

LAPD - VALVE AND INSTRUMENT INDEX

Instr Code	Tag #	Serv. Code	PID	END LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
MV	101	Ar	SHT-1	7- C	connection to HP Ar dewar #1	manual valve	NA	3000 psig	Matheson	53-48T
MV	102	Ar	SHT-1	7- D	connection to HP Ar dewar #2	manual valve	NA	3000 psig	Matheson	53-48T
MV	103	Ar	SHT-1	7- D	connection to HP Ar dewar #3	manual valve	NA	3000 psig	Matheson	53-48T
PI	104	Har	SHT-1	6- E	regeneration gas trailer pressure	local pressure indicator	NA	3000 psig	Wika	NA
PT	105	Ar	SHT-1	6- B	HP Ar header pressure	pressure transmitter	0 - 3000 psig	3750 psig	Setra	C280E
PRV	106	Har	SHT-1	7- F	Ar/H2 from trailer	pressure regulator	50	3000 psig	Matheson	3201
PSV	108	Har	SHT-1	7- F	Ar/H2 from trailer relief	relief valve	100 psig	400 psig	Rockwood Swendeman	710NBEF-A
PRV	110	Ar	SHT-1	7- E	header from HP Ar dewars	pressure regulator	85 psig	3000 psig	Victor	VTS 450 E 580
PT	111	Ar	SHT-1	6- E	Ar/H2 trailer pressure	pressure transmitter	0 - 3000 psia	3000 psia	Setra	225130CPAC411B1
MV	113	Ar	SHT-1	7- D	HP Ar header	manual valve	NA	600 psig	Quadrant	M1FNSRRSLT-100
PSV	114	Ar	SHT-1	7- E	header from HP Ar dewars	relief valve	100 psig	2400 psig	Circle-Seal	5100-4MP
MV	115	Ar	SHT-1	7- E	HP Ar header blowdown	manual valve	NA	600 psig	Quadrant	M1FNSRRSLT-100
MV	116	Ar	SHT-1	7- E	HP Ar supply to LAPD tank	manual valve	NA	600 psig	Quadrant	M1FNSRRSLT-100
MV	118	Ar	SHT-1	4- D	Argon Source #2 vent valve	manual valve	NA	1500 psig	Swagelok	B-44XS6
MV	119	Ar	SHT-1	6- D	Argon Source #2 hookup #1	manual valve	NA	3000 psig	Matheson	53-48T
MV	120	Ar	SHT-1	6- D	Argon Source #2 hookup #2	manual valve	NA	3000 psig	Matheson	53-48T
MV	121	Ar	SHT-1	6- D	Argon Source #2 hookup #3	manual valve	NA	3000 psig	Matheson	53-48T
MV	122	Ar	SHT-1	6- D	Argon Source #2 hookup #4	manual valve	NA	3000 psig	Matheson	53-48T
PT	123	Ar	SHT-1	6- D	Ar bottle header header	pressure transmitter	0 - 3000 psia	3000 psia	Setra	225130CPAC411B1
PRV	124	Ar	SHT-1	5- D	Ar bottle header header	pressure regulator	75	3000 psig	Victor	VTS 450 E 580
PSV	125	Ar	SHT-1	4- D	Ar bottle header header	relief valve	100 psig	2400 psig	Circle-Seal	5100-4MP
MV	126	Ar	SHT-1	4- D	Argon source #2	manual valve	NA	1500 psig	Swagelok	B-44XS6
MV	128	Ar	SHT-1	6- E	Argon Source #3 hookup #1	manual valve	NA	3000 psig	Matheson	53-48T
MV	129	Ar	SHT-1	6- E	Argon Source #3 hookup #2	manual valve	NA	3000 psig	Matheson	53-48T
MV	130	Ar	SHT-1	6- E	Argon Source #3 hookup #3	manual valve	NA	3000 psig	Matheson	53-48T
MV	131	Ar	SHT-1	6- E	Argon Source #3 hookup #4	manual valve	NA	3000 psig	Matheson	53-48T
PT	132	Ar	SHT-1	6- E	Argon Source #3 manifold pressure	pressure transmitter	0 - 3000 psia	3000 psia	Setra	225130CPAC411B1
PRV	133	Ar	SHT-1	5- E	Argon source #3 header	pressure regulator	65	3000 psig	Victor	VTS 450 E 580
PSV	134	Ar	SHT-1	4- E	Argon source #3 header	relief valve	100 psig	2400 psig	Circle-Seal	5100-4MP
MV	135	Ar	SHT-1	4- E	Argon Source #3 vent valve	manual valve	NA	1500 psig	Swagelok	B-44XS6
MV	137	Ar	SHT-1	4- E	Argon Source #3	manual valve	NA	1500 psig	Swagelok	B-44XS6
PT	138	N2	SHT-1	7- G	N2 trailer	pressure transmitter	0-100 psig	>150 psig	Setra	C206, 100 psig, top mounted bayonet
LT	139	N2	SHT-1	7- G	N2 trailer	press diff (level) transmitter	0-100 %vc	3000 psig	Cameron (formerly Barton)	9A-IN0224-GC-LA IT
SP	140	N2	SHT-1	5- G	liq. N2 from N2 trailer to phase sep. outdoor section	Y-strainer (particulate filter)	NA	400 psig	McMASTER-CARR	44125K45 - 200 mesh
TE	141	N2	SHT-1	5- G	liq. N2 from N2 trailer to phase sep. outdoor section	temperature element	70-400K	>200 psig	OMEGA	Platinum RTD PR-18-2-100-1/4-9-E
MV	142	N2	SHT-1	5- G	liq. N2 from N2 trailer to vaporizer	manual shutoff valve	NA	600 psig	CPC-Cryolab	ES4-088-TPG standard length bonnet, 1", NPT, globe body
PSV	143	N2	SHT-1	4- G	liq. N2 from N2 trailer to vaporizer	relief valve trapped volume	100 psig	2400 psig	Circle-Seal	5180B-4M-100
SV	144	N2	SHT-1	3- G	GN2 supply to PC4	solenoid valve	NA	300 psig	Magnatrol	16L44Z, 24 VDC
PI	145	N2	SHT-1	4- G	N2 gas from vaporizer to regen gas header / outdoor section	local pressure indicator	0-160 psig	>200 psig	US Gauge	US Gauge Series P1535 - 2.5" Dial Gauge 110795
TE	146	N2	SHT-1	4- G	N2 gas from vaporizer to regen gas header / outdoor section	temperature element	70-400K	>200 psig	OMEGA	Platinum RTD PR-18-2-100-1/4-9-E
MV	148	N2	SHT-1	5- G	liq. N2 from N2 trailer to phase sep. outdoor section	manual valve	NA	600 psig	CPC-Cryolab	ES4-088-TPG standard length bonnet, 1", NPT, globe body
PI	149	N2	SHT-1	4- G	liq. N2 from N2 trailer to phase sep. outdoor section	local pressure indicator	0-160 psig	>200 psig	US Gauge	US Gauge Series P1535 - 2.5" Dial Gauge 110795
PSV	150	N2	SHT-1	4- G	liq. N2 from N2 trailer to phase sep. outdoor section	relief valve trapped volume	100 psig	2400 psig	Circle-Seal	5180B-4M-100
CV	151	N2	SHT-1	3- F	N2 gas from vaporizer to regen gas header / indoor section	check valve	1 psig spring	1600 psig	Check-All Valve	BU-125-BR-BN-1.00-SS
MV	152	N2	SHT-1	3- G	N2 gas from vaporizer to regen gas header / indoor section	manual valve	NA	600 psig	Quadrant	M1FNSRRSLT-100
CV	153	Har	SHT-1	3- F	Ar/H2 from trailer to LAPD filtration indoor section	check valve	1 psig spring	1600 psig	Check-All Valve	BU-125-BR-BN-1.00-SS
MV	154	Har	SHT-1	3- F	Ar/H2 from trailer to LAPD filtration indoor section	manual valve	NA	600 psig	Quadrant	M1FNSRRSLT-100
MV	156	Ar	SHT-1	3- C	HP Ar supply to LAPD tank	inside manual valve	NA	600 psig	Quadrant	M1FNSRRSLT-100
FCV	157	Ar	SHT-1	3- D	Ar purge header to purge #101	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	158	Ar	SHT-1	3- D	Ar purge header to purge #102	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	159	Ar	SHT-1	3- D	Ar purge header to purge #103	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	160	Ar	SHT-1	3- D	Ar purge header to purge #104	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	161	Ar	SHT-1	3- D	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	162	Ar	SHT-1	2- D	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	163	Ar	SHT-1	2- D	Ar purge header to purge #107	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	164	Ar	SHT-1	2- D	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	165	Ar	SHT-1	2- D	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	166	Ar	SHT-1	2- D	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
MV	167	Ar	SHT-1	3- D	Ar bottle gas to Ar purge header	manual valve	NA	1000 psig	Swagelok	B-4HK
PSV	168	N2	SHT-1	3- G	LN2 supply	relief valve trapped volume	100 psig	2400 psig	Circle-Seal	5100-4MP
MV	170	Har	SHT-1	6- F	Ar/H2 from trailer blowdown	manual valve	NA	1000 psig	Sharpe	84-6-6-P-G-SW
MV	171	Har	SHT-1	7- F	Ar/H2 from trailer	manual valve	NA	1000 psig	Sharpe	84-6-6-P-G-SW
PI	174	Ar	SHT-1	3- D	Ar bottle gas to Ar purge header	pressure indicator	0 - 10 psig	10 psig	Matheson	0 - 10 psig gauge
PI	175	Ar	SHT-1	7- E	header from HP Ar dewars	pressure indicator on regulator	0 - 3000 psig	3000 psig	Victor	Supplied with regulator
PI	176	Ar	SHT-1	7- E	header from HP Ar dewars	pressure indicator on regulator	0 - 400 psig	400 psig	Victor	Supplied with regulator
PI	178	Har	SHT-1	7- F	Ar/H2 from trailer	pressure indicator on regulator	0 - 4000 psig	4000 psig	Wika	111.11.68.4000
PI	179	Har	SHT-1	7- F	Ar/H2 from trailer	pressure indicator on regulator	vac - 200 psig	200 psig	Matheson	Supplied with regulator
PI	180	Ar	SHT-1	5- D	Ar bottle header header	pressure indicator on regulator	0 - 3000 psig	3000 psig	Victor	Supplied with regulator
PI	181	Ar	SHT-1	5- D	Ar bottle header header	pressure indicator on regulator	0 - 400 psig	400 psig	Victor	Supplied with regulator
PI	182	Ar	SHT-1	5- E	Ar bottle header header	pressure indicator on regulator	0 - 3000 psig	3000 psig	Victor	Supplied with regulator
PI	183	Ar	SHT-1	5- E	Ar bottle header header	pressure indicator on regulator	0 - 400 psig	400 psig	Victor	Supplied with regulator
CV	186	Ar	SHT-1	3- C	HP Ar supply to LAPD tank	check valve	1 psig spring	1600 psig	Check-All Valve	BU-125-BR-BN-1.00-SS
CV	187	Ar	SHT-1	4- C	Ar bottle gas to PC4	check valve	1 psig spring	1600 psig	Check-All Valve	BU-125-BR-BN-1.00-SS
FCV	189	Ar	SHT-1	3- D	Ar purge header to purge #111	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV

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FCV	190	Ar	SHT-1	3-	D	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	191	Ar	SHT-1	3-	D	Ar purge header to purge #113	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	192	Ar	SHT-1	3-	D	Ar purge header to purge #114	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	193	Ar	SHT-1	3-	D	Ar purge header to purge #115	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	194	Ar	SHT-1	2-	D	Ar purge header to purge #116	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	195	Ar	SHT-1	2-	D	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	196	Ar	SHT-1	2-	D	Ar purge header to purge #118	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	197	Ar	SHT-1	2-	C	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	198	Ar	SHT-1	2-	C	Ar purge header to purge #120	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	199	Ar	SHT-1	2-	C	Ar purge header to purge #121	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	200	Ar	SHT-1	2-	C	Ar purge header spare	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	201	Ar	SHT-1	2-	C	Ar purge header to purge #123	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	202	Ar	SHT-1	2-	C	Ar purge header to purge #124	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
PI	206	Ar	SHT-1	3-	D	low pressure ar purge line pressure	local pressure indicator	0 - 100 psig	100 psig	US Gauge	162988
PRV	207	Ar	SHT-1	3-	D	low pressure ar purge line pressure regulator	pressure regulator	0.5 - 5 psi	250 psig	Matheson	3702
CV	208	Ar	SHT-1	4-	D	argon supply	check valve	1 psig spring	1600 psig	Check-All Valve	BU-125-BR-BN-1.00-SS
PSV	209	N2	SHT-1	3-	G	trapped volume relief inside PC4	relief valve	100 psig	2400 psig	Circle-Seal	5100-4MP
PT	210	Air	SHT-1	6-	C	air bottle manifold	pressure transmitter	0-3000 psig	3000 psig	Ashcroft	K1
PT	211	Air	SHT-1	5-	C	air bottle manifold	pressure transmitter	0-3000 psig	3000 psig	Ashcroft	K1
MV	212	Air	SHT-1	5-	C	air bottle manifold	manual valve	NA	2500 psig	Swagelok	B-42XF2
MV	213	Air	SHT-1	5-	C	air bottle manifold	manual valve	NA	2500 psig	Swagelok	B-43YF2
PRV	214	Air	SHT-1	5-	C	air bottle manifold	pressure regulator	NA	> 2000 psig	Scott	Part of commercially purchased switchover manifold
PRV	215	Air	SHT-1	5-	C	air bottle manifold	pressure regulator	NA	> 2000 psig	Scott	Part of commercially purchased switchover manifold
PRV	216	Air	SHT-1	5-	C	air bottle manifold	pressure regulator	NA	> 2000 psig	Scott	Part of commercially purchased switchover manifold
PI	217	Air	SHT-1	5-	C	air bottle manifold	pressure indicator	0 - 400 psig	400 psig	Wika	NA
PSV	218	Air	SHT-1	5-	C	air bottle manifold	relief valve	100 psig	2400 psig	Circle-Seal	5100-4MP
MV	219	Ar	SHT-2	4-	D	Tank purge gas analyzers	manual valve	NA	1000 psig	Swagelok	SS-4BG-V47
MV	220	Ar	SHT-2	4-	D	Tank purge gas analyzers	manual valve	NA	1000 psig	Swagelok	SS-4BG-V47
FCV	221	Ar	SHT-2	4-	D	Tank purge gas analyzers	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
FCV	222	Ar	SHT-2	4-	D	Tank purge gas analyzers	rotameter	5-50 sccm	100 psig	Dwyer Instruments	RMA-151-SSV
AV	225	N2	SHT-1	6-	G	LN2 supply	automatic valve	NA	> 100 psig	Ferrelab	Ferrelab extended stem cryogenic control valve
MV	226	Ar	SHT-1	7-	B	connection to HP Ar dewar #3	manual valve	NA	3000 psig	Matheson	53-48T
MV	227	Ar	SHT-1	6-	E	H2/Ar pressure instrumentation	manual valve	NA	3500 psig	Swagelok	6LV-DLBW4
MV	228	Har	SHT-1	6-	B	Ar supply pressure instrumentation	manual valve	NA	3500 psig	Swagelok	6LV-DLBW4
PI	229	Ar	SHT-1	6-	B	argon dewar gas supply pressure instrumentation	pressure indicator	0 - 3000 psig	3000 psig	Wika	NA
MV	230	Har	SHT-1	4-	F	regeneration gas isolation	manual valve	NA	600 psig	Quadrant	M1FNSRRSLTT-100
PI	231	N2	SHT-1	3-	G	nitrogen gas supply	pressure indicator	vac - 150 psig	150 psig	US Gauge	vac - 150 psig pressure gauge
MV	232	N2	SHT-1	3-	F	nitrogen gas supply	manual valve	NA	600 psig	Quadrant	M1FNSRRSLTT-100
MV	233	V	SHT-1	2-	F	regeneration gas header	manual valve	NA	1000 psig	Swagelok	B-4HK
MV	234	V	SHT-1	2-	F	regeneration gas header	manual valve	NA	1000 psig	Swagelok	B-4HK
CV	236	Ar	SHT-1	3-	F	argon gas supply @ regen header	check valve	1 psig spring	1600 psig	Check-All Valve	BU-125-BR-BN-1.00-SS
MV	237	Ar	SHT-1	3-	F	argon gas supply @ regen header	manual valve	NA	600 psig	Quadrant	M1FNSRRSLTT-100
MV	238	Ar	SHT-1	4-	E	argon supply isolation	manual valve	NA	600 psig	Quadrant	M1FNSRRSLTT-100
SP	239	N2	SHT-1	3-	F	nitrogen gas supply	particulate filter	NA	500 psig	McMASTER-CARR	4414K35
SP	240	N2	SHT-1	3-	F	nitrogen gas supply	Y-strainer (particulate filter)	NA	200 psig	McMASTER-CARR	4393SK556
SP	241	Har	SHT-1	3-	F	hydrogen argon gas supply	Y-strainer (particulate filter)	NA	200 psig	McMASTER-CARR	4393SK556
SP	242	Ar	SHT-1	3-	F	argon gas supply @ regen header	Y-strainer (particulate filter)	NA	200 psig	McMASTER-CARR	4393SK556
SP	243	N2	SHT-1	2-	F	nitrogen gas supply	particulate filter	NA	500 psig	McMASTER-CARR	4414K35
PI	244	N2	SHT-1	2-	F	nitrogen gas supply	pressure indicator	vac - 150 psig	150 psig	US Gauge	FNAL Stock Item 1050-003500
MV	245	N2	SHT-1	2-	G	nitrogen gas supply	manual valve	NA	3000 psig	Swagelok	B-1VM4
SP	246	Ar	SHT-1	3-	E	argon supply	particulate filter	NA	500 psig	McMASTER-CARR	4414K35
PI	247	Ar	SHT-1	3-	E	argon supply	pressure indicator	vac - 150 psig	150 psig	US Gauge	FNAL Stock Item 1050-003500
MV	248	Ar	SHT-1	3-	E	argon supply	manual valve	NA	3000 psig	Swagelok	B-1VM4
MV	249	Ar	SHT-1	3-	E	pneumatic valve actuation	manual valve	NA	2200 psig	Swagelok	B-43S6
PI	250	Ar	SHT-1	2-	E	pneumatic valve actuation	pressure indicator	vac - 150 psig	150 psig	US Gauge	FNAL Stock Item 1050-003500
MV	251	Ar	SHT-1	2-	E	pneumatic valve actuation	manual valve	NA	2200 psig	Swagelok	B-43S6
MV	252	Ar	SHT-1	2-	E	pneumatic valve actuation	manual valve	NA	2200 psig	Swagelok	B-43S6
MV	253	Ar	SHT-1	2-	E	pneumatic valve actuation	manual valve	NA	2200 psig	Swagelok	B-43S6
MV	254	Ar	SHT-1	2-	E	pneumatic valve actuation	manual valve	NA	2200 psig	Swagelok	B-43S6
MV	255	Ar	SHT-1	2-	E	pneumatic valve actuation	manual valve	NA	2200 psig	Swagelok	B-43S6
MV	256	Ar	SHT-2	4-	D	TPC signal purge	manual valve	NA	1000 psig	Swagelok	SS-4BG-V47
SP	258	Ar	SHT-1	3-	D	argon supply	particulate filter	NA	500 psig	McMASTER-CARR	4414K35
SP	259	Ar	SHT-1	3-	C	argon supply	particulate filter	NA	500 psig	McMASTER-CARR	4414K35
MV	260	Ar	SHT-1	3-	D	argon purges	manual valve	NA	250 psig	Matheson	100-S
MV	261	N2	SHT-1	7-	G	LN2 trailer instrumentation	manual valve	NA	1000 psig	Swagelok	B-4HK
PRV	262	N2	SHT-1	6-	G	LN2 trailer automatic shut off valve	pressure regulator	15 psig	300 psig	McMASTER-CARR	428K21
PI	263	N2	SHT-1	6-	G	LN2 trailer automatic shut off valve	pressure indicator	0 - 30 psig	30 psig	McMASTER-CARR	gauge included with PRV-262-N2
PSV	264	N2	SHT-1	2-	G	trapped volume relief inside PC4	relief valve	100 psig	2400 psig	Circle-Seal	5100-4MP
PI	265	Ar	SHT-1	3-	C	argon utility gas	pressure indicator	vac - 150 psig	150 psig	US Gauge	FNAL Stock Item 1050-003500
PT	266	Ar	SHT-1	2-	E	argon utility gas	pressure transmitter	0 - 300 psig	300 psig	Setra	C206
PT	267	B	SHT-2	2-	C	barometric pressure	pressure transmitter	800 - 1100 mpa	1100 mpa	Setra	C278
SP	268	Har	SHT-1	3-	F	H2/Ar dilution	particulate filter	NA	200 psig	McMASTER-CARR	4393SK556
CV	269	Har	SHT-1	3-	F	H2/Ar dilution	check valve	1 psig spring	1600 psig	Check-All Valve	BU-125-BR-BN-1.00-SS
MV	270	Har	SHT-1	3-	F	H2/Ar dilution	manual valve	NA	600 psig	Quadrant	M1FNSRRSLTT-100

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SP	271	N2	SHT-1	3-	G	nitrogen purge supply	particulate filter	NA	500 psig	McMASTER-CARR	4414K35
MV	272	N2	SHT-1	3-	G	nitrogen purge supply	manual valve	NA	600 psig	Quadrant	M1FNRRSLTT-100
CV	273	Ar	SHT-1	5-	E	Argon Source #3	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	274	Ar	SHT-1	5-	E	Argon Source #3	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	275	Ar	SHT-1	5-	E	Argon Source #3	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	276	Ar	SHT-1	5-	E	Argon Source #3	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	277	Ar	SHT-1	5-	C	Argon Source #2	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	278	Ar	SHT-1	5-	C	Argon Source #2	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	279	Ar	SHT-1	5-	C	Argon Source #2	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	280	Ar	SHT-1	5-	C	Argon Source #2	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	281	Ar	SHT-1	8-	E	Argon Source #1	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	282	Ar	SHT-1	8-	D	Argon Source #1	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	283	Ar	SHT-1	8-	C	Argon Source #1	check valve	NA	3000 psig	Matheson	580-CV-4-BP
CV	284	Ar	SHT-1	8-	C	Argon Source #1	check valve	NA	3000 psig	Matheson	580-CV-4-BP
MV	285	N2	SHT-1	2-	G	N2 liquid to LAPD	manual valve	NA	870 psig	Worcester	#C4466 PM SW
MV	286	AIR	SHT-1	3-	A	breathable air	manual valve	NA	250 psig	Worcester	1/4-416N
SP	287	AIR	SHT-1	3-	A	breathable air	particulate filter	NA	500 psig	McMASTER-CARR	4414K3
PI	288	AIR	SHT-1	3-	A	breathable air	pressure gauge	vac - 150 psig	150 psig	US Gauge	FNAL Stock Item 1050-003500
MV	289	AIR	SHT-1	3-	A	breathable air	manual valve	NA	250 psig	Worcester	1/4-416N
SP	290	AIR	SHT-1	3-	A	breathable air	particulate filter	NA	500 psig	McMASTER-CARR	4414K3
PI	291	AIR	SHT-1	3-	A	breathable air	pressure gauge	vac - 150 psig	150 psig	US Gauge	FNAL Stock Item 1050-003500
MV	292	AIR	SHT-1	3-	A	breathable air	manual valve	NA	250 psig	Worcester	1/4-416N
CV	293	AIR	SHT-1	6-	C	breathable air	check valve	10 psid	3000 psig	Nupro	B-4CP4
PI	294	AIR	SHT-1	6-	C	breathable air	pressure indicator	0 - 3000 psig	3000 psig	Wiki	NA
MV	295	AIR	SHT-1	5-	C	breathable air	manual valve	NA	2500 psig	Swagelok	B-42XF2
PI	296	AIR	SHT-1	5-	C	breathable air	pressure indicator	0 - 3000 psig	3000 psig	Wiki	NA
CV	297	AIR	SHT-1	5-	C	breathable air	check valve	10 psid	3000 psig	Nupro	B-4CP4
AE	298	Ar	SHT-2	4-	D	piston purge	oxygen sensor 1/3 elevation	0-25% O2	ambient	MSA	A-ULTIMAX-XP-E-14-U150-0010-100
AE	299	Ar	SHT-2	4-	D	piston purge	oxygen sensor 2/3 elevation	0-25% O2	ambient	MSA	A-ULTIMAX-XP-E-14-U150-0010-100
FCVE	300	Ar	SHT-2	7-	B	argon purge gas from HP Ar	gas mass flow control valve	0-6.5 SCFH	160 psia	Alcat Scientific Inc	MCR-250SLPM-D
SP	301	N2	SHT-2	7-	G	liq N2 from N2 trailer to phase sep. indoor section	Y-strainer	NA	400 psig	McMASTER-CARR	44125K45 - 200 mesh
MV	302	N2	SHT-2	8-	G	liq N2 from N2 trailer to phase sep. indoor section	manual shutoff valve	NA	600 psig	CPC-Cryolab	ES4-088-TPG standard length bonnet, 1" NPT, globe body
PI	303	N2	SHT-2	7-	G	liq N2 from N2 trailer to phase sep. indoor section	local pressure indicator	0-160 psig	>200 psig	US Gauge	0-100 psig
PT	304	N2	SHT-2	7-	G	liq N2 from N2 trailer to phase sep. indoor section	pressure transmitter	0-100 psig	>150 psig	Setra	C206, 100 psig, top mounted bayonet
FCV	305	N2	SHT-2	7-	G	liq N2 from N2 trailer to phase sep. indoor section	solenoid valve	NA	300 psig	Magnatrol	16L442, 24 VDC
PSV	306	N2	SHT-2	7-	G	vicinity of phase sep	relief valve trapped volume	100 psig	2400 psig	Circle-Seal	5180B-4MP-100
PT	307	N2	SHT-2	6-	G	phase sep vent to vent header	pressure transmitter	0-100 psig	>150 psig	Setra	C206, 100 psig, top mounted bayonet
PI	309	N2	SHT-2	6-	G	phase sep vent to vent header	pressure indicator	0-100 psig	100 psig	US Gauge	162888
PRV	310	N2	SHT-2	7-	H	phase sep vent to vent header	back pressure regulator	20 psig	400 psig	Cash Valve	FR, 13782 (12"), 0-20 psig, cryogenic N2 gas
PSV	311	N2	SHT-2	7-	G	phase separator vessel	vessel overpressure relief valve	60 psig	2400 psig	Rockwood Swendeman	710-A-B-E-A-060 ASME Bronze RXSO, plain cap, B orifice, 3/4" inlet, 1" outlet, gas sect VIII, set at 60 psig
FCV	312	N2	SHT-2	6-	F	liq N2 from phase separator condenser	control valve	0 - 100 %	>300 psig	Fermilat	std Fermi LN2 valve w/badge actuator
MV	313	N2	SHT-2	6-	G	phase separator vessel	manual valve	NA	250 psig	see LT-316	NA
MV	314	N2	SHT-2	7-	G	phase separator vessel	manual valve	NA	250 psig	see LT-316	NA
MV	315	N2	SHT-2	6-	G	phase separator vessel	manual valve	NA	250 psig	see LT-316	NA
LT	316	N2	SHT-2	6-	G	phase separator vessel	level transmitter (pressure differential)	0-100%, 0-2psid	250 psig	Setra	2301-002PD-3V-11-A
PSV	317	N2	SHT-2	6-	F	liq N2 from phase separator condenser	relief valve trapped volume	100 psig	2400 psig	Circle-Seal	5180B-4MP-100
MV	318	Ar	SHT-2	4-	D	LAPD nozzle ar impurity purge vent	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
SV	319	N2	SHT-2	6-	G	liq N2 from phase separator condenser coil #3	solenoid valve	NA	300 psig	Magnatrol	16L442, 24 VDC
SV	320	N2	SHT-2	6-	F	liq N2 from phase separator condenser coil #2	solenoid valve	0 - 100 %	>300 psig	Fermilat	std Fermi LN2 valve w/badge actuator
SV	321	N2	SHT-2	6-	F	liq N2 from phase separator condenser coil #1	solenoid valve	NA	300 psig	Magnatrol	14L42, 24 VDC
MV	322	Ar	SHT-2	7-	C	LAPD tank level	manual valve	NA	250 psig	Swagelok	6LUV-DPBW4-P
LIT	323	Ar	SHT-2	7-	C	LAPD tank level	differential pressure indicator	0-10 psid (0-16.67 ft)	50 psid	Setra	231MS1
MV	324	Ar	SHT-2	7-	C	LAPD tank level	manual valve	NA	250 psig	Swagelok	6LUV-DPBW4-P
MV	325	Ar	SHT-2	6-	C	LAPD tank level	manual valve	NA	250 psig	Swagelok	6LUV-DPBW4-P
LT	326	Ar	SHT-2	6-	C	LAPD tank liquid level	differential pressure transmitter	0-10 psid (0-16.67 ft)	500 psi	GP-50	316DPJLC
MV	327	Ar	SHT-2	6-	C	LAPD tank level	manual valve	NA	250 psig	Swagelok	6LUV-DPBW4-P
MV	328	Ar	SHT-2	6-	C	LAPD tank level	manual valve	NA	250 psig	Swagelok	6LUV-DPBW4-P
PSV	329	Ar	SHT-2	4-	F	Pump cool down trapped volume	relief valve	100 psig	2400 psig	Circle-Seal	5100-4MP
MV	330	Ar	SHT-2	5-	B	argon purge gas from HP Ar to LAPD tank	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
MV	331	Ar	SHT-2	3-	E	LAPD pressure control vent	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
PT	332	N2	SHT-2	5-	G	N2 vent from condenser	pressure transmitter	0-100 psig	>150 psig	Setra	C206, 100 psig, top mounted bayonet
MV	333	N2	SHT-2	5-	G	N2 vent from condenser	manual valve	NA	600 psig	CPC-Cryolab	ES4-088-TPG standard length bonnet, 1" NPT, globe body
PSV	334	Ar	SHT-2	4-	G	condenser	vessel overpressure relief valve	60 psig	2400 psig	Rockwood Swendeman	710-A-A-D-E-A-060 ASME Bronze RXSO, plain cap, A orifice, 3/4" inlet, 1" outlet, gas sect VIII, set at 60 psig
PSV	335	N2	SHT-2	5-	G	condenser	relief valve	60 psig	2400 psig	Circle-Seal	5180B-4M-100
CV	338	Ar	SHT-2	7-	B	argon purge gas from HP Ar	check valve	2 psi crack	3000 psig	Swagelok	6L-CV4V8
MV	339	Ar	SHT-2	6-	B	argon purge gas from HP Ar	manual valve	NA	300 psig	Swagelok	6L-ELD8-C2XX
MV	340	Ar	SHT-2	6-	B	argon purge gas from HP Ar blowdown	manual valve	NA	300 psig	Swagelok	6L-ELD8-C2XX
MV	341	Ar	SHT-2	4-	E	LAPD nozzle ar impurity purge vent	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
FCV	342	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
MV	343	Ar	SHT-2	4-	E	LAPD nozzle ar impurity purge vent	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
FCV	344	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
FCV	345	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
MV	346	Ar	SHT-2	4-	D	LAPD nozzle ar impurity purge vent	manual valve	NA	375 psig	Carten	MD-250
MV	347	Ar	SHT-2	3-	E	LAPD nozzle ar impurity purge vent	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW

LAPD - VALVE AND INSTRUMENT INDEX

Instr Code	Tag #	Serv. Code	PID	END	LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
FCV	348	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
FCV	349	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
MV	350	Ar	SHT-2	4-	E	tank vent	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8134
PCV	351	Ar	SHT-2	4-	E	LAPD pressure control vent	pressure control valve	NA	165 psid	Eden Cryogenics	BC-02146-8135
SV	351	Ar	SHT-2	4-	E	PCV-351-Ar	solenoid valve	NA	150 psig	ASCO	EF8327G041
MV	353	Ar	SHT-2	4-	E	LAPD pressure control vent	manual valve	NA	1000 psig	Swagelok	SS-88G-TW
MV	354	Ar	SHT-2	4-	E	LAPD pressure control vent	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8119
FO	355-1	Ar	SHT-2	5-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.067"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-2	Ar	SHT-2	5-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.067"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-3	Ar	SHT-2	4-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.140"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-4	Ar	SHT-2	4-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.200"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-5	Ar	SHT-2	4-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.140"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-6	Ar	SHT-2	4-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.067"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-7	Ar	SHT-2	4-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.067"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-8	Ar	SHT-2	4-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.09"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-9	Ar	SHT-2	3-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.200"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-10	Ar	SHT-2	3-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.200"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-11	Ar	SHT-2	3-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.200"	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	355-12	Ar	SHT-2	3-	D	tank riser diffusion purge	orifice (drilled blind VCR seal)	0.200"	3500 psig	Swagelok	SS-8-VCR-2-BL
PI	358	Ar	SHT-2	3-	E	suction line to vent purge bellows pump	local pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-Z-WH-UZ-ZZZ P/N 50328794
PT	359	Ar	SHT-2	3-	E	suction line to vent purge bellows pump	pressure transmitter	0-100 psia	150 psig	Setra	2251-100P-A-D4-11-B1
FCV	360	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
PSV	361	Ar	SHT-2	3-	E	vent purge bellows pump outlet	relief valve	40 psig	2400 psig	Circle-Seal	5100-2MP
PI	362	Ar	SHT-2	2-	E	vent purge bellows pump outlet	local pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-Z-WH-UZ-ZZZ P/N 50328794
PT	363	Ar	SHT-2	2-	E	vent purge bellows pump outlet	pressure transmitter	0-100 psia	150 psig	Setra	2251-100P-A-D4-11-B1
MV	364	Ar	SHT-2	2-	E	vent purge bellows pump discharge to vent header	manual valve	NA	300 psig	Swagelok	6L-ELDE-CXXX
AE	365	V	SHT-2	3-	C	LAPD tank insulation	moisture analyzer and temperature sensor	0-100% RH -40 to +80 C	external to process	Vaisala	HMT100A12A621A2A1CB00
FCV	366	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
MV	367	Ar	SHT-2	2-	C	argon liquid return from filtration to tank	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8118
MV	368	Ar	SHT-2	3-	B	LAPD tank liquid to filtration pump	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8119
PT	369	Ar	SHT-2	4-	D	LAPD tank vapor pressure transmitter #1	pressure transmitter	0-5 psid	500 psi	GP-50	316DPJLC
PT	370	Ar	SHT-2	5-	D	LAPD tank vapor pressure transmitter #2	pressure transmitter	0-5 psid	500 psi	GP-50	316DPJLC
FCV	371	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
MV	372	Ar	SHT-2	5-	F	condenser liq overflow to LAPD tank	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8122
FCV	373	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
FCV	374	N2	SHT-2	7-	E	insulation purges	rotameter	0 - 20 SCFH	100 psig	Dwyer Instruments	RMA-6-SSV
MV	375	Ar	SHT-2	4-	D	LAPD nozzle ar impurity purge vent	manual valve	NA	375 psig	Carten	MD-250
FO	376	Ar	SHT-2	4-	E	tank riser diffusion purge	orifice	3/32" (~Cv=0.2)	3500 psig	Swagelok	SS-8-VCR-2-BL
PSV	377	Ar	SHT-2	3-	D	LAPD tank relief vent	relief valve	3 psid internal / 0.2 psid external	25 psig	Anderson Greenwood	9399C06SSTC
PRV	378	N2	SHT-2	7-	F	nitrogen to tank insulation	pressure regulator	0.5 - 5 psig	250 psig	Matheson	3702
PI	379	N2	SHT-2	7-	F	nitrogen to tank insulation	pressure indicator on regulator	0 - 100 psig	100 psig	US Gauge	0 - 100 psig gauge
PI	380	N2	SHT-2	7-	F	nitrogen to tank insulation	pressure indicator on regulator	0 - 10 psig	10 psig	Matheson	0 - 10 psig gauge
FO	381	Ar	SHT-2	4-	E	tank riser diffusion purge	orifice	3/32" (~Cv=0.2)	3500 psig	Swagelok	SS-8-VCR-2-BL
FCV	382	N2	SHT-2	7-	F	nitrogen to tank insulation	rotameter	30-240 sccm	100 psig	Dwyer Instruments	RMA-11-SSV
FO	383	Ar	SHT-2	2-	D	tank riser diffusion purge	orifice	3/32" (~Cv=0.2)	3500 psig	Swagelok	SS-8-VCR-2-BL
MV	384	Ar	SHT-2	5-	C	LAPD tank vapor isolation	manual valve	NA	1000 psig	Swagelok	SS-88G-TW
HTR	385	Ar	SHT-2	5-	B	LAPD tank	tank heater #1	NA	external to process	Watlow	K020100C3-0009B
HTR	386	Ar	SHT-2	5-	B	LAPD tank	tank heater #2	NA	external to process	Watlow	K020100C3-0009B
HTR	387	Ar	SHT-2	4-	B	LAPD tank	tank heater #3	NA	external to process	Watlow	K020100C3-0009B
HTR	388	Ar	SHT-2	4-	B	LAPD tank	tank heater #4	NA	external to process	Watlow	K020100C3-0009B
HTR	389	Ar	SHT-2	4-	B	LAPD tank	tank heater #5	NA	external to process	Watlow	K020100C3-0009B
HTR	390	Ar	SHT-2	4-	B	LAPD tank	tank heater #6	NA	external to process	Watlow	K020100C3-0009B
HTR	391	Ar	SHT-2	4-	B	LAPD tank	tank heater #7	NA	external to process	Watlow	K020100C3-0009B
HTR	392	Ar	SHT-2	4-	B	LAPD tank	tank heater #8	NA	external to process	Watlow	K020100C3-0009B
HTR	393	Ar	SHT-2	4-	B	LAPD tank	tank heater #9	NA	external to process	Watlow	K020100C3-0009B
HTR	394	Ar	SHT-2	4-	B	LAPD tank	tank heater #10	NA	external to process	Watlow	K020100C3-0009B
HTR	395	Ar	SHT-2	4-	B	LAPD tank	tank heater #11	NA	external to process	Watlow	K020100C3-0009B
HTR	396	Ar	SHT-2	5-	B	LAPD tank	tank heater #12	NA	external to process	Watlow	K020100C3-0009B
HTR	397	Ar	SHT-2	5-	B	LAPD tank	tank heater #13	NA	external to process	Watlow	K020100C3-0009B
HTR	398	Ar	SHT-2	5-	B	LAPD tank	tank heater #14	NA	external to process	Watlow	K020100C3-0009B
HTR	399	Ar	SHT-2	3-	B	LAPD tank	tank heater #15	NA	external to process	Watlow	K020100C3-0009B
HTR	400	Ar	SHT-2	4-	B	LAPD tank	tank heater #16	NA	external to process	Watlow	K020100C3-0009B
HTR	401	Ar	SHT-2	4-	B	LAPD tank	tank heater #17	NA	external to process	Watlow	K020100C3-0009B
HTR	402	Ar	SHT-2	4-	B	LAPD tank	tank heater #18	NA	external to process	Watlow	K020100C3-0009B
HTR	403	Ar	SHT-2	4-	B	LAPD tank	tank heater #19	NA	external to process	Watlow	K020100C3-0009B
HTR	404	Ar	SHT-2	4-	B	LAPD tank	tank heater #20	NA	external to process	Watlow	K020100C3-0009B
HTR	405	Ar	SHT-2	4-	B	LAPD tank	tank heater #21	NA	external to process	Watlow	K020100C3-0009B
HTR	406	Ar	SHT-2	4-	B	LAPD tank	tank heater #22	NA	external to process	Watlow	K020100C3-0009B
HTR	407	Ar	SHT-2	3-	B	LAPD tank	tank heater #23	NA	external to process	Watlow	K020100C3-0009B
HTR	408	Ar	SHT-2	3-	B	LAPD tank	tank heater #24	NA	external to process	Watlow	K020100C3-0009B
TE	409	Ar	SHT-2	5-	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	410	Ar	SHT-2	5-	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	411	Ar	SHT-2	5-	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	412	Ar	SHT-2	4-	C	LAPD tank (midpoint)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon

LAPD - VALVE AND INSTRUMENT INDEX

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Instr Code	Tag #	Serv. Code	PID	END	LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
TE	413	Ar	SHT-2	4	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	414	Ar	SHT-2	4	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
MV	415	N2	SHT-2	7	F	nitrogen to tank insulation	manual valve	NA	1000 psig	Swagelok	B-4HK
FCV	417	N2	SHT-2	7	F	nitrogen to tank insulation	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
TE	418	Ar	SHT-2	4	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	419	Ar	SHT-2	4	C	LAPD tank (midpoint)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	420	Ar	SHT-2	4	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	421	Ar	SHT-2	4	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	422	Ar	SHT-2	4	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	423	Ar	SHT-2	3	C	LAPD tank (midpoint)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
MV	427	Ar	SHT-2	6	C	LAPD tank level	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
MV	428	Ar	SHT-2	4	D	LAPD tank sample line	manual valve	NA	1000 psig	Swagelok	SS-4BG-V47
FO	429	Ar	SHT-2	3	D	tank riser diffusion purge	orifice	3/32" (-Cv=0.2)	3500 psig	Swagelok	SS-8-VCR-2-BL
FO	430	Ar	SHT-2	2	D	tank riser diffusion purge	orifice	3/32" (-Cv=0.2)	3500 psig	Swagelok	SS-8-VCR-2-BL
PI	431	Ar	SHT-2	6	E	tank pressure makeup	pressure indicator	vac - 150 psig	150 psig	US Gauge	vac - 150 psig pressure gauge
AV	432	Ar	SHT-2	6	E	tank pressure makeup	automatic valve	NA	1000 psig	Swagelok	SS-6UW/19-TF-6C
SV	432	Ar	SHT-2	6	E	AV-432-Ar	solenoid valve	NA	150 psig	ASCO	EF8327G041
MV	433	Ar	SHT-2	5	E	tank pressure makeup	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
MV	434	Ar	SHT-2	4	F	LAPD tank vent to condenser	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
PI	435	Ar	SHT-2	4	F	LAPD tank vent to condenser	manual valve	vac - 60 psig	60 psig	Ashcroft	25-10095WVKLL
MV	436	Ar	SHT-2	3	E	bellows pump isolation	manual valve	NA	300 psig	Swagelok	6L-ELDB-CXX
MV	437	Ar	SHT-2	2	E	vent purge bellows pump sample	manual valve	NA	375 psig	Carten	MD-250
MV	438	Ar	SHT-2	2	E	vent purge bellows pump discharge	manual valve	NA	300 psig	Swagelok	6L-ELDB-CXX
TE	439	Ar	SHT-2	3	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	440	Ar	SHT-2	3	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	441	Ar	SHT-2	3	C	LAPD tank (midpoint)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	442	Ar	SHT-2	3	B	LAPD tank (base)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	443	Ar	SHT-2	3	C	LAPD tank (top - L)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	444	Ar	SHT-2	4	C	LAPD tank (top - E)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	445	Ar	SHT-2	4	C	LAPD tank (top - C)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	446	Ar	SHT-2	5	C	LAPD tank (top - A)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	447	Ar	SHT-2	5	C	LAPD tank (top - B)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
TE	448	Ar	SHT-2	3	C	LAPD tank (top - D)	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
FCV	449	N2	SHT-2	7	F	phase separator insulation purge	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
SV	450	N2	SHT-2	6	F	liq N2 from phase separator condenser coil #1	solenoid valve	NA	300 psig	Magnetrol	14L42, 24 VDC
FCV	451	N2	SHT-2	7	F	nitrogen to tank insulation	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
FCV	452	N2	SHT-2	7	F	nitrogen to tank insulation	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
FCV	453	N2	SHT-2	7	E	nitrogen to tank insulation	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
FCV	454	N2	SHT-2	7	E	nitrogen to tank insulation	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
MV	455	Ar	SHT-2	4	D	LAPD nozzle ar impurity purge vent	manual valve	NA	375 psig	Carten	MD-250
MV	456	Ar	SHT-2	4	D	LAPD nozzle ar impurity purge vent	manual valve	NA	375 psig	Carten	MD-250
MV	457	Ar	SHT-2	3	E	LAPD nozzle ar impurity purge vent	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
MV	458	Ar	SHT-2	4	E	LAPD nozzle ar impurity purge vent	manual valve	NA	2500 psig	Swagelok	SS-12UAW-TW
MV	459	Ar	SHT-2	3	E	LAPD nozzle ar impurity purge vent	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
PI	460	Ar	SHT-2	3	E	bellows pump suction	local pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-Z-WI-UZ-ZZZ ZZZ P/N 50328794
MV	461	Ar	SHT-2	3	E	bellows pump suction	manual valve	NA	300 psig	Swagelok	6L-ELDB-CXX
MV	462	Ar	SHT-2	3	E	bellows pump suction metering valve	manual valve	NA	700 psig	Swagelok	SS-4BMRW-TW
PI	463	Ar	SHT-2	3	E	bellows pump suction	local pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-Z-WI-UZ-ZZZ ZZZ P/N 50328794
MV	464	Ar	SHT-2	2	E	bellows pump discharge	manual valve	NA	300 psig	Swagelok	6L-ELDB-CXX
MV	465	Ar	SHT-2	5	F	condenser liquid to pump suction	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8122
MV	466	Ar	SHT-2	4	F	vapor from tank to condenser	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8131
FCV	467	N2	SHT-2	7	E	nitrogen to condenser insulation	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
PI	468	N2	SHT-2	5	H	nitrogen to condenser	pressure indicator	0 - 100 psig	100 psig	US Gauge	162988
MV	469	N2	SHT-2	5	G	nitrogen vent	manual valve	NA	1000 psig	Swagelok	B-4HK
MV	470	N2	SHT-2	6	G	phase separator vent pressure	manual valve	NA	1000 psig	Swagelok	B-4HK
SP	471	Ar	SHT-2	6	E	tank make up gas	particulate filter	NA	500 psig	McMASTER-CARR	4414K35
MV	472	Ar	SHT-2	5	E	tank make up gas vent	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
SP	473	Har	SHT-3	7	H	regeneration gas	particulate filter	NA	1177 psig	GKN and FNAL	GKN tool # 911112
SP	474	Ar	SHT-3	2	F	liquid argon fill	particulate filter	NA	1177 psig	GKN and FNAL	GKN tool # 911111
SP	475	Ar	SHT-3	5	B	liquid argon pump suction	particulate filter	NA	820 psig	GKN and FNAL	GKN tool # 911115
SP	476	Ar	SHT-3	7	F	liquid return to tank	particulate filter	NA	820 psig	GKN and FNAL	GKN tool # 911115
MV	477	N2	SHT-2	7	F	nitrogen purges	manual valve	NA	250 psig	Matheson	100-S
CV	478	Ar	SHT-2	6	B	argon for tank purge	check valve	2 psi crack	3000 psig	Swagelok	6L-CV4VR8
SP	479	N2	SHT-2	6	F	LN2 for condenser	Y-trainer (particulate filter)	NA	400 psig	McMASTER-CARR	44129K5 - 200 mesh
MV	480	Ar	SHT-2	6	B	tank dp valving vent	manual valve	NA	1000 psig	Swagelok	SS-4BG-V47
MV	481	Ar	SHT-2	3	E	purity monitor diffusion purge	manual valve	NA	1000 psig	Swagelok	SS-8BG-V51
MV	482	N2	SHT-2	7	G	LN2 for condenser	manual valve	NA	1000 psig	Swagelok	B-4HK
MV	483	Ar	SHT-2	4	D	breather isolation	manual valve	NA	15 psid	Varian	Bellows sealed conflat vacuum valve
SP	484	Ar	SHT-2	4	D	tank atmospheric breather	particulate filter - sintered metal filter	NA	175 psig	McMASTER-CARR	440K56
MV	485	Ar	SHT-2	6	D	tank pressure instrumentation valving	manual valve	NA	375 psig	Carten	MD 250
MV	486	Ar	SHT-2	6	D	tank pressure instrumentation valving	manual valve	NA	375 psig	Carten	MD 250
PI	487	Ar	SHT-2	6	D	tank vapor pressure	pressure indicator	0 - 35 psia	35 psig	Wallace & Tiernan	61A-1A-0035
MV	489	Ar	SHT-2	4	F	condenser Argon side	manual valve	NA	1000 psig	Swagelok	SS-8BG-V51
PSV	491	Ar	SHT-2	6	D	tank pressure instrumentation	relief valve	20 psig	2400 psig	Circle-Seal	5100-2MP

Instr Code	Tag #	Serv. Code	PID	END	LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
AE	492	V	SHT-2	2-	C	ambient	dewpoint transmitter	0-100% RH -40 to +80 C	external to process	Vaisala	HMT120KA1A2B12A1C0A
TE	493	N2	SHT-2	5-	G	N2 coil vent	100 ohm platinum RTD	NA	external to process	Minco	S651PD236A thermal ribbon
CV	494	N2	SHT-2	8-	F	N2 insulation purges	check valve	1/3 psia	3000 psig	Swagelok	B-4CP4-1/3
MV	495	N2	SHT-2	8-	F	N2 on/off to FCV	manual valve	NA	1000 psig	Swagelok	B-4HK
PI	496	Ar	SHT-2	4-	F	Pump cool down	pressure indicator	vac - 150 psig	150 psig	Ashcroft	25HPGG4FMVCRLLXLL30MM&150#
PSV	497	Ar	SHT-2	4-	F	Pump cool down trapped volume	relief valve	100 psig	2400 psig	Generant	CRV8-8V-K-100-PSI
MV	498	Ar	SHT-2	4-	F	Pump cool down	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
MV	499	Ar	SHT-2	4-	F	Pump cool down	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
PSV	500	Ar	SHT-3	7-	C	from LAPD tank to LAPD particulate filter before pump	relief valve	100 psig	2400 psig	Circle Seal	5100-2MP
AV	501	Ar	SHT-3	6-	B	from LAPD tank to LAPD particulate filter before pump (normally closed)	automatic valve (act'd by SV-641-N2)	NA	165 psid	Eden Cryogenics	ECV-70-Y-20-B-VJ
SV	501	Ar	SHT-3	6-	B	AV-501-Ar	solenoid valve	NA	100 psig	ASCO	EF8327G041
MV	502	Ar	SHT-3	6-	B	LAPD condenser to LAPD particulate filter before pump	manual valve	NA	165 psid	Eden Cryogenics	EVC-60-Y-10-B-VJ
SC	504	Ar	SHT-3	5-	B	argon pump	motor speed control	NA	external to process	Tohiba	VFS11-4007PL-WN(5)
PT	505	Ar	SHT-3	5-	B	argon pump vacuum jacket	pressure transmitter	0 - 1 Torr	1 atm	Granville-Phillips	275851-EU
MV	506	Ar	SHT-3	5-	C	pressure differential line on pump	pressure transmitter	NA	375 psig	Carten	MD 250
DPT	507	Ar	SHT-3	5-	C	pressure differential across pump	pressure differential transmitter	0-100 psid	500 psi	GP-50	316DP-JLC
MV	508	Ar	SHT-3	5-	B	pressure differential line on pump	manual valve	NA	375 psig	Carten	MD 250
PI	509	Ar	SHT-3	5-	C	pressure differential line on pump	local pressure indicator	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
PT	510	Ar	SHT-3	5-	C	pressure differential line on pump	pressure transmitter	0-250 psia	250 psia	Setra	2251250PAD41106
MV	511	Ar	SHT-3	4-	B	pressure differential line on pump	manual valve	NA	375 psig	Carten	MD 250
MV	512	Ar	SHT-3	4-	B	pump discharge	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
MV	513	Har	SHT-3	4-	F	regen gas to O2 filter	manual valve	NA	2500 psig	Swagelok	SS-12UAW-TW
MV	514	Ar	SHT-3	4-	B	from argon pump to flow transmitter, pump isolation	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
MV	516	Ar	SHT-3	3-	C	from argon pump to LAPD tank / filter bypass	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8122
PSV	517	Ar	SHT-3	6-	C	liquid argon from tank and condenser to particulate filter before pump	relief valve	100 psig	2400 psig	Circle Seal	5100-4MP
MV	527	Ar	SHT-3	3-	D	argon filtration	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
PSV	531	Ar	SHT-3	3-	E	from argon pump to first filter	relief valve	100 psig	2400 psig	Circle Seal	5100-4MP
CV	532	Ar	SHT-3	3-	D	vapor recirculation	check valve	2 psi crack	3000 psig	Swagelok	6L-CW4V4R8
PI	533	Har	SHT-3	7-	H	regen gas from heater to filters	local pressure indicator	vac - 150 psig	150 psig	US Gauge	FNAL stock item 1050-003500
PT	534	Har	SHT-3	7-	H	regen gas from heater to filters	pressure transmitter	0 - 100 psig	300 psig	Setra	C206.100 psig, top mounted bayonet
MV	535	Har	SHT-3	7-	H	regen gas from heater to filters	manual valve	NA	1000 psig	Sharpe	84-6-6-P-G-SW
MV	539	Har	SHT-3	6-	H	regen gas to filter one	manual valve	NA	1000 psig	Sharpe	84-6-6-P-G-SW
MV	540	Ar	SHT-3	4-	F	regen gas to filter one	manual valve	NA	2500 psig	Swagelok	SS-12UAW-TW
MV	541	Ar	SHT-3	3-	F	filter one sample connection	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
TE	542	Ar	SHT-3	4-	G	regen gas to molecular sieve	Type K TC	NA	100 psig	Omega	TC-K-NPT-G-72
PSV	543	Ar	SHT-3	1-	F	bulk liquid argon supply line	relief valve	100 psig	2400 psig	Circle-Seal	5180B-4M-100
MV	544	Ar	SHT-3	1-	F	bulk liquid argon supply line	manual valve	NA	600 psig	CPC-Cryolab	ES4-088-TPG standard length bonnet, 1" NPT, globe body
PI	545	Ar	SHT-3	1-	F	bulk liquid argon supply line	local pressure indicator	vac - 150 psig	150 psig	Ashcroft	25HPGG4FMVCRLLXLL30MM&150#
MV	547	Ar	SHT-3	2-	F	bulk liquid argon supply line	manual valve	NA	600 psig	CPC-Cryolab	ES4-088-TPG standard length bonnet, 1" NPT, globe body
PSV	548	Ar	SHT-3	2-	F	bulk liquid argon supply line	relief valve	100 psig	2400 psig	Circle-Seal	5180B-4M-100
MV	549	Ar	SHT-3	2-	F	bulk liquid argon supply line	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8122
MV	550	Ar	SHT-3	3-	D	liquid recirculation mole sieve input	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
PT	551	Ar	SHT-3	3-	D	liquid recirculation mole sieve input	pressure transmitter	0 - 500 psia	500 psia	Setra	2251250PAD41106
PI	552	Ar	SHT-3	3-	D	liquid recirculation mole sieve input	local pressure indicator	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
MV	553	Ar	SHT-3	2-	F	line from pump and bulk argon supply to first filter	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8129
MV	554	Ar	SHT-3	4-	F	filter one to filter two	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
AV	557	Ar	SHT-3	6-	F	filter three to purity monitor	automatic valve (act'd by SV-557-Ar)	NA	165 psid	Eden Cryogenics	BC-02146-8119
SV	557	Ar	SHT-3	6-	F	AV-557-Ar	solenoid valve	NA	150 psig	ASCO	EF8327G041
MV	559	Ar	SHT-3	6-	E	filter loop vent to argon vaporizer and atmosphere	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8129
MV	560	Ar	SHT-3	7-	G	purity monitor vent to vent compressor	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
FCV	562	Ar	SHT-3	7-	G	purity monitor vent	automatic valve (act'd by SV562-Ar)	NA	1000 psig	Swagelok	SS-6UW-V19-1TF-6C
SV	562	Ar	SHT-3	7-	G	FCV-552-Ar	solenoid valve	NA	150 psig	ASCO	EF8327G041
MV	563	Ar	SHT-3	6-	C	liquid argon from tank and condenser to particulate filter before pump	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
PSV	564	Ar	SHT-3	3-	B	from argon pump to first filter	relief valve	100 psig	2400 psig	Circle Seal	5100-4MP
MV	565	Har	SHT-3	4-	G	O2 filter regen vent to water analyzer	manual valve	NA	2500 psig	Swagelok	SS-12UAW-TW
AE	566	Har	SHT-3	2-	G	O2 filter regeneration vent	Dewpoint meter	-80 to +20 C	290 psia	Vaisala	DMT242A1A1A1B
PSV	568	Ar	SHT-3	4-	G	filter two	relief valve	100 psig	400 psig	Rockwood Swendeman	710NBEF-A
MV	569	Ar	SHT-3	4-	G	filter two	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
PT	570	Ar	SHT-3	4-	G	oxygen filter	pressure transmitter	0-250 psia	250 psia	Setra	2251250PAD41106
PI	571	Ar	SHT-3	4-	G	filter two	local pressure indicator	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
MV	572	Ar	SHT-3	4-	F	filter two sample connection	NA	160 psig	Swagelok	6LVV-DPBW4-P	
MV	573	Har	SHT-3	3-	G	filter one to analyzer	manual valve	NA	250 psig	Swagelok	SS-12UAW-TW
TE	574	Har	SHT-3	5-	G	regen gas to oxygen filter	Type K TC	NA	2500 psig	Omega	TC-K-NPT-G-72
AE	576	Har	SHT-3	2-	G	molecular sieve regeneration vent	Dewpoint meter	-80 to +20 C	290 psia	Vaisala	DMT242A1A1A1B
LT	586	Ar	SHT-3	6-	G	purity monitor liquid level	capacitance probe	0 - 44.6 inches	100 psig	American Magnetics	Model 185 Liquid Level Monitor
PSV	587	Ar	SHT-3	6-	G	purity monitor	relief valve	100 psig	400 psig	Rockwood Swendeman	710NBEF-A
PI	589	Ar	SHT-3	6-	H	purity monitor	local pressure indicator	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
PT	590	Ar	SHT-3	6-	H	purity monitor	pressure transmitter	0 - 250 psia	250 psia	Setra	2251250PAD41106
FCV	592	Har	SHT-3	7-	H	regen gas from heater to filters	Variable Area Flowmeter	0 - 1,000 SCFH	100 psig	Dwyer Instruments	RMC-106-SSV
MV	593	Ar	SHT-3	6-	G	purity monitor to LAPD tank	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
MV	594	Ar	SHT-3	3-	B	from argon pump to first filter, flowmeter isolation	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
FT	595	Ar	SHT-3	3-	B	from argon pump to first filter	coriolis flow transmitter	0 - 15 GPM	285 psig	Emerson Process Management	Micro Motion flowmeter CMP100M329NQBUEZZZ and transmitter 1700R12ABUEZZZ
MV	596	Ar	SHT-3	3-	B	from argon pump to first filter	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
MV	597	Ar	SHT-3	3-	B	from argon pump to first filter, blowdown	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47

LAPD - VALVE AND INSTRUMENT INDEX

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Instr Code	Tag #	Serv. Code	PID	END	LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
PSV	598	Ar	SHT-3	4-	B	from argon pump to first filter (trapped volume relief)	relief valve	100 psig	1000 psig	Circle Seal	5100-4MP
MV	599	Ar	SHT-3	3-	B	from argon pump to first filter, flowmeter bypass	manual valve	NA	2400 psig	Eden Cryogenics	BC-02146-8101
PSV	601	Ar	SHT-3	3-	F	filter one	relief valve	100 psig	400 psig	Rockwood Swindeman	710NEF-A
MV	602	Ar	SHT-3	3-	F	filter one	manual valve	NA	250 psig	Swagelok	8LVV-DPBW4-P
PT	603	Ar	SHT-3	3-	G	molecular sieve	pressure transmitter	0-250 psia	250 psig	Setra	2251250PAD41106
PI	604	Ar	SHT-3	3-	G	filter one	local pressure indicator	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
FCVE	606	Ar	SHT-3	4-	D	makeup argon gas to pump loop	flow control valve	0 - 10,000 sccm	150 psig	MKS	1480
CV	607	Ar	SHT-3	3-	D	makeup argon gas to pump loop	check valve	1 / 3 psi crack	150 psig	Hylok	CVWBVM-4-SM6L
MV	608	Ar	SHT-3	3-	D	makeup argon gas to pump loop	manual valve	NA	250 psig	Swagelok	8LVV-DPBW4-P
MV	609	Ar	SHT-3	3-	D	makeup argon gas to pump loop	manual valve	NA	250 psig	Swagelok	8LVV-DPBW4-P
MV	610	Ar	SHT-3	3-	D	from vent compressor to pump loop	manual valve	NA	300 psig	Swagelok	6L-ELDB-CCXX
TE	611	Ar	SHT-3	8-	E	filter loop vent to argon vaporizer and atmosphere	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-4-E-SL RTD
HTR	612	Har	SHT-3	6-	H	regen gas from heater to filters	Circulation heater	NA	100 psig	Omega	AHPF-122
PSV	615	Ar	SHT-3	8-	F	liquid return to tank	relief valve	100 psig	external to process	Circle Seal	5100-4MP
SP	620	Ar	SHT-3	1-	F	bulk liquid argon supply line	y-strainer	NA	400 psig	McMASTER-CARR	44125K45 - 200 mesh
TE	621	Ar	SHT-3	3-	F	molecular sieve	100 ohm platinum RTD	NA	400 psig	Omega	PR-18-2-100-1/4-6-E-SL RTD
TE	622	Ar	SHT-3	3-	F	molecular sieve	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-4-E-SL RTD
TE	623	Ar	SHT-3	3-	F	molecular sieve	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-6-E-SL RTD
TE	624	Ar	SHT-3	3-	F	molecular sieve	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-4-E-SL RTD
TE	625	Ar	SHT-3	3-	F	molecular sieve	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-6-E-SL RTD
TE	626	Ar	SHT-3	4-	F	oxygen filter	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-6-E-SL RTD
TE	627	Ar	SHT-3	4-	F	oxygen filter	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-4-E-SL RTD
TE	628	Ar	SHT-3	4-	F	oxygen filter	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-6-E-SL RTD
TE	629	Ar	SHT-3	4-	F	oxygen filter	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-4-E-SL RTD
TE	630	Ar	SHT-3	4-	F	oxygen filter	100 ohm platinum RTD	NA	external to process	Omega	PR-18-2-100-1/4-6-E-SL RTD
MV	633	Ar	SHT-3	6-	B	LAPD TANK TO Argon vaporizer	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
HTR	634	Har	SHT-3	6-	H	regen gas from heater to filters	Circulation heater	NA	165 psid	Omega	AHPF-122
TE	635	Har	SHT-3	6-	H	regen gas heater (gas flow)	Type K TC	NA	100 psig	Omega	TC-K-NPT-G-72
TE	636	Har	SHT-3	6-	H	regen gas heater (heater surface)	Type K TC	NA	100 psig	Watlow	75XKFGA120A
TE	637	Har	SHT-3	6-	H	regen gas heater (gas flow)	Type K TC	NA	external to process	Omega	TC-K-NPT-G-72
TE	638	Har	SHT-3	7-	H	regen gas heater (gas flow)	Type K TC	NA	100 psig	Omega	TC-K-NPT-G-72
TE	639	Har	SHT-3	6-	H	regen gas heater (heater surface)	Type K TC	NA	100 psig	Watlow	75XKFGA120A
TE	640	Har	SHT-3	6-	H	regen gas heater (gas flow)	Type K TC	NA	external to process	Omega	TC-K-NPT-G-72
PSV	650	Ar	SHT-3	7-	B	liquid line to pump	relief valve	100 psig	150 psig	Circle Seal	5100-2MP
PI	651	Ar	SHT-3	7-	B	liquid line to pump	pressure gauge	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
MV	652	Ar	SHT-3	7-	B	liquid line to pump	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
PI	653	Ar	SHT-3	7-	C	condenser to pump suction	pressure gauge	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
MV	654	Ar	SHT-3	7-	C	condenser to pump suction	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
PI	655	Ar	SHT-3	6-	C	liquid line to pump	pressure gauge	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
DPT	656	Ar	SHT-3	5-	C	liquid line to pump across filter	differential pressure transmitter	0 - 5 psid	160 psig	Setra	C239
PI	657	Ar	SHT-3	5-	C	liquid line to pump	pressure gauge	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
MV	658	Ar	SHT-3	5-	C	liquid line to pump	manual valve	NA	375 psig	Carten	MD 250
MV	659	Ar	SHT-3	6-	B	liquid line to pump	manual valve	NA	375 psig	Carten	MD 250
MV	660	Ar	SHT-3	5-	B	liquid line to pump	manual valve	NA	375 psig	Carten	MD 250
MV	661	Ar	SHT-3	4-	C	liquid line pump discharge	manual valve	NA	375 psig	Carten	MD 250
TE	662	Ar	SHT-3	5-	B	liquid pump temperature	100 ohm platinum RTD	NA	375 psig	Minco	S651PD236A thermal ribbon
PSV	663	Ar	SHT-3	4-	C	pump discharge trapped volume relief	relief valve	100 psig	2400 psig	Circle Seal	5100-4MP
FCV	664	N2	SHT-2	7-	E	nitrogen purge to liquid argon flowmeter foam insulation	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
PI	665	Ar	SHT-3	3-	B	liquid argon flowmeter inlet pressure	pressure gauge	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
PSV	666	V	SHT-3	5-	B	tank to pump vacuum jacket relief	relief valve (vacuum pumpout)	~ 0 psig	160 psig	CVI	V-1046-31 (spring removed)
LT	667	Ar	489659	4-	C	Liquid argon supply trailer liquid level	Level transmitter	0 - 100 %H2O		Ashcroft C	C1
MV	667	Ar	SHT-3	5-	E	future filter bypass isolation	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
PT	668	V	SHT-3	3-	F	molecular sieve vacuum	pressure transmitter	0 - 1 Torr	1 atm	Granville-Phillips	275851-EU
PT	669	V	SHT-3	4-	F	Cu filter vacuum	pressure transmitter	0 - 1 Torr	1 atm	Granville-Phillips	275851-EU
PSV	670	V	SHT-3	3-	F	molecular sieve vacuum	parallel plate relief	-0.25 psid	1 atm	Eden Cryogenics	Eden dwg # BC-02128-5815
PSV	671	V	SHT-3	4-	F	oxygen filter vacuum	parallel plate relief	-0.25 psid	1 atm	Eden Cryogenics	Eden dwg # BC-02128-5815
PSV	672	V	SHT-3	6-	F	inline purity monitor vacuum	parallel plate relief	-0.64 psid	1 atm	Fermlab	MB-106391
PI	673	Ar	SHT-3	8-	F	liquid return to tank	pressure gauge	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
PT	673	Ar	489659	4-	C	Liquid argon supply trailer	pressure transmitter	0 - 100 psig	100 psig	Ashcroft	Duratron #2279
MV	674	Ar	SHT-3	6-	F	inline purity monitor bypass	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
MV	675	Ar	SHT-3	7-	F	liquid return to tank	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
MV	676	Ar	SHT-3	6-	E	filter bypass	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
MV	677	Ar	SHT-3	6-	F	inline purity monitor bypass	manual valve	NA	1000 psig	Swagelok	SS-8BG-TW
PI	678	Ar	SHT-3	6-	F	inline purity monitor bypass	pressure gauge	vac - 160 psig	160 psig	WIKA	230.15 2" P/N 50328808
PI	680	Ar	SHT-3	2-	F	Lar supply	local pressure indicator	vac - 150 psig	150 psig	Ashcroft	25HPGG4FM/CR/LXLL30IMV&150#
MV	681	Ar	SHT-3	2-	F	Lar supply	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
FCV	682	N2	SHT-2	7-	E	nitrogen purge - spare	rotometer	30-240 sccm	100 psig	Dwyer	RMA-11-SSV
PSV	683	Ar	SHT-3	6-	F	liquid return to tank	relief valve	100 psig	2400 psig	Circle Seal	5100-4MP
PI	684	Har	SHT-3	7-	H	regeneration gas heater inlet	pressure gauge	vac - 150 psig	150 psig	US Gauge	FNAL stock item 1050-003500
MV	685	Har	SHT-3	7-	H	regeneration gas heater inlet	manual valve	NA	1000 psig	Sharpe	84-6-6-P-G-SW
MV	686	Har	SHT-3	3-	G	regeneration vent drain	manual valve	NA	1000 psig	Swagelok	B-4HK-2
MV	687	Har	SHT-3	3-	G	regeneration vent drain	manual valve	NA	1000 psig	Swagelok	B-4HK-2
MV	688	Ar	SHT-3	3-	B	post pump Lar trapped volume	manual valve	NA	1000 psig	Swagelok	SS-4BG-V47
MV	689	Ar	SHT-3	3-	B	post pump Lar trapped volume	manual valve	NA	300 psig	Swagelok	6L-ELDB-CCXX

LAPD - VALVE AND INSTRUMENT INDEX

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Instr Code	Tag #	Serv. Code	PID	END LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
PI	690	Ar	SHT-3	3- B	post pump Lar trapped volume	pressure gauge	vac - 150 psig	150 psig	Ashcroft	25HPGG4FMVCRLLXLL30MM&150#
MV	691	Ar	SHT-3	7- F	tank liquid return trapped volume	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
MV	692	Ar	SHT-3	7- F	tank liquid return trapped volume	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
PSV	693	Ar	SHT-3	7- E	trapped volume relief	relief valve	100 psig	2400 psig	Generant	CRV8-BV-K-100-PSI
MV	694	Ar	SHT-3	7- G	inline purity monitor	manual valve	NA	100 psig	Varian	951-5017
MV	695	Ar	SHT-3	7- G	liquid return to tank	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
PSV	696	Ar	SHT-3	7- G	cool pump cool down valving	relief valve	100 psig	2400 psig	Generant	CRV8-BV-K-100-PSI
PI	697	Ar	SHT-3	8- E	vaporizer outlet	pressure gauge	0 - 15 psig	15 psig	USA	NA
PI	698	Ar	SHT-3	7- G	pump discharge	pressure gauge	vac - 150 psig	150 psig	Ashcroft	25HPGG4FMVCRLLXLL30MM&150#
SV	699	Ar	SHT-3	8- E	LAr electric vaporizer	solenoid valve	NA	500 psig	included with vaporizer package	NA
TS	700	Ar	SHT-3	8- E	LAr electric vaporizer	temperature switch	- 20 F	500 psig	included with vaporizer package	NA
HTR	701	Ar	SHT-3	8- E	LAr electric vaporizer	heater	NA	500 psig	included with vaporizer package	NA
AE	702	Har	SHT-3	3- G	Regeneration gas vent	Hydrogen analyzer	0 - 10% H2	atm	Beacon	110
PT	703	Ar	SHT-3	6- F	O2 filter discharge	pressure transmitter	0 - 250 psia	250 psia	Setra	2251250PAD41106
PT	704	Ar	SHT-3	8- F	Tank side of return particulate filter	pressure transmitter	0 - 250 psia	250 psia	Setra	2251250PAD41106
SV	705	Har	SHT-3	7- H	Regen gas to filters	solenoid valve	NA	100 psig	Asico	8210B054
SV	706	Har	SHT-3	7- H	H2/Ar dilution shutoff	solenoid valve	NA	100 psig	Asico	8210B054
PI	707	Har	SHT-3	3- H	O2 filter regeneration vent H2 analyzer	pressure gauge	vac - 30 psig	30 psig	USG	FNAL stock item 1050-002500
MV	708	Har	SHT-3	3- H	O2 filter regeneration vent H2 analyzer	manual valve	NA	1000 psig	Swagelok	B-4HK
FCV	709	Har	SHT-3	3- H	O2 filter regeneration vent H2 analyzer	rotometer	30-240 scfm	100 psig	Dwyer	RMA-11-SSV
MV	710	Har	SHT-3	3- H	H2 analyzer	manual valve	NA	1000 psig	Swagelok	B-4HK
FCV	711	Har	SHT-3	3- H	H2 analyzer	rotometer	30-240 scfm	100 psig	Dwyer	RMA-11-SSV
MV	712	Har	SHT-3	3- H	H2 analyzer	manual valve	NA	1000 psig	Swagelok	B-4HK
FCV	713	Har	SHT-3	3- H	H2 analyzer	rotometer	30-240 scfm	100 psig	Dwyer	RMA-11-SSV
FCV	714	Har	SHT-3	7- H	H2/Ar dilution	rotometer	10 - 1000 SCFH	100 psig	Dwyer	RMC-102-SSV
PI	715	Har	SHT-3	7- H	H2/Ar dilution	pressure gauge	vac - 150 psig	150 psig	US Gauge	FNAL stock item 1050-003500
MV	716	Har	SHT-3	7- H	H2/Ar dilution	manual valve	NA	1000 psig	Swagelok	B-4HK
MV	717	Ar	SHT-3	5- B	pump strainer vent	manual valve	NA	1000 psig	Swagelok	SS-4BG-V47
MV	718	Ar	SHT-3	4- C	pump discharge cooldown	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
MV	719	Ar	SHT-3	4- C	pump discharge	manual valve	NA	1000 psig	Swagelok	SS-8BG-V47
PSV	720	Ar	SHT-3	3- C	pump discharge trapped volume relief	relief valve	100 psig	2400 psig	Generant	CRV8-BV-K-100-PSI
SP	721	Ar	SHT-3	5- F	Post filter particulate	particulate filter	NA	820 psig	GKN and FNAL	GKN tool # 9111/5
FO	722	Ar	SHT-3	6- F	inline purity monitor	orifice	3/8" (Cv = 2)	NA	Fermitab	NA
MV	803	N2	SHT-4	6- G	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
SP	804	N2	SHT-4	6- G	gas analyzers	H2O filter	NA	350	Matheson	460 (housing) + 461 (cartridge)
MV	805	N2	SHT-4	5- G	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	806	N2	SHT-4	5- G	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
SP	807	N2	SHT-4	5- G	gas analyzers	O2 filter	NA	150 psig	Airgas	Y40-RES0010K with Y40-RES0301 oxygen cartridge
MV	808	N2	SHT-4	5- G	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	809	N2	SHT-4	6- G	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	810	N2	SHT-4	6- F	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
SP	811	N2	SHT-4	6- F	gas analyzers	H2O filter	NA	350 psig	Matheson	460 (housing) + 461 (cartridge)
MV	812	N2	SHT-4	5- F	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	813	N2	SHT-4	5- F	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
SP	814	N2	SHT-4	5- F	contaminant gas to analyzers	O2 filter	NA	150 psig	Airgas	Y40-RES0010K with Y40-RES0301 oxygen cartridge
MV	815	N2	SHT-4	5- F	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
AE	819	V	SHT-4	2- E	vicinity of LAPD tank	ODH O2 sensor	0-25% O2	atm	MSA	A-ULTIMAX-PL-A-14-03D2-0000-100
AE	820	V	SHT-4	2- D	vicinity of LAPD tank	ODH O2 sensor	0-25% O2	atm	MSA	A-ULTIMAX-PL-A-14-03D2-0000-100
FS	821	V	SHT-4	1- D	ODH blower inlet duct	pressure differential switch	100-1000 cm/sec	atm	Efector	SL5101
MV	822	Ar	SHT-3	F	analyzer pump input	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
MV	827	N2	SHT-4	5- F	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	828	N2	SHT-4	5- G	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
PI	829	N2	SHT-4	5- G	gas analyzers	pressure indicator	vac - 160 psig	160 psig	Wika	230.15-B-PV412-Z-WI-UZ-ZZZ ZZ
CV	830	N2	SHT-4	5- F	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
CV	831	Ar	SHT-4	6- F	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
MV	840	Ar	SHT-4	3- F	gas analyzers	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
MV	841	Ar	SHT-4	3- F	gas analyzers	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
PI	842	Ar	SHT-4	4- F	gas analyzers	pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-Z-WI-UZ-ZZZ ZZ
PT	843	Ar	SHT-4	4- F	gas analyzers	pressure transmitter	0 - 100 psia	150 psig	Setra	2251100PAC411B1
PI	844	Ar	SHT-4	4- F	gas analyzers	pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-Z-WI-UZ-ZZZ ZZ
PT	845	Ar	SHT-4	4- F	gas analyzers	pressure transmitter	0 - 100 psia	150 psig	Setra	2251100PAC411B1
PSV	846	Ar	SHT-4	4- F	gas analyzers	relief valve	40 psig	2400 psig	Circle Seal	5100-2MP
CV	847	Ar	SHT-4	4- F	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
MV	848	Ar	SHT-4	4- F	gas analyzers	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
MV	849	Ar	SHT-4	4- F	gas analyzers	manual valve	NA	250 psig	Swagelok	6LVV-DPBW4-P
PI	850	Ar	SHT-4	3- F	gas analyzers	pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-Z-WI-UZ-ZZZ ZZ
PCV	851	N2	SHT-4	3- F	gas analyzers	pressure control valve	0 - 30 psig	300 psig	Matheson	9332-3-V4FF
EV	852	Ar	SHT-4	3- F	gas analyzers	control valve	Cv max = 0.02	750 psig	Swagelok	SS-4BMG-V51 w/actuator (Custom part # OS-FERMI-004)
MV	853	Ar	SHT-4	3- F	gas analyzers	manual valve	NA	1000 psig	Swagelok	SS-4BG-TW
AE	860	V	SHT-4	3- D	gas analyzers	Dewpoint meter	-80 to +20 C	290 psia	Vaisala	DMT242A1A1A1B
AE	861	V	SHT-4	6- C	gas analyzers	Dewpoint meter	-80 to +20 C	290 psia	Vaisala	DMT242A1A1A1B
MV	900	V	SHT-4	5- E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	901	V	SHT-4	5- E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	902	V	SHT-4	5- E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250

LAPD - VALVE AND INSTRUMENT INDEX

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Instr Code	Tag #	Serv. Code	PID	END	LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
MV	903	V	SHT-4	6-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	904	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	905	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	906	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	907	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	908	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	909	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	910	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	911	V	SHT-4	6-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	912	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	913	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	914	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	915	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	916	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	917	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	918	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	919	V	SHT-4	6-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	920	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	921	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	922	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	923	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	924	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	925	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	926	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	927	V	SHT-4	6-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	928	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	929	V	SHT-4	5-	A	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	930	V	SHT-4	5-	A	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	931	V	SHT-4	5-	A	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	932	V	SHT-4	5-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	933	V	SHT-4	5-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	934	V	SHT-4	5-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	935	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	936	V	SHT-4	4-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	937	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	938	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	939	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	940	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	941	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	942	V	SHT-4	5-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	943	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	944	V	SHT-4	4-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	945	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	946	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	947	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	948	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	949	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	950	V	SHT-4	5-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	951	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	952	V	SHT-4	4-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	953	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	954	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	955	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	956	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	957	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	958	V	SHT-4	5-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	959	V	SHT-4	5-	A	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	960	V	SHT-4	4-	B	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	961	V	SHT-4	5-	A	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	962	V	SHT-4	5-	A	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	963	V	SHT-4	5-	A	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	964	V	SHT-4	6-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
MV	965	V	SHT-4	6-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
PE	966	V	SHT-4	6-	E	gas analyzers	pressure element	NA	~ 1 atm	Granville Phillips	275 Convecron Gauge
CV	967	V	SHT-4	6-	E	gas analyzers	check valve	2 psig	3000 psig	Circle Seal	249T1APP-2 psi
CV	968	V	SHT-4	6-	D	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
MV	969	V	SHT-4	6-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
CV	970	V	SHT-4	6-	C	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
PCV	971	V	SHT-4	6-	B	gas analyzers	pressure control valve	0 - 30 psig	300 psig	Matheson	9332-3-V4FF
PI	972	V	SHT-4	6-	B	gas analyzers	pressure indicator	30°-0-60 psig	60 psig	Matheson	supplied with regulator
CV	973	V	SHT-4	6-	B	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
PCV	974	V	SHT-4	4-	D	gas analyzers	pressure control valve	0 - 30 psig	300 psig	Matheson	9332-3-V4FF
PI	975	V	SHT-4	4-	D	gas analyzers	pressure indicator	30°-0-60 psig	60 psig	Matheson	supplied with regulator
CV	976	V	SHT-4	4-	D	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4

LAPD - VALVE AND INSTRUMENT INDEX

Rev 10/24/12

Instr Code	Tag #	Serv. Code	PID	IBID	LOC	Service Description	Instrument Type	Operating Range or Setpoint	Pressure Rating	Manufacturer	Model No.
CV	977	V	SHT-4	4-	C	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
MV	978	V	SHT-4	4-	C	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
PCV	979	V	SHT-4	4-	C	gas analyzers	pressure control valve	0 - 30 psig	300 psig	Matheson	9332-3-V4FF
PI	980	V	SHT-4	4-	C	gas analyzers	pressure indicator	30"-0-60 psig	60 psig	Matheson	supplied with regulator
CV	981	V	SHT-4	4-	C	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
PCV	982	V	SHT-4	4-	B	gas analyzers	pressure control valve	0 - 30 psig	300 psig	Matheson	9332-3-V4FF
PI	983	V	SHT-4	4-	B	gas analyzers	pressure indicator	30"-0-60 psig	60 psig	Matheson	supplied with regulator
CV	984	V	SHT-4	4-	B	gas analyzers	check valve	2 psig	3000 psig	Swagelok	6L-CW4FR4
AE	990	V	SHT-4	7-	D	gas analyzers	oxygen analyzer	0 - 2.5 ppm	125 psig	Tiger Optics	LaserTrace O2
AE	991	V	SHT-4	7-	C	gas analyzers	water analyzer	0 - 20 ppm	125 psig	Tiger Optics	HaloTrace H2O
AE	992	V	SHT-4	7-	B	gas analyzers	oxygen analyzer	0 - 50 ppm	30 psig	Delta-F	DF-310E
AE	993	V	SHT-4	4-	D	gas analyzers	nitrogen analyzer	0 - 100 ppm	30 psig	Servomex/Kontrol Analytik	K2001
AE	994	V	SHT-4	4-	D	gas analyzers	water analyzer	0 - 5 ppm	125 psig	Tiger Optics	LaserTrace H2O
AE	995	V	SHT-4	4-	B	gas analyzers	oxygen analyzer	0 - 100 ppm	30 psig	Delta-F	NanoTrace II DF-560
AE	996	V	SHT-4	4-	A	gas analyzers	oxygen analyzer	0 - 5000 ppm	30 psig	Delta-F	DF-310
MV	997	V	SHT-4	6-	E	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
PI	998	V	SHT-4	6-	E	gas analyzers	pressure indicator	vac - 60 psig	60 psig	Wika	230.15-B-PV352-2-WI-UZ-ZZZ ZZ
MV	999	V	SHT-4	6-	D	gas analyzers	manual valve	NA	375 psig	Carten	MD-250
SP	1001	N2	SHT-1	3-	G	N2 liquid to LBNE 35T	particulate filter	NA	1400 psig	McMaster	4745K555
MV	1002	N2	SHT-1	3-	G	N2 liquid to LBNE 35T instrumentation	manual valve	NA	1000 psig	Swagelok	B-4HK2
MV	1003	N2	SHT-1	3-	G	N2 liquid to LBNE 35T instrumentation	manual valve	NA	1000 psig	Swagelok	B-4HK2
PI	1004	N2	SHT-1	3-	G	N2 liquid to LBNE 35T instrumentation	pressure indicator	vac - 150 psig	150 psig	US Gauge	FNAL STK 1050-003500
MV	1005	N2	SHT-1	3-	G	N2 liquid to LBNE 35T	manual valve	NA	870 psig	Worcester	1" #C4466 PM SW
MV	1006	N2	SHT-1	3-	G	N2 liquid to LBNE 35T instrumentation	manual valve	NA	1000 psig	Swagelok	B-4HK2
MV	1007	N2	SHT-1	3-	G	N2 liquid to LBNE 35T instrumentation	manual valve	NA	1000 psig	Swagelok	B-4HK2
PSV	1008	N2	SHT-1	3-	G	N2 liquid to LBNE 35T	relief valve	100 psig	2400 psig	Circle Seal	5100-4MP
PI	1009	N2	SHT-1	3-	G	N2 liquid to LBNE 35T instrumentation	pressure gauge	vac - 150 psig	150 psig	US Gauge	FNAL STK 1050-003500
PT	1010	N2	SHT-1	3-	G	N2 liquid to LBNE 35T	pressure transmitter	vac - 135 psig	135 psig	Setra	5161-135P-C-2M-11-B1-H
MV	5001	Ar	SHT-3	4-	A	LBNE 35T to filter (isolation)	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101
MV	5002	Ar	SHT-3	7-	F	LBNE 35T from filters (isolation)	manual valve	NA	165 psid	Eden Cryogenics	BC-02146-8101