SINCE 1932
OFFICINE GIUDICI

Steam Water Mixer
VULCANO

STEAM WATER MIXER "VULCANO"

Instant hot water

The Steam Water Mixer VULCANO is a piece of equipment designed to produce instant hot water through the direct condensation of steam into water.

The temperature and water flow at the outlet of the mixer are regulated by using water and steam valves settled to the inlets (not included in supply).

Non-return valves are placed in the water and steam connections, to avoid water entering the steam supply and vice versa.

Two sizes are available: V34 (threaded or flanged connection ND20) and V100 (threaded or flanged connection ND25).

Built in stainless steel AISI 316, it grants the highest hygienic requirements for all applications.

Suitable for food industries (cheese factory, cured meats, slaughterhouses, brewery), chemical pharmaceuticals industries, hospitals and everywhere hot water production is needed without the extra costs for storing.

Connected to the existing steam and cold water supplies, the Steam Water Mixer VULCANO represents an ideal and cheap alternative to the traditional heat exchangers, producing instant hot water adjustable from 40° to 95°C.

An ideal example of the multifunctionality of the Steam Water Mixer VULCANO can be shown when used with a spray gun or nozzle to create a pressured hot water jet wash.

When the gun is locked, due to the back pressure caused, steam and water connections automatically close themselves.

When the gun is unlocked, the mixer goes back to the initial operating conditions.

Simple and safe operation

The Steam Water Mixer VULCANO has a safety device to ensure that live steam cannot accidentally exit.

The water pressure ensures the opening of the inlet steam valve; if the water pressure decreases, the steam valve automatically closes itself.

The water temperature is measured by a thermometer which is attached to the mixer outlet.

If direct steam is required, for example for sterilisation, close the water input valve which screws in place the override knob.

The Steam knob kit is available on request and it is an alternative to the standard construction.

Instant hot water for washing

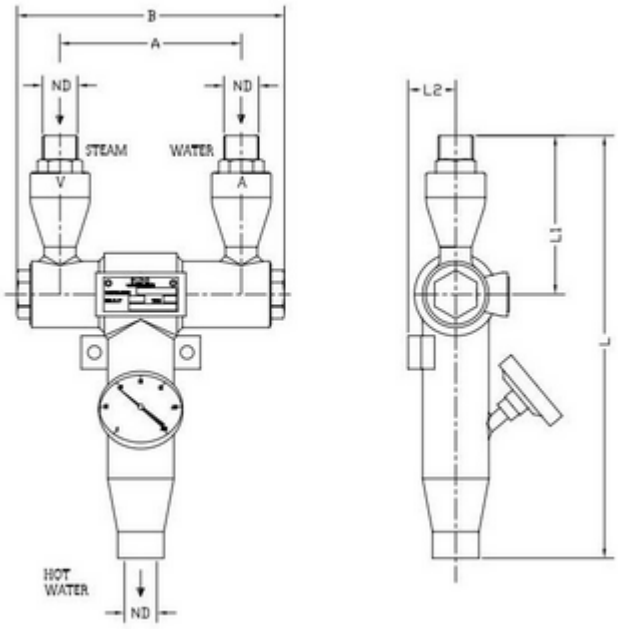
STEAM PRESSURE bar	OUTLET WATER TEMPERATURE						**Mod. Vulcano 34**
	40°C	50°C	60°C	70°C	80°C	90°C	95°C
2.5	1900	1400	1100	900	750	650	600
3.0	2250	1700	1350	1100	900	750	700
4.0	2700	2000	1600	1300	1050	900	850
5.0	3250	2450	1900	1550	1250	1050	1000
6.0	3800	2900	2250	1800	1450	1200	1100
7.0	4300	3200	2500	2000	1650	1350	1250
8.0	4700	3500	2700	2200	1800	1500	1400
9.0	5200	3800	3000	2450	2000	1700	1550
10.0	5650	4100	3250	2650	2200	1850	1700

STEAM PRESSURE bar	OUTLET WATER TEMPERATURE						**Mod. Vulcano 100**
	40°C	50°C	60°C	70°C	80°C	90°C	95°C
2.5	2400	1750	1400	1150	950	800	750
3.0	2800	2150	1700	1400	1150	950	900
4.0	3400	2500	2000	1650	1350	1150	1100
5.0	4050	3050	2400	1950	1550	1300	1200
6.0	4750	3650	2800	2250	1800	1500	1400
7.0	5400	4000	3150	2500	2050	1700	1550
8.0	5900	4400	3400	2750	2250	1900	1750
9.0	6500	4750	3750	3050	2500	2150	1950
10.0	7050	5150	4050	3300	2750	2300	2150

Accessories – on demand

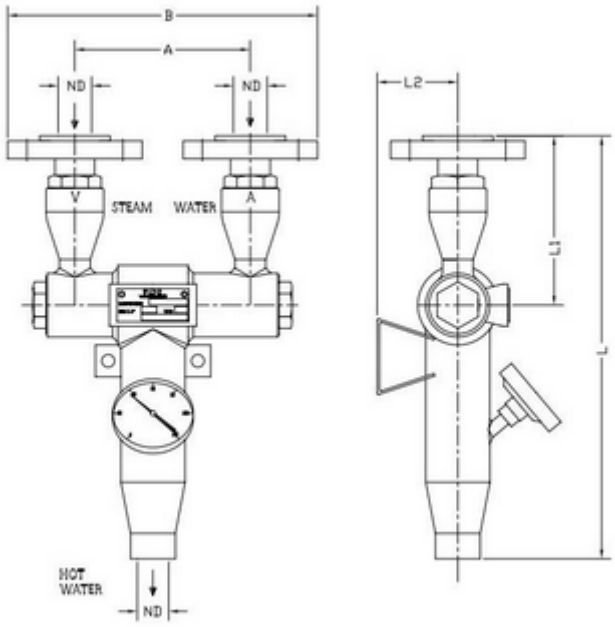
- Steam hose blue-food industry - 3/4 (19x28) – 1” (ø 25x36)- Operating pressure 15 bar-110°C
- Turning connection for steam tube
- Stainless steel hose hanger
- Stainless steel hose reel
- Spray gun – antishock body
- Selection of steam/water valves
- Steam knob kit

Dimensions



Threated connections		
Type	V34F	V100F
ND	3/4	1”
A	137	137
B	202	202
L1	120	120
L2	36	36
L	319	329
Weight (kg)	4.5	5.0

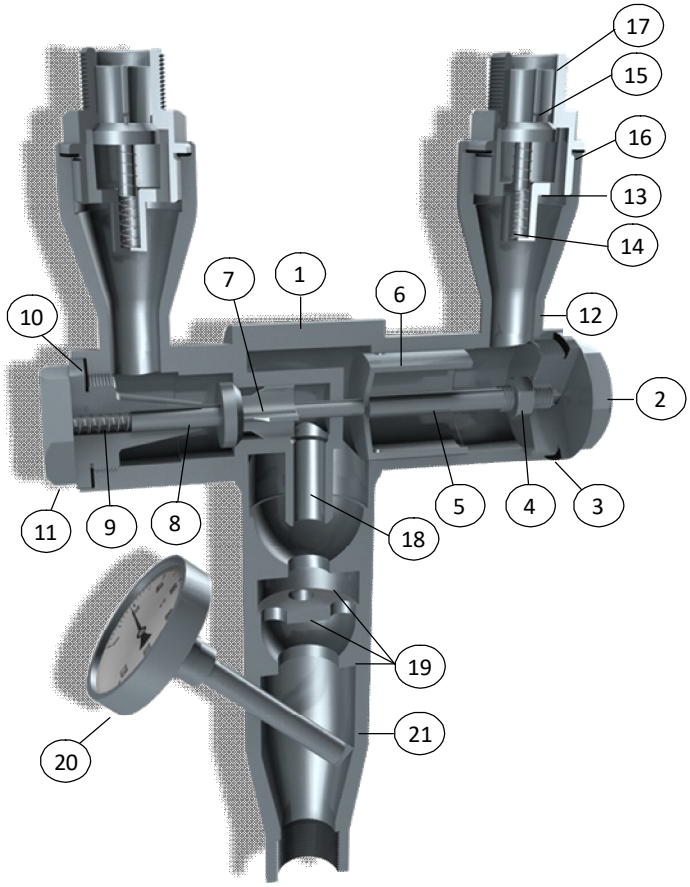
Flanged Connections		
Type	V34FL	V100FL
ND	3/4	1”
A	137	137
B	242	252
L1	138	138
L2	63	63
L	337	347
Weight (kg)	5.5	6.0

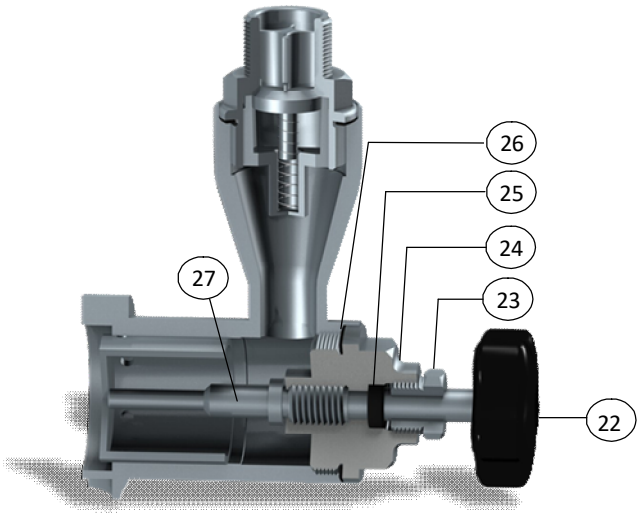


Application limits

Minimum steam pressure 2,0 bar
Maximum steam pressure 10 bar
The steam pressure must be equal or no more than three times the water one.

Steam Water Mixer “Vulcano V34” details





Pos.	Q.ty	Components	Materials
1	1	Body	AISI 316
2 *	1	Water plug	AISI 316
3 *	1	Water gasket	PTFE
4 *	1	Nut	AISI 316
5 *	1	Water shaft	AISI 316
6 *	1	Slide valve	AISI 316
7 *	1	Steam shutter shaft	AISI 316
8 *	1	Steam shaft	AISI 316
9 *	1	Steam spring	AISI 302
10 *	1	Steam gasket	PTFE
11 *	1	Steam plug	AISI 316
12	2	Body	AISI 316
13 *	2	Fork	AISI 316
14 *	2	Steam spring	AISI 302
15 *	1	Non-return valve shutter	AISI 316
16 *	1	Gasket	PTFE
17 *	2	Large screw	AISI 316
18	1	Steam nozzle	AISI 316
19	3	Ring joint	AISI 316
20 *	1	Thermometer	ACC. INOX
21	1	Diffuser	AISI 316
22 *	1	Knob	PLASTICA
23 *	1	Staffing box	AISI 316
24 *	1	Steam large screw	AISI 316
25 *	1	Staffing box gasket	PTFE
26 *	1	PTFE gasket	PTFE
27 *	1	Override shaft	AISI 316

* available spare parts

Steam knob detail

Installation and maintenance instructions

Before operating the Steam-Water Mixer “Vulcano”, please read these instructions carefully.
The Steam-Water Mixer VULCANO must work within its pressure and temperature limits.
Don’t remove the data label stuck to the mixer, which contains the series number and construction details.

1. **Operating limits:** The operating pressure has to be between 2 and 12 bar. The steam pressure has to be equal to or no more than three times the water pressure.

2. **Installation:** The Steam Water Mixer VULCANO must be installed vertically, with the water outlet connection downward.
   Steam-Water Mixer VULCANO can be installed with the specific backside clamp to the wall, making sure that the tubes and valves don’t weigh down the mixer and instead provide a proper retaining structure for them.
   In case of long tubes, it’s advisable to have a diameter greater than the mixer’s connections(tubes), to prevent loss of pressure.
   Looking at the mixer front on, the steam control valve is on the left side of the thermometer, as indicated with a “V” on the non-return valve shutter.
   The water control valve is on the right, as indicated with an “A” on the non-return valve Shutter.
   We recommend to install a control valve both on the steam and water side, in order to regulate and even stop the steam flow in cases where maintenance is needed.
   The use of a filter grant is advised in order to stop slag and impurities that could interfere with the operation of the mixer.

3. **Operation:** before use, check that the mixer is clean with no impurities or slag that could compromise the internal parts.
   During the operation, avoid touching the equipment without using specialised safety gear, as the machinery can cause burns if not handled with caution.
   Open the valves to regulate the water and steam flow, to reach the flow rate at the right temperature.
   Check the apparatus and settings regularly to maintain fully operable equipment.
   If a spray gun or a wash gun is used, simply close the water valve to stop the flow. However, due to the back pressure, the steam and water flow will automatically stop. When the mixer restarts it will return to the preconditioned values.
   If the steam control disposal is installed, check that the safety valve is completely open by unscrewing the knob (23).

4. **Maintenance:** ensure that the mixer isn't under the required pressure or hot.
   The Steam-Water Mixer “Vulcano” doesn't require any particular maintenance: it's necessary to ensure it’s free from calcareous deposits and that all working parts can move freely.
   In case of prolonged non-usage, empty the mixer, take it apart and then assemble it again after greasing the internal parts with silicone sprays or Vaseline oil.

5. **Spare parts (suggested for 2 years operation)**
   Pos. 4,11,17 – gasket kit PTFE
   Pos. 9 – Steamshaft
   Pos. 15 – non-return valve shutter spring

6. **Operating deficiency**: in case of a steam leakage. If the manual steam knob kit is installed, completely unscrew the knob. If the leakage continues:
   - check if the steamshaft, and its base, is damaged and, if it's necessary, substitute it;
   - verify the steamshutter spring status and substitute it if necessary;
   - check if the water drawer can freely flow without calcareous deposits.
   If there isn't any steam flow, check that the tube isn't full of condensation (eventually apply a steam trap close to the mixer).
   Check and maintain the indicated operating limits.
   If the water pressure exceeds the steam pressure, install a pressure regulator on the water side.