

Desuperheater:

Superheated steam is not always desirable, for instance in those applications that heat transfer coefficient is important, saturated steam is preferred. Desuperheaters can reduce the temperature of steam or any other superheated vapor to its saturated temperature by means of water or another coolant.

Advantages:

- No moving parts
- Low maintenance cost
- Simple and compact
- Optional control package
- Custom-designed according to operating conditions

Applicable Codes and Standards:

- ASME Sec. VIII, div. 1
- ASME B31.3

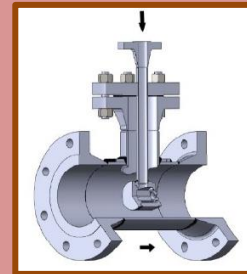
Types:

Kara Sanat desuperheaters are built to cover a wide range of applications and long lasting life according to your requirements. Various types of desuperheaters are available and depending on the required pressure drop, outlet superheat and turndown capability a special type will be selected.

- **Spray type:** It is the simplest type of desuperheaters in which the cooling medium is injected into the steam through nozzles. This kind of desuperheaters can be subdivided into the followings:

- Single spray type:

Turndown ratio	2:1 to 5:1
Pressure drop	low
Outlet superheat	20 °F



➤ Multiple spray type

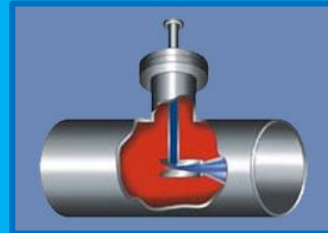
Turndown ratio	50:1
Pressure drop	high
Outlet superheat	10 °F



- **Venturi Type:** In this type of desuperheaters cooling medium is piped into the the venturi nozzle and atomized. Venturi types are subdivided into the followings:

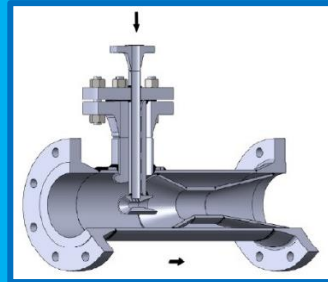
➤ Single venturi type:

Turndown ratio	2:1
Pressure drop	negligible
Outlet superheat	20 °F



➤ Double venturi type:

Turndown ratio	10:1
Pressure drop	moderate
Outlet superheat	10 °F



- **Steam-Atomizing Type:** Small amount of high pressure steam is used to atomize the cooling medium.

Turndown ratio	50:1
Pressure drop	negligible
Outlet superheat	10 °F

