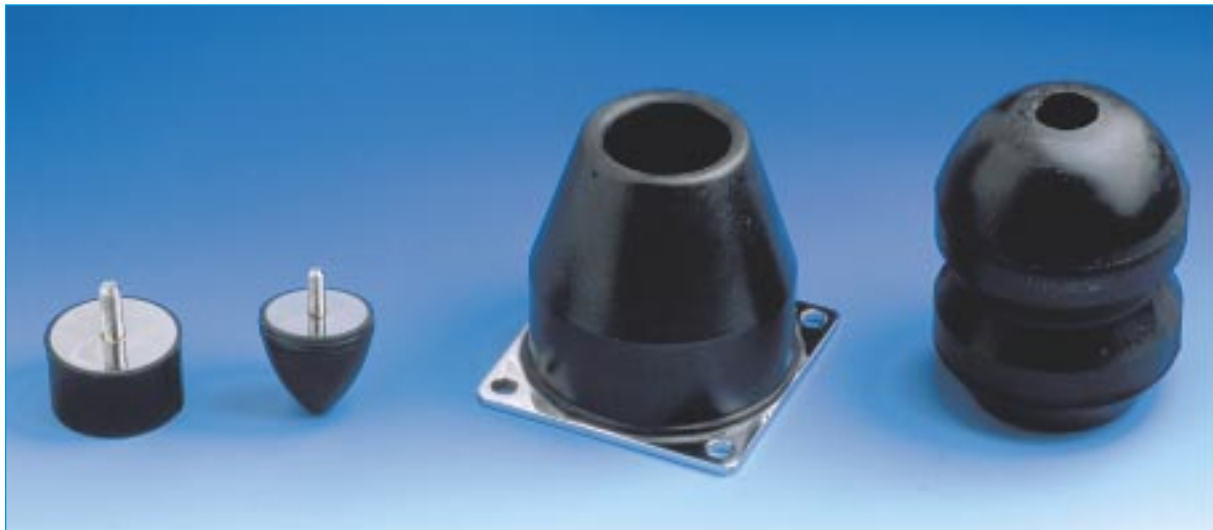


STOPS

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 :

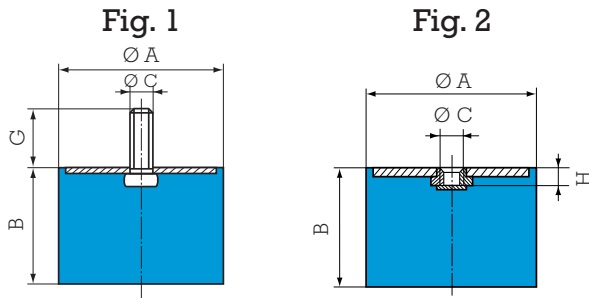
- By comparison with rigid stops, PAULSTRA elastic stops are quiet and avoid hammering and deterioration of equipment.

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



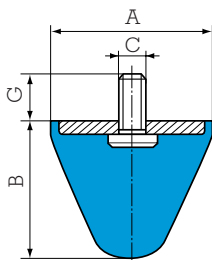
New range RADIAPLEX

| Ø A mm | B mm | Ø C | G mm | Fig. | H mm | Max. load daN | Deflect mm | Energy Joules | Reference |
|--------|------|-----|------|------|------|---------------|------------|---------------|-----------|
| 12.5 | 10 | M5 | 10 | 1 | - | 12 | 2 | 0.12 | 511110 |
| | 13.5 | | | | | 2.5 | 0.13 | 511128 | |
| | 15 | | | | | 3 | 0.16 | 511115 | |
| | 20 | | | | | 3.5 | 0.14 | 511125 | |
| 16 | 10 | M4 | - | 1 | - | 20 | 2 | 0.20 | 511150 |
| | 15 | | | | | 3 | 0.30 | 511151 | |
| | 10 | | | | | 2 | 0.20 | 511152 | |
| | 15 | | | | | 2 | 0.30 | 511153 | |
| 16 | 10 | M5 | 12 | 1 | - | 20 | 2 | 0.20 | 511292 |
| | 15 | | | | | 3 | 0.30 | 511294 | |
| | 20 | | | | | 4 | 0.30 | 511296 | |
| | 25 | | | | | 5 | 0.30 | 511298 | |
| 20 | 15 | M6 | - | 2 | 4 | 35 | 4 | 0.70 | 511154 |
| | 8.5 | | | | | 40 | 1.5 | 0.30 | 511200 |
| | 15 | | | | | 35 | 4 | 0.70 | 511215 |
| | 20 | | | | | 30 | 5 | 0.70 | 511220 |
| 20 | 25 | M6 | 16.5 | 1 | - | 30 | 5 | 0.70 | 511225 |
| | 30 | | | | | 5.5 | 0.80 | 511225 | |
| | 30 | | | | | 7 | 0.80 | 511230 | |
| | 30 | | | | | 25 | 7 | 0.80 | 511230 |
| 25.5 | 10 | M6 | 18 | 1 | - | 80 | 2 | 0.80 | 511158 |
| | 15 | | | | | 3.5 | 1.00 | 511155 | |
| | 20 | | | | | 5 | 1.20 | 511159 | |
| | 30 | | | | | 8 | 2.00 | 511160 | |
| 25.5 | 15 | - | - | 2 | 4 | 60 | 3.5 | 1.00 | 511164 |
| | 20 | | | | | 5.5 | 1.20 | 511162 | |
| | 30 | | | | | 8 | 2.00 | 511163 | |
| | 30 | | | | | 8 | 2.00 | 511163 | |

| Ø A mm | B mm | Ø C | G mm | Fig. | H mm | Charge maxi daN | Deflect mm | Energy Joules | Reference |
|--------|------|-----|------|------|--------|-----------------|------------|---------------|-----------|
| 25.5 | 10 | M8 | 20 | 1 | - | 80 | 2 | 0.80 | 511265 |
| | 15 | | | | | 3.5 | 1.00 | 511270 | |
| | 19 | | | | | 4.5 | 1.20 | 511251 | |
| | 22 | | | | | 5.5 | 1.30 | 511275 | |
| | 25 | | | | | 6 | 1.50 | 511280 | |
| | 30 | | | | | 8 | 2.00 | 511285 | |
| 30 | 22 | M8 | - | 2 | 6 | 80 | 6 | 2.40 | 511156 |
| | 15 | | | | | 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 | | | | | 30 | M8 | 20 | 1 |
| 40 | | 120 | 10 | 6.00 | 511161 | | | | |
| 20 | | 160 | 5 | 4.00 | 511450 | | | | |
| 25 | | 150 | 6 | 4.50 | 511401 | | | | |
| 35 | | 120 | 8 | 4.80 | 511452 | | | | |
| 40 | | 120 | 10 | 6.00 | 511454 | | | | |
| 50 | 45 | M10 | 25 | 1 | - | 120 | 11 | 6.60 | 511456 |
| | 25 | | | | | 300 | 6 | 9.00 | 511525 |
| | 35 | | | | | 250 | 9 | 11.20 | 511535 |
| 60 | 45 | M10 | 25 | 1 | - | 190 | 11 | 10.00 | 511545 |
| | 25 | | | | | 400 | 6 | 12.00 | 511625 |
| | 36 | | | | | 300 | 9 | 13.50 | 511635 |
| 70 | 45 | M10 | 25 | 1 | - | 250 | 11 | 13.70 | 511645 |
| | 35 | | | | | 450 | 9 | 20.00 | 511735 |
| | 50 | | | | | 350 | 12 | 21.00 | 511750 |
| 80 | 70 | M10 | 25 | 1 | - | 300 | 14 | 21.00 | 511770 |
| | 25 | | | | | 1100 | 6 | 33.00 | 513801 |
| | 30 | | | | | 950 | 8 | 38.00 | 511830 |
| 80 | 30 | M14 | 45 | 1 | - | 35 | 10 | 30.00 | 511840 |
| | 35 | | | | | 600 | 10 | 30.00 | 511840 |
| | 70 | | | | | 500 | 17 | 42.50 | 511870 |
| | 35 | | | | | 35 | 19 | 43.00 | 511880 |
| | 80 | | | | | 450 | 19 | 43.00 | 511880 |

See current price list for availability of items.

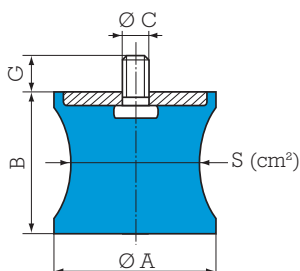
CONICAL PROGRESSIVE STOPS



| Reference | Ø A mm | B mm | Ø C | G mm | Repetitive shocks | | | Exceptional shock Energy joules | Wght g |
|-----------|--------|------|-----|------|-------------------|-------------|--------------|---------------------------------|--------|
| | | | | | Energy Joules | Deflect. mm | Reaction daN | | |
| 512251 | 25.5 | 19 | M8 | 20 | 3 | 8 | 100 | 9 | 20 |
| 512307 | 30 | 30 | M8 | 25 | 6 | 15 | 140 | 18 | 37 |
| 512301 | 30 | 30 | M6 | 13.5 | 6 | 15 | 140 | 18 | 30 |
| 512515 | 50 | 50 | M10 | 25 | 30 | 25 | 340 | 90 | 85 |
| 512501 | 50 | 50 | M8 | 20 | 30 | 25 | 340 | 90 | 75 |
| 512516 | 50 | 64 | M10 | 25 | 40 | 32 | 370 | 120 | 150 |
| 512502 | 50 | 64 | M8 | 35 | 40 | 32 | 370 | 120 | 150 |
| 512517 | 50 | 58 | M10 | 25 | 37 | 28 | 400 | 110 | 130 |
| 512503 | 50 | 58 | M8 | 15 | 37 | 28 | 400 | 110 | 120 |
| 512608 | 60 | 40 | M10 | 25 | 27 | 18 | 550 | 70 | 140 |
| 512601 | 60 | 40 | M14 | 62 | 27 | 18 | 550 | 70 | 200 |
| 512700 | 72 | 58 | M10 | 25 | 50 | 26 | 550 | 150 | 290 |
| 512721 | 72 | 58 | M12 | 30 | 50 | 26 | 550 | 150 | 300 |
| 512951 | 95 | 80 | M16 | 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 | G mm | Max. instant. load daN | Deflect. mm | Max. static load daN | Deflect. mm | Energy Joules | Wght 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 |

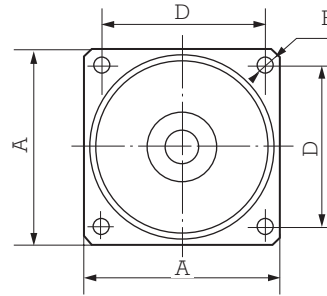
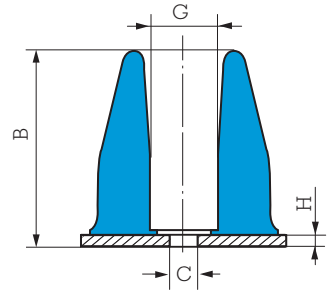
See current price list for availability of items.



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.



| Energy Joules | Repetitive shocks | | Exceptional shock energy Joules | Reference hardness |
|---------------|-----------------------------|--------------|---------------------------------|--------------------|
| | 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

| Energy Joules | Repetitive shocks | | Exceptional shock energy Joules | Reference hardness |
|---------------|-----------------------------|--------------|---------------------------------|--------------------|
| | 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 |

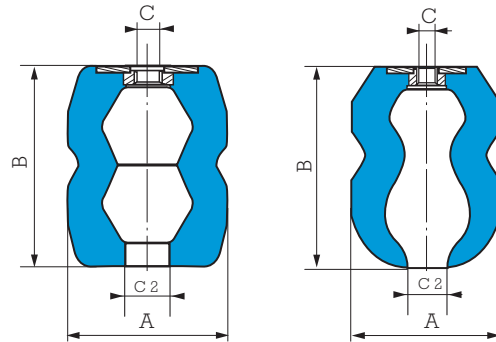


Fig. 1

Fig. 2

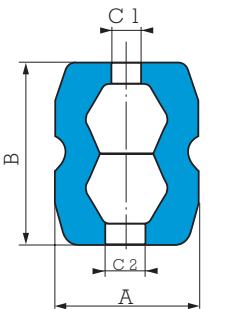


Fig. 3

| Stop reference | Fig. | All rubber Evidgom reference | Ø A mm | B mm | Ø C | Ø C ₁ mm | Ø C ₂ mm | Ø D mm | Ø A under load mm |
|----------------|------|------------------------------|--------|------|---------|---------------------|---------------------|--------|-------------------|
| 810642 | 1 | 810022 | 85 | 120 | M16 | 20 | 30 | -- | 114 |
| 810644 | 1 | 810004 | 55 | 55 | M10 | 14 | 14 | -- | 72 |
| 810645 | 2 | 810035 | 66 | 93 | M16 | 20 | 14 | -- | 100 |
| 810653 | 1 | 810023 | 100 | 130 | M16 | 20 | 30 | -- | 140 |
| 810655 | 1 | 810025 | 110 | 132 | M16 | 20 | 30 | -- | 142 |
| 810666 | 2 | 810046 | 76 | 90 | M16 | 20 | 14 | -- | 98 |
| 810669 | 2 | 810029 | 110 | 150 | M16 | 20 | 30 | -- | 155 |
| 810731 | 3 | -- | 250 | 400 | 6 X M24 | 70 | 70 | 150 | 360 |
| 810732 | 3 | -- | 250 | 315 | 6 X M24 | 70 | 70 | 150 | 380 |
| 810733 | 3 | -- | 250 | 230 | 6 X M24 | 70 | 70 | 150 | 370 |
| 840734 | 3 | -- | 350 | 500 | 6 X M24 | 85 | 85 | 196 | 445 |
| 810735 | 3 | -- | 350 | 395 | 6 X M24 | 85 | 85 | 196 | 500 |
| 810775 | 1 | 810015 | 155 | 150 | M16 | 25 | 40 | -- | 202 |
| 810776 | 1 | 810016 | 188 | 180 | M24 | 40 | 30 | -- | 256 |
| 810784 | 1 | 810014 | 125 | 140 | M16 | 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 61 and 62)

