



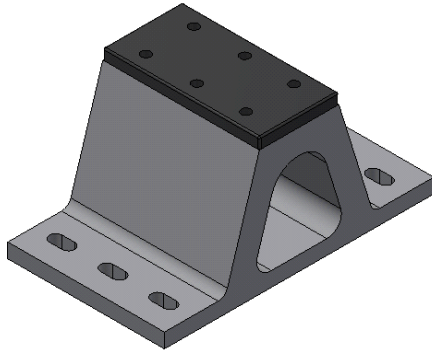
TTV FENDER DATA SHEET

1000.0000-Td-0201gen_rev1

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



1. TTV FENDERS



Features

Simple one-piece design

Excellent shear performance

Low friction shield

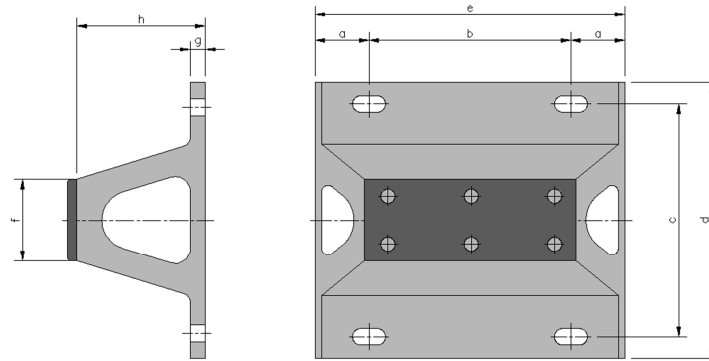
Applications

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	f	g	h	Weight (kg)	NºAnchors/ Metric
TTV-150	250	500	265	320	95	20	150	40	4xM.22
TTV-200	250	500	350	445	125	25	200	64	4xM.30
TTV-250	250	500	400	500	160	30	250	78	4xM.30
TTV-300	250	500	530	645	190	35	300	117	4xM.36
TTV-400	250	500	710	840	250	40	400	228	4xM.36
TTV-500	250	500	860	1000	315	40	500	339	4xM.42
TTV-600	250	500	1050	1210	380	50	600	508	4xM.42
TTV-800	250	500	1350	1550	500	60	800	806	6xM.52
TTV-1000	250	500	1600	1800	625	75	1000	1482	6xM.56
TTV-1300	250	500	2030	2250	813	98	1300	2404	6xM.64

All dimension in mm unless otherwise specified.
Lengths "a" and "b" may vary depending on the project.

Fender	e				
	1000	1500	2000	2500	3000
TTV-150	☒	☒	☒	☒	☒
TTV-200	☒	☒	☒	☒	☒
TTV-250	☒	☒	☒	☒	☒
TTV-300	☒	☒	☒	☒	☒
TTV-400	☒	☒	☒	☒	☒
TTV-500	☒	☒	☒	☒	☒
TTV-600	☒	☒	☒	☒	☒
TTV-800	☐	☒	☒	☒	☒
TTV-1000	☐	☒	☒	☒	☒
TTV-1300	☐	☒	☒	☒	☒

☒ Standard lengths

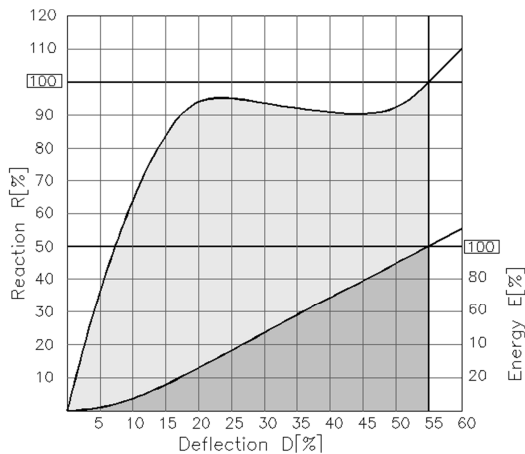
☐ Non-standard lengths

For others lengths consult with Prosertek

3. NOMINAL FENDER PERFORMANCE*

Fender		Grade		
		A	B	C
TTV-150	R	112.8	124.6	74
	E	15.1	13.2	9.8
TTV-200	R	147.4	128.6	96.4
	E	19.7	17.2	13
TTV-250	R	186	162.3	122
	E	24.8	21.6	16
TTV-300	R	218	190.2	143
	E	29.1	25.4	19
TTV-400	R	295	257.4	193
	E	51.9	45.3	34
TTV-500	R	368	321.2	241
	E	81.1	71	53
TTV-600	R	440	384	288
	E	116.6	102	76.3
TTV-800	R	587	512.3	384
	E	208	181.5	136
TTV-1000	R	734	640.6	480.4
	E	322	281	211
TTV-1300	R	960	838	628
	E	549	479	359

Also available other grades.



Intermediate grades								
A1	A2	A3	B1	B2	B3	C1	C2	C3
11%	8%	4%	11%	8%	4%	13%	10%	7%

Intermediate deflections												
D (%)	5	10	15	20	25	30	35	40	45	50	55	60
R (%)	36	64	84	94	95	94	92	91	90	92	100	110
E (%)	2	8	16	26	36	47	58	69	79	90	100	111

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

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

4. 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.

• 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	0.96
5	0.95
8	0.93
10	0.91
15	0.81
20	0.60

• Velocity factor:

Fender	Impact velocity (mm/s)						
	1	50	100	150	200	250	300
TTV-150	0.85	0.90	0.95	1	1.04	1.08	1.11
TTV-200	0.85	0.90	0.95	1	1.04	1.08	1.11
TTV-250	0.86	0.91	0.96	1	1.03	1.07	1.10
TTV-300	0.87	0.92	0.96	1	1.03	1.06	1.09
TTV-400	0.87	0.92	0.96	1	1.03	1.06	1.09
TTV-500	0.89	0.93	0.96	1	1.03	1.05	1.08
TTV-600	0.90	0.93	0.97	1	1.02	1.05	1.07
TTV-800	0.91	0.94	0.98	1	1.02	1.04	1.06
TTV-1000	0.91	0.94	0.98	1	1.02	1.04	1.06
TTV-1300	0.92	0.95	0.99	1	1.01	1.03	1.05