



RK TECHNOLOGIES

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+91 9028646172
+91 7050670655
rktechnologies99@gmail.com

RK-PHP-40

Pneumatic Hand Pump

✦ -0.90 to 40 bar | Pressure & Vacuum | Resolution: 1 mbar

3/8" BSP Gauge Port | Fine Adjustment Valve | Release Valve | Over-Pressure Protection



PRODUCT OVERVIEW

The RK-PHP-40 is a robust, manually-operated pneumatic hand pump designed to generate vacuum and pressure between -0.90 bar and 40 bar for quick and accurate calibration of pressure gauges and pressure measuring instruments. It is manufactured with high-quality components and is suitable for both laboratory and field calibration of analog and digital pressure gauges by the comparison method.

The pump features a pressure / vacuum changeover selector switch, a fine adjustment valve for precise pressure setting during calibration, and a release valve for depressurising the system after calibration. An over-pressure protection knurling thumb nut allows the user to set the maximum output pressure per stroke, preventing damage to delicate instruments under test.

The test output port (1/4" BSP Female) accepts the flexible nylon hose supplied, while the gauge / indicator port (3/8" BSP Female) connects to the master or reference instrument. All wetted parts use air as the medium — no oil or fluid required for standard use.

KEY FEATURES

Pressure Performance

- **Range:** -0.90 bar vacuum to 40 bar pressure
- **Medium:** Air (no oil / fluid required)
- **Resolution:** Up to 1 mbar
- **Stabilization Time:** 1–2 minutes
- **Over-pressure Protection:** Knurling thumb nut limits max stroke
- **Fine Adjustment:** Fine adjustment valve — CW / CCW
- **Pressure Release:** Dedicated release valve

Connections & Ports

- **Gauge Port:** 3/8" (F) BSP — Master instrument connection
- **Test Port:** 1/4" (F) BSP — Unit under test (UUT)
- **Hose:** 1 m nylon hose with swivel adaptor (1/4" BSP F)
- **Vacuum / Pressure Mode:** Selector switch with positive engagement
- **Seals Kit:** Nylon washers 3/8" (2 nos.) & 1/4" (2 nos.)
- **Dust Protection:** 2 × plastic caps included

Physical & Applications

- **Dimensions:** 230 × 140 × 65 mm (L × B × H)
- **Weight:** Approx. 750 g
- **Use Case:** Lab & field pressure gauge calibration
- **Compatible Gauges:** Analog & digital pressure gauges
- **Method:** Comparison calibration method
- **Certificate:** Conformance certificate supplied
- **Optional:** Carrying case, adaptors, quick connector



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SPECIFICATIONS

Parameter	Specification
Pressure Range	Vacuum: -0.90 bar Pressure: up to 40 bar (models: 10 / 25 / 35 / 40 bar)
Pressure Medium	Air
Sensitivity / Resolution	Up to 1 mbar
Gauge / Indicator Port	3/8" (F) BSP — Master instrument connection
Test Port (UUT)	1/4" (F) BSP — Unit under test connection
Stabilization Time	1–2 minutes
Fine Adjustment	Fine adjustment valve (clockwise = increase, anticlockwise = decrease)
Pressure Release	Release valve (clockwise = close/seal, anticlockwise = open/release)
Over-pressure Protection	Knurling thumb nut — adjusts max pressure per stroke
Pressure / Vacuum Selector	Two-position changeover switch
Instrument Dimensions	230 × 140 × 65 mm (L × B × H)
Instrument Weight	Approx. 750 g
Wetted Medium	Air only (no oil / fluid)

PARTS IDENTIFICATION

No.	Part Name	No.	Part Name
1	Pump Handles	7	Quick-Fit Connector — 1/4" BSP (F) Swivel Adaptor
2	Knurling Thumb Nut (Over-Pressure Protection)	8	Nylon Washer 1/4"
3	Pressure Release Valve	9	Plastic Plug / Dust Cap
4	Fine Adjustment Valve	10	Flexible Nylon Hose (1 m) — connects UUT
5	Pressure / Vacuum Selector Switch	11	Pressure Port — 3/8" BSP (F) — Master Instrument
6	(Spare port / cap)	12	Nylon Washer 3/8"



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STANDARD DELIVERY & OPTIONAL ACCESSORIES

Standard Delivery

- RK-PHP-40 Basic Pump (main unit)
- Nylon hose (1 m) with swivel adaptor — 1/4" BSP (F)
- Plastic dust caps × 2
- Seals kit: nylon washers 3/8" (F) × 2 & 1/4" (F) × 2
- Conformance certificate
- Instruction manual

Optional Accessories

- Carrying case (soft or hard)
- Analog / Digital reference pressure gauges
- Quick connector
- OEM spare seals kit
- Set of adaptors — BSP: 1/8", 3/8", 1/2" (F) × 1/4" BSP (M)
- Set of adaptors — NPT: 1/8", 1/4", 3/8", 1/2" (F) × 1/4" BSP (M)

TYPICAL APPLICATIONS

Pressure Calibration	Vacuum Calibration	Field Use	Lab & Workshop
<ul style="list-style-type: none">• Analog pressure gauge calibration• Digital manometer verification• Pressure transmitter field check• Pressure switch setpoint testing	<ul style="list-style-type: none">• Vacuum gauge calibration• Compound gauge testing (vac + press)• Differential pressure testing• Leak testing of components	<ul style="list-style-type: none">• On-site instrument calibration• Pipeline pressure testing• Control valve field calibration• Process instrument commissioning	<ul style="list-style-type: none">• NABL / ISO calibration lab use• Gauge repair & verification shop• Quality assurance testing• Comparison method calibration

Contact RK Technologies for Pricing, Demo & Calibration Services

+91 9028646172 | +91 7050670655 | 0253 – 4034044
rktechnologies99@gmail.com | 302, Krishna Pride Apt., Nashik 422010
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