, active	PCS	ABB	HU_T01	038			
		TIALSAL	-200...+50 °C	TY73005	Transmitter, temperature	S	ABB									
				TSL73005	Limit value switch	S	AGS									
Legend: F = local, V = local cabinet, S = control room, PCS = process control system																
Annotation on column "Hook Up": (FP*) = Frost Protection recommended																
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T 73031	WATER BATH VAPORIZER GAN			TE73031	Pt100, temperature sensor	F		TV73081	Globe valve	F	Flowserve	HU_T01; HU_V10	039	
	TICSAHL	0...100 °C	TT3031_I	Analog Input, Pt100	PCS	ABB								
			TT3031_O	Analog Output	PCS	ABB								
T 73032	WATER BATH VAPORIZER GAN			TE73032	Pt100, temperature sensor	F						HU_T01	039	
	TISAHL	0...100 °C	TT3032_I	Analog Input, Pt100	PCS	ABB								
T 73051	GAN BEHIND WATER BATH VAPORIZER			TE73051	Pt100, temperature sensor	F		TT3051_I	Analog Input, passive	PCS	ABB	HU_T07	039	
	TIALZALL; TIC	-40...+60 °C	TY73051	Transmitter, temperature	S	ABB								
			TZL73051	Limit value switch	S									
T 73057	GAN BEHIND WATER BATH VAPORIZER			TE73057	Pt100, temperature sensor	F		TT3057_I	Analog Input, passive	PCS	ABB	HU_T07	039	
	TIALZALL	-40...+60 °C	TY73057	Transmitter, temperature	S	ABB								
			TZL73057	Limit value switch	S									
T 73130	COOL DOWN TEMP. P73101			TE73130	Pt100, temperature sensor	F	PV						037	
	TISLAH	-200...+50 °C	TT3130_I	Binary Input	PCS	ABB								
T 73131	WATER BATH NAT. GAS VAP. LIN			TSL73131	Thermoswitch	S	NGV						040	
	TSL	°C												
T 73132	WATER BATH NAT. GAS VAP. LIN			TSL73132	Thermoswitch	S	NGV						040	
	TSL	°C												
Legend: F = local, V = local cabinet, S = control room, PCS = process control system														
Annotation on column "Hook Up": (PP*) = Frost Protection recommended														
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
T 73133	WATER BATH NAT. GAS VAP. LIN		TSL73133	Thermoswitch	S	NGV							
	TSL	°C									040		
T 73134	WATER BATH NAT. GAS VAP. LIN		TE73134	Pt100, temperature sensor	F	NGV							
	TI	0...100 °C	TT73134	Transmitter, temperature	S	NGV							
			TT73134_I	Analog Input, passive	PCS	ABB					040		
T 73135	WATER BATH NAT. GAS VAP. LIN		TI73135	Temperature gauge	F	NGV							
	TI	0...100 °C											
											040		
T 73140	SEAL LEAKAGE LIN BACK UP PUMP P73101		TE73140	Pt100, temperature sensor	F	PV							
	TIALSALL	-200...+50 °C	TT73140_I	Analog Input, Pt100	PCS	ABB							
											037		
T 73141	SEAL LEAKAGE LIN BACK UP PUMP P73101		TE73141	Pt100, temperature sensor	F	PV							
	TIALSALL	-200...+50 °C	TT73141_I	Analog Input, Pt100	PCS	ABB							
											037		
T 73142	MOTOR TEMP. P73201		TE73142	Thermistor	S	PV							
	TSHH		TSHH7341_42	Thermal cutout	S								
											037		
T 73151	GAN BEHIND W73101		TE73151	Pt100, temperature sensor	F	NGV	TZL73151	Limit value switch	S				
	TIALZALL	°C	TT73151	Transmitter, temperature	S	NGV							
			TT73151_I	Analog Input, passive	PCS	ABB							
											040		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system													
Annotation on column "Hook Up": (FP*) = Frost Protection recommended													
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T 73157	GAN BEHIND W73101		TE73157	Pt100, temperature sensor	F	NGV	TZL73157	Limit value switch	S						
	TIALZALL	°C	TT73157	Transmitter, temperature	S	NGV									
			TT3157_I	Analog Input, passive	PCS	ABB						040			
T 73159	GAN BEHIND WBV														
	TICALSALL	-40...100 °C										040			
T 73230	COOL DOWN TEMP. P73201		TE73230	Pt100, temperature sensor	F	PV									
	TISLAH	-200...+50 °C	TT3230_I	Analog Input, Pt100	PCS	ABB							037		
T 73240	SEAL LEAKAGE LIN BACK UP PUMP P73102		TE73141	Pt100, temperature sensor	F	PV									
	TIALSALL	-200...+50 °C	TT3141_I	Analog Input, Pt100	PCS	ABB							037		
T 73241	SEAL LEAKAGE LIN BACK UP PUMP P73201		TE73241	Pt100, temperature sensor	F	PV									
	TIALSALL	-200...+50 °C	TT3241_I	Analog Input, Pt100	PCS	ABB							037		
T 73242	MOTOR TEMP. P73201		TE73242	Thermistor	S	PV									
	TSHH		TSHH73242	Thermal cutout	S								037		
T 74090	GAN BEHIND AIR EVAPORATORS		TE74090	Pt100, temperature sensor	F		TT4090_I	Analog Input, passive	PCS	ABB		HU_T01			
	TIALZALL	-40...+60 °C	TY74090	Transmitter, temperature	S										
			TZL74090	Limit value switch	S								036		
Legend: F = local, V = local cabinet, S = control room, PCS = process control system															
Annotation on column "Hook Up": (FP*) = Frost Protection recommended															
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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET							
T 74095		GAN BEHIND AIR EVAPORATORS		TE74095	Pt100, temperature sensor	F		T74095_J	Binary Input	PCS	ABB	HU_T01		036					
		TICALZALL	-40...+60 °C	TY74095	Transmitter, temperature	S													
				TSL74095	Limit value switch	S													
T 74130		COOL DOWN TEMP. P74101		TE74130	Pt100, temperature sensor	F								036					
		TISLAH	-200...+50 °C	T74130_J	Analog Input, Pt100	PCS	ABB												
T 74140		SEAL LEAKAGE LIN PUMP P74101		TE74140	Pt100, temperature sensor	F	PV							036					
		TIALSALL	-200...+50 °C	T74140_J	Analog Input, Pt100	PCS	ABB												
T 74141		SEAL LEAKAGE LIN PUMP P74101		TE74141	Pt100, temperature sensor	F	PV							036					
		TIALSALL	-200...+50 °C	T74141_J	Analog Input, Pt100	PCS	ABB												
T 74230		COOL DOWN TEMP. P74201		TE74230	Pt100, temperature sensor	F								036					
		TISLAH	-200...+50 °C	T74230_J	Analog Input, Pt100	PCS	ABB												
T 74240		SEAL LEAKAGE LIN PUMP P74201		TE74240	Pt100, temperature sensor	F	PV							036					
		TIALSALL	-200...+50 °C	T74240_J	Analog Input, Pt100	PCS	ABB												
T 74241		SEAL LEAKAGE LIN PUMP P74201		TE74241	Pt100, temperature sensor	F	PV							036					
		TIALSALL	-200...+50 °C	T74241_J	Analog Input, Pt100	PCS	ABB												
Legend: F = local, V = local cabinet, S = control room, PCS = process control system																			
Annotation on column "Hook Up": (FP*) = Frost Protection recommended																			
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T 77001	INLET GAN COMPRESSOR 2			TE77001	Pt100, temperature sensor	F							HU_T03	
	TI	0...60 °C	T77001_J	Analog Input, Pt100	PCS	ABB								
												020		
T 77015	GAN BEH. COOLER 1ST STAGE			TE77015	Pt100, temperature sensor	F							020	
	TIAHSAHH	0...200 °C	T77015_J	Analog Input, Pt100	PCS	ABB								
												020		
T 77025	GAN BEH. COOLER 2ND STAGE			TE77025	Pt100, temperature sensor	F							020	
	TIAHSAHH	0...200 °C	T77025_J	Analog Input, Pt100	PCS	ABB								
												020		
T 77035	GAN BEH. COOLER 3RD STAGE			TE77035	Pt100, temperature sensor	F							020	
	TIAHSAHH	0...200 °C	T77035_J	Analog Input, Pt100	PCS	ABB								
												020		
T 77512	COOLING WATER BEH. VW77001			TI77512	Temperature gauge	F							020	
	TI	0...60 °C												
												020		
T 77522	COOLING WATER BEH. VW77002			TI77522	Temperature gauge	F							020	
	TI	0...60 °C												
												020		
T 77532	COOLING WATER BEH. VW77003			TI77532	Temperature gauge	F							020	
	TI	0...60 °C												
												020		

Legend:

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21.12.2004

Frohn

Initial version

Rev.


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AIR LIQUIDE



Drwg.-No.:

ASU No.09 Kosice

Instrument List

K70101

ASU No.09 Kosice

Instrument List

Air Liquide AGS GmbH

Füttingsweg 34

D-47805 Krefeld, Germany

Annotation on column "Hook Up":  
(FP\*) = Frost Protection recommended

F = local, V = local cabinet, S = control room, PCS = process control system

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**Legend:**

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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
T 77621		COOLING WATER MOTOR COMP. 2		TI77621	Temperature gauge	F										
		TI	0...60 °C										020			
T 77701		BEARING MAIN MOTOR GAN COMP. 2		TE77701	Pt100, temperature sensor	F										
		TIAHSAHH	0...150 °C	TT7701_J	Analog Input, Pt100	PCS	ABB						022			
T 77703		BEARING MAIN MOTOR GAN COMP. 2		TE77703	Pt100, temperature sensor	F										
		TIAHSAHH	0...150 °C	TT7703_J	Analog Input, Pt100	PCS	ABB						022			
T 77715		MOTOR WINDING U COMP. 2		TE77715	Pt100, temperature sensor	F										
		TIAHSAHH	0...200 °C	TT7715_J	Analog Input, Pt100	PCS	ABB						022			
T 77718		MOTOR WINDING V COMP. 2		TE77718	Pt100, temperature sensor	F										
		TIAHSAHH	0...200 °C	TT7718_J	Analog Input, Pt100	PCS	ABB						022			
T 77721		MOTOR WINDING W COMP. 2		TE77721	Pt100, temperature sensor	F										
		TIAHSAHH	0...200 °C	TT7721_J	Analog Input, Pt100	PCS	ABB						022			
T 77736		BEARING 1.ST STAGE GAN COMP. 2		TE77736	Pt100, temperature sensor	F	Dittmer									
		TIAHSAHH	0...200 °C	TT7736_J	Analog Input, Pt100	PCS	ABB						022			
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET		
T 77737	BEARING 1.ST STAGE GAN COMP. 2		TE77737	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T77737_I	Analog Input, Pt100	PCS	ABB							
										022			
T 77738	BEARING 2.ND STAGE GAN COMP. 2		TE77738	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T77738_I	Analog Input, Pt100	PCS	ABB							
										022			
T 77739	BEARING 2.ND STAGE GAN COMP. 2		TE77739	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T77739_I	Analog Input, Pt100	PCS	ABB							
										022			
T 77740	BEARING 3.RD STAGE GAN COMP. 2		TE77740	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T77740_I	Analog Input, Pt100	PCS	ABB							
										022			
T 77741	BEARING 3.RD STAGE GAN COMP. 2		TE77741	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T77741_I	Analog Input, Pt100	PCS	ABB							
										022			
T 77742	BEARING 4.TH STAGE GAN COMP. 2		TE77742	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T70742_I	Analog Input, Pt100	PCS	ABB							
										022			
T 77743	BEARING 4.TH STAGE GAN COMP. 2		TE77743	Pt100, temperature sensor	F	Dittmer							
	TIAHSAHH	0...200 °C	T70743_I	Analog Input, Pt100	PCS	ABB							
										022			
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T 77810	OIL HEATING W11810 GAN COMP. 2		TC77810	Thermostat	F	Atlas Copco								
	TCAH	°C	TSHT77810	Thermoswitch	F	Atlas Copco								
			TH77810_I	Binary Input	PCS	ABB					022			
T 77815	OIL HEATING W77815 GAN COMP. 2		TC77815	Thermostat	F	Atlas Copco								
	TCSAH	°C	TSHT77815	Thermoswitch	F	Atlas Copco								
			TH77815_I	Binary Input	PCS	ABB					022			
T 77845	LUBE OIL BEHIND OIL COOLER NV2		TCV77845	Temp regulator	F									
	TC													
											022			
T 77854	LUBE OIL GAN COMP. 2		TE77854	Pt100, temperature sensor	F	Armatherm								
	TIAHLSAHH	0...100 °C	T77854_I	Analog Input, Pt100	PCS	ABB								
											022			
T 80001	COOLING WATER		TE80001	Pt100, temperature sensor	F	WIKA					HU_T03			
	TIAH	0...60 °C	T80001_I	Analog Input, Pt100	PCS	ABB								
											023			
T 80010	COOLING WATER REFLEX		TE80010	Pt100, temperature sensor	F	WIKA					HU_T03			
	TIAH	0...60 °C	T80010_I	Analog Input, Pt100	PCS	ABB								
											023			
T 84010	STEAM FROM CUSTOMER		TE84010	Pt100, temperature sensor	F	WIKA					HU_T03			
	TIAHL	0...250 °C	T84010_I	Analog Input, Pt100	PCS	ABB								
											031			
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U 11010		GUIDE VANE MAC		FV11010	Drive unit	F						001					
				U11010_O	Analog Output	PCS	ABB										
U 11074		SURGE PROTECTION MAC		UV11074	Solenoid valve	F						001					
				U11074_O	Binary Output, relay	PCS	ABB										
U 11706		SPACE HEATER MOTOR MAC		US11706	Switching relay	S		EH11706_J	Binary Input	PCS	ABB	028					
				ESH	Check back signal	S		EA11706_J	Binary Input	PCS	ABB						
U 12001		FAIL CHILLER UNIT KA12001		USH12001	Contact	S						002					
				UH12001	Binary Input	PCS	ABB										
U 13001		TRIP DC /AC		US13001	ESD - relay	S						002					
				UA13001_I	Binary Input	PCS	ABB										
U 14001		TRIP CHILL TOWER		US14001	ESD - relay	S						003					
				UA14001_I	Binary Input	PCS	ABB										
U 15011		AIR INLET ADSORBER A15001		UK15011	Butterfly valve	F	Kühme	GH15011_I	Binary Input	PCS	ABB	HU_V10					
				US15011_O	Binary Output, relay	PCS	ABB	GL15011	End position switch	F							
				GH15011	End position switch	F		GL15011_I	Binary Input	PCS	ABB						
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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY				
U 15012	OUTLET REGENERATION GAS A15001		UK15012	Butterfly valve	F	Kühme						HU_V10		
	US		US15012_O	Binary Output, relay	PCS	ABB								
														004
U 15013	DEPRESSURISATION A15001		UK15013	Butterfly valve	F	Xomox						HU_V10		
	US		US15013_O	Binary Output, relay	PCS	ABB								
														004
U 15014	INLET REGENERATION GAS A15001		UK15014	Butterfly valve	F	Kühme						HU_V10		
	US		US15014_O	Binary Output, relay	PCS	ABB								
														004
U 15016	AIR OUTLET ADSORBER A15001		UK15016	Butterfly valve	F	Kühme	GH15016_I	Binary Input	PCS	ABB		HU_V10		
	US / GOHL		US15016_O	Binary Output, relay	PCS	ABB	GL15016	End position switch	F					
				GH15016	End position switch	F		GL15016_I	Binary Input	PCS	ABB			004
U 15017	PRESSURISATION ADSORBER 1/2		UK15017	Butterfly valve	F	Xomox						HU_V10		
	US		US15017_O	Binary Output, relay	PCS	ABB								
														004
U 15018	PRESSURISATION ADSORBER A15001		UK15018	Butterfly valve	F	Xomox						HU_V10		
	US		US15018_O	Binary Output, relay	PCS	ABB								
														004
U 15021	AIR INLET ADSORBER A15002		UK15021	Butterfly valve	F	Kühme	GH15021_I	Binary Input	PCS	ABB		HU_V10		
	US / GOHL		US15021_O	Binary Output, relay	PCS	ABB	GL15021	End position switch	F					
				GH15021	End position switch	F		GL15021_I	Binary Input	PCS	ABB			004

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	FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY				
U 16001	TRIP BAC		US16001	ESD - relay	S							006		
	USA		US16001_I	Binary Input	PCS	ABB								
U 16010	GUIDE VANE BAC STAGE 1		UY16010	Drive unit	F	Arca						006		
	UY	0...100 %	U16010_O	Analog Output	PCS	ABB								
U 16074	SURGE PROTECTION BAC		US16074_O	Binary Output, relay	PCS	ABB						006		
	US		UV16074	Solenoid valve	F									
U 16706	SPACE HEATER MOTOR BAC		US16706	Switching relay	S		EH16706_I	Binary Input	PCS	ABB		028		
	US / EOH						EA16706_I	Binary Input	PCS	ABB				
				ESH	Check back signal	S								
U 20001	TRIP HP-GAN PRODUCT		UV20001	Solenoid valve	F	Flowserve						010		
	US		US20001_O	Binary Output, relay	PCS	ABB								
U 20011	TRIP GOX PRODUCT		UV20011	Solenoid valve	F	Flowserve	US2011_2_O	Binary Output, relay	PCS	ABB		010		
	US		US20011_1_O	Binary Output, relay	PCS	ABB								
				UV20012	Solenoid valve	F	Flowserve							
U 20013	GOX TO CUSTOMER 1		US20013_O	Binary Output, relay	PCS	ABB						010		
	HS		UV20013	Solenoid valve	F									
				UK20013	Butterfly valve	F	Ebro							


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U 20014	GOX TO CUSTOMER 2		US20014_O	Binary Output, relay	PCS	ABB									
	US		UV20014	Solenoid valve	F										
			UK20014	Butterfly valve	F	Ebro						010			
U 22001	TRIP LOX PRODUCT		UV22001	Solenoid valve	F	Flowserve									
	US		US22001_O	Binary Output, relay	PCS	ABB									
												011			
U 23013	TRIP LIN PRODUCT		UV23013	Solenoid valve	F	Flowserve									
	US		US23013_O	Binary Output, relay	PCS	ABB									
												011			
U 24100	TRIP EXPANDER TURBINE 1		US24100	ESD - relay	S										
	USA / HS		UA24100_I	Binary Input	PCS	ABB									
			HS24100_O	Binary Output, relay	PCS	ABB						007			
U 24105	HEATING NOZZLE RING DRIVE TURBINE 1		W24101	Switching relay	S	Siemens	EH24105_I	Binary Input	PCS	ABB					
	US		US24105_O	Binary Output, relay	PCS	ABB									
			ESH24105	Check back signal	S							007			
U 24110	GENERATOR EXPANDER TURBINE 1		MG24101	Switching relay	S	Siemens	EH24110_I	Binary Input	PCS	ABB					
	US / EOH		US24110_O	Binary Output, relay	PCS	ABB									
			ESH24110	Check back signal	S							007			
U 24200	TRIP EXPANDER TURBINE 2		US24200	ESD - relay	S										
	USA / HS		UA24200_I	Binary Input	PCS	ABB									
			HS24200_O	Binary Output, relay	PCS	ABB						008			

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U 24205	HEATING NOZZLE RING DRIVE TURBINE 2		W24201	Switching relay	S	Siemens	EH24205_I	Binary Input	PCS	ABB						
	US		US24205_O	Binary Output, relay	PCS	ABB							008			
			ESH24205	Check back signal	S											
U 24210	GENERATOR EXPANDER TURBINE 2		MG24201	Switching relay	S	Siemens	EH24210_I	Binary Input	PCS	ABB						
	US / EOH		US24210_O	Binary Output, relay	PCS	ABB							008			
			ESH24210	Check back signal	S											
U 44001	LAR PUMP P44001		MO44001	Switching relay	S		EH44001_I	Binary Input	PCS	ABB						
	US / EOH		US44001_O	Binary Output, relay	PCS	ABB							042			
			ESH44001	Check back signal	S											
U 44003	READY TO START		UO44003	Lamp	F											
	UOH		UH44003_O	Binary Output, relay	PCS	ABB							042			
U 44012	PUSH DEAD MAN'S HANDLE		UOH44012	Flash lamp	F											
	UOH		UH44012_O	Binary Output, relay	PCS	ABB							042			
U 49020	TEMPERATURE TRIP HP-GAR		UV49020	Solenoid valve	F											
	UZ		US49020_O	Binary Output, relay	PCS	ABB							044			
			UZ49020	Emergency shut down relay	S											
U 61100	FREQUENCY CONVERTER P61100		UC61100	Frequency converter	S	Cutler Hammer	EL61100_I	Binary Input	PCS	ABB						
	UC		H61100_O	Analog Output	PCS	ABB										
				ESL61100	Fail contact	S							012			
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U 61200	FREQUENCY CONVERTER P61200		UC61200	Frequency converter	S	Cutler Hammer	EL61200_I	Binary Input	PCS	ABB					
	UC	0...100 %	H61200_O	Analog Output	PCS	ABB									
			ESL61200	Fail contact	S							012			
U 62001	LOX PUMP P62001		MO62001	Switching relay	S		EH62001_I	Binary Input	PCS	ABB					
	US / EOH		US62001_O	Binary Output, relay	PCS	ABB									
			ESH62001	Check back signal	S							032			
U 62003	READY TO START LOX PUMP P62001		UH62012	Lamp	F	AGS									
	UOH		UH62003_O	Binary Output, relay	PCS	ABB									
												032			
U 62012	PUSH DEAD MAN'S HANDLE		UOH62012	Flash lamp	F										
	UOH		US62012_O	Binary Output, relay	PCS	ABB									
												032			
U 62051	ENABLE FILLING LOX TANK		US62051_O	Binary Output, relay	PCS	ABB									
	US		US62051_K	Emergency shut down relay	S	AGS									
			U62051_I	Binary Input	PCS	ABB						032			
U 63001	LOX CONVERTER CYCLE PUMP P63001		MO32001	Switching relay	S		EH63001_I	Binary Input	PCS	ABB					
	US / EOH		US63001_O	Binary Output, relay	PCS	ABB									
			ESH63001	Check back signal	S				PCS			032			
U 64001	GOX TRIP WATER BATH VAPORIZER		UZ64001_K	Emergency shut down relay	S										
	UZ / USA		UA64001_I	Binary Input	PCS	ABB									
			US64001_O	Binary Output, relay	PCS	ABB						034			
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U 64010	LOX SUPPLY W64001		UV64010	Globe valve	F	Flowserve						HU_V10		
	UCZ		UV64010	Solenoid valve	F									
			US64010_O	Analog Output	PCS	ABB						034		
U 70010	GUIDE VANE GAN COMPR. 1		V70010	Drive unit	F									
	UY	0...100 %	U70010_O	Analog Output	PCS	ABB								019
U 70074	SURGE PROTECTION GAN COMP. 1		US70074_O	Binary Output, relay	PCS	ABB								
	USAH		UV70074	Solenoid valve	F									019
U 70706	SPACE HEATER MOTOR GAN COMP. 1		US70706	Switching relay	S		EH70706_I	Binary Input	PCS	ABB				
	US / EOH						EA70706_I	Binary Input	PCS	ABB				
				ESH70706	Check back signal	S							021	
U 71100	FREQUENCY CONVERTER P71100		UC71100	Frequency converter	S	Cutler Hammer	EL71100_I	Binary Input	PCS	ABB				
	UC	0...100 %	HT71100_O	Analog Output	PCS	ABB								
				ESL71100	Fail contact	S							015	
U 71200	FREQUENCY CONVERTER P71200		UC71200	Frequency converter	S	Cutler Hammer	EL71200_I	Binary Input	PCS	ABB				
	UC	0...100 %	HT1200_O	Analog Output	PCS	ABB								
				ESL71200	Fail contact	S							015	
U 72001	LIN PUMP P72001		MO72001	Switching relay	S		EH72001_I	Binary Input	PCS	ABB				
	US / EOH		US72001_O	Binary Output, relay	PCS	ABB								
				ESH72001	Check back signal	S							035	

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		FUNCTION	RANGE	TAG	DEVICE	LOC	SUPPL. BY	TAG	DEVICE	LOC	SUPPL. BY	P&I SHEET				
U 73016	MP-LIN TRIP		PV73016	Globe valve	F	Flowserve	UA_73016_I	Binary Input	PCS	ABB	HU_V10		038			
	USA	UV73016	Solenoid valve	F		US73016_O	Binary Output, relay	PCS	ABB							
	TRIP WATER BATH NAT. GAS VAP.		US73016_K1	Emergency shut down relay	S											
U 73100	UZ / UAHAHH		UZ73100	Safety control	S	NGV					040		040			
	MOTOR FAN P73101		UH73100_I	Binary Input	PCS	ABB										
	US / EOH		UHH73100_J	Binary Input	PCS	ABB										
U 73102	LIN TO WATER BATH NAT. GAS VAP.		MO73102	Switching relay	S		US73102_O	Binary Output, relay	PCS	ABB	037		HU_V10			
	FAN 1 WATER BATH NAT. GAS VAP. LIN		ESH73102	Check back signal	S											
	US		UV73111	Globe valve	F	NGV										
U 73130	FAN 2 WATER BATH NAT. GAS VAP. LIN		UV73111	Solenoid valve	F	NGV					040		040			
	FAN 3 WATER BATH NAT. GAS VAP. LIN		MT73130	Switching relay	S	NGV										
	US		MT73131	Switching relay	S	NGV										
U 73132	FAN 1 WATER BATH NAT. GAS VAP. LIN		MT73132	Switching relay	S	NGV					040		040			
	FAN 2 WATER BATH NAT. GAS VAP. LIN															
	FAN 3 WATER BATH NAT. GAS VAP. LIN															
Legend: F = local, V = local cabinet, S = control room, PCS = process control system																
Annotation on column "Hook Up": (FP*) = Frost Protection recommended																
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U 73170	COMBUSTION AIR FAN		M73140	Switching relay	S		EHT73170_I	Binary Input	PCS	ABB						
	US / UOH		US73170	Binary Output, relay	PCS	ABB										
			EHT73170	Check back signal	S							040				
U 73182	COOLING WATER TO W73101		V 73183	Solenoid valve	F	NGV										
	US											040				
U 73202	MOTOR FAN P73201		MO73202	Switching relay	S		US73202_O	Binary Output, relay	PCS	ABB						
	US / EOH		ESH73202	Check back signal	S											
			EHT73202_I	Binary Input	PCS	ABB						037				
U 74090	OUTLET MP-GAN		UV74090	Globe valve	F	Flowserve	UZ74090	Emergency shut down relay	S	AGS	HU_V10					
	UZ / UY	0...100 %	UV74090_MV	Solenoid valve	F											
				U74090_O	Analog Output	PCS	ABB					036				
U 77010	GUIDE VANE GAN COMPR. 2		V77010	Drive unit	F											
	UY	0...100 %	U77010_O	Analog Output	PCS	ABB										
												020				
U 77074	SURGE PROTECTION GAN COMP. 2		US77074_O	Binary Output, relay	PCS	ABB										
	USAH		UV77074	Solenoid valve	F											
												020				
U 77706	SPACE HEATER MOTOR GAN COMP. 2		US77706	Switching relay	S		EHT7706_I	Binary Input	PCS	ABB						
	US / EOH						EAT7706_I	Binary Input	PCS	ABB						
				ESH77706	Check back signal	S						022				
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X 11740	VIBRATION GEARING MAC		XE11740	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 μm	XT11740	Vibration transducer	S	Bently Nevada									
			X11740_J	Analog Input, passive	PCS	ABB					027				
X 11743	VIBRATION GEARING MAC		XE11743	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 μm	XT11743	Vibration transducer	S	Bently Nevada									
			X11743_J	Analog Input, passive	PCS	ABB					027				
X 11745	VIBRATION MAIN SHAFT MAC		XE11745	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 μm	XT11745	Vibration transducer	S	Bently Nevada									
			X11745_J	Analog Input, passive	PCS	ABB					027				
X 11747	VIBRATION MAIN SHAFT MAC		XE11747	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 μm	XT11747	Vibration transducer	S	Bently Nevada									
			X11747_J	Analog Input, passive	PCS	ABB					027				
X 16736	VIBRATION X 1ST STAGE BAC		XE16736	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...125 μm	XT16736	Vibration transducer	S	Bently Nevada									
			X16736_J	Analog Input, passive	PCS	ABB					028				
X 16737	VIBRATION Y 1ST STAGE BAC		XE16737	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...125 μm	XT16737	Vibration transducer	S	Bently Nevada									
			X16737_J	Analog Input, passive	PCS	ABB					028				
X 16738	VIBRATION X 2ND STAGE BAC		XE16738	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 μm	XT16738	Vibration transducer	S	Bently Nevada									
			X16738_J	Analog Input, passive	PCS	ABB					028				
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X 16739	VIBRATION Y 2ND STAGE BAC		XE16739	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 µm	XT16739	Vibration transducer	S	Bently Nevada									
			X16739_I	Analog Input, passive	PCS	ABB					028				
X 16740	VIBRATION X 3RD STAGE BAC		XE16740	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 µm	XT16740	Vibration transducer	S	Bently Nevada									
			X16740_I	Analog Input, passive	PCS	ABB					028				
X 16741	VIBRATION Y 3RD STAGE BAC		XE16741	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 µm	XT16741	Vibration transducer	S	Bently Nevada									
			X16741_I	Analog Input, passive	PCS	ABB					028				
X 16743	VIBRATION X 4TH STAGE BAC		XE16743	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 µm	XT16743	Vibration transducer	S	Bently Nevada									
			X16743_I	Analog Input, passive	PCS	ABB					028				
X 16744	VIBRATION Y 4TH STAGE BAC		XE16744	Vibration sensor	F	Bently Nevada									
	XIAHSAHH	0...200 µm	XT16744	Vibration transducer	S	Bently Nevada									
			X16744_I	Analog Input, passive	PCS	ABB					028				
X 24124	VIBRATION EXPANDER TURBINE 1		XE24124	Vibration sensor	F										
	XIAHSAHH	0...125 µm	XT24124	Vibration transducer	S										
			X24124_I	Analog Input, passive	PCS	ABB					029				
X 24224	VIBRATION EXPANDER TURBINE 2		XE24224	Vibration sensor	F										
	XIAHSAHH	0...125 µm	XT24224	Vibration transducer	S										
			X24224_I	Analog Input, passive	PCS	ABB					030				
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X 70736	VIBRATION 1ST STAGE GAN COMP. 1		XE70736	Vibration sensor	F	Bently Nevada						
	XIAHSAHH	0...125 µm	XT70736	Vibration transducer	S	Bently Nevada						
			X70736_I	Analog Input, passive	PCS	ABB					021	
X 70738	VIBRATION 2ND STAGE GAN COMP. 1		XE70738	Vibration sensor	F	Bently Nevada						
	XIAHSAHH	0...125 µm	XT70738	Vibration transducer	S	Bently Nevada						
			X70738_I	Analog Input, passive	PCS	ABB					021	
X 70740	VIBRATION 3RD STAGE GAN COMP. 1		XE70740	Vibration sensor	F	Bently Nevada						
	XIAHSAHH	0...125 µm	XT70740	Vibration transducer	S	Bently Nevada						
			X70740_I	Analog Input, passive	PCS	ABB					021	
X 70742	VIBRATION FREE END GAN COMP. 1		XE70742	Vibration sensor	F	Bently Nevada						
	XIAHSAHH	0...125 µm	XT70742	Vibration transducer	S	Bently Nevada						
			X70742_I	Analog Input, passive	PCS	ABB					021	
X 77736	VIBRATION 1ST STAGE GAN COMP. 2		XE77736	Vibration sensor	F	Bently Nevada						
	XIAHSAHH	0...125 µm	XT77736	Vibration transducer	S	Bently Nevada						
			X77736_I	Analog Input, passive	PCS	ABB					022	
X 77738	VIBRATION 2ND STAGE GAN COMP. 2		XE77738	Vibration sensor	F	Bently Nevada						
	XIAHSAHH	0...125 µm	XT77738	Vibration transducer	S	Bently Nevada						
			X77738_I	Analog Input, passive	PCS	ABB					022	
X 77740	VIBRATION 3RD STAGE GAN COMP. 2		XE77740	Vibration sensor	F	Bently Nevada						
	XIAHSAHH	0...125 µm	XT77740	Vibration transducer	S	Bently Nevada						
			X77740_I	Analog Input, passive	PCS	ABB					022	

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X 77742	VIBRATION FREE END GAN COMP. 2		XE77742	Vibration sensor	F	Bently Nevada						
			XT77742	Vibration transducer	S	Bently Nevada						
	XIAHSAHH	0...125 µm	XT7740_I	Analog Input, passive	PCS	ABB					022	

Legend:										F = local, V = local cabinet, S = control room, PCS = process control system				Annotation on column "Hook Up": (FP*) = Frost Protection recommended			
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