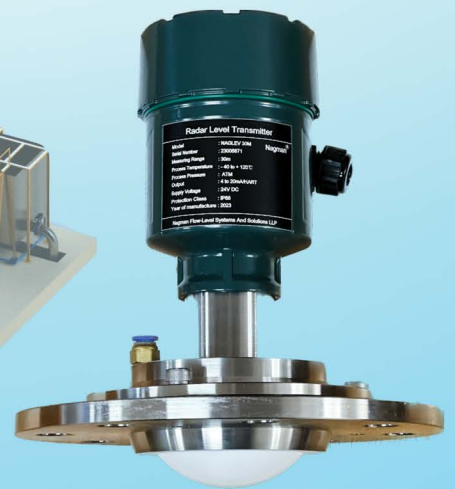
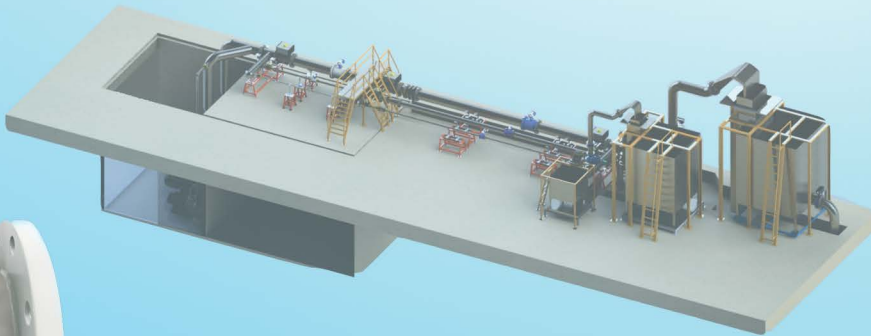




Nagman Flow Level Systems & Solutions



MEASURE FLOW & LEVEL WITH **CONFIDENCE**

Nagman's Process Flow meter calibration systems are your best turn-key solution for calibrating all types of flow meters

Sizes of Calibratable meters from DN-3 up to DN-600

FLOCAL Software included for easy integration and report generation

Customised & specialised systems for matching user requirements



ISO-4185



High accuracy upto 0.05%

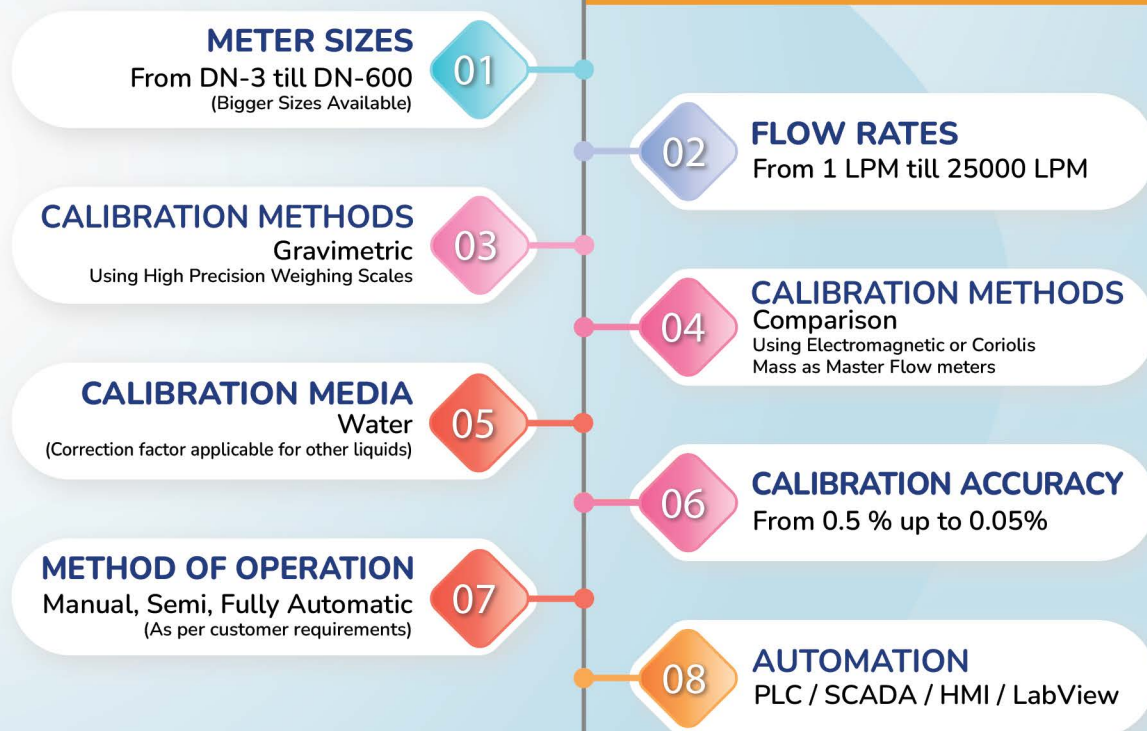


Fully Automatic Systems



SCAN FOR MORE INFORMATION

Technical Specifications



Types of Test Meters

- Electromagnetic Flow meters
- Positive Displacement Flow Meters
- Vortex Flow Meters
- Mass Flow Meters
- Ultrasonic Flow Meters
- Rota Meters

WATCAL Water Meter Calibration System

Nagman's Water meter calibration systems are your best turn-key solution for calibrating all types of domestic water meters as well as Bulk/Industrial Water meters

Meters of sizes DN-15 up to DN 300 and higher calibratable

Custom levels of system automation available including Fully Automatic systems

FLOCAL Software included for easy integration and report generation



ISO-4064



Fully Automatic Systems



High Throughput



SCAN FOR MORE INFORMATION

Technical Specifications

DOMESTIC METERS

From DN-15 till DN-50
(Up to 20 DN-15 at a time)

01

FLOW RATES

From 0.1 LPM till 25000 LPM

03

CALIBRATION ACCURACY

From 0.5 % up to 0.05%

05

AUTOMATION

PLC / SCADA / HMI / LabView

07

BULK METERS

From DN-50 till DN-300
(Bigger Sizes Optional)

02

CALIBRATION METHODS

Gravimetric
Using High Precision Weighing Scales

04

CALIBRATION METHODS

Comparison
Using Electromagnetic or Coriolis Mass
as Master Flow meters

06

METHOD OF OPERATION

Manual, Semi, Fully Automatic
(As per customer requirements)

08

Types of Test Meters

- Domestic Water Meters (DN-15 to DN-50)
- Bulk Water Meters (DN-50 to DN-300)
- Single Jet, Multi Jet, Ultrasonic, AMR, AMI, Electromagnetic & More

MOBICAL

Mobile Flow Meter Calibration System

Nagman's Mobile Flow meter calibration systems are our best portable small scale solutions for calibrating all kinds of flow meters.



Portable



Single or 3 Phase



Fully Automatic

METER SIZES

From DN-6 till DN-100

CALIBRATION ACCURACY

From 0.5 % up to 0.1 %

CALIBRATION METHODS

Comparison
Using Electromagnetic or Coriolis Mass
as Master Flow meters

METHOD OF OPERATION

Manual, Semi, Fully Automatic
(As per customer requirements)

FLOW RATES

From 1 LPM till 2500 LPM

AUTOMATION

PLC / SCADA / HMI / LabView



LEVELCAL

Level Meter Calibration System

Nagman's Level Test Rig is designed for Primary and Interface Liquid Level Testing and Calibration. This bench is suited for Wet Calibration of both Contact / Non Contact Level Instruments



Accurate



Software Included



Fully Automatic



METER RANGES

From 1000 mm till 5000mm

CALIBRATION MEDIA

Water

MASTER

Magnetostrictive

CALIBRATION ACCURACY

$\pm 0.05\%$ of FS
(Minimum 1mm)

METHOD OF OPERATION

Manual, Semi-Automatic and Fully Automatic

MODELS

Single/Dual Chamber Lab models

Types of Test Meters

Ultrasonic Level | Radar Level | Float type Level
Guided-wave Level | Capacitance Level

Dry Level Calibration System
upto 20 meter also available

GASCAL

Gas Meter Calibration System

Nagman's Gas Meter Calibration Test Bench uses "Bell Prover" technology, which is considered as a Primary (Calibration) Standard or the "Sonic Nozzle" technology, the best Flow transfer Standard.



Sonic Nozzle



Compact or Lab Setup



Fully Automatic

METER SIZES

G 1.6 to G400

CALIBRATION ACCURACY

1% to 0.2%

CALIBRATION METHODS

Bell Prover Method, Sonic Nozzle Method

CALIBRATION MEDIA

Air (Density correction factors can be given for other gases)

FLOW RATES

0.5 m³/Hr to 10000 m³/Hr

METHOD OF OPERATION

Automatic



Types of Test Meters

Diaphragm Meter | Ultrasonic | Turbine | Coriolis Mass | Thermal Mass

SALIENT FEATURES

- Bidirectional & No moving Parts
- Supports low conductivity from 5µS/cm
- Detects Backflow & In-built Totalizer

APPLICATIONS

- Water Distribution
- Sewage Treatment & Slurry
- Cooling Water



TECHNICAL SPECIFICATIONS

SIZE DN 6 (1/4") to DN 3000 (120")	FLOW RANGE (VELOCITY) 0.5m/s to 15m/s
ACCURACY ±0.5%, ±0.3%, ±0.2%	POWER SUPPLY 220 VAC / 24V DC / 3.6V DC (Battery Operated)
MEDIUM Conductive Liquids	TYPES Integral / Insertion / Remote / IoT
OUTPUT Pulse, 4-20mA, RS485, Alarm, HART / PROFIBUS (Optional)	

*Economical Model for Water Application Only

SALIENT FEATURES

- High Accuracies up to 0.1%
- Measure volume and mass flow rate
- Measure all fluids including gases

APPLICATIONS

- Polymer & High viscous fluids
- Paper & Food
- Custody transfer in Petroleum & Chemical



TECHNICAL SPECIFICATIONS

SIZE DN 8 (1/3") to DN 200 (8")	SENSOR SERIES Micro-bend, U-Series, Super Micro series
ACCURACY ±0.5%, ±0.2%, ±0.1%	POWER SUPPLY 220 VAC / 24V DC
MEDIUM Liquids, Gases	TYPES Integral / Remote
OUTPUT Pulse, 4-20mA, RS485, HART (Optional)	

Ultrasonic Flow Meters

12+ MODELS

SALIENT FEATURES

- Non-Contact, Clamp-On meter
- Easy to carry Kit
- Battery lasts up to 10 hrs
- Sensor cable up to 30m
- Low Power (1.5W)
- Continuous Monitoring and Recording

APPLICATIONS

- Energy Monitoring
- Water Conservation
- Heat Flow Measurement
- Raw & Waste Water
- Energy Audit for Cooling Water
- Flow Meter Verification



Handheld



Wall Mounted



Pro



Ultra

Other Models

- Panel Mounted
- Solar Powered
- Pro Energy
- Plus
- Dual Path
- Doppler
- Snap
- Mini



TECHNICAL SPECIFICATIONS

SIZE DN 15 (1/2") to DN 6000 (240")	FLOW RANGE (VELOCITY) 0.2m/s to 20 m/s	ACCURACY ±1%, 0.5% (Optional)	POWER SUPPLY Powered, Battery Operated
MEDIUM Homogeneous Liquids	OUTPUT RS 232 / RS 485 / SD Card / 4-20mA	SENSORS S (15-100) / M (50-700) / L (300-6000) / P (25 - 1200) / U (25 - 6000)	

SALIENT FEATURES

- Cost Effective & Minimal Maintenance
- Excellent repeatability with 0.05%
- High Pressure up to 400 bar

APPLICATIONS

- Distilled / Demineralized water
- Non-conductive fluids
- Fuel / Petrochemicals Custody



FUEL*
FLOW



TECHNICAL SPECIFICATIONS

SIZE DN 4 (1/6") to DN 200 (8")	MEDIUM Liquids & Gases
ACCURACY ±0.5%, ±1%	TYPES Integral / Remote / Hygenic / Fuel
POWER SUPPLY 24V DC / 3.6V DC (Battery Operated)	OUTPUT Pulse, 4-20mA, RS485
TEMPERATURE Up to 150° C	

*For Gravity Truck Loading / Unloading

SALIENT FEATURES

- No moving Parts
- High Temperature up to 350°C
- In-built Temperature And Pressure Compensation

APPLICATIONS

- Natural Gas
- Energy Generation & Supply
- Chemicals & Pharmaceuticals



TECHNICAL SPECIFICATIONS

SIZE DN 15 (1/2") to DN 300 (12")	POWER SUPPLY 24V DC / 220V DC
ACCURACY ±1.5%, ±1%	OUTPUT Pulse, 4-20mA, RS485, HART / PROFIBUS (Optional)
FLOW RANGE (VELOCITY) 0.5m/s to 70m/s	TYPES Integral / Remote
MEDIUM Steam, Liquids, Gas	

SALIENT FEATURES

- No Need for Temperature & Pressure Compensation
- Detects low flow of Gas (Leaks)
- Can measure both Mass & Volume flow of Gas

APPLICATIONS

- Electric Power & Water Treatment
- Petrochemical & Pharmacy
- Air separation industry



TECHNICAL SPECIFICATIONS

SIZE DN 15 (1/2") to DN 4000 (160")	FLOW RANGE (VELOCITY) 0.1 Nm/s to 100 Nm/s
ACCURACY ±1.0%, ±2.5%	POWER SUPPLY 220 VAC / 24V DC
MEDIUM All kinds of Gases	TYPES Integral / Remote / Insertion
OUTPUT Pulse, 4-20mA, RS485, HART (Optional)	

SALIENT FEATURES

- Low Pressure Loss
- Low Maintenance
- Detects Low Flow

APPLICATIONS

- Custody Transfer for Oil & Gas
- Marine & Shipping
- Food & Pharmaceutical



TECHNICAL SPECIFICATIONS

SIZE DN 8 (1/3") to DN 400 (16")	POWER SUPPLY 220 VAC / 24V DC / No Power
ACCURACY ±0.5%, ±0.2%, ±0.1%	OUTPUT Pulse, 4-20mA, RS485
MEDIUM Liquids	TYPES Digital / Analog
TEMPERATURE Up to 250° C	

SALIENT FEATURES

- Smart meters with Bluetooth Connectivity
- False Echo detection and removal
- Small Beam Angle under 7°

APPLICATIONS

- Cement, powder, wood & other Solid materials
- Process & Bulk Storage vessels
- Thermal & Hydroelectric power stations



LENS

TECHNICAL SPECIFICATIONS

RANGE

Up to 10m / 20m / 35m / 85m / 120m

OUTPUT

4-20mA, RS485 , HART / MODBUS (Optional)

ACCURACY

±1mm , ±2mm

MEDIUM

Liquids / Solids / Corrosive

POWER SUPPLY

220 VAC / 24V DC

TYPES

Lens / Cone / Economical / Remote

ADDITIONAL FEATURES

Bluetooth, Air Purging, False Echo Detection & Removal

SALIENT FEATURES

- Operable in High Pressure and Temperature
- Works with most liquids and solids
- False Echo detection and removal

APPLICATIONS

- Organic & Petrochemical Industry
- Liquid Storage & Solid powdered Silos
- Foaming/Fuming Liquids



TECHNICAL SPECIFICATIONS

RANGE

Up to 30m

OUTPUT

4-20mA, RS485 , HART / MODBUS (Optional)

ACCURACY

±3mm

OPERATING CONDITIONS

-200°C – 400°C ; -1 – 400 bar

POWER SUPPLY

220 VAC / 24V DC

MEDIUM

Solids / Liquids / Corrosive / Low Dielectric

TYPES

Rope, Rod, Dual cable, PTFE Rod , Coaxial Cable

SALIENT FEATURES

- Economical
- Not affected by dielectric constant of mediums
- Not affected by foam/fumes

APPLICATIONS

- Petrol & Chemical
- Sewage Treatment & Slurry
- Electric Power & Food Processing



TECHNICAL SPECIFICATIONS

RANGE

Up to 20m

OUTPUT

4-20mA, RS485 , HART / MODBUS (Optional)

ACCURACY

±0.25% (full range)

MEDIUM

Solids / Liquids / Corrosive / Low Dielectric

POWER SUPPLY

220 VAC / 24V DC

TYPES

Integral, Remote

ADDITIONAL FEATURES

Open channel function, Echo Curve display

SALIENT FEATURES

- Integrated Flow Velocity and Water Level Measurement
- Simple and convenient Installation
- Small Beam Angle & Low Power Consumption

APPLICATIONS

- Smart City & Urban Flood Control / Monitoring
- River & Stormwater flow monitoring
- Reservoir / Dam Discharge & Agriculture Irrigation



TECHNICAL SPECIFICATIONS

LEVEL RANGE

Up to 45m / 85m

VELOCITY RANGE

0.05 – 20 m/s

LEVEL ACCURACY

±1mm

VELOCITY ACCURACY

± 10mm/s

POWER SUPPLY

12V / 24V DC

OUTPUT

RS485, MODBUS

RADAR FREQUENCY

80GHz , 24GHz

NEW PRODUCTS

TYPE TEST BENCH



Type Test Bench for Domestic Water Meters (DN 15-25 mm) as per ISO 4064
10+ Testing Services Available

MINI GASCAL



A Compact System to Calibrate Domestic Gas meters of sizes G1.6 to G4 with High Accuracy

PORTABLE ROTAMETER CALIBRATION KIT



A Portable & Compact System to Calibrate Rotameters for Medical Oxygen Measurement

PORTABLE WATER METER TEST KIT



A Portable, Accurate, Battery Operated Test Kit to verify Accuracy and Working of Domestic Water Meters

NAGMAN INSTRUMENTS CONSORTIUM

COMPREHENSIVE CALIBRATION SOLUTIONS PROVIDER

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Manufacturer of Calibration Standards, Systems & Software for Temperature, Pressure & Signal Parameters

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