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Ports & Terminals - Fenders

Pneumatic Fenders



(Product Code STDR - 5201)



(Product Code STDR - 5211)

Available in 'Net Hanging' or 'Direct Hanging' type, Griffin-Woodhouse pneumatic fenders are manufactured with three layers of vulcanised rubber. The inner airtight layer is surrounded by a nylon cord reinforcing layer, both of which are encapsulated in an outer watertight layer which is resistant to laceration. Available with two internal pressure options, 50kPa or 80kPa, the pneumatic fender is ideal for absorbing kinetic energy during berthing between vessels or between vessel and jetty, quay or dolphin. As the units are easily inflated on-site transport costs are reduced by shipping deflated.

A rib version is also available, please contact us for more details.

Alternatively, a foam filled option is available. These are also manufactured with three layers. A closed cell polyethylene foam core is encapsulated by two layers of reinforced polyurethane elastomer skin. They are therefore highly durable, being resistant to impact, abrasion, UV degradation and chemical attack. Available in a range of colours but supplied in orange as standard, they are also available in 'Net Hanging' or 'Direct Hanging' type.

Both can be manufactured to client specific requirements but are available in standard dimensions as detailed over. Further information can also be found on page 4 herewith.

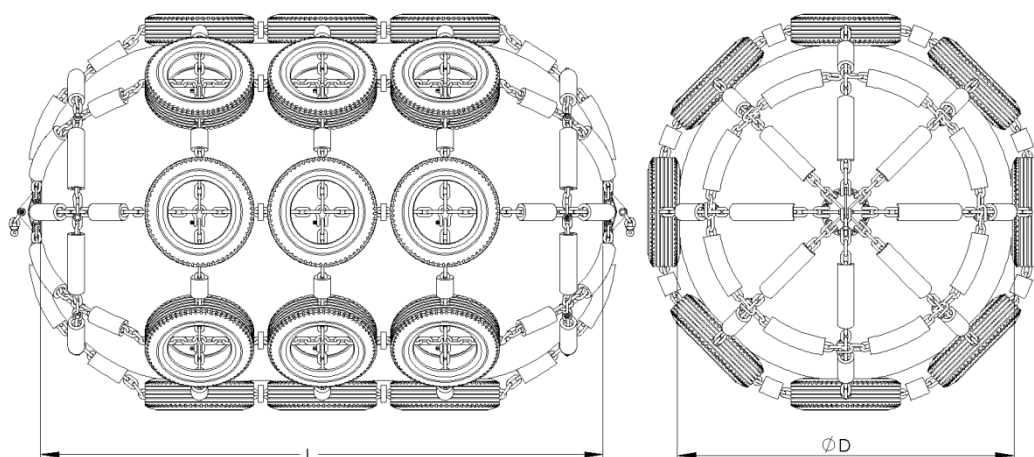


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Dims. D x L (mm)	Energy Absorption (tf-m)			Reaction Force (tf)			Hull Pressure 60% Def. (tf/m ²)		
	STDR - 5201		5211	STDR - 5201		5211	STDR - 5201		5211
	50kPa	80kPa	-	50kPa	80kPa	-	50kPa	80kPa	-
300 x 600	0.1	0.1	0.2	2.4	3.2	2.5	13.7	17.7	15.29
500 x 800	0.5	0.6	0.6	5.3	6.8	5.5	13.3	17.1	15.29
500 x 1000	0.6	0.8	0.7	6.8	8.9	6.9	13.7	17.8	15.29
600 x 1000	0.9	1.1	1.0	8.0	10.2	8.3	13.3	17.0	15.29
600 x 1200	1.1	1.4	1.2	9.7	12.6	9.9	13.5	17.4	15.29
700 x 1500	1.9	2.5	2.1	14.5	18.8	14.4	13.9	18.0	15.29
800 x 1500	2.4	3.1	2.7	16.1	20.8	16.5	13.5	17.3	15.29
1000 x 1500	3.6	4.7	4.2	19.3	24.9	20.6	12.9	16.6	15.29
1000 x 2000	5.1	6.6	5.6	27.2	35.2	27.5	13.7	17.7	15.29
1200 x 2000	7.1	9.1	8.1	31.4	40.6	33.0	13.2	16.9	15.29
1200 x 3000	11.1	14.3	12.1	49.2	63.6	49.5	13.7	17.7	15.29
1350 x 2500	11.3	15.2	12.8	44.8	58.4	46.4	13.3	17.3	15.29
1500 x 2500	13.8	17.8	15.8	48.9	63.3	51.6	13.1	16.9	15.29



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	STDR - 5201		5211	STDR - 5201		5211	STDR - 5201		5211
	50kPa	80kPa	-	50kPa	80kPa	-	50kPa	80kPa	-
1500 x 3000	17.1	22.2	18.9	60.8	79.2	61.9	13.6	17.7	15.29
1500 x 4000	23.4	30.2	25.2	83.2	107	82.6	13.9	18.0	15.29
1700 x 3000	21.4	27.8	24.3	67.1	87.0	70.2	13.2	17.1	15.29
1700 x 7200	52.7	68.2	58.3	165.4	214	168.4	13.6	17.6	15.29
2000 x 3000	28.8	39.4	33.6	76.7	105	82.6	12.9	17.6	15.29
2000 x 3500	34.3	44.9	39.2	91.4	120	96.3	13.1	17.1	15.29
2000 x 6000	62.3	80.6	67.3	166	215	165.1	13.9	18.0	15.29
2500 x 4000	67.3	95.0	70.1	144	187	137.6	14.4	18.8	15.29
2500 x 5500	98.1	138	96.3	209	271	189.2	15.2	19.8	15.29
2500 x 9100	166	234	159.4	355	460	313.1	15.6	20.3	15.29
3000 x 5000	116	163	126.1	206	266	206.4	13.8	17.8	15.29
3300 x 4500	121	171	137.3	196	254	204.4	13.3	17.1	15.29
3300 x 6500	195	276	198.3	316	411	295.2	14.8	19.2	15.29
3300 x 10600	341	477	323.5	551	710	481.4	15.8	20.3	15.29
4500 x 7000	387	545	-	459	594	-	14.6	18.9	-
4500 x 9000	506	709	-	600	774	-	14.9	19.2	-
4500 x 12000	713	986	-	845	1076	-	15.7	20.0	-



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Selection -

When choosing which fender to employ one should select an appropriate size which ensures the anticipated berthing energy can be absorbed by a single fender. Of course, the best method is to use several smaller fenders in order to distribute contact energy however, one must take into account that simultaneous contacting of all fenders does not always take place.

Excellent Compressibility & Elasticity -

Unlike other fender types which rely on elasticity of rubber material, pneumatic fenders utilise the compressibility and elasticity of air. Therefore shock absorption rates are significantly improved.

Low Reaction & High Absorption Energy -

Pneumatic fenders are designed to absorb kinetic energy. Consequently the more energy that is absorbed the more efficient the fender. However the fender also works most effectively when reaction forces are reduced in order to prevent the ship's hull from being deformed and/ or to protect the quay from damage.

Good Buoyancy & Simplified Handling -

Pneumatic fenders are naturally buoyant and therefore sit at the appropriate working height without being affected by tidal range. Moreover they are much lighter and easier to handle than conventional solid rubber models due to their hollow construction.

Ease of Installation -

As a result of their excellent buoyancy pneumatic fenders can be moored to either vessel or quay with a chain or wire line.

Valve -

A valve is provided at one end of the fender for inflation and larger size fenders are equipped with a safety valve to release excess pressure. All units are subject to air leakage tests prior to shipment.

Repair -

Following damage pneumatic fenders can be easily repaired and reinstalled, thus maintenance cost are dramatically reduced. All pneumatic fenders are supplied with an appropriate repair kit free of charge. It is suggested that a detailed inspection is conducted on fenders at least every 12 months. Where necessary we would also advise full repair by means of vulcanisation by a reputable rubber manufacturer.