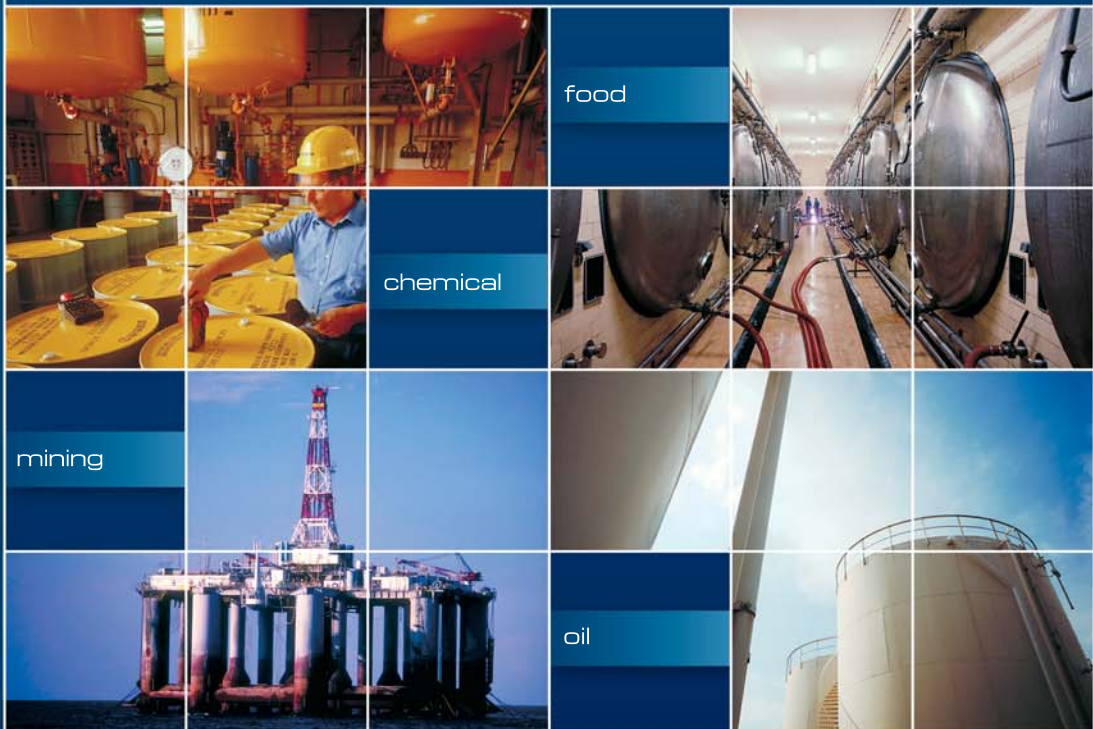




Macnaught offers a comprehensive range of oval gear meters suited to flows from as low as 0.5 LPH (litres per hour) up to 1200 LPM (litres per minute). Macnaught meters are available in a range of construction materials, port sizes and ancillary accessories including mechanical and electronic displays. 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.



food

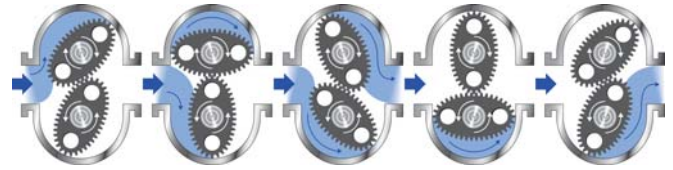
chemical

mining

oil



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 55 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:** 3/4" BSP(F) or NPT(F)
- Pressure Ratings:** 5,500kpa - 800psi,
- 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

Positive Displacement Flow Meters

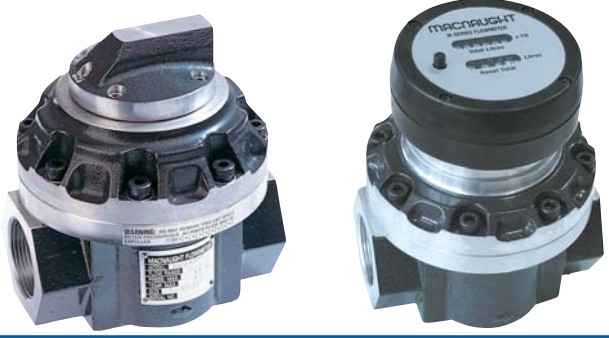
M10

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)



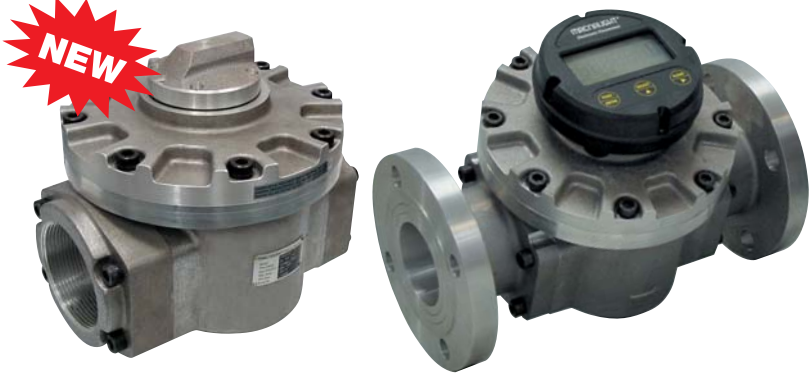
M50

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

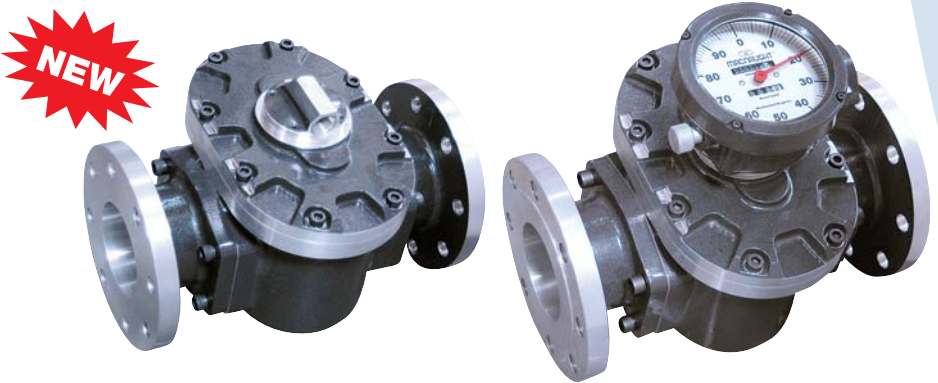
Flow: 33(8.7) ~ 733(194) LPM(USGM) (> 5cps)
Materials: **Body:** Aluminium/Stainless Steel*
Rotors: Aluminium/Stainless Steel*
Bushings: Needle roller/Carbon
Port Size: 3" BSP(F), NPT(F), ANSI 150lb, DIN 16, JIS 10
Pressure Ratings: 1,200kpa – 175psi
Temperature: 80°C (176F)
Viscosity: 1,000cps Maximum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



*Release date for stainless steel Q4 2005

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)



*Release date for stainless steel Q4 2005



MACNAUGHT®



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 facia 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
- Pulser Option



VEEDER ROOT DISPLAY

- Reset Total 5 Digits
- Grand Total 8 Digits



A500 PULSE TO ANALOGUE CONVERTER

- Reed Switch Input
- 4 - 20mA Output
- Loop Powered Device
- Meter or Remote Mount
- Output Pulse



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



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

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

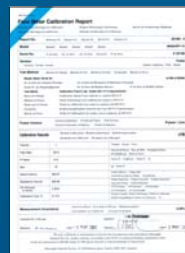
CE MARKINGS

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

CALIBRATION CERTIFICATE



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