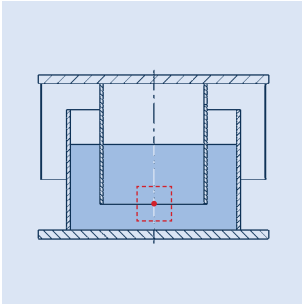


Viscoelastic damper Type 3D .. 44-D

Viscoelastic damper
type 3D 03 44-D
to 3D H1 44-D



= working range round the mid-position

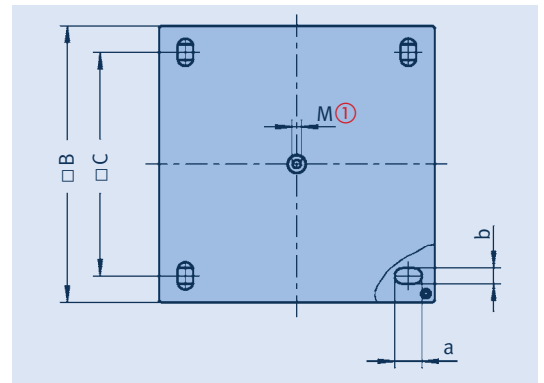
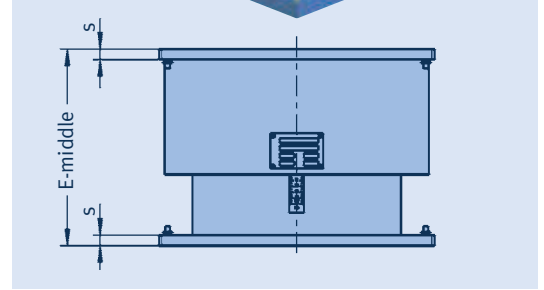
Selection and dimensions

When selecting viscoelastic dampers attention should be paid to the **temperature existing on site**. These dampers are available for application temperatures ranging from 20°C to 80°C, whereby the various damping media cover a temperature range of 10°C in each case. **For this reason the correct selection of application temperature is important.**

The choice of damper size depends on the nominal load. The offset in horizontal and vertical directions must be considered for the cold load position. For LISEGA dampers in the 44-D series this amounts in each case to $\pm 40\text{mm}$ in horizontal/vertical directions.

Operation of the damper in mid-position should be aimed at. To achieve the necessary damping resistance the viscoelastic dampers should operate in the range $\pm 20\text{mm}$ from the mid-position. Before any start-up the dampers are to be preheated to operating temperature.

- **load range: 2.5kN up to 100kN**
- **frequency range: up to 35Hz**
- **temperature range: 20°C up to 80°C (in 10°C stages)**
- **offset (cold position) to mid-position: up to $\pm 40\text{mm}$ (horizontal/vertical)**



The table values are minimum values at ordered working temperature. At lower temperatures the damping resistance increases. If required, the equivalent stiffness (kN/mm) can be given in vertical and horizontal directions.

① Inner thread for transport ring screw.

Order details:

viscoelastic damper
type 3D .. 44-D
marking: ...
nominal load: ...kN
offset: ...
x: ...mm, y: ...mm, z: ...mm
operating temperature: ...°C

type	nom. load [kN]	E	□B	□C	s	a	b	M①	weight [kg]
3D 03 44-D	2.5	240	270	215	8	34	14	-	16
3D 05 44-D	5	240	290	230	8	34	14	-	19
3D 10 44-D	10	240	340	270	10	38	18	M16	31
3D 20 44-D	20	280	390	320	12	42	22	M16	51
3D 30 44-D	30	320	440	350	15	46	26	M16	84
3D 40 44-D	40	335	470	380	18	46	26	M16	109
3D 60 44-D	60	350	510	410	20	53	33	M16	149
3D 80 44-D	80	390	535	430	25	59	39	M16	191
3D H1 44-D	100	405	580	460	30	59	39	M16	246

type	nom. load [kN]	vertical damping resistance [kNs/m]							horizontal damping resistance [kNs/m]						
		5 [Hz]	10 [Hz]	15 [Hz]	20 [Hz]	25 [Hz]	30 [Hz]	35 [Hz]	5 [Hz]	10 [Hz]	15 [Hz]	20 [Hz]	25 [Hz]	30 [Hz]	35 [Hz]
3D 03 44-D	2.5	15.7	12.0	10.2	9.1	8.3	7.7	7.3	14.0	10.8	8.6	7.0	6.0	5.4	5.1
3D 05 44-D	5	27.8	21.1	18.0	16.0	14.7	13.7	12.9	23.7	18.3	14.6	12.0	10.2	9.1	8.6
3D 10 44-D	10	47.3	36.0	30.7	27.4	25.0	23.3	21.9	37.4	28.8	22.9	18.9	16.1	14.4	13.6
3D 20 44-D	20	89.3	67.9	57.9	51.6	47.3	44.0	41.4	94.0	72.5	57.8	47.5	40.6	36.3	34.2
3D 30 44-D	30	143.9	109.4	93.2	83.2	76.2	70.9	66.7	148.7	114.5	91.5	75.1	64.2	57.4	54.1
3D 40 44-D	40	162.7	123.7	105.4	94.1	86.1	80.1	75.4	229.9	177.1	141.2	116.2	99.2	88.7	83.6
3D 60 44-D	60	189.4	144.0	122.7	109.5	100.3	93.3	87.8	293.0	225.8	180.0	148.1	126.5	113.1	106.6
3D 80 44-D	80	229.9	174.8	148.9	132.9	121.7	113.2	106.5	367.3	283.0	225.6	185.6	158.5	141.8	133.7
3D H1 44-D	100	340.2	258.7	220.4	196.7	180.1	167.6	157.7	554.1	427.0	340.4	280.0	239.2	214.0	201.7

Viscoelastic dampers Type 3D .. 33-L, 3D .. 55-L



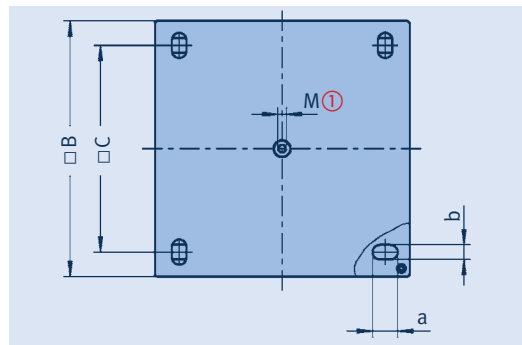
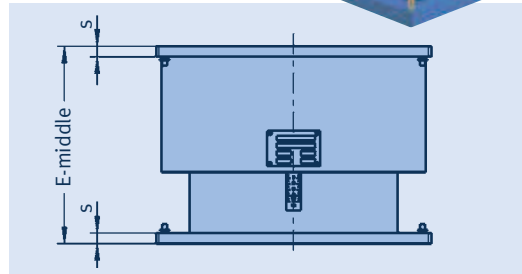
Selection and dimensions

When selecting viscoelastic dampers the **temperature on site** is important. Series 3D .. -L is designed for use in a temperature range from -10°C up to +40°C. In this temperature range the damper functions with relatively constant characteristics. The values were determined for a temperature of 20°C.

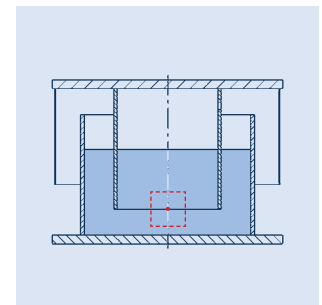
The choice of damper size depends on the nominal load. The offset in horizontal and vertical directions must be taken into account for the cold load position. For LISEGA dampers in the 33-L and 55-L series it amounts to ± 30mm and ± 50mm respectively in horizontal / vertical directions.

Operation of the damper in mid-position should be aimed at. To achieve the necessary damping resistance the viscoelastic dampers should be positioned in the range ± 20mm from the mid-position during operation. The dampers do not need to be preheated to operating temperature before start-up.

The table values are minimum values at 20°C. At lower temperatures the damping resistance increases. If required, the equivalent stiffness (kN/mm) can be given in vertical and horizontal directions.



Viscoelastic dampers
type 3D 05 33-L
to 3D 50 55-L



= working range round the mid-position

- load range: 2.5kN up to 50kN
- frequency range: up to 35Hz
- temperature range: - 10°C up to + 40°C
- offset (cold position) to mid-position:
up to ± 30mm (type 30 .. 33L)
up to ± 40mm (type 30 .. 55L)
(horizontal/vertical)

① Inner thread for transport ring bolt

type	nom. load [kN]	E	□B	□C	s	a	b	M①	weight [kg]
3D 05 33-L	5	270	260	195	10	38	18	M16	21
3D 10 33-L	10	270	295	230	10	38	18	M16	30
3D 15 33-L	15	280	335	265	15	42	22	M16	48
3D 25 33-L	25	290	425	340	20	46	26	M16	106
3D 40 33-L	40	300	540	440	25	53	33	M16	193
3D 50 33-L	50	380	590	480	30	59	39	M16	288

type	nom. load [kN]	E	□B	□C	s	a	b	M①	weight [kg]
3D 05 55-L	5	390	325	260	10	38	18	M16	39
3D 10 55-L	10	390	360	290	10	42	22	M16	49
3D 15 55-L	15	410	420	345	20	46	26	M16	107
3D 25 55-L	25	410	525	420	20	46	26	M16	158
3D 40 55-L	40	490	590	470	25	53	33	M16	282
3D 50 55-L	50	500	730	590	30	59	39	M16	489

Order details:

viscoelastic damper
type 3D ..
marking: ...
nominal load: ...kN
offset: ...
x: ...mm, y: ...mm z: ...mm
operating temperature: ...°C

type	nom. load [kN]	vertical damping resistance [kNs/m]							horizontal damping resistance [kNs/m]						
		5 [Hz]	10 [Hz]	15 [Hz]	20 [Hz]	25 [Hz]	30 [Hz]	35 [Hz]	5 [Hz]	10 [Hz]	15 [Hz]	20 [Hz]	25 [Hz]	30 [Hz]	35 [Hz]
3D 05 ...-L	5	9.6	7.3	6.3	5.6	5.1	4.8	4.5	11.0	8.2	7.0	6.2	5.6	5.2	4.9
3D 10 ...-L	10	18.6	14.1	12.1	10.8	9.9	9.2	8.7	22.8	17.1	14.5	12.9	11.8	10.9	10.2
3D 15 ...-L	15	28.2	21.5	18.4	16.4	15.1	14.0	13.2	38.9	29.3	24.8	22.0	20.1	18.6	17.5
3D 25 ...-L	25	52.2	39.8	34.0	30.4	27.8	25.9	24.4	95.0	71.5	60.5	53.8	49.1	45.5	42.8
3D 40 ...-L	40	98.0	74.8	63.8	57.0	52.3	48.7	45.8	206.4	155.3	131.5	116.9	106.7	99.0	92.9
3D 50 ...-L	50	166.0	126.7	108.1	96.7	88.6	82.5	77.7	416.4	313.4	265.4	235.9	215.2	199.7	187.5