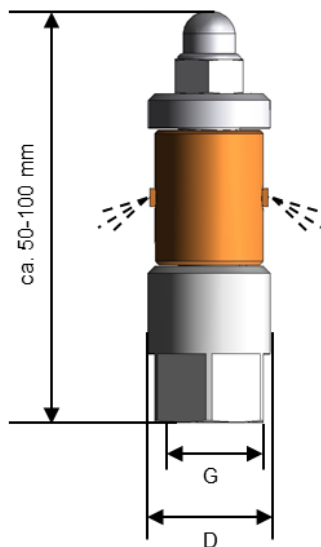


# Whirl jet nozzle

## WSD-R 1000

Whirl jet nozzles WSD-R 1000 are radial-radiating, rotating nozzles for pipe cleaning. Due to the repulsive force of the emerging high-pressure water, the nozzle rotor rotates several thousand revolutions and effectively frees tube walls from dirt. The whirl jet nozzles are available in many diameters for adaptation to different pipe diameters.



### Special benefits

- Robust design and easy rotor exchange
- For use with lances or hoses
- Can also be used without forward feed unit

### Technical data

Operating pressure	max. 1.000 bar
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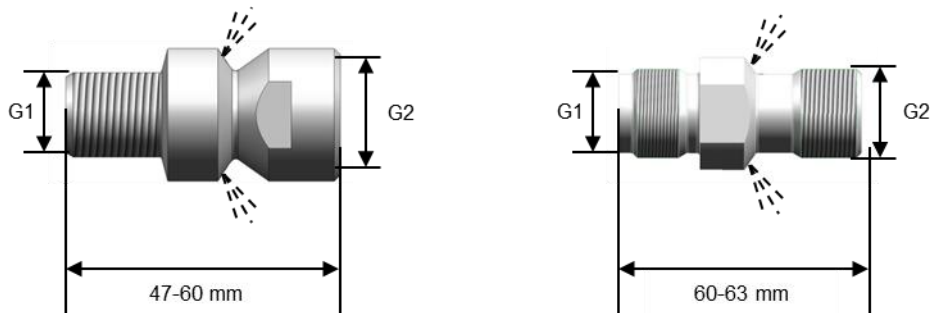
### Variants whirl jet nozzle

Type	Ø D [mm]	Thread G [mm]	Nozzle-Ø [mm]	Material-Number
WSD-R10	10	iM7	2x 0,8	9.886-709.0
			2x 1,0	9.914-714.0
WSD-R12	12	iG 1/8"	2x 0,65	9.910-952.0
			2x 0,7	9.914-377.0
			2x 0,8	9.886-613.0
			2x 1,0	9.886-614.0
			2x 1,2	9.886-615.0
WSD-R18	18	iG 1/4"	2x 0,6	9.914-378.0
			2x 0,7	9.886-756.0
			2x 0,8	9.886-616.0
			2x 0,9	9.886-617.0
			2x 1,0	9.886-618.0
			2x 1,2	9.886-619.0
			2x 1,5	9.886-620.0
WSD-R22	22	iG 1/4"	2x 0,6	9.914-379.0
			2x 0,7	9.886-754.0
			2x 1,2	9.886-621.0

Type	Ø D [mm]	Thread G [mm]	Nozzle-Ø [mm]	Material-Number
WSD-R28	28	iM22 x 1,5	2x 1,0	9.910-953.0
			2x 1,1	9.886-739.0
			2x 1,4	9.886-734.0
			2x 1,5	9.886-643.0
WSD-R31	31	iM22 x 1,5	2x 1,0	9.910-935.0
			2x 1,2	9.886-622.0
			2x 1,5	9.886-611.0
			2x 2,2	9.886-623.0
WSD-R47	47	iM22 x 1,5	2x 1,2	9.886-624.0

Performance chart whirl jet nozzle																
Type	Operating pressure [bar]															
	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
	Flow rate [l/min]															
R10 2x 0,8	10	11	11	12	13	13	14	15	15	16	16	17	17	18	18	
R10 2x 1,0	15	17	18	19	20	21	22	23	24	24	25	26	27	28	28	
R12 2x 0,65	7	7	8	8	8	9	9	10	10	10	11	11	11	12	12	
R12 2x 0,7	8	8	9	9	10	10	11	11	12	12	12	13	13	13	14	
R12 2x 0,8	10	11	11	12	13	13	14	15	15	16	16	17	17	18	18	
R12 2x 1,0	15	17	18	19	20	21	22	23	24	24	25	26	27	28	28	
R12 2x 1,2	22	24	26	27	29	30	32	33	34	35	36	37	39	40	41	
R18 2x 0,6	7	8	8	9	9	10	10	10	11	11	12	12	12	13	13	
R18 2x 0,7	10	10	11	12	12	13	14	14	15	15	16	16	17	17	18	
R18 2x 0,8	13	14	15	15	16	17	18	18	19	20	21	21	22	22	23	
R18 2x 0,9	16	17	18	19	21	22	22	23	24	25	26	27	28	28	29	
R18 2x 1,0	20	21	23	24	25	27	28	29	30	31	32	33	34	35	36	
R18 2x 1,2	28	31	33	35	36	38	40	42	43	45	46	48	49	50	52	
R18 2x 1,5	44	48	51	54	57	60	62	65	67	70	72	74	76	79	81	
R22 2x 0,6	7	8	9	9	10	10	11	11	11	12	12	13	13	13	14	
R22 2x 0,7	10	11	12	12	13	14	14	15	16	16	17	17	18	18	19	
R22 2x 1,2	30	32	35	37	39	41	42	44	46	47	49	50	52	53	55	
R28 2x 1,0	21	23	25	26	28	29	30	32	33	34	35	36	37	38	39	
R28 2x 1,1	26	28	30	32	34	35	37	38	40	41	42	44	45	46	47	
R28 2x 1,4	42	45	49	52	54	57	60	62	64	67	69	71	73	75	77	
R28 2x 1,5	48	52	56	59	62	65	68	71	74	76	79	81	84	86	88	
R31 2x 1,0	21	23	25	26	28	29	30	32	33	34	35	36	37	38	39	
R31 2x 1,2	31	33	36	38	40	42	44	46	47	49	50	52	54	55	56	
R31 2x 1,5	48	52	56	59	62	65	68	71	74	76	79	81	84	86	88	
R31 2x 2,2	104	112	120	127	134	141	147	153	159	164	170	175	180	185	190	
R47 2x 1,2	32	34	36	39	41	43	45	46	48	50	52	53	55	56	58	

## Accessories

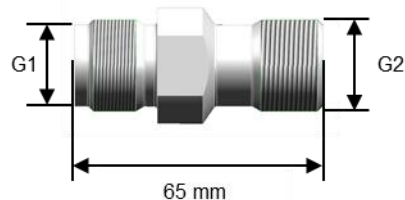


### Variants forward feed unit

Type	for	Threads G1 – G2 [mm]	Nozzle-Ø [mm]	Material-Number VSE complete	Material-Number Spare sealing ring
VSE 12	WSD-R12	aG 1/8" – iG 1/8"	2x 0,8	9.886-632.0	6.025-316.0
VSE 18	WSD-R18	aG 1/4" – iG 1/4"	2x 0,8	9.886-634.0	6.025-298.0
VSE 22	WSD-R22	aG 1/4" – iG 1/4"	2x 0,9	9.886-636.0	6.025-298.0
VSE 28/31/47	WSD-R28 WSD-R31 WSD-R47	aM22 x 1,5 – aM22 x 1,5 60°DK	2x 0,9	9.886-638.0	9.881-445.0
		aM22 x 1,5 – aM24 x 1,5 24°DK		9.886-640.0	
VSE 31/47	WSD-R31 WSD-R47	aM22 x 1,5 – aM24 x 1,5 24°DK	4x 0,9	9.919-134.0	

### Performance chart forward feed unit

Type	Operating pressure [bar]														
	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
	Flow rate [l/min]														
VSE 12	13	14	15	16	17	18	19	20	20	21	22	22	23	24	25
VSE 18	13	14	15	16	17	18	19	20	20	21	22	22	23	24	24
VSE 22	17	18	19	21	22	23	24	25	26	27	27	28	29	30	30
VSE 31 2x0,9	17	18	19	21	22	23	24	25	26	27	27	28	29	30	30
VSE 31 4x0,9	36	39	41	44	46	49	51	53	55	57	59	60	62	64	66
VSE 47 2x0,9	17	18	19	21	22	23	24	25	26	27	27	28	29	30	30
VSE 47 4x0,9	36	39	41	44	46	49	51	53	55	57	59	60	62	64	66



### Hose connector

Type	for	Threads G1 – G2 [mm]	Material-Number
SAA	WSD-R28 WSD-R31 WSD-R47	aM22 x 1,5 – aM24 x 1,5 24°DK	9.877-951.0