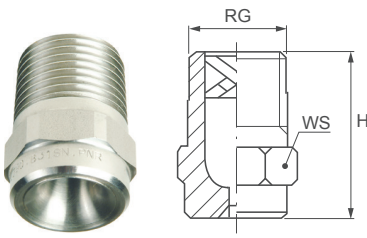
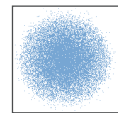


X VANE / TWO-PIECE DESIGN

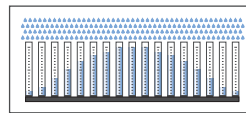


D series full cone nozzles with wide passage X-vanes offer a full choice of spray angles, capacities ranging from 1.18 and 1.420 l/min and connections from 1/8" to 4". In continuous casting cooling and other specific applications, they are used spraying upwards and operate at very high temperatures. The X-vane is safely locked into place for all dimensions up to 3/8", to avoid it may escape from the nozzle body in case of size changes due to temperature variations, and allows to assemble the nozzle with any desired orientation. Excellent mist effect and a wide variety of applications make D series nozzles an optimal choice.

- **Spray specification**
- BSPT
- NPT (on request)



Spray section



Convex distribution



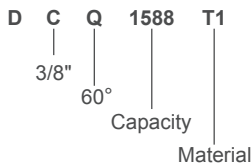
SPRAY ANGLE 45°

Nozzle type				Code	D mm	D1 mm	Capacity (l/min) at different pressure values (bar)						
DAM	DBM	DCM	DDM				0.7	1.0	2.0	3.0	5.0	7.0	10
•	•			1118 xx	1.1	1.0	0.57	0.68	0.96	1.18	1.52	1.80	2.15
•	•			1147 xx	1.2	1.1	0.71	0.85	1.20	1.47	1.90	2.25	2.68
•	•			1188 xx	1.3	1.2	0.91	1.09	1.54	1.88	2.43	2.87	3.43
•	•			1212 xx	1.4	1.2	1.02	1.22	1.73	2.12	2.74	3.24	3.87
•	•			1235 xx	1.5	1.3	1.14	1.36	1.92	2.35	3.03	3.59	4.29
•	•			1294 xx	1.7	1.5	1.42	1.70	2.40	2.94	3.80	4.49	5.37
	•	•		1370 xx	2.0	1.8	1.79	2.14	3.02	3.70	4.78	5.65	6.76
	•	•		1470 xx	2.1	2.0	2.27	2.71	3.84	4.70	6.07	7.18	8.58
	•	•		1588 xx	2.3	2.0	2.84	3.39	4.80	5.88	7.59	8.98	10.7
	•	•	•	1659 xx	2.5	2.2	3.18	3.80	5.38	6.59	8.51	10.1	12.0
		•	•	1740 xx	2.7	2.3	3.57	4.27	6.04	7.40	9.55	11.3	13.5
		•	•	1835 xx	2.8	2.6	4.03	4.82	6.82	8.35	10.8	12.8	15.2
		•	•	1940 xx	3.0	3.0	4.54	5.43	7.68	9.40	12.1	14.4	17.2
		•	•	2105 xx	3.2	3.2	5.07	6.06	8.57	10.5	13.6	16.0	19.2
		•	•	2117 xx	3.4	3.3	5.65	6.75	9.55	11.7	15.1	17.9	21.4
		•	•	2147 xx	3.8	3.7	7.10	8.49	12.0	14.7	19.0	22.5	26.8
		•	•	2188 xx	4.3	4.3	9.08	10.9	15.4	18.8	24.3	28.7	34.3
		•	•	2235 xx	5.0	4.5	11.4	13.6	19.2	23.5	30.3	35.9	42.9

Thread size coding table

RG inch	Code	H mm	WS mm
1/8"	DA	19.5	12.0
1/4"	DB	22.0	14.0
3/8"	DC	25.0	17.0
1/2"	DD	33.0	22.0

How to make up the nozzle code



SPRAY ANGLE 60°

Nozzle type				Code	D mm	D1 mm	Capacity (l/min) at different pressure values (bar)						
DAQ	DBQ	DCQ	DDQ				0.7	1.0	2.0	3.0	5.0	7.0	10
•	•			0610 xx	0.9	0.5	0.29	0.35	0.50	0.61	0.79	0.93	1.11
•	•			1118 xx	1.2	0.8	0.57	0.68	0.96	1.18	1.52	1.80	2.15
•	•			1147 xx	1.3	1.0	0.71	0.85	1.20	1.47	1.90	2.25	2.68
•	•			1188 xx	1.4	1.1	0.91	1.09	1.54	1.88	2.43	2.87	3.43
•	•			1212 xx	1.5	1.2	1.02	1.22	1.73	2.12	2.74	3.24	3.87
•	•			1235 xx	1.6	1.2	1.14	1.36	1.92	2.35	3.03	3.59	4.29
•	•			1294 xx	1.8	1.3	1.42	1.70	2.40	2.94	3.80	4.49	5.37
•	•	•		1370 xx	2.0	1.4	1.79	2.14	3.02	3.70	4.78	5.65	6.76
•	•	•		1470 xx	2.4	1.9	2.27	2.71	3.84	4.70	6.07	7.18	8.58
	•	•		1588 xx	2.6	2.0	2.84	3.39	4.80	5.88	7.59	8.98	10.7
	•	•		1659 xx	2.7	2.0	3.18	3.80	5.38	6.59	8.51	10.1	12.0
	•	•	•	1740 xx	2.9	2.0	3.57	4.27	6.04	7.40	9.55	11.3	13.5
	•	•	•	1835 xx	3.2	2.8	4.03	4.82	6.82	8.35	10.8	12.8	15.2
	•	•	•	1940 xx	3.2	2.8	4.54	5.43	7.68	9.40	12.1	14.4	17.2
	•	•	•	2105 xx	3.4	3.0	5.07	6.06	8.57	10.5	13.6	16.0	19.2
		•	•	2117 xx	3.6	3.0	5.65	6.75	9.55	11.7	15.1	17.9	21.4
		•	•	2147 xx	4.0	3.3	7.10	8.49	12.0	14.7	19.0	22.5	26.8
		•	•	2188 xx	4.5	3.7	9.08	10.9	15.4	18.8	24.3	28.7	34.3
		•	•	2235 xx	5.2	4.5	11.4	13.6	19.2	23.5	30.3	35.9	42.9
		•	•	2294 xx	5.8	4.7	14.2	17.0	24.0	29.4	38.0	44.9	53.7

Typical applications

Washing

- Food cleaning
- Parts cleaning
- Pre-treatment for coating process

Cooling

- Continuous casting cooling
- Product cooling
- Tank cooling

Dust control

- Remove flying dust in mining and coal plants.

Other applications

- Spray of chemicals
- Leak test

X VANE / TWO-PIECE DESIGN

SPRAY ANGLE 90°

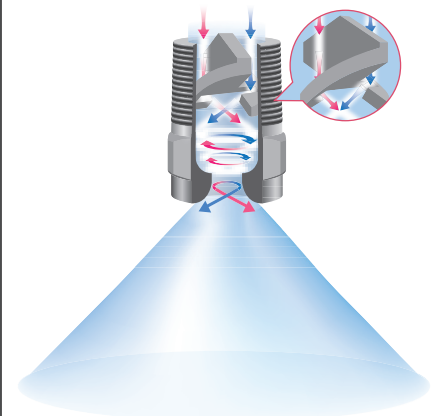
Nozzle type				Code	D mm	D1 mm	Capacity at different pressure values						(l/min) (bar)	
DAU	DBU	DCU	DDU				0.7	1.0	2.0	3.0	5.0	7.0	10	
•				0610 xx	0.9	0.5	0.29	0.35	0.50	0.61	0.79	0.93	1.11	
•				1118 xx	1.2	0.8	0.57	0.68	0.96	1.18	1.52	1.80	2.15	
•	•			1147 xx	1.3	1.0	0.71	0.85	1.20	1.47	1.90	2.25	2.68	
•	•			1188 xx	1.4	1.2	0.91	1.09	1.54	1.88	2.43	2.87	3.43	
•	•			1212 xx	1.5	1.2	1.02	1.22	1.73	2.12	2.74	3.24	3.87	
•	•			1235 xx	1.6	1.3	1.14	1.36	1.92	2.35	3.03	3.59	4.29	
•	•			1294 xx	1.8	1.3	1.42	1.70	2.40	2.94	3.80	4.49	5.37	
•	•	•		1370 xx	2.0	1.4	1.79	2.14	3.02	3.70	4.78	5.65	6.76	
	•	•		1470 xx	2.3	1.8	2.27	2.71	3.84	4.70	6.07	7.18	8.58	
	•	•		1588 xx	2.6	1.8	2.84	3.39	4.80	5.88	7.59	8.98	10.7	
	•	•		1659 xx	2.7	2.0	3.18	3.80	5.38	6.59	8.51	10.1	12.0	
	•	•		1740 xx	2.9	2.0	3.57	4.27	6.04	7.40	9.55	11.3	13.5	
	•	•		1835 xx	3.3	2.0	4.03	4.82	6.82	8.35	10.8	12.8	15.2	
	•	•		1940 xx	3.3	2.4	4.54	5.43	7.68	9.40	12.1	14.4	17.2	
	•	•		2105 xx	3.5	2.6	5.07	6.06	8.57	10.5	13.6	16.0	19.2	
		•		2117 xx	3.7	2.7	5.65	6.75	9.55	11.7	15.1	17.9	21.4	
		•		2147 xx	4.0	3.2	7.10	8.49	12.0	14.7	19.0	22.5	26.8	
		•		2164 xx	4.1	3.2	7.92	9.47	13.4	16.4	21.2	25.1	29.9	
			•	2188 xx	4.7	3.2	9.08	10.9	15.4	18.8	24.3	28.7	34.3	
			•	2235 xx	5.2	3.8	11.4	13.6	19.2	23.5	30.3	35.9	42.9	
			•	2294 xx	5.8	3.8	14.2	17.0	24.0	29.4	38.0	44.9	53.7	
			•	2370 xx	6.4	3.8	17.9	21.4	30.2	37.0	47.8	56.5	67.6	

SPRAY ANGLE 120°

Nozzle type				Code	D mm	D1 mm	Capacity at different pressure values						(l/min) (bar)	
DAW	DBW	DCW	DDW				0.7	1.0	2.0	3.0	5.0	7.0	10	
•				0610 xx	0.9	0.5	0.29	0.35	0.50	0.61	0.79	0.93	1.11	
•				1118 xx	1.2	0.8	0.57	0.68	0.96	1.18	1.52	1.80	2.15	
•	•			1147 xx	1.3	0.9	0.71	0.85	1.20	1.47	1.90	2.25	2.68	
•	•			1188 xx	1.5	1.0	0.91	1.09	1.54	1.88	2.43	2.87	3.43	
•	•			1212 xx	1.6	1.1	1.02	1.22	1.73	2.12	2.74	3.24	3.87	
•	•			1235 xx	1.6	1.2	1.14	1.36	1.92	2.35	3.03	3.59	4.29	
•	•			1294 xx	1.9	1.3	1.42	1.70	2.40	2.94	3.80	4.49	5.37	
•	•			1370 xx	2.1	1.4	1.79	2.14	3.02	3.70	4.78	5.65	6.76	
	•	•		1470 xx	2.4	1.6	2.27	2.71	3.84	4.70	6.07	7.18	8.58	
	•	•		1588 xx	2.7	1.8	2.84	3.39	4.80	5.88	7.59	8.98	10.7	
	•	•		1659 xx	3.0	1.8	3.18	3.80	5.38	6.59	8.51	10.1	12.0	
	•	•		1740 xx	3.1	1.9	3.57	4.27	6.04	7.40	9.55	11.3	13.5	
	•	•		1835 xx	3.3	1.9	4.03	4.82	6.82	8.35	10.8	12.8	15.2	
	•	•		1940 xx	3.5	1.9	4.54	5.43	7.68	9.40	12.1	14.4	17.2	
		•		2105 xx	3.7	2.3	5.07	6.06	8.57	10.5	13.6	16.0	19.2	
		•		2117 xx	3.8	2.4	5.65	6.75	9.55	11.7	15.1	17.9	21.4	
		•		2147 xx	4.2	2.7	7.10	8.49	12.0	14.7	19.0	22.5	26.8	
		•		2164 xx	4.4	2.7	7.92	9.47	13.4	16.4	21.2	25.1	29.9	
			•	2188 xx	4.6	3.1	9.08	10.9	15.4	18.8	24.3	28.7	34.3	
			•	2235 xx	5.3	3.3	11.4	13.6	19.2	23.5	30.3	35.9	42.9	
			•	2294 xx	5.9	4.1	14.2	17.0	24.0	29.4	38.0	44.9	53.7	
			•	2370 xx	6.6	4.7	17.9	21.4	30.2	37.0	47.8	56.5	67.6	

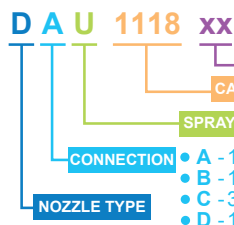
X-VANE

X vanes are widely used, mainly in steelworks. Their simple design is based on two sloping flat surfaces which induce a rotation of the liquid going through the nozzle, and two small slots on each flat part to produce a full-cone spray pattern. All vanes are secured inside the nozzle body to prevent their moving in case of size changes due to high temperatures or sudden vacuum conditions in the feed pipe.



HOW TO MAKE UP THE NOZZLE CODE

EX.: DAU 1118 B1



- SPRAY ANGLE
- M - 45°
 - Q - 60°
 - U - 90°
 - W - 120°

- CONNECTION
- A - 1/8"
 - B - 1/4"
 - C - 3/8"
 - D - 1/2"

MATERIAL

- B1 - AISI 303 Stainless steel
- B31 - AISI 316L Stainless steel
- T1 - Brass
- On request special materials are quoted