

m series positive
displacement flowmeters

macnaught

m-series positive displacement flowmeters

Macnaught offers a comprehensive range of oval gear meters suited to flows from as low as 0.5 LPH (litres per hour) up to 1200 LPM (litres per minute). Macnaught meters are available in a range of construction materials, port sizes and ancillary accessories including mechanical and electronic displays. Sold to over 60 countries, Macnaught meters provide solutions for applications in energy, oil and gas, mining, marine, pharmaceutical, food, textiles, cosmetics, petrochemical, transport and construction industries.

Macnaught manufactures a range of fully positive displacement flow meters utilising the time proven oval gear principle. This style of meter offers extremely high accuracy (better than +/- 0.5% of reading), unaffected by viscosity (< 1 to > 1,000,000) with low pressure loss. The meters are available in a range of construction materials, port types and can be supplied with ancillary accessories including mechanical and electronic displays. One of the major advantages of the M Series meters is low maintenance and the ability for on site repairs when needed. The range includes meters with flows as low as 0.5 litres per hour and as high as 1200 litres per minute. Each meter is supplied with a calibration certificate showing meter accuracy.



Macnaught was established in 1948 and through 58 years of engineering excellence has responded to international manufacturers need for the accurate metering and control of fluids.

Today's product is the result of continued research and development aimed at supplying the best possible meter for each application. Macnaught is able to provide creative solutions and develop customised products where needed.

Macnaught is dedicated to a policy of providing clients with exceptional levels of support, service and engineering backup of the highest quality.

M05 / M1 / M2



Flow: • M05: 0.5(0.13) ~ 50(13.2) • M1: 1(0.26) ~ 100(26.4)
• M2: 15(3.96) ~ 500(132) LPH(USGH) (> 5cps)
Materials: Body: Aluminium/PPS/Stainless Steel
Rotors: Stainless Steel / PPS
Bushings: Sapphire/Zirconia
Port Size: 1/8" (M05) & 1/4" BSP(F) or NPT(F)
Pressure Ratings: 500kpa - 75psi/1,000kpa - 150psi/5,500kpa - 800psi/55,1600kpa - 8,000psi
Temperature: 80°C (176F) or 120°C (248F)
Viscosity: 1,000cps Maximum (M2 with HV rotors > 1,000cps)
Model Types: Pulse, Encoder(M2), Liquid Crystal Display

M4



Flow: 1(0.26) ~ 30(7.93) LPM(USGM) (> 5cps)
Materials: Body: Aluminium/Stainless Steel
Rotors: Stainless Steel / PPS
Bushings: Carbon / PPS
Port Size: 1/2" BSP(F) or NPT(F)
Pressure Ratings: 5,500kpa - 800 psi (pulse version)
3,400kpa - 500psi (mechanical version),
HP 20,000 kPa - 2900 psi
Temperature: 80°C (176F) or 120°C (248F)
Viscosity: 1,000cps Maximum (with HV rotors > 1,000cps)
Model Types: Pulse, Encoder, Liquid Crystal Display, Mechanical (Digital)

M6



Flow: 3(0.8) ~ 80(21) LPM(USGM) (> 5cps)
Materials: Body: Aluminium / Bronze
Rotors: Stainless Steel / PPS
Bushings: Carbon / PPS
Port Size: 1/2" BSP(F) or NPT(F)
Pressure Ratings: 5,500kpa - 800psi, HP 13,800 kPa -2000 psi
Temperature: 80°C (176F) or 120°C (248F)
Viscosity: 1,000cps Maximum (HV rotors > 1,000cps)
Model Types: Pulse, Liquid Crystal Display

M7



Flow: 3(0.8) ~ 80(21) LPM(USGM) (> 5cps)
Materials: Body: PPS / Aluminium
Rotors: PPS / Stainless Steel
Bushings: PPS / Carbon
Port Size: 1" BSP(F) or NPT(F)
Pressure Ratings: 1,000kpa - 150psi,
25,000 kPa - 3625 psi (aluminium version only)
Temperature: 80°C / 120°C (stainless steel rotor version)
Viscosity: 1,000cps Maximum
Model Types: Pulse, Liquid Crystal Display

M10



Flow: 6(1.6) ~ 120(31.7) LPM(USGM) (> 5cps)
 Materials: Body: Aluminium/Stainless Steel / Bronze
 Rotors: Stainless Steel / PPS
 Bushings: Carbon / PPS
 Port Size: 1" BSP(F), NPT(F), ANSI 150lb, DIN16, JIS10, Tri Clover
 Pressure Ratings: 5,500kpa – 800psi (3,450kpa – 500psi mechanical version)
 HP 13,800kPa - 2000psi
 Temperature: 80°C (176F) or 120°C (248F)
 Viscosity: 1,000cps Maximum (HV rotors >1,000cps)
 Model Types: Pulse, Encoder, Liquid Crystal Display,
 Mechanical (Digital or Analogue)

M40



Flow: 10(2.64) ~ 250(66) LPM(USGM) (> 5cps)
 Materials: Body: Aluminium/316 Stainless Steel / Bronze
 Rotors: 316 Stainless Steel / PPS
 Bushings: Carbon / PPS
 Port Size: 1 1/2" BSP(F), NPT(F), ANSI 150lb, DIN16, JIS10, Tri Clover
 Pressure Ratings: 1,800kpa – 260psi
 Temperature: 80°C (176F) or 120°C (248F)
 Viscosity: 1,000cps Maximum (HV rotors >1,000cps)
 Model Types: Pulse, Encoder, Liquid Crystal Display,
 Mechanical (Digital or Analogue)

M50



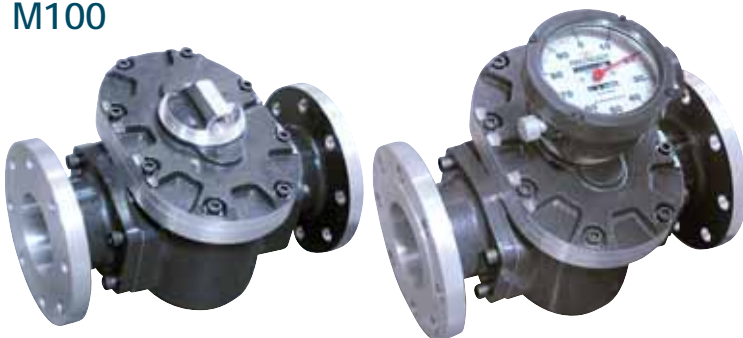
Flow: 15(3.96) ~ 350(92.5) LPM(USGM) (> 5cps)
 Materials: Body: Aluminium/316 Stainless Steel/Bronze
 Rotors: 316 Stainless Steel / PPS
 Bushings: Carbon / PPS
 Port Size: 2" BSP(F), NPT(F), ANSI 150lb, DIN16, JIS10, Tri Clover
 Pressure Ratings: 1,800kpa – 260psi
 Temperature: 80°C (176F) or 120°C (248F)
 Viscosity: 1,000cps Maximum (HV rotors >1,000cps)
 Model Types: Pulse, Encoder, Liquid Crystal Display,
 Mechanical (Digital or Analogue)

M80



Flow: 33(8.7) ~ 733(194) LPM(USGM) (> 5cps)
 Materials: Body: Aluminium/Stainless Steel
 Rotors: Aluminium/Stainless Steel
 Bushings: Needle roller/Carbon
 Port Size: 3" BSP(F), NPT(F), ANSI 150lb, DIN 16, JIS 10
 Pressure Ratings: 1,200kpa – 175psi
 Temperature: 80°C (176F)
 Viscosity: 1,000cps Maximum
 Model Types: Pulse, Liquid Crystal Display,
 Mechanical (Analogue)

M100



Flow: 120(31.7) ~ 1200(317) LPM(USGM) (> 5cps)
 Materials: Body: Aluminium/Stainless Steel
 Rotors: Aluminium/Stainless Steel
 Bushings: Needle roller/Carbon
 Port Size: 3" BSP or NPT (F), 4" ANSI 150lb,
 100 DIN 16, 100 JIS 10
 Pressure Ratings: 1,000kPa – 145psi
 Temperature: 80°C (176F)
 Viscosity: 1,000cps maximum
 Model Types: Pulse, Liquid Crystal Display,
 Mechanical (Analogue) (Pulse/LCD only)

Standard Display

- Liquid Crystal Display
- 7 x 17mm Digits
- 11 x 8mm Digits
- Grand Total / Reset Total / Rate
- 7 Year Battery Life
- Meter or Remote Mount
- IP65 Protection
- Silicon Protection Boot Option



Deluxe Display

- Liquid Crystal Display
- 7 x 13mm Digits
- Grand Total / Reset Total / Rate
- Batching Facility
- 1 Year Battery Life
- Meter or Remote Mount
- IP54 Protection
- Silicon Protection Boot Option



Mechanical Register Digital

- Roller Wheel
- Total 6 Digits
- Reset Total 4 Digits
- Reset – Push Button
- Silicon Protection Boot Option



MH450 Industrial Mechanical register

- Extra robust design
- Aluminium fascia plate with toughened glass exterior
- Aluminium reset knob
- Reset total 4 digits
- Grand total 6 digits
- IP65 Protection



Mechanical Register Analogue

- Revolving Pointer 10L or 100L
- 150mm Diameter Dial
- Total 6 Digits
- Reset Total 4 Digits
- Pulsar Option



Veeder Root Display

- Reset Total 5 Digits
- Grand Total 8 Digits



MR150

- Reed Switch Input
- 4-20mA Output
- Loop Power Device
- Meter or Remote Mount
- Output Pulse (Scaled)
- Hi/Lo Alarm
- Optional PC Calibration (MR120)



A110 Rate Totaliser

- Liquid Crystal Display
- 7 x 17mm Digits
- 11 x 8mm Digits
- Total / Reset Total / Rate
- 7 Year Battery Life
- Scaled Pulse Output
- 4 – 20mA Analogue Output
- Fully Programmable
- IP65 Protection
- Optional Functions



MR100 Digital Display

- 6 x 12mm Digits
- battery life 2 years
- Grand Total / Reset Total / Batch Total / Rate
- Fully field programmable
- 2 x AAA Alkaline batteries
- Rate Units: sec, min, hr
- IP65 Protection



Meter Test & Calibration

- Flows 0.2 to 1000 LPM
- Fluids 1 to 60 cSt
- All master meters directly traceable to a national standard NMI/UKAS
- Volume or Rate Calibrations/Test

CE Markings

EMC Directive 89/336/EEC
Standard Display
Deluxe Display
MR100

PE Directive 97/23/EC
M40 to M100 inclusive

Machine Directive 98/37/EC
All Models

Hazardous Area Certifications

M10/M40/M50
Explosion Proof Certification
SAA Ex d IIB T6 IP66 Class 1 Zone
Standard Display
Kema EEx ia IIB/IIC T4
Deluxe Display
PTB EEx ia IIC T6

STANDARDS AUSTRALIA

Flameproof Approval

Calibration certificate



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