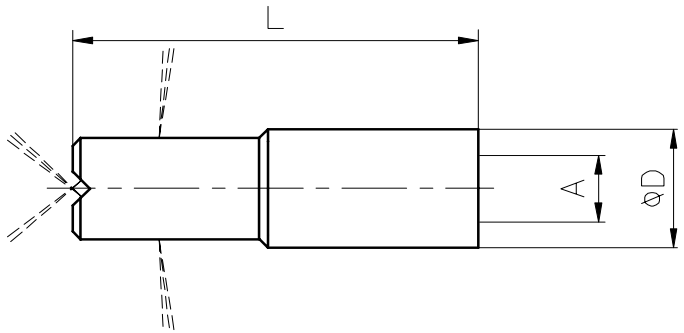
Wasser als Werkzeug für eine saubere Umwelt

Whirl Jet Nozzle
WSD - F / R

Operating pressure: max. 1000 bar



Whirl jet nozzle Front and Radial water jets

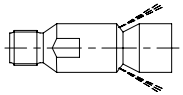
Exhibiting an extremely high cleaning rate, the whirl jet nozzle was specifically designed for cleaning the inside diameter of tubes. Because these nozzles are available with a variety of orifice sizes one can optimize the configuration to varying tube diameters.

Function: By utilizing the reaction force of the high pressure jet a nozzle carrier rotates on the longitudinal axis of a carrier shaft at several thousand rpm. The rotating radial jets will remove the unwanted deposits or contamination from the tube inner walls. In addition this nozzle is equipped with forward cutting jets which remove unwanted deposits ahead of the nozzle.

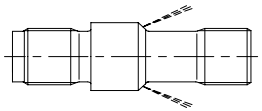
Attention! The WSD-F/R must be equipped with the forward feed component for use with hose or flexible lance, **without a forward feed component the WSD-F/R must only be used with rigid lances**. When using the whirl jet nozzle type WSD-F/R to clean vertically arranged tubes it is essential that the cleaning process takes place from the bottom to up.

Forward feed component

Forward feed component VSE 12 - VSE 22

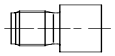


Forward feed component VSE 31 - VSE 47

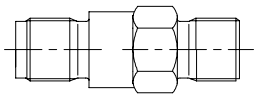


Reducer / Hose connector

Reducer for R 12 - R 22



Hose connector for R 31 - R 47



Type	Part-No.	ØD mm	L mm	Thread A	Nozzle Ø mm	Type	Part-No.	Thread	Nozzle Ø mm	Part-No.	Thread
F / R 12	341.0244	12	50	i G 1/8	2 x Ø 0,8F / 2 x Ø 0,8R	VSE 12	341.0251 341.0252	a G 1/8 - i G 1/8 a G 1/8 - i M 8x1	2 x Ø 0,8 2 x Ø 0,8	341.0260	a G 1/8 - i M8x1
F / R 18	341.0245	18	70	i G 1/4	2 x Ø 0,8F / 2 x Ø 0,8R	VSE 18	341.0253 341.0254	a G 1/4 - i G 1/4 a G 1/4 - i M 10x1	2 x Ø 0,8 2 x Ø 0,8	341.0261	a G 1/4 - i M10x1
F / R 22	341.0246	22	80	i G 1/4	2 x Ø 0,5F / 2 x Ø 0,5R	VSE 22	341.0255 341.0256	a G 1/4 - i G 1/4 a G 1/4 - i M 10x1	2 x Ø 0,9 2 x Ø 0,9	341.0261	a G 1/4 - i M10x1
	341.0247				2 x Ø 0,6F / 2 x Ø 0,8R						
	341.0248				2 x Ø 1,0F / 2 x Ø 1,0R						
F / R 31	341.0249	31	115	i M 22x1,5	2 x Ø 1,0F / 2 x Ø 1,0R	VSE 31 / 47	341.0257 341.0258	a M22x1,5 - a M22x1,5 60° DK a M22x1,5 - a M22x1,5 24° DK	2 x Ø 0,9 2 x Ø 0,9	180.0001 180.1421	a M22x1,5 - a M22x1,5 60° DK a M22x1,5 - a M22x1,5 24° DK
F / R 47	341.0250	47	160	i M 22x1,5	2 x Ø 1,0F / 2 x Ø 1,0R		341.0259	a M22x1,5 - a M24x1,5 24° DK	2 x Ø 0,9	180.0778	a M22x1,5 - a M24x1,5 24° DK

Metric thread - M - as per DIN 13 / ISO 261 ; Pipe thread - G - as per DIN ISO 228/1

a = outside - i = inside

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Performance Chart

Whirl jet nozzle WSD - F / R

Type	Part-No..	Nozzle Ø mm	Operating pressure - bar - / Flow rate - l/min - 300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
F / R 12	341.0244	2 x ø 0,8F / 2x ø 0,8R	18	20	21	22	24	25	26	27	28	29	30	31	32	33	33
F / R 18	341.0245	2 x ø 0,8F / 2x ø 0,8R	24	26	28	30	31	33	34	36	37	38	40	41	42	43	44
F / R 22	341.0246	2 x ø 0,5F / 2x ø 0,5R	10	11	12	12	13	14	14	15	16	16	17	17	18	18	19
	341.0247	2 x ø 0,6F / 2x ø 0,8R	20	22	23	25	26	28	29	30	31	32	33	34	35	36	37
	341.0248	2 x ø 1,0F / 2x ø 1,0R	41	44	47	50	52	55	57	60	62	64	66	68	70	72	74
F / R 31	341.0249	2 x ø 1,0F / 2 x ø 1,0R	43	46	50	53	55	58	61	63	66	68	70	72	74	76	78
F / R 47	341.0250	2 x ø 1,0F / 2 x ø 1,0R	44	48	51	54	57	60	63	65	68	70	72	75	77	79	81

Forward feed component VSE

Type	Nozzle Ø mm	Operating pressure - bar - / Flow rate - l/min - 300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
VSE 12	2 x ø 0,8	13	14	15	16	17	18	19	20	20	21	22	22	23	24	24
VSE 18	2 x ø 0,8	13	14	15	16	17	18	19	20	20	21	22	22	23	24	24
VSE 22	2 x ø 0,9	17	18	19	21	22	23	24	25	26	27	27	28	29	30	31
VSE 31	2 x ø 0,9	17	18	19	21	22	23	24	25	26	27	27	28	29	30	31
VSE 47	2 x ø 0,9	17	18	19	21	22	23	24	25	26	27	27	28	29	30	31