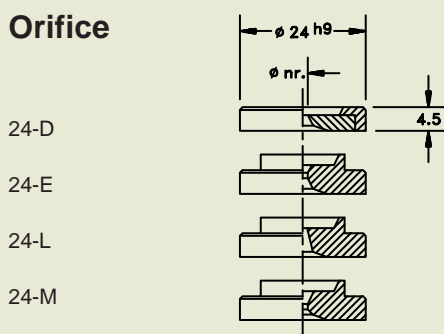


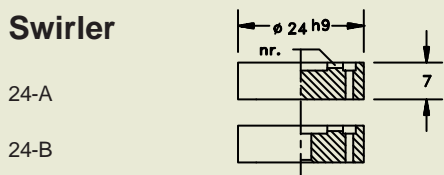
Orifice



Standard sizes:

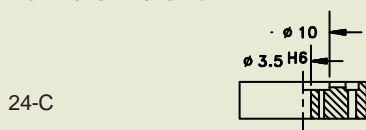
1.4 - 1.6 - 1.8 - 2.0 - 2.25 - 2.5 - 2.75 - 3.0 - 3.25 - 3.5 - 3.75 - 4.0

Swirler



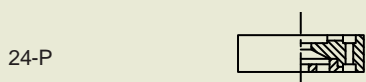
Standard sizes:

2 - 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 - 11 - 12



Standard sizes:

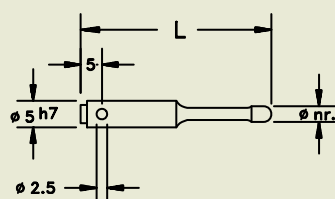
6.2 - 8.0 - 9.6 - 11.6 - 13 - 16 - 18 - 20 - 22 - 24



Standard sizes:

10 - 13 - 16 - 20 - 24 - 28 - 32 - 36 - 40

Shutoff needle



Size:

2.8 - 3.8 - 4.8

L = 43 mm

The disc atomizer 24 is an industrial nozzle for the output range of 200 kg/h up to 1500 kg/h.

The nozzle works according to the two disc atomizer construction using an orifice and swirler. By combining different disc types it is possible to achieve different spray patterns at high and low flow rate and spray angles between 50 and 110 degree at nominal output. Thus it is always possible to adapt the nozzle to the special characteristics of an existing burner head.

If a nozzle cut off is requested this can be done by using a shutoff needle together with a special swirler disc. This system is TÜV approved and allows oil to circulate through the nozzle under operating conditions. So immediately after opening the needle a good atomization will result even after long periods of idling and when using heavy oil.

Simplex nozzle 24

Using a swirler of type A with any kind of orifice will result in a simplex nozzle or nozzle without return line.

Flow rate is depending on the code number of the disc combination and can be influenced up to a certain point by varying supply pressure.

With swirler type A, orifice of type D or L is commonly used. When using high supply pressure, for constant operation or heavy oil, use of orifice type D is recommended which have a 3 micron thin layer of high resistant TiN (2.300 HV).

Return flow nozzle 24

Beside the code number of the combination, flow rate of a return flow nozzle is depending basically on supply and return pressure. Thus turn down ratios up to 1 : 5 can be achieved. Flow rate and spray angle are given at maximum return pressure, i. e. with closed return line. Only in this case increasing of supply pressure will result in flow rate enlargement. With return line open, increase of supply pressure will result in a flow rate decrease at constant return pressure.

To vary nozzle flow rate return pressure has to be changed while supply pressure is kept constant to assure good atomization also at low flow rate. At low flow rate spray angle will become wider and spray pattern more hollow whereas at maximum flow rate spray angle will be smaller and spray pattern more solid.

For return flow nozzles without shutoff needle the most commonly used swirler is type B with orifice type D or E. At a turn down ratio of 4 : 1 with orifice type D spray angle will enlarge about 40 degree and about 30 degree with orifice type L. Using orifice type E, spray angle at low flow rate will increase only about 20 degree but the spray pattern is tending to become more hollow.

With binary system burners with their special air pattern of the burner head, use of orifice type M will mostly bring best results.

A swirler of type P is mostly to be used together with a shutoff needle due to it's integrated needle guidance and central bore for return line. Please select the needle size depending on the swirler size according to information sheet 245FDBCg.

A swirler of type C has to be used together with needle type S. It is useful for applications where a slight difference in return pressure should result in a big change in flow rate.

For all applications burner lances are available with hydraulic and pneumatic control of the shutoff needle and integrated or external volume regulator.