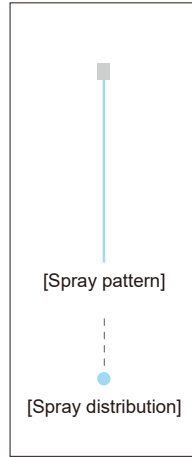


Paper Trimming Nozzles

Some Models are Made-to-Order
CMP-T/CM/CTM



- Extra fine straight solid stream nozzles with high impact cutting force.

[STANDARD PRESSURE]
1.0 MPa

[APPLICATIONS]
Trimming: Paper making
Others: Cleaning of precision machine parts, injection of chemicals, deburring

Solid Stream

CMP-T SERIES (with alumina ceramic orifice)

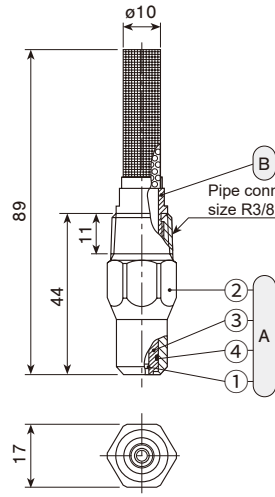
| | |
|-----------|--|
| Structure | <ul style="list-style-type: none"> • Features a high-purity ceramic orifice. Polyamide sleeve molded around a ceramic orifice is pressed into the tip of the nozzle. • Includes a nozzle and a strainer. Worn-out nozzles can be replaced separately. • The sleeve of the CMP-T series is color-coded by orifice diameter (see table on p.102). |
| Material | <ul style="list-style-type: none"> • Nozzle orifice: alumina ceramic • Sleeve: PA • Metal parts: S303 • O-ring: NBR |
| Weight | <ul style="list-style-type: none"> • Complete assembly: 47 g • Nozzle only: 40 g |

[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

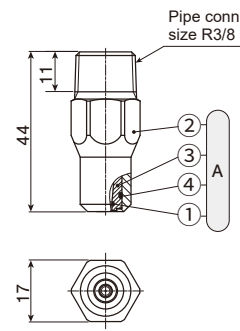
DRAWING

Unit: mm

Complete Assembly



Nozzle Only



① Alumina ceramic orifice ② Nozzle body ③ Sleeve ④ O-ring [NBR]
⑤ Strainer

CM SERIES (with ceramic orifice)

| | |
|-----------|--|
| Structure | <ul style="list-style-type: none"> • Features a ceramic orifice. • Includes a nozzle and a strainer integrated with an adaptor. Worn-out nozzles can be replaced separately. |
| Material | <ul style="list-style-type: none"> • Nozzle orifice: ceramic • Metal parts: S303 |

[Complete Assembly]

| Orifice diameter code | Pipe conn size | Dimensions (mm) | | | | | | Weight (g) |
|-----------------------|----------------|-----------------|----|----|----|----------|----|------------|
| | | L2 | L3 | H1 | H2 | ϕD | N2 | |
| $\phi 0.1-\phi 0.9$ | R3/8 | 54 | 92 | 10 | 17 | 10 | 11 | 39 |
| $\phi 1.0-\phi 1.5$ | R3/8 | 52 | 90 | 14 | 17 | 10 | 11 | 47 |

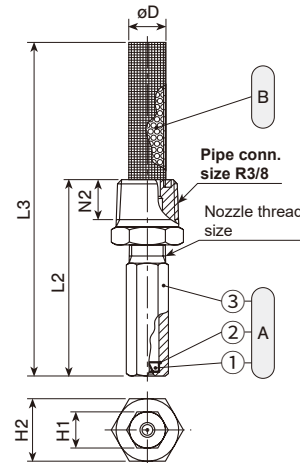
[Nozzle Only]

| Orifice diameter code | Nozzle thread size | Dimensions (mm) | | | Weight (g) |
|-----------------------|--------------------|-----------------|----|------|------------|
| | | L1 | H1 | N1 | |
| $\phi 0.1-\phi 0.9$ | R1/8 | 40 | 10 | 7 | 16.5 |
| $\phi 1.0-\phi 1.5$ | R1/4 | 40 | 14 | 10.5 | 30 |

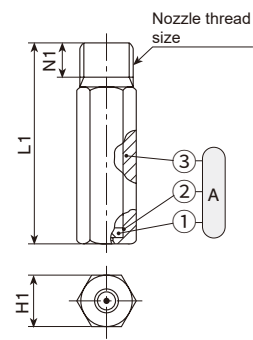
[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

DRAWING

Complete Assembly



Nozzle Only



① Ceramic orifice ② Adhesive: Araldite® ③ Nozzle body
④ Strainer

CTM SERIES (with tungsten carbide orifice)

| | |
|-----------|---|
| Structure | <ul style="list-style-type: none"> Features a tungsten carbide orifice. Includes a nozzle and a strainer integrated with an adaptor. Worn-out nozzles can be replaced separately. |
| Material | <ul style="list-style-type: none"> Nozzle orifice: tungsten carbide Metal parts: S303 |

[Complete Assembly]

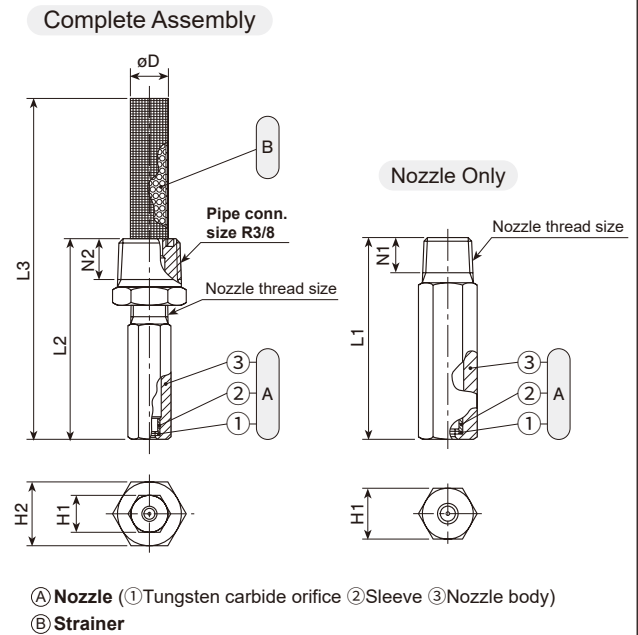
| Orifice diameter code | Pipe conn. size | Dimensions (mm) | | | | | | Weight (g) |
|-----------------------|-----------------|-----------------|----|----|----|----|----|------------|
| | | L2 | L3 | H1 | H2 | øD | N2 | |
| ø0.2-ø0.9 | R3/8 | 54 | 92 | 10 | 17 | 10 | 11 | 39 |
| ø1.0-ø1.5 | R3/8 | 52 | 90 | 14 | 17 | 10 | 11 | 47 |

[Nozzle Only]

| Orifice diameter code | Nozzle thread size | Dimensions (mm) | | | Weight (g) |
|-----------------------|--------------------|-----------------|----|------|------------|
| | | L1 | H1 | N1 | |
| ø0.2-ø0.9 | R1/8 | 40 | 10 | 7 | 16.5 |
| ø1.0-ø1.5 | R1/4 | 40 | 14 | 10.5 | 30 |

[Note] Appearance and dimensions may differ slightly depending on material and nozzle code.

DRAWING



CMP-T, CM SERIES

| Orifice diameter code | CMP-T ^{*2} | CM | Spray capacity (L/min) | | | | | | Strainer mesh size |
|-----------------------|---------------------|-----------------|------------------------|-------|-------|-------|-------|-------|--------------------|
| | | | 0.5 MPa | 1 MPa | 2 MPa | 3 MPa | 4 MPa | 5 MPa | |
| ø0.1 | | ● ^{*1} | 0.010 | 0.014 | 0.019 | 0.024 | 0.027 | 0.03 | 200 |
| ø0.15 | | ● ^{*1} | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.07 | 200 |
| ø0.2 | | ● ^{*1} | 0.04 | 0.05 | 0.08 | 0.09 | 0.11 | 0.12 | 200 |
| ø0.25 | | ● ^{*1} | 0.06 | 0.09 | 0.12 | 0.15 | 0.17 | 0.19 | 200 |
| ø0.3 | ● | ● | 0.09 | 0.12 | 0.17 | 0.21 | 0.25 | 0.27 | 150 |
| ø0.4 | ● | ● | 0.15 | 0.22 | 0.31 | 0.38 | 0.44 | 0.49 | 150 |
| ø0.5 | ● | ● | 0.25 | 0.35 | 0.49 | 0.60 | 0.68 | 0.76 | 80 |
| ø0.6 | ● | ● | 0.36 | 0.51 | 0.71 | 0.86 | 0.99 | 1.10 | 80 |
| ø0.7 | ● | ● | 0.49 | 0.69 | 0.96 | 1.17 | 1.34 | 1.49 | 50 |
| ø0.8 | ● | ● | 0.62 | 0.87 | 1.23 | 1.51 | 1.75 | 1.95 | 50 |
| ø0.9 | ● | ● | 0.78 | 1.10 | 1.56 | 1.91 | 2.21 | 2.47 | 50 |
| ø1.0 | ● | ● ^{*1} | 0.96 | 1.36 | 1.93 | 2.36 | 2.73 | 3.05 | 50 |
| ø1.1 | | ● ^{*1} | 1.17 | 1.65 | 2.33 | 2.86 | 3.30 | 3.69 | 50 |
| ø1.2 | | ● ^{*1} | 1.39 | 1.96 | 2.78 | 3.40 | 3.93 | 4.39 | 50 |
| ø1.3 | | ● ^{*1} | 1.63 | 2.30 | 3.26 | 3.99 | 4.61 | 5.15 | 50 |
| ø1.4 | | ● ^{*1} | 1.89 | 2.67 | 3.78 | 4.63 | 5.34 | 5.98 | 50 |
| ø1.5 | | ● ^{*1} | 2.17 | 3.07 | 4.34 | 5.31 | 6.14 | 6.86 | 50 |

*1) Made-to-order model *2) The color of ● (filled circle) in the CMP-T series indicates the sleeve color coded by orifice diameter.

[Note] The above nozzles are manufactured for specific orifice diameters, therefore the spray capacity is not guaranteed.

CTM SERIES

| Orifice diameter code | CTM | Spray capacity (L/min) | | | | | | Strainer mesh size |
|-----------------------|-----------------|------------------------|-------|-------|-------|-------|-------|--------------------|
| | | 0.5 MPa | 1 MPa | 2 MPa | 3 MPa | 4 MPa | 5 MPa | |
| ø0.2 | ● ^{*1} | 0.04 | 0.05 | 0.07 | 0.09 | 0.10 | 0.12 | 200 |
| ø0.25 | ● ^{*1} | 0.06 | 0.08 | 0.11 | 0.14 | 0.16 | 0.18 | 200 |
| ø0.3 | ● | 0.08 | 0.12 | 0.16 | 0.20 | 0.23 | 0.26 | 150 |
| ø0.4 | ● | 0.15 | 0.21 | 0.29 | 0.36 | 0.41 | 0.46 | 150 |
| ø0.5 | ● | 0.23 | 0.32 | 0.46 | 0.56 | 0.64 | 0.72 | 80 |
| ø0.6 | ● | 0.33 | 0.46 | 0.66 | 0.80 | 0.93 | 1.04 | 80 |
| ø0.7 | ● | 0.45 | 0.63 | 0.89 | 1.09 | 1.26 | 1.41 | 50 |
| ø0.8 | ● | 0.58 | 0.82 | 1.16 | 1.43 | 1.65 | 1.84 | 50 |
| ø0.9 | ● | 0.74 | 1.04 | 1.47 | 1.81 | 2.08 | 2.33 | 50 |
| ø1.0 | ● ^{*1} | 0.91 | 1.29 | 1.82 | 2.23 | 2.57 | 2.88 | 50 |
| ø1.1 | ● ^{*1} | 1.10 | 1.56 | 2.20 | 2.70 | 3.11 | 3.48 | 50 |
| ø1.2 | ● ^{*1} | 1.31 | 1.85 | 2.62 | 3.21 | 3.71 | 4.14 | 50 |
| ø1.3 | ● ^{*1} | 1.54 | 2.18 | 3.08 | 3.77 | 4.35 | 4.86 | 50 |
| ø1.4 | ● ^{*1} | 1.78 | 2.52 | 3.57 | 4.37 | 5.05 | 5.64 | 50 |
| ø1.5 | ● ^{*1} | 2.05 | 2.90 | 4.10 | 5.02 | 5.79 | 6.48 | 50 |

*1) Made-to-order model

[Note] The above nozzles are manufactured for specific orifice diameters, therefore the spray capacity is not guaranteed.

HOW TO ORDER

To inquire about or order a specific nozzle please refer to this coding system.

CMP-T**① Complete Assembly (Nozzle and Strainer)**Example: 3/8M CMP \emptyset 0.3 T S303 W

| | | | | | |
|------------------------------|------------|--|----------|-------------|----------|
| 3/8M | CMP | \emptyset0.3 | T | S303 | W |
| Pipe conn. size ³ | Series | Orifice diameter code | Material | Material | Strainer |
| | | <input type="checkbox"/> \emptyset 0.3 <input type="checkbox"/> \emptyset 1.0 | | | |

② Nozzle OnlyExample: 3/8M CMP \emptyset 0.3 T S303

| | | | | |
|------------------------------|------------|--|----------|-------------|
| 3/8M | CMP | \emptyset0.3 | T | S303 |
| Pipe conn. size ³ | Series | Orifice diameter code | Material | Material |
| | | <input type="checkbox"/> \emptyset 0.3 <input type="checkbox"/> \emptyset 1.0 | | |

CM**① Complete Assembly (Nozzle and Strainer)**Example: 3/8M CM \emptyset 0.1 S303 W (PM-Strainer \emptyset 10)

| | | | | | |
|------------------------------|-----------|--|-------------|----------|---|
| 3/8M | CM | \emptyset0.1 | S303 | W | (PM-Strainer \emptyset10) |
| Pipe conn. size ³ | Series | Orifice diameter code ⁴ | Material | Material | Strainer |
| | | <input type="checkbox"/> \emptyset 0.1 <input type="checkbox"/> \emptyset 1.5 | | | |

② Nozzle OnlyExample: 1/8M CMP \emptyset 0.1 S303

| | | | |
|--|------------|--|-------------|
| 1/8M | CMP | \emptyset0.1 | S303 |
| Nozzle thread size ³ | Series | Orifice diameter code ⁴ | Material |
| <input type="checkbox"/> 1/8M (for \emptyset 0.1– \emptyset 0.9) <input type="checkbox"/> 1/4M (for \emptyset 1.0– \emptyset 1.5) | | <input type="checkbox"/> \emptyset 0.1 <input type="checkbox"/> \emptyset 1.5 | |

CTM**① Complete Assembly (Nozzle and Strainer)**Example: 3/8M CTM \emptyset 0.2 S303 W (PM-Strainer \emptyset 10)

| | | | | | |
|------------------------------|------------|--|-------------|----------|---|
| 3/8M | CTM | \emptyset0.2 | S303 | W | (PM-Strainer \emptyset10) |
| Pipe conn. size ³ | Series | Orifice diameter code ⁴ | Material | Material | Strainer |
| | | <input type="checkbox"/> \emptyset 0.2 <input type="checkbox"/> \emptyset 1.5 | | | |

② Nozzle OnlyExample: 1/8M CTMP \emptyset 0.2 S303

| | | | |
|--|-------------|--|-------------|
| 1/8M | CTMP | \emptyset0.2 | S303 |
| Nozzle thread size ³ | Series | Orifice diameter code ⁴ | Material |
| <input type="checkbox"/> 1/8M (for \emptyset 0.2– \emptyset 0.9) <input type="checkbox"/> 1/4M (for \emptyset 1.0– \emptyset 1.5) | | <input type="checkbox"/> \emptyset 0.2 <input type="checkbox"/> \emptyset 1.5 | |

*3) "M" indicates male thread ("R" of the ISO standard), e.g. 3/8M = R3/8.

*4) The CTM/CM series with orifice diameters of \emptyset 0.1–0.25 and \emptyset 1.0–1.5 are made-to-order. \emptyset 0.1 and \emptyset 0.15 are available only for the CM series.