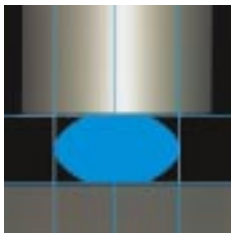
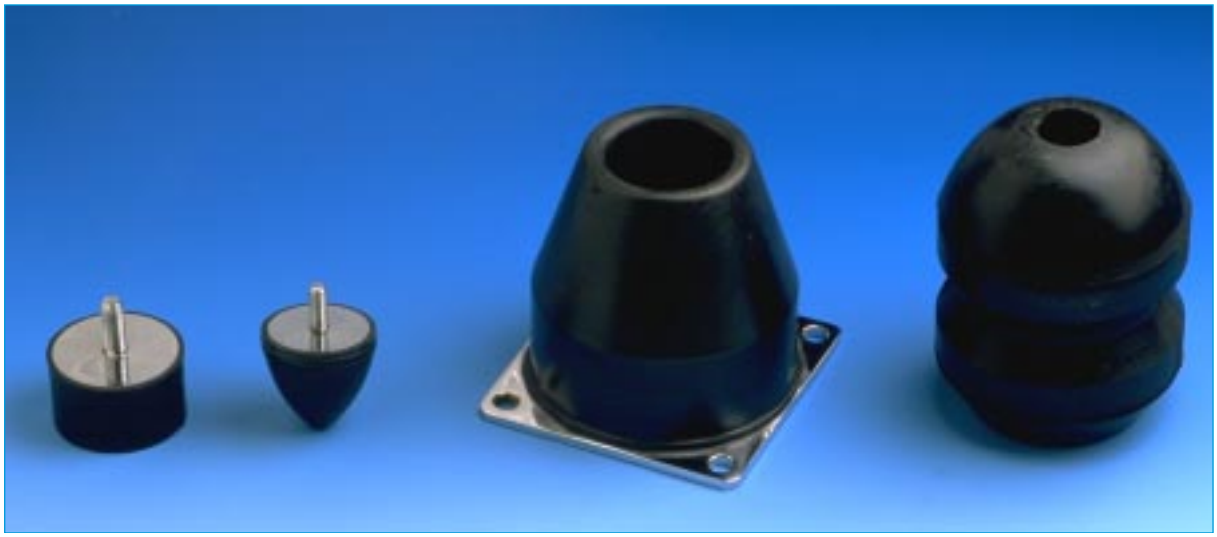


STOPS

See : Supports and Bump stops



Cylindrical stop | Conical progressive stop | LEVAFLEX progressive stop | EVIDGOM stop

DESCRIPTION

There are several types of stops :

- Cylindrical or DIABOLO stops.
- Conical progressive stops.
- LEVAFLEX progressive stops with central cavity.
- EVIDGOM stops.

OPERATION

The design of the PAULSTRA elastic stops gives the following basic characteristics :

- Highly deformable allowing high energies to be absorbed.
- Progressive absorption of energy due to the carefully designed shape.

Advantages :

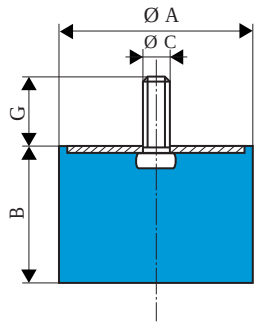
- By comparison with rigid stops, PAULSTRA elastic stops are quiet and avoid hammering and deterioration of equipment.

Recommendations :

- The stops must be fitted so that, on impact, the axis of the stop is perpendicular to the contact surface.
- On impact, the external diameter of the stop increases : this must be allowed for when fixing.

DIMENSIONS AND OPERATING CHARACTERISTICS

CYLINDRICAL STOPS

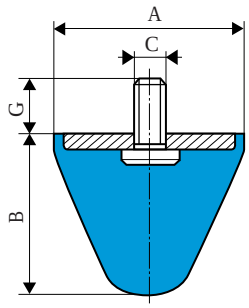


Ø A mm	B mm	Ø C mm	G mm	Max load daN	Deflect. mm	Energy Joules	Reference
12.5	10	M 5	10	12	2	0.12	511110
	13.5			11	2.5	0.13	511128
	15			10	3	0.16	511115
	20			8	3.5	0.14	511125
16	10	M 5	12	20	2	0.20	511292
	15			20	3	0.30	511294
	20			15	4	0.30	511296
	25			15	5	0.30	511298
20	8.5	M 6	16.5	40	1.5	0.30	511200
	15			35	4	0.70	511215
	20			30	5	0.70	511220
	25			30	5.5	0.80	511225
	30			25	7	0.80	511230

Ø A mm	B mm	Ø C mm	G mm	Max load daN	Deflect. mm	Energy Joules	Reference
25.5	10	M 8	20	80	2	0.80	511265
	15			60	3.5	1.00	511270
	19			55	4.5	1.20	511251
	22			50	5.5	1.30	511275
	25			50	6	1.50	511280
	30			50	8	2.00	511285
	40			50	10	2.50	511290
30	15	M 8	25	90	3.5	1.50	511308
	22			80	6	2.40	511310
	30			70	8	2.80	511312
	40			60	9	2.70	511314
40	20	M 10	25	160	5	4.00	511450
	25			150	6	4.50	511401
	35			120	8	4.80	511452
	40			120	10	6.00	511454
	45			120	11	6.60	511456
50	25	M 10	25	300	6	9.00	511525
	35			250	9	11.20	511535
	45			190	11	10.00	511545
60	25	M 10	25	400	6	12.00	511625
	36			300	9	13.50	511635
	45			250	11	13.70	511645
70	35	M 10	25	450	9	20.00	511735
	50			350	12	21.00	511750
	70			300	14	21.00	511770
80	25	M 14	45	1100	6	33.00	513801
	30		35	950	8	38.00	511830
	40		35	600	10	30.00	511840
	70		35	500	17	42.50	511870
	80		35	450	19	43.00	511880

See current price list for availability of items.

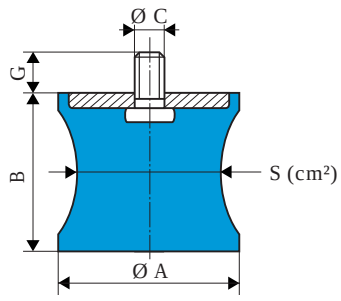
CONICAL PROGRESSIVE STOPS



Reference	Ø A mm	B mm	Ø C mm	G mm	Repetitive shocks Energy Joules	Repetitive shocks Deflection mm	Repetitive shocks Reaction daN	Exceptional shock Energy joules	Weight g
512251	25.5	19	M 8	20	3	8	100	9	20
512307	30	30	M 8	25	6	15	140	18	37
512301	30	30	M 6	13.5	6	15	140	18	30
512215	50	50	M 10	25	30	25	340	90	85
512501	50	50	M 8	20	30	25	340	90	75
512516	50	64	M 10	25	40	32	370	120	150
512502	50	64	M 8	35	40	32	370	120	150
512517	50	58	M 10	25	37	28	400	110	130
512503	50	58	M 8	15	37	28	400	110	120
512608	60	40	M 10	25	27	18	550	70	140
512601	60	40	M 14	62	27	18	550	70	200
512700	72	58	M 10	25	50	26	550	150	290
512721	72	58	M 12	30	50	26	550	150	300
512951	95	80	M 16	45	120	37	1100	350	750

See current price list for availability of items.

DIABOLO STOPS



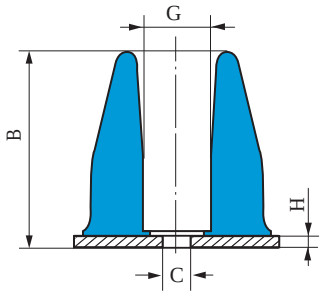
Reference	S cm²	Ø A mm	B mm	Ø C mm	G mm	Max instant. load daN	Deflect mm	Max static load daN	Deflect mm	Energy Joules	Weight g
511571	5	57	42	M8	20	100	10	40	4	1	60
511572	9.5	57	42	M8	20	200	12	75	5.5	2	80
511601	19.5	60	57	M10	25	350	15	150	8	6	190
511801	38.5	80	65	M14	30	800	16	300	9.5	15	500
511951	50	95	70	M16	35	1000	18	400	9.5	20	790

See current price list for availability of items.

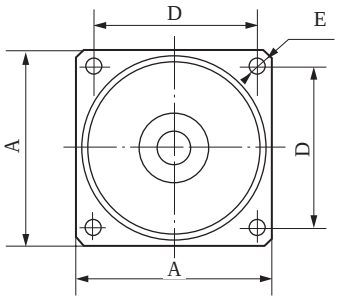
LEVAFLEX PROGRESSIVE STOPS

Reference	A mm	B mm	Ø C mm	D mm	Ø E mm	Ø G mm	H mm	Weight g
514085	85	85	8.5	69	8.5	20	5	600
514110	110	110	12.5	90	8.5	30	6	1200
514130	130	130	19	106	11	40	6	2000
514160	160	160	23	132	11	45	8	3000
514200	200	200	28	168	13	60	10	7000

See current price list for availability of items.



Repetive shocks			Exceptional shock energy Joules	Reference hardness
Energy Joules	Corresponding deflection mm	Reaction daN		
170	40	1200	500	514085/60
280	40	1700	850	514085/75
330	50	1800	1000	514110/60
550	50	3400	1500	514110/75
600	65	2800	1800	514130/60
650	60	3000	1900	514130/75
1050	75	4500	3000	514160/60
1200	90	4000	3600	514200/60
1300	70	6000	3900	514160/75
2200	85	7800	6600	514200/75



EVIDGOM STOPS

Repetive shocks			Exceptional shock energy Joules	Reference hardness
Energy Joules	Corresponding deflection mm	Reaction daN		
31	30	190	95	810644
100	50	580	300	810645
110	45	600	330	810666
180	67	750	540	810642
350	75	1250	1050	810653
360	65	1400	1100	810655
400	85	1500	1200	810669
300	70	900	--	810784
600	75	1625	--	810775
1050	90	2375	--	810776
2500	90	5500	--	810733/60
7100	150	11000	--	810732/60
9500	200	9500	--	810731/60
13000	130	18000	--	810732/75
17500	175	19000	--	810731/75
21000	200	25000	--	810735/60
29000	250	35000	--	810734/60
41000	200	70000	--	810735/75
50000	250	55000	--	810734/75

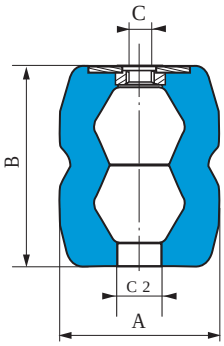


Fig. 1

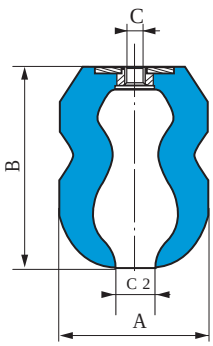


Fig. 2

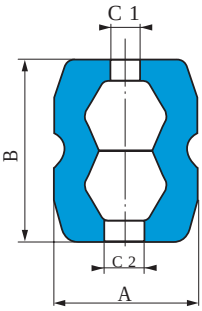
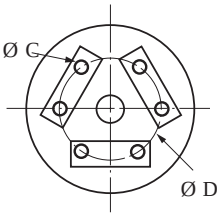


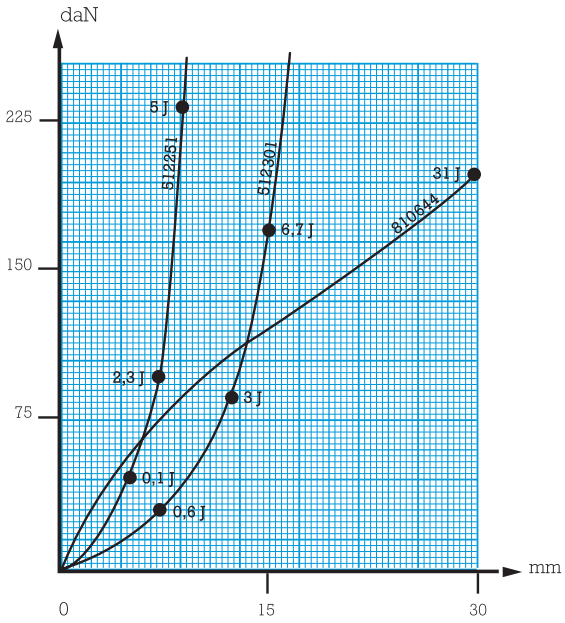
Fig. 3

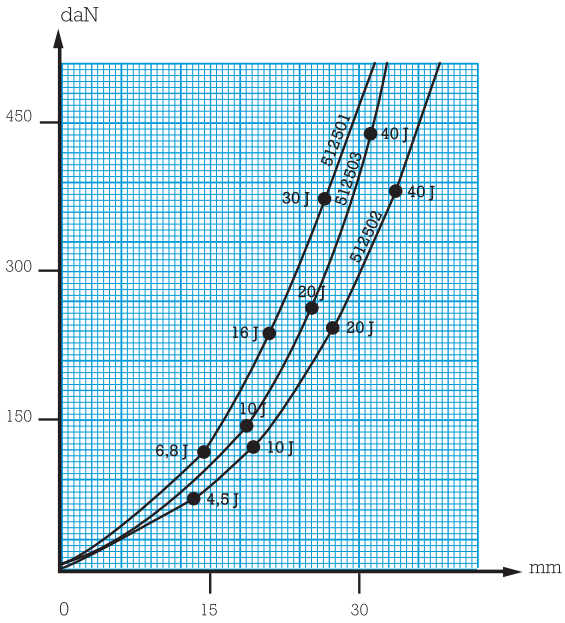
Stop reference	Fig.	All rubber Evidgom reference	Ø A mm	B mm	Ø C mm	Ø C_1 mm	Ø C_2 mm	Ø D mm	Ø A under load mm
810642	1	810022	85	120	M 16	20	30		114
810644	1	810004	55	55	M 10	14	14		72
810645	2	810035	66	93	M 16	20	14		100
810653	1	810023	100	130	M 16	20	30		140
810655	1	810025	110	132	M 16	20	30		142
810666	2	810046	76	90	M 16	20	14		98
810669	2	810029	110	150	M 16	20	30		155
810731	3	--	250	400	6 X M 24	70	70	150	360
810732	3	--	250	315	6 X M 24	70	70	150	380
810733	3	--	250	230	6 X M 24	70	70	150	370
840734	3	--	350	500	6 X M 24	85	85	196	445
810735	3	--	350	395	6 X M 24	85	85	196	500
810775	1	810015	155	150	M 16	25	40		202
810776	1	810016	188	180	M 24	40	30		256
810784	1	810014	125	140	M 16	30	25		168

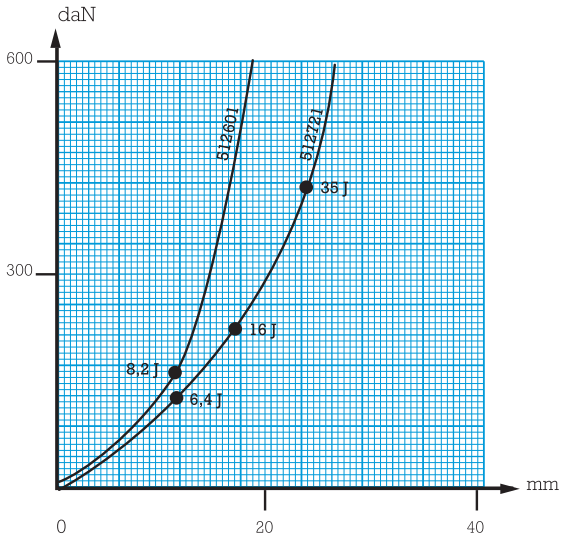


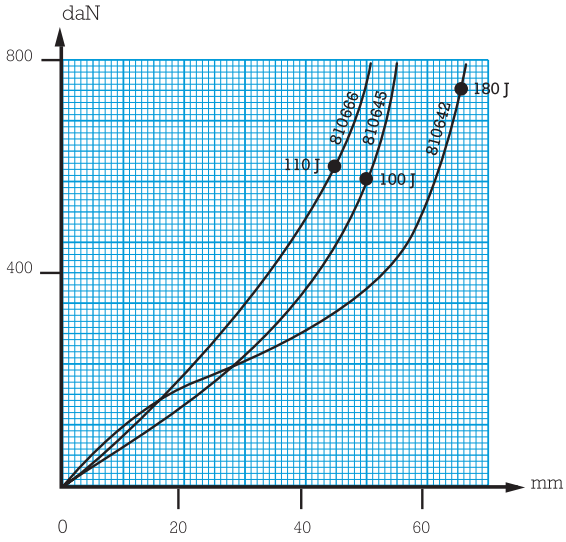
NOTE : The values are given for test conditions with an impact speed of 1 m/s. Consult us for speeds that are much higher.

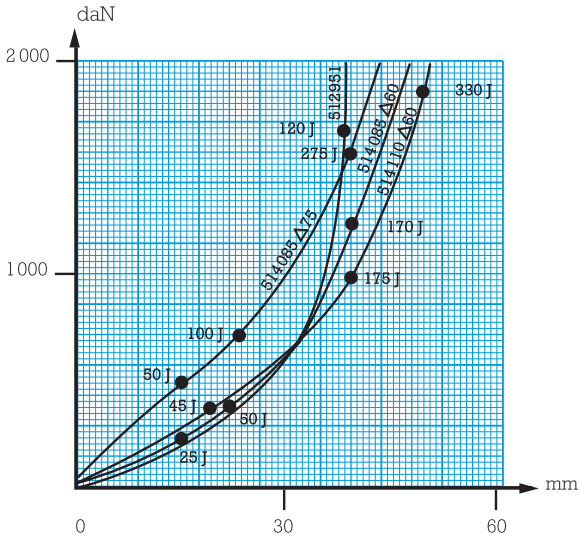
DEFLECTION CURVES AND ENERGY VALUES FOR PROGRESSIVE, LEVAFLEX AND EVIDGOM STOPS (Pages 59 and 60)

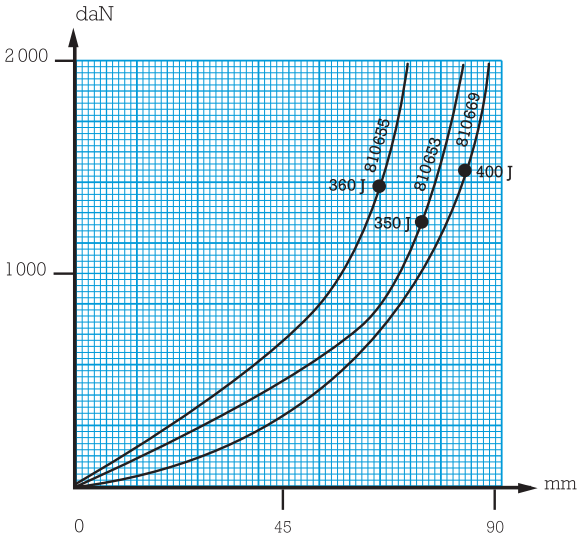


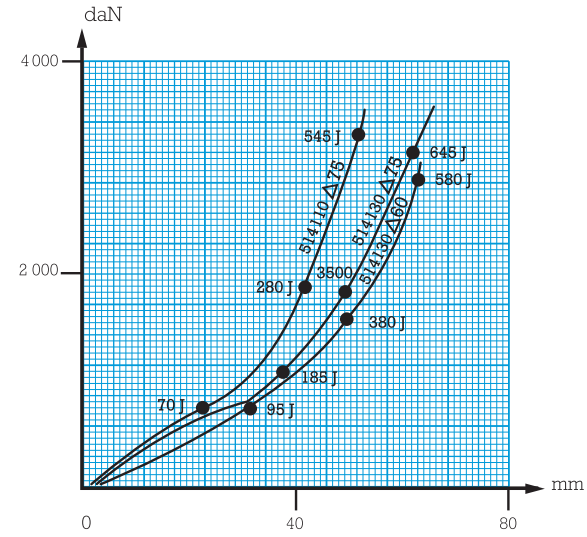


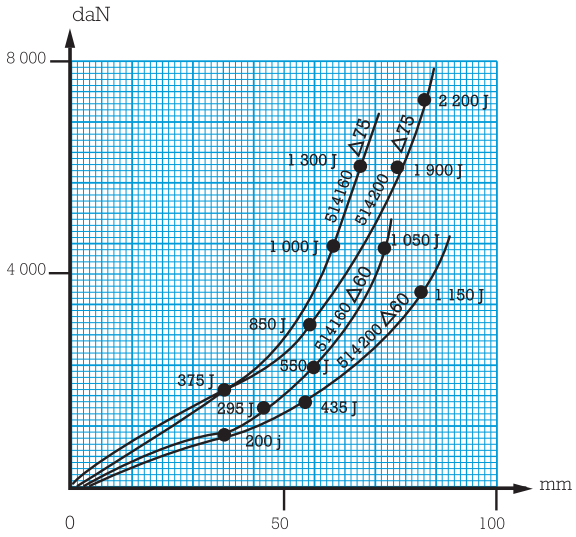


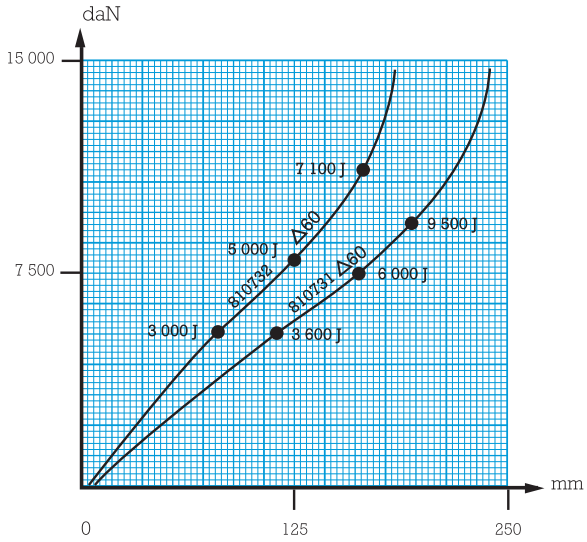


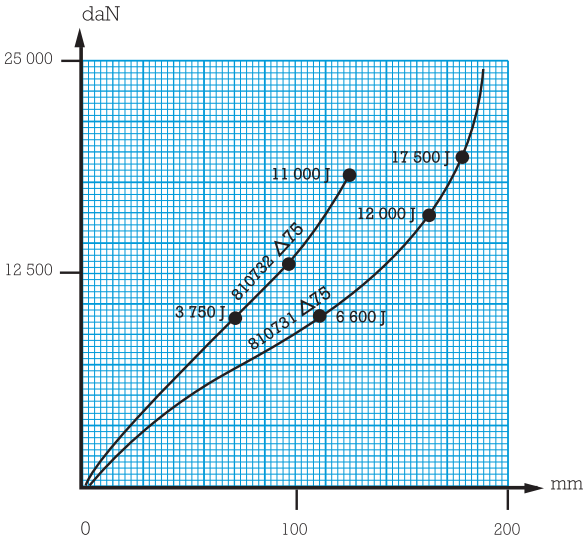


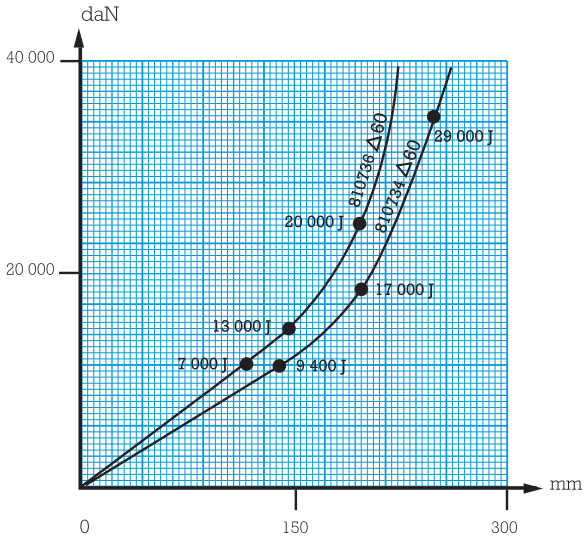


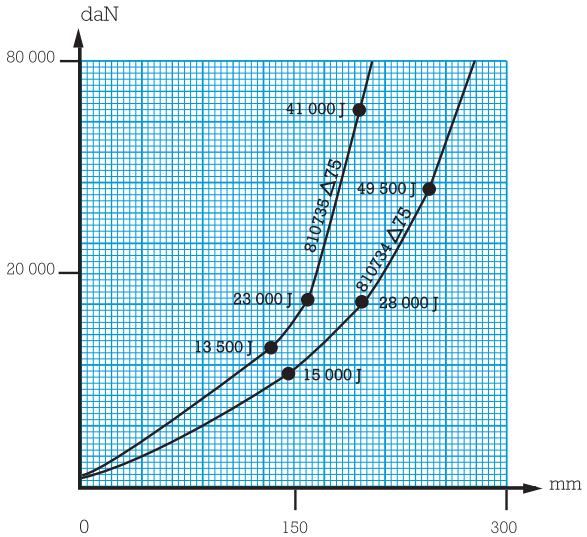

daN
4 000
2 000
0
40
80
mm
545 J
645 J
580 J
514110 Δ75
514130 Δ75
514130 Δ60
280 J
350 J
380 J
188 J
70 J
95 J

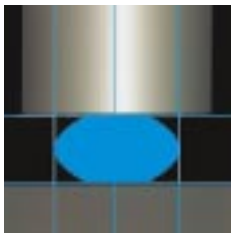

daN
8 000
4 000
0
50
100
mm
2 200 J
1 300 J
1 900 J
514160 Δ75
514200 Δ75
1 000 J
1 050 J
514160 Δ60
514200 Δ60
1 150 J
850 J
550 J
375 J
295 J
435 J
200 J


daN
15 000
7 500
0
125
250
mm
7 100 J
9 500 J
5 000 J
Δ60
810732
810731 Δ60
6 000 J
3 000 J
3 800 J


daN
25 000
12 500
0
100
200
mm
11 000 J
17 500 J
12 000 J
810732 Δ75
3 750 J
810731 Δ75
6 600 J

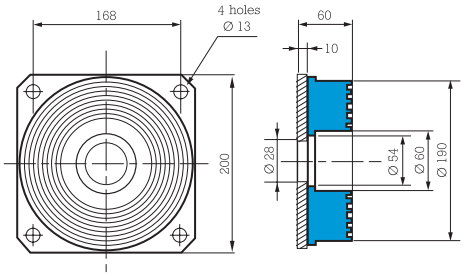

daN
40 000
20 000
0
150
300
mm
29 000 J
810736 Δ60
810734 Δ60
20 000 J
17 000 J
13 000 J
7 000 J
9 400 J


daN
80 000
20 000
0
150
300
mm
41 000 J
49 500 J
810736 Δ75
810734 Δ75
23 000 J
28 000 J
13 500 J
15 000 J

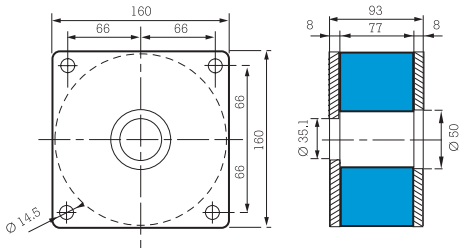


SUPPORTS AND BUMP STOPS

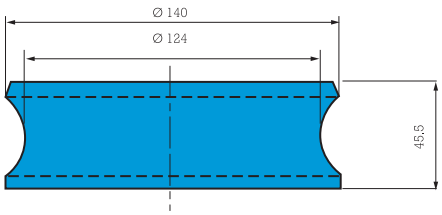
Reference : 514202 - Hardness : 75 - Compressive load : 5000 daN - Deflection : 8 mm



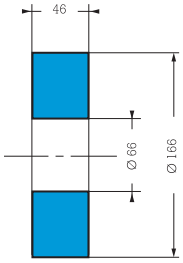
Reference : 534501 - Hardness : 60 - Load : Compression : 2500 daN - Deflection : 15 mm - Shear load : 300 daN - Deflection : 10 mm



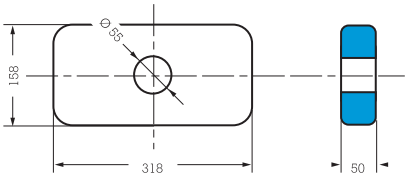
Reference : 813501 - Hardness : 60 - Compressive load : 1000 daN - Deflection : 4 mm



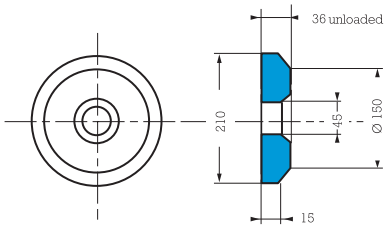
Reference : 817505 - Hardness 60 - Compressive load : 1500 daN - Deflection : 5 mm



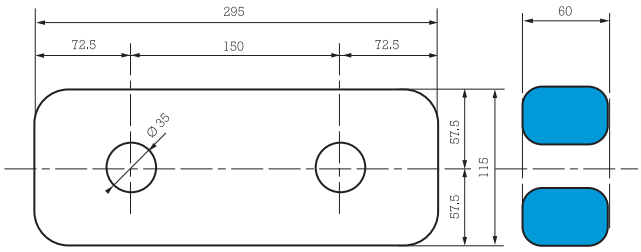
Reference : 813506 - Hardness 60 - Compressive load : 4000 daN - Deflection : 2.4 mm



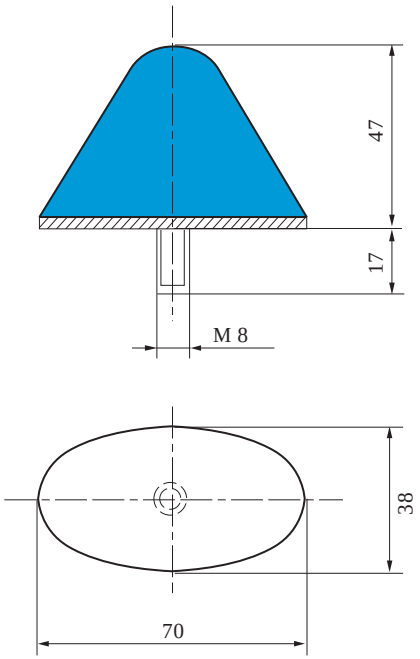
Reference : 817605 - Hardness 60 - Compressive load : 2000 daN - Deflection : 1.4 mm



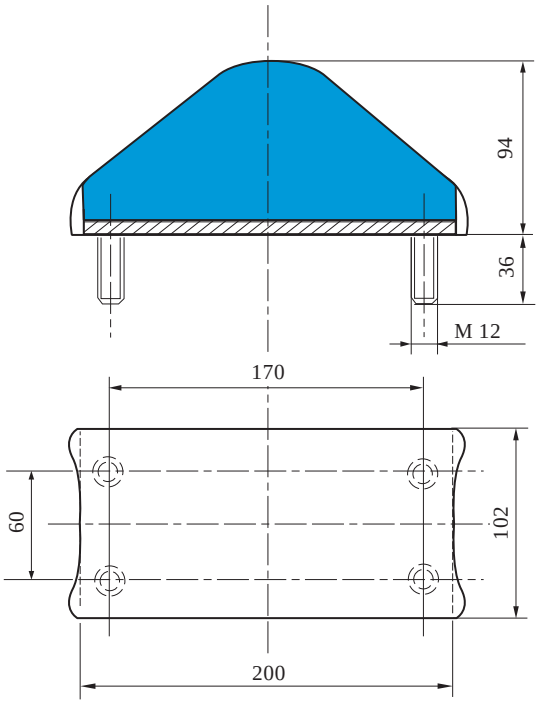
Reference : 813504 - Hardness 60 - Compressive load : 3000 daN - Deflection : 9 mm



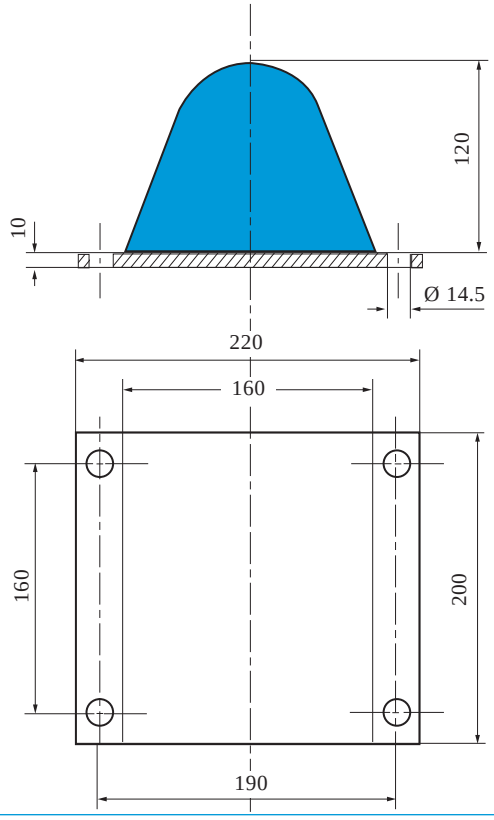
See current price list for availability of items.



Deflection : 14 mm
Maximum load : 150 daN
Reference 512389



Deflection : 35 mm
Maximum load : 3 000 daN
Reference 519186



Deflection : 45 mm
Maximum load : 4 800 daN
Reference 512991

See current price list for availability of items.

Fig. 1

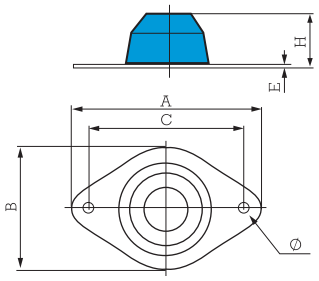


Fig. 2

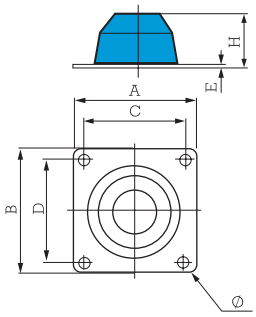


Fig. 3

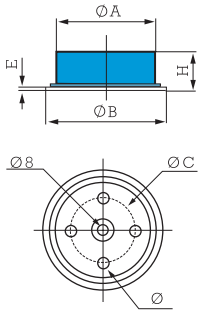
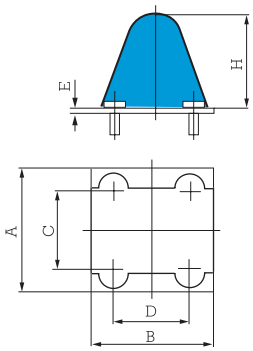


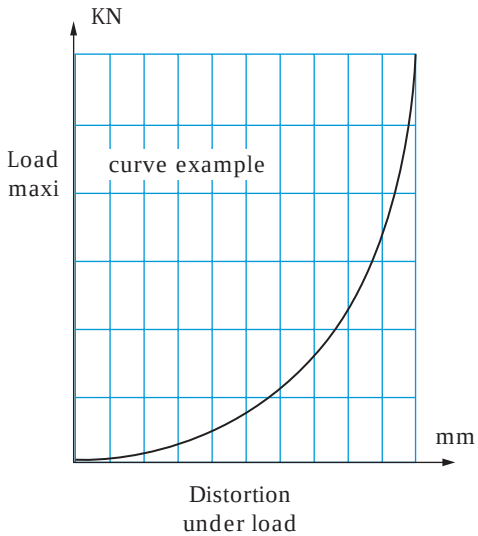
Fig. 4

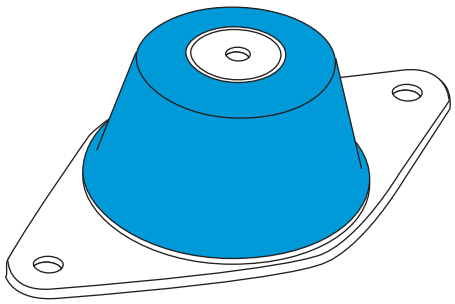


See Paulstra elastomer range : Stops

Reference	Fig.	A	B	C	D	E	H	Deflection under load mm	Load maxi KN	Ø
E1V-3245-04*	4	135	125	106	85	5	110		50	M10
E1V-3568-01*	3	126		80		3	36	10	59	5/16 or M8
E1V-3892-01*	2	196	140	174	118	5	85	40	25	13
E1V-3914-01*	1	170	110	140		3	40	25	20	15
E1V-3921-01*	1	170	110	140		3	50	31	28	15
E1V-3922-01*	2	180	180	148	148	6	56	32	60	15
E1V-3927-01*	1	170	110	140		3	40	25	28.5	15
E1V-3931-01*	2	110	110	92	92	3	90		26	9
E1V-3932-01*	1	170	110	140		3	30	15.5	50	15
E1V-3940-01*	1	170	88	140		3	20	10	30	15
E1V-4031-01*	1	170	110	140		3	65	41	25	15
E1V-4059-11*	1	234	125	200		5	70	40	51.2	14
519805	1	170	110	140		3	50	31	28	15
519830	1	100	100	90	90	3	62	25	12.5	11

*Vibrachoc range





Advantages :
- sliding plate.
- integrated stop.
- progressive stiffness.