TECHNICAL DATA

Fluke 729 Automatic Pressure Calibrator

Portable automatic pressure calibrator simplifies pressure calibration

The Fluke 729 Automatic Pressure Calibrator has been designed specifically with process technicians in mind to simplify the pressure calibration process and provide faster, more accurate test results. Technicians know that calibrating pressure can be a time-consuming task, but the 729 makes it easier than ever with an internal electric pump that provides automatic pressure generation and regulation in an in an easy-to-use, rugged, portable package.

The ideal portable pressure calibrator, the 729 allows you to simply type in a target pressure, and the calibrator will automatically pump to the desired set-point. Then, internal fine adjustment control automatically stabilizes the pressure at the requested value.

The Fluke 729 can also automatically test multiple pressure test points and automatically document the results. Calibration is as easy as typing in the starting and ending pressure and the number of test points and tolerance level. The 729 does the rest.

Built-in HART communication capabilities enable HART transmitter mA adjustments, light HART configuration and the ability to adjust to applied 0 % and 100 % values.

Upload and manage documented calibration results with DPCTrack2™ Calibration Management Software, making it easy to manage your instrumentation, create scheduled tests and reports, and manage calibration data.

With three ranges to choose from, 30 psi (2 bar, 200 kPa), 150 psi (10 bar, 1 MPa) and 300 psi (20 bar, 2 MPa), Fluke 729 Automatic Pressure Calibrators are designed to perform when and where you need them.

KEY PRESSURE FUNCTIONS:
Pressure sourcing/control and measurement

KEY ELECTRICAL FUNCTIONS:
mA source, simulate and measure. Measure mA with 24V loop power. Measure Vdc and measure temperature (with optional RTD probe).

FLUKE CONNECT COMPATIBILITY:
With Fluke Connect® mobile app and desktop software compatibility, technicians can wirelessly monitor and log measured and sourced pressure values.

Fluke 729 key features:

- Automatic pressure generation and regulation to 300 psi
- Easily document the process using onboard test templates
- Automatic internal fine-pressure adjustment
- Measure, source and simulate 4 to 20 mA signals
- 24V loop power for powering transmitters for tests
- Bright dual/triple-channel color graphical display
- HART communication for testing HART smart transmitters
- Built in leak testing for verifying test setups for leakage
- Rugged portable design with standard 3-year warranty
- Fluke Connect® App compatibility
- Measure temperature with optional 720RTD probe
- Measure Vdc for testing 1 V dc to 5 V dc output transmitters
- Compatible with 700 Series and 750 Series pressure modules
- Upload documented test results to DPCTrack2™ Calibration Management Software
- Innovative semi-rigid carrying case designed for field work

Automatic pressure generation and control to 300 psi, (20 bar, 2 MPa). Enter a pressure and the 729 automatically pumps to the desired pressure. Fill in a test template and the 729 will automatically pump to and document a multiple-point pressure calibration test.

Easy calibration documentation using defined templates for transmitters and switches. Type in the starting and ending test pressures and number of test points. The 729 does the rest by documenting the applied pressure, measured mA and % error for each test point. The bright color graphical display will flag out of tolerance test results in red.

Automatic internal fine pressure adjustment helps compensate for minor leaks in hoses and test setups. No need to manually turn a vernier to compensate for leaks helping to eliminate the hassle of manual pumping and manual fine adjustment of test setups.

HART communication enables mA output trim, trim to applied values and pressure zero trimming of HART pressure transmitters. You can also do light configuration tasks such as changing a transmitter tag, measurement units and ranging. Other supported HART commands include setting fixed mA outputs for troubleshooting, read device configuration and variables and read device diagnostics.

Measure mA signals on transmitter outputs, source and simulate mA signals for testing I/Ps and other mA loop devices. Includes a 24V loop power supply for testing and powering transmitters in standalone tests disconnected from the control system.

Rugged portable design and 3-year warranty set the 729 apart from most other pressure calibrators. The 729 is tested and warranted to withstand a 1-meter drop test so it is ready for field instrumentation calibration work.

Fluke Connect® compatibility enables a user to perform remote monitoring using the Fluke Connect mobile app and also manage and store pressure measurements and logging events. Share measurements using ShareLive™ video calls and emails.

Measure temperature with optional 720RTD probe for performing custody transfer calibrations.

Measure pressure with legacy 700 Series and the new 750 Series pressure modules if different pressure measurement ranges or resolution is desired.

Multiple language support, select language from the instrument setup utility. Hart communication commands are limited to English per the HART device descriptors and protocol.

Semi-rigid carrying case designed for field work, with room in the case to store test hoses, fittings, test leads and small hand tools needed for field pressure calibrations.

Specifications

Pressure specification*

One-year specification	0.02 % of full scale
Control specification	0.005 % full scale minimum

*See manual for detailed specifications

Model	Psi range, resolution	Bar range, resolution	kPa range, resolution	Comment
729 30G	–12.0000 to 30.0000 psi	–0.82737 to 2.06842 bar	–82.737 to 206.843 kPa	No wireless communication
729 150G	–12.000 to 150.000 psi	–0.8273 to 10.3421 bar	–82.73 to 1034.21 kPa	No wireless communication
729 300G	–12.000 to 300.000 psi	–0.8273 to 20.6843 bar	–82.73 to 2068.43 kPa	No wireless communication
729 30G FC	–12.0000 to 30.0000 psi	–0.82737 to 2.06842 bar	–82.737 to 206.843 kPa	Wireless communication for Fluke Connect
729 150G FC	–12.000 to 150.000 psi	–0.8273 to 10.3421 bar	–82.73 to 1034.21 kPa	Wireless communication for Fluke Connect
729 300G FC	–12.000 to 300.000 psi	–0.8273 to 20.6843 bar	–82.73 to 2068.43 kPa	Wireless communication for Fluke Connect
729CN 200K	–12.0000 to 30.0000 psi	–0.82737 to 2.06842 bar	–82.737 to 206.843 kPa	For China, no wireless communication
729CN 1M	–12.000 to 150.000 psi	–0.8273 to 10.3421 bar	–82.73 to 1034.21 kPa	For China, no wireless communication
729CN 2M	–12.000 to 300.000 psi	–0.8273 to 20.6843 bar	–82.73 to 2068.43 kPa	For China, no wireless communication
729CN 200K FC	–12.0000 to 30.0000 psi	–0.82737 to 2.06842 bar	–82.737 to 206.843 kPa	For China, wireless communication for Fluke Connect
729CN 1M FC	–12.000 to 150.000 psi	–0.8273 to 10.3421 bar	–82.73 to 1034.21 kPa	For China, wireless communication for Fluke Connect
729CN 2M FC	–12.000 to 300.000 psi	–0.8273 to 20.6843 bar	–82.73 to 2068.43 kPa	For China, wireless communication for Fluke Connect
729JP 200K	N/A	N/A	–82.737 to 206.843 kPa	For Japan, no wireless communication
729JP 1M	N/A	N/A	–82.73 to 1034.21 kPa	For Japan, 1 MPa range, no wireless communication
729JP 2M	N/A	N/A	–82.73 to 2068.43 kPa	For Japan, 2 MPa range, no wireless communication
729JP 200K FC	N/A	N/A	–82.737 to 206.843 kPa	For Japan, wireless communication for Fluke Connect
729JP 1M FC	N/A	N/A	–82.73 to 1034.21 kPa	For Japan, wireless communication for Fluke Connect
729JP 2M FC	N/A	N/A	–82.73 to 2068.43 kPa	For Japan, wireless communication for Fluke Connect

Electrical specification

All specifications are valid to 110 % of range, except 24 mA source and simulate which are valid to 100 % of range.

Ranges	
mA measure, source and simulate	0 mA to 24 mA
Volts dc measure	0 V dc to 30 V dc

Resolution	
mA dc source, simulate and measure	1 µA
Voltage dc measurement	1 mV
Accuracy	0.01 % ± 2 LSD all ranges (at 23 °C ± 5 °C)
Stability	20 ppm of full scale /°C from –10 °C to +18 °C and 28 °C to +50 °C
Loop compliance voltage	24 V dc @ 20 mA
mA simulate external voltage requirement	12 V dc to 30 V dc
Temperature measurement only/100 Ω Pt(385) RTD	–50 °C to 150 °C (–58 °F to 302 °F)
Temperature resolution	0.01 °C (0.01 °F)
Temperature accuracy	± 0.1 °C (0.2 °F) ± 0.25 °C (± 0.45 °F) combined uncertainty when using 720 RTD probe (optional accessory)
Drive capability	1200 Ω without HART resistor, 950 Ω with internal HART resistor

FLUKE ®

General specifications

Mechanical specification	
Size (HxWxL)	7 cm x 27.94 cm x 17.27 cm (2.75 in x 11 in x 6.8 in)
Weight	6.5 lbs., 2.95 kg
Ingress protection	IP54
Environmental specification	
Operating temperature	–10 °C to 50 °C for measurement, 0 °C to 50 °C for pressure control
Operating temperature with battery	–10 °C to 40 °C
Battery will only charge to 40 °C	
Storage temperature	–20 °C to 60 °C
Operating altitude	3000 m
Storage altitude	13000 m
Wireless (729FC only)	
Radio frequency certification	FCC ID: T68-FBLE IC:6627A-FBLE
Wireless radio frequency range	2412 MHz to 2462 MHz

Ordering information

Model	Description	Comment
FLK-729 30G	Fluke 729 30G, 30 psi, 2 Bar Automatic Pressure Calibrator	30 psi, 2 bar range, no wireless communication
FLK-729 150G	Fluke 729 150G, 150 psi, 10 Bar Automatic Pressure Calibrator	150 psi, 10 bar range, no wireless communication
FLK-729 300G	Fluke 729 300G, 300 psi, 20 Bar Automatic Pressure Calibrator	300 psi, 20 bar range, no wireless communication
FLK-729 30G FC	Fluke 729 30G FC, 30 psi, 2 Bar Automatic Pressure Calibrator, with Fluke Connect	30 psi, 2 bar range, includes wireless communication for Fluke Connect
FLK-729 150G FC	Fluke 729 150G FC, 150 psi, 10 Bar Automatic Pressure Calibrator, with Fluke Connect	150 psi, 10 bar range, includes wireless communication for Fluke Connect
FLK-729 300G FC	Fluke 729 300G FC, 300 psi, 20 Bar Automatic Pressure Calibrator, with Fluke Connect	300 psi, 20 bar range, includes wireless communication for Fluke Connect
FLK-729CN 200K	Fluke 729CN 200K, 200 kPa Automatic Pressure Calibrator, China	For China, 200 kPa range, no wireless communication
FLK-729CN 1M	Fluke 729CN 1M, 1 MPa Automatic Pressure Calibrator, China	For China, 1 mpa range, no wireless communication
FLK-729CN 2M	Fluke 729CN 2M, 2 MPa Automatic Pressure Calibrator, China	For China, 2 MPa range, no wireless communication
FLK-729CN 200K FC	Fluke 729CN 200K FC, 200 kPa Automated Pressure Calibrator, China with Fluke Connect	For China, 200 kPa Range, includes wireless communication for Fluke Connect
FLK-729CN 1M FC	Fluke 729CN 1M FC, 1 MPa Automatic Pressure Calibrator, China with Fluke Connect	For China, 1 MPa range, includes wireless communication for Fluke Connect
FLK-729CN 2M FC	Fluke 729CN 2M FC, 2 MPa Automatic Pressure Calibrator, China with Fluke Connect	For China, 2 MPa range includes wireless communication for Fluke Connect
FLK-729JP 200K	Fluke 729JP 200K, 200 kPa Automatic Pressure Calibrator, Japan	For Japan, 200 kPa Range, no wireless communication
FLK-729JP 1M	Fluke 729JP 1M, 1 MPa Automatic Pressure Calibrator, Japan	For Japan, 1 MPa Range, no wireless communication
FLK-729JP 2M	Fluke 729JP 2M, 2 MPa Automatic Pressure Calibrator, Japan	For Japan, 2 MPa range, no wireless communication
FLK-729JP 200K FC	Fluke 729JP 200K FC, 200 kPa Automatic Pressure Calibrator, Japan with Fluke Connect	For Japan, 200 kPa range, includes wireless communication for Fluke Connect
FLK-729JP 1M FC	Fluke 729JP 1M FC, 1 MPa Automatic Pressure Calibrator, Japan with Fluke Connect	For Japan, 1 MPa range, includes wireless communication for Fluke Connect
FLK-729JP 2M FC	Fluke 729JP 2M FC, 2 MPa Automatic Pressure Calibrator, Japan with Fluke Connect	For Japan, 2 MPa range, includes wireless communication for Fluke Connect

Ordering information continued

Wireless versions include:

Calibrator with wireless communication, soft case, stackable test leads, AC280 hook clips, alligator clips, test probes, magnetic hanger kit, carrying strap, wireless adapter, quick start guide, safety sheet, power supply, rechargeable battery (installed), hose kit with push fit adapters, hanging clip, USB cable, 1/8 in FNPT to 1/4 in FNPT adapter, 1/8 in FNPT to F-M20 adapter, 1/8 in FNPT to 1/4 in FBSP adapter, PTFE tape, (2) sintered filters, water trap drain and valve tuning hoses.

Versions with no wireless functionality include:

Calibrator without wireless communication, soft case, stackable test leads, AC280 hook clips, alligator clips, test probes, magnetic hanger kit, carrying strap, quick start guide, safety sheet, power supply, rechargeable battery (installed), hose kit with push fit adapters, hanging clip, USB cable, 1/8 in FNPT to 1/4 in FNPT adapter, 1/8 in FNPT to F-M20 adapter, 1/8 in FNPT to 1/4 in FBSP adapter, PTFE tape, (2) sintered filters, water trap drain and valve tuning hoses.

Preventive maintenance simplified. Rework eliminated.

Save time and improve the reliability of your maintenance data by wirelessly syncing measurements using the Fluke Connect® system.

- Eliminate data-entry errors by saving measurements directly from the tool and associating them with the work order, report or asset record.
- Maximize uptime and make confident maintenance decisions with data you can trust and trace.
- Access baseline, historical and current measurements by asset.
- Move away from clipboards, notebooks and multiple spreadsheets with a wireless one-step measurement transfer.
- Share your measurement data using ShareLive™ video calls and emails.
- Fluke 729 Automatic Pressure Calibrator is part of a growing system of connected test tools and equipment maintenance software. Visit the website to learn more about the Fluke Connect® system.

Find out more at **flukeconnect.com**

Download on the App Store

ANDROID APP ON Google Play

Fluke. *Keeping your world up and running.*®.

Fluke DPC/TRACK2
Automatically record and document your work

Fluke DPC/TRACK2 is a calibration management software database that makes it easy to manage your instrumentation, create and schedule tests, load and unload a 753 or 754 Documenting Process Calibrator, print a variety of standard reports, and manage calibration data.

Print standard reports automatically. The software assembles pre-formatted reports from your database files, saving time and reducing errors. Reports include calibration certificates, instruments due for calibration, inventory characteristics, calibration histories, calibration procedures, and traceability to instruments touched.

DPC/TRACK2 features:

Interface with Fluke 750 Series Documenting Process Calibrators:
- Build instrumentation maintenance routes and load to Fluke 740 and 750 Series Documenting Process Calibrators
- Select downloaded tasks in the field configured to match field the instruments being calibrated
- Upload calibration results with field documented calibrations

Manage equipment and loops
- Track asset and loop configurations, allowing associated items to be managed as a group or individually

Easy navigation with multi-window functionality
- Graphical user interface featuring DPC/TRACK Explorer—use DPC/TRACK Explorer to easily navigate through all of the records and view calibrations that are coming due

Multi-COM port support
- Communicate with your Fluke Documenting Process Calibrators (DPCs) easily and without configuration file changes through USB or RS-232 serial ports

Drywell source mode support
- Download and upload calibrations using drywell calibrator test standards

Reminders screen
- Use automatically-generated reminders to stay informed on all work items needing attention including Calibrations Awaiting Finalization, Calibrations Due, Records Awaiting Approval, and more

Flexible scheduling capability
- These scheduling features give a greater degree of control when setting calibration frequencies

Powerful reports
- Powered by Crystal Reports 11 the DPC/TRACK2 reporting system contains over 40 standard loaded reports that can be printed or exported to multiple file formats

Advanced query capability
- Powerful query capabilities allow advanced searches to easily locate desired records

Set required field
- Define what fields must be completed when entering new records.

Applications supported by DPC/TRACK2 combined with a Fluke Documenting Process Calibrator:

Pressure transmitter calibration

Pressure switch testing

Testing a temperature transmitter using a dry well calibrator

User defined labels and variable
- The software features an unprecedented level of customization ability with the ability to redefine most field names and create user-defined variables to ensure the software functions as necessary

Multiple test point ranges
- Multiple test point groups allow for advanced calibration procedures with an easy-to-use interface

Multi-lingual user interface
- English, French, Italian, German, Spanish and Brazilian Portuguese languages are selectable

Applications supported by DPC/TRACK2 combined with a Fluke Documenting Process Calibrator
- Pressure transmitter calibration
- Pressure switch testing
- Testing a temperature transmitter using a dry well calibrator

Want more in your calibration management software?
Upgrade to ProCalV5. For small sites or single-user requirements, Fluke DPC/TRACK2 is a smart investment. Companies needing more advanced features or large network compatibility should consider ProCalV5 enterprise-class calibration management software.

PROCAL V5

ProCalV5 incorporates all the functions of DPC/TRACK2 and more including:
- Unlimited number of accounts, users and assets
- Full validation and 21 CFR Part 11 compliance
- Offline, validated, 21 CFR Part 11 compliant mobile workstations
- IQ/OQ validation test scripts
- Integrates with SAP and other applications
- Seamless data transfer from DPC/TRACK2
- Data mapping services from other programs
- Validated SaaS solutions

For more information on DPC/TRACK2 and ProCalV5 visit DPCTRACK2.com
Other calibration management software solutions for use with Fluke documenting process calibrators:

PRIME TECHNOLOGIES

PRM
Plant Resource Manager
PRM (Plant Resource Manager) from Yokogawa Electric Corporation.

AMS aware
AMS from Emerson Process Management, (formerly Fisher-Rosemount).

On Time Support Process/Track

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Order information

Fluke DPC/TRACK2	
Model	**Description**
Fluke-750SW	750SW DPC/TRACK2 Calibration management software, Includes Software on CDROM and proof of purchase for product registration and USB cable
Fluke-753	Documenting Process Calibrator
Fluke-754	Documenting Process Calibrator with HART

Fluke. *The Most Trusted Tools in the World.*