

Giti

Fender



*Is All About **Strength**
& **Durability** Fenders*



Tug Boat Fender



Cone Fender

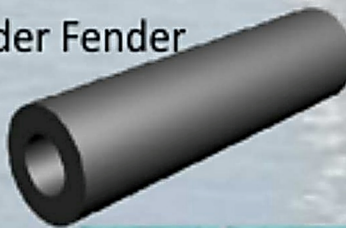


V Fender

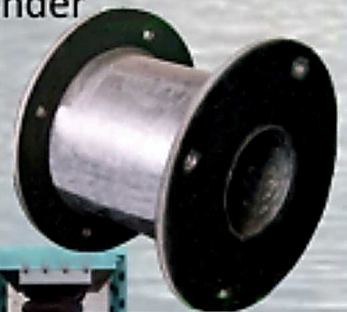


D Fender

Cylinder Fender



Cell Fender



Compression Load Test



Pneumatic Fender



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V-SHAPED FENDER

SV-type fender

A conventional cylindrical type fender absorbed energy through compressive deformation, while this SV-type fender materialized a revolutionary improved energy absorption efficiency by adding the compressive deformation to buckling deformation.

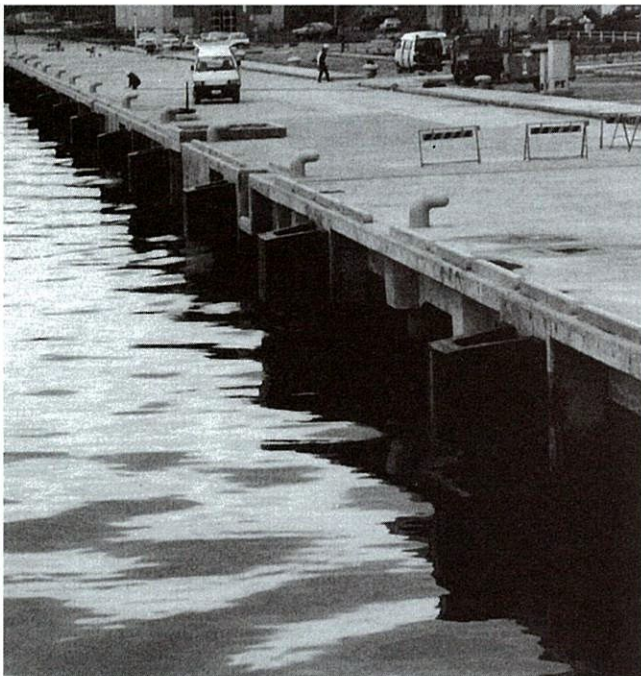
Again, the introduction of a stationary system with anchor bolts improved the durability remarkably.

This fender is used most widely in the world harbors as a made-in-Japan "all purpose type" fender.

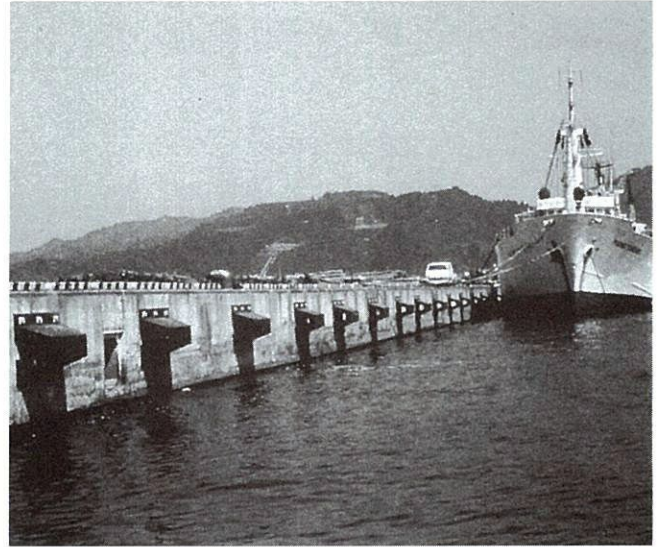
Features

- 1) Excellent energy absorption efficiency
(Use of compression deformation as well as buckling deformation stress)
- 2) Excellent durability and stability
(Stationary type with anchor bolts)

SH-TYPE FENDER



SV-TYPE FENDER



SH-type fender

It is the wide type ultra-low reaction force and high energy absorption type SH-type fender that materialized increased energy absorption and low face reaction in addition to the features of a general-purpose type (SV-type) fender.

This is especially suitable for small-sized tanker berths and quay walls for high speed boats, which require low reaction force as well as low face reaction force.

Features

- 1) Ultimate energy absorption efficiency is
- 2) Materialized as a solid type
(Energy absorption amount is greatly improved over a general-purpose type)
- 2) Hull friendly low face reaction force type
(Impact applied to both the hull and the wall during a ship coming alongside the quay is minimal due to the small face reaction force per absorption energy amount)
- 3) Quay wall friendly low-reaction force type
(Impact applied to both the hull and the wall during a ship coming alongside the quay is minimal due to the small reaction force per absorption energy amount)

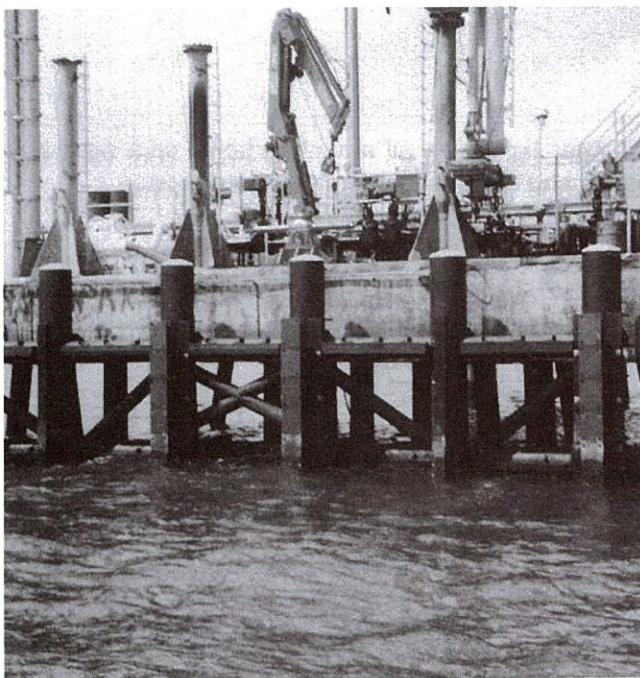
SX-type fender

It is the SX-type fender which is a narrow, ultra-low reaction force and high-energy absorption type together with features of a general-purpose type (SV-type) fender and increased energy absorption efficiency for higher stability. This is especially suitable for open-type piers with vertical piles and the like to which the low reaction force type is advantageous to construction cost.

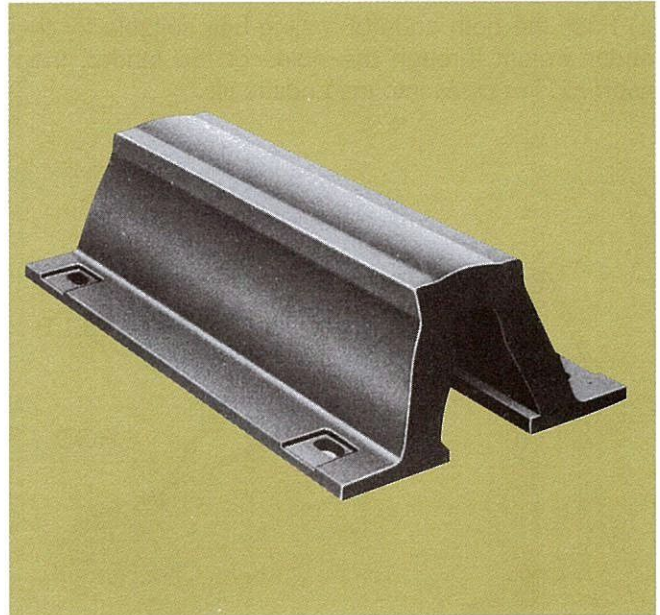
Features

- 1) Realization of ultimate energy absorption
- 2) Efficiency as a solid type (Substantially higher absorption energy over a general-purpose type)
- 1) Quay wall friendly low-reaction force type impact applied to both the hull and the wall during a ship coming alongside the quay is minimal due to the small reaction force per absorption energy amount.
- 1) Limited installation area, (The space necessary for installing the fender per absorption energy is smaller than that for a general-purpose type or wide-type fender.

SX-P-TYPE FENDER



SX-TYPE FENDER



SX-P-type fender

The use of impact-absorbing plate on the face of the SX-type fender enables the plate to receive the local pressure from the hull.

The fender is so constructed that the local pressure is dispersed throughout the fender via the impact-absorbing plate, damage to the fender by projections on the hull can be prevented, and stress is dispersed throughout the rubber part.

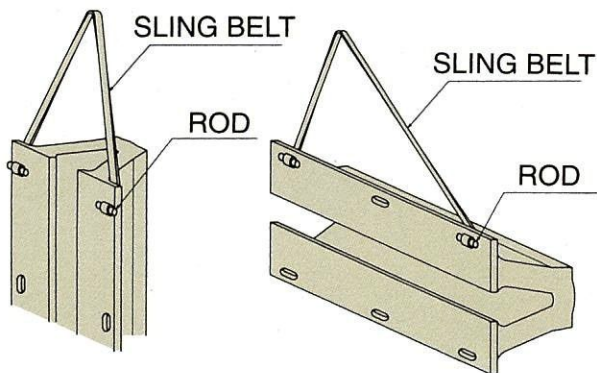
This type is especially suitable for the places where more than a few meter long fenders are required due to a wide tidal difference, or for mooring quay walls for work ships.

Features

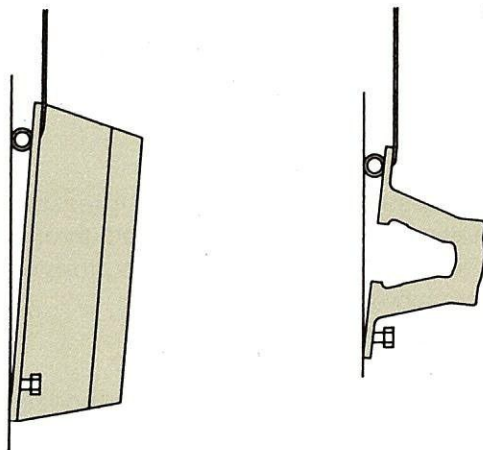
- 1) Excellent durability
Stress caused by the local compression due to projections of the hull is dispersed throughout the rubber impact-supporting part, which prevents damage by the local over compression.
- 2) Can be arranged variously
Connecting several rubber impact-supporting parts to an impact-receiving plate enable to have an impact-receiving face suitable for all application conditions.
 - Fender mounting surface or place is easily adjustable.
 - Corresponding to with wide tidal difference is easy.
- 3) Adjustment to face reaction force is possible
Desired face reaction force is obtainable by adjusting the size of the impact-receiving plate.

Fender mounting procedure

(1) Pass the both ends of a sling belt suitable for the fender weight through the holes of the fender; then insert rods or pipes into the ends to lift.

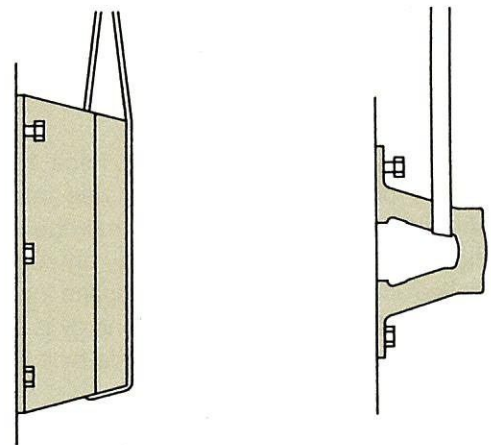


(2) Lower the fender to the installation position, then first tighten loose the lower bolts (more than 2 bolts).

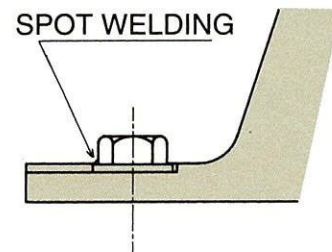


(3) Undo the sling belt once, then pass the belt through the hollow part of the fender.

Tighten loose the rest of the bolts while adjusting the positions of the bolt holes. When all bolts are tightened loose, confirm the overall position adjustments, and then tighten hard using an impact wrench and the like.



(4) After tightening all mounting bolts, spot weld bolt heads and the washers to prevent loosening.



QUALITY PROFILE

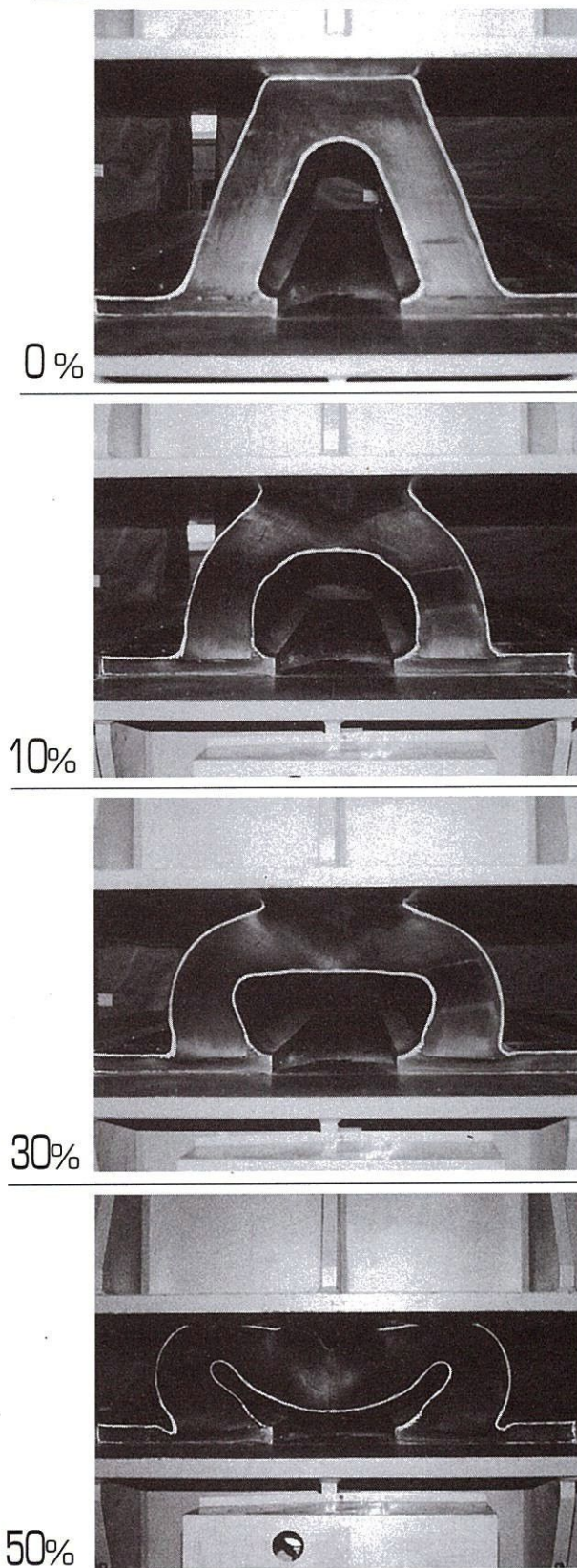
SV TYPE FENDER

■ PERFORMANCE (DESIGNED DEFLECTION 45%)

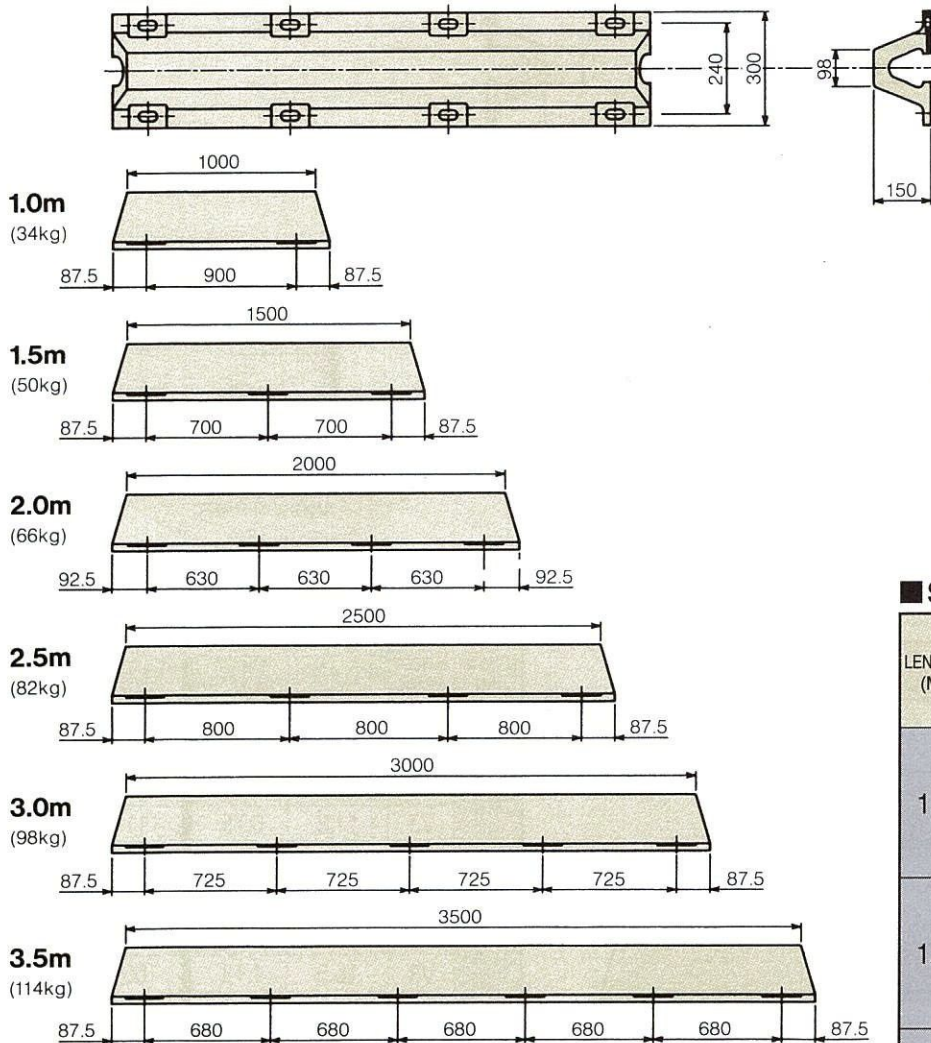
HEIGHT	RUBBER GRADE	METRIC		SI	
		REACTION FORCE (tonf)	ENERGY ABSORPTION (tonf-m)	REACTION FORCE (KN)	ENERGY ABSORPTION (KN-m)
150H	V1	12.8	0.641	126	6.29
	V2	11.3	0.563	111	5.52
	V3	8.44	0.422	82.8	4.14
	V4	5.63	0.281	55.2	2.76
200H	V1	17.1	1.14	168	11.2
	V2	15.0	1.00	147	9.81
	V3	11.3	0.750	111	7.35
	V4	7.50	0.500	73.5	4.90
250H	V1	21.4	1.78	210	17.5
	V2	18.8	1.56	184	15.3
	V3	14.1	1.17	138	11.5
	V4	9.38	0.781	92.0	7.66
300H	V1	25.7	2.57	252	25.2
	V2	22.5	2.25	221	22.1
	V3	16.9	1.69	166	16.6
	V4	11.3	1.13	111	11.1
400H	V1	34.2	4.56	335	44.7
	V2	30.0	4.00	294	39.2
	V3	22.5	3.00	221	29.4
	V4	15.0	2.00	147	19.6
500H	V1	42.8	7.13	420	69.9
	V2	37.5	6.25	368	61.3
	V3	28.1	4.69	276	46.0
	V4	18.8	3.13	184	30.7
600H	V1	51.3	10.3	503	101
	V2	45.0	9.00	441	88.3
	V3	33.8	6.75	331	66.2
	V4	22.5	4.50	221	44.1
800H	V1	68.4	18.2	671	178
	V2	60.0	16.0	588	157
	V3	45.0	12.0	441	118
	V4	30.0	8.00	294	78.5
1000H	V1	85.5	28.5	838	279
	V2	75.0	25.0	738	245
	V3	56.3	18.8	552	184
	V4	37.5	12.5	368	123

PERFORMANCE
TOLERANCE : ±10%

COMPRESSION TEST OF SV TYPE FENDER



V SV-150H

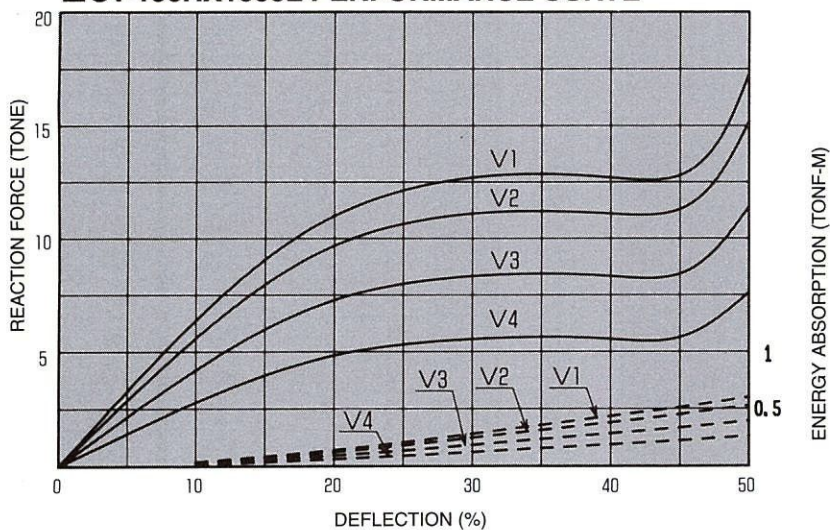


■ SV-150H PERFORMANCE TABLE

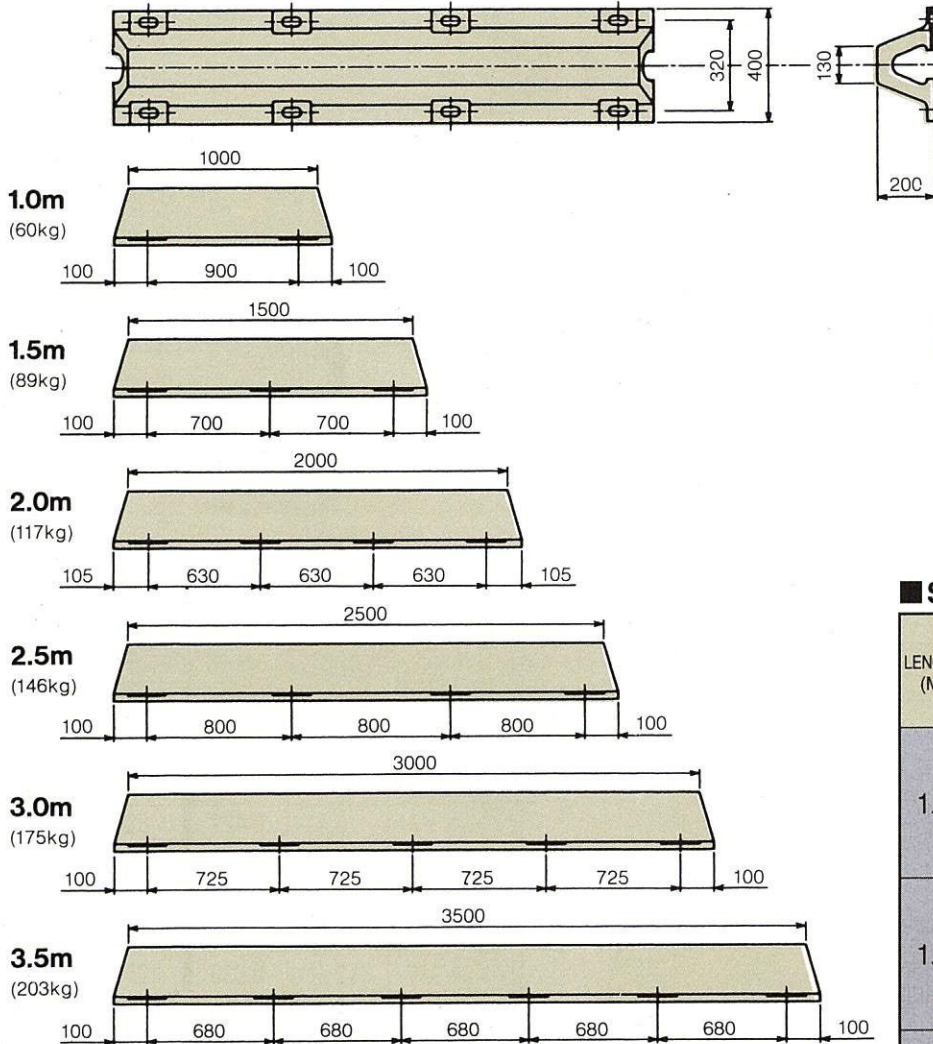
LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE	ENERGY ABSORPTION	REACTION FORCE	ENERGY ABSORPTION
		(tonf)	(tonf-m)	(KN)	(KN-m)
1.0	V1	12.8	0.641	126	6.29
	V2	11.3	0.563	111	5.52
	V3	8.44	0.422	82.8	4.14
	V4	5.63	0.281	55.2	2.76
1.5	V1	19.2	0.962	188	9.43
	V2	16.9	0.844	166	8.28
	V3	12.7	0.633	125	6.21
	V4	8.44	0.422	82.8	4.14
2.0	V1	25.7	1.28	252	12.6
	V2	22.5	1.13	221	11.1
	V3	16.9	0.844	166	8.28
	V4	11.3	0.563	111	5.52
2.5	V1	32.1	1.60	315	15.7
	V2	28.1	1.41	276	13.8
	V3	21.1	1.05	207	10.3
	V4	14.1	0.703	138	6.89
3.0	V1	38.5	1.92	378	18.8
	V2	33.8	1.69	331	16.6
	V3	25.3	1.27	248	12.5
	V4	16.9	0.844	166	8.28
3.5	V1	44.9	2.24	440	22.0
	V2	39.4	1.97	386	19.3
	V3	29.5	1.48	289	14.5
	V4	19.7	0.984	193	9.65

PERFORMANCE TOLERANCE : ±10%

■ SV-150HX1000L PERFORMANCE CURVE



V SV-200H

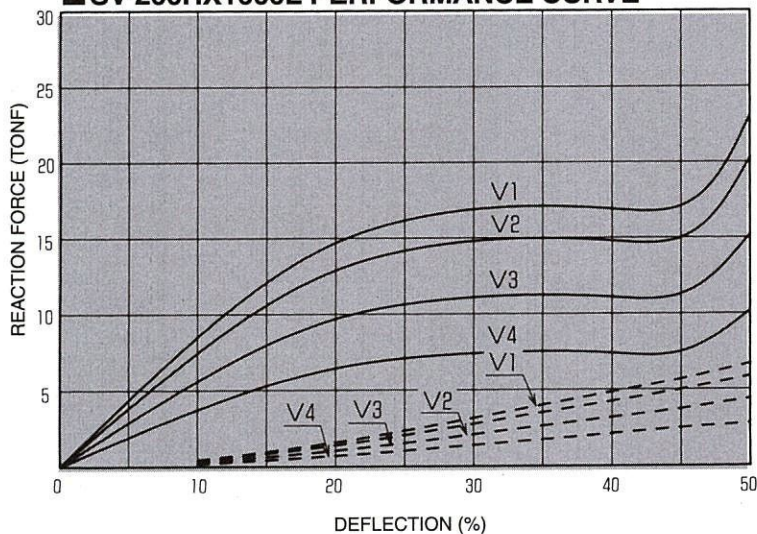


■ SV-200H PERFORMANCE TABLE

LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE (tonf)	ENERGY ABSORPTION (tonf-m)	REACTION FORCE (KN)	ENERGY ABSORPTION (KN-m)
1.0	V1	17.1	1.14	168	11.2
	V2	15.0	1.00	147	9.81
	V3	11.3	0.75	111	7.35
	V4	7.50	0.50	73.5	4.90
1.5	V1	25.7	1.71	252	16.8
	V2	22.5	1.50	221	14.7
	V3	16.9	1.13	166	11.1
	V4	11.3	0.75	111	7.35
2.0	V1	34.2	2.28	335	22.4
	V2	30.0	2.00	294	19.6
	V3	22.5	1.50	221	14.7
	V4	15.0	1.00	147	9.81
2.5	V1	42.8	2.85	420	27.9
	V2	37.5	2.50	368	24.5
	V3	28.1	1.88	276	18.4
	V4	18.8	1.25	184	12.3
3.0	V1	51.3	3.42	503	33.5
	V2	45.0	3.00	441	29.4
	V3	33.8	2.25	331	22.1
	V4	22.5	1.50	221	14.7
3.5	V1	59.9	3.99	587	39.1
	V2	52.9	3.50	515	34.3
	V3	39.4	2.63	386	25.8
	V4	26.3	1.75	258	17.2

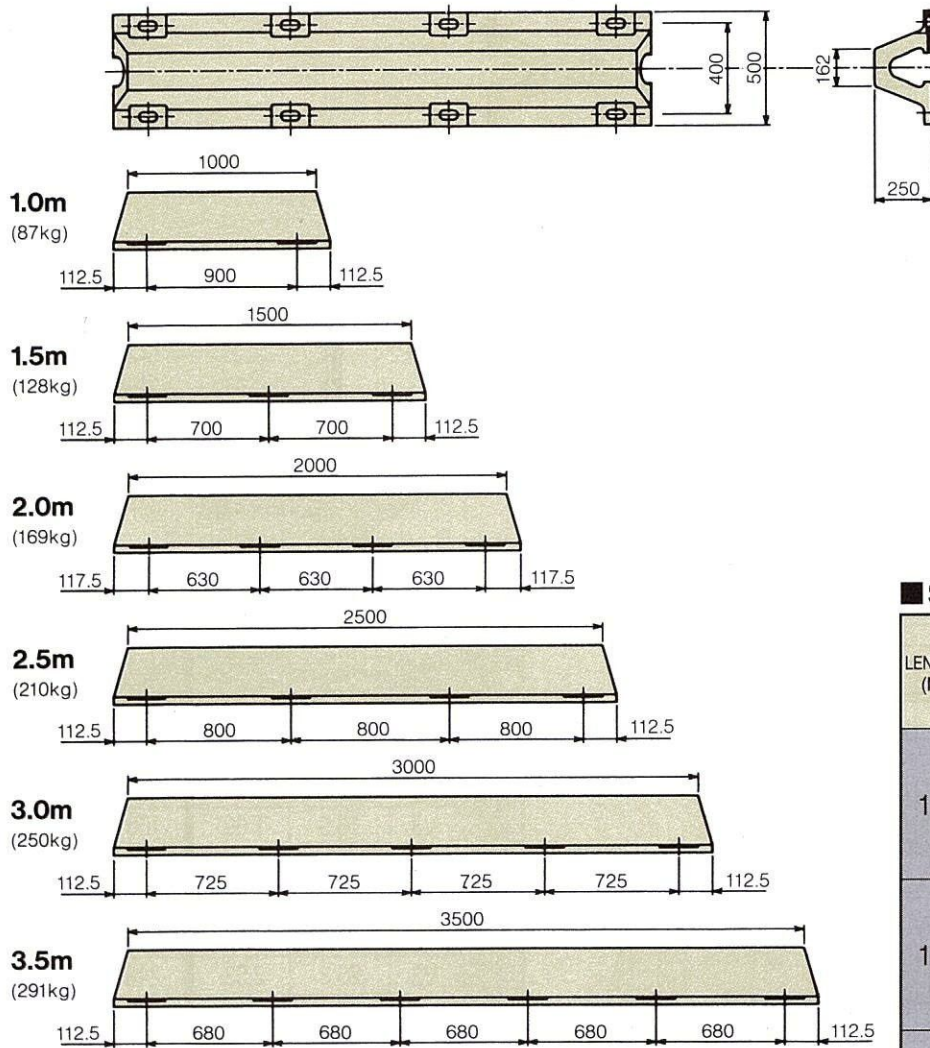
PERFORMANCE TOLERANCE : ±10%

■ SV-200HX1000L PERFORMANCE CURVE



ENERGY ABSORPTION (TONF-M)

V SV-250H

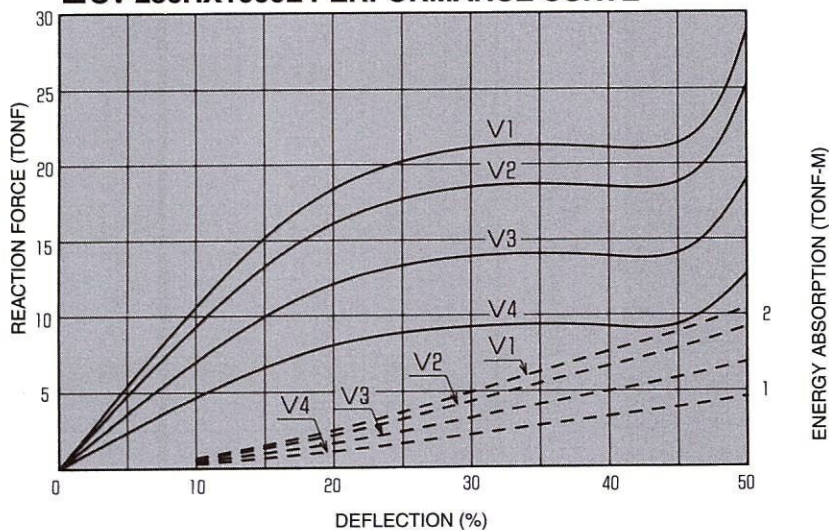


SV-250H PERFORMANCE TABLE

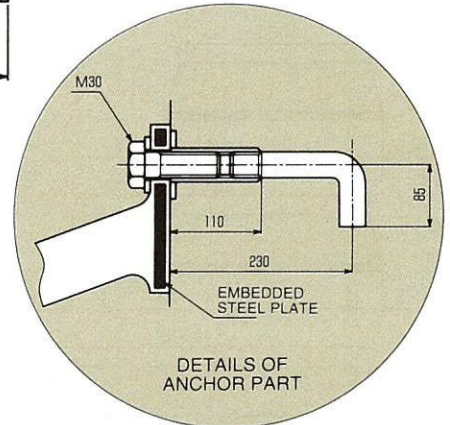
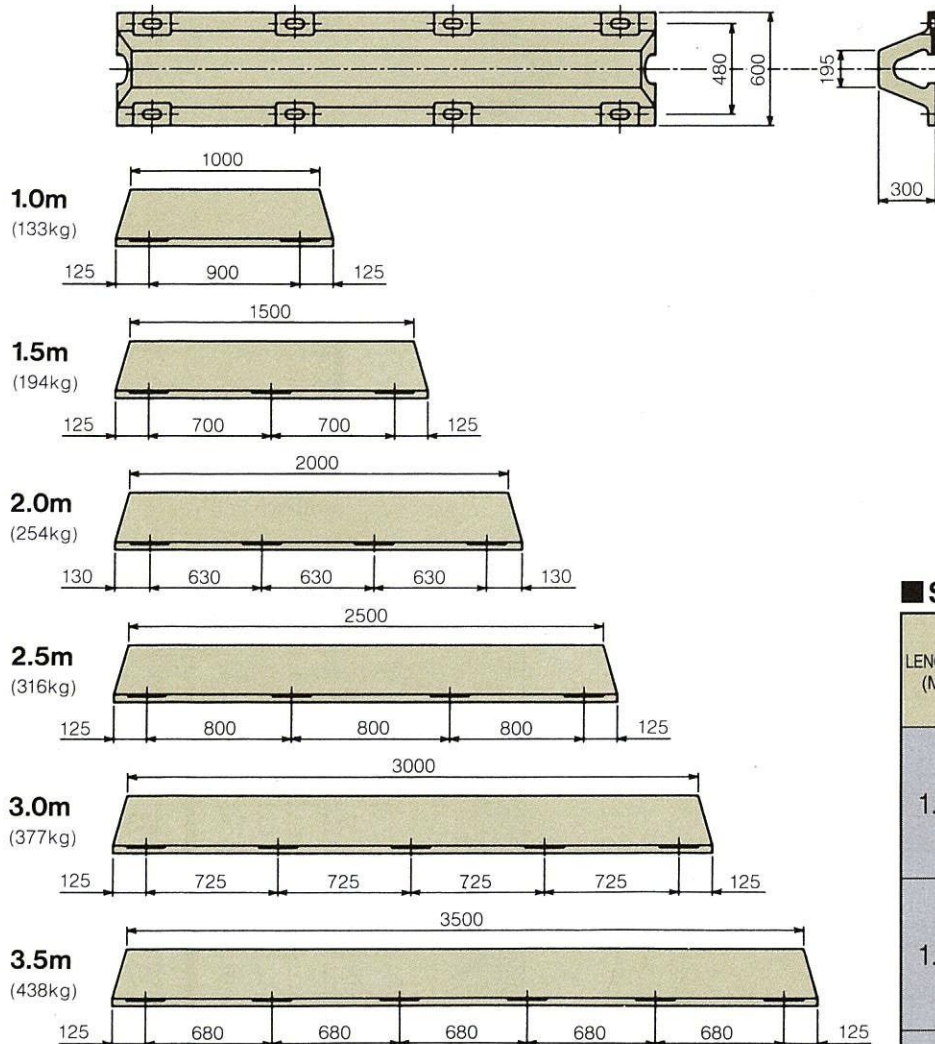
LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE	ENERGY ABSORPTION	REACTION FORCE	ENERGY ABSORPTION
		(tonf)	(tonf-m)	(KN)	(KN-m)
1.0	V1	21.4	1.78	210	17.5
	V2	18.8	1.56	184	15.3
	V3	14.1	1.17	138	11.5
	V4	9.38	0.781	92.0	7.66
1.5	V1	32.1	2.67	315	26.2
	V2	28.1	2.34	276	22.9
	V3	21.1	1.76	207	17.3
	V4	14.1	1.17	138	11.5
2.0	V1	42.8	3.56	420	36.8
	V2	37.5	3.13	368	30.7
	V3	28.1	2.34	276	22.9
	V4	18.8	1.56	184	15.3
2.5	V1	53.4	4.45	524	43.6
	V2	46.9	3.91	460	38.3
	V3	35.2	2.93	345	28.7
	V4	23.4	1.95	229	19.1
3.0	V1	64.1	5.34	629	52.4
	V2	56.3	4.69	552	46.0
	V3	42.2	3.52	414	34.5
	V4	28.1	2.34	276	23.0
3.5	V1	74.8	6.23	734	61.1
	V2	65.6	5.47	643	53.6
	V3	49.2	4.10	482	40.2
	V4	32.8	2.73	322	26.8

PERFORMANCE
TOLERANCE : ±10%

SV-250HX1000L PERFORMANCE CURVE



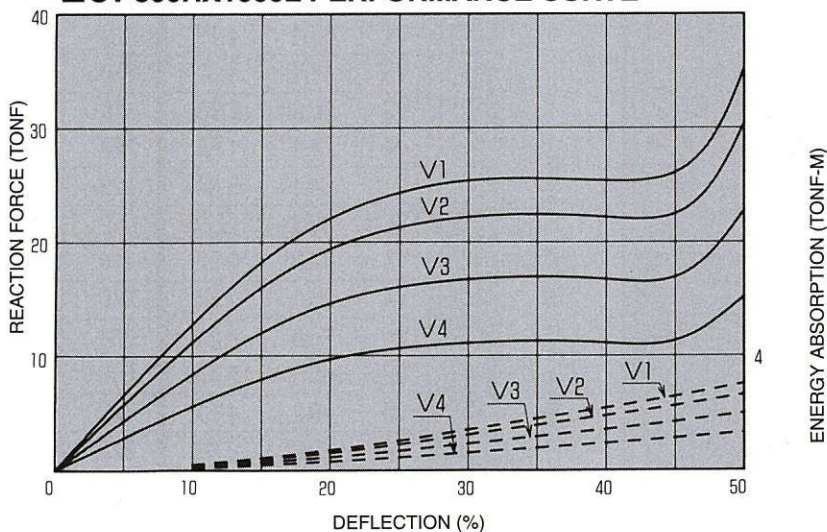
V SV-300H



■ SV-300H PERFORMANCE TABLE

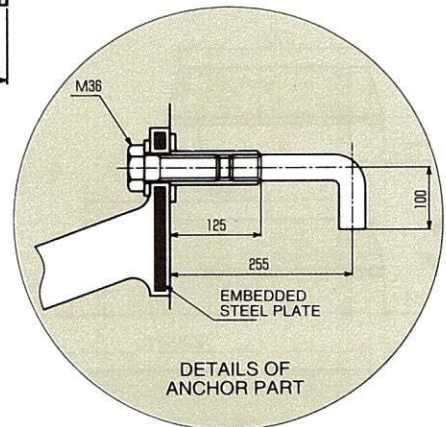
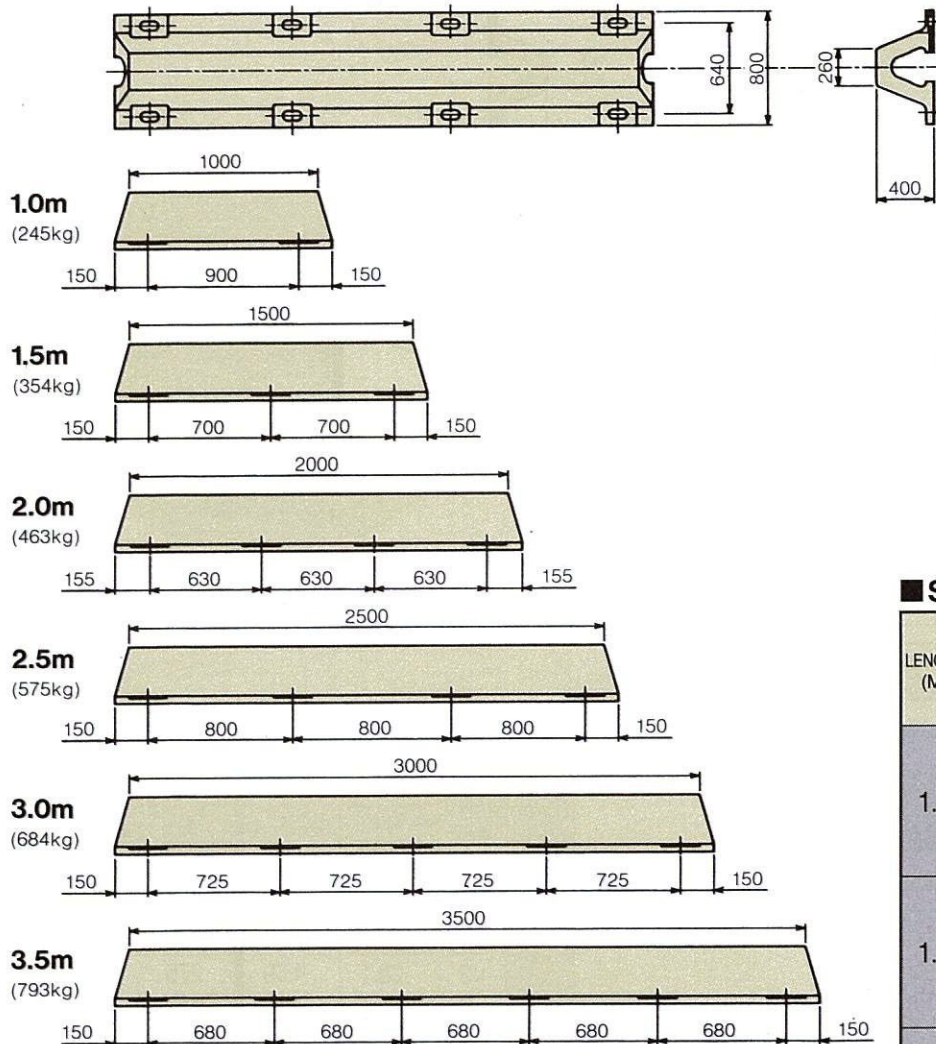
LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE (tonf)	ENERGY ABSORPTION (tonf-m)	REACTION FORCE (KN)	ENERGY ABSORPTION (KN-m)
1.0	V1	25.7	2.57	252	25.2
	V2	22.5	2.25	221	22.1
	V3	16.9	1.69	166	16.6
	V4	11.3	1.13	111	11.1
1.5	V1	38.5	3.85	378	37.8
	V2	33.8	3.38	331	33.1
	V3	25.3	2.53	248	24.8
	V4	16.9	1.69	166	16.6
2.0	V1	51.3	5.13	503	50.3
	V2	45.0	4.50	441	44.1
	V3	33.8	3.38	331	33.1
	V4	22.5	2.25	221	22.1
2.5	V1	64.1	6.41	629	62.9
	V2	56.3	5.63	552	55.2
	V3	42.2	4.22	414	41.4
	V4	28.1	2.81	276	27.6
3.0	V1	77.0	7.70	755	75.5
	V2	67.5	6.75	662	66.2
	V3	50.6	5.06	496	49.6
	V4	33.8	3.38	331	33.1
3.5	V1	89.8	8.98	881	88.1
	V2	78.8	7.88	773	77.3
	V3	59.1	5.91	580	58.0
	V4	39.4	3.94	386	39.6

■ SV-300HX1000L PERFORMANCE CURVE



PERFORMANCE
TOLERANCE : $\pm 10\%$

V SV-400H

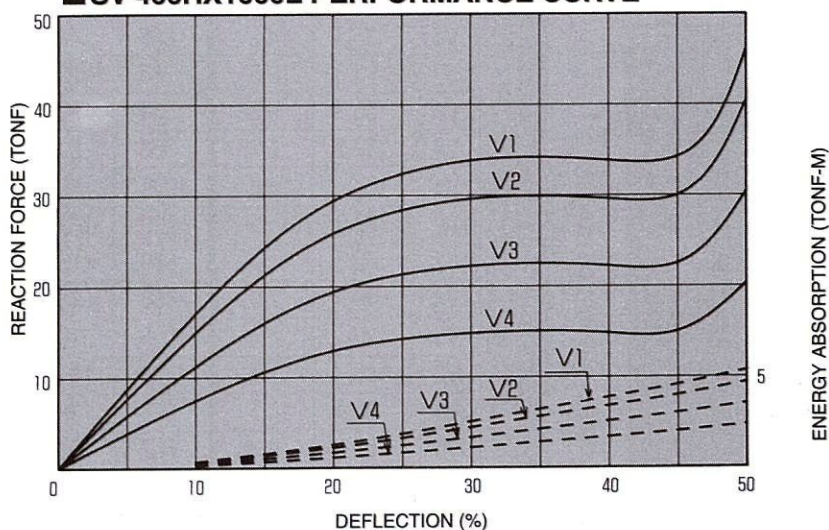


SV-400H PERFORMANCE TABLE

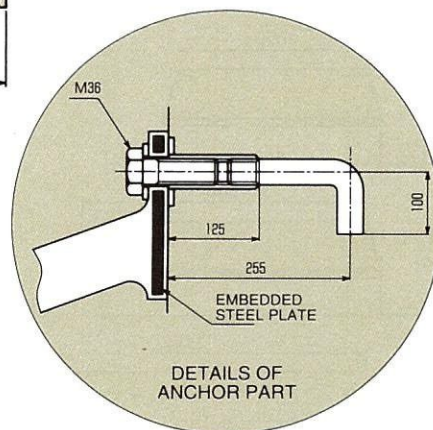
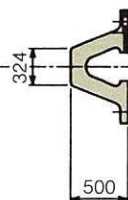
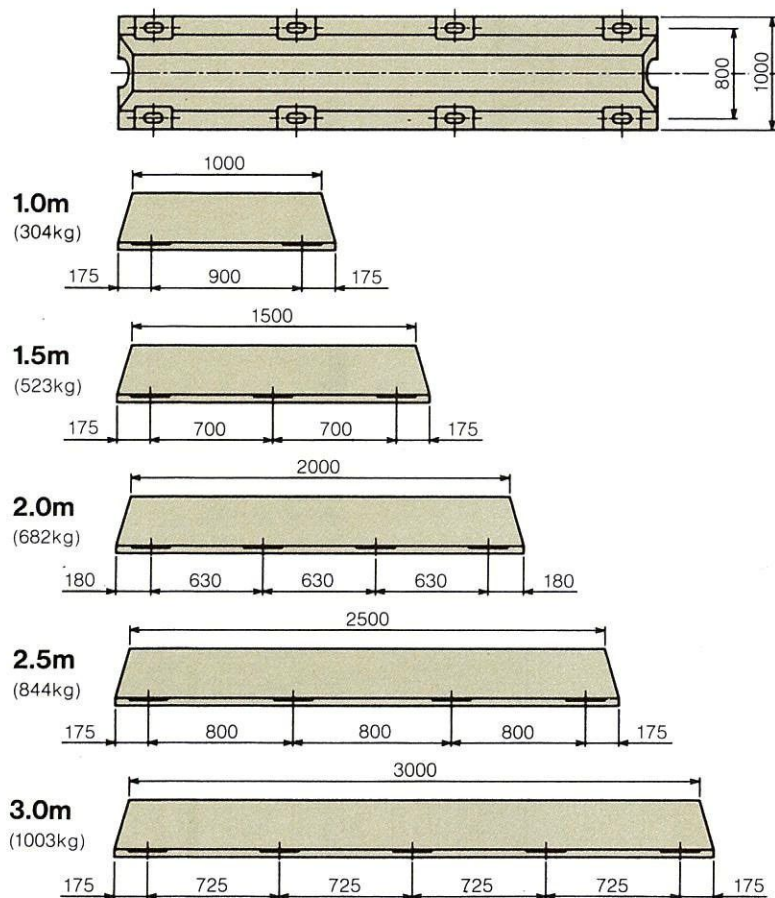
LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE (tonf)	ENERGY ABSORPTION (tonf-m)	REACTION FORCE (KN)	ENERGY ABSORPTION (KN-m)
1.0	V1	34.2	4.56	335	44.7
	V2	30.0	4.00	294	39.2
	V3	22.5	3.00	221	29.4
	V4	15.0	2.00	147	19.6
1.5	V1	51.3	6.84	503	67.1
	V2	45.0	6.00	441	58.8
	V3	33.8	4.50	331	44.1
	V4	22.5	3.00	221	29.4
2.0	V1	68.4	9.12	671	89.4
	V2	60.0	8.00	588	78.5
	V3	45.0	6.00	441	58.8
	V4	30.0	4.00	294	39.2
2.5	V1	85.5	11.4	838	112
	V2	75.0	10.0	735	98.1
	V3	56.3	7.50	552	73.5
	V4	37.5	5.00	368	49.0
3.0	V1	103	13.7	1010	134
	V2	90.0	12.0	883	118
	V3	67.5	9.00	662	88.3
	V4	45.0	6.00	441	58.8
3.5	V1	120	16.0	1177	157
	V2	105	14.0	1030	137
	V3	78.8	10.5	773	103
	V4	52.5	7.00	515	68.6

PERFORMANCE TOLERANCE : $\pm 10\%$

SV-400HX1000L PERFORMANCE CURVE



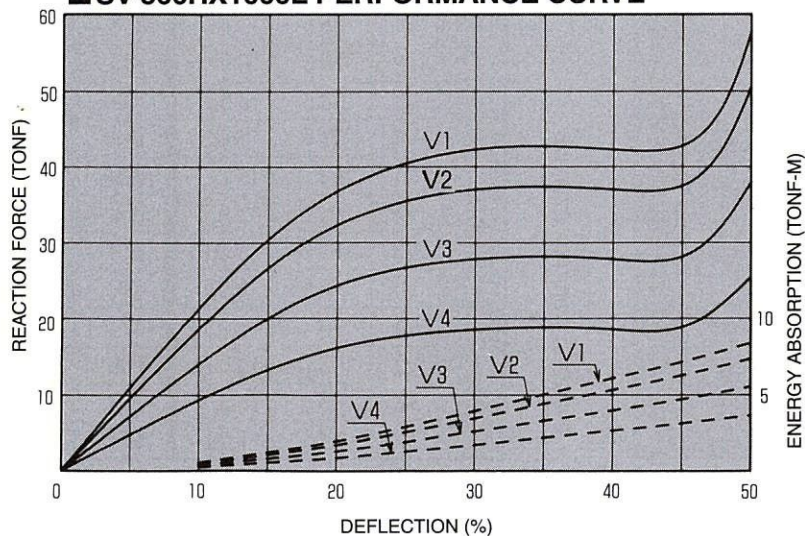
V SV-500H



■ SV-500H PERFORMANCE TABLE

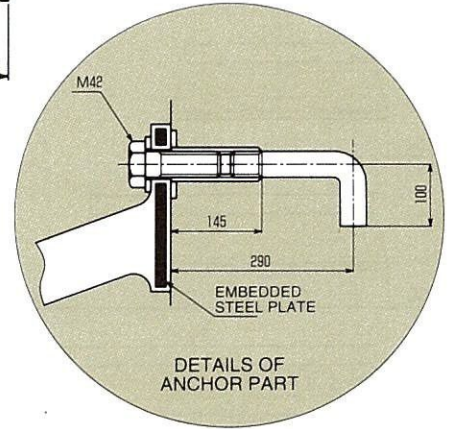
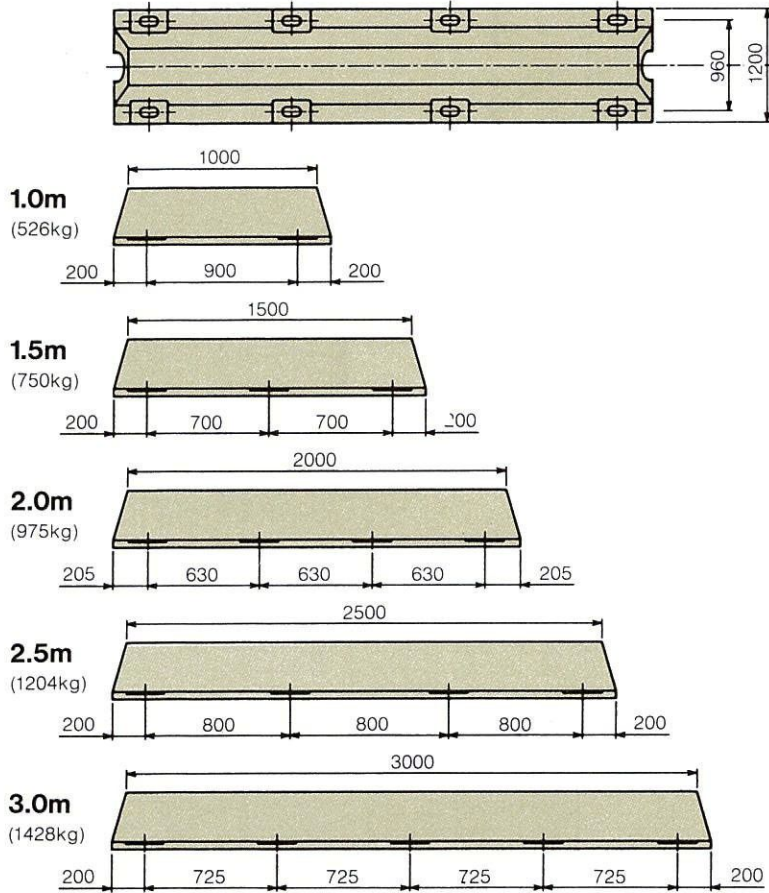
LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE	ENERGY ABSORPTION	REACTION FORCE	ENERGY ABSORPTION
		(tonf)	(tonf-m)	(KN)	(KN-m)
1.0	V1	42.8	7.13	420	69.9
	V2	37.5	6.25	368	61.3
	V3	28.1	4.69	276	46.0
	V4	18.8	3.13	184	30.7
1.5	V1	64.1	10.7	629	105
	V2	56.3	9.38	552	92.0
	V3	42.2	7.03	414	68.9
	V4	28.1	4.69	276	46.0
2.0	V1	85.5	14.3	838	140
	V2	75.0	12.5	735	123
	V3	56.3	9.38	552	92.0
	V4	37.5	6.25	368	61.3
2.5	V1	107	17.8	1049	175
	V2	93.8	15.6	920	153
	V3	70.3	11.7	689	115
	V4	46.9	7.81	460	76.6
3.0	V1	128	21.4	1255	210
	V2	113	18.8	1108	184
	V3	84.4	14.1	828	138
	V4	56.3	9.38	552	92.0

■ SV-500HX1000L PERFORMANCE CURVE



PERFORMANCE
TOLERANCE : $\pm 10\%$

V SV-600H

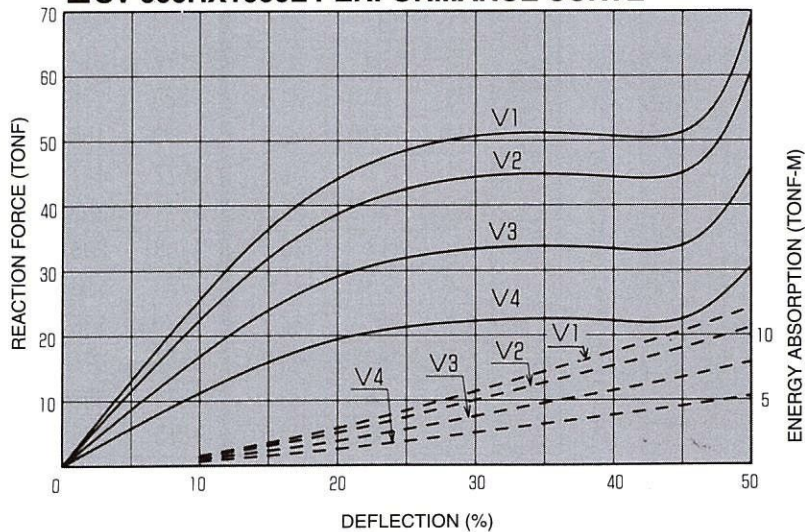


SV-600H PERFORMANCE TABLE

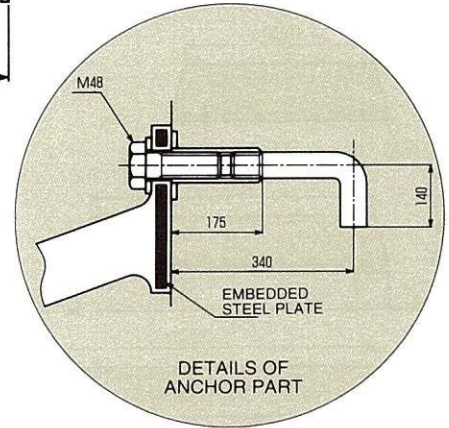
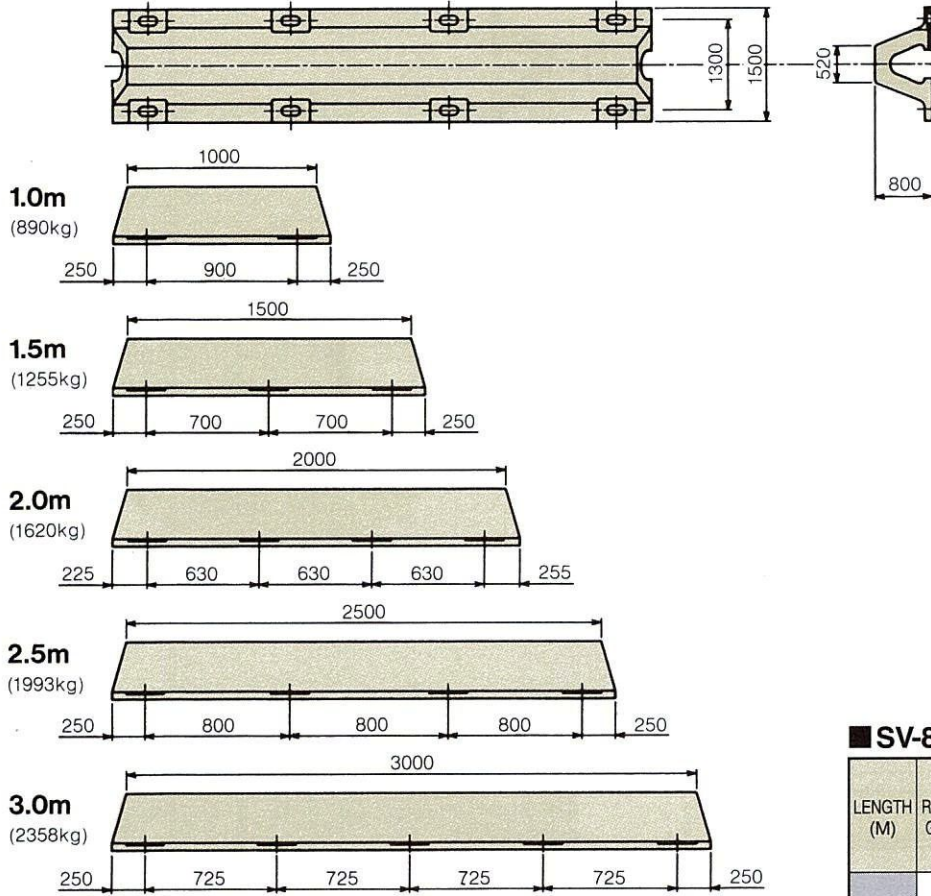
LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE	ENERGY ABSORPTION	REACTION FORCE	ENERGY ABSORPTION
		(tonf)	(tonf-m)	(KN)	(KN-m)
1.0	V1	51.3	10.3	503	101
	V2	45.0	9.00	441	88.3
	V3	33.8	6.75	331	66.2
	V4	22.5	4.50	221	44.1
1.5	V1	77.0	15.4	755	151
	V2	67.5	13.5	662	132
	V3	50.6	10.1	496	99.0
	V4	33.8	6.75	331	66.2
2.0	V1	103	20.5	1010	201
	V2	90.0	18.0	883	177
	V3	67.5	13.5	662	132
	V4	45.0	9.00	441	88.3
2.5	V1	128	25.7	1255	252
	V2	113	22.5	1108	221
	V3	84.4	16.9	828	166
	V4	56.3	11.3	552	111
3.0	V1	154	30.8	1510	302
	V2	135	27.0	1324	265
	V3	101	20.3	990	199
	V4	67.5	13.5	662	132

PERFORMANCE
TOLERANCE : $\pm 10\%$

SV-600HX1000L PERFORMANCE CURVE



V SV-800H

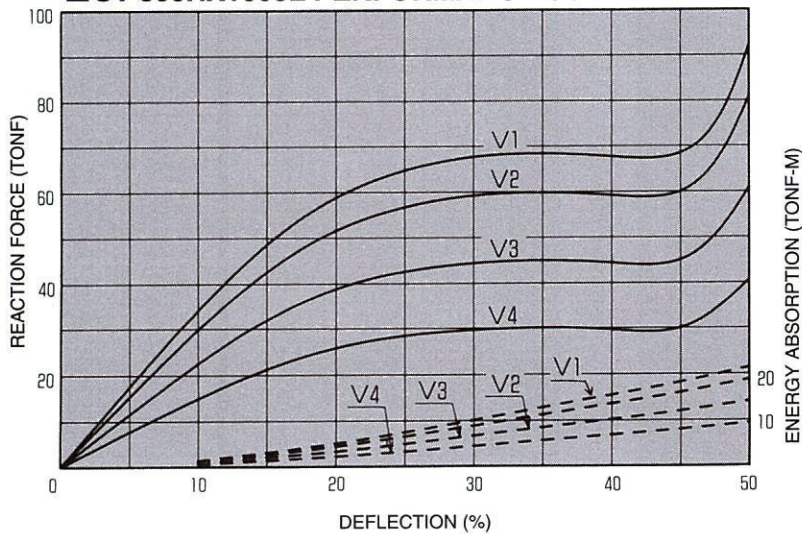


■ SV-800H PERFORMANCE TABLE

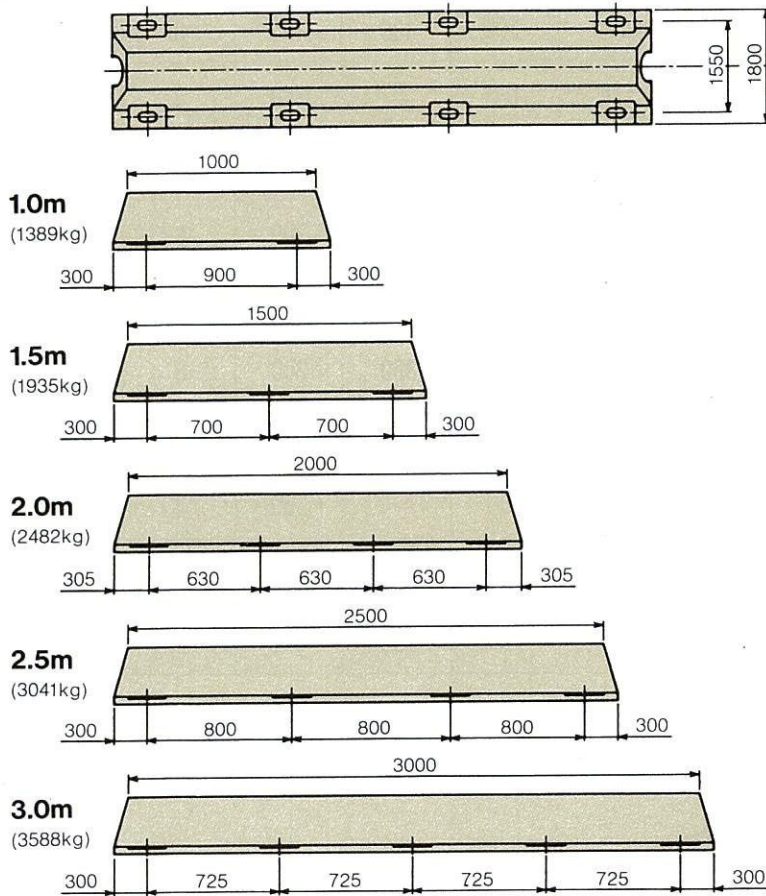
LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE	ENERGY ABSORPTION	REACTION FORCE	ENERGY ABSORPTION
		(tonf)	(tonf-m)	(KN)	(KN-m)
1.0	V1	68.4	18.2	671	178
	V2	60.0	16.0	588	157
	V3	45.0	12.0	441	118
	V4	30.0	8.00	294	78.5
1.5	V1	103	27.4	1010	269
	V2	90.0	24.0	883	235
	V3	67.5	18.0	662	177
	V4	45.0	12.0	441	118
2.0	V1	137	36.5	1344	358
	V2	120	32.0	1177	314
	V3	90.0	24.0	883	235
	V4	60.0	16.0	588	157
2.5	V1	171	45.6	1677	447
	V2	150	40.0	1471	392
	V3	113	30.0	1108	294
	V4	75.0	20.0	735	196
3.0	V1	205	54.7	2010	536
	V2	180	48.0	1765	471
	V3	135	36.0	1324	353
	V4	90.0	24.0	883	235

PERFORMANCE TOLERANCE : ±10%

■ SV-800HX1000L PERFORMANCE CURVE



V SV-1000H

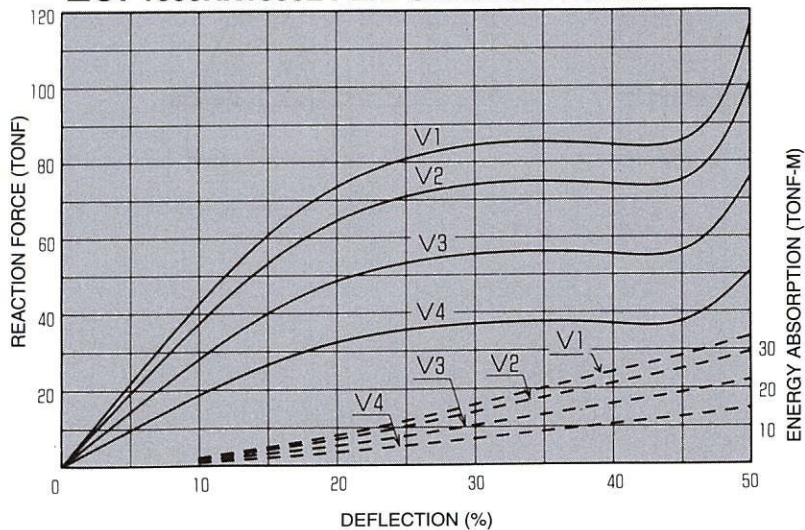


SV-1000H PERFORMANCE TABLE

LENGTH (M)	RUBBER GRADE	(DESIGNED DEFLECTION 45%)			
		REACTION FORCE	ENERGY ABSORPTION	REACTION FORCE	ENERGY ABSORPTION
		(tonf)	(tonf-m)	(KN)	(KN-m)
1.0	V1	85.5	28.5	838	279
	V2	75.0	25.0	735	245
	V3	56.3	18.8	552	184
	V4	37.5	12.5	368	123
1.5	V1	128	42.8	1255	420
	V2	113	37.5	1108	368
	V3	84.4	28.1	828	276
	V4	56.3	18.8	552	184
2.0	V1	171	57.0	1677	559
	V2	150	50.0	1471	490
	V3	113	37.5	1108	368
	V4	75.0	25.0	735	245
2.5	V1	214	71.3	2099	699
	V2	188	62.5	1844	613
	V3	141	46.9	1383	460
	V4	93.8	31.3	920	307
3.0	V1	257	85.5	2520	838
	V2	225	75.0	2206	735
	V3	169	56.3	1657	552
	V4	113	37.5	1108	368

PERFORMANCE
TOLERANCE : ±10%

SV-1000HX1000L PERFORMANCE CURVE

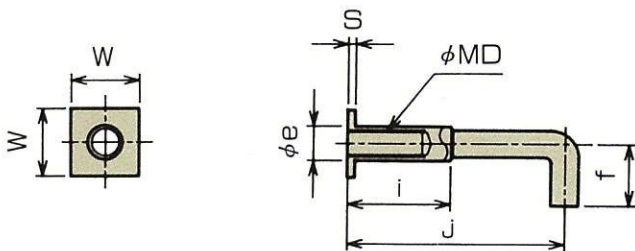


V SERIES RUBBER FENDER
ANCHOR BOLT

FL TYPE ANCHOR BOLT (For New Concrete)

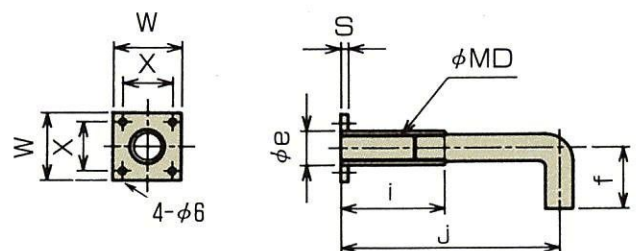
	150H	200H	250H	300H	400H	500H	600H	800H	1000H
SV TYPE	M22	M24	M24	M30	M36	M36	M42	M48	M64
SX TYPE	—	—	M24	M30	M36	M36	M42	M48	M64
SH TYPE	—	—	M24	M30	M30	M36	M42	M48	M48

ANCHOR SOCKET
(M22)



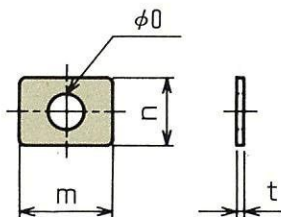
MATERIAL : SUS304

ANCHOR SOCKET
(M24~M64)



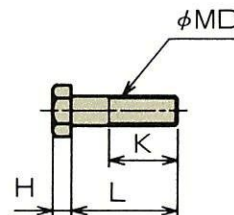
MATERIAL : FLANGE SUS304, SOCKET SUS304
BOLT SS400

WASHER



MATERIAL : SUS304
(Zn-Galvani)

BOLT



MATERIAL : SUS304

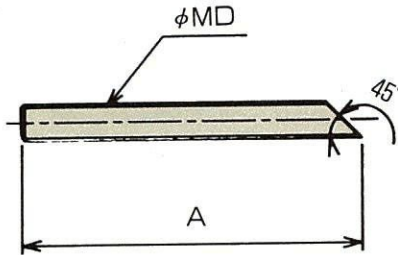
■ 寸法表

UNIT:mm

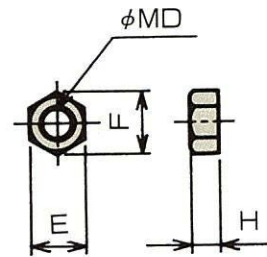
Type φMD	Anchor Socket			Flange			Bolt			Washer				Weight
	f	i	j	S	W	X	K	L	H	m	n	o	t	
M22	50	85	175	6	55	—	55	60	14	75	50	25	4.5	1.07
M24	50	90	185	6	65	50	60	70	15	75	55	29	6	1.56
M30	85	110	230	6	80	65	70	90	19	85	65	35	6	2.70
M36	100	125	255	6	85	70	80	105	23	100	75	42	6	4.21
M42	100	145	290	6	110	85	95	120	26	150	90	49	9	7.38
M48	140	175	340	6	115	90	110	140	30	175	100	55	9	10.5
M64	160	215	380	6	130	105	140	180	40	190	120	69	9	20.4

CR TYPE ANCHOR BOLT (For Existing Concrete)

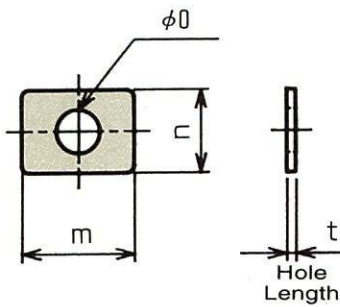
ANCHOR BOLT
SUS304



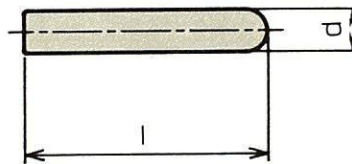
NUT
SUS304



WASHER
SUS304



RESIN CAPSULE



■ DIMENSION

UNIT:mm

Type øMD	Bolt Length	Hole Length	Protrusion Length	Hole Dia	Nut			Washer				Resin Capsule				Weight 1 Set (kg)
	A	B	C	D	E	F	H	m	n	o	t	Type	d	l	No.	
M22	196	150	45	28	32	37	18	75	50	25	4.5	RG-2215F	24	150	1	0.857
M24	225	170	55	30	36	41.6	19	75	55	29	6	RG-2416F	28	160	1	1.22
M30	275	210	65	38	46	53.1	24	85	65	35	6	RG-3021F	35	210	1	2.25
M36	325	250	75	46	55	63.5	29	100	75	42	6	RG-3625F	40	250	1	3.63
M42	385	290	95	55	65	75	34	150	90	49	9	RG-4523F	50	230	1	6.23
M48	435	330	105	60	75	86.5	38	175	100	55	9	RG-5027F	53	270	1	9.22
M64	580	450	130	75	95	110	51	190	120	69	9	RG-5027F RG-5018F	53 53	270 180	1 1	21.3

STANDARD & SPECIFICATIONS (V-SHAPED FENDER)

STANDARDS FOR THE RUBBER COMPOUND

- 1) The rubber for QUALITY PROFILE V SHAPED FENDER shall comply with the specifications stipulated in table below. The test shall be conducted in accordance with Japanese Industrial Standard (JIS K 6301-'75 "Physical Testing Methods for Vulcanized Rubber").
- 2) The rubber for QUALITY PROFILE V SHAPED FENDER shall be vulcanized natural or synthetic rubber or a mixture of these. These shall be reinforced with carbon black and resistant to aging, seawater, oil, abrasion, etc.
- 3) The rubber for QUALITY PROFILE V SHAPED FENDER shall be homogeneous in quality, and free from foreign materials, bubbles, injury, cracks and other harmful defects.

Design Load (ton)	Chain Dia (mm)	Shackle Dia (in)(mm)	Dogbone Shackle		U-Anchor Dia (mm)
			øMD	Length	
8	22	3/4 (19.9)	M30	126.5~217.5	32
10	25	7/8 (22.2)	M36	144~245	36
13	28	1 (25.4)	M39	159~272	40
18	32	1 1/8 (28.6)	M42	171~298	42
20	34	1 1/4 (31.8)	M45	186~319	46
22	36	1 3/8 (34.9)	M48	193~340	48
25	38	1 1/2 (38.1)	M52	208~364	55
28	40	1 1/2 (38.1)	M56	225~388	55
30	42	1 3/4 (44.5)	M56	225~388	60
33	44	1 3/4 (44.5)	M60	240~418	60
37	46	1 3/4 (44.5)	M60	240~418	65
40	48	2 (50.8)	M64	255~498	65
47	52	2 (50.8)	M68	275~481	70
Material	SBC490	S45C, SCM 435	SBC490 (S45C), SS400		SS400

*Breaking Load of above is each item 3 times of Design Load

6. RESIN PADS for Frontal Frame

LOW FRICTION FACE PADS — (Ship-Friendly Resin Pads)

- 1) The resin pads that are bolted to the frontal frame have a low coefficient of friction of 0.2. This prevents the ship hull from being damaged by the steel panel, and protects the fender body as well.
- 2) As the rubber fender is not in direct contact with the vessel, it will not leave any carbon black marking on the ship hull.
- 3) The resin pads are fixed to the frontal frame by bolts, and thus they can be easily replaced during maintenance.

Physical properties of resin pad

Item	Properties	Test method
Tensile strength	min. 250kg/cm ²	JIS K6760
Elongation	min. 300%	JIS K6760
Izod impact strength	min. 15kg-cm/cm notch	JIS K7110
Hardness	65 ± 5°	Shore D
Abrasion resistance	35mg	JIS K7204 (Taber type)
Friction coefficient	max. 0.2	



PT. IRC INOAC INDONESIA

AUTOMOTIVE AND INDUSTRIAL RUBBER PARTS

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