

DAMPTAC

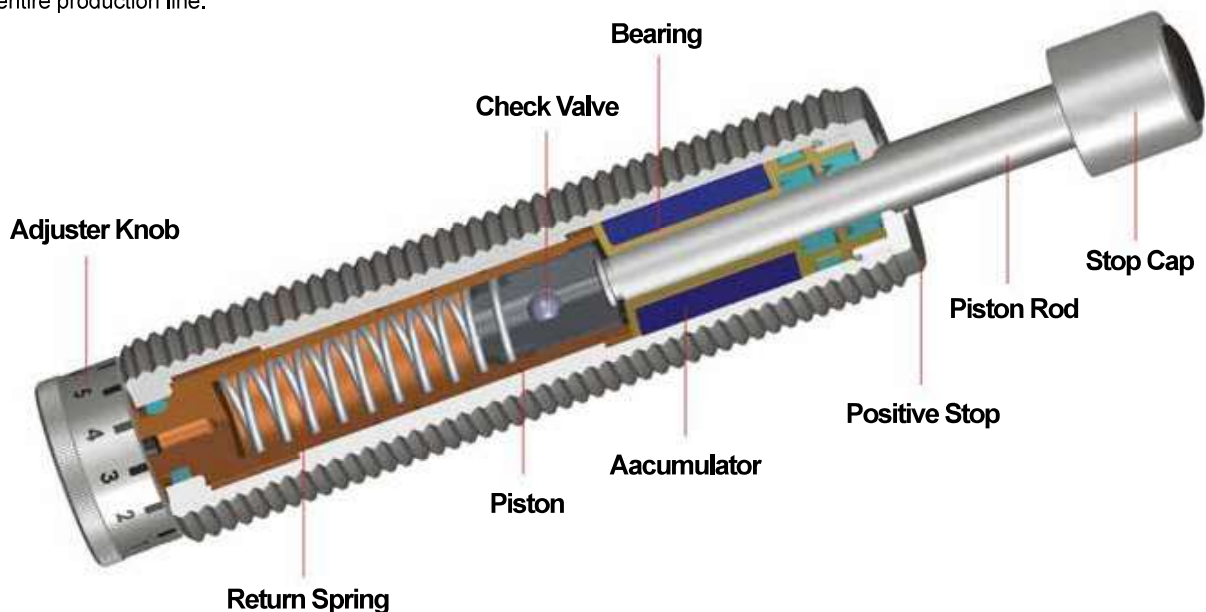
Industrial Shock Absorber



DTK Series

Adjustable Type

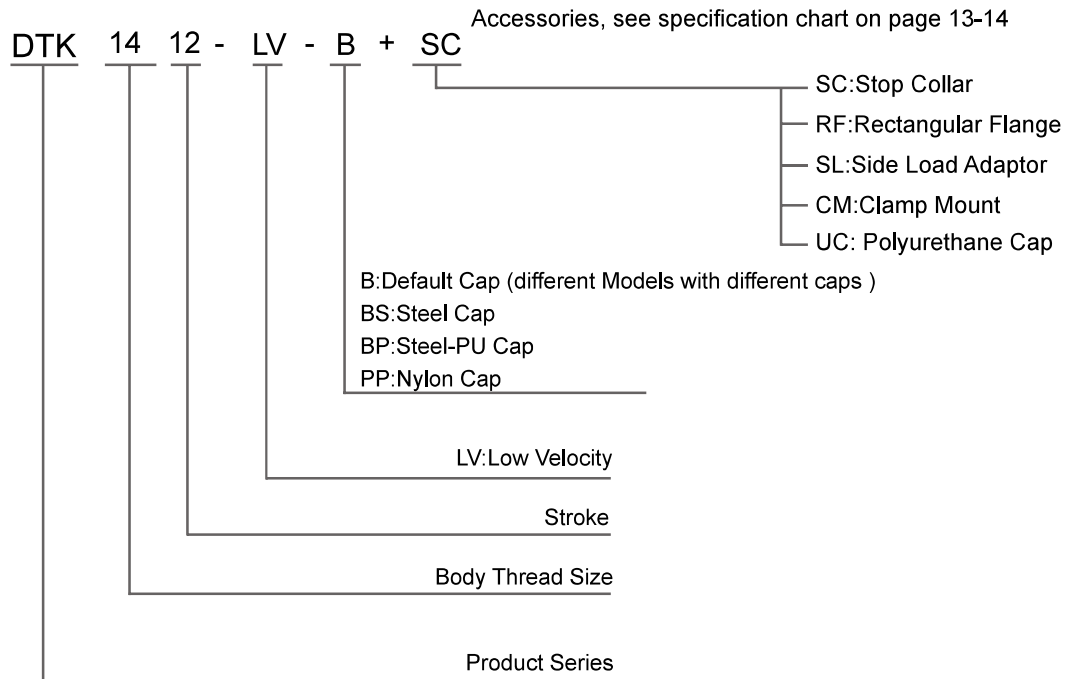
The DAMPTAC DTK series is widely used in the automotive industry, the automation industry, etc., which make the mobile load to be decelerated smoothly until stopped, without bounce, and the reliability is fully validated. Simply adjust the knob, you can change the size of the damping force to adapt to different application conditions, to provide you with the best damping effect. The calculation of DTK series is convenient, and the application is flexible, a single model can be adjusted to meet the needs of many different working conditions. The DTK series is available with threads from M10 to M36, with stroke from 7 mm to 50 mm, with a single impact absorbing energy from 5.5 Nm to 692 Nm, and the accessories are also available to solve all customer application requirements. Adjustable shock absorbers with the same specification and stroke, the max. absorbing energy and effective weight range of DTK series is much higher than other brands, while the service life time of up to 5 million impacting cycle (correct selection and use); Moreover, DTK series comes with "sideforce protection" function, in the same application conditions (with side force, without side force adapter), the life time of DTK series is far more than other brands of the same series of products! Based on the above advantages, DAMPTAC DTK series greatly improve the efficiency of machinery and equipment, saving more energy consumption, cost-effective to ensure the stable operation of the entire production line.



Properties

- DTK model is adjustable type so you could control the damping force according to impact velocity. DTK model has the 12 step range to rotate the dial 0° to 300° so it is possible to get the fine tuning.
- Most of the adjustable shock absorbers on the market use the backward single-hole adjusting technology. DTK series use the most advanced multi-orifice precision trimming technology. It provides the constant damping force with minimum peak impact and realize the fast and smooth flexible damping. It reduces the damping time and impacting noise, reduces the cost of equipment maintenance and effectively protects the machines and greatly improves the production efficiency.
- DTK series uses the advanced composite polyester oil seals and wiper scraper seals, and hardened, aluminium-titanium-nitride coated piston rod, and special accumulator made of special materials. These designs ensure the long life time of DTK (up to 5 million impacting cycles) and the performance of resistance to harsh environment.
- DTK series uses the distinctive front extended guidance bearing and the advanced oil-free bearing. It improves the performance of resistance to side load force.
- Environment Temperature: -10 °C ~ 80 °C (special demand on request)

DTK Series Ordering Information



Example: DTK2016 (Thread M20, Stroke 16mm, Without Cap)

DTK2016-B (Thread M20, Stroke 16mm, Standard with Steel-PU Cap)

DTK2525-B (Thread M25, Stroke 25mm, Standard with Steel Cap)

DTK3325-B + UC33 (Thread M33, Stroke 25mm, additional with Polyurethane Cap)

DTK2016 + SL2016 (shock absorber DTK2016 without cap used together with side load adaptor SL2016)

Direction for Calculation, Mount and Use

Correct calculation, mount and use ensures the ideal damping effect.

1. Calculation

DAMPTAC offers various channels for customers to do the calculation: catalogue sizing, online calculation on website, calculation program and professional calculation by DAMPTAC engineers. Please input the accurate application data when calculating. (DAMPTAC do not take the responsibility if the customer input the wrong application data and make the wrong calculation result.)

2. Mount

The mount of the shock absorbers must be secured and reliable. Use two screws to lock the shock absorber without shaking. Mount of instability may cause the damage of shock absorber when being impacted, worsely may make the machines damaged. Take care of the using stroke when mounted, 1-3 mm free stroke will help to extend the life time of the shock absorber.

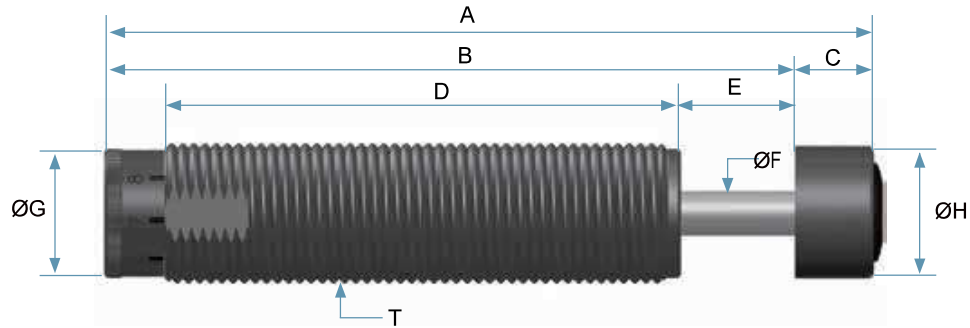
3. Use

Be sure to adjust the knob to "0", mount the shock absorber and start the impact, Listen to the impacting sound and observe the damping effect carefully.

If there is no obvious deceleration during the whole stroke and there is a loud noise of bang, it means the damping force is too small. Please adjust the knob to "1" and do the test again. If there is no improvement, continue to adjust the knob to "2" or "3" ...

When the knob is adjusted to "X", the moving mass can stop fastly and smoothly, there is only a sound of "Pu", then you get the ideal damping effect. Use the L-shaped wrench to lock the knob and remain the dial "X". On the contrary, if there is a sudden deceleration in the first or middle section of the stroke with a loud noise of bang, it means the damping force is too large and please adjust the knob to smaller dials and do the test again.

If you can not get the ideal damping effect after repeatedly test, the calculation for sizing the shock absorber may be wrong, you may need change a suitable type of shock asborber to solve the problem, so you need confirm the calculation again.



Specifications Chart - Adjustable DTK Series

| Type (with cap) | Type (without cap) | Stroke (mm) | Max. Energy /Cycle E1 (Nm) | Max. Energy /Hour E2 (Nm/h) | Effective Weight Me (kg) | Return Force (N) | | Weight (g) |
|--------------------|-----------------------|----------------|----------------------------------|-----------------------------------|--------------------------------|------------------|------|---------------|
| | | | | | | Ext | Comp | |
| DTK1007-B | DTK1007 | 7 | 7 | 15,000 | 0.2-25 | 2.4 | 5.4 | 28 |
| DTK1210-B | DTK1210 | 10 | 16 | 25,000 | 1-35 | 3.7 | 9.6 | 45 |
| DTK1210-LV-B | DTK1210-LV | | | | 20-245 | | | |
| DTK1412F-B | DTK1412F | 12 | 29 | 45,000 | 1-158 | 3.6 | 9.8 | 75 |
| DTK1412F-LV-B | DTK1412F-LV | | | | 60-598 | | | |
| DTK1412-B | DTK1412 | 12 | 29 | 45,000 | 1-158 | 3.6 | 9.8 | 75 |
| DTK1412-LV-B | DTK1412-LV | | | | 60-598 | | | |
| DTK1612-B | DTK1612 | 12 | 38 | 51,000 | 1-218 | 4.9 | 11.4 | 89 |
| DTK1612-LV-B | DTK1612-LV | | | | 80-769 | | | |
| DTK2016-B | DTK2016 | 16 | 69 | 69,000 | 2-450 | 8 | 19.6 | 170 |
| DTK2016-LV-B | DTK2016-LV | | | | 160-1480 | | | |

Dimensions Chart - Adjustable DTK Series

| Type (with cap) | Type (without cap) | Dimensions (Unit: mm) | | | | | | | | |
|--------------------|-----------------------|-----------------------|------------------|----|------|----|---|----|------|---------|
| | | A with cap | B without cap | C | D | E | F | G | H | T |
| DTK1007-B | DTK1007 | 74 | 64 | 10 | 49.2 | 7 | 3 | 8 | 8.5 | M10X1.0 |
| DTK1210-B | DTK1210 | 86 | 75 | 11 | 58 | 10 | 4 | 10 | 10.5 | M12X1.0 |
| DTK1210-LV-B | DTK1210-LV | | | | | | | | | |
| DTK1412F-B | DTK1412F | 95.2 | 84.2 | 11 | 65 | 12 | 4 | 12 | 10.5 | M14X1.0 |
| DTK1412F-LV-B | DTK1412F-LV | | | | | | | | | |
| DTK1412-B | DTK1412 | 95.2 | 84.2 | 11 | 65 | 12 | 4 | 12 | 10.5 | M14X1.5 |
| DTK1412-LV-B | DTK1412-LV | | | | | | | | | |
| DTK1612-B | DTK1612 | 95.2 | 84.2 | 11 | 65 | 12 | 4 | 14 | 12 | M16X1.5 |
| DTK1612-LV-B | DTK1612-LV | | | | | | | | | |
| DTK2016-B | DTK2016 | 116 | 98 | 18 | 65 | 16 | 6 | 18 | 18 | M20X1.5 |
| DTK2016-LV-B | DTK2016-LV | | | | | | | | | |

Specifications Chart - Adjustable DTK Series

| Type (with cap) | Type (without cap) | Stroke (mm) | Max. Energy /Cycle E1 (Nm) | Max. Energy /Hour E2 (Nm/h) | Effective Weight Me (kg) | Return Force (N) | | Weight (g) |
|--------------------|-----------------------|----------------|----------------------------------|-----------------------------------|--------------------------------|------------------|------|---------------|
| | | | | | | Ext | Comp | |
| DTK2525-B | DTK2525 | 25 | 220 | 113,000 | 8.3-2,150 | 12 | 31 | 315 |
| DTK2525-LV-B | DTK2525-LV | | | | 580-6,830 | | | |
| DTK2540-B | DTK2540 | 40 | 320 | 174,500 | 30-3000 | 16 | 32 | 394 |
| DTK2540-LV-B | DTK2540-LV | | | | 998-12,000 | | | |
| DTK2725F-B | DTK2725F | 25 | 230 | 113,000 | 8.3-2,150 | 12 | 31 | 357 |
| DTK2725F-LV-B | DTK2725F-LV | | | | 580-6,830 | | | |
| DTK2725-B | DTK2725 | 25 | 230 | 113,000 | 8.3-2,150 | 12 | 31 | 357 |
| DTK2725-LV-B | DTK2725-LV | | | | 580-6,830 | | | |
| DTK3035-B | DTK3035 | 35 | 360 | 137,000 | 9-3200 | 21 | 46 | 610 |
| DTK3325-B | DTK3325 | 25 | 305 | 120,000 | 9-3400 | 23 | 48.8 | 715 |
| DTK3325-LV-B | DTK3325-LV | | | | 975-25,000 | | | |
| DTK3350-B | DTK3350 | 50 | 510 | 150,000 | 12-5500 | 25 | 52.1 | 917 |
| DTK3350-LV-B | DTK3350-LV | | | | 1450-51,000 | | | |
| DTK3625-B | DTK3625 | 25 | 332 | 125,000 | 9-3500 | 25 | 53 | 795 |
| DTK3625-LV-B | DTK3625-LV | | | | 997-28,000 | | | |
| DTK3650-B | DTK3650 | 50 | 560 | 160,000 | 12-5700 | 25 | 60 | 995 |
| DTK3650-LV-B | DTK3650-LV | | | | 1690-54,000 | | | |

Dimensions Chart - Adjustable DTK Series

| Type (with cap) | Type (without cap) | Dimensions (Unit: mm) | | | | | | | | |
|--------------------|-----------------------|-----------------------|------------------|------|-------|----|----|----|----|---------|
| | | A with cap | B without cap | C | D | E | F | G | H | T |
| DTK2525-B | DTK2525 | 139 | 127 | 12 | 84.5 | 25 | 8 | 23 | 22 | M25X1.5 |
| DTK2525-LV-B | DTK2525-LV | | | | | | | | | |
| DTK2540-B | DTK2540 | 187 | 174.5 | 12.5 | 117.5 | 40 | 8 | 23 | 22 | M25X1.5 |
| DTK2540-LV-B | DTK2540-LV | | | | | | | | | |
| DTK2725F-B | DTK2725F | 139 | 126.5 | 12.5 | 84.5 | 25 | 8 | 23 | 22 | M27X1.5 |
| DTK2725F-LV-B | DTK2725F-LV | | | | | | | | | |
| DTK2725-B | DTK2725 | 139 | 126.5 | 12.5 | 84.5 | 25 | 8 | 23 | 22 | M27X3.0 |
| DTK2725-LV-B | DTK2725-LV | | | | | | | | | |
| DTK3035-B | DTK3035 | 183.5 | 168 | 15.5 | 115 | 35 | 10 | 28 | 28 | M30X1.5 |
| DTK3325-B | DTK3325 | 156 | 140.5 | 15.5 | 99 | 25 | 10 | 30 | 28 | M33X1.5 |
| DTK3325-LV-B | DTK3325-LV | | | | | | | | | |
| DTK3350-B | DTK3350 | 223 | 207.5 | 15.5 | 141 | 50 | 10 | 30 | 28 | M33X1.5 |
| DTK3350-LV-B | DTK3350-LV | | | | | | | | | |
| DTK3625-B | DTK3625 | 165.5 | 150 | 15.5 | 107 | 25 | 10 | 33 | 28 | M36X1.5 |
| DTK3625-LV-B | DTK3625-LV | | | | | | | | | |
| DTK3650-B | DTK3650 | 223 | 207.5 | 15.5 | 141 | 50 | 10 | 33 | 28 | M36X1.5 |
| DTK3650-LV-B | DTK3650-LV | | | | | | | | | |