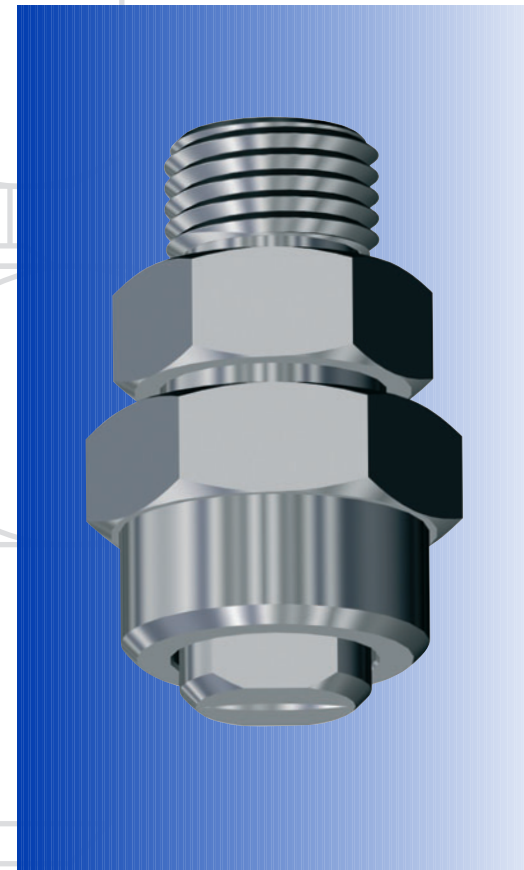


Schlick Series 650-655 Series 700 Flat-Jet Nozzles



Applications:

- Car wash equipment
- Cleaning equipment
- Cooling
- Dust control
- Fire protection equipment
and rain curtains
- Moisturising

Schlick flat-jet nozzles

- Flat-jet nozzles are suited to spraying both liquid and gas or steam media.
- The spray angle resembles a flat jet in the shape of a fan.
- Depending on nozzle model, spray angles between 20° and 160° are possible. Compared with liquid, the spray angle reduces by approximately 30° for gas and steam.
- Flat-jet nozzles are available in various designs.
- The degree of atomisation is related to the nozzle size, the capacity, and the differential pressure. Very fine droplets are achieved with small orifices and high pressures.

Nozzle designs

Model 650 Size 0 – Flat-jet nozzle

Two-component nozzle mounting

With rotatable and replaceable nozzle orifice insert

With or without strainer

Standard 90° spray angle

Available with 30°, 45°, 60°, 120° angles

Fig. 09001

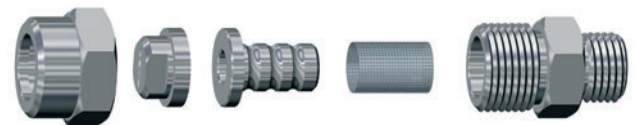
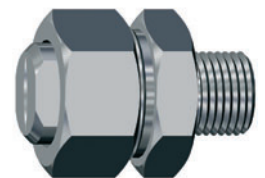


Fig. 09002

Model 650 Size 0 – Flat-jet nozzle

Small mounting, without strainer

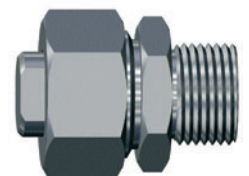
Fig. 09003



Model 650 Size 1-3 – Flat-jet nozzle

As for Size 0

Fig. 09004



Model 650 Size 7-1 – Flat-jet nozzle

With pneumatic open/close control using control air.

The nozzle needle closes the outlet abruptly when the control air is shut off. Especially suitable for etching, marking, cyclic spraying and above all for liquids under pressure where drips are to be avoided.

Fig. 09005



Nozzle designs

Model 650 Form 8 – Flat-jet nozzle

With solenoid valve
Standard design: 220 V, 50 Hz, 100 % ED
Ambient temperature: max. 55 °C
Enclosure protection IP 65
Cycling frequency: limited only by the changeover time

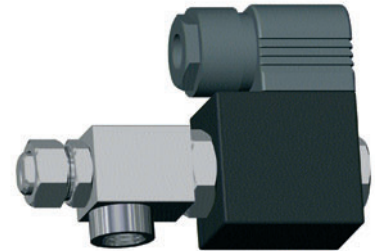


Fig. 09006

Model 651 – Flat-jet nozzle

Nozzle body with press-fit stabiliser
Slit-form, non-wear orifice
Standard 90° spray angle
Available with 20°, 40°, 60°, 120°, 160° angles

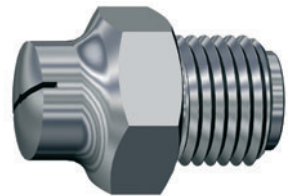


Fig. 09007

Model 655 – Flat-jet nozzle

Short nozzle body without inserts
Oval orifice
Extremely insensitive to clogging
Standard 60° spray angle
Available with 15°, 30°, 45°, 90°, 120° angles

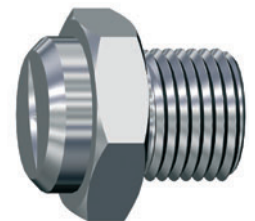


Fig. 09008

Model 700 – Flat-jet nozzle

Nozzle body with central liquid and right-angled compressed air connector
Oval orifice
Can be used as a pressure or two-substance nozzle
90° - 120° spray angles



Fig. 09009

Materials

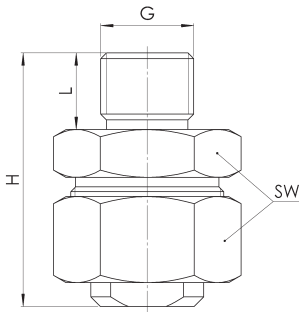
- Heat resistant stainless steel
- Acid resistant stainless steel

- Brass
- HASTELLOY

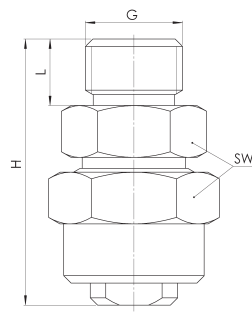
- PVC
- PVDF

Custom products from other materials available on request

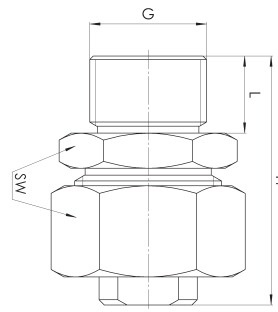
Dimensions



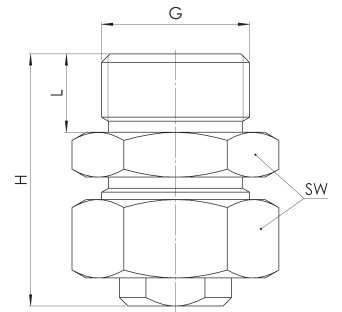
Model 650/0
Small mounting



Model 650/0
Normal mounting



Model 650/1-3



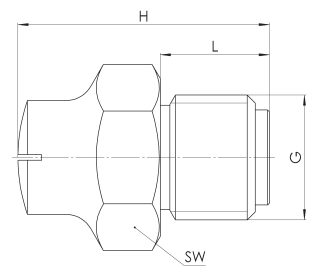
Model 650/4

Model 650

Size	Connector G ISO 228	Total height H in mm	Thread length L in mm	Spanner size SW in mm
0 Small mounting	1/8	~ 25	8	17
0 Normal mounting	1/4	~ 40	9	17/20
1-3	1/4	~ 35	10	24
	3/8			
4	1/2	~ 38	10	32
	3/4	~ 42	14	32

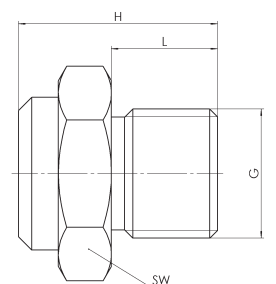
Model 651

Size	Connector G ISO 228	Total height H in mm	Thread length L in mm	Spanner size SW in mm
1	1/8	21	8	14
2	1/4	26	9	17
3	3/8	32	11	20
4	1/2	34	14	27
5	3/4	46	16	32
6	1	53	19	41
7	1 1/4	57	20	50
8	1 1/2	68	21	55



Model 655

Size	Connector G ISO 228	Total height H in mm	Thread length L in mm	Spanner size SW in mm
1	1/4	15	8	17
2	1/4	15	8	17
3	3/8	18	10	20
4	1/2	24	14	24
5	3/4	30	16	32
6	1	35	19	41
7	1 1/2	45	21	60
8	2	53	25	70



Performance specification

Model 650

Water flow rate at 16 °C

Model/ Size	Connector G ISO 228	Corre- sponds to an orifice in mm	Δp 0.5 bar		Δp 1 bar		Δp 2 bar		Rated flow at Δp 3 bar		Δp 4 bar		Δp 6 bar		Δp 8 bar		Δp 10 bar		Δp 20 bar	
			l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
650/0	Normal mounting 1/4	0.60	0.16	0.010	0.23	0.014	0.33	0.020	0.4	0.024	0.46	0.028	0.56	0.034	0.65	0.040	0.73	0.044	1.03	0.062
		0.70	0.20	0.012	0.29	0.017	0.41	0.024	0.5	0.030	0.57	0.034	0.70	0.042	0.81	0.049	0.91	0.055	1.29	0.077
		0.85	0.32	0.020	0.46	0.028	0.65	0.039	0.8	0.048	0.92	0.055	1.13	0.068	1.30	0.078	1.46	0.087	2.06	0.124
	Small mounting 1/8	1.1	0.41	0.024	0.57	0.034	0.81	0.049	1.0	0.06	1.15	0.069	1.41	0.084	1.63	0.098	1.83	0.110	2.58	0.155
		1.2	0.61	0.036	0.87	0.052	1.22	0.075	1.5	0.09	1.73	0.104	2.12	0.127	2.45	0.147	2.75	0.165	3.87	0.233
		1.4	0.81	0.048	1.15	0.069	1.63	0.097	2.0	0.12	2.31	0.139	2.83	0.170	3.26	0.196	3.65	0.219	5.15	0.309
650/1	3/8 - 1/2	1.1	0.41	0.024	0.57	0.034	0.81	0.049	1.0	0.06	1.15	0.069	1.41	0.084	1.63	0.098	1.83	0.110	2.58	0.155
		1.2	0.61	0.036	0.87	0.052	1.22	0.075	1.5	0.09	1.73	0.104	2.12	0.127	2.45	0.147	2.75	0.165	3.87	0.233
		1.4	0.81	0.048	1.15	0.069	1.63	0.097	2.0	0.12	2.31	0.139	2.83	0.170	3.26	0.196	3.65	0.219	5.15	0.309
		1.5	1.02	0.061	1.44	0.086	2.04	0.122	2.5	0.15	2.89	0.173	3.55	0.213	4.08	0.245	4.57	0.274	6.45	0.387
		1.7	1.20	0.072	1.73	0.104	2.45	0.147	3.0	0.18	3.46	0.208	4.24	0.254	4.88	0.293	5.48	0.329	7.74	0.464
		2.2	2.04	0.122	2.88	0.173	4.08	0.245	5.0	0.30	5.75	0.345	7.05	0.423	8.15	0.489	9.15	0.549	12.9	0.774
650/2	3/8 - 1/2	2.7	3.06	0.184	4.32	0.259	6.12	0.367	7.5	0.45	8.60	0.516	10.60	0.636	12.2	0.732	13.7	0.822	19.4	1.160
		3.0	4.08	0.245	5.75	0.345	8.16	0.490	10	0.60	11.55	0.69	14.15	0.846	16.32	0.979	18.28	1.10	25.8	1.55
		3.8	6.15	0.365	8.70	0.522	12.2	0.735	15	0.90	17.30	1.04	21.20	1.27	24.40	1.460	27.40	1.64	38.7	2.32
650/3	1/2 - 3/8	4.3	8.20	0.492	11.50	0.690	16.3	0.970	20	1.20	23.10	1.39	28.30	1.70	32.60	1.960	36.50	2.19	51.6	3.10
		4.8	10.2	0.612	14.4	0.864	20.4	1.220	25	1.50	28.9	1.73	35.5	2.13	40.8	2.45	45.7	2.74	64.5	3.87
		5.3	12.0	0.720	17.3	1.040	24.5	1.470	30	1.80	34.6	2.08	42.4	2.54	48.8	2.93	54.8	3.29	77.4	4.64
650/4	3/4 - 1/2	6.1	16.3	0.980	22.0	1.380	32.7	1.960	40	2.40	46.2	2.77	56.6	3.40	65.3	3.92	73.0	4.38	103	6.19
		6.8	20.4	1.22	28.8	1.73	40.8	2.45	50	3.00	57.7	3.45	70.5	4.23	81.5	4.89	91	5.49	129	7.74
		8.4	30.6	1.84	43.2	2.59	61.2	3.67	75	4.50	86.0	5.16	106	6.36	122	7.32	137	8.22	194	11.6
		9.7	40.8	2.45	57.5	3.45	81.6	4.90	100	6.00	115	6.90	141	8.46	163	9.78	182	10.9	258	15.5

Compressed air flow rate at 20 °C

Model/ Size	Connector G ISO 228	Corresponds to an orifice in mm	Rated flow at 1 bar (ü)	2 bar (ü)	3 bar (ü)	4 bar (ü)	5 bar (ü)	6 bar (ü)	7 bar (ü)
			Normal m³/h						
650/0	Normal mounting 1/4	0.60	0.4	0.6	0.8	1.0	1.2	1.4	1.6
		0.70	0.5	0.8	1.0	1.3	1.5	1.8	2.0
		0.85	0.8	1.2	1.6	2.0	2.4	2.8	3.2
	Small mounting 1/8	1.10	1.0	1.5	2.0	2.5	3.0	3.5	4.0
		1.20	1.5	2.2	3.0	3.7	4.5	5.2	6.0
		1.40	2.0	3.0	4.0	5.0	6.0	7.0	8.0
650/1	3/8 - 1/2	1.50	2.5	3.7	5.0	6.2	7.5	8.7	10.0
		1.10	1.0	1.5	2.0	2.5	3.0	3.5	4.0
		1.20	1.5	2.2	3.0	3.7	4.5	5.2	6.0
		1.40	2.0	3.0	4.0	5.0	6.0	7.0	8.0
		1.50	2.5	3.7	5.0	6.2	7.5	8.7	10
		1.70	3.0	4.5	6.0	7.5	9.0	10.5	12
650/2	3/8 - 1/2	2.20	5.0	7.5	10	12.5	15	17.5	20
		2.70	7.5	11.2	15	18.7	22	26	30
		3.00	10	15	20	25	30	35	40
650/3	1/2 - 3/8	3.80	15	22	30	37	45	52	60
		4.30	20	30	40	50	60	70	80
		4.80	25	37	50	62	75	87	100
650/4	3/4 - 1/2	5.30	30	45	60	75	90	105	120
		6.10	40	60	80	100	120	140	160
		6.80	50	75	100	125	150	175	200
		8.40	75	112	150	187	225	260	300
		9.70	100	150	200	250	300	350	400

Performance specification

Model 651

Water flow rate at 16 °C

Model/ Size	Connector G ISO 228	Corre- sponds to an orifice in mm	Δp 0.5 bar		Δp 1 bar		Δp 2 bar		Rated flow at Δp 3 bar		Δp 4 bar		Δp 6 bar		Δp 8 bar		Δp 10 bar		Δp 20 bar	
			l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
651/1	1/8	1.7	1.20	0.072	1.7	0.104	2.45	0.144	3	0.18	3.4	0.204	4.2	0.25	4.9	0.29	5.5	0.33	7.70	0.46
651/2	1/4	2.4	2.45	0.147	3.5	0.210	4.90	0.294	6	0.29	6.9	0.414	8.5	0.51	9.8	0.59	11.0	0.66	15.5	0.93
651/3	3/8	3.4	4.90	0.294	7.0	0.420	9.80	0.588	12	0.72	13.8	0.828	17.0	1.02	19.6	1.18	21.9	1.31	31.0	1.86
651/4	1/2	4.3	8.20	0.492	11.5	0.690	16.3	0.978	20	1.20	23.1	1.390	28.3	1.70	32.6	1.96	36.5	2.19	51.6	3.10
651/5	3/4	6.8	20.4	1.220	28.8	1.730	40.8	2.450	50	3.00	57.5	3.450	70.5	4.23	81.5	4.89	91.0	5.49	129	7.74

Compressed air flow rate at 20 °C

Model/ Size	Connector G ISO 228	Corresponds to an orifice in mm	Rated flow at 1 bar (ü)	2 bar (ü)	3 bar (ü)	4 bar (ü)	5 bar (ü)	6 bar (ü)	7 bar (ü)
			Normal m³/h						
651/1	1/8	1.7	3	4.8	6.4	8.0	9.6	11.2	12.8
651/2	1/4	2.4	6	9.7	13.0	16.2	19.5	22.7	26.0
651/3	3/8	3.4	12	19.5	26.0	32.0	39.0	45.0	52.0
651/4	1/2	4.3	20	33.0	44.0	55.0	66.0	77.0	88.0
651/5	3/4	6.8	50	80.0	106.0	132.0	160.0	185.0	212.0

Flow rates for larger nozzles and saturated steam available on request

Model 655

Water flow rate at 16 °C

Model/ Size	Connector G ISO 228	Corre- sponds to an orifice in mm	Δp 0.5 bar		Δp 1 bar		Δp 2 bar		Rated flow at Δp 3 bar		Δp 4 bar		Δp 6 bar		Δp 8 bar		Δp 10 bar		Δp 20 bar	
			l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h	l/min	m³/h
655/1	1/4	1.2	0.61	0.04	0.87	0.05	1.22	0.07	1.5	0.09	1.73	0.10	2.12	0.13	2.45	0.15	2.75	0.16	3.87	0.23
		1.4	0.81	0.05	1.15	0.07	1.63	0.10	2.0	0.12	2.31	0.14	2.83	0.17	3.26	0.20	3.65	0.22	5.15	0.31
		1.5	1.02	0.06	1.44	0.08	2.04	0.12	2.5	0.15	2.89	0.17	3.55	0.21	4.08	0.25	4.75	0.27	6.45	0.39
		2.2	2.04	0.12	2.88	0.17	4.08	0.25	5.0	0.30	5.75	0.35	7.05	0.42	8.15	0.49	9.15	0.55	12.9	0.77
		2.7	3.06	0.18	4.32	0.25	6.12	0.37	7.5	0.45	8.60	0.52	10.6	0.64	12.2	0.73	13.7	0.82	19.4	1.16
655/2	1/4	3.0	4.08	0.24	5.75	0.34	8.16	0.49	10	0.60	11.5	0.69	14.1	0.85	16.3	0.98	18.3	1.10	25.8	1.55
		3.8	6.15	0.37	8.70	0.52	12.25	0.73	15	0.90	17.3	1.04	21.2	1.27	24.4	1.46	27.4	1.64	38.7	2.32
		4.3	8.20	0.49	11.5	0.69	16.30	0.98	20	1.20	23.1	1.39	28.3	1.70	32.6	1.96	36.5	2.19	51.6	3.10
655/3	3/8	4.8	10.2	0.61	14.4	0.87	20.4	1.22	25	1.50	28.9	1.73	35.5	2.13	40.8	2.45	45.7	2.74	64.5	3.87
		5.3	12.0	0.72	17.3	1.04	24.5	1.47	30	1.80	34.6	2.08	42.4	2.54	48.8	2.93	54.8	3.29	77.4	4.64
		6.1	16.3	0.98	23.0	1.38	32.7	1.96	40	2.40	46.2	2.77	56.6	3.40	65.3	3.92	73.0	4.38	103.2	6.19
655/4	1/2	6.8	20.4	1.22	28.8	1.73	40.8	2.45	50	3.00	57.5	3.45	70.5	4.23	82	4.89	91	5.49	129	7.74
		8.4	30.6	1.84	43.2	2.59	61.2	3.67	75	4.50	86.0	5.16	106	6.36	122	7.32	137	8.22	194	11.60
		9.7	40.8	2.45	57.5	3.45	81.5	4.90	100	6.00	115	6.90	141	8.46	163	9.78	182	10.90	258	15.50
655/5	3/4	10.0	51.0	3.06	72.0	4.32	110	6.60	125	7.50	144	8.64	177	10.60	210	12.60	228	13.70	324	19.40
		12.0	61.5	3.69	87.0	5.22	122	7.32	150	9.00	173	10.40	212	12.70	244	14.60	274	16.40	387	23.20

Compressed air flow rate at 20 °C

Model/ Size	Connector G ISO 228	Corresponds to an orifice in mm	Rated flow at 1 bar (ü)	2 bar (ü)	3 bar (ü)	4 bar (ü)	5 bar (ü)	6 bar (ü)	7 bar (ü)
			Normal m³/h						
655/1	1/4	1.2	1.5	2.2	3	3.7	4.5	5.2	6
		1.4	2.0	3.0	4	5.0	6.0	7.0	8
		1.5	2.5	3.7	5	6.3	7.5	8.7	10
		2.2	5.0	7.5	10	12.5	15	17	20
		2.7	7.5	11.2	15	18.7	22	26	30
655/2	1/4	3.0	10	15	20	25	30	35	40
		3.8	15	22	30	37	45	52	60
		4.3	20	30	40	50	60	70	80
655/3	3/8	4.8	25	37	50	62	75	87	100
		5.3	30	45	60	75	90	105	120
		6.1	40	60	80	100	120	140	160
655/4	1/2	6.8	50	75	100	125	150	170	200
		8.4	75	112	150	187	225	260	300
		9.7	100	150	200	250	300	350	400
655/5	3/4	10.0	125	188	250	310	375	437	500
		12.0	150	225	300	375	450	525	600

Flow rates for larger nozzles and saturated steam available on request

Custom versions

Model 650 – Flat-jet nozzle

Brazed socket

With bore for brazing or welding to pipes, etc.

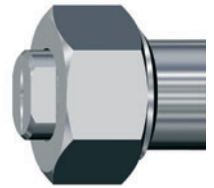


Fig. 09010

Model 650 Form 7-1 – Flat-jet nozzle

With shaft

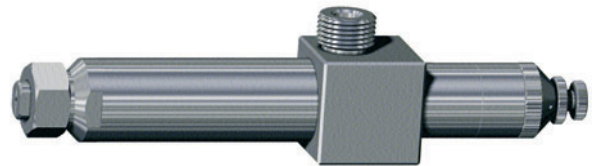


Fig. 09011

Model 656 – Flat-jet nozzle

With ball and socket joint

Can be set in any direction



Fig. 09012

Model 2655 – Flat-jet nozzle

Double flat-jet nozzle



Fig. 09013

Custom designs/specialities

Spray pipe

With flat-jet nozzle Model 650



Fig. 09014

Insertion pipe

With flat-jet nozzle Model 655
and compression ring fitting (olive type)



Fig. 09015

Service spectrum

Pilot test laboratory

Before any new spray nozzles are used we subject them to comprehensive trials in our own test laboratory – if need be to your operational parameters. During these tests, we precisely determine droplet size, velocities and flow densities with our modern DUAL PDA laser-measuring equipment.



Test nozzles

Schlick spray nozzles are world renowned for highest precision. We can offer you the best and most lasting solution to your requirements. And, if you want, we can supply you with test nozzles in advance – just contact us.

Engineering

Take advantage of our comprehensive expertise – from design to installation – the conception of new products or

the optimisation of existing plant. We would be glad to help you improve the success of your operation.

Repair service

As well as competent advice and its inception, you can profit from an efficient after-sales service that guarantees long-term supply of all products. We carry out both repair and conversion of Schlick spray nozzles, and in emergency, we can supply spare parts quickly and reliably.

Onsite service

If required we will investigate and develop an optimal solution to suit individual requirements onsite. We will advise you and give you support during installation and initial start-up of the plant. A further plus is the help available from our worldwide technical field service network.

Custom products

As one of the leading spray nozzle manufacturers in Europe, we can offer both high quality standard solutions and are in the position of developing customised products for individual tasks as fast as possible, even for small production runs.



Documentation to the customer's requirements

Reliability and quality are the basis for successful cooperation with our international customers. This applies both to our products and to our service. If you wish, we will supply you with all necessary documentation such as technical handbooks for the nozzles (drawings, flow diagrams, installation and operating instructions) together with factory and material specifications.



All specifications are subject to change (flow rates/dimensions).

The performance/flow rate specifications quoted are descriptive or product identities and can vary by up to ± 5 percent on delivery.



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