



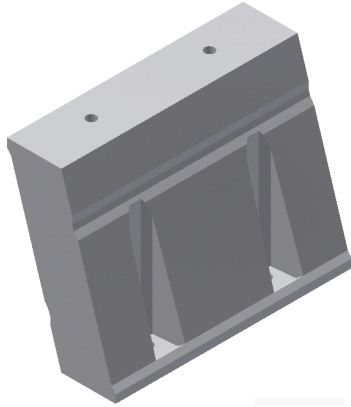
IV FENDER DATA SHEET

1000.0000-Td-0201cen_rev2

Rev.	Date	Description	Prepared	Checked	Approved
			by	by	by
0	06/03/2014	First Issue	BFA	DBL	GEB
1	30/03/2015	General Revision	BFA	DBL	GEB
2	14/05/2015	General Revision	BFA		GEB



1. IV FENDERS



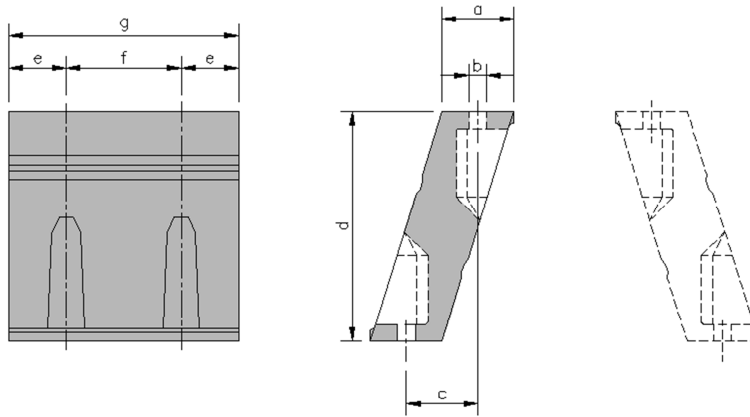
Features

- High deformation capacity
- Symmetrical or asymmetrical installation
- Excellent shear performance

Applications

- All kind of berths (coastal, river, tidal and non-tidal)
- All types of jetties (open pile, dolphins, monopiles, mass structures...)
- All types of ships (general cargo, bulk carrier, oil tanker, gas carrier, passenger...)

2. DIMENSIONS



Fender	a	b	c	d	e	f	g	Weight (kg) ⁽¹⁾	Nº Anchors/Metric ⁽²⁾
IV-400	125	31	124	400	250	500	1000	79	4xM.24
IV-500	160	38	155	500	250	500	1000	128	4xM.30
IV-550	176	38	170	550	250	500	1000	148	4xM.30
IV-600	193	38	200	600	250	500	1000	175	4xM.30
IV-750	230	42	230	750	250	500	1000	247	4xM.36
IV-800	240	42	250	800	250	500	1000	280	4xM.36
IV-1000	320	50	310	1000	250	500	1000	449	4xM.42
IV-1250	400	56	388	1250	250	500	1000	686	4xM.48
IV-1450	464	56	450	1450	250	500	1000	867	4xM.48
IV-1600	500	66	480	1600	250	500	1000	1105	4xM.56

All dimension in mm unless otherwise specified.

(1) Weight per leg of fender.

(2) Number of anchorages per system of fender (2 legs per system).

Fender	f			
	750	1000	1500	2000
IV-400	☒	☒	☒	☒
IV-500	☒	☒	☒	☒
IV-550	☒	☒	☒	☒
IV-600	☒	☒	☒	☒
IV-750	☒	☒	☒	☒
IV-800	☒	☒	☒	☒
IV-1000	☒	☒	☒	☒
IV-1250	☒	☒	☒	☒
IV-1450	☒	☒	☒	☒
IV-1600	☒	☒	☒	☒

☒ Standard lengths

☐ Non-standard lengths

For others lengths consult with Prosertek

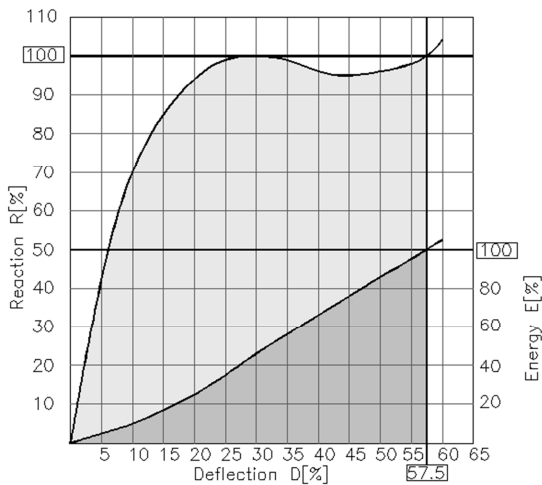
3. NOMINAL FENDER PERFORMANCE*

Fender		Grade ⁽²⁾	
		A	B
IV-400	R	439	308
	E	82	57
IV-500	R	549	385
	E	127	89
IV-550	R	604	423
	E	154	108
IV-600	R	659	462
	E	184	129
IV-750	R	824	577
	E	287	201
IV-800	R	879	615
	E	326	229
IV-1000	R	1098	769
	E	510	357
IV-1250	R	1373	961
	E	797	558
IV-1450	R	1593	1115
	E	1072	751
IV-1600	R	1757	1230
	E	1306	914

Also available other grades.

Reaction and energy values per meter of fender.

(2) Reaction and energy per system of fender (2 legs per system).



- Temperature factor:

Temperature (°C)	TF
+50	0.90
+40	0.94
+30	0.97
+23	1
+10	1.05
0	1.09
-10	1.16
-20	1.25
-30	1.35

- Angle factor:

Angle (°)	AF
0	1
3	0.97
5	0.95
8	0.92
10	0.90
15	0.82
20	0.75

- Velocity factor:

Fender	Impact velocity (mm/s)						
	1	50	100	150	200	250	300
IV-400	0.87	0.92	0.96	1	1.03	1.06	1.09
IV-500	0.87	0.92	0.96	1	1.03	1.06	1.09
IV-550	0.89	0.93	0.96	1	1.03	1.05	1.08
IV-600	0.89	0.93	0.96	1	1.03	1.05	1.07
IV-750	0.90	0.93	0.97	1	1.02	1.04	1.06
IV-800	0.92	0.94	0.97	1	1.02	1.04	1.06
IV-1000	0.93	0.95	0.98	1	1.02	1.04	1.06
IV-1250	0.94	0.96	0.98	1	1.02	1.04	1.05
IV-1450	0.95	0.97	0.98	1	1.02	1.03	1.05
IV-1600	0.95	0.97	0.98	1	1.02	1.03	1.05

Intermediate grade					
A1	A2	A3	B1	B2	B3
14%	9%	6%	14%	9%	6%

Intermediate deflections												
D (%)	5	10	15	20	25	30	35	40	45	50	55	60
R (%)	42	70	85	94	99	100	99	96	95	96	98	104
E (%)	5	10	17	25	35	46	56	66	76	86	95	105

All dimension in mm, kN or kNm unless otherwise specified.

* (E) Energy [kJm] and (R) Reaction [kN] values according to PIANC 2002

4. ALLOWABLE STATIC WEIGHT

Although IV fenders support a lot of static weight, if the frame weight exceeds the values of the following table shall be necessary to install lifting chains.

Fender		Grade	
		A	B
IV-400	H	480	360
	V	840	640
IV-500	H	600	450
	V	1050	800
IV-550	H	660	495
	V	1155	880
IV-600	H	720	540
	V	1260	960
IV-750	H	900	675
	V	1575	1200
IV-800	H	960	720
	V	1680	1280
IV-1000	H	1200	900
	V	2100	1600
IV-1250	H	1500	1125
	V	2625	2000
IV-1450	H	1740	1305
	V	3045	2320
IV-1600	H	1920	1440
	V	3360	2560

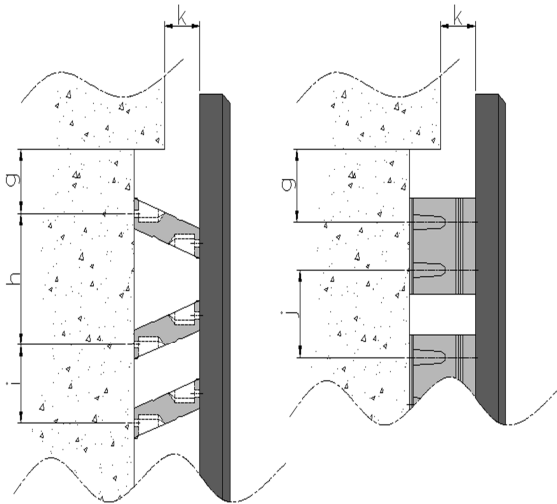
All weight in kg unless otherwise specified.
The values of the weights are per meter of fender.
(H) Single or multiple Horizontal. (V) Multiple Vertical

5. FENDER POSITIONING

Fender	g	h	i	j	k
IV-400	426	485	270	550	280
IV-500	465	610	335	550	350
IV-550	490	670	370	550	385
IV-600	510	730	405	550	420
IV-750	575	910	505	550	525
IV-800	600	1000	600	550	560
IV-1000	630	1210	670	550	700
IV-1250	710	1520	840	550	875
IV-1450	800	1710	1000	550	1015
IV-1600	900	1840	1200	550	1120

Distance i, is the minimum clearance that should be left on each side of the fender.

Distance j, is the minimum clearance that should be left between the frame and the cantilever of the jetty



6. TOLERANCES

Dimension	Tolerances
General dimensions	±3% or 2mm*
Distances between fixing centres	±4mm (Non-cumulative)
Flange thickness	±15mm
Diameters of the fixing points	±5mm
Energy performance	±10%
Reaction performance	±10%

* Whichever is the greater dimension.