



INCLINED-P BOLLARD DATA SHEET

2000.0000-Td-0201fen_rev3

Rev.	Date	Description	Prepared	Checked	Approved
0	27/12/2013	First Issue	BFA	DBL	GEB
1	19/02/2015	General Revision	BFA	DBL	GEB
2	12/03/2015	Anchorage Revision	BFA	DBL	GEB
3	25/03/2015	Weight revisión	IME	DBL	GEB
4	29/04/2015	General Revision	BFA		GEB



1. BOLLARD INCLINED-P

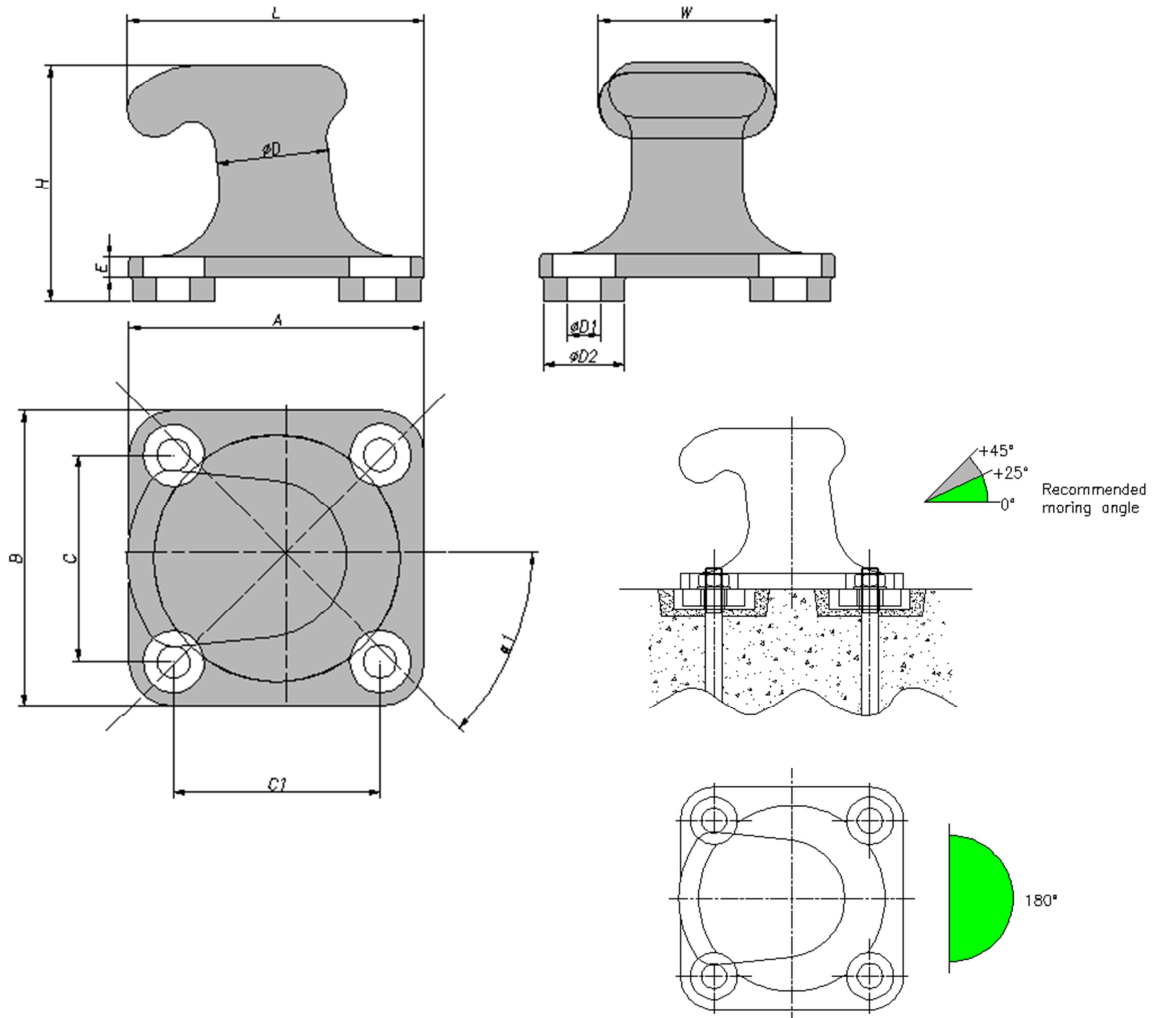


High quality casting material

Strong and durable design

Low maintenance

Large mooring range angle



Bollard summary	
Type:	INCLINED-P
Safety Work Load:	See Table Below
Mooring Range:	Vertical: 0° to +45°
	Horizontal: 180°
Material	
Typel:	Cast steel
Quality:	GS 52 (DIN 1681) Gr 10552
Properties	Yield Strength : >260 MPa
	Tensile Strength: >520 MPa
	Elongation: > 18 %
Anticorrosive Treatment	
Treatment:	Painted
Scheme:	Abrasive Blasting. Degree of cleanliness Sa 2 ½ (ISO 8501.1)
	Surface roughness of 30-75µ (EN ISO 8503) 2 Coats of epoxy polyamide HEMPADUR 45143**
Dry Film Thickness:	≥ 320 µ
Colour:	Black, RAL 9005
Quality Control	
Material Certificate:	3.1,Acc EN 10204

Anchorage summary	
Type:	New Concrete/Old Concrete/Through
Metric:	See Table Below
Material	
Type:	Steel
Quality:	C45E EN10083 **
Properties:	Yield Strength : ≥ 305 MPa
	Tensile Strength: 580 MPa
	Elongation: ≥ 16%
Quality Control	
Material Certificate:	3.1,Acc EN 10204

** Or equivalents

Dimension (mm)	Bollard Capacity (Tn)					
	15	30	100	150	250	
Weight(kg):	125	190	630	820	1980	
A:	500	600	940	1000	1400	
B:	500	600	940	1000	1400	
C:	300	400	640	700	975	
C1:	300	400	640	700	975	
D	200	230	320	380	500	
D1:	42	66	91	112	122	
D2:	140	170	240	275	300	
E:	40	45	65	70	100	
H:	410	470	675	800	1065	
L:	508	626	940	1007	1181	
W:	330	370	514	600	800	
Anchorage						
Metric:	M.36	M.72	M.80	M.90	M.110	
New concrete	Length (mm):	550	850	1000	1100	1300
	Length Embedded(mm):	465	705	845	930	1090
	Weight(kg):	6	45	60	93	148
Old concrete	Length (mm):	550	1080	1100	1130	1460
	Length Embedded(mm):	465	935	945	960	1250
	Weight(kg):	4.8	38	48	64	119
Number of anchorages:		4	4	4	4	
α1:	45°	45°	45°	45°	45°	
α2:		-	-	-	-	
α3:		-	-	-	-	
α4:		-	-	-	-	