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# VIBRAFLEX

Vibration absorber for cooling systems

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# FROM -70 °C TO +200 °C

Leak-proof, pressure resistant, flexible –  
the metal hose for refrigerant technology

Vibraflex vibration absorbers are chiefly used in cooling systems such as air-conditioning units, refrigeration plants and in heat pumps. Vibraflex vibration absorbers prevent transmission of vibrations and have a sound insulating effect. Vibraflex vibration absorbers are resistant to usual refrigerants. Stainless steel must be used for R 717 (NH<sub>3</sub>). Vibraflex vibration compensators are frost-resistant.

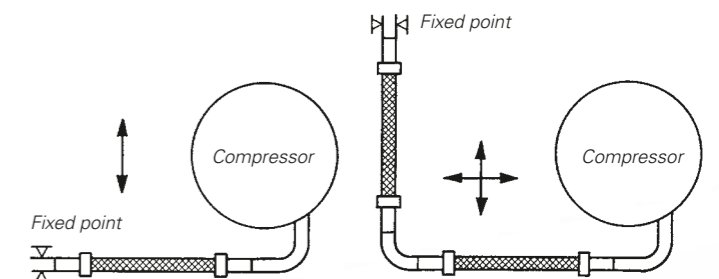
#### Usage

Vibraflex vibration absorbers are designed for a nominal pressure of 30 bar. The permissible temperature range extends from -70 °C to +200 °C taking account of the reduction factors at pressure and temperature.

**Do not use Vibraflex with CO<sub>2</sub> carbon dioxide (45 bar), but RS 331L12.**

#### Planning and installation

When installing the hoses, check the direction of the vibrations since the hoses can only absorb movements at right angles to their axis. They must also be free of stress, aligned (not offset) and must not be stretched or buckled when connected.

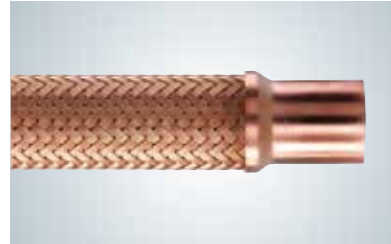


The fixing point must be arranged directly behind the hose. The maximum amplitude in continuous operation is  $\pm 1$  mm, when turning on or off  $\pm 5$  mm; in the event of additional vibrations in the axial direction of the hose, two Vibraflex vibration absorbers must be installed in a 90° arrangement. Each delivery is accompanied by detailed installation instructions.

# VIBRAFLEX – VIBRATION ABSORBER

Vibraflex is available in 3 models

## Model 1



## Model 1

### Bronze hose with copper connection pieces

- For conventional applications in the area of refrigeration/ air-conditioning technology. Simple and problem-free brazing with copper connection pieces.
- DN 8 to DN 50

## Model 2

### Stainless steel hose with factory welded copper connection pieces

- More stability through stainless steel hose
- Simple brazing into existing copper lines directly at the construction site
- DN 6 to DN 100

## Model 2



## Model 3

### Stainless steel hose with factory welded stainless steel connection pieces

- The hose features high stability and long service life
- Designed for use with modern cooling agents such as ammonia (NH<sub>3</sub>)
- Advantage: simple welding into steel pipelines
- DN 6 to DN 100

### Explanation of types

- Standard:  
VX 11/12; VX 21/22; VX 31/32; VX 33/34; VX 41
- Special design, fitting length up to 50 mm:  
VXS 101; VXS 201; VXS 301; VXS 303; VXS 401
- Special design, fitting length from 51 mm:  
VXS 102; VXS 202; VXS 302; VXS 304

When ordering, please specify the precise length of the fittings

### Operating pressures

- All VX products listed here have a nominal pressure of 30 bar, taking into consideration the shading factors
- Tubing design for higher pressures, e.g. for (R22) R410a, are handled as RS 331 or higher and not as VX

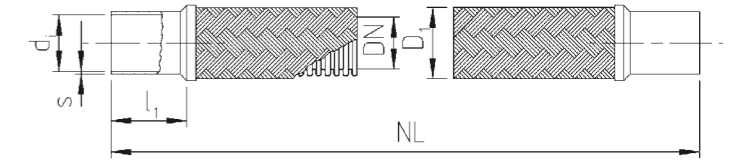


# BRONZE HOSE

with copper connection pieces, type VX 11/12; type VX 21/22

## Dimensions for type VX 11/12

- Hose material Bronze
- Special lengths/fittings up to 50 mm: VXS 101\*  
51 mm or more: VXS 102\*

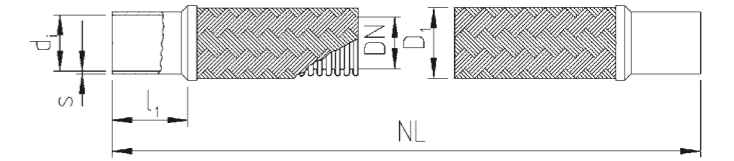


## Metric dimension

DN	Connection dimensions to DIN 2856			Standard connection pieces VX 11		Weight	Extended connection pieces VX 12		Weight
	Connection for pipe outside diameter	s	D <sub>1</sub>	NL ± 6	l <sub>1</sub>		NL ± 6	l <sub>1</sub>	
mm	d <sub>i</sub> mm	mm	mm	mm	mm	kg/Unit	mm	mm	kg/Unit
8	10	1	14,0	200	16	0,06	280	56	0,08
10	12	1	16,5	220	20	0,08	320	65	0,11
12/15	15	1,5	19,1	250	23	0,11	360	78	0,19
12/16	16	1	19,1	250	25	0,10	360	78	0,15
16	18	1	23,6	250	29	0,14	360	80	0,20
20	22	1	28,5	280	32	0,22	400	92	0,30
25	28	1,5	35,5	320	38	0,37	450	103	0,53
32	35	1,5	44,3	360	41	0,57	500	110	0,78
40	42	2	53,8	450	50	0,95	560	105	1,23
50	54	2	66,2	500	65	1,57	630	130	1,94

## Dimensions for type VX 21/22

- Hose material Bronze
- Special lengths/fittings up to 50 mm: VXS 201\*  
51 mm or more: VXS 202\*



## Inch dimension

DN	Connection dimensions to ASME/ANSI/B 16.22			Standard connection pieces VX 21		Weight	Extended connection pieces VXS 22		Weight	
	Connection for pipe outside diameter	s	D <sub>1</sub>	NL ± 6	l <sub>1</sub>		NL ± 6	l <sub>1</sub>		
mm	d <sub>i</sub> mm	mm	mm	mm	mm	kg/Unit	mm	mm	kg/Unit	
8	3/8	9,5	1	14,0	200	16	0,06	280	56	0,08
10	1/2	12,7	1	16,5	220	20	0,08	320	70	0,12
12	5/8	15,9	1	19,1	250	23	0,10	360	78	0,16
16	3/4	19,1	1	23,6	250	25	0,11	360	80	0,20
20	7/8	22,2	1	28,5	280	32	0,22	400	92	0,30
25	1 1/8	28,6	1,5	35,5	320	38	0,37	450	103	0,53
32	1 3/8	34,9	1,5	44,3	360	41	0,57	500	110	0,78
40	1 5/8	41,3	1,5	53,8	450	50	0,89	560	105	1,09
50	2 1/8	54,0	2	66,2	500	65	1,53	630	130	1,94

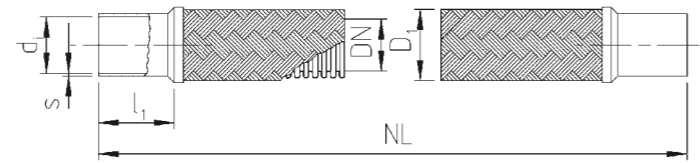
\* In case of deviation from standard fittings, please always specify the required fitting length.

# STAINLESS STEEL HOSE

with factory welded copper connection pieces, type VX 31/32; type VX 33

## Dimensions for type VX 31/32, ab DN 65 VX 11/12

- Hose material stainless steel
- Special lengths/fittings  
up to 50 mm: VXS 301\*  
51 mm or more: VXS 302\*

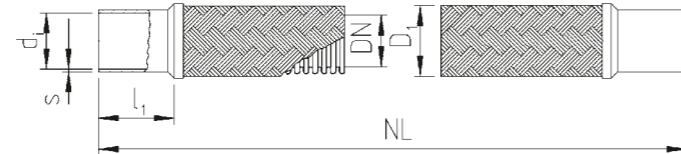


### Metric dimension

Connection dimensions to DIN 2856				Standard connection pieces VX 31			Extended connection pieces VX 32		
DN	Connection for pipe outside diameter		to DIN EN ISO 1127 D3/T3			Weight			Weight
	d <sub>i</sub>	s	D <sub>1</sub>	NL ± 6	l <sub>1</sub>	kg/Unit	NL ± 6	l <sub>1</sub>	kg/Unit
mm	mm	mm	mm	mm	mm	kg/Unit	mm	mm	kg/Unit
6	8	1	10,8	180	14	0,05	250	50	0,06
8	10	1	13,7	200	16	0,06	280	56	0,08
10	12	1	15,7	220	20	0,08	320	65	0,11
12/15	15	1,5	18,2	250	23	0,11	360	78	0,19
12/16	16	1	18,2	250	25	0,10	360	78	0,15
16	18	1	23,3	250	29	0,14	360	80	0,20
20	22	1	28,3	280	32	0,22	400	92	0,30
25	28	1,5	34,2	320	38	0,37	450	103	0,53
32	35	1,5	43,0	360	41	0,57	500	110	0,78
40	42	2	52,0	450	50	0,95	560	105	1,23
50	54	2	62,6	500	65	1,57	630	130	1,94
65/64	64	3	84,2	630	71	2,92			
65	76,1	3	84,2	630	71	3,06			
80	88,9	4	101,5	710	90	4,88			
100	108	4	121,0	800	110	6,89			

## Dimensions for type VX 33/34, ab DN 65 VX 21/22

- Hose material stainless steel
- Special lengths/fittings  
up to 50 mm: VXS 303\*  
51 mm or more: VXS 304\*



### Inch dimension

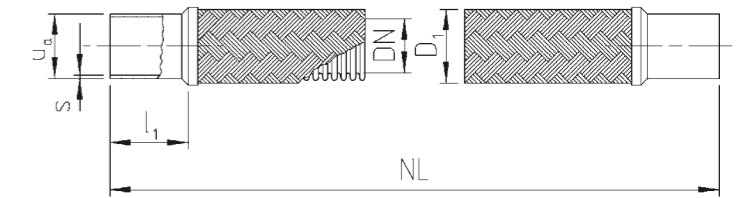
Connection dimensions to ASME/ANSI/B 16.22				Standard connection pieces VX 33			Extended connection pieces VX 34		
DN	Connection for pipe outside diameter		to DIN EN ISO 1127 D3/T3			Weight			Weight
	d <sub>i</sub>	s	D <sub>1</sub>	NL ± 6	l <sub>1</sub>	kg/Unit	NL ± 6	l <sub>1</sub>	kg/Unit
mm	mm	mm	mm	mm	mm	kg/Unit	mm	mm	kg/Unit
8	3/8	9,5	13,7	200	16	0,06	280	56	0,08
10	1/2	12,7	15,7	220	20	0,08	320	70	0,12
12	5/8	15,9	18,2	250	23	0,10	360	78	0,16
16	3/4	19,1	23,3	250	25	0,11	360	80	0,20
20	7/8	22,2	28,3	280	32	0,22	400	92	0,30
25	1 1/8	28,6	34,2	320	38	0,37	450	103	0,53
32	1 3/8	34,9	43,0	360	41	0,57	500	110	0,78
40	1 5/8	41,3	52,0	450	50	0,89	560	105	1,09
50	2 1/8	54,0	62,6	500	65	1,53	630	130	1,94
65	2 5/8	66,7	84,2	630	71	3,24			
80	3 1/8	79,4	101,5	710	90	4,68			
100	4 1/8	104,8	121,0	800	110	7,51			

# STAINLESS STEEL HOSE

with factory welded stainless steel connection pieces, type VX 41

## Dimensions for type VX 41

- Completely stainless steel
- Special lengths/fittings VXS 401\*



### Metric dimension

Connection dimensions to DIN EN ISO 1127 D3/T3				Standard connection pieces VX 41		
DN	Weld end					Weight
	d <sub>a</sub>	s	D <sub>1</sub>	NL ± 6	l <sub>1</sub>	kg/Unit
mm	mm	mm	mm	mm	mm	kg/Unit
6	8	1	10,8	180	14	0,05
8	10	1,5	13,7	200	16	0,06
10	13,5	1,6	15,5	220	20	0,08
12	17,2	1,6	18,2	250	23	0,11
16	21,3	2,0	23,3	250	29	0,14
20	26,9	2,3	28,3	280	32	0,22
25	33,7	2,6	34,2	320	38	0,37
32	42,4	2,6	43,0	360	41	0,57
40	48,3	2,6	52,0	450	50	0,95
50	60,3	2,9	62,6	500	65	1,57
65	76,1	2,9	84,2	630	71	2,92
80	88,9	3,2	101,5	710	90	4,88
100	114,3	3,6	121,0	800	110	6,89

\* In case of deviation from standard fittings, please always specify the required fitting length.