



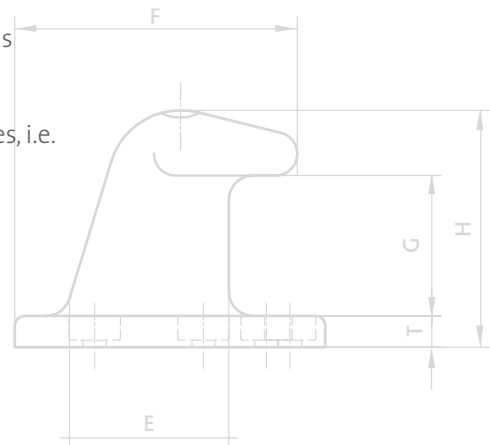
BOLLARDS

For historical reasons, bollards vary significantly between ports and countries, especially in Europe regarding the following parameters:

- ▶ Shape,
- ▶ Material quality,
- ▶ Anchoring system
- ▶ Corrosion protection,
- ▶ Safety factors and design methods

We offer a wide range of bollard types, i.e.

- ▶ T-Head
- ▶ Staghorn
- ▶ Pipe
- ▶ Kidney
- ▶ Canon
- ▶ Break-off
- ▶ Single Bitt
- ▶ Double Bitt



We offer bollards in different material grades made from the following materials:

- ▶ Grey cast iron
- ▶ Ductile cast iron (spheroidal graphite)
- ▶ Cast steel
- ▶ Mild steel



We offer the following anchor systems:

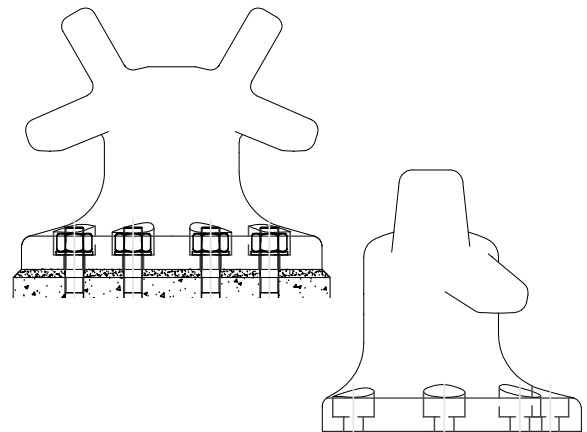
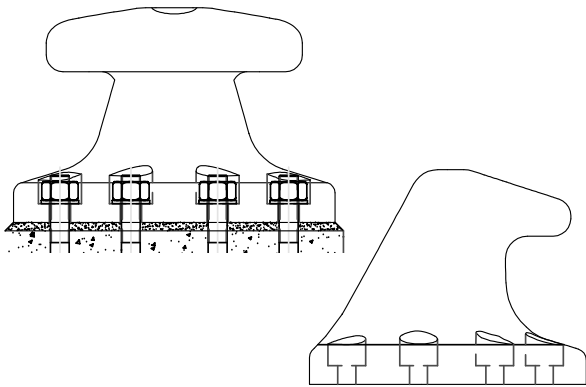
- ▶ Mild steel anchor rods with end-plates and nut fixing for new concrete
- ▶ Mild steel anchor rods with epoxy grout and nut fixing for existing concrete
- ▶ Cast-in anchor systems with break-off bolts

We offer the following corrosion protection systems:

- ▶ Primed only
- ▶ Painted with primer, 2-component epoxy layer and top coat
- ▶ Galvanized
- ▶ Galvanized and painted (Duplex)

Kindly contact us for special designs.





T-HEAD

Name	Capacity	Anchor size	Anchor qty.
FT - 10	10 Tons	M24	4
FT - 15	15 Tons	M24	4
FT - 20	20 Tons	M24	5
FT - 30	30 Tons	M30	5
FT - 50	50 Tons	M36	5
FT - 75	75 Tons	M42	6
FT - 100	100 Tons	M42	7
FT - 125	125 Tons	M48	7
FT - 150	150 Tons	M48	7
FT - 200	200 Tons	M56	8
FT - 250	250 Tons	M56	8
FT - 300	300 Tons	M64	8

STAGHORN

Name	Capacity	Anchor size	Anchor qty.
FSH - 10	10 Tons	M24	4
FSH - 15	15 Tons	M24	4
FSH - 20	20 Tons	M24	5
FSH - 30	30 Tons	M30	5
FSH - 50	50 Tons	M36	5
FSH - 75	75 Tons	M42	6
FSH - 100	100 Tons	M42	7
FSH - 125	125 Tons	M48	7
FSH - 150	150 Tons	M48	7
FSH - 200	200 Tons	M56	8

higher capacity upon request

