



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0642

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: FireFlex

Manufacturer's Technical Representative: Jonathan Roger

Mailing Address: 1935 Lionel-Bertrand Blvd., Boisbriand, QC J7H1N8

Telephone: (450) 437-3473

Email: JRoger@fireflex.com

Product Information

Product Name: Electrical Control Panels on Life Safety/Critical Branch

Product Type: Fire Protection & Security Panels

Product Model Number: TotalPac3

General Description: _____

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: Forell/Elsesser Engineers

Contact Person: Christopher Tung

Mailing Address: 160 Pine Street, San Francisco, CA 94111

Telephone: (415) 837-0700

Email: c.tung@forell.com

Title: _____





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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

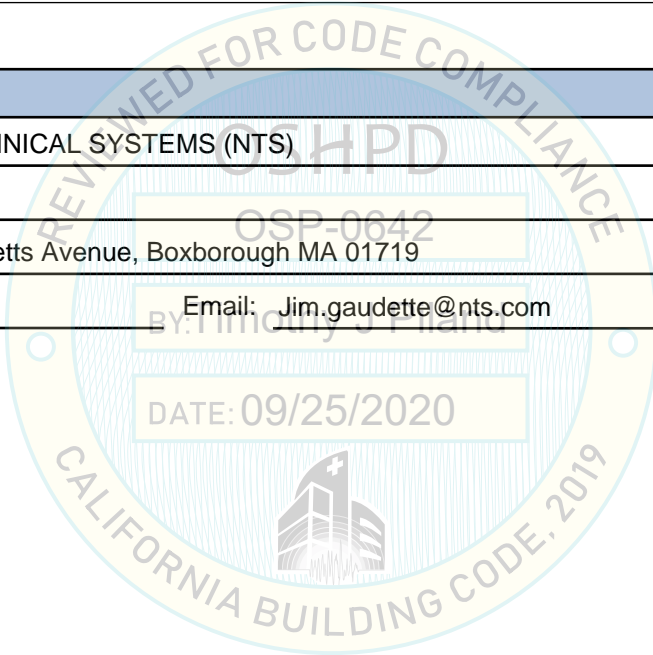
Company Name: FORELL / ELSESSER ENGINEERS, INC.
Name: Marco Scanu California License Number: S4454
Mailing Address: 160 Pine Street, Suite 600, San Francisco, CA 94111
Telephone: (415) 837-0700 Email: scanu@forell.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS)
Contact Person: Jim Gaudette
Mailing Address: 1146 Massachusetts Avenue, Boxborough MA 01719
Telephone: (978) 263-9515 Email: Jim.gaudette@nts.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.60

SDS (Design spectral response acceleration at short period, g) = 2.22

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Application

Overall dimensions and weight = See Application

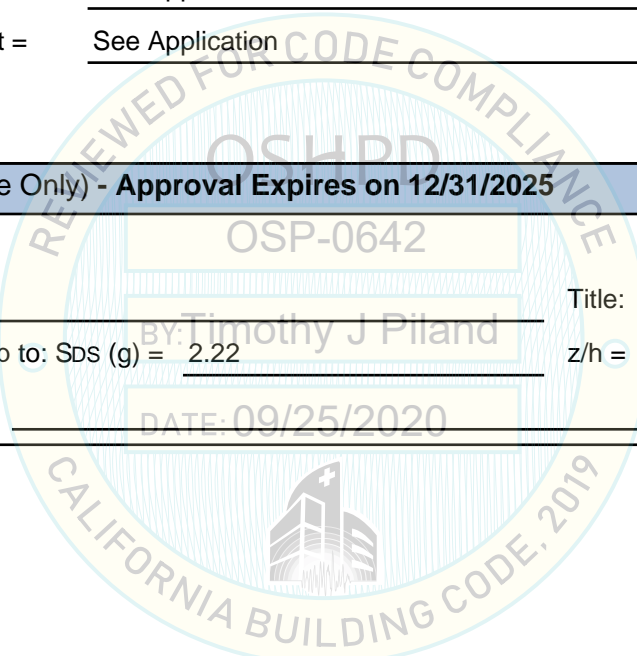
OSHPD Approval (For Office Use Only) - Approval Expires on 12/31/2025

Date: 9/25/2020

Name: Timothy Piland Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = 2.22 z/h = 1

Condition of Approval (if applicable): DATE: 09/25/2020

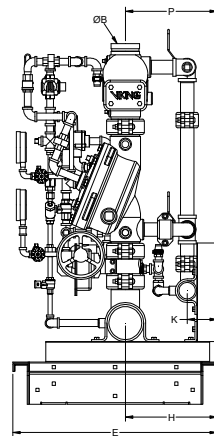
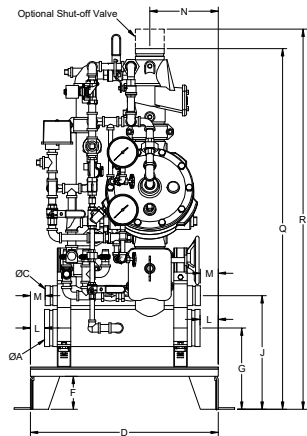


TOTALPAC3 Product Line Summary

Main Model number	Unit	Width (in)	Height (in)	Depth (in)	Operating Weight (lb)	Construction Material	Notes	S _{DS} (g) z/h =1	Unit
T3PXXXSK15	1-1/2" Preaction skid mounted unit	23	45	25	285	11ga-7ga CRS	1	2.22	UUT-1
T3PXXXSK20	2" Preaction skid mounted unit	23	45	25	290	11ga-7ga CRS	1	2.22	Interpolated
T3PXXXSK30	3" Preaction skid mounted unit	36	48	25	477	11ga-7ga CRS	1	2.22	Interpolated
T3PXXXSK40	4" Preaction skid mounted unit	36	53	25	490	11ga-7ga CRS	1	2.22	Interpolated
T3PXXXSK60	6" Preaction skid mounted unit	46	65	25	695	11ga-7ga CRS	1	2.22	Interpolated
T3DXXXSK15	1-1/2" Deluge skid mounted unit	23	45	25	280	11ga-7ga CRS	1	2.22	Interpolated
T3DXXXSK20	2" Deluge skid mounted unit	23	45	25	285	11ga-7ga CRS	1	2.22	Interpolated
T3DXXXSK30	3" Deluge skid mounted unit	36	48	25	395	11ga-7ga CRS	1	2.22	Interpolated
T3DXXXSK40	4" Deluge skid mounted unit	36	53	25	410	11ga-7ga CRS	1	2.22	Interpolated
T3DXXXSK60	6" Deluge skid mounted unit	46	65	25	665	11ga-7ga CRS	1	2.22	Interpolated
T3FXXXSK15	1-1/2" Firecylce skid mounted unit	23	45	25	295	11ga-7ga CRS	1	2.22	Interpolated
T3FXXXSK20	2" Firecylce skid mounted unit	23	45	25	300	11ga-7ga CRS	1	2.22	Interpolated
T3FXXXSK30	3" Firecylce skid mounted unit	36	48	25	485	11ga-7ga CRS	1	2.22	Interpolated
T3FXXXSK40	4" Firecylce skid mounted unit	36	53	25	500	11ga-7ga CRS	1	2.22	Interpolated
T3FXXXSK60	6" Firecylce skid mounted unit	46	65	25	705	11ga-7ga CRS	1	2.22	Interpolated
T3SXXXSK15	1-1/2" Surefire skid mounted unit	23	45	25	305	11ga-7ga CRS	1	2.22	Interpolated
T3SXXXSK20	2" Surefire skid mounted unit	23	45	25	310	11ga-7ga CRS	1	2.22	Interpolated
T3SXXXSK30	3" Surefire skid mounted unit	36	48	25	495	11ga-7ga CRS	1	2.22	Interpolated
T3SXXXSK40	4" Surefire skid mounted unit	36	53	25	510	11ga-7ga CRS	1	2.22	Interpolated
T3SXXXSK60	6" Surefire skid mounted unit	46	65	25	715	11ga-7ga CRS	1	2.22	Interpolated
T3DRXXSK40	4" Dry pipe skid mounted unit	36	53	25	445	11ga-7ga CRS	1	2.22	Interpolated
T3DRXXSK60	6" Dry pipe skid mounted unit	46	65	25	665	11ga-7ga CRS	1	2.22	Interpolated

Notes

- Floor mounted.



A = Main Inlet Manifold Diameter
 B = Sprinkler Riser Diameter
 C = Drain Manifold Diameter

FM0611-0-132A

DATE: 09/25/2020

System Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
1½"	2"	1½"	2"	23"	25"	4"	8¾"	11½"	13½"	3¾"	2"	2"	2"	11"	38"	45"
2"	2"	2"	2"	23"	25"	4"	8¾"	11½"	13½"	3¾"	2"	2"	2"	11"	38"	45"
3"	4"	3"	2"	36"	25"	4"	10"	11½"	13½"	3¾"	2"	2"	2"	11¼"	44"	48"
4"	4"	4"	2"	36"	25"	4"	10"	11½"	13½"	3¾"	2"	2"	16"	11¼"	48"	53"
6"	6"	6"	2"	46"	25"	4"	11"	11½"	13½"	3¾"	2"	2"	22¼"	11¼"	60"	65"

Note: Dimensions are nominal and may vary ±1/4"

TOTALPAC3 Product Line Summary

Main Model number	Unit	Width (in)	Height (in)	Depth (in)	Operating Weight (lb)	Construction Material	Notes	S _{ps} (g) z/h =1	Unit
T3PXXXNP15	1-1/2" Preaction enclosure unit	23	77	25	450	14ga-7ga CRS	1	2.22	Interpolated
T3PXXXNP20	2" Preaction enclosure unit	23	77	25	455	14ga-7ga CRS	1	2.22	Interpolated
T3PXXXNP30	3" Preaction enclosure unit	36	77	25	730	14ga-7ga CRS	1	2.22	Interpolated
T3PXXXNP40	4" Preaction enclosure unit	36	77	25	755	14ga-7ga CRS	1	2.22	Interpolated
T3PXXXNP60	6" Preaction enclosure unit	46	77	25	1025	14ga-7ga CRS	1	2.22	Interpolated
T3PXXXNP80	8" Preaction enclosure unit	54	81	31	1475	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXNP15	1-1/2" Deluge enclosure unit	23	77	25	455	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXNP20	2" Deluge enclosure unit	23	77	25	450	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXNP30	3" Deluge enclosure unit	36	77	25	690	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXNP40	4" Deluge enclosure unit	36	77	25	705	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXNP60	6" Deluge enclosure unit	46	77	25	1010	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXNP80	8" Deluge enclosure unit	54	81	31	1470	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXNP15	1-1/2" Firecycle enclosure unit	23	77	25	460	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXNP20	2" Firecycle enclosure unit	23	77	25	465	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXNP30	3" Firecycle enclosure unit	36	77	25	740	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXNP40	4" Firecycle enclosure unit	36	77	25	755	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXNP60	6" Firecycle enclosure unit	46	77	25	1035	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXNP80	8" Firecycle enclosure unit	54	81	31	1485	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXNP15	1-1/2" Surefire enclosure unit	23	77	25	470	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXNP20	2" Surefire enclosure unit	23	77	25	475	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXNP30	3" Surefire enclosure unit	36	77	25	750	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXNP40	4" Surefire enclosure unit	36	77	25	765	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXNP60	6" Surefire enclosure unit	46	77	25	1045	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXNP80	8" Surefire enclosure unit	54	81	31	1495	14ga-7ga CRS	1	2.22	Interpolated
T3DRXXXNP40	4" Dry pipe enclosure unit	36	77	25	710	14ga-7ga CRS	1	2.22	UUT-2
T3DRXXXNP60	6" Dry pipe enclosure unit	46	77	25	995	14ga-7ga CRS	1	2.22	Extrapolated

Notes

1. Floor mounted.

System Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
1 1/2"	2"	1 1/2"	2"	23"	25"	77"	4"	8 3/4"	11 1/2"	13 1/2"	3 3/4"	2"	2"	8 3/4"	11"	38"	45"	34"
2"	2"	2"	2"	23"	25"	77"	4"	8 3/4"	11 1/2"	13 1/2"	3 3/4"	2"	2"	8 3/4"	11"	38"	45"	34"
3"	4"	3"	2"	36"	25"	77"	4"	10"	11 1/2"	13 1/2"	3 3/4"	2"	2"	10"	11 1/4"	44"	48"	37"
4"	4"	4"	2"	36"	25"	77"	4"	10"	11 1/2"	13 1/2"	3 3/4"	2"	2"	16"	11 1/4"	48"	53"	42"
6"	6"	6"	2"	46"	25"	77"	4"	11"	11 1/2"	13 1/2"	3 3/4"	2"	2"	22 1/4"	11 1/4"	60"	65"	N/A
8"	8"	8"	2"	54"	31"	81"	4"	12"	13 1/4"	17 1/2"	3 3/4"	4"	4"	23 1/2"	13 1/4"	70"	75"	N/A

Note: Dimensions are nominal and may vary ±1/4"

TOTALPAC3 Product Line Summary

Main Model number	Unit	Width (in)	Height (in)	Depth (in)	Operating Weight (lb)	Construction Material	Notes	S _{ps} (g) z/h =1	Unit
T3PXXXWP15	1-1/2" Preaction enclosure unit	23	77	25	475	14ga-7ga CRS	1	2.22	Extrapolated
T3PXXXWP20	2" Preaction enclosure unit	23	77	25	480	14ga-7ga CRS	1	2.22	UUT-3
T3PXXXWP30	3" Preaction enclosure unit	36	77	25	755	14ga-7ga CRS	1	2.22	Interpolated
T3PXXXWP40	4" Preaction enclosure unit	36	77	25	770	14ga-7ga CRS	1	2.22	UUT-4
T3PXXXWP60	6" Preaction enclosure unit	46	77	25	1050	14ga-7ga CRS	1	2.22	Interpolated
T3PXXXWP80	8" Preaction enclosure unit	54	81	31	1500	14ga-7ga CRS	1	2.22	UUT-5
T3DXXXWP15	1-1/2" Deluge enclosure unit	23	77	25	470	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXWP20	2" Deluge enclosure unit	23	77	25	475	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXWP30	3" Deluge enclosure unit	36	77	25	715	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXWP40	4" Deluge enclosure unit	36	77	25	730	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXWP60	6" Deluge enclosure unit	46	77	25	1035	14ga-7ga CRS	1	2.22	Interpolated
T3DXXXWP80	8" Deluge enclosure unit	54	81	31	1495	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXWP15	1-1/2" Firecycle enclosure unit	23	77	25	485	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXWP20	2" Firecycle enclosure unit	23	77	25	490	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXWP30	3" Firecycle enclosure unit	36	77	25	765	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXWP40	4" Firecycle enclosure unit	36	77	25	780	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXWP60	6" Firecycle enclosure unit	46	77	25	1060	14ga-7ga CRS	1	2.22	Interpolated
T3FXXXWP80	8" Firecycle enclosure unit	54	81	31	1510	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXWP15	1-1/2" Surefire enclosure unit	23	77	25	495	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXWP20	2" Surefire enclosure unit	23	77	25	500	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXWP30	3" Surefire enclosure unit	36	77	25	775	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXWP40	4" Surefire enclosure unit	36	77	25	790	14ga-7ga CRS	1	2.22	Interpolated
T3SXXXWP60	6" Surefire enclosure unit	46	77	25	1070	14ga-7ga CRS	1	2.22	UUT-6
T3SXXXWP80	8" Surefire enclosure unit	54	81	31	1520	14ga-7ga CRS	1	2.22	Extrapolated

Notes

1. Floor mounted.

System Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T
1 1/2"	2"	1 1/2"	2"	23"	25"	77"	4"	8 3/4"	11 1/2"	13 1/2"	3 3/4"	2"	2"	8 3/4"	11"	38"	45"	34"
2"	2"	2"	2"	23"	25"	77"	4"	8 3/4"	11 1/2"	13 1/2"	3 3/4"	2"	2"	8 3/4"	11"	38"	45"	34"
3"	4"	3"	2"	36"	25"	77"	4"	10"	11 1/2"	13 1/2"	3 3/4"	2"	2"	10"	11 1/4"	44"	48"	37"
4"	4"	4"	2"	36"	25"	77"	4"	10"	11 1/2"	13 1/2"	3 3/4"	2"	2"	16"	11 1/4"	48"	53"	42"
6"	6"	6"	2"	46"	25"	77"	4"	11"	11 1/2"	13 1/2"	3 3/4"	2"	2"	22 1/4"	11 1/4"	60"	65"	N/A
8"	8"	8"	2"	54"	31"	81"	4"	12"	13 1/4"	17 1/2"	3 3/4"	4"	4"	23 1/2"	13 1/4"	70"	75"	N/A

TOTALPAC3 Product Line Summary

Manufacturer	Model number	Description	Test in UUT
Viking Corp.	F-1, 12125	Deluge Valve* straight through style	UUT-1
	F-1, 12057	Deluge Valve* straight through style	UUT-3
	F-1, 12022	Deluge Valve* straight through style	Interpolated
	F-1, 11513	Deluge Valve* straight through style	UUT-4
	F-1, 11524	Deluge Valve* straight through style	UUT-6
	F-1, 11018	Deluge Valve* straight through style	UUT-5
Viking Corp.	J-1, 12129	Flow control Valve*	Interpolated
	J-1, 12061	Flow control Valve*	Interpolated
	J-1, 12024	Flow control Valve*	Interpolated
	J-1, 11516	Flow control Valve*	Interpolated
	J-1, 11527	Flow control Valve*	Interpolated
	J-1, 11019	Flow control Valve*	Interpolated
Viking Corp.	F-1, 07627	Dry pipe Valve	UUT-2
	F-1, 12654	Dry pipe Valve	Extrapolated
Viking Corp.	L-1, 11054	In-line swing check valve grooved	UUT-1
	L-1, 11059	In-line swing check valve grooved	UUT-3
Viking Corp.	F-1, 08507	Easy riser swing check valve	Interpolated
	F-1, 08510	Easy riser swing check valve	UUT-4
	F-1, 08513	Easy riser swing check valve	UUT-6
	F-1, 08516	Easy riser swing check valve	UUT-5
Viking Corp.	H-1	Pneumatic actuator	All UUT
Viking Corp.	11591	solenoid valve 24VDC/NC 250 psi	UUT-1, UUT-3, UUT-4, UUT-6
Viking Corp.	11595	solenoid valve 24V.DC/NO 250psi	UUT-5

VERY IMPORTANT: * These valves are physically the same, only one of the three valves is used in a system. Differences between the systems are the number of fittings, length of nipples and settings for the VFR-400 release control Panel if installed.

TOTALPAC3 Product Line Summary

Manufacturer	Model number	Description	Test in UUT
Viking Corp.	D-1, 10730	Drip check del & flow valve	UUT-1, UUT-3, UUT-4, UUT-5 and UUT-6
Viking Corp.	D-3, 10732	Drip check for dry valve	UUT-2
Viking Corp.	D-3, 16970	Pressure operated relief valve (PORV)	UUT-1, UUT-3, UUT-4, UUT-5 and UUT-6
Viking Corp.	10110	1/4" x .062" Restriction orifice	All UUT
Viking Corp.	05781A	swing check valve with .067 hole	All UUT
Viking Corp.	04947A	spring loaded check valve	All UUT
Potter Electric	1340101	PS10-1 single pressure switch	All UUT
Fireflex	T3PIPPMA15	Main pipe	UUT-1
	T3PIPPMA20	Main pipe	UUT-3
	T3PIPPMA30	Main pipe	Interpolated
	T3PIPPMA40	Main pipe	UUT-4
	T3PIPPMA60	Main pipe	UUT-6
	T3PIPPMA80	Main pipe	UUT-5
Fireflex	T3PIPPDR15	Drain pipe	UUT-1
	T3PIPPDR20	Drain pipe	UUT-3
	T3PIPPDR30	Drain pipe	Interpolated
	T3PIPPDR40	Drain pipe	UUT-4
	T3PIPPDR60	Drain pipe	UUT-6
	T3PIPPDR80	Drain pipe	UUT-5
Various	Various	Grooved couplings & Fittings (elbow, tee, cap)	UUT-1
	Various	Grooved couplings & Fittings (elbow, tee, cap)	UUT-3
	Various	Grooved couplings & Fittings (elbow, tee, cap)	Interpolated
	Various	Grooved couplings & Fittings (elbow, tee, cap)	UUT-4
	Various	Grooved couplings & Fittings (elbow, tee, cap)	UUT-6
	Various	Grooved couplings & Fittings (elbow, tee, cap)	UUT-5

TOTALPAC3 Product Line Summary

Manufacturer	Model number	Description	Test in UUT
Victaulic	728	1-1/2" grooved end valve	UUT-1
	728	2" grooved end valve	UUT-3
Nibco	GD4765-8N	3" Grooved butterfly valve	Interpolated
	GD4765-8N	4" Grooved butterfly valve	Interpolated
	GD4765-8N	6" Grooved butterfly valve	UUT-6
	GD4765-8N	8" Grooved butterfly valve	UUT-5
Nibco	T-FP-600A, NL998H4	Ball Valve – Brass, Two-Piece, Full Port, NPT x NPT	All UUT
	T-FP-600A, NL998H6	Ball Valve – Brass, Two-Piece, Full Port, NPT x NPT	All UUT
	T-FP-600A, NL998H8	Ball Valve – Brass, Two-Piece, Full Port, NPT x NPT	All UUT
	T-FP-600A, NL998HB	Ball Valve – Brass, Two-Piece, Full Port, NPT x NPT	Interpolated
	T-FP-600A, NL998HD	Ball Valve – Brass, Two-Piece, Full Port, NPT x NPT	UUT-3, UUT-4, UUT-5 and UUT-6
Fivalco	Fireriser HPG	3" Grooved butterfly valve	Extrapolated
	Fireriser HPG	4" Grooved butterfly valve	UUT-4
	Fireriser HPG	6" Grooved butterfly valve	Interpolated
	Fireriser HPG	8" Grooved butterfly valve	UUT-5
KVC Industries	F-1 100T	600 WOG FP NPTFORGED BRASS BALL VALVE	All UUT
	F-1 100T	600 WOG FP NPTFORGED BRASS BALL VALVE	All UUT
	F-1 100T	600 WOG FP NPTFORGED BRASS BALL VALVE	UUT-1, UUT-3
	F-1 100T	600 WOG FP NPTFORGED BRASS BALL VALVE	Interpolated
	F-1 100T	600 WOG FP NPTFORGED BRASS BALL VALVE	UUT-4, UUT-5, UUT-6
Wika	50021214	Water gauge kilo 0-300 psi/kPa	UUT-1, UUT-2, UUT-3, UUT-5, UUT-6
Wika	4279931	Air gauge kilo 0-80 and 250 psi/kPa	UUT-1, UUT-2, UUT-3, UUT-5, UUT-6
Winters	PFE3933	Water gauge kilo 0-300 psi/kPa	UUT-4
Winters	PFE3932	Air gauge kilo 0-80 and 250 psi/kPa	UUT-4
United Brass	200-50 ME	Strainer 50 mesh	All UUT

TOTALPAC3 Product Line Summary

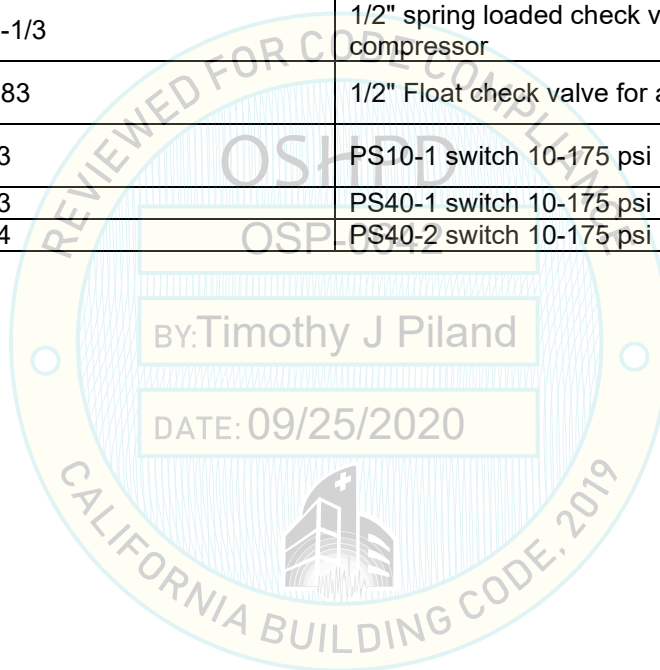
Manufacturer	Model number	Description	Test in UUT
Fireflex	T3EMERG001	Emergency release assembly for unit in a cabinet	UUT-2, UUT-3, UUT-4, UUT-5, UUT-6
Fireflex	T3EMBOX001	Emergency release assembly in a box for skid units	UUT-1
Various		Threaded fittings and nipples	All UUT
Viking Corp	08055	Accelerator E-1 without anti-flood device	UUT-4
Viking Corp	08116	Accelerator E-1 With anti-flood device fro dry pipe system	UUT-2
Viking Corp	01285A	Dehydrator	UUT-3
Viking Corp	04624A	Air pressure maintenance device AMPD	UUT-1
Viking Corp	14800	Anti-column Device LD-1	UUT-2
Fireflex	T3EMERG001	Emergency release assembly for unit in a cabinet	UUT-2, UUT-3, UUT-4, UUT-5, UUT-6

Manufacturer	Model number	Description	Test in UUT
Viking Corp.	VFR-400	Control panel board	All UUT
Power Max	SB 1275	Batteries 12V 7.5 Ah	UUT-3, UUT-4
	SB 12120	Batteries 12V 12 Ah	UUT-6
	SB 12180	Batteries 12V 18 Ah	UUT-5
Enerwatt, AGM Series	WP7.5-12	Batteries 12V 7.5 Ah	UUT-3, UUT-4
	WP12-12	Batteries 12V 12 Ah	UUT-6
	WP20-12	Batteries 12V 20 Ah	UUT-5
Fireflex	T3WIRING01	Electrical wiring for VFR-400 panel in a junction box	UUT-3, UUT-4, UUT-5, UUT-6
	T3WIRING02	Electrical wiring for VFR-400 panel in a junction box if Panel is installed by others, outside of the unit	Extrapolated

TOTALPAC3 Product Line Summary

Manufacturer	Model number	Description	Test in UUT
General Air Products *	OL12516A	Air compressor manual 120/220V 60Hz	UUT-3
	OL25033A	Air compressor manual 120/220V 60Hz	UUT-4
	OL36550A	Air compressor manual 120/220V 60Hz	UUT-2
	OL615100A	Air compressor manual 120/220V 60Hz	UUT-6
	OL915150A	Air compressor manual 120/220V 60Hz	Interpolated
	OL1225200A	Air compressor manual 120/220V 60Hz	UUT-5
Hallen Bradley	HBL 1221I	Elect switch for compressor on off	All UUT
Furnas	69HA3	Pressure switch	UUT-2, UUT-3, UUT-4, UUT-5, UUT-6
Swagelock	B-8CP2-1/3	1/2" spring loaded check valve for air compressor	UUT-2, UUT-3, UUT-4, UUT-5, UUT-6
Viking Corp.	A-1 10883	1/2" Float check valve for air compressor	UUT-2, UUT-3, UUT-4, UUT-5, UUT-6
Potter Electric	1340103	PS10-1 switch 10-175 psi	UUT-1, UUT-3, UUT-4, UUT-5, UUT-6
	1340403	PS40-1 switch 10-175 psi	UUT-1, UUT-3, UUT-4, UUT-5, UUT-6
	1340404	PS40-2 switch 10-175 psi	UUT-2, UUT-6

NOTE: *Air supplies are tankless



Test Report TR026390-14N-SEI – UUT1 – T3PDPASK15

1 ½" Preaction Double Interlock
Electric-Pneumatic Skid-mounted Unit
Shown without enclosure
59"H X 23"W X 25"D
Weight: 285 lbs
Floor Mounted with (4) – ½" – 13 grade 5 bolts



The height and weight differs from that in the Product Summary due to the installation of optional parts, included in the Internal Components list below.

Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				AFLX-H	ARIG-H	AFLX-V	ARIG-V
CBC 2016	ICC-ES AC 156	2.22	1	3.55	2.66	1.50	0.59
Natural Frequencies			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
7.1 Hz	6.8 Hz	-					

Internal Components	Manufacturer	Part #
1 ½" Deluge valve	Viking Corp.	F-1, 12125
1 ½" In-line swing check valve, groomed	Viking Corp.	L-1, 11054
Pneumatic actuator	Viking Corp.	H-1
½" Solenoid valve 24 VDC/NC 250 psi	Viking Corp.	11591
Drip check del. and flow valve	Viking Corp.	D-1, 10730
Pressure operated relief valve	Viking Corp.	D-3, 16970
¼" x 0.62" Restriction orifice	Viking Corp.	10110
½" Swing check valve with 0.67" hole	Viking Corp.	05781A
¼" Spring loaded check valve	Viking Corp.	04947A
PS10-1 Single pressure switch	Potter Electric	1340101
1 ½" Main pipe	FireFlex	T3PIPPMA15
1 ½" Drain pipe	FireFlex	T3PIPPDR15
1 ½" Grooved end valve	Victaulic	728
¼" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H4
½" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H6
¾" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H8
¼" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
½" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¾" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¼" NPT Water gauge kilo 0-300 psi/kPa	Wika	50021214
¼" NPT Air gauge kilo 0-80 and 250 psi/kPa	Wika	4279931
Emergency release assembly	FireFlex	T3EMBOX001
Air pressure maintenance device AMPD	Viking Corp.	04624A
PS10-1 Switch 10-175 psi	Potter Electric	1340103
PS40-1 Switch 10-175 psi	Potter Electric	1340403

Test Report TR026390-14N-SEI – UUT2

4" Dry Cabinet

77" H X 36" W X 25" D

Weight: 710 lbs

Floor Mounted with (4) – ½" – 13 grade 5 bolts



Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016	ICC-ES AC 156	2.22	1	3.55	2.66	1.50	0.59
Natural Frequencies			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
7.7 Hz	6.6 Hz	-					

Internal Components	Manufacturer	Part #
4" Dry pipe valve	Viking Corp.	F-1, 07627
Pneumatic actuator	Viking Corp.	H-1
Drip check for dry valve	Viking Corp.	D-3, 10732
¼" x 0.62" Restriction orifice	Viking Corp.	10110
½" Swing check valve with 0.67" hole	Viking Corp.	05781A
¼" Spring loaded check valve	Viking Corp.	04947A
PS10-1 Single pressure switch	Potter Electric	1340101
¼" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H4
½" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H6
¾" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H8
¼" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
½" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¼" NPT Water gauge kilo 0-300 psi/kPa	Wika	50021214
¼" NPT Air gauge kilo 0-80 and 250 psi/kPa	Wika	4279931
Emergency release assembly	FireFlex	T3EMERG001
Accelerator E-1 with anti-flood device for dry pipe system	Viking Corp.	08116
Anti-column device LD-1	Viking Corp.	14800
½ hp Air compressor manual 120/220V 60Hz	General Air Products	OL36550A
Pressure switch	Furnas	69HA3
½" Spring loaded check valve for air compressor	Swagelock	B-8CP2-1/3
½" Float check valve for air compressor	Viking Corp.	A-1 10883
PS40-1 Switch 10-175 psi	Potter Electric	1340403

Test Report TR026390-14N-SEI – UUT3

2" Preaction Double interlock
Electric-Pneumatic Cabinet w/ Control Panel
77"H X 23"W X 25"D
Weight: 480 lbs
Floor Mounted with (4) – ½" – 13 grade 5 bolts



Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016	ICC-ES AC 156	2.22	1	3.55	2.66	1.50	0.59
Natural Frequencies			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
9.8 Hz	6.9 Hz	-					

Internal Components	Manufacturer	Part #
2" Deluge valve	Viking Corp.	F-1, 12057
2" In-line swing check valve, groomed	Viking Corp.	L-1, 11059
Pneumatic actuator	Viking Corp.	H-1
½" Solenoid valve 24 VDC/NC 250 psi	Viking Corp.	11591
Drip check del. and flow valve	Viking Corp.	D-1, 10730
Pressure operated relief valve	Viking Corp.	D-3, 16970
¼" x 0.62" Restriction orifice	Viking Corp.	10110
½" Swing check valve with 0.67" hole	Viking Corp.	05781A
¼" Spring loaded check valve	Viking Corp.	04947A
PS10-1 Single pressure switch	Potter Electric	1340101
2" Main pipe	FireFlex	T3PIPPMA20
2" Drain pipe	FireFlex	T3PIPPDR20
2" Grooved end valve	Victaulic	728
¼" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H4
½" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H6
¾" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H8
2" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998HD
¼" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
½" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¾" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¼" NPT Water gauge kilo 0-300 psi/kPa	Wika	50021214
¼" NPT Air gauge kilo 0-80 and 250 psi/kPa	Wika	4279931
Emergency release assembly	FireFlex	T3EMERG001
Dehydrator	Viking Corp.	01285A
Control Panel	Viking Corp.	VFR-400
Batteries 12V 7.5 Ah	Power Max	SB 1275
Batteries 12V 7.5 Ah	Enerwatt, AGM Series	WP7.5-12
1/6 hp Air compressor manual 120/220V 60Hz	General Air Products	OL12516A
Pressure switch	Furnas	69HA3
½" Spring loaded check valve for air compressor	Swagelock	B-8CP2-1/3
½" Float check valve for air compressor	Viking Corp.	A-1 10883
PS10-1 Switch 10-175 psi	Potter Electric	1340103
PS40-1 Switch 10-175 psi	Potter Electric	1340403

Test Report TR026390-14N-SEI – UUT4

4" Preaction Double interlock
Electric-Pneumatic Cabinet w/ Control Panel
77" H X 36" W X 25" D
Weight: 770 lbs
Floor Mounted with (4) – ½" – 13 grade 5 bolts



Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016	ICC-ES AC 156	2.22	1	3.55	2.66	1.50	0.59
Natural Frequencies				Test Results			
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
8.2 Hz	7.6 Hz	-					

Internal Components	Manufacturer	Part #
4" Deluge valve	Viking Corp.	F-1, 11513
4" Easy riser swing check valve, groomed	Viking Corp.	F-1, 08510
Pneumatic actuator	Viking Corp.	H-1
½" Solenoid valve 24 VDC/NC 250 psi	Viking Corp.	11591
Drip check del. and flow valve	Viking Corp.	D-1, 10730
Pressure operated relief valve	Viking Corp.	D-3, 16970
¼" x 0.62" Restriction orifice	Viking Corp.	10110
½" Swing check valve with 0.67" hole	Viking Corp.	05781A
¼" Spring loaded check valve	Viking Corp.	04947A
PS10-1 Single pressure switch	Potter Electric	1340101
4" Main pipe	FireFlex	T3PIPPMA40
4" Drain pipe	FireFlex	T3PIPPDR40
¼" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H4
½" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H6
¾" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H8
2" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998HD
4" Grooved butterfly valve	Fivalco	Fireriser HPG
¼" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
½" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
2" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¼" NPT Water gauge kilo 0-300 psi/kPa	Winters	PFE3933
¼" NPT Air gauge kilo 0-80 and 250 psi/kPa	Winters	PFE3932
Emergency release assembly	FireFlex	T3EMERG001
Accelerator E-1 w/o anti-flood device	Viking Corp.	08055
Control Panel	Viking Corp.	VFR-400
Batteries 12V 7.5 Ah	Power Max	SB 1275
Batteries 12V 7.5 Ah	Enerwatt, AGM Series	WP7.5-12
1/3 hp Air compressor manual 120/220V 60Hz	General Air Products	OL25033A
Pressure switch	Furnas	69HA3
½" Spring loaded check valve for air compressor	Swagelock	B-8CP2-1/3
½" Float check valve for air compressor	Viking Corp.	A-1 10883
PS10-1 Switch 10-175 psi	Potter Electric	1340103
PS40-1 Switch 10-175 psi	Potter Electric	1340403

Test Report TR026390-14N-SEI – UUT5

8" Preaction Double interlock
Electric-Pneumatic Cabinet w/ Control Panel
81" H X 54" W X 31" D
Weight: 1500 lbs
Floor Mounted with (4) – ½" – 13 grade 5 bolts



Building Code	Test Criteria	S _{Ds} (g)	z/h	Horizontal		Vertical	
				AFLX-H	ARIG-H	AFLX-V	ARIG-V
CBC 2016	ICC-ES AC 156	2.22	1	3.55	2.66	1.50	0.59
Natural Frequencies			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
4.0 Hz	5.4 Hz	13.8 Hz					

Internal Components	Manufacturer	Part #
8" Deluge valve	Viking Corp.	F-1, 11018
8" Easy riser swing check valve, groomed	Viking Corp.	F-1, 08516
Pneumatic actuator	Viking Corp.	H-1
½" Solenoid valve 24 VDC/NO 250 psi	Viking Corp.	11595
Drip check del. and flow valve	Viking Corp.	D-1, 10730
Pressure operated relief valve	Viking Corp.	D-3, 16970
¼" x 0.62" Restriction orifice	Viking Corp.	10110
½" Swing check valve with 0.67" hole	Viking Corp.	05781A
¼" Spring loaded check valve	Viking Corp.	04947A
PS10-1 Single pressure switch	Potter Electric	1340101
8" Main pipe	FireFlex	T3PIPPMA80
8" Drain pipe	FireFlex	T3PIPPDR80
8" Grooved butterfly valve	Nibco	GD4765-8N
¼" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H4
½" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H6
¾" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H8
2" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998HD
8" Grooved butterfly valve	Fivalco	Fireriser HPG
¼" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
½" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
2" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¼" NPT Water gauge kilo 0-300 psi/kPa	Wika	50021214
¼" NPT Air gauge kilo 0-80 and 250 psi/kPa	Wika	4279931
Emergency release assembly	FireFlex	T3EMERG001
Control Panel	Viking Corp.	VFR-400
Batteries 12V 18 Ah	Power Max	SB 12180
Batteries 12V 20 Ah	Enerwatt, AGM Series	WP20-12
2 hp Air compressor manual 120/220V 60Hz	General Air Products	OL1225200A
Pressure switch	Furnas	69HA3
½" Spring loaded check valve for air compressor	Swagelock	B-8CP2-1/3
½" Float check valve for air compressor	Viking Corp.	A-1 10883
PS10-1 Switch 10-175 psi	Potter Electric	1340103
PS40-1 Switch 10-175 psi	Potter Electric	1340403

Test Report TR026390-14N-SEI – UUT6

6" Surefire Double interlock
Cabinet w/ Control Panel
77" H X 46" W X 31" D
Weight: 1520 lbs
Floor Mounted with (4) – ½" – 13 grade 5 bolts



Building Code	Test Criteria	S _{DS} (g)	z/h	Horizontal		Vertical	
				A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2016	ICC-ES AC 156	2.22	1	3.55	2.66	1.50	0.59
Natural Frequencies			Test Results				
F-B	S-S	V	The UUT maintained structural integrity and functionality after the AC156 test. UUT full of contents during testing.				
5.4 Hz	7.8 Hz	-					

Internal Components	Manufacturer	Part #
6" Deluge valve	Viking Corp.	F-1, 11524
6" Easy riser swing check valve, groomed	Viking Corp.	F-1, 08513
Pneumatic actuator	Viking Corp.	H-1
½" Solenoid valve 24 VDC/NC 250 psi	Viking Corp.	11591
Drip check del. and flow valve	Viking Corp.	D-1, 10730
Pressure operated relief valve	Viking Corp.	D-3, 16970
¼" x 0.62" Restriction orifice	Viking Corp.	10110
½" Swing check valve with 0.67" hole	Viking Corp.	05781A
¼" Spring loaded check valve	Viking Corp.	04947A
PS10-1 Single pressure switch	Potter Electric	1340101
6" Main pipe	FireFlex	T3PIPPMA60
6" Drain pipe	FireFlex	T3PIPPDR60
6" Grooved butterfly valve	Nibco	GD4765-8N
¼" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H4
½" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H6
¾" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998H8
2" Ball valve – brass, 2-piece, full port, NPT x NPT	Nibco	T-FP-600A, NL998HD
¼" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
½" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
2" 600 WOG FP NPT Forged brass ball valve	KVC industries	F-1, 100T
¼" NPT Water gauge kilo 0-300 psi/kPa	Wika	50021214
¼" NPT Air gauge kilo 0-80 and 250 psi/kPa	Wika	4279931
Emergency release assembly	FireFlex	T3EMERG001
Control Panel	Viking Corp.	VFR-400
Batteries 12V 12 Ah	Power Max	SB 12120
Batteries 12V 12 Ah	Enerwatt, AGM Series	WP12-12
1 hp Air compressor manual 120/220V 60Hz	General Air Products	OL615100A
Pressure switch	Furnas	69HA3
½" Spring loaded check valve for air compressor	Swagelock	B-8CP2-1/3
½" Float check valve for air compressor	Viking Corp.	A-1 10883
PS10-1 Switch 10-175 psi	Potter Electric	1340103
PS40-2 Switch 10-175 psi	Potter Electric	1340404