



FLUKE

Fluke 730 Test Solution 730G + 730 Test Pump

A compact pressure calibration solution for bench or field

Apr 2021

Introduction



Customer Needs

- Cover adequate workload, range and various UUTs with reference models.
- Easy to use reference model for both pressure and electrical measurements.
- Reduce connections with direct connect to test pumps and less fittings.
- Demanding quality results requires pressure control stability for measurement.
- Adjust HART directly when errors are found.
- Easy to apply, record data, and generate report.
- Ideal for comparison pump applications with easy connection.
- Overall, deliver high performance while simple to use.

0.02% pressure measurement accuracy, 0.01% current measurement accuracy

FLUKE®

- Offers high-accuracy pressure (0.05/0.02% level) and current measurement (0.01% level), which meets the accuracy level requirements of establishing a pressure laboratory to achieve precise pressure verification
- Used with various pressure tests; full range pressure from -14psi to 10,000psi can be verified



Target users

- **Industry**

- Process industry
 - Oil & gas, metallurgy, Power Generation plant, etc.
 - Food and beverage, Water, Pharmaceutical, electronics/semicond mfg etc.
- Pressure automation contractor for commissioning of pressure instruments
- Metrology Lab



- **Users**

- Instrument technicians
- Electricians
- Pressure calibration experts

Gauge



Transmitter



Sensor



Switch



Fluke 730G Digital Pressure ~~Gauge~~ Calibrator

The Fluke 730G Digital Pressure Calibrator is a highly-efficient and accurate calibrator when used with test pump to test various pressure instrumentation ideal for instrument shops and laboratories.

- **Performance:** Accurate up to 0.02% pressure measurement accuracy, 0.01% current measurement accuracy
- **Built-in HART Communication:** Integrated HART functionality is easy to use and allows direct HART adjustment
- **Documentation:** Storage up to 128 sets of calibration data
- **Interface:** Easy-to-Use High-end bright LCD display, User-friendly screen to navigate
- **Paperless testing and reporting:** Smart verification management software helps to realize paperless verification reporting.

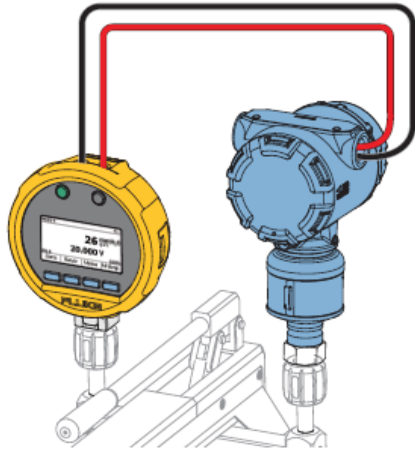


Fluke 730G Digital Pressure Calibrator

- **Wide pressure ranges:** From -14 to 10,000 psi; 25 models to choose from; optional software
- **Absolute Pressure:** Includes 4 absolute pressure measurement range 15 PSIA, 30 PSIA, 100PSIA, 300PSIA.
- **Powered by rechargeable lithium battery.**
- **Protection:** IP54-rating
- **Rugged Design:** 1 meter drop test
- **Three-year warranty**



FLUKE 730 series Test pumps



FLUKE 730-series Test pumps Technology

- Achieve faster and better pressure stability
- No need external air/gas supply
- Supports fine pressure adjustments with the screw-press wheel.
- Produce quality results
- FLUKE-730LTP/40K is thermally insulated for very low pressure control.
- 95% vacuum range
- Isolation valve designed to quickly help user maintain pressure easier and faster.
- Special surface treated material to resist from wear and corrosion.
- 2-years warranty



Fluke-730LTP/40K

- Pressure range -40 kPa to 40 kPa
- Ultra-fine precision adjustment to support low pressure calibration
- Special insulation to reduce the influence of external temperature environment



Fluke-730LTP/600K

- Pressure range -95kPa to 600kPa
- Pressure is generated by the combination of the pressure rod and screw for faster and smoother pressure increase and decrease
- Safely switch between pressure and vacuum



Fluke-730PTP/10M

- Pressure range -95 kPa to 10 MPa
- Multi-stage boost system design makes the process 5 times more efficient.
- Safety lock ensures safe switching between positive and negative pressure

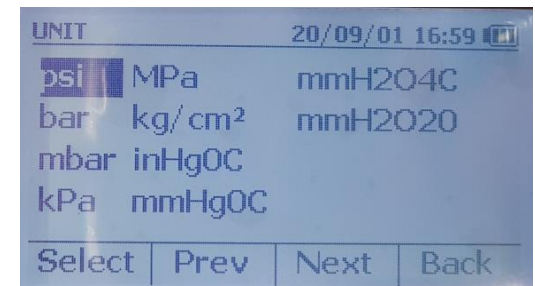
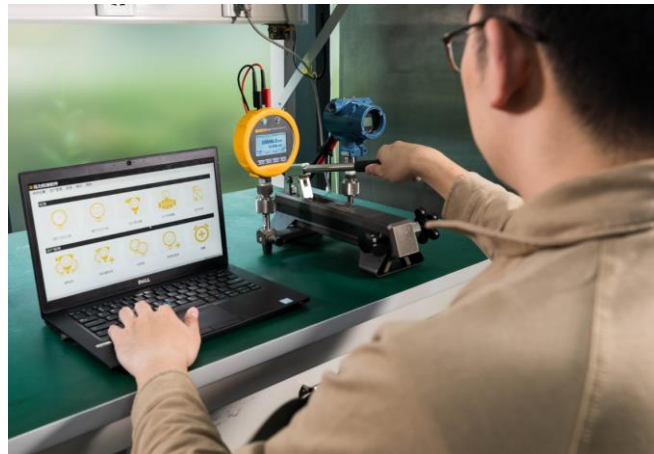
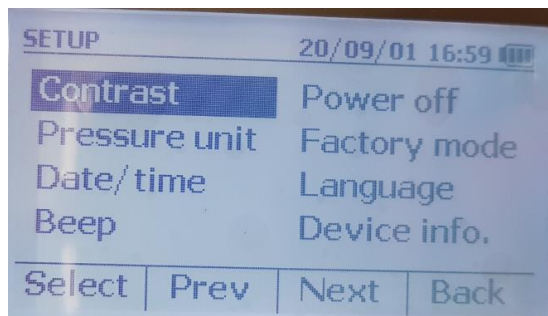
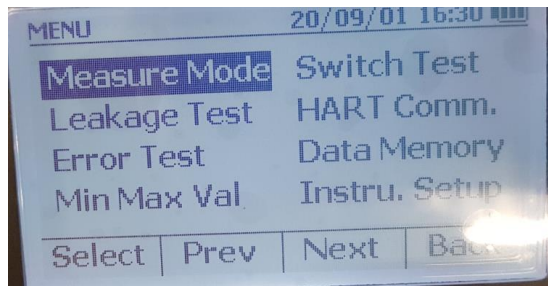


Fluke-730HTP/70M

- Pressure range 0 kPa to 70 MPa
- The screw press design supports high pressure range with less effort.
- Fine pressure adjustment capability with shut-off valve for stable measurements.

High-end LCD display, User-friendly interface

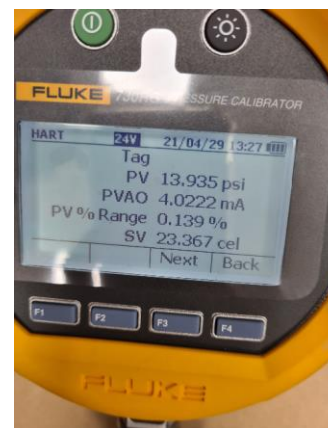
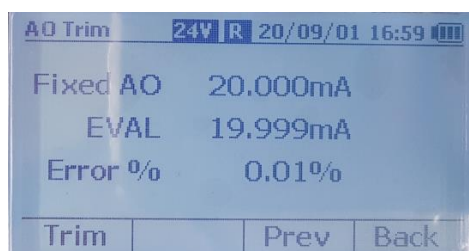
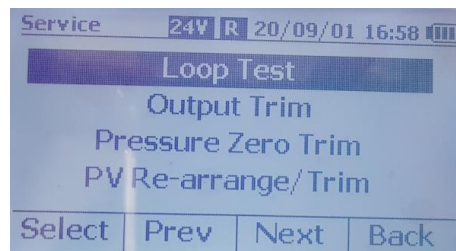
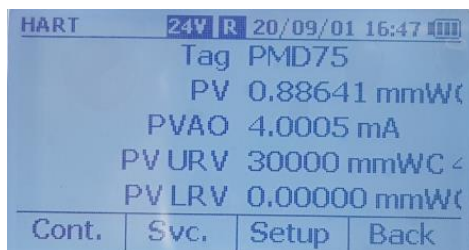
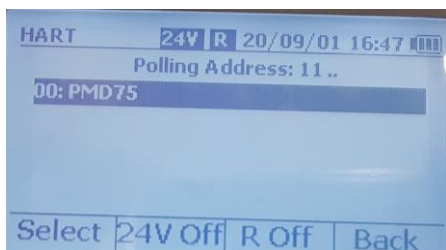
- High-end LCD display, intuitive interface, **dual-jack design**, bring more convenient and efficient operation experience.
- The 730G Digital Pressure Calibrator comes with a 24V loop power supply, which can power the pressure instrument under tested and measures the mA signal, further simplifying the pressure calibration process.



Complete HART adjustments quickly and intuitively

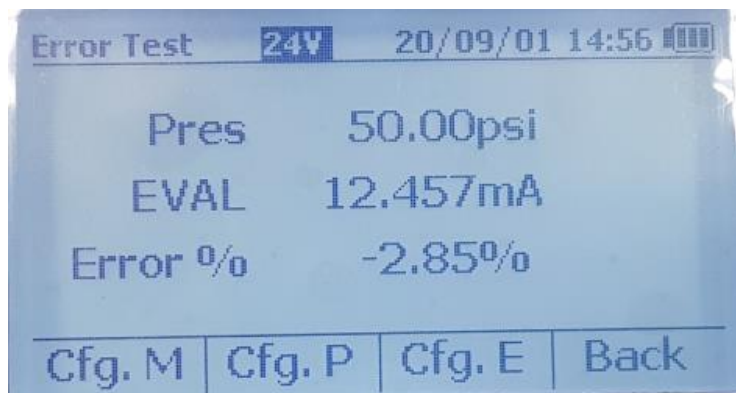


- The Fluke 730G innovatively integrates the HART communication protocol, without the need for an additional communicator, the instrument configuration information (such as tag, range) of the unit under tested can be read and modified through the 730G, which greatly facilitates the calibration work of customers



Hart operation diagram

Other Functions



Pressure Transmitter



Fine control adjustment with ease.



Simple interface to toggle and save.

Pressure Transmitter



Switch Test mode



The verification management software helps to realize paperless and intelligent verification.

- Verification reports can be automatically generated by using the optional PCSW verification management software, realizing paperless management of assets and calibration process



Verification record of pressure transmitter

Department: Fluke
Manufacturer: EH
Pressure Range: 0-30000 mmH2O@4C
Accuracy: 0.5%F.S.
Reference ID and Model: 729SG/729FC300

Product ID: SGoffice
Model: PMD75
S/N: L500112109D
Temperature: 25°C
Humidity: 70%RH

Result:

Test Point (mmH2O@4C)	mA output (mA)	Output Current(mA)						Error (mA)	Hysteresis Error (mA)
		First cycle		Second cycle		Third cycle			
		Increase	Decrease	Increase	Decrease	Increase	Decrease		
2	4.001	3.999	4.000	--	--	--	--	-0.002	0.001
15000	12.000	12.000	12.006	--	--	--	--	0.006	0.006
30000	20.000	20.001	20.002	--	--	--	--	0.002	0.001

Tolerance: ±0.08
Insulation Resistance: NA
Conclusion: Passed
Calibrated by: admin
Certificate No.: 013

Max Error: 0.006
Insulation Strength: NA

Allowed Hysteresis: 0.08
Sealing : NA

Max Hysteresis: 0.006
Appearance Inspect: NA

Review by: Jake
Calibration Date: 2020-08-12



Introduction of the Pressure Verification Software

1. Connect the 730G to a PC via a USB cable by using the optional PCSW verification management software.



Verification record of pressure transmitter

Department: Fluke **Product ID:** SGoffice
Manufacturer: EH **Model:** PMD75
Pressure Range: 0-30000 mmH2O@4C **S/N:** L500112109D
Accuracy: 0.5%F.S. **Temperature:** 25°C **Humidity:** 70%RH
Reference ID and Model: 729SG/729FC300

Result:

Test Point (mmH2O@4C)	mA output (mA)	Output Current(mA)						Error (mA)	Hysteresis Error (mA)
		First cycle		Second cycle		Third cycle			
		Increase	Decrease	Increase	Decrease	Increase	Decrease		
2	4.001	3.999	4.000	--	--	--	--	-0.002	0.001
15000	12.000	12.000	12.006	--	--	--	--	0.006	0.006
30000	20.000	20.001	20.002	--	--	--	--	0.002	0.001

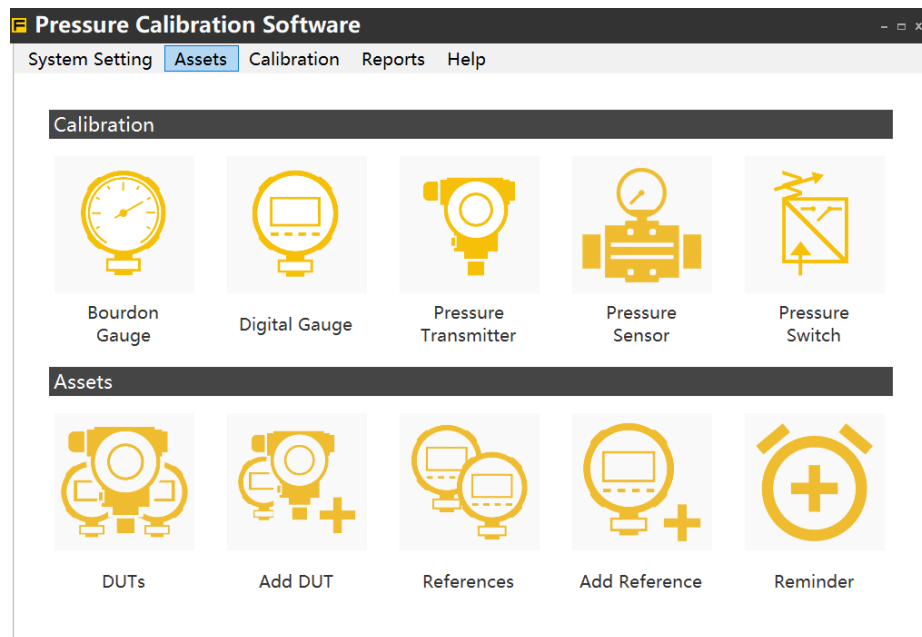
Tolerance: ±0.08 **Max Error:** 0.006 **Allowed Hysteresis:** 0.08 **Max Hysteresis:** 0.006
Insulation Resistance: NA **Insulation Strength:** NA **Sealing:** NA **Appearance Inspect:** NA
Conclusion: Passed **Review by:** Jake
Calibrated by: admin **Calibration Date:** 2020-08-12
Certificate No.: 013



Pressure Verification Software 730PCSW

2. Program Interface:

- **Paperless management of pressure calibrations:** Record calibration data, automate calibration tests and generate calibration reports.
- **Asset management:** Manage tested equipment and pressure standards with ease.
- **Supported pressure devices include:** analog pressure gauges, digital pressure gauge, pressure transmitter, pressure sensors and pressure switches.



DUTs List (Insert assets first)

DUTs

Gauge/Abs.

Gauge

- abc
- SGoffice
- 123456
- Demo Gauge
- 014FIA
- sensor
- DemoSwitch
- Dialgauge

Manufacturer

test

Model Name

demogauge

Serial Number

123456

Last Cal. Date

2020-05-12

Gauge/Abs.

Gauge

Range

0~100 psi

Accuracy

0.5

%F.S

Calibration

Record



Edit



Delete

Cancel

Reference connected List (Insert assets first)

Pressure Calibration Software



System Setting Assets Calibration Reports Help

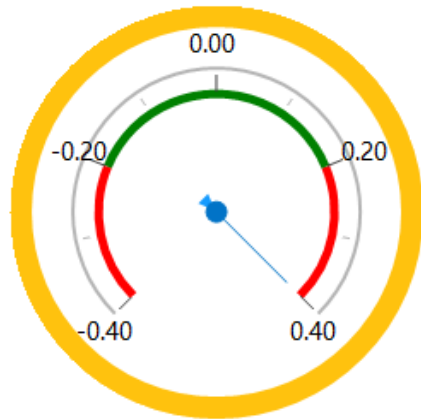
Add Reference



Label	<input type="text"/>	Gauge/Abs.	<input type="text" value="Gauge"/>
Manufacturer	<input type="text" value="FLUKE"/>	Unit	<input type="text" value="psi"/>
Model Name	<input type="text" value="730RG07"/>	Range	<input type="text" value="-12"/> ~ <input type="text" value="500"/>
Serial Number	<input type="text" value="5051294"/>	Accuracy	<input type="text" value="0.02"/> %F.S.
Cal Date	<input type="text" value="2020-09-01"/>	Resolution	<input type="text" value="0.01"/>
Cal. Cycle	<input type="text"/> Month		
Due Date	<input type="text" value="2020-09-01"/>		

Calibration view

Digital Gauge Calibration



Cycles 1/2 Test Points 6/6

Prev

Next

Test Point 0.000

Reference Reading 20.00

Serial Number 123456
 DUT Label Demo Gauge
 Range 0~40
 Unit psi
 Accuracy 0.5 %F.S.

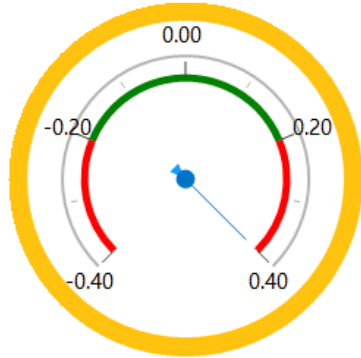
Record Data

Abort

Cycle1	Cycle1Chart	Cycle2	Cycle2Chart			
	Set Point(psi)	Reference Reading(psi)	DUT Reading(psi)	Tolerance(psi)	Error(psi)	Result
1	0.000	0.00	0.000	0.200	0.000	Pass
2	20.000	20.08	20.070	0.200	-0.010	Pass
3	40.000	39.95	40.000	0.200	0.050	Pass
4	40.000	39.94	40.000	0.200	0.060	Pass
5	20.000	20.00	19.980	0.200	-0.020	Pass

Calibration view

Digital Gauge Calibration



20

Cycles 1/2 Test Points 6/6

Prev

Next

Test Point 0.000

Reference Reading 20.00

Serial Number 123456
DUT Label Demo Gauge
Range 0~40
Unit psi
Accuracy 0.5 %F.S.

Record Data

Abort

Cycle1

Cycle1Chart

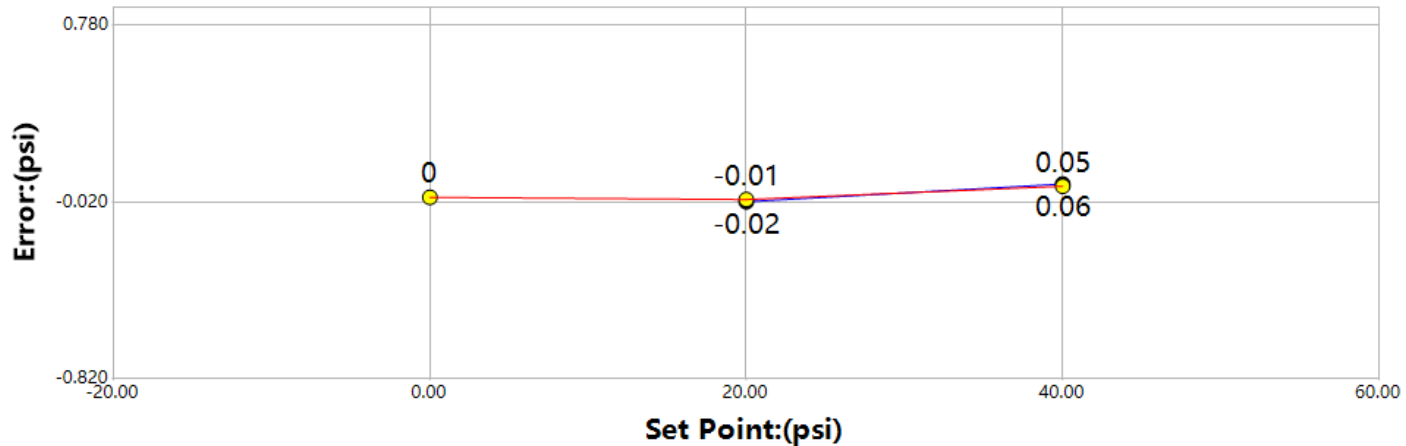
Cycle2

Cycle2Chart

Rising Round



Falling Round



Stored Report

Report

DUT Label Created Date 2020-07-01 ~ 2020-09-01 Search F

DUT Label	Tester	Model Name	Serial Number	DUT Type	Gauge/Abs.	Creat
Demo Gauge	admin	G08	123456	Digital Gauge	Gauge	2020-
Dialgauge	admin	testdemo	U8475	Bourdon Gau...	Gauge	2020-
SGoffice	admin	PMD75	L500112109D	Pressure Tra...	Gauge	2020-
SGoffice	admin	PMD75	L500112109D	Pressure Tra...	Gauge	2020-
SGoffice	admin	PMD75	L500112109D	Pressure Tra...	Gauge	2020-
SGoffice	admin	PMD75	L500112109D	Pressure Tra...	Gauge	2020-
DemoSwitch	admin	NC	Fluke123	Pressure Swit...	Gauge	2020-
sensor	admin	abcsense	K0958	Pressure Sen...	Gauge	2020-

Report Preview

Preview Report

Cycle1	Set Point(mmH2O@4C)	Reference Reading(mmH2O@4C)	Reference(mA)	DUT Output(mA)	Tolerance(mA)	Error(mA)	Result
1	0.000	3	4.002	4.013	0.080	0.011	Pass
2	15,000.000	15000	12.000	12.007	0.080	0.007	Pass
3	30,000.000	30000	20.000	20.008	0.080	0.008	Pass
4	30,000.000	30000	20.000	20.009	0.080	0.009	Pass
5	15,000.000	14999	11.999	12.010	0.080	0.011	Pass
6	0.000	-7	3.996	4.002	0.080	0.006	Pass

1 / 1 150% [Navigation icons]

Verification record of pressure transmitter

Department:
Manufacturer: EH
Pressure Range: 0~30000 mmH2O@4C
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		First cycle		Second cycle		Third cycle			
		Increase	Decrease	Increase	Decrease	Increase	Decrease		
3	4.002	4.013	4.002	--	--	--	--	0.011	0.011
15000	12.000	12.007	12.010	--	--	--	--	0.010	0.003
30000	20.000	20.008	20.009	--	--	--	--	0.009	0.001

Tolerance: ±0.08
Insulation Resistance:
Conclusion:
Calibrated by: admin
Certificate No.: 014

Max Error: 0.011
Insulation Strength:

Allowed Hysteresis: 0.08
Sealing :

Max Hysteresis: 0.011
Appearance Inspect:

Review by:
Calibration Date: 2020-08-12

Appendix - Optional Accessories



FLK-730ILF



FLK-730GLSF

- Liquid Filter to remove dirt from contaminating the DUT.
- Works up to **10,000psi**
- Liquid-Gas separator to remove moisture from air that may get into the DUT.
- Works with pneumatic pump
- Works up to **3,600psi**

FLK-730PFK pressure fitting kit

- Comprises of 38 different types of adapters.

Appendix - Specifications

Calibrator Specs	Fluke 730G	Fluke 730RG	Fluke 730GA
Pressure Range	-14psi – 10,000psi	-14psi – 10,000psi	0-300psia
Pressure Accuracy	+/- 0.05% F.S.	+/- 0.02% F.S.	+/- 0.05% F.S.
Loop Power	24 V ± 10%	24 V ± 10%	24 V ± 10%
mA range	0-24mA 0.010% rdg + 2 digits	0-24mA 0.010% rdg + 2 digits	0-24mA 0.010% rdg + 2 digits
Voltage range	0-30V 0.010% rdg + 2 digits	0-30V 0.010% rdg + 2 digits	0-30V 0.010% rdg + 2 digits
HART	Yes	Yes	Yes
Language interface	English / Chinese	English / Chinese	English / Chinese
Electrical Connection	Dual Jack	Dual Jack	Dual Jack
Drop Test	1-metre	1-metre	1-metre
IP-rating	IP54	IP54	IP54
Software compatible	730G/CPSW	730G/CPSW	730G/CPSW
Warranty	3-years	3-years	3-years

Pump Specs	FLK-730LTP/40K	FLK-730LTP/600K	FLK-730PTP/10M	FLK-730HTP/70M
Pressure Range	-6psi to 6psi	-13.8 – 90psi	-13.8 – 1,500psi	0 – 10,000psi
Media	Air	Air	Air	Distilled water/ mineral oil
Warranty	2-years	2-years	2-years	2-years

Appendix – Product Adjacencies



Questions & Answers

Authorised Distributor:



46, Jalan SS 22/21, Damansara Jaya,
47400 Petaling Jaya,
Selangor Darul Ehsan, Malaysia.

Skype ID: AmpmechSkype

Email: ampmech@ampmech.com

Website: www.ampmech.com

THANK YOU

More information: [730G Link](#)