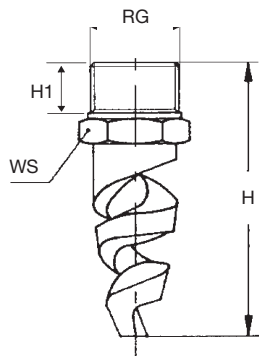


E



SPIRAL NOZZLES

Spiral nozzles work on the impact principle. The stream of liquid is deflected onto a surface which is engineered into a spiral profile creating the desired spray angle. The spray angle value is maintained even at low pressure and also when spraying high viscosity liquids.

While the droplet spray distribution is not comparable to that of a standard full cone nozzle, the fact that an internal vane is not present makes them virtually clog-free in most cases.

Please note that spray coverage is not as uniform as that from a standard full cone nozzle with the internal vane. The capacity values provided on the grey background in the table below should be attributed to metal nozzles only, as plastic materials can be too weak to assure structural resistance in the nozzle. 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 offered on request.

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

Pressure values and capacities shown here on the grey background are 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.

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				
	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		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	
	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	1/4	4.0	2.5	7.54	9.01	12.7	15.6	20.1	23.8	28.5	45	12	14
				3.2	2.5	4.83	5.77	8.16	10.0	12.9	15.3	18.3			
		ECZ 2230 xx ECZ 2317 xx ECZ 2410 xx ECZ 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	99.0	118				
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				
E EZ 3165 xx		3/4	12.7	4.7	79.7	95.3	135	165	213	252	301	70	19	27	
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				



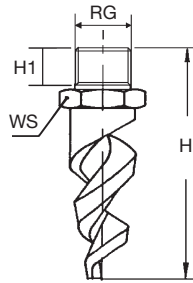
Pressure values and capacities shown here on the grey background are recommended for cast or machined metal nozzles only.

Spiral nozzles can be delivered in brass and in all the plastic materials from the opposite list. Most types are also available from stock or with a short delivery if 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

E-X



SPIRAL NOZZLES/WIDE PASSAGE

E-X type nozzles feature the same design and advantages as the E-type nozzles. The resistance to clogging is enhanced by a longer spiral pitch and the spiral pitch length is typically equal to the inlet orifice diameter. Therefore any foreign particle entering the nozzle can also find a way out through the spiral opening.

Material list at the bottom of previous page.

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°																
ECW 2230 xx Xy	3/8	4.8	4.8	11.4	13.6	19.2	23.5	30.3	35.9	42.9	70	15	22			
ECW 2317 xx Xy		5.6	5.6	15.3	18.3	25.9	31.7	40.9	48.4	57.9						
ECW 2410 xx Xy		6.4	6.4	20.0	24.0	33.9	41.5	53.6	63.4	75.8						
ECW 2640 xx Xy		7.9	7.9	31.2	37.3	52.7	64.6	83.4	98.7	118						
EDW 2940 xx Xy	1/2	9.5	9.5	45.6	54.5	77.1	94.4	122	144	172	86	18	27			
EDW 3128 xx Xy		11.1	11.1	61.8	73.9	105	128	165	196	234						
EEW 3165 xx Xy	3/4	12.7	12.7	79.7	95.3	135	165	213	252	301	130	20	27			
EFW 3260 xx Xy	1	16.0	16.0	126	150	212	260	336	397	475	131	26	34			
EFW 3372 xx Xy		19.0	19.0	180	215	304	372	480	568	679	168	26	34			
EHW 3507 xx Xy	1 1/2	22.2	22.2	245	293	414	507	655	774	926	171	27	50			
EHW 3663 xx Xy		25.4	25.4	320	383	541	663	856	1013	1210						
EHW 3747 xx Xy		28.6	28.6	361	431	610	747	964	1141	1364	185	27	50			
EKW 4109 xx Xy	2	35.0	35.0	527	629	890	1090	1407	1665	1990	279	32	65			
EKW 4139 xx Xy		38.1	38.1	671	803	1136	1391	1796	2125	2540						
EMW 4204 xx Xy	3	44.5	44.5	985	1178	1666	2040	2634	3116	3725	267	32	90			
EMW 4265 xx Xy		51.0	51.0	1280	1530	2164	2650	3421	4048	4838						
EPW 4412 xx Xy	4	63.5	63.5	1990	2379	3364	4120	5318	6293	7522	293	36	127			

Pressure values and capacities shown here on the grey background are recommended for cast or machined metal nozzles only.

Coding

Extra wide passage spiral nozzles are often supplied in a special design, where the nozzle has no thread and it is assembled onto a nipple using a retaining nut. This design is the only one possible with Silicon Carbide nozzles, while it can be obtained as an option for nozzles cast in special alloys or stainless steel. To identify such nozzles please note the following coding:

EHW 3747 xx Xy

xx = Material code, see material table on the previous page

y = Connection code / B=Bspt male thread / N=NPT male thread / F= Locknut fitting



SILICON CARBIDE NOZZLES

We design and supply spiral nozzles made out several types of silicon carbide for applications where fluids containing abrasive solid particles must be sprayed and where long nozzle service life is required.

Please contact our offices for more detailed information.

Common Applications

- Chemical processes
- Fire fighting
- Gas cooling
- Gas & smoke scrubbers