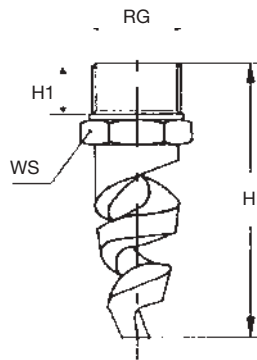


## FULL CONE NOZZLES

### E



### SPIRAL NOZZLES

Spiral nozzles work on the impact principle, by deflection of a water stream onto a spiral profiled surface which provides the desired spray angle.

The spray angle value is maintained even at low pressure and when spraying high viscosity liquids.

While the droplet spray distribution is not comparable to the one provided by a standard full cone nozzle, the fact that a whirling vane is not required makes them virtually clog-free in most cases. Since spiral nozzles work on the impact principle and have no inherent turbulence losses, they produce faster and smaller droplets as compared to a standard full cone nozzle.

Capacity values on a grey background should be obtained with metal nozzles only, plastic materials being too weak to assure structural nozzle resistance.

See next page for materials, applications and assembly fittings.

**Materials**      **B31**    **AISI 316L Stainless steel**  
                          **T1**      **Brass**

The two above materials are usually available in stock, while several other materials as listed on page 25 can be obtained on request.

60°	Code	RG inch	D mm	D1 mm	Capacity at different pressure values							Dimensions mm		
					0.7	1.0	2.0	3.0	5.0	7.0	10	H	H1	WS
60°	<b>EBQ 1550 xx</b>	1/4	2.4	2.4	2.66	3.18	4.49	5.50	7.10	8.40	10.0	45	12	14
	<b>EBQ 2156 xx</b>		4.0	3.2	7.54	9.01	12.7	15.6	20.1	23.8	28.5			
	<b>ECQ 2230 xx</b>	3/8	4.8	3.2	11.4	13.6	19.2	23.5	30.3	35.9	42.9	48	14	19
	<b>ECQ 2410 xx</b>		6.4	3.2	20.0	24.0	33.9	41.5	53.6	63.4	75.8			
	<b>ECQ 2640 xx</b>		7.9	3.2	31.2	37.3	52.7	64.6	83.4	99.0	118			
	<b>EDQ 2940 xx</b>	1/2	9.5	4.7	45.6	54.5	77.1	94.4	122	144	172	64	18	22
	<b>EDQ 3128 xx</b>		11.1	4.7	61.8	73.9	105	128	165	196	234			
	<b>EEQ 3165 xx</b>	3/4	12.7	4.7	79.7	95.3	135	165	213	252	301	70	19	27
	<b>EFQ 3260 xx</b>	1	15.9	6.3	126	150	212	260	336	397	475	92	26	34
	<b>EHQ 3507 xx</b>	1 1/2	22.2	7.9	245	293	414	507	655	774	926	111	27	50
90°	<b>EBU 1550 xx</b>	1/4	2.4	2.4	2.66	3.18	4.49	5.50	7.10	8.40	10.0	45	12	14
	<b>EBU 2100 xx</b>		3.2	3.2	4.83	5.77	8.16	10.0	12.9	15.3	18.3			
	<b>EBU 2156 xx</b>		4.0	3.2	7.54	9.01	12.7	15.6	20.1	23.8	28.5			
	<b>ECU 2230 xx</b>	3/8	4.8	3.2	11.4	13.6	19.2	23.5	30.3	35.9	42.9	48	14	19
	<b>ECU 2317 xx</b>		5.6	3.9	15.3	18.3	25.9	31.7	40.9	48.4	57.9			
	<b>ECU 2410 xx</b>		6.4	4.8	20.0	24.0	33.9	41.5	53.6	63.4	75.8			
	<b>ECU 2640 xx</b>		7.9	5.5	31.2	37.3	52.7	64.6	83.4	99.0	118			
	<b>EDU 2940 xx</b>	1/2	9.5	3.3	45.6	54.5	77.1	94.4	122	144	172	64	18	22
	<b>EDU 3128 xx</b>		11.1	3.7	61.8	73.9	105	128	165	196	234			
	<b>EEU 3165 xx</b>	3/4	12.7	4.7	79.7	95.3	135	165	213	252	301	70	19	27
	<b>EFU 3260 xx</b>	1	19.0	6.3	126	150	212	260	336	397	475	92	26	34
	<b>EFU 3372 xx</b>		23.0	6.3	180	215	304	372	480	568	679			
	<b>EKU 4109 xx</b>	2	34.9	11.1	527	629	890	1090	1407	1665	1990	149	31	65
	<b>EMU 4204 xx</b>	3	44.5	14.3	985	1178	1666	2040	2633	3116	3724	219	42	89
	<b>EMU 4267 xx</b>		50.8		1290	1541	2180	2670	3447	4078	4874			

Operation with pressure values and capacities shown on the grey background recommended for cast or machined metal nozzles only.



The picture shows the inside of a spiral nozzle with a completely free passage, without any internal vane.

## FULL CONE NOZZLES

## E

## SPIRAL NOZZLES

Code	RG inch	D mm	D1 mm	Capacity at different pressure values								(lpm) (bar)	Dimensions mm		
				0.7	1.0	2.0	3.0	5.0	7.0	10	H		H1	WS	
120°	EBW 1550 xx EBW 2100 xx EBW 2156 xx	1/4	2.4	2.4	2.66	3.18	4.49	5.50	7.10	8.40	10.0	45	12	14	
			3.2	3.2	4.83	5.77	8.16	10.0	12.9	15.3	18.3				
			4.0	3.2	7.54	9.01	12.7	15.6	20.1	23.8	28.5				
	ECW 2156 xx ECW 2230 xx ECW 2317 xx ECW 2410 xx ECW 2640 xx	3/8	4.0	3.2	7.54	9.01	12.7	15.6	20.1	23.8	28.5	48	14	19	
			4.8	3.2	11.4	13.6	19.2	23.5	30.3	35.9	42.9				
			5.6	4.0	15.3	18.3	25.9	31.7	40.9	48.4	57.9				
			6.4	4.0	20.0	24.0	33.9	41.5	53.6	63.4	75.8				
			7.9	4.0	31.2	37.3	52.7	64.6	83.4	98.7	118				
	EDW 2940 xx EDW 3104 xx EDW 3128 xx	1/2	9.5	4.8	45.6	54.5	77.1	94.4	122	144	172	64	18	22	
			9.7	4.8	50.2	60.0	84.9	104	134	159	190				
			11.1	4.8	61.8	73.9	105	128	165	196	234				
	EEW 3165 xx	3/4	12.7	4.8	79.7	95.3	135	165	213	252	301	70	19	27	
			15.9	6.3	126	150	212	260	336	397	475				
	EFW 3260 xx EFW 3372 xx	1	15.9	6.3	126	150	212	260	336	397	475	92	26	34	
			19.0		180	215	304	372	480	568	679				
	EHW 3507 xx EHW 3663 xx EHW 3747 xx	1 1/2	22.2	7.9	245	293	414	507	655	774	926	111	27	50	
			25.4		320	383	541	663	856	1013	1210				
			28.6		361	431	610	747	964	1141	1364				
EKW 4109 xx EKW 4139 xx	2	34.9	11.1	527	629	890	1090	1407	1665	1990	149	31	65		
		38.1		671	803	1136	1391	1796	2125	2540					
EMW 4204 xx EMW 4265 xx	3	44.5	14.3	985	1178	1666	2040	2634	3116	3725	203	35	90		
		51.0		1280	1530	2164	2650	3421	4048	4838					
EPW 4412 xx	4	63.5	15.9	1990	2379	3364	4120	5318	6293	7522	230	40	127		
150°	ECX 2230 xx ECX 2317 xx ECX 2410 xx ECX 2640 xx	3/8	4.8	3.2	11.4	13.6	19.2	23.5	30.3	35.9	42.9	48	14	19	
			5.6	4.0	15.3	18.3	25.9	31.7	40.9	48.4	57.9				
			6.4		20.0	24.0	33.9	41.5	53.6	63.4	75.8				
			7.9		31.2	37.3	52.7	64.6	83.4	98.7	118				
	EDX 2940 xx EDX 3128 xx	1/2	9.5	4.8	45.6	54.5	77.1	94.4	122	144	172	64	18	22	
			11.1	4.8	61.8	73.9	105	128	165	196	234				
	EEX 3165 xx	3/4	12.7	4.8	79.7	95.3	135	165	213	252	301	70	19	27	
			15.9	6.3	126	150	212	260	336	397	475				
	EFX 3260 xx EFX 3372 xx	1	15.9	6.3	126	150	212	260	336	397	475	92	26	34	
			19.0		180	215	304	372	480	568	679				
	EHX 3507 xx EHX 3663 xx EHX 3747 xx	1 1/2	22.2	7.9	245	293	414	507	655	774	926	111	27	50	
			25.4		320	383	541	663	856	1013	1210				
28.6				361	431	610	747	964	1141	1364					
EKX 4109 xx EKX 4139 xx	2	34.9	11.1	527	629	890	1090	1407	1665	1990	149	31	65		
		38.1		671	803	1136	1391	1796	2125	2540					
180°	EBZ 2156 xx ECZ 2230 xx ECZ 2317 xx ECZ 2410 xx ECZ 2640 xx	3/8	4.0	2.5	7.54	9.01	12.7	15.6	20.1	23.8	28.5	45	12	14	
			4.8	3.2	11.4	13.6	19.2	23.5	30.3	35.9	42.9				
			5.6	4.0	15.3	18.3	25.9	31.7	40.9	48.4	57.9				
			6.4		20.0	24.0	33.9	41.5	53.6	63.4	75.8				
	EDZ 2940 xx EDZ 3128 xx	1/2	9.5	3.3	45.6	54.5	77.1	94.4	122	144	172	64	18	22	
			11.1	4.8	61.8	73.9	105	128	165	196	234				
	EEZ 3165 xx	3/4	12.7	4.7	79.7	95.3	135	165	213	252	301	70	19	27	
			15.9	6.3	126	150	212	260	336	397	475				
	EFZ 3260 xx EFZ 3372 xx	1	15.9	6.3	126	150	212	260	336	397	475	92	25	36	
			19.0		180	215	304	372	480	568	679				
	EHZ 3507 xx EHZ 3663 xx EHZ 3747 xx	1 1/2	22.2	7.9	245	293	414	507	655	774	926	111	27	50	
			25.4		320	383	541	663	856	1013	1210				
28.6				361	431	610	747	964	1141	1364					
EKZ 4109 xx EKZ 4139 xx	2	34.9	11.1	527	629	890	1090	1407	1665	1990	149	31	63		
		38.1		671	803	1136	1391	1796	2125	2540					



Operation with pressure values and capacities shown on the grey background recommended for cast or machined metal nozzles only.

Spiral nozzles can be delivered in brass and all the plastic materials in the following list. Most types are also available from stock or with short delivery in cast 316 stainless steel. Please contact our sales offices for delivery time in a given material.

## Materials

B31	AISI 316L Stainless steel
D1	PVC
D2	Polypropylene
D8	PVDF
E1	PTFE
L8	Hastelloy C 276
T1	Brass