Vortex tube Series VT

- **Cooling of cutting tools**
- **Cooling of needles in sewing machines**
- **Cooling when spot welding**
- **Cooling of overheated electronics**
- **Cooling when soldering**
- **Cooling of chocolate when production**

- **Low purchasing and operating costs**
- **Maintenance free**
- **No moving part**
- **High reliability**
- **Only compressed air is needed**
- **No electricity**
- **No sediments on cooled material due to use coolant media**

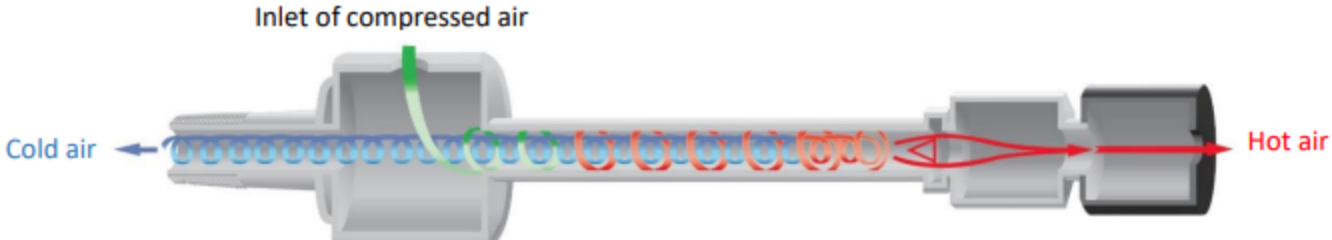
Vortex tubes Series VT solve many of industrial cooling and heating problem using only compressed air as power a power source. No moving part, no elektricity, no freon.

Function:

Vortex tube treats ordinary compressed air flowing into two air streams, one is hot and one is cold. Hot air exits on one side of tube and cold air on the other side. With control valve placed on outlet of hot air it is possible to set up difference of temperature and flowing between incoming compressed air and outgoing cold air.

Aplication:

- cooling the joing after welding of plastic bags
- cooling of distribution and regulation box
- cooling when chip machining without coolant media (e.g. for plastics)



Technical parameters

Operating pressure	.....	1 - 8 bar
Operating temperature	.....	-20°C up to +120°C
Outlet temperature	.....	-40°C up to +110°C
Body material	.....	stainless steel AISI 303
Generator material	.....	plastic
Pneumatic connection	.....	G 1/4"

Product	VTL-14-B	VTL-N-14	VT-R-14-24	VT-R-14-230
Vortex generators	red	yellow, green, red, white, blue, gray, beige	yellow, red, blue, brown	yellow, red, blue, brown
Output of cold air	G 1/4"	G 1/2"	hose	hose

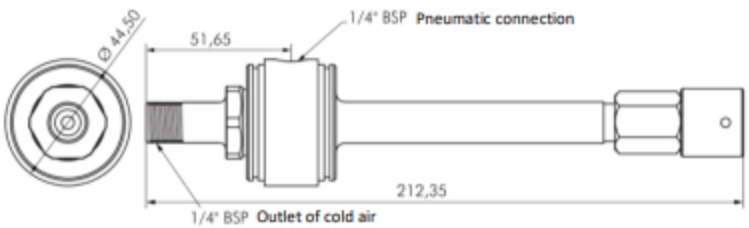
Vortex generators

Colour	Yellow	Grenn	Red	White	Blue	Gray	Beige	Brown
Cooling performance [kcal/h] *	130	130	230	230	380	380	630	630
Air consumption [l/min] *	280	280	420	420	700	700	990	990
Temperature [°C] *	-31	-33	-30	-34	-26	-30	-24	-29

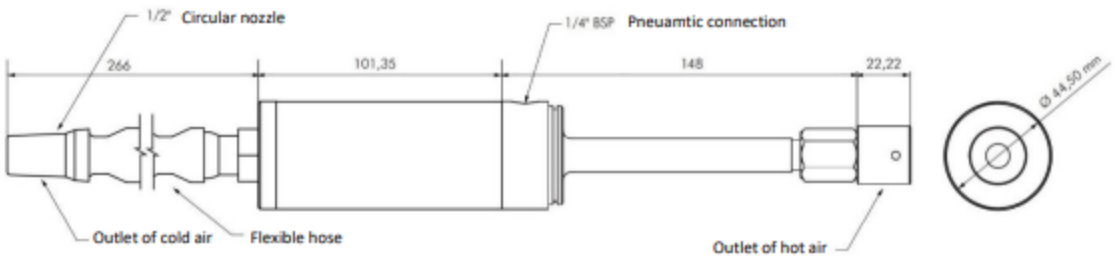
*Measured at pressure 5,5 bar and temperature 20 ° C, regulating screw set up at 2,5 revs (70 % of air leaks as cold air)

Dimensions and constructions

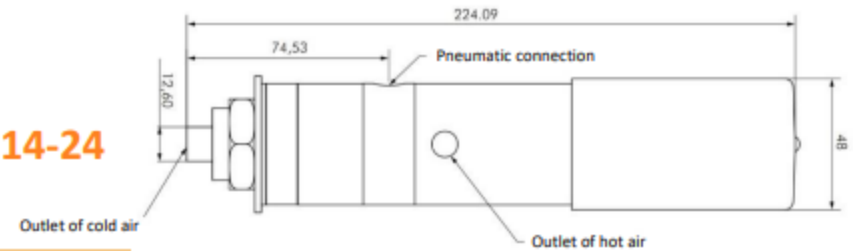
VTL-14-B

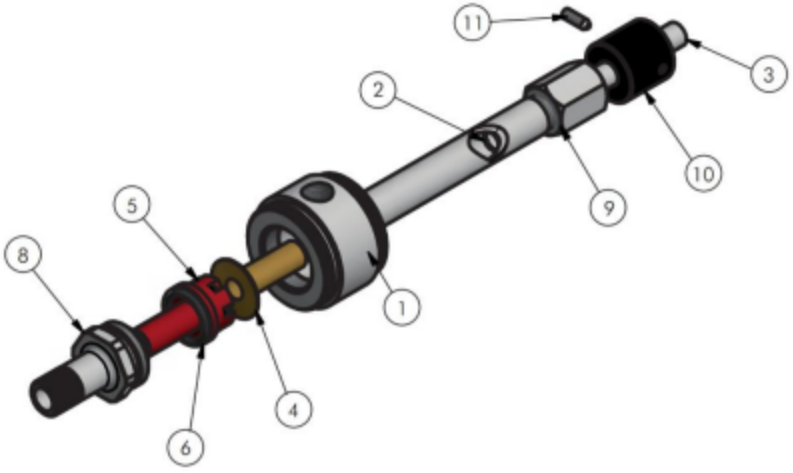


VTL-N-14

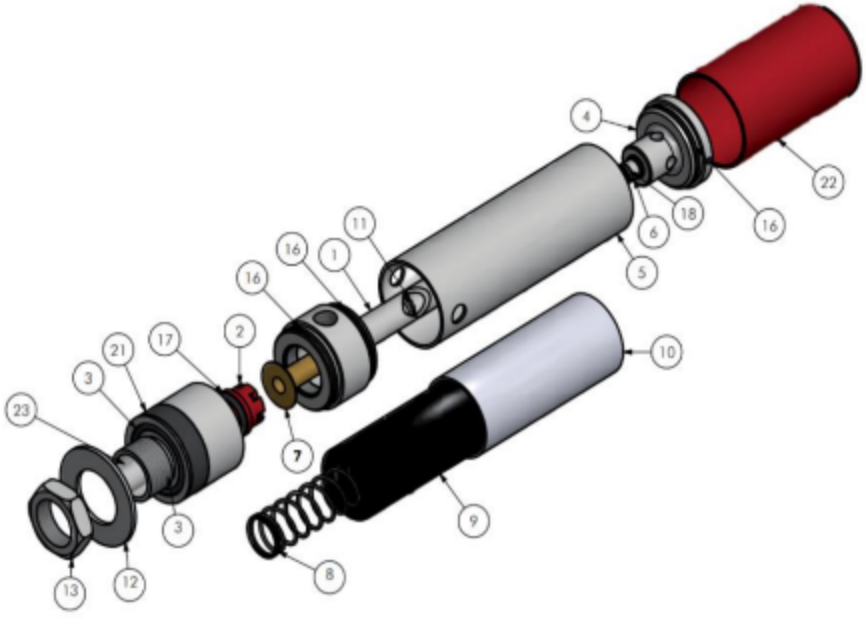


VT-R-14-24





1. Vortex chamber
2. Seal
3. Needle valve
4. Housing
5. Generator
6. O-ring
7. O-ring
8. Cover
9. Lock nut
10. Regulating screw
11. Adjusting screw



1. Vortex chamber
2. Generator
3. Bushing
4. Plug on the hot side
5. Housing
6. Needle valve
7. Brass housing
8. Silencer spring
9. Damping foam
10. Plastic insert
11. Fan washer
12. Big washer
13. Nut
16. O-ring
17. O-ring
18. O-ring
19. O-ring
22. Red ending
23. Outlet of cold air

Informations about performance

pressure [bar]	Cooling performance [%]						
	20	30	40	50	60	70	80
1	25	24	24	20	18	15	11
	6	10	15	20	26	33	43
2	35	34	32	29	25	21	15
	8	14	21	29	37	47	59
3	53	51	48	44	38	31	23
	12	21	31	43	55	71	87
4	56	54	50	45	39	32	24
	13	22	31	43	56	71	90
5	58	55	51	46	40	33	25
	13	22	32	43	58	72	91
6	59	57	53	48	41	34	26
	13	22	32	44	58	73	93
7	69	66	62	56	48	40	30
	14	24	35	49	64	80	105
8	70	67	63	57	49	41	32
	14	25	37	51	66	84	105

Decreasing of temperature of supplying air at ° C
Increasing of temperature of suction air at ° C