



#### **PAMTIGHT Manhole Covers**



PAMTIGHT manhole covers are the optimum choice for applications where air- and watertightness are required. Made from ductile iron — an engineered material that offers many advantages over traditional cast iron — PAMTIGHT covers deliver all the benefits of pressure tightness, resistance to traffic shock and enhanced ergonomics, providing advanced solutions for today's public works departments, engineers and maintenance personnel.

There are over 6 million PAM units in the ground around the world utilizing technically advanced materials and engineering. Our focus on the needs of the end-user — rather than developing products merely to meet a minimum performance standard — led us to ductile iron, a superior alternative to cast iron in terms of weight, strength and designability.

### **Pressure Tight Design**



PAMTIGHT manhole covers are designed to prevent the infiltration or escape of air and water to a 14-psi (1-bar) positive or negative pressure rating.



 Elastomer sealing ring ensures watertightness (confirmed during sevenday trial in hydraulic laboratory).



- Design incorporating both stainless steel bolts (8) and clamping claws allows higher performance sealing.
- After opening, cover can be put back in any orientation and remain pressure tight.

# Highlights

- Available in 32" opening
- Two rings:
  - Elastomer sealing ring
  - Polyethylene seating ring
- Fastened by 8 bolts and clamping claws
- Ductile iron
- Class D 400 EN 124
- Exceeds H20 AA SHTO loading
- Closed handling box

#### Safety

PAMTIGHT manhole covers are designed for safe use by installers and maintenance personnel.

- Ductile iron:
  - Product weighs 50% less than typical cast-iron covers, reducing risks of manual material handling (MMH).
  - Safe mode of failure even in unlikely event that cover dishes and/or cracks, it remains strong and therefore protects the public from accidents.

#### Strength and Durability

PAMTIGHT manhole covers are designed to be highly durable, a benefit that is made possible by the excellent mechanical performance of ductile iron.

- Three times the load strength of typical cast-iron covers.
- Exceeds the AASHTO (American Association of State Highway and Transportation Officials) H20 heavy duty load resistance requirement and is rated at 100,000 lbs.
- Polyethylene seating ring ensures perfect seating, resistance to traffic shock.

 Bolts are in an enclosed pocket, and thus are not exposed to hydrogen sulfide attack and corrosion through sewer gases. This feature ensures that bolts won't rust to the frame and have to be drilled out.

# **Ergonomics**

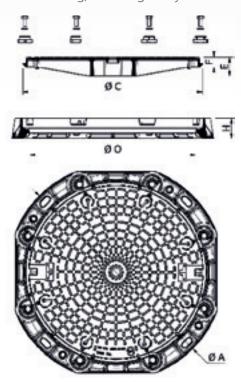
- Clamping device can be rotated and the cover opened simply by loosening the bolts.
- Handling is facilitated by the relatively low cover weight (100 lbs.) and the presence of a closed handling box.
- Bolts do not need to be fully removed to gain access, lessening the chance they'll be misplaced.



# **Quality Assurance**

The PAMTIGHT manhole cover unit has been designed and manufactured within a certified ISO 9000 quality management system, certified by an independent, internationally recognized third party.

• Extensive field testing, including heavy traffic situations.



# The PAMTIGHT Range

WEIGHT (Lbs)		DIMENSIONS (inches)					
COVER	TOTAL	А	С	E	F	Н	0
146,3	284,9	42,4	35,12	3,76	1,96	4	35,512

#### Installation Notes:

- Care shall be taken that frame is properly secured to concrete or brickwork shafts.
- Use of anchoring devices is highly recommended.

#### **Specification**

- PAMTIGHT or similar approved Manhole Cover and Frame.
- Covers and Frames shall be manufactured from Ductile Iron in accordance with ISO 1083.
- Covers shall be one-man operable using standard tools and shall be capable of withstanding an average load of 100,000 lbs.
- Frames shall be circular and shall incorporate a sealing gasket; Frame depth shall not exceed 4".

- Cover shall withstand pressure of 14-psi positive or negative rating.
- The flange shall incorporate bedding slots and bolt holes.
- Cover shall be held in place by eight clamping claws with fully enclosed bolts.
- All components shall be black coated\*.
   \*The components can also be in red or blue epoxy.

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