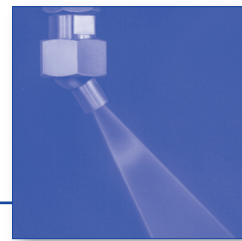




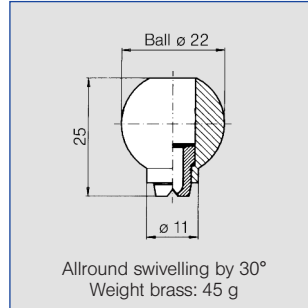
# Flat fan nozzles with ball joint

## Series 676



**Swivelling nozzle for precise adjusting of jet direction. No gaskets necessary. Long, unproblematic service life.**

Applications:  
Cleaning, cooling, lubricating.



Spray angle	Ordering no.		A Ø [mm]	E Ø [mm]	$\dot{V}$ [l/min]						Spray width B at p = 2 bar		
	Type	Mat.-no.			p [bar] (p <sub>max</sub> = 30 bar)						H =		
			16	30	0.5	1.0	2.0	3.0	5.0	10.0	250 mm	500 mm	
20°	676.301	○	○	0.70	0.60	0.16*	0.23*	0.32	0.39	0.51	0.72	65	120
	676.361	○	○	1.00	0.80	0.31*	0.44*	0.63	0.77	1.00	1.40	70	130
	676.441	○	○	1.35	1.10	0.62*	0.88	1.25	1.53	1.98	2.80	75	145
	676.481	○	○	1.50	1.20	0.80*	1.13	1.60	1.96	2.53	3.58	75	150
30°	676.302	○	○	0.70	0.50	0.16*	0.23*	0.32	0.39	0.51	0.72	120	235
	676.362	○	○	1.00	0.70	0.31*	0.44*	0.63	0.77	1.00	1.40	120	235
	676.402	○	○	1.20	0.90	0.50*	0.71	1.00	1.23	1.58	2.24	120	235
	676.482	○	○	1.50	1.10	0.80*	1.13	1.60	1.96	2.53	3.58	120	235
	676.562	○	○	2.00	1.50	1.25	1.77	2.50	3.06	3.95	5.59	120	235
	676.642	○	○	2.50	1.80	2.00	2.83	4.00	4.90	6.33	8.94	120	240
	676.722	○	○	3.00	2.40	3.15	4.46	6.30	7.72	9.96	14.09	125	240
	676.762	○	○	3.50	2.70	4.00	5.66	8.00	9.80	12.65	17.89	125	245
676.802	○	○	4.00	3.10	5.00	7.07	10.00	12.25	15.81	22.36	130	250	
45°	676.303	○	○	0.70	0.50	0.16*	0.23*	0.32	0.39	0.51	0.72	150	270
	676.363	○	○	1.00	0.60	0.31*	0.44*	0.63	0.77	1.00	1.40	155	280
	676.403	○	○	1.20	0.90	0.50*	0.71	1.00	1.23	1.58	2.24	175	320
	676.483	○	○	1.50	1.10	0.80	1.13	1.60	1.96	2.53	3.58	180	340
	676.563	○	○	2.00	1.40	1.25	1.77	2.50	3.06	3.95	5.59	185	355
	676.643	○	○	2.50	1.80	2.00	2.83	4.00	4.90	6.33	8.94	195	370
	676.723	○	○	3.00	2.40	3.15	4.46	6.30	7.72	9.96	14.09	200	375
	676.763	○	○	3.50	2.60	4.00	5.66	8.00	9.80	12.65	17.89	200	380
676.803	○	○	4.00	3.00	5.00	7.07	10.00	12.25	15.81	22.36	205	385	
60°	676.304	○	○	0.70	0.40	0.16*	0.23*	0.32	0.39	0.51	0.72	215	425
	676.334	○	○	0.90	0.50	0.22*	0.32*	0.45	0.55	0.71	1.01	220	440
	676.364	○	○	1.00	0.60	0.31*	0.44*	0.63	0.77	1.00	1.40	230	460
	676.404	○	○	1.20	0.80	0.50*	0.71	1.00	1.23	1.58	2.24	245	485
	676.444	○	○	1.35	0.90	0.62*	0.88	1.25	1.53	1.98	2.80	255	495
	676.484	○	○	1.50	1.00	0.80*	1.13	1.60	1.96	2.53	3.58	260	510
	676.514	○	○	1.65	1.10	0.95*	1.34	1.90	2.33	3.00	4.25	270	520
	676.564	○	○	2.00	1.30	1.25	1.77	2.50	3.06	3.95	5.59	280	535
	676.604	○	○	2.20	1.50	1.58	2.23	3.15	3.86	4.98	7.04	290	550
	676.644	○	○	2.50	1.60	2.00	2.83	4.00	4.90	6.33	8.94	295	565
	676.674	○	○	2.70	1.80	2.38	3.36	4.75	5.82	7.51	10.62	300	575
	676.724	○	○	3.00	2.10	3.15	4.46	6.30	7.72	9.96	14.09	305	590
	676.764	○	○	3.50	2.30	4.00	5.66	8.00	9.80	12.65	17.89	310	595

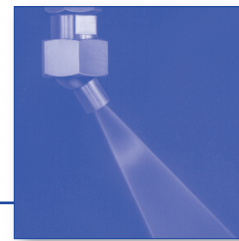
A = Equivalent bore diameter · E = narrowest free cross section  
\* Differing spray pattern

Continued on next page.



# Flat fan nozzles with ball joint

## Series 676



Spray angle	Ordering no.		A Ø [mm]	E Ø [mm]	V̇ [l/min]						Spray width B at p = 2 bar		
	Type	Mat.-no.			p [bar] (p <sub>max</sub> = 30 bar)						H = 250 mm	H = 500 mm	
		16	30										
	AISI 303	Brass	0.5	1.0	2.0	3.0	5.0	10.0					
75°	676. 145	○	○	0.20	0.12	-	0.04*	0.05	0.06	0.08	0.11	280	550
	676. 165	○	○	0.20	0.08	-	0.05*	0.07	0.08	0.10	0.15	290	560
	676. 185	○	○	0.20	0.15	-	0.06*	0.08	0.10	0.13	0.18	300	575
	676. 215	○	○	0.40	0.20	-	0.08*	0.11	0.14	0.18	0.25	300	580
	676. 245	○	○	0.50	0.30	-	0.12*	0.16	0.20	0.26	0.30	310	585
	676. 275	○	○	0.60	0.30	0.11*	0.16*	0.22	0.27	0.35	0.49	310	590
90°	676. 216	○	○	0.40	0.20	-	0.08*	0.11	0.14	0.18	0.25	370	700
	676. 276	○	○	0.60	0.30	0.11*	0.16*	0.22	0.27	0.35	0.49	375	720
	676. 306	○	○	0.70	0.40	0.16*	0.23*	0.32	0.39	0.51	0.72	380	740
	676. 336	○	○	0.90	0.50	0.22*	0.32*	0.45	0.55	0.71	1.01	415	800
	676. 366	○	○	1.00	0.50	0.31*	0.44*	0.63	0.77	1.00	1.40	420	810
	676. 406	○	○	1.20	0.70	0.50*	0.71	1.00	1.23	1.58	2.24	430	820
	676. 446	○	○	1.35	0.80	0.62*	0.88	1.25	1.53	1.98	2.80	435	830
	676. 486	○	○	1.50	0.80	0.80*	1.13	1.60	1.96	2.53	3.58	440	835
	676. 516	○	○	1.65	0.90	0.95*	1.34	1.90	2.33	3.00	4.25	440	840
	676. 566	○	○	2.00	1.10	1.25	1.77	2.50	3.06	3.95	5.59	445	850
	676. 606	○	○	2.20	1.20	1.58	2.23	3.15	3.86	4.98	7.04	450	860
	676. 646	○	○	2.50	1.30	2.00	2.83	4.00	4.90	6.33	8.94	455	865
	676. 676	○	○	2.70	1.40	2.38	3.36	4.75	5.82	7.51	10.62	465	875
	676. 726	○	○	3.00	1.70	3.15	4.46	6.30	7.72	9.96	14.09	470	885
120°	676. 187	○	○	0.35	0.20	-	0.06*	0.08	0.10	0.13	0.18	630	1200
	676. 217	○	○	0.40	0.20	-	0.08*	0.11	0.14	0.18	0.25	640	1210
	676. 247	○	○	0.50	0.20	-	0.12*	0.16	0.20	0.26	0.36	650	1230
	676. 277	○	○	0.60	0.30	-	0.16*	0.22	0.27	0.35	0.49	660	1250
	676. 307	○	○	0.70	0.30	0.16*	0.23*	0.32	0.39	0.51	0.72	660	1250
	676. 337	○	○	0.90	0.40	0.22*	0.32*	0.45	0.55	0.71	1.01	670	1270
	676. 367	○	○	1.00	0.50	0.31*	0.44*	0.63	0.77	1.00	1.40	670	1270
	676. 407	○	○	1.20	0.60	0.50*	0.71	1.00	1.23	1.58	2.24	670	1270
	676. 447	○	○	1.35	0.60	0.62*	0.88	1.25	1.53	1.98	2.80	675	1270
	676. 487	○	○	1.50	0.60	0.80*	1.13	1.60	1.96	2.53	3.58	680	1275
	676. 517	○	○	1.65	0.90	0.95*	1.34	1.90	2.33	3.00	4.25	685	1280
	676. 567	○	○	2.00	0.90	1.25	1.77	2.50	3.06	3.95	5.59	690	1285
	676. 607	○	○	2.20	1.10	1.58	2.23	3.15	3.86	4.98	7.04	700	1300
	676. 647	○	○	2.50	1.30	2.00	2.83	4.00	4.90	6.33	8.94	700	1300
	676. 677	○	○	2.70	1.40	2.38	3.36	4.75	5.82	7.51	10.62	720	1330
	676. 727	○	○	3.00	1.60	3.15	4.46	6.30	7.72	9.96	14.09	740	1360
	676. 767	○	○	3.50	1.70	4.00	5.66	8.00	9.80	12.65	17.89	760	1400

A = Equivalent bore diameter · E = narrowest free cross section

\* Differing spray pattern

Accessories see next page.

Example	Type	+	Material-no.	=	Ordering no.
for ordering:	676. 145	+	16	=	676. 145. 16

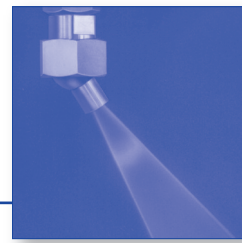
Conversion formula for the above series:  $\dot{V}_2 = \dot{V}_1 \cdot \sqrt{\frac{p_2}{p_1}}$





# Flat fan nozzles with ball joint

## Series 676



### Accessories

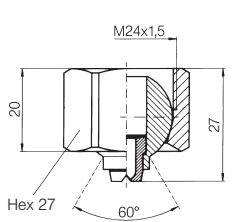
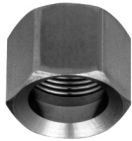
#### Retaining nut

092. 020. 16. 00. 02

Material: AISI 303

092. 020. 30. 00. 02

Material: Brass



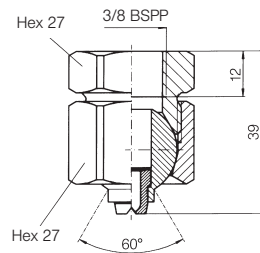
#### Socket

092. 020. 16. AF. 03

Material: AISI 303

092. 020. 30. AF. 03

Material: Brass



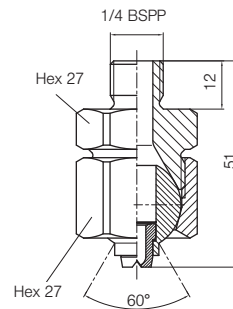
#### Retaining nipple

092. 024. 16. AC. 03

Material: AISI 303

092. 024. 30. AC. 03

Material: Brass



#### Welding nipple

092. 020. 17. 00. 04

Material: AISI 316Ti

