SCIENTICO INDIA
Manufacturer & Exporter · Ambala, Haryana, India

PRODUCT DATA SHEET
Catalogue reference for product evaluation

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Reciprocating Pump Demonstration Unit | FluidoSurge-X 264

Category: Fluid Mechanics · **Country of Origin:** India

Product Overview

A CE-certified pump test unit for investigating flow-head characteristics, efficiency at various speeds, and pump performance curves, manufactured by Scientico India to ISO 9001:2015 standards. Supplied with calibration certificate, operation manual, and complete export documentation. Designed for Fluid Mechanics laboratories in engineering colleges and technical institutions.

View this product online: https://scienticoindia.com/product/reciprocating-pump-demonstration-unit-fluidosurge-x-264/



Request a model-specific quotation
Include quantity and delivery country.

Technical Specifications

Parameter	Specification
Apparatus Type	Reciprocating pump demonstration unit
Pump Type	Single reciprocating pump
Pump Maximum Flow Rate	155 L/h
Pump Maximum Head	30 to 60 m water column
Drive Motor Power	370 W
Motor Speed	1450 rpm
Speed Control	Fixed, optional variable speed via VFD
Supply Voltage	230 V, 50 Hz
Pressure Measurement Range	0 to 10 bar
Flow Rate Measurement Range	0 to 7 LPM
Stroke Measurement Range	2 to 20 mm
Bore Diameter	38 mm
Stroke Length	2 to 20 mm
Delivery Pipe Internal Diameter	15 mm
Maximum Operating Pressure	13 bar

Parameter	Specification
Mechanical Safety Limit	6 bar

Key Features

Key Features

- Demonstration of reciprocating pump operating characteristics
- Measurement of pump characteristic curve
- Pressure measurement in cylinder and delivery line
- Integrated pressure retention valve for stable operation
- Air vessel for pulsation damping at discharge
- Volumetric flow measurement using compensation tank
- Suitable for steady and pulsating flow studies

Applications

- Fluid mechanics laboratory experiments
- Study of reciprocating pump performance
- Analysis of pressure pulsation effects
- Demonstration of pump characteristic curves
- Hydraulic machinery teaching and training

Construction & Design Details

The unit comprises a compact reciprocating pump coupled to an electric drive motor and mounted on a rigid frame. The intake side includes a built-in service tank, while the delivery side incorporates a flow measurement arrangement and pressure gauges. Cylinder pressure and delivery pressure are monitored independently. An air vessel is provided at the discharge to study pulsation attenuation effects under controlled conditions.

Experiments

- Determination of characteristic curve of a reciprocating pump
- Study of delivery pressure and cylinder pressure behavior
- Investigation of pulsation attenuation using air vessel
- Measurement of volumetric flow rate
- Effect of stroke length on pump performance

Data Acquisition Software (Optional)

Optional DAQ software developed in the NITM LabVIEW™ environment enables acquisition, processing, and visualization of experimental data on a Windows-based PC. The software supports display of pressure, flow rate, and stroke data, generation of graphs, and export of comprehensive CSV reports containing measured and calculated results.

Standard Scope of Delivery

- 1 experimental module
- 1 instruction manual
- Software CD and data cable (optional)

Export & Supply Capability

SCIENTICO manufactures the Reciprocating Pump Demonstration Unit FluidoSurge-X 264 for engineering colleges, technical universities, and training laboratories. The equipment is suitable for domestic and international supply. Export packing and documentation are provided as per customer and destination requirements.

Ordering & Delivery

- Send the product name, quantity, delivery country and destination with your enquiry.
- Production schedule, freight, payment terms and export documents are confirmed in the written quotation.

Frequently Asked Questions

Q1. What is the main purpose of FluidoSurge-X 264?
It is used to study the performance and pressure characteristics of a reciprocating pump.

Q2. How is pressure measured in the system?
Pressure is measured both in the pump cylinder and in the delivery pipe using pressure gauges.

Q3. Can pressure pulsations be reduced during experiments?
Yes. Pressure pulsations can be damped using the air vessel provided at the discharge.

Q4. Is variable speed operation available?
Variable speed operation is available as an optional configuration using a variable frequency drive.

Q5. Is digital data acquisition supported?
Yes. Optional DAQ hardware and software are available for data recording and analysis.

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