Technical Data D1.0xL2.0

Pneumatic Rubber Fenders

This technical data sheet is applicable to Sling Type and Net Type pneumatic rubber fender. For the sling type, please ignore the fender size (including chain and tire net) and net type.

Pneumatic Rubber Fenders P50/80-1020		
Pneumatic Fender Size (without tire net)	D1000mm x L2000mm *(tolerance: +10%, -5%)*	
Fender Size (include chain and tire net)	D1300mm x L2000mm *(tolerance: +10%, -5%)*	
Net Type (For net type fender only)	Hop dipped galvanized chain & used truck tires & rubber sleeves net	
Fender Type	**Pneumatic 50 (P50)**	**Pneumatic 80 (P80)**
Initial internal pressure	50 kpa	80 kpa
Energy absorption (at 60% deflection)	45 kN-M	63 kN-M
Reaction force (at 60% deflection)	257 kN	338 kN
Hull pressure at 60% deflection	132 kPa	174 kPa
Testpressure	200 kPa	250 kPa
Safety-valve setting pressure	none	none
Production Standard	ISO 17357-1:2014	
Brand	APL	
Warranty	18 months since the date of Bill of Loading	
Inflate Repair Kit	Include	
Certification	Factory Certificate, or the third party inspection certification such as BV, SGS, ABS, Llyod's, CCS etc.	

Note:

1. The above weight is only your reference, not standard.

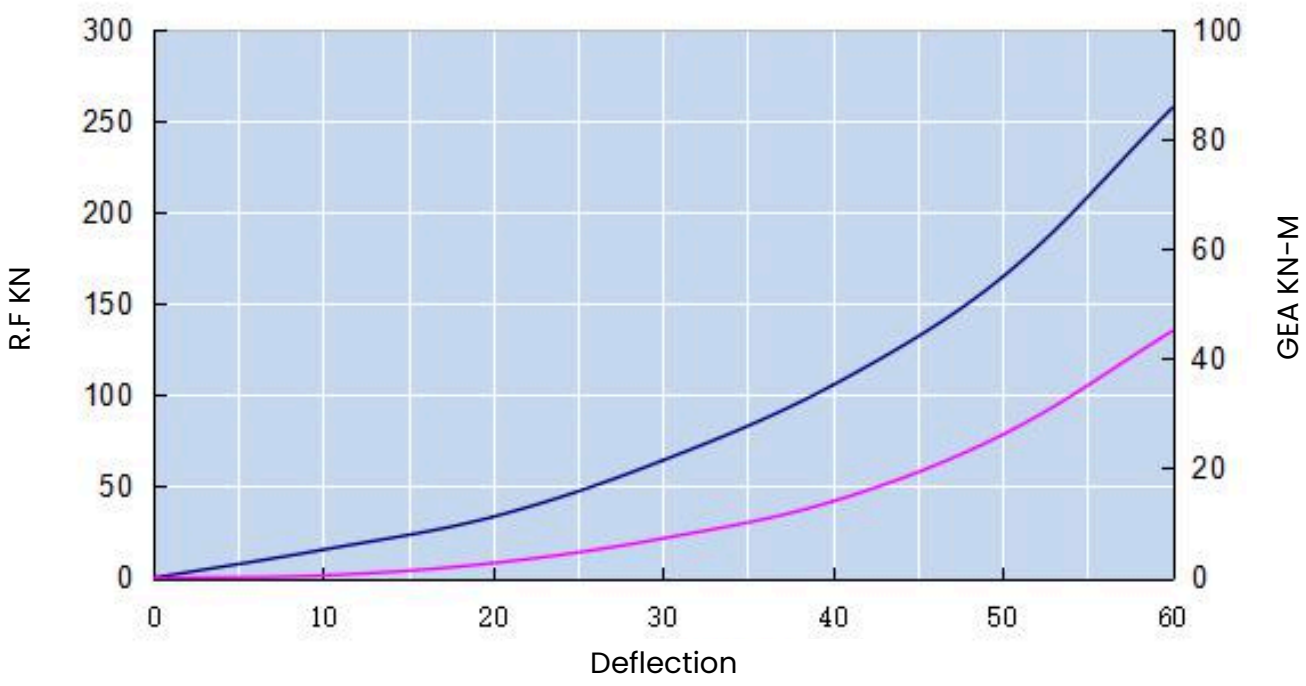
2. There is safety- valve for the fenders size over 2.5x4.0m.

3. The third party certificates are not free.

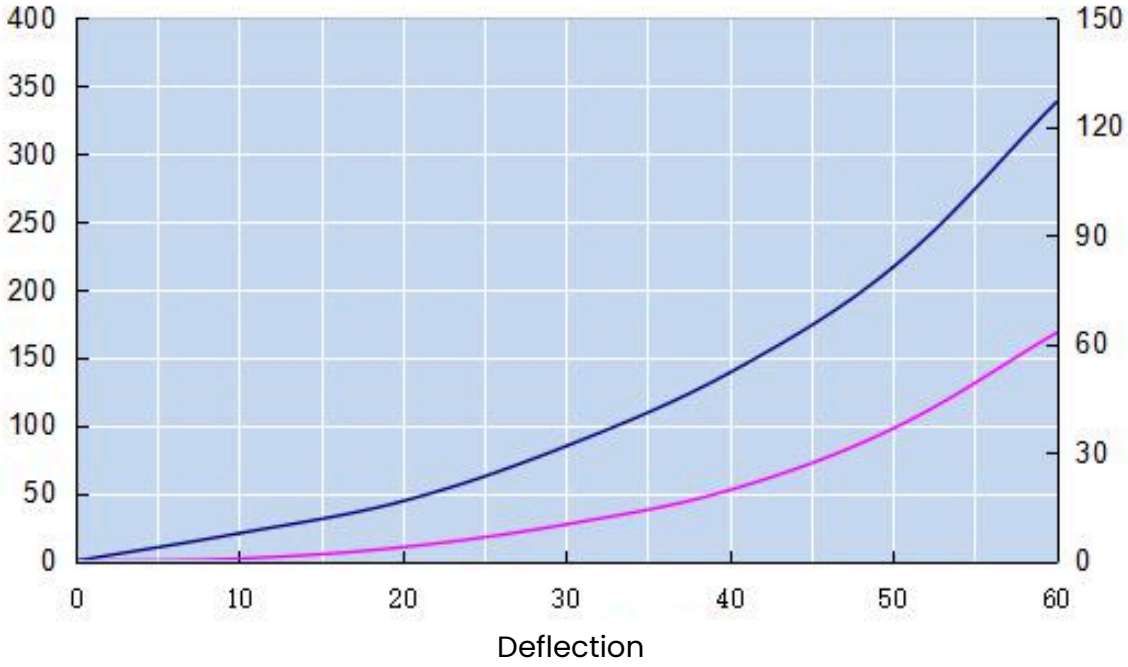
4. The sling type doesn't include chain and tire net. The net type include chain and tire net.

Standard Performance Curve

P50-1020/ Performance Curve



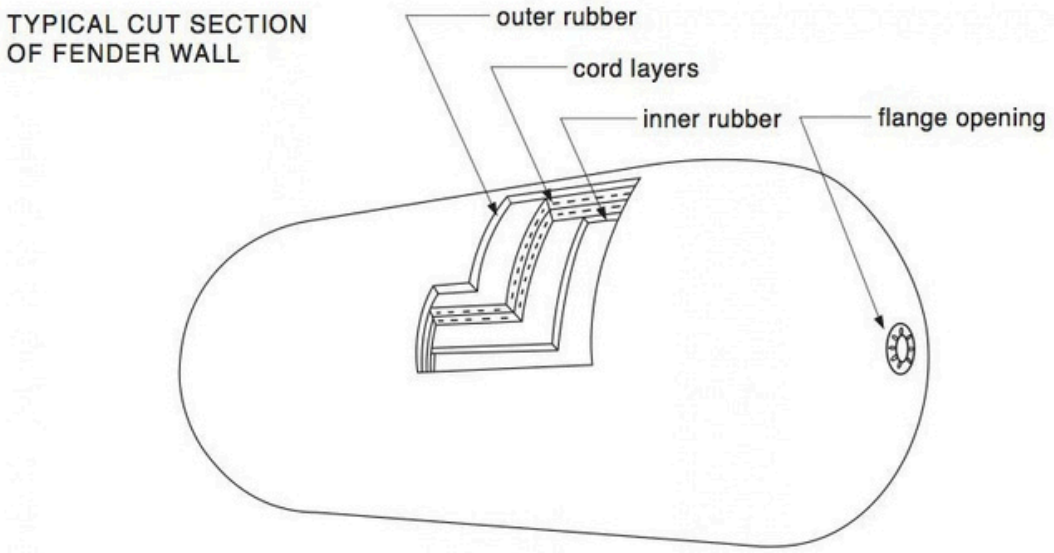
P80-1220/ Performance Curve



1. Supply Range

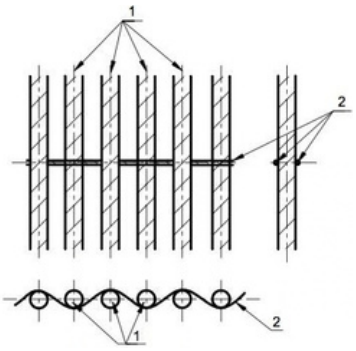
- Fender body with chain tire net
- Safety valve for fender diameter over 2.5m
- Both end swivels (Q235 H.D.G)
- Operation and maintenance manual
- Inflate Tools

2. Construction and Material



A. Constructed of inner rubber layer, out rubber layer, and synthetic-tire-cord layer.
B. Physical property of rubber material

Test item	Test Metod	Our rbber	Iner rubber
1. Before aging			
1.1 Tensile strength	ISO 37:2011	18 MPa or more	10 MPa or more
1.2 Elongation	ISO 37:2011	400% or more	400% or more
1.3 Hardness	ISO 7619-1:2010	60 ± 10 (Durometer hardness Type A)	50 ± 10 (Durometer hardness Type A)
2. After aging	ISO 188:2011	Air oven aging, 70°C ± 1°C, 96 h	Air oven aging, 70°C ± 1°C, 96 h
2.1 Tensile strength	ISO 37:2011	Not less than 80 % of the original property	Not less than 80 % of the original property
2.2 Elongation	ISO 37:2011	Not less than 80 % of the original property	Not less than 80 % of the original property
2.3 Harness	ISO 7619-1:2010	Not to exceed the original property by more than 8	Not to exceed the original property by more than 8
3. Tear	ISO 34-1:2010	400 N/cm or more	No requirement
4. Compression set	ISO 815-1:2008	30 %(70 ± 1 °C, 22hours) or less	No requirement
5. Static ozone aging test	ISO 1431-1:2012	No cracks after elongation by 20 % and exposure to 50 pphma at 40 °C for 96 h	No requirement
NOTE If the colour of the outer cover is not black, the material requirements will differ from those in this table. a Parts of ozone per hundred million of air by volume.			

C. Synthetic-tire-cord layer for reinforcement

Item	Unit	1400dtex/3 (3 strands)	1400dtex/2 (2 strands)
Breaking Strength	N/per cord	>313	>215
Diameter	mm	0.75+/-0.05	0.60+/-0.05
Density	Per 100mm in	(90+/-5)	(90+/-5)