Manhole metal lid 870-L

[Applications] Used as a metal lid to be attached to a manhole accommodating power cables.

[Specifications]

˜ Lid: Shall consist of an outer lid, a middle lid, and a barrel, each structured as described below.

(1) The outer lid and the barrel must be free of flaws and blow holes that are hazardous in using a manhole, and other hazardous defects.
(2) The middle lid must be free of flaws and faults that are hazardous in using a manhole and other defects.
(3) The outer lid and the barrel shall be built in a flat support structure by which the load on the outer lid imposed by the passage of vehicles is borne by the contact surface with the barrel. With the outer lid set on the barrel, the system shall maintain an equilibrium so that practically harmful backlash and elevation changes do not occur.
(4) The outer lid shall be provided with grips (U-shaped bolts) for opening at two locations. The grip shall be of a structure in which its upper surface comes below the upper surface of the outer lid when the grip is not in use and in which any shock caused by the passage of vehicles does not damage the grip.
(5) The lid shall be of a structure in which rubber packing is placed on the contact surface between the middle lid and the barrel with a horizontal bar fastening them. The middle lid shall be provided with grips for opening at two locations.
(6) The outer lid and the barrel shall be coated with black paint excellent in corrosion and weather resistance. The middle lid shall be provided with anti-rust treatment uniformly over its entire surface; the color of the middle lid shall be equivalent to Munsell N-7.
(7) The surface of the outer lid shall be provided with three-dimensional patterns to prevent people and vehicles from slipping independently of the weather environment.

˜ Horizontal bar: Shall be composed of the main body horizontal bar, special bolts, caps, and collars, and structured as described below.

(1) The horizontal bar must be free of flaws and blow holes that are hazardous in using a manhole and other hazardous defects.
(2) The horizontal bar shall be capable of, by being attached to the barrel, allowing the middle lid to be fixed easily, and the locking sections at two locations shall additionally serve to prevent the middle lid from flying due to the rise in the internal pressure of the manhole. The locking mechanism section shall allow the lock to be released and re-engaged easily by a devoted tool alone even after a long time of use.
(3) The surface of the horizontal bar main body shall be provided uniformly over its entire surface with anti-rust treatment based on hot dip galvanizing.
(4) The horizontal bar main body shall be equipped with a cap to prevent mud and dust from entering the locking mechanism section and a collar to cover the tip of the special bolt section, with the cap and the collar being integrated. The surface of the collar shall be provided uniformly over its entire surface with anti-rust treatment based on hot dip galvanizing.

˜ Devoted tool: Shall consist of a grip section and a socket section, and be structured as described below.

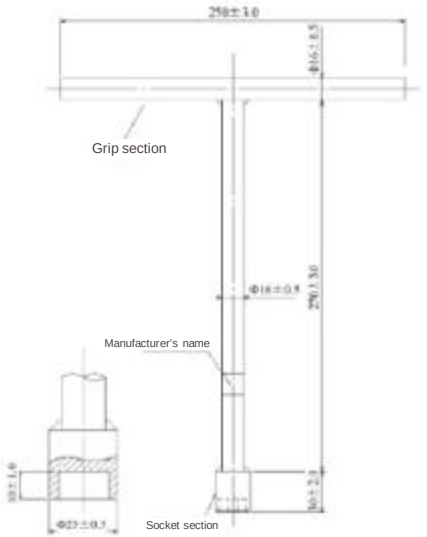
(1) The devoted tool must be free of flaws and faults that are hazardous in using a manhole and other hazardous defects.
(2) The devoted tool shall be of a structure that facilitates locking and releasing the locking mechanism section of the horizontal bar.

Manhole metal lid 870-L

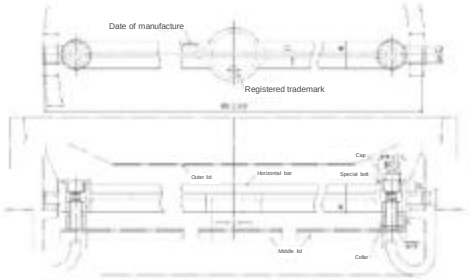
Materials for parts

Name			Materials
Lid	Outer lid	Main body	FC250 specified in JIS G5501
		Grip	SS400 specified in JIS G3101 or an equivalent
	Middle lid	Main body	SS400 specified in JIS G3101 or an equivalent
		Rubber packing	Rubber packing consisting mainly of chloroprene-based synthetic rubber
		Grip	SS400 specified in JIS G3101 or an equivalent
		Pin for the grip	C1100B specified in JIS H3250 or an equivalent
		Split pin for the grip	C2700W specified in JIS H3260 or an equivalent
	Barrel	Main body	FC200 specified in JIS G5501
Horizontal bar		Main body	FCD600-3 specified in JIS G5502 or an equivalent
		Special bolt	SUS304 specified in JIS G4303 or an equivalent
		Cap	Vinyl chloride resin specified in JIS K6720 or an equivalent
		Collar	Carbon steel pipes for ordinary piping specified in JIS G3452 or an equivalent
Devoted tool		Grip section	SUS304 specified in JIS G4303 or an equivalent
		Socket section	S55C specified in JIS G4501 or an equivalent

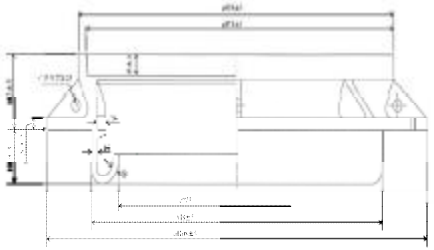
Devoted tool



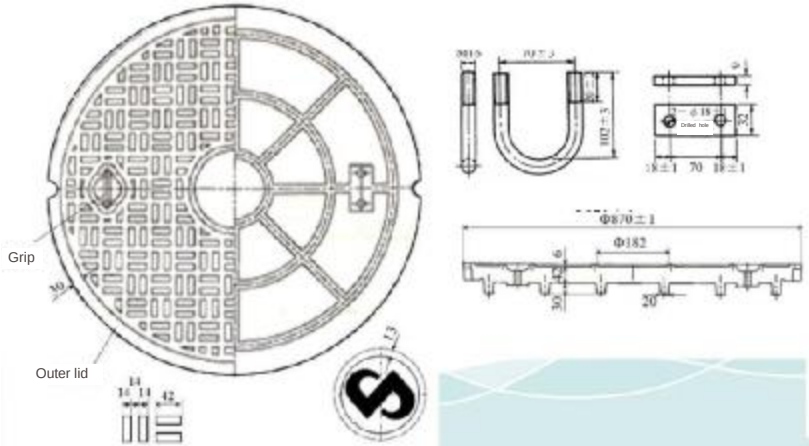
Horizontal bar



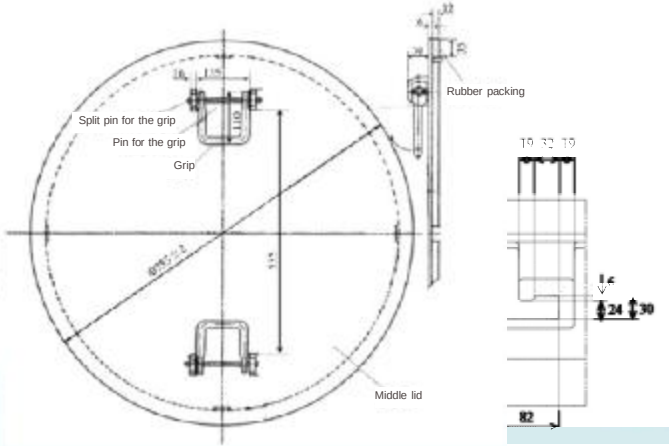
Barrel section

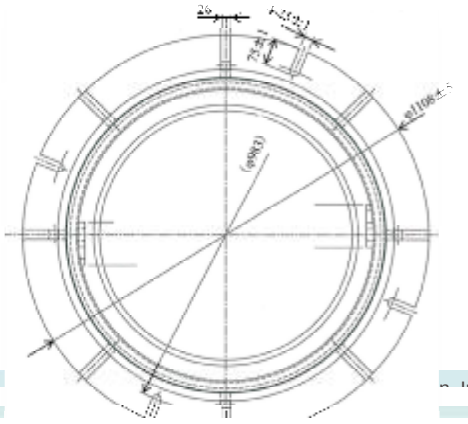


Outer lid



Middle lid





Manhole metal lid: 870DVL

[Applications] Used as a metal lid to be attached to a manhole accommodating underground power cables.

[Specifications]

The material for the lid shall be spheroidal graphite cast iron, FCD700-2.
A lid shall consist of an outer lid, a middle lid, a barrel, and accessories, each structured as described below.

a. With the outer lid set on the barrel, the system shall maintain an equilibrium that prevents practically harmful backlash from occurring.

b. The outer lid shall be provided with hooks at two locations to prevent the outer lid from riding up or slipping down at the stage of initial penetration in a support structure in the from of a V-shaped steep inclined plane.

c. The outer lid shall be provided with opening-and-closing keyholes at two locations that enables a hook-unlocking key opener to be mounted, with a resin cap to be attached to the keyhole if required.

d. The middle lid shall be of a structure in which a piece of rubber packing is attached between the middle lid and the barrel to prevent stagnant water from leaking into the manhole, with the rubber packing squeezed by the horizontal bar and a special bolt for locking to stop water.
The horizontal bar and the special bolt for locking shall also serve to prevent the lid from flying due to the rise of the inner pressure in a manhole.

e. The locking mechanism section shall be of a structure that allows the lock to be released and re-engaged easily after a long time of use in an inspection of the manhole.