スプレーノズル カタログ

Spray nozzle catalog

NIIKURA KOGYO CO., LTD.

新倉工業は「技術の新倉」として、１９５０年の創業以来、舶用トップクラスの実績を誇っております。
舶用艤装品で培った技術・ノウハウを広く活用し
陸上プラント用製品、スプレーノズルの設計・開発・製造・販売、アフターサービスまで一貫体制で行っております。
人を創り、高品質な製品を創り、お客様をサポートする「製造サービス業」としてさらに飛躍します。

Niikura Kogyo, reputed as “Niikura, the pioneer of innovative technology,” has been a leading manufacturer of marine products for more than since its founding in 1950.
Making extensive use of the technology and know-how we have accumulated from marine fittings, we design, development manufacture and sell spray nozzles and provide after-sales services through an integrated system.
We will make greater strides as a “manufacturing and service company” that develops people, creates high-quality products, and supports customers.

企業理念　Corporate Philosophy

我社はお客様に常に最高の製品サービスを提供し製造サービス業として社会に貢献する。
Niikura Kogyo, as a manufacturing and service company, contributes to society by constantly manufacturing and providing unparalleled products and services for customers.

社業を通じて社会の発展に貢献し社会に望まれる企業を目指す。
Niikura Kogyo strives to become a company that contributes to the development of society through our business and is desired and required by society.

沿　革　History

1950年 10月　舶用艤装品機器の設計製作を目的として、東京都中央区に新倉工業㈱を設立
1950 October Niikura Kogyo Co., Ltd. was founded in Chuo-ku, Tokyo with the aim of designing and manufacturing marine fittings and equipment.

1971年　2月　生産部門増強のため、福島工場を建設
1971 February Fukushima Factory was constructed to reinforce production departments.

1992年　1月　新倉本社ビルを建設
1992 January New Niikura Kogyo Head Office building was constructed.

2011年　3月　本社を富士御殿場工場に移転
2011 March Head office was relocated to the Fuji Gotemba Factory.

2011年　5月　ISO9001 取得
2011 May Niikura Kogyo acquired ISO 9001 certification.

2015年　4月　㈱トップコートと資本提携
2015 April Niikura Kogyo entered a capital tie-up with Top Coat Co., Ltd.

2015年　9月　佐賀鋳物㈱と資本提携
2015 September Niikura Kogyo entered a capital tie-up with Saga Imono Foundry Co., Ltd.

2016年 10月　新倉本社ビル閉鎖
2016 October Niikura Kogyo Head Office building was closed.

2020年　1月　台湾支店設立
2020 January Taiwan Branch was founded.

2021年　9月　㈱東進との業務提携
2021 September Niikura Kogyo entered a business tie-up with Toshin Co., Ltd.

2022年　7月　シンガポール支店設立
2022 July Singapore Branch was founded.

2024年　9月　シンガポール支店を NIIKURA SINGAPORE PTE.LTD. として分社化
2024 September Singapore branch has been spun off as NIIKURA SINGAPORE PTE.LTD.

拠　点　Location

本社／富士御殿場工場　Head office and Factories

富士御殿場工場　A 棟
Fuji Gotemba Factory Building A

富士御殿場工場　B 棟
Fuji Gotemba Factory Building B

B 棟内 開発試験場
Development laboratory in Building B

グループ企業　Group companies

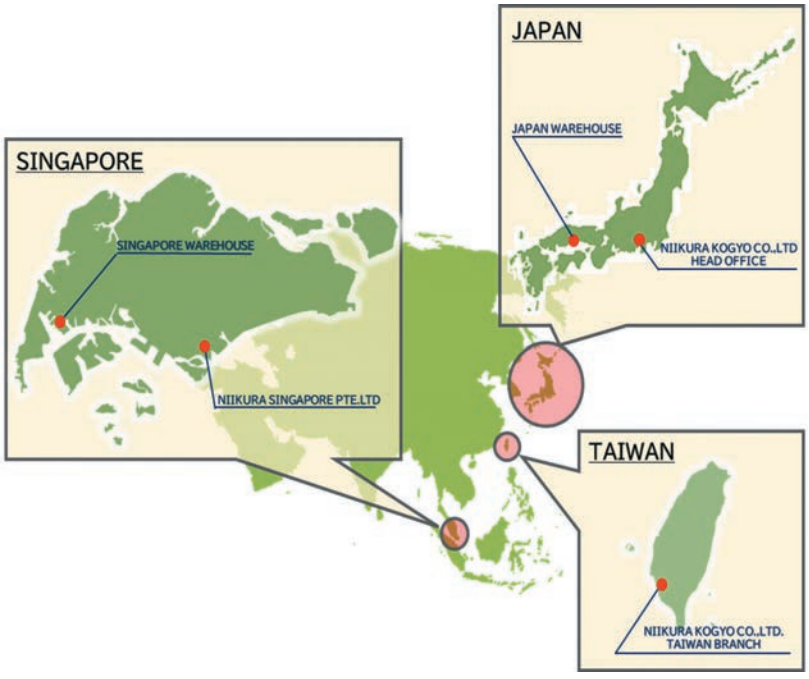
NIIKURA SINGAPORE Pte. Ltd.
2024 年 9 月分社化
Niikura Singapore Pte. Ltd.
Spin off in September 2024

佐賀鋳物株式会社（佐賀県）
2015 年 9 月資本提携
Saga Imono Foundry Co., Ltd.
(Saga Prefecture)
Capital tie-up entered in September, 2015

株式会社トップコート（C 棟）
2015 年 4 月資本提携
Top Coat Co., Ltd.
(Building C)
Capital tie-up entered in April, 2015

台湾支店　Taiwan Branch

2020 年 1 月設立
Taiwan branch established in January, 2020



使用業界と型式（例）User industries and models (examples)

製鉄・製鋼 Ironmaking and steelmaking

- 連続鋳造設備 Continuous casting equipment
- 連続圧延設備 Continuous rolling equipment
- 鋼材冷却／洗浄 Cooling and washing of steel materials
- 鋼材表面処理 Steel material surface treatment
- 鋼材スケール除去 Removal of scale from steel materials

- 円形全面撒水型 FULL CONE SPRAY
- フラット撒水型 FLAT SPRAY
- 二流体噴霧ノズル MICROMIZER (PNEUMATIC ATOMIZING NOZZLE)

石油化学 Petrochemicals

- 医科学薬品配合 Medical drug formulation
- 石油化学品混合 Petrochemical product compounding
- 精製塔反応塔内 Insides of refinement towers and reaction towers
- 化学薬品製造設備 Chemical manufacturing equipment
- 石油化学プロセス Petrochemical processes

- 円形全面撒水型 FULL CONE SPRAY
- 円環撒水型 HOLLOW CONE SPRAY
- フラット撒水型 FLAT SPRAY

下水／排水設備 Sewage and drainage equipment

- 曝気槽消泡 Defoaming of aeration tanks
- スカム破砕 Scum crushing
- 薬剤散布 Chemical spraying
- 脱臭 Deodorization

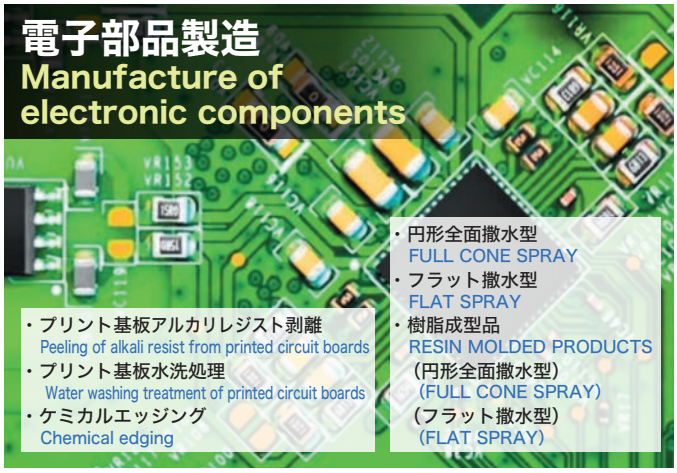
- 円形全面撒水型 FULL CONE SPRAY
- 四角形全面撒水型 FULL CONE SQUARE SPRAY
- フラット撒水型 FLAT SPRAY
- 超広角フラット撒水型 FLAT SUPER WIDE ANGLE SPRAY

船舶 Ships

- 消火設備 Fire extinguishing equipment
- ガスタンク冷却 Gas tank cooling
- タンク洗浄 Tank washing
- 海賊対策 Antipiracy measures

- 円環撒水型 HOLLOW CONE SPRAY
- 円形全面撒水型 FULL CONE SPRAY
- フラット撒水型 FLAT SPRAY
- クリアボール CLEAR BALL （フォグジェット円形全面撒水型） (FULL CONE FOG JET SPRAY)
- 回転洗浄機 Rotary washing machine

電子部品製造 Manufacture of electronic components



- プリント基板アルカリレジスト剥離 Peeling of alkali resist from printed circuit boards
- プリント基板水洗処理 Water washing treatment of printed circuit boards
- ケミカルエッジング Chemical edging

- 円形全面撒水型 FULL CONE SPRAY
- フラット撒水型 FLAT SPRAY
- 樹脂成型品 RESIN MOLDED PRODUCTS （円形全面撒水型） (FULL CONE SPRAY) （フラット撒水型） (FLAT SPRAY)

原子力発電設備 Nuclear power Plant equipment

- 原子炉圧力容器 Reactor pressure vessels
- 原子炉格納容器 Reactor containment vessels
- 原子力排水廃液処理 Nuclear wastewater and effluent treatment

- 円形全面撒水型 FULL CONE SPRAY
- 円環撒水型 HOLLOW CONE SPRAY
- フラット撒水型 FLAT SPRAY
- フォグジェット円形全面撒水型 FULL CONE FOG JET SPRAY

農園芸／土木 Agriculture and horticulture and civil engineering

- 農薬消毒薬散布 Pesticide and disinfectant spraying
- ハウス内加湿調湿 Humidification and humidity control in greenhouses
- 公園庭園内撒水／噴水 Water sprinkling and fountains in parks and gardens
- 屋根冷却／融雪 Roof cooling and thawing

- 円形全面撒水型 FULL CONE SPRAY
- 円環撒水型 HOLLOW CONE SPRAY
- フラット撒水型 FLAT SPRAY
- 二流体噴霧ノズル MICROMIZER (PNEUMATIC ATOMIZING NOZZLE)

食品製造 Food manufacture

- 粉末食品スプレードライヤー Powder food spray dryers
- 食器洗浄機 Dishwashers
- 消毒液噴霧 Antiseptic solution spraying
- 食用油噴霧 Edible oil spraying

- 円形全面撒水型 FULL CONE SPRAY
- 円環撒水型 HOLLOW CONE SPRAY
- フラット撒水型 FLAT SPRAY
- 二流体噴霧ノズル MICROMIZER (PNEUMATIC ATOMIZING NOZZLE)

上記用途はスプレーノズルに於ける用途と型式の一例で、掲載例以外の種々の用途にご利用頂けます。
The applications shown above are examples of the applications and models of spray nozzles, and they can be used for other various applications in addition to the application examples listed.

使用用途と型式（例）Applications and models (examples)

公害防止 Pollution prevention

- 排ガス冷却 Exhaust gas cooling
- 排ガス吸収 Exhaust gas absorption
- 排ガス洗浄 Exhaust gas cleaning
- 排煙脱硫 Flue gas desulfurization
- 排煙脱硝 Flue gas denitrification

- 円形全面撒水型 FULL CONE SPRAY
- 円環撒水型 HOLLOW CONE SPRAY
- 二流体噴霧ノズル MICROMIZER (PNEUMATIC ATOMIZING NOZZLE)

洗浄（自動・固定） Washing (automatic/fixed)

- 発酵槽／飲食品貯槽／酒類樽 Fermenters, food and beverage storage tanks and liquor casks
- サイロ／コンテナ／反応釜 Silos, containers and reaction kettles
- 蒸留塔／パルプチェスト Distillation columns and pulp chests
- タンクローリー／タンカー Tanker lorries and tankers

- 円形面撒水型 FULL CONE SPRAY
- フラット撒水型 FLAT SPRAY
- クリアボール CLEAR BALL （フォグジェット円形全面撒水型）(FULL CONE FOG JET SPRAY)
- 回転洗浄機 Rotary washing machine

防災 Disaster prevention

- 各種貯槽塔冷却 Cooling of various storage tanks and towers
- 液化ガス容器冷却 Cooling of liquefied gas containers
- 可燃物製造装置冷却保護 Cooling and protection of combustible material manufacturing devices
- 可燃性毒性ガス遮断水幕 Flammable/Toxic gas shut-off water curtains
- 延焼防止水幕 Flame propagation prevention water curtains

- 円形全面撒水型 FULL CONE SPRAY
- 四角形全面撒水型 FULL CONE SQUARE SPRAY
- フラット撒水型 FLAT SPRAY

涼感 Cool feeling

- 教育機関 Educational institutions
- 公園 Parks
- ドックラン Dog parks
- ゴルフ場 Golf course
- 駅 Stations
- 工場 Factories

- MISTDIY MISTDIY
- 二流体噴霧ノズル MICROMIZER (PNEUMATIC ATOMIZING NOZZLE)

冷却 Cooling

- 連続圧延設備の鋼材冷却 Cooling of steel materials in continuous rolling equipment
- 各種貯槽塔槽の冷却 Cooling of various storage tanks and towers
- 液化ガス容器の冷却 Cooling of liquefied gas containers
- 可燃物製造装置の冷却保護 Cooling and protection of combustible material manufacturing devices

- 円形全面撒水型 FULL CONE SPRAY
- 四角形全面撒水型 FULL CONE SQUARE SPRAY
- フラット撒水型 FLAT SPRAY
- 二流体噴霧ノズル MICROMIZER (PNEUMATIC ATOMIZING NOZZLE)

消泡 Defoaming

- 曝気槽の消泡 Defoaming of aeration tanks
- スカム破砕 Scum crushing

- フラット撒水型 FLAT SPRAY

加湿 Humidification

- キノコ栽培 Mushroom cultivation
- ハウス栽培 Greenhouse cultivation

- MISTDIY MISTDIY
- 二流体噴霧ノズル MICROMIZER (PNEUMATIC ATOMIZING NOZZLE)

撒水 Water sprinkling

- 道路 Roads
- 公園 Parks
- 屋根 Roofs

- 円形全面撒水型 FULL CONE SPRAY
- 四角形全面撒水型 FULL CONE SQUARE SPRAY
- フラット撒水型 FLAT SPRAY

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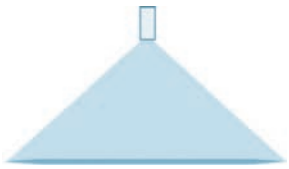
フラット撒水型 FLAT SPRAY		フラット散水型 FLAT SPRAY	EX6	47 - 48
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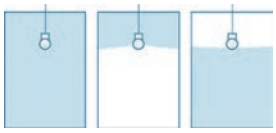
洗浄機等 WASHING MACHINE etc.		クリアボール （フォグジェット円形全面撒水型） CLEAR BALL（FULL CONE FOG JET SPRAY）	CB4	65 - 66
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	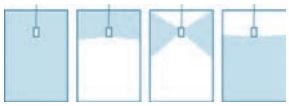	回転式スプリンクラーノズル ROTATING TYPE SPRINKLER SPARY	SPR-E15	69 - 70
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	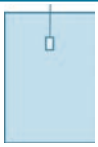	回転洗浄機 ROTARY WASHING MACHINE	JW-25	73 - 74
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	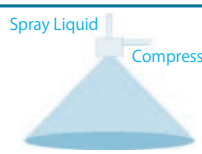	ミクロマイザー（二流体噴霧ノズル） MICROMIZER (AIR ATOMIZING NOZZLE)	PSA2	82
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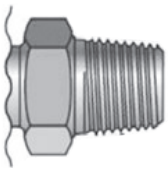
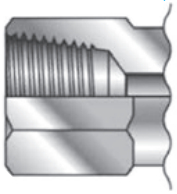
スプレーノズル選定要素 Elements for the selection of spray nozzles

型番選定 Selection of model number

(例)
Example: ❶ M ❷ 1/4 ❸ EX2 ❹ 3 ／ SUS316

- ❹ 材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- ❸ 設計圧(0.2MPa)時の撒水量(流量) L/min【3.0L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.0 L/min]
- ❷ 型番タイプ【広角円形全面撒水型：EX2】 Model number type [wide-angle circular water sprinkling pattern type over entire surface: EX2]
- ❶ 接続ネジサイズ Connection thread size → 【管用テーパオネジ1/4M（R1/4）】 [Taper thread for piping 1/4 (R1/4)]
  - M：オネジ（R） Male Thread (R)
  - F：メネジ（Rc） Female thread (Rc)


M:テーパオネジ(R) M:Male thread(R)


F:テーパメネジ(Rc) F:Female thread(Rc)

❶ 接続 Connection

JIS B 0203:1999,ISO 7/1,BS21 管用テーパオネジ（R）　例：M1/4 = R/1/4
JIS B 0203:1999, ISO 7/1, BS21 Tapered male thread for pipes (R) Example: M1/4 = R/1/4
JIS B 0203:1999,ISO 7/1,BS21 管用テーパメネジ（Rc）例：F1/4 = Rc1/4
JIS B 0203:1999, ISO 7/1, BS21 Tapered female thread for pipes (Rc) Example: F1/4 = Rc1/4
ANSI/ASME B 1.20.1 アメリカ管用テーパネジ（NPT）　例：NPT1/4M（F）
ANSI/ASME B 1.20.1 American pipe taper thread (NPT) Example: NPT1/4M (F)
JIS B 2220:2012 ステンレス鋼フランジ
JIS B 2220:2012 stainless steel flange

❷ 撒水パターン Water sprinkling pattern

全面撒水型 FULL CONE SPRAY

円形 CIRCLE

広角円形全面散水型 EX2
FULL CONE WIDE ANGLE SPRAY

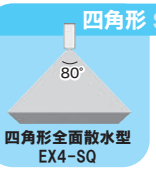
超広角円形全面散水型 EX2-W
FULL CONE SUPER WIDE ANGLE SPRAY

円形全面散水型 EX4
FULL CONE ANGLE SPRAY

コアレス円形全面散水型 EX4-HN
FULL CONE CORELESS SPRAY

狭角円形全面撒水型 EX4-N
FULL CONE NARROW SPRAY

四角形 SQUARE

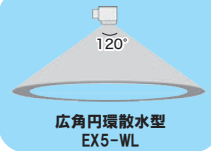


四角形全面散水型 EX4-SQ
FULL CONE SQUARE SPRAY

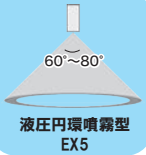
広角四角形全面散水型 EX2-SQ
FULL CONE WIDE ANGLE SQUARE SPRAY

円環撒水型 HOLLOW CONE SPRAY

円環散水型 EX5-L
HORROW CONE SPRAY

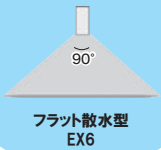


広角円環散水型 EX5-WL
HORROW CONE WIDE ANGLE SPRAY

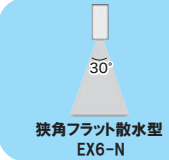


液圧円環噴霧型 EX5
HORROW CONE HYDRAULIC MIST SPRAY

フラット撒水型 FLAT SPRAY



フラット散水型 EX6
FLAT SPRAY



狭角フラット散水型 EX6-N
FLAT NARROW ANGLE SPRAY

狭角フラット散水型 EX6-M
FLAT MIDDLE ANGLE SPRAY

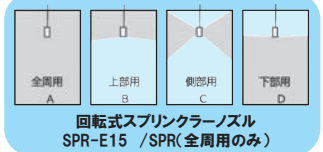
広角フラット散水型 EX6-W
FLAT WIDE ANGLE SPRAY

超広角フラット散水型 FN / DFN
FLAT SUPER WIDE ANGLE SPRAY

その他 OTHERS


円形全面散水型 FG4
FULL CONE FOG JET SPRAY

クリアボール CB4
CLEAR BALL



回転式スプリンクラーノズル SPR-E15 /SPR(全周用のみ)
SPRINKLER SPRAY

回転洗浄機 JW-25/JWP-40
JET WASHER TANK CLEANING GEAR


棒状直進噴射型 EX6-O
SOLID JET NON ANGLE SPRAY

二流体噴霧ノズル PSA2
AIR ATOMIZING NOZZLE


ミスト噴霧ノズル MIST DIY
MIST SPRAY NOZZLE

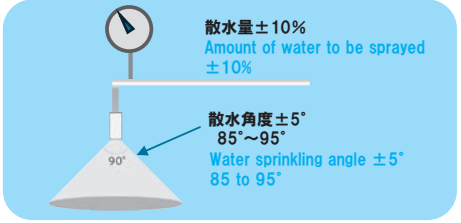
❸ 撒水量 Amount of water to be sprayed

必要な散水量を確認してください。
Check the required amount of water to be sprayed.
弊社では設計圧※1を基準として製品型式を設定しております。
We set product models based on design pressures*1.

※1…接続箇所（スプレーノズル直前（1次側））の圧力
*1…Pressure at one connection point
[just before the spray nozzle (primary side)]

品質精度 Quality accuracy

社内検査を右記の基準で実施しております。
We perform internal inspections in accordance with the following criteria:



※社内検査は常温上水で実施しております。
*We perform internal inspections using ordinary-temperature tap water.

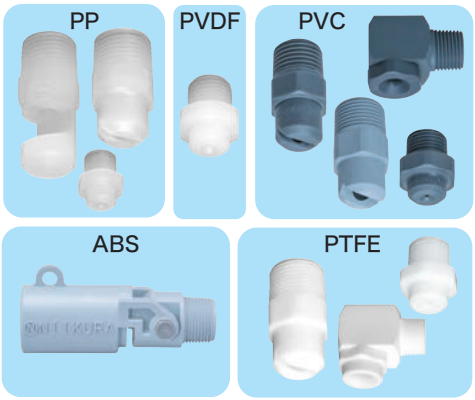
❹ 材質 Material

ステンレス鋼
Stainless Steel
SUS304　SUS316
SUS316L

ステンレス鋼鋳鋼
Cast stainless steel
SCS13　SCS14
SCS16

黄銅（真鍮）
Brass
C3604B　BSCR（クロムメッキ）
(chromium-plated)

樹脂 Resin
PP　PVC　PTFE　PVDF　ABS



				SUS304 ステンレス鋼 304 Stainless steel 304 SCS13 鋳造 ステンレス鋼 304相当 Equivalent to caststainless steel 304	SUS316 ステンレス鋼 316 Stainless stee 316 SCS14 鋳造 ステンレス鋼 316相当 Equivalent to cast stainless steel 316	SUS316L ステンレス鋼 316L Stainless steel 316L SCS16 鋳造 ステンレス鋼 316L Equivalent to cast stainless steel 316L	C3604B 真鍮 Brass	PP ポリプロピレン Polypropylene	PVC ポリ塩化ビニル Polyvinyl chloride	PTFE ポリテトラフルオロエチレン Polytetrafluoroethylene	PVDF ポリビニリデンフルオライド Polyvinylidene fluoride	ABS ABS樹脂 ABS resin
耐熱性 耐寒性 Heat resistance Cold resistance	耐熱温度（℃） Heat-resistant temperature(℃)			800			400	90	80	250	150	90
	使用推奨温度（℃） Recommended operating temperature(℃)			500以下 500 or less			150以下 150 or less	80以下 80 or less	60以下 60 or less	200以下 200 or less	100以下 100 or less	70以下 70 or less
	耐寒温度（℃） Cold-resistant temperature(℃)			-273			-196	0	-20	-250	-40	-
耐薬品性 Chemical resistance		濃度(%) Concentration (%)	温度(℃) Temperature (℃)									
	塩酸 Hydrochloric acid	20	80	×	×	×	×	○	△	○	○	△
		38	20	×	×	×	×	○	○	○	○	△
	硝酸 Nitric acid	30	70	○	○	○	×	△	×	○	○	×
	硫酸 Sulfuric acid	30	20	×	×	×	×	○	○	○	○	○
		98	20	△	△	○	×	△	△	○	○	×
	ｱﾝﾓﾆｱ(無水) Ammonia (anhydrous)	—	—	○	○	○	△	○	○	○	○	○
	ｱﾝﾓﾆｱ水(28℃) Aqueous ammonia(28℃)	—	—	○	○	○	△	○	○	○	○	○
	苛性ソーダ Caustic soda	30	20	○	○	○	×	○	○	○	△	○
		30	70	○	○	○	×	○	△	△	△	△
	アセトン Acetone	—	—	○	○	○	○	△	×	○	×	×
	エチルアルコール Ethyl alcohol	—	—	○	○	○	○	○	○	○	○	△

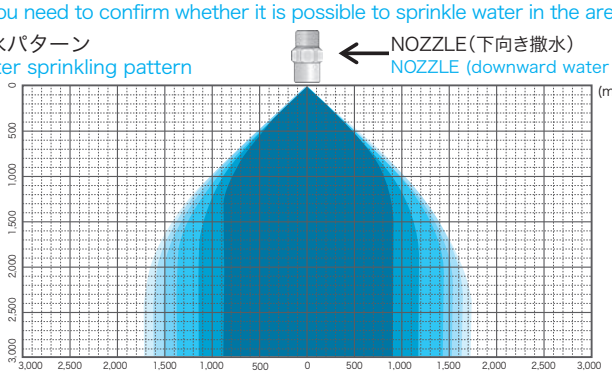
※上表は参考資料となります。製品における保証値ではありません。
*The table shown above is a reference material. It does not show guaranteed values for products.
※使用条件（温度･圧力･流量）、使用環境により薬品の影響は異なります。
*The impacts of chemicals depend on the operating conditions (temperature, pressure, flow rate) and the use environment.

○：使用可
○：Usable
△：注意して使用（影響を受けることが考えられる）
△：Use with care (the material may be affected).
×：使用不可
×：Unusable

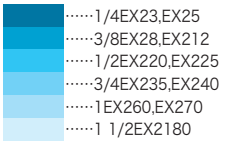
撒水範囲 Water sprinkling pattern

ご使用目的の範囲に散水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

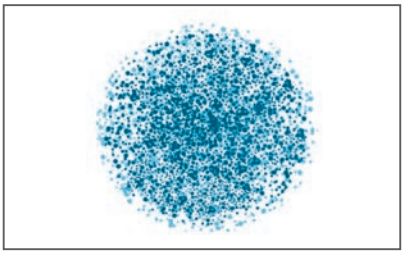
撒水パターン
Water sprinkling pattern



※圧力0.2MPa時
*At pressure of 0.2MPa



撒水イメージ Image of water sprinkling
上から見た撒水図
Water spraying diagram from above



スプレーノズル選定用技術資料 Technical information for spray nozzle selection

1．スプレーパターン Spray Pattern

スプレーノズルの撒水角度からの理論上の広がりは表1.及び図1.の通りですが、
スプレーパターンはノズルの型式・撒水圧力等の諸条件により異なります。

The theoretical spread based on the spray nozzle's spray angle is as shown in Table 1 and Figure 1,
but the spray pattern will change depending on various conditions such as the nozzle type and spray pressure.

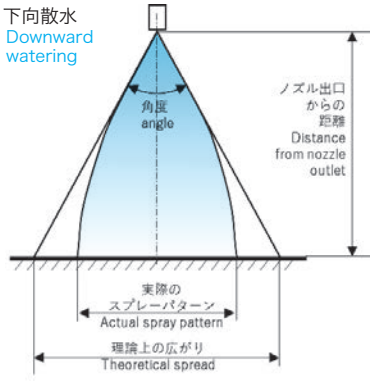
◆ 表1．スプレーノズルの撒水角度からの理論上の広がり
Table 1. Theoretical spread from spray nozzle water spray angle

(mm)

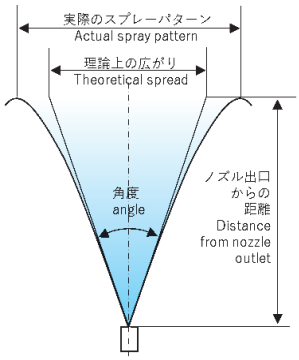
撒水角度 Water spray angle	スプレーノズル出口からの各距離に於ける理論上の広がり Theoretical spread at each distance from the spray nozzle exit													
	50	100	150	200	250	300	400	500	600	700	800	900	1,000	1,500
5°	4	9	13	18	22	26	35	44	52	61	70	79	87	131
10°	9	18	26	35	44	53	70	88	105	122	140	158	175	262
15°	13	26	40	53	66	79	105	132	158	184	211	237	263	395
20°	18	35	53	71	88	106	141	176	212	247	282	317	353	529
25°	22	44	67	89	111	133	177	222	266	310	355	399	443	665
30°	27	54	80	107	134	161	214	268	322	375	429	482	536	804
35°	32	63	95	126	158	189	252	315	378	441	504	568	631	946
40°	36	73	109	146	182	218	291	364	437	510	582	655	728	1,092
45°	41	83	124	166	207	249	331	414	497	580	663	746	828	1,243
50°	47	93	140	187	233	280	373	466	560	653	746	839	933	1,399
55°	52	104	156	208	260	312	416	521	625	729	833	937	1,041	1,562
60°	58	115	173	231	289	346	462	577	693	808	924	1,039	1,155	1,732
65°	64	127	191	255	319	382	510	637	764	892	1,019	1,147	1,274	1,911
70°	70	140	210	280	350	420	560	700	840	980	1,120	1,260	1,400	2,101
75°	77	153	230	307	384	460	614	767	921	1,074	1,228	1,381	1,535	2,302
80°	84	168	252	336	420	503	671	839	1,007	1,175	1,343	1,510	1,678	2,517
85°	92	183	275	367	458	550	733	916	1,100	1,283	1,466	1,649	1,833	2,749
90°	100	200	300	400	500	600	800	1,000	1,200	1,400	1,600	1,800	2,000	3,000
95°	109	218	327	437	546	655	873	1,091	1,310	1,528	1,746	1,964	2,183	3,274
100°	119	238	358	477	596	715	953	1,192	1,430	1,668	1,907	2,145	2,384	3,575
110°	143	286	428	571	714	867	1,143	1,430	1,714	1,999	2,285	2,571	2,856	–
120°	173	346	520	693	866	1,039	1,386	1,732	2,078	2,425	2,771	3,117	3,464	–
130°	214	429	643	858	1,072	1,287	1,716	2,145	2,573	3,002	3,431	3,860	–	–
140°	275	549	824	1,099	1,374	1,648	2,198	2,747	3,297	3,846	–	–	–	–
150°	373	747	1,120	1,493	1,866	2,240	2,986	3,733	–	–	–	–	–	–
160°	567	1,134	1,702	2,269	2,837	3,403	–	–	–	–	–	–	–	–
170°	1,143	2,285	3,429	–	–	–	–	–	–	–	–	–	–	–

◆ 図1．スプレーノズルの撒水方向によるスプレーパターン
Figure 1. Spray pattern depending on the direction of spray nozzle

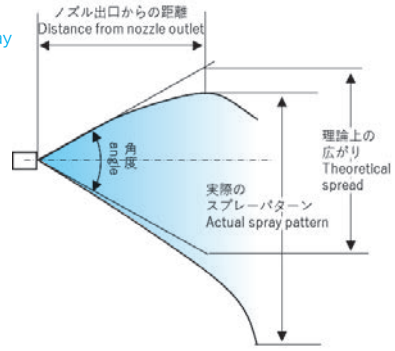
下向散水 Downward watering



上向散水 Upward watering



横向散水 Horizontal water spray



2．撒水量 Amount of water sprayed

撒水量（Q_1L/min）は圧力（P_1MPa）の平方根にほぼ比例しますので、
カタログに表記されていない圧力（P_2MPa）に於ける撒水量（Q_2L/min）を求める場合には、式（a）にて概算値を出すことが出来ます。
また、撒液量（Q_3L/min）の比重（γ'_3）が水の比重（γ=1）と異なる場合には、式（b）にて撒水量（QL/min）に換算してからご選定下さい。

Since the amount of water sprayed (Q1L/min) is roughly proportional to the square root of the pressure (P1MPa), when determining the amount of water sprayed (Q2L/min) at a pressure (P2MPa) not listed in the catalogue, a rough estimate can be obtained using formula (a). Also, if the specific gravity (γ'3) of the amount of water sprayed (Q3L/min) differs from the specific gravity of water (γ=1), please convert it to the amount of water sprayed (QL/min) using formula (b) before making your selection.

式 formula (a) $\dfrac{Q_1}{\sqrt{P_1}} = \dfrac{Q_2}{\sqrt{P_2}}$

式 formula (b) $Q = Q_3\sqrt{\gamma'_3}$

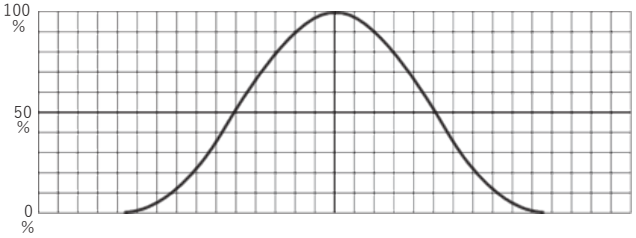
3. 撒水量分布と衝撃力分布 Water distribution and impact force distribution

撒水量分布と衝撃力分布とを分布曲線にて表すと図.2の様に同等の曲線になりますが、
スプレーノズル型式、撒水状態、計測位置、撒水圧力等の諸条件により異なります。
また、フラット撒水型には、図2-(1)のテーパーフラット撒水型と図2-(2)のイーブンフラット撒水型とがあり、
標準品のフラット撒水型は全てテーパーフラット撒水型ですので、イーブンフラット撒水型をご使用の際は、その旨ご指示願います。

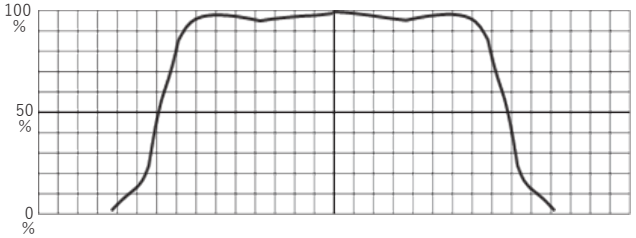
If the water spray volume distribution and the impact force distribution are represented by distribution curves, they will be equivalent as shown in Figure 2, but this will vary depending on various conditions such as the spray nozzle type, water spraying conditions, measurement position, water spray pressure, etc. Also, there are two types of flat water spray types: the tapered flat water spray type in Figure 2-(1) and the even flat water spray type in Figure 2-(2), and as all standard flat water spray types are tapered flat water spray types, please specify if you would like to use the even flat water spray type.

◆ 図2.撒水量分布と衝撃力分布
Figure 2. Water distribution & Impact force distribution

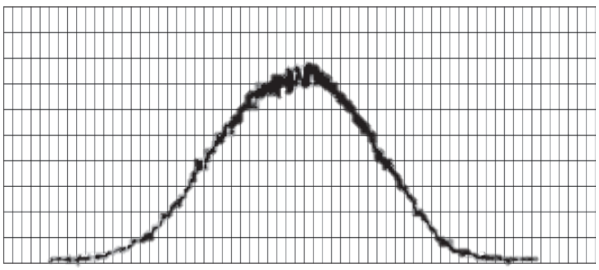
撒水量分布（1）
Water distribution (1)



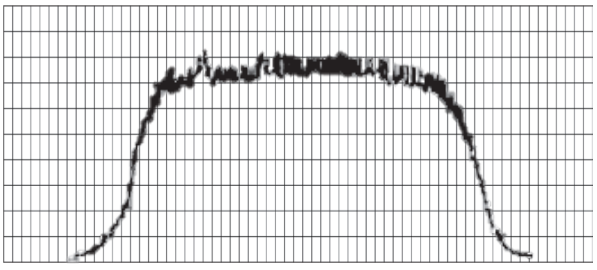
撒水量分布（2）
Water distribution (2)



衝撃力分布（1）
Impact force distribution (1)



衝撃力分布（2）
Impact force distribution (2)



4. 粒子径 Particle size

スプレーノズルから撒水された液の粒子径はスプレーノズル型式、撒水形状、撒水圧力、撒水量、撒水角度等の諸条件により異なります。
一般的には、同じ撒水圧力であれば撒水量が多いほど粗粒となり、同じスプレーノズルであれば撒水圧力が低いほど粗粒となります。

The particle size of the liquid sprayed from a spray nozzle varies depending on various conditions such as the spray nozzle type, spray shape, spray pressure, spray volume, spray angle, etc. Generally, with the same spray pressure, the greater the amount of water sprayed, the coarser the particles will be, and with the same spray nozzle, the lower the spray pressure, the coarser the particles will be.

技術資料 Technical documentation

◆ 1. 単位換算表 Unit Conversion Table

(1)圧力 pressure

Pa (N/m²)	MPa	kgf/cm²	lbf/in² (PSI)	bar	atm	mmH_2O (mmAq)	mmHg (Torr)
1	1×10^{-6}	1.01972×10^{-5}	1.45×10^{-4}	1×10^{-5}	9.86923×10^{-6}	1.01972×10^{-1}	7.50062×10^{-3}
1×10^{6}	1	1.01972×10	1.45×10^{2}	1×10	9.86923	1.01972×10^{5}	7.50062×10^{3}
9.80665×10^{4}	9.80665×10^{-2}	1	1.4223×10	9.80665×10^{-1}	9.67841×10^{-1}	1×10^{4}	7.35559×10^{2}
6.895×10^{3}	6.895×10^{-3}	7.031×10^{-2}	1	6.895×10^{-2}	6.805×10^{-2}	7.031×10^{2}	5.171×10
1×10^{5}	1×10^{-1}	1.01972	1.45×10	1	9.86923×10^{-1}	1.01972×10^{4}	7.50062×10^{2}
1.01325×10^{5}	1.01325×10^{-1}	1.03323	1.47×10	1.01325	1	1.03323×10^{4}	7.6×10^{2}
9.80665	9.80665×10^{-6}	1×10^{-4}	1.4222×10^{-3}	9.80665×10^{-5}	9.67841×10^{-5}	1	7.35559×10^{-2}
1.33322×10^{2}	1.33322×10^{-4}	1.35951×10^{-3}	1.934×10^{-2}	1.33322×10^{-3}	1.31579×10^{-3}	1.35951×10	1

(2)流量 Flow rate

cm³/min (cc/min)	L/min	L/hr	m³/hr	in³/hr	ft³/hr	gal/min (GPM)
1	1×10^{-3}	6×10^{-2}	6×10^{-5}	3.6615	2.1189×10^{-3}	2.6417×10^{-4}
1×10^{3}	1	6×10	6×10^{-2}	3.6615×10^{3}	2.1189	2.6417×10^{-1}
1.667×10	1.667×10^{-2}	1	1×10^{-3}	6.1024×10	3.5315×10^{-2}	4.403×10^{-3}
1.667×10^{4}	1.667×10	1×10^{3}	1	6.1024×10^{4}	3.5315×10	4.403
2.7311×10^{-1}	2.7311×10^{-4}	1.63866×10^{-2}	1.63866×10^{-5}	1	5.787×10^{-4}	7.215×10^{-5}
4.72×10^{2}	4.72×10^{-1}	2.832×10	2.832×10^{-2}	1.728×10^{3}	1	1.25×10^{-1}
3.785×10^{3}	3.785	2.2715×10^{2}	2.2715×10^{-1}	1.386×10^{4}	8.021	1

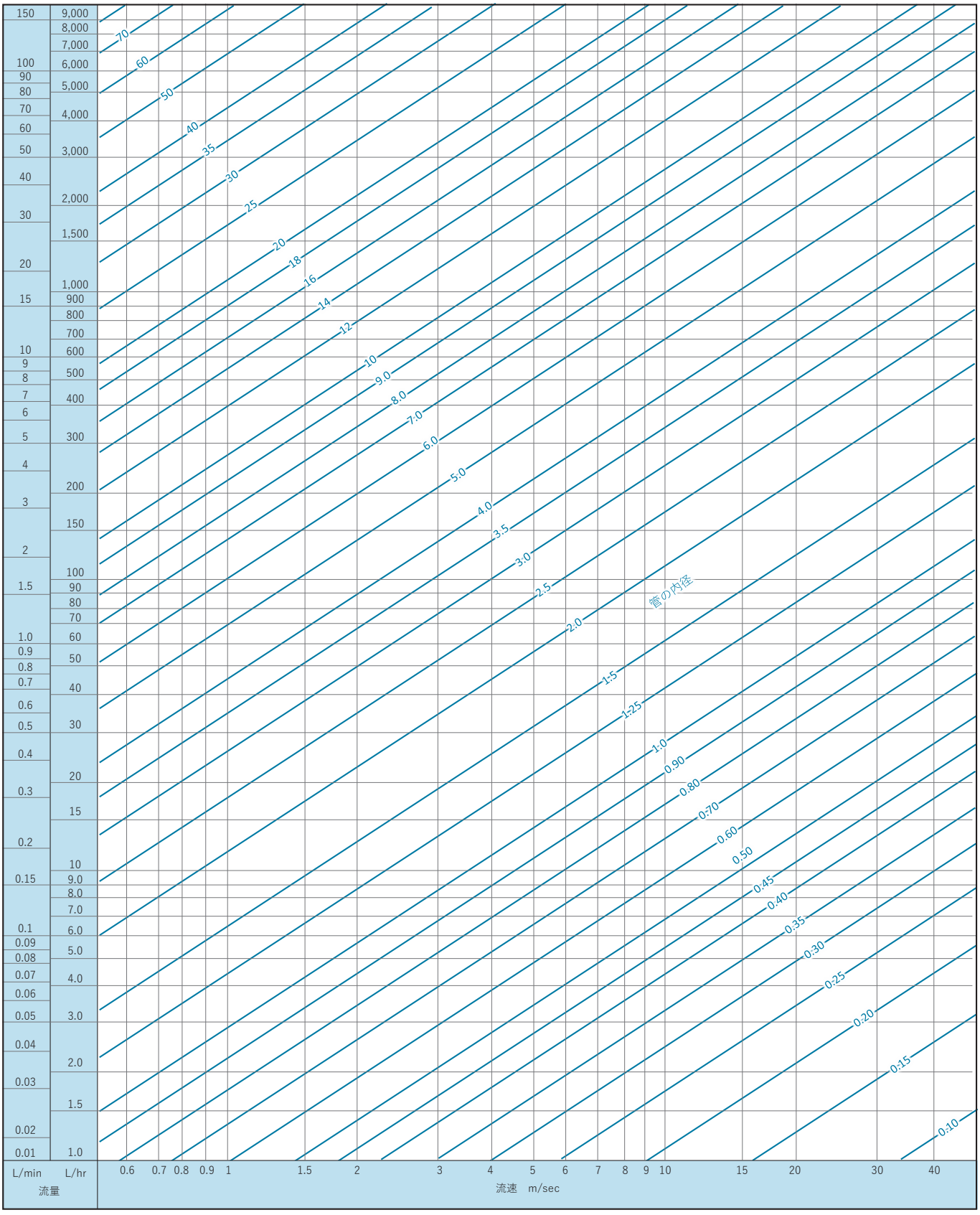
(3)長さ length

mm	cm	m	in	ft	yd
1	1×10^{-1}	1×10^{-3}	3.937×10^{-2}	3.2808×10^{-3}	1.0936×10^{-3}
1×10	1	1×10^{-2}	3.937×10^{-1}	3.2808×10^{-2}	1.0936×10^{-2}
1×10^{3}	1×10^{2}	1	3.937×10	3.2808	1.0936
2.54×10	2.54	2.54×10^{-2}	1	8.333×10^{-2}	2.778×10^{-2}
3.048×10^{2}	3.048×10	3.048×10^{-1}	1.2×10	1	3.333×10^{-1}
9.14399×10^{2}	9.14399×10	9.14399×10^{-4}	3.6×10	3	1

(4)重量 weight

g	kg	t	gr	oz	lb
1	1×10^{-3}	1×10^{-6}	1.54324×10	3.5274×10^{-2}	2.20462×10^{-3}
1×10^{3}	1	1×10^{-3}	1.54324×10^{4}	3.5274×10	2.20462
1×10^{6}	1×10^{3}	1	1.54324×10^{7}	3.5274×10^{4}	2.20462×10^{3}
6.4799×10^{-2}	6.4799×10^{-5}	6.4799×10^{-8}	1	2.2857×10^{-3}	1.42857×10^{-4}
2.83495×10	2.83495×10^{-2}	2.83495×10^{-5}	4.375×10^{2}	1	6.25×10^{-2}
4.5359×10^{2}	4.5359×10^{-1}	4.5359×10^{-4}	7×10^{3}	1.6×10	1

◆ 2. 管内流速流量表 Pipe flow rate table



広角円形全面撒水型

EX2 type NOZZLE

FULL CONE WIDE ANGLE SPRAY

◆ 特性 Characteristics

・全面均一に撒水する
Water is sprinkled uniformly over the entire surface.
・0.2MPaで90˚の広角円形全面撒水
Water is sprinkled over the entire surface
in a circular pattern at a wide angle of 90˚ at 0.2 MPa.
・高圧域では角度が狭くなる
The angle becomes narrow in the high-pressure region.
・インパクトはEX4型より若干弱い
The impact is slightly weaker than the EX4 model.
・粒子は比較的粗い。
Water particles are relatively coarse.
・小流量から大流量まで各種ラインナップ
The EX2 model comes in various types,
from small flow rate to large flow rate.

◆ 主用途 Main applications

・貯槽屋根上面、塔槽類外面等への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the top faces of storage tank roofs, the outer surfaces of towers and tanks, etc.
・排煙、排ガスの冷却/吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment
・薬品/薬液等の混合等各種化学プロセス
Various chemical processes, such as mixing of chemicals, chemical solutions, etc.

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・SCS13/SCS14/SCS16
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

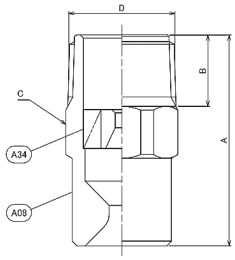
◆ 重量＆寸法（SUS316） Weight & dimensions (SUS316)

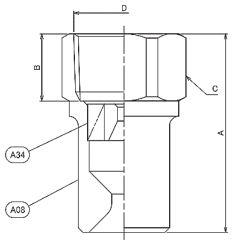
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/4 EX2	30	11	HEX.14	R1/4		0.03
M3/8 EX2	35	13	HEX.17	R3/8		0.05
M1/2 EX2	44	16	HEX.21	R1/2		0.1
M3/4 EX2	52	19	HEX.29	R3/4		0.2
M1 EX2	65	22	HEX.35	R1		0.3

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/4 EX2	30	11	HEX.17	Rc1/4		0.03
F3/8 EX2	35	13	HEX.21	Rc3/8		0.05
F1/2 EX2	44	16	HEX.26	Rc1/2		0.1
F3/4 EX2	52	19	HEX.32	Rc3/4		0.2
F1 EX2	65	22	HEX.41	Rc1		0.3

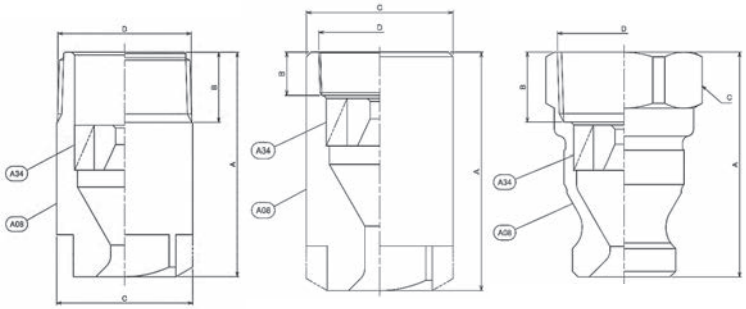
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1 1/2 EX2	80	25	Φ 49	R 1 1/2		0.8
F1 1/2 EX2	80	25	Φ 55	Rc1 1/2		0.9
F2 EX2	110	25	Φ 70	Rc 2		1.8
F2 1/2 EX2	150	32	Φ 90	Rc2 1/2		4.5
F3 EX2	180	40	Φ 108	Rc3		6.5
F4 EX2	220	40	Φ 136	Rc4		10.0

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F 1 1/2 EX2	80	25	HEX.56	Rc 1 1/2		0.85
F2 EX2	110	25	HEX.70	Rc2		1.8
F2 1/2 EX2	150	32	HEX.88	Rc 2 1/2		4.5
F3 EX2	180	40	HEX.102	Rc3		6.0
F4 EX2	220	40	HEX.130	Rc4		10.0
F5 EX2	260	50	HEX.165	Rc5		16.0
F6 EX2	300	50	HEX.190	Rc6		24.0





Item list	
A08	NOZZLE BODY
A34	CORE



◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX2 | 3 ／ SUS316

- SUS316 — 材質【ステンレス鋼：SUS316】 Material [Stainless Steel: SUS316]
- 3 — 設計圧(0.2MPa)時の撒水量(流量) L/min【3.0L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.0 L/min]
- EX2 — 型番タイプ【広角円形全面撒水型：EX2】 Model number type [FULL CONE WIDE ANGLE SPRAY: EX2]
- 1/4 — 接続ネジサイズ Connection thread size — 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M — M：オネジ（R） M: Male thread (R)
  F：メネジ（Rc） F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 23	PT1/4 (8A)	1.2	—	1.55	2.15	2.6	3.0	3.6	4.1	4.45	5.15	6.0	—	90°	85°	80°	—	450	250
1/4EX 25		1.5	2.0	2.6	3.65	4.35	5.0	5.95	6.8	7.35	8.6	10.0	—	90°	85°	80°	900	550	300
3/8EX 28	PT3/8 (10A)	1.75	3.25	4.15	5.9	7.05	8.0	9.4	10.8	11.6	13.7	16.0	85°	90°	85°	80°	950	600	350
3/8EX 212		2.0	4.95	6.3	8.75	10.5	12.0	14.2	16.2	17.5	20.6	24.0	85°	90°	85°	80°	1000	650	350
1/2EX 216	PT1/2 (15A)	2.25	6.6	8.4	11.5	14.0	16.0	19.1	21.5	23.3	27.4	32.0	85°	90°	85°	80°	1050	700	400
1/2EX 220		3.0	8.05	10.5	15.8	18.0	20.0	23.0	26.6	28.4	33.1	39.4	85°	90°	85°	80°	1100	750	400
1/2EX 225		3.0	9.9	13.0	18.8	22.2	25.0	29.1	33.5	36.1	42.1	49.6	85°	90°	85°	80°	1150	800	400
3/4EX 230	PT3/4 (20A)	3.0	11.6	15.5	21.6	26.2	30.0	35.3	40.5	44.1	51.3	60.0	85°	90°	85°	80°	1200	850	450
3/4EX 235		4.0	14.3	18.6	26.2	31.1	35.0	41.1	46.9	51.1	59.2	69.6	85°	90°	85°	80°	1250	850	450
3/4EX240		4.0	17.2	21.9	30.0	36.1	40.0	47.0	53.2	58.0	66.9	79.2	85°	90°	85°	80°	1300	900	500
1EX 242	PT1 (25A)	4.0	19.4	24.7	31.6	37.6	42.0	49.5	56.4	62.2	72.7	83.6	85°	90°	85°	80°	1300	900	500
1EX 250		5.3	24.7	31.3	37.0	44.3	50.0	59.2	67.9	75.7	89.4	100	85°	90°	85°	80°	1350	950	550
1EX 260		5.5	27.8	35.6	44.0	53.2	60.0	70.0	78.9	86.3	101	117	85°	90°	85°	80°	1350	950	550
1EX 270		5.5	30.3	39.3	55.5	62.0	70.0	80.3	89.0	95.4	111	132	85°	90°	85°	80°	1400	950	550
1 1/2EX 284	PT1 1/2 (40A)	6.5	35.7	45.5	63.9	74.2	84.0	97.8	110	118	137	162	85°	90°	85°	80°	1400	950	550
1 1/2EX 295		6.5	39.6	49.5	69.1	83.6	95.0	112	128	138	160	188	85°	90°	85°	80°	1450	1000	600
1 1/2EX 2100		6.5	41.6	52.1	72.7	88.0	100	118	133	144	168	198	85°	90°	85°	80°	1450	1000	600
1 1/2EX 2120		7.5	49.9	62.4	87.2	106	120	141	157	172	200	237	85°	90°	85°	80°	1500	1000	600
1 1/2EX 2150		8.0	64.6	81.6	114	135	150	176	197	215	249	295	85°	90°	85°	80°	1500	1050	600
1 1/2EX 2180		8.0	77.2	96.2	134	160	180	212	239	263	305	357	85°	90°	85°	80°	1550	1100	650
2EX 2200	PT2 (50A)	10.0	85.7	107	149	177	200	236	266	292	339	397	85°	90°	85°	80°	1600	1100	—
2EX 2250		10.0	107	131	181	219	250	295	336	371	432	500	85°	90°	85°	80°	1600	1100	—
2EX 2300		11.0	120	156	222	265	300	359	406	444	513	600	85°	90°	85°	80°	1650	1150	—
2EX 2370		11.0	147	192	273	326	370	437	496	544	629	736	85°	90°	85°	80°	1650	1150	—
2EX 2470		11.0	186	243	345	414	470	548	624	687	794	930	85°	90°	85°	80°	1700	1200	—
2 1/2EX 2500	PT2 1/2 (65A)	12.5	209	263	389	442	500	589	671	725	841	984	85°	90°	85°	70°	1700	1200	—
2 1/2EX 2600		12.5	258	323	462	536	600	703	797	874	1010	1190	85°	90°	85°	70°	1750	1250	—
3EX 2700	PT3 (80A)	17.5	301	376	539	625	700	820	930	1020	1180	1380	85°	90°	70°	60°	1800	1300	—
3EX 2920		17.5	396	495	707	822	920	1080	1220	1340	1550	1820	85°	90°	70°	60°	1850	1350	—
3EX 21200		17.5	530	658	916	1080	1200	1400	1580	1760	2020	2380	85°	90°	70°	60°	1950	1450	—
4EX 21500	PT4 (100A)	25.0	663	823	1150	1360	1500	1750	1970	2190	2530	2980	85°	90°	70°	60°	2300	1600	—
4EX22000		25.0	884	1100	1530	1810	2000	2330	2630	2930	3370	3970	85°	90°	70°	60°	2500	1800	—
5EX 22500	PT5 (125A)	30.0	1110	1370	1910	2260	2500	2920	3290	3660	4210	4970	85°	90°	70°	60°	2700	2000	—
5EX 23000		30.0	1330	1650	2290	2710	3000	3500	3950	4390	5050	5960	85°	90°	70°	60°	3000	2300	—
6EX 23500	PT6 (150A)	35.0	1550	1920	2670	3160	3500	4080	4600	5120	5890	6950	85°	90°	70°	60°	3300	2600	—
6EX 24000		35.0	1770	2190	3050	3610	4000	4660	5260	5850	6730	7940	85°	90°	70°	60°	3700	3000	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

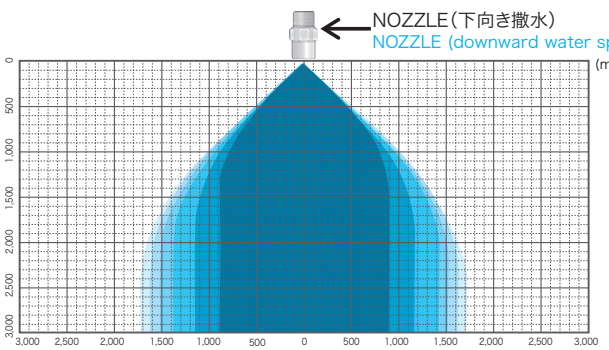
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

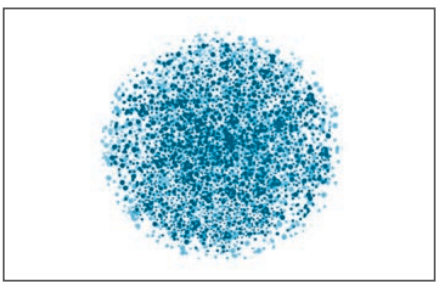


※圧力0.2MPa時
*At pressure of 0.2MPa

- ……1/4EX23,EX25
- ……3/8EX28,EX212
- ……1/2EX220,EX225
- ……3/4EX235,EX240
- ……1EX260,EX270
- ……1 1/2EX2180

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



広角円形全面撒水型（フランジモデル）

EX2-FL type NOZZLE

FULL CONE WIDE ANGLE SPRAY (Flange model)

◆ 特性 Characteristics

・広角円形全面に同芯方向へ撒水
Water is sprinkled over the entire surface in a circular pattern at a wide angle in the concentric direction.
・設計圧力0.2MPaにおいて90°に撒水
Water is sprinkled at 90° at the design pressure of 0.2 MPa.

◆ 主用途 Main applications

・鉱石/砕石の粉塵防止用
For preventing dust of ore and crushed stone
・大型塔内の洗浄
Cleaning of the insides of large towers
・排煙、排ガスの冷却/吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・汚泥焼却等下水処理設備及び廃水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment
・薬品/薬液等の混合等各種化学プロセス
Various chemical processes, such as mixing of chemicals, chemical solutions, etc.

◆ 材質 Material

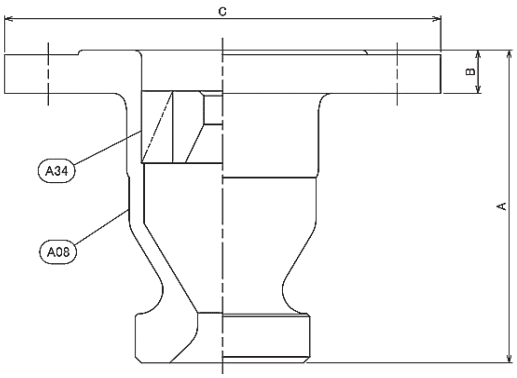
・SCS13/SCS14/SCS16

◆ 接続 Connections

・JIS B 2220 ステンレス鋼フランジ
Stainless steel flange specified in JIS B 2220
・JPI-7S-15-2011 石油工業用フランジ（クラス150）
Japan Petroleum Institute Flanges specified in JPI-7S-15-2011(class 150)

◆ 重量＆寸法(SCS13) Weight & dimensions(SCS13)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
2 EX2-FL	100	16	Φ155	JIS10K	4.2
2 1/2 EX2-FL	130	18	Φ175	JIS10K	5.6
3 EX2-FL	150	18	Φ185	JIS10K	7.0
4 EX2-FL	185	18	Φ210	JIS10K	11.0
5 EX2-FL	220	20	Φ250	JIS10K	18.0
6 EX2-FL	260	22	Φ280	JIS10K	26.0
8 EX2-FL	330	22	Φ330	JIS10K	45.0
10 EX2-FL	430	24	Φ400	JIS10K	69.0
12 EX2-FL	460	24	Φ445	JIS10K	98.0



Item list	
A08	NOZZLE BODY
A34	CORE

◆ 型番選定 Selection of model number

(例)
Example: 2 | EX2 | 200 | FL ／ SCS13

- 材質【ステンレス鋼鋳鋼：SCS13】
  Material [cast stainless steel: SCS13]
- 設計圧(0.2MPa)時の撒水量(流量) L/min【200L/min】
  Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [200 L/min]
- 型番タイプ【広角円形全面散水型(フランジモデル) ：EX2-FL】
  Model number type [FULL CONE WIDE ANGLE SPRAY(Flange model): EX2-FL]
- 【2インチ(50A)JIS10Kフランジ】
  [2" (50A) JIS10K flange]

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.5 MPa
2EX 2200 FL	2"(50A) JIS10K	10.0	85.7	107	149	177	200	236	266	292	339	397	85°	90°	85°	80°	1600	1100	800
2EX 2250 FL		10.0	107	131	181	219	250	295	336	371	432	500	85°	90°	85°	80°	1600	1100	800
2EX 2300 FL		11.0	120	156	222	265	300	359	406	444	513	600	85°	90°	85°	80°	1650	1150	800
2EX 2370 FL		11.0	147	192	237	326	370	437	496	544	629	736	85°	90°	85°	80°	1650	1150	850
2EX 2470 FL		11.0	186	243	345	414	470	548	624	687	794	930	85°	90°	85°	80°	1700	1200	850
2 1/2EX 2500 FL	2 1/2"(65A) JIS10K	12.5	209	263	389	442	500	589	671	725	841	984	85°	90°	80°	70°	1700	1200	900
2 1/2EX 2600 FL		12.5	258	323	462	536	600	703	797	874	1010	1190	85°	90°	80°	70°	1750	1250	950
3EX 2700 FL	3"(80A) JIS10K	17.5	301	376	539	625	700	820	930	1020	1180	1380	85°	90°	70°	60°	1800	1300	1000
3EX 2920 FL		17.5	396	495	707	822	920	1080	1220	1340	1550	1820	85°	90°	70°	60°	1850	1350	1050
3EX 21200 FL		17.5	530	658	916	1080	1200	1400	1580	1760	2020	2380	85°	90°	70°	60°	1950	1450	1150
4EX 21500 FL	4"(100A) JIS10K	25.0	663	823	1150	1360	1500	1750	1970	2190	2530	2980	85°	90°	70°	60°	2300	1600	—
4EX 22000 FL		25.0	884	1100	1530	1810	2000	2330	2630	2930	3370	3970	85°	90°	70°	60°	2500	1800	—
5EX 22500 FL	5"(125A) JIS10K	30.0	1110	1370	1910	2260	2500	2920	3290	3660	4210	4970	85°	90°	70°	60°	2700	2000	—
5EX 23000 FL		30.0	1330	1650	2290	2710	3000	3500	3950	4390	5050	5960	85°	90°	70°	60°	3000	2300	—
6EX 23500 FL	6"(150A) JIS10K	35.0	1550	1920	2670	3160	3500	4080	4600	5120	5890	6950	85°	90°	70°	60°	3300	2600	—
6EX 24000 FL		35.0	1770	2190	3050	3610	4000	4660	5260	5850	6730	7940	85°	90°	70°	60°	3700	3000	—
8EX 25000 FL	8"(200A) JIS10K	40.0	2210	2740	3820	4520	5000	5830	6580	7310	8420	9930	85°	90°	70°	60°	—	—	—
8EX 26000 FL		40.0	2650	3290	4580	5420	6000	7000	7890	8780	10100	11900	85°	90°	70°	60°	—	—	—
10EX 210000 FL	10"(250A) JIS10K	50.0	4420	5500	7630	9040	10000	11700	13200	14600	16800	19900	85°	90°	70°	60°	—	—	—
10EX 212000 FL		50.0	5300	6590	9160	10800	12000	14000	15800	17600	20200	23800	85°	90°	70°	60°	—	—	—
12EX 215000 FL	12"(300A) JIS10K	60.0	6630	8250	11500	13600	15000	17500	19700	21900	25200	29800	85°	90°	70°	60°	—	—	—
12EX 220000 FL		60.0	8840	11000	15300	18100	20000	23300	26300	29200	33700	39700	85°	90°	70°	60°	—	—	—
14EX 225000 FL	14"(350A) JIS10K	70.0	11100	13700	19100	22600	25000	29200	32900	36600	42100	49600	85°	90°	70°	60°	—	—	—
14EX 230000 FL		70.0	13300	16100	22900	27100	30000	35000	39500	43900	50500	59600	85°	90°	70°	60°	—	—	—
16EX 240000 FL	16"(400A) JIS10K	80.0	17700	21900	30500	36100	40000	46600	52600	58500	67300	79400	85°	90°	70°	60°	—	—	—
16EX 250000 FL		80.0	22100	27400	38200	45200	50000	58300	65800	73100	84200	99300	85°	90°	70°	60°	—	—	—

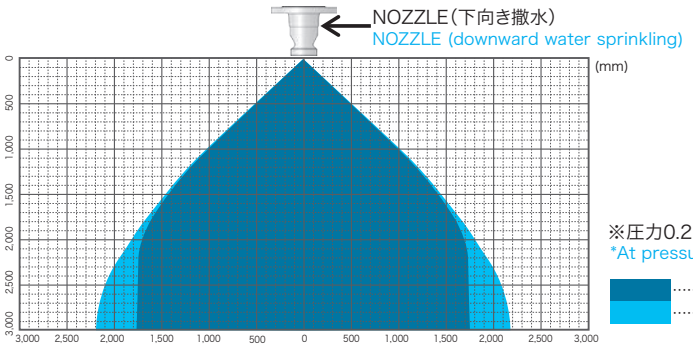
：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

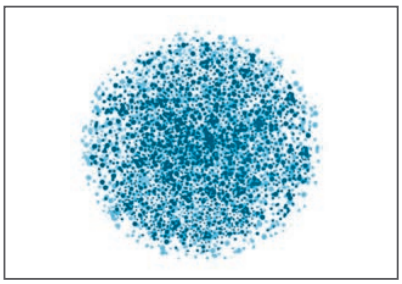


※圧力0.2MPa時
*At pressure of 0.2MPa

····· 2EX2300FL,2EX2370FL
····· 3EX21200FL

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



広角円形全面撒水型（両端ねじ込みタイプ）

EX2-TC type NOZZLE

FULL CONE WIDE ANGLE SPRAY (Twin connection model)

◆ 特性 Characteristics

・全面均一に撒水する
Water is sprinkled uniformly over the entire surface.
・0.2MPaで90°の広角円形全面撒水
Water is sprinkled over the entire surface in a circular pattern at a wide angle of 90° at 0.2 MPa.
・高圧域では角度が狭くなる
The angle becomes narrow in the high-pressure region.
・インパクトはEX4型より若干弱い
The impact is slightly weaker than the EX4 model.
・粒子は比較的粗い
Water particles are relatively coarse.
・小流量から大流量まで各種ラインナップ
The EX2 model comes in various types, from small flow rate to large flow rate.
・ノズルボディの出口側にも接続用オネジ付き
Connection male thread also provided on the outlet side of the nozzle body

◆ 主用途 Main applications

・貯槽屋根上面、塔槽類外面等への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the top faces of storage tank roofs, the outer surfaces of towers and tanks, etc.
・排煙、排ガスの冷却/吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment
・薬品/薬液等の混合等各種化学プロセス
Various chemical processes, such as mixing of chemicals, chemical solutions, etc.

◆ 材質 Material

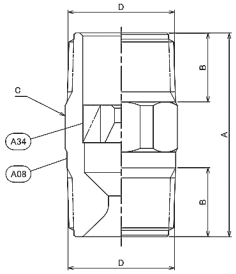
・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

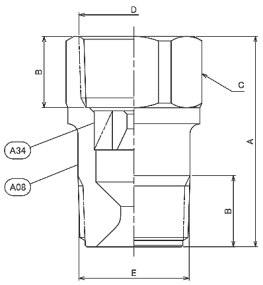
◆ 重量＆寸法(SUS316)
Weight & dimensions (SUS316)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/4 EX2-TC	30	11	HEX.14	R1/4	0.03
M3/8 EX2-TC	35	13	HEX.17	R3/8	0.05
M1/2 EX2-TC	44	16	HEX.21	R1/2	0.1
M3/4 EX2-TC	52	19	HEX.29	R3/4	0.2
M1 EX2-TC	65	22	HEX.35	R1	0.3



Item list	
A08	NOZZLE BODY
A34	CORE

Nominal diameter	Dimensions (mm)			connection		Weight (kg)
	A	B	C	D	E	
F1/4 EX2-TC	30	11	HEX.17	Rc1/4	R1/4	0.03
F3/8 EX2-TC	35	13	HEX.21	Rc3/8	R3/8	0.05
F1/2 EX2-TC	44	16	HEX.26	Rc1/2	R1/2	0.1
F3/4 EX2-TC	52	19	HEX.32	Rc3/4	R3/4	0.2
F1 EX2-TC	65	22	HEX.41	Rc1	R1	0.3



◆ 型番選定 Selection of model number

(例)
Example:

M	1/4	EX2	3	TC	／	SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 3：設計圧(0.2MPa)時の撒水量(流量) L/min【3.0L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.0 L/min]
- EX2-TC：型番タイプ【広角円形全面撒水型（両端ねじ込みタイプ）:EX2-TC】 Model number type [FULL CONE WIDE ANGLE SPRAY (Twin connection model): EX2-TC]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)

◆ 撒水データ Watering data

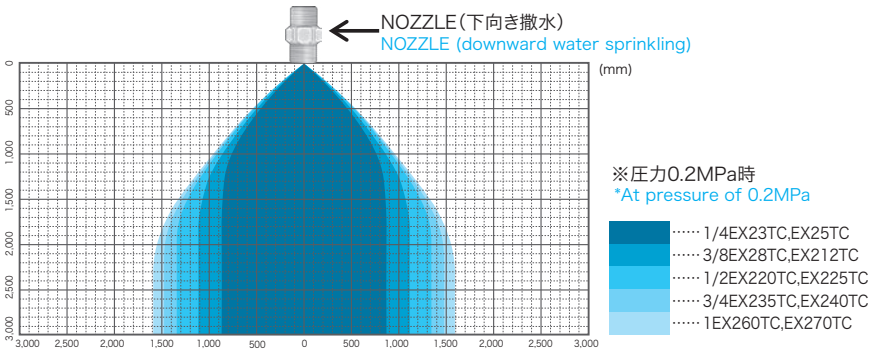
ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 23 TC	PT1/4 (8A)	1.2	—	1.55	2.15	2.6	3.0	3.6	4.1	4.45	5.15	6.0	—	90°	85°	80°	—	450	250
1/4EX 25 TC		1.5	2.0	2.6	3.65	4.35	5.0	5.95	6.8	7.35	8.6	10.0	—	90°	85°	80°	900	550	300
3/8EX 28 TC	T3/8 (10A)	1.75	3.25	4.15	5.9	7.05	8.0	9.4	10.8	11.6	13.7	16.0	85°	90°	85°	80°	950	600	350
3/8EX 212 TC		2.0	4.95	6.3	8.75	10.5	12.0	14.2	16.2	17.5	20.6	24.0	85°	90°	85°	80°	1000	650	350
1/2EX 216 TC	PT1/2 (15A)	2.25	6.6	8.4	11.5	14.0	16.0	19.1	21.5	23.3	27.4	32.0	85°	90°	85°	80°	1050	700	400
1/2EX 220 TC		3.0	8.05	10.5	15.8	18.0	20.0	23.0	26.6	28.4	33.1	39.4	85°	90°	85°	80°	1100	750	400
1/2EX 225 TC		3.0	9.9	13.0	18.8	22.2	25.0	29.1	33.5	36.1	42.1	49.6	85°	90°	85°	80°	1150	800	400
3/4EX 230 TC	PT3/4 (20A)	3.0	11.6	15.5	21.6	26.2	30.0	35.3	40.5	44.1	51.3	60.0	85°	90°	85°	80°	1200	850	450
3/4EX 235 TC		4.0	14.3	18.6	26.2	31.1	35.0	41.1	46.9	51.1	59.2	69.6	85°	90°	85°	80°	1250	850	450
3/4EX240 TC		4.0	17.2	21.9	30.0	36.1	40.0	47.0	53.2	58.0	66.9	79.2	85°	90°	85°	80°	1300	900	500
1EX 242 TC	PT1 (25A)	4.0	19.4	24.7	31.6	37.6	42.0	49.5	56.4	62.2	72.7	83.6	85°	90°	85°	80°	1300	900	500
1EX 250 TC		5.3	24.7	31.3	37.0	44.3	50.0	59.2	67.9	75.7	89.4	100	85°	90°	85°	80°	1350	950	550
1EX 260 TC		5.5	27.8	35.6	44.0	53.2	60.0	70.0	78.9	86.3	101	117	85°	90°	85°	80°	1350	950	550
1EX 270 TC		5.5	30.3	39.3	55.5	62.0	70.0	80.3	89.0	95.4	111	132	85°	90°	85°	80°	1400	950	550

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

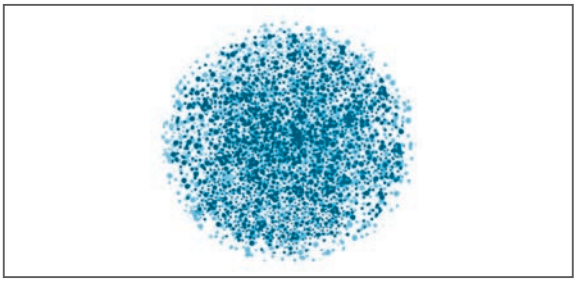
ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



◆ 撒水イメージ

Image of water sprinkling

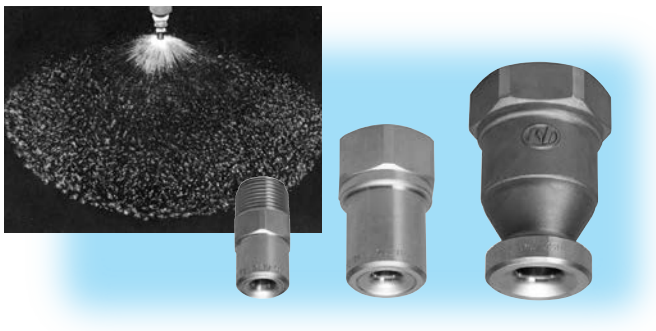
上から見た撒水図
Water spraying diagram from above



超広角円形全面撒水型

EX2-W type NOZZLE

FULL CONE SUPER WIDE ANGLE SPRAY



◆ 特性 Characteristics

・全面均一に撒水する
Water is sprinkled uniformly over the entire surface.
・0.2MPaで120° の超広角円形全面撒水
Water is sprinkled over the entire surface in a circular pattern at an extremely wide angle of 120° at 0.2 MPa.
・高圧域では角度が狭くなる
The angle becomes narrow in the high-pressure region.
・小流量から大流量まで各種ラインナップ
The EX2 model comes in various types, from small flow rate to large flow rate.

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・SCS13/SCS14/SCS16
・PVC/PP/PTFE

◆ 主用途 Main applications

・球形貯槽表面、塔槽類外表面等への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the surfaces of spherical storage tanks, the outer surfaces of towers and tanks, etc.
・排煙、排ガスの冷却/吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment
・貯槽内への液化ガス撒布等、徐冷/冷却
Slow cooling and cooling, such as sprinkling of liquefied gas into a storage tank
・鋼材、鋼板等の冷却/洗浄/表面処理
Cooling, washing, and surface treatment of steel materials, steel sheets, etc.

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

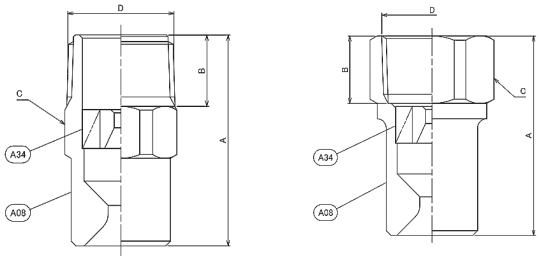
◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/4 EX2-W	30	11	HEX.14	R1/4		0.03
M3/8 EX2-W	35	13	HEX.17	R3/8		0.05
M1/2 EX2-W	44	16	HEX.21	R1/2		0.1
M3/4 EX2-W	52	19	HEX.29	R3/4		0.2
M1 EX2-W	65	22	HEX.35	R1		0.3

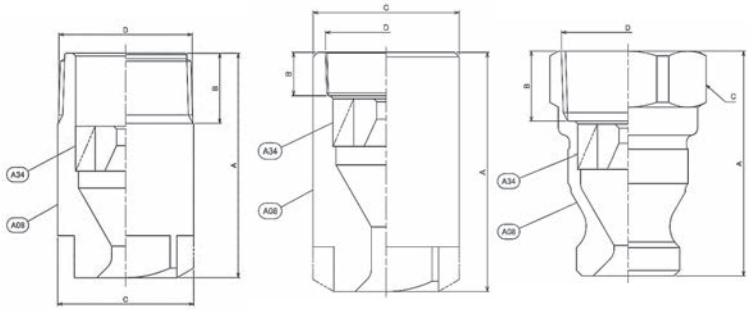
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/4 EX2-W	30	11	HEX.17	Rc1/4		0.03
F3/8 EX2-W	35	13	HEX.21	Rc3/8		0.05
F1/2 EX2-W	44	16	HEX.26	Rc1/2		0.1
F3/4 EX2-W	52	19	HEX.32	Rc3/4		0.2
F1 EX2-W	65	22	HEX.41	Rc1		0.3

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1 1/2 EX2-W	80	25	Φ 49	R 1 1/2		0.8
F1 1/2 EX2-W	80	25	Φ 55	Rc1 1/2		0.9
F2 EX2-W	110	25	Φ 70	Rc 2		1.8
F2 1/2 EX2-W	150	32	Φ 90	Rc2 1/2		4.5
F3 EX2-W	180	40	Φ 108	Rc3		6.5
F4 EX2-W	220	40	Φ 136	Rc4		10.0

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F 1 1/2 EX2-W	80	25	HEX.56	Rc 1 1/2		0.85
F2 EX2-W	110	25	HEX.70	Rc2		1.8
F2 1/2 EX2-W	150	32	HEX.88	Rc 2 1/2		4.5
F3 EX2-W	180	40	HEX.102	Rc3		6.0
F4 EX2-W	220	40	HEX.130	Rc4		10.0
F5 EX2-W	260	50	HEX.165	Rc5		16.0
F6 EX2-W	300	50	HEX.190	Rc6		24.0



Item list	
A08	NOZZLE BODY
A34	CORE



◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX2 | 3 | W ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 3：設計圧(0.2MPa)時の撒水量(流量) L/min【3.0L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.0 L/min]
- EX2：型番タイプ【超広角円形全面撒水型：EX2-W】 Model number type [FULL CONE SUPER WIDE ANGLE SPRAY: EX2-W]
- 1/4：接続ネジサイズ Connection thread size → 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ（R） M: Male thread (R)
  F：メネジ（Rc） F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 23 W	PT1/4 (8A)	1.2	—	1.55	2.15	2.6	3.0	3.6	4.1	4.45	5.15	6.0	—	110°	90°	85°	—	450	250
1/4EX 25 W		1.5	2.0	2.6	3.65	4.35	5.0	5.95	6.8	7.35	8.6	10.0	100°	110°	90°	85°	900	550	300
3/8EX 28 W	PT3/8 (10A)	1.75	3.25	4.15	5.9	7.05	8.0	9.4	10.8	11.6	13.7	16.0	105°	120°	100°	85°	950	600	350
3/8EX 212 W		2.0	4.95	6.3	8.75	10.5	12.0	14.2	16.2	17.5	20.6	24.0	105°	120°	100°	85°	1000	650	350
1/2EX 216 W	PT1/2 (15A)	2.25	6.6	8.4	11.5	14.0	16.0	19.1	21.5	23.3	27.4	32.0	105°	120°	100°	85°	1050	700	400
1/2EX 220 W		3.0	8.05	10.5	15.8	18.0	20.0	23.0	26.6	28.4	33.1	39.4	105°	120°	100°	85°	1100	750	400
1/2EX 225 W		3.0	9.9	13.0	18.8	22.2	25.0	29.1	33.5	36.1	42.1	49.6	105°	120°	100°	85°	1150	800	400
3/4EX 230 W	PT3/4 (20A)	3.0	11.6	15.5	21.6	26.2	30.0	35.3	40.5	44.1	51.3	60.0	105°	120°	100°	85°	1200	850	450
3/4EX 235 W		4.0	14.3	18.6	26.2	31.1	35.0	41.1	46.9	51.1	59.2	69.6	105°	120°	100°	85°	1250	850	450
3/4EX240 W		4.0	17.2	21.9	30.0	36.1	40.0	47.0	53.2	58.0	66.9	79.2	105°	120°	100°	85°	1300	900	500
1EX 242 W	PT1 (25A)	4.0	19.4	24.7	31.6	37.6	42.0	49.5	56.4	62.2	72.7	83.6	105°	120°	100°	85°	1300	900	500
1EX 250 W		5.3	24.7	31.3	37.0	44.3	50.0	59.2	67.9	75.7	89.4	100	105°	120°	100°	85°	1350	950	550
1EX 260 W		5.5	27.8	35.6	44.0	53.2	60.0	70.0	78.9	86.3	101	117	105°	120°	100°	85°	1350	950	550
1EX 270 W		5.5	30.3	39.3	55.5	62.0	70.0	80.3	89.0	95.4	111	132	105°	120°	100°	85°	1400	950	550
1 1/2EX 284 W	PT1 1/2 (40A)	6.5	35.7	45.5	63.9	74.2	84.0	97.8	110	118	137	162	105°	120°	100°	85°	1400	950	550
1 1/2EX 295 W		6.5	39.6	49.5	69.1	83.6	95.0	112	128	138	160	188	105°	120°	100°	85°	1450	1000	600
1 1/2EX 2100 W		6.5	41.6	52.1	72.7	88.0	100	118	133	144	168	198	105°	120°	100°	85°	1450	1000	600
1 1/2EX 2120 W		7.5	49.9	62.4	87.2	106	120	141	157	172	200	237	105°	120°	100°	85°	1500	1000	600
1 1/2EX 2150 W		8.0	64.6	81.6	114	135	150	176	197	215	249	295	105°	120°	100°	85°	1500	1050	600
1 1/2EX 2180 W		8.0	77.2	96.2	134	160	180	212	239	263	305	357	105°	120°	100°	85°	1550	1100	650
2EX 2200 W	PT2 (50A)	10.0	85.7	107	149	177	200	236	266	292	339	397	105°	120°	100°	85°	1600	1100	—
2EX 2250 W		10.0	107	131	181	219	250	295	336	371	432	500	105°	120°	100°	85°	1600	1100	—
2EX 2300 W		11.0	120	156	222	265	300	359	406	444	513	600	105°	120°	100°	85°	1650	1150	—
2EX 2370 W		11.0	147	192	273	326	370	437	496	544	629	736	105°	120°	100°	85°	1650	1150	—
2EX 2470 W		11.0	186	243	345	414	470	548	624	687	794	930	105°	120°	100°	85°	1700	1200	—
2 1/2EX 2500 W	PT2 1/2 (65A)	12.5	209	263	389	442	500	589	671	725	841	984	105°	120°	100°	85°	1700	1200	—
2 1/2EX 2600 W		12.5	258	323	462	536	600	703	797	874	1010	1190	105°	120°	100°	85°	1750	1250	—
3EX 2700 W	PT3 (80A)	17.5	301	376	539	625	700	820	930	1020	1180	1380	100°	120°	90°	70°	1800	1300	—
3EX 2920 W		17.5	396	495	707	822	920	1080	1220	1340	1550	1820	100°	120°	90°	70°	1850	1350	—
3EX 21200 W		17.5	530	658	916	1080	1200	1400	1580	1760	2020	2380	100°	120°	90°	70°	1950	1450	—
4EX 21500 W	PT4 (100A)	25.0	663	823	1150	1360	1500	1750	1970	2190	2530	2980	100°	120°	90°	70°	2300	1600	—
4EX22000 W		25.0	884	1100	1530	1810	2000	2330	2630	2930	3370	3970	100°	120°	90°	70°	2500	1800	—
5EX 22500 W	PT5 (125A)	30.0	1110	1370	1910	2260	2500	2920	3290	3660	4210	4970	100°	120°	90°	70°	2700	2000	—
5EX 23000 W		30.0	1330	1650	2290	2710	3000	3500	3950	4390	5050	5960	100°	120°	90°	70°	3000	2300	—
6EX 23500 W	PT6 (150A)	35.0	1550	1920	2670	3160	3500	4080	4600	5120	5890	6950	100°	120°	90°	70°	3300	2600	—
6EX 24000 W		35.0	1770	2190	3050	3610	4000	4660	5260	5850	6730	7940	100°	120°	90°	70°	3700	3000	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

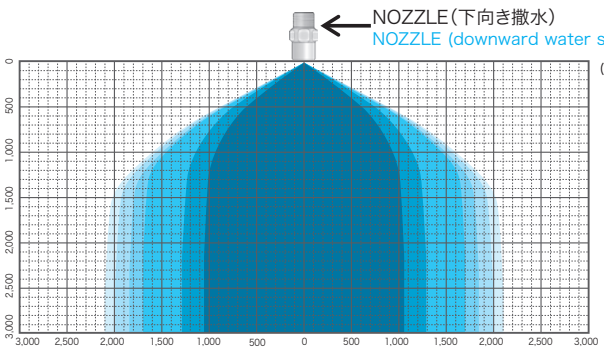
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

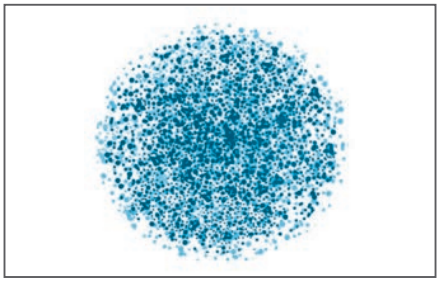


※圧力0.2MPa時
*At pressure of 0.2MPa

- 1/4EX23W,EX25W
- 3/8EX28W,EX212W
- 1/2EX220W,EX225W
- 3/4EX235W,EX240W
- 1EX260W,EX270W
- 1 1/2EX2180W

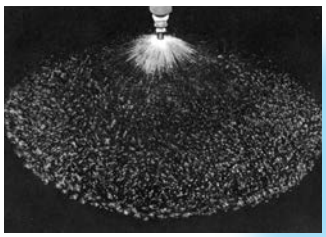
◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



超広角円形全面撒水型（フランジモデル）

EX2-WFL type NOZZLE



FULL CONE SUPER WIDE ANGLE SPRAY (Flange model)

◆ 特性 Characteristics

・超広角円形全面に同芯方向へ撒水
Water is sprinkled over the entire surface in a circular pattern at an extremely wide angle in the concentric direction.
・設計圧力0.2MPaにおいて120°に撒水
Water is sprinkled at 120° at the design pressure of 0.2 MPa.

◆ 主用途 Main applications

・排煙、排ガスの冷却/吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・海水淡水化装置脱気用
For deaeration of seawater desalination systems
・各種化学プロセス装置用
For various chemical process devices

◆ 材質 Material

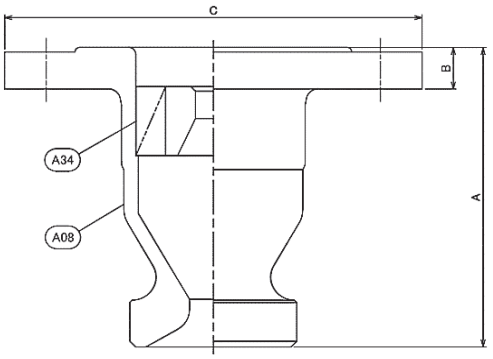
・SCS13/SCS14/SCS16

◆ 接続 Connections

・JIS B 2220 ステンレス鋼フランジ
Stainless steel flange specified in JIS B 2220
・JPI-7S-15-2011 石油工業用フランジ（クラス150）
Japan Petroleum Institute Flanges specified in JPI-7S-15-2011(class 150)

◆ 重量&寸法(SCS13) Weight & dimensions(SCS13)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
2 EX2-WFL	100	16	Φ155	JIS10K	4.2
2 1/2 EX2-WFL	130	18	Φ175	JIS10K	5.6
3 EX2-WFL	150	18	Φ185	JIS10K	7.0
4 EX2-WFL	185	18	Φ210	JIS10K	11.0
5 EX2-WFL	220	20	Φ250	JIS10K	18.0
6 EX2-WFL	260	22	Φ280	JIS10K	26.0
8 EX2-WFL	330	22	Φ330	JIS10K	45.0
10 EX2-WFL	430	24	Φ400	JIS10K	69.0
12 EX2-WFL	460	24	Φ445	JIS10K	98.0



Item list	
A08	NOZZLE BODY
A34	CORE

◆ 型番選定 Selection of model number

(例) Example:

2	EX2	200	W	FL	／	SCS13

- SCS13: 材質【ステンレス鋼鋳鋼：SCS13】 Material [cast stainless steel: SCS13]
- 200: 設計圧(0.2MPa)時の撒水量(流量) L/min【200L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [200 L/min]
- EX2: 型番タイプ【超広角円形全面散水型(フランジモデル):EX2-WFL】 Model number type [FULL CONE SUPER WIDE ANGLE SPRAY(Flange model): EX2-WFL]
- 2: 【2インチ(50A)JIS10Kフランジ】 [2" (50A) JIS10K flange]

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.5 MPa
2EX 2200 WFL	2"(50A) JIS10K	10.0	85.7	107	149	177	200	236	266	292	339	397	105°	120°	100°	85°	1600	1100	800
2EX 2250 WFL		10.0	107	131	181	219	250	295	336	371	432	500	105°	120°	100°	85°	1600	1100	800
2EX 2300 WFL		11.0	120	156	222	265	300	359	406	444	513	600	105°	120°	100°	85°	1650	1150	800
2EX 2370 WFL		11.0	147	192	237	326	370	437	496	544	629	736	105°	120°	100°	85°	1650	1150	850
2EX 2470 WFL		11.0	186	243	345	414	470	548	624	687	794	930	105°	120°	100°	85°	1700	1200	850
2 1/2EX 2500 WFL	2 1/2"(65A) JIS10K	12.5	209	263	389	442	500	589	671	725	841	984	105°	120°	100°	80°	1700	1200	900
2 1/2EX 2600 WFL		12.5	258	323	462	536	600	703	797	874	1010	1190	105°	120°	100°	80°	1750	1250	950
3EX 2700 WFL	3"(80A) JIS10K	17.5	301	376	539	625	700	820	930	1020	1180	1380	100°	120°	90°	70°	1800	1300	1000
3EX 2920 WFL		17.5	396	495	707	822	920	1080	1220	1340	1550	1820	100°	120°	90°	70°	1850	1350	1050
3EX 21200 WFL		17.5	530	658	916	1080	1200	1400	1580	1760	2020	2380	100°	120°	90°	70°	1950	1450	1150
4EX 21500 WFL	4"(100A) JIS10K	25.0	663	823	1150	1360	1500	1750	1970	2190	2530	2980	100°	120°	90°	70°	2300	1600	—
4EX 22000 WFL		25.0	884	1100	1530	1810	2000	2330	2630	2930	3370	3970	100°	120°	90°	70°	2500	1800	—
5EX 22500 WFL	5"(125A) JIS10K	30.0	1110	1370	1910	2260	2500	2920	3290	3660	4210	4970	100°	120°	90°	70°	2700	2000	—
5EX 23000 WFL		30.0	1330	1650	2290	2710	3000	3500	3950	4390	5050	5960	100°	120°	90°	70°	3000	2300	—
6EX 23500 WFL	6"(150A) JIS10K	35.0	1550	1920	2670	3160	3500	4080	4600	5120	5890	6950	100°	120°	90°	70°	3300	2600	—
6EX 24000 WFL		35.0	1770	2190	3050	3610	4000	4660	5260	5850	6730	7940	100°	120°	90°	70°	3700	3000	—
8EX 25000 WFL	8"(200A) JIS10K	40.0	2210	2740	3820	4520	5000	5830	6580	7310	8420	9930	100°	120°	90°	70°	—	—	—
8EX 26000 WFL		40.0	2650	3290	4580	5420	6000	7000	7890	8780	10100	11900	100°	120°	90°	70°	—	—	—
10EX 210000 WFL	10"(250A) JIS10K	50.0	4420	5500	7630	9040	10000	11700	13200	14600	16800	19900	100°	120°	90°	70°	—	—	—
10EX 212000 WFL		50.0	5300	6590	9160	10800	12000	14000	15800	17600	20200	23800	100°	120°	90°	70°	—	—	—
12EX 215000 WFL	12"(300A) JIS10K	60.0	6630	8250	11500	13600	15000	17500	19700	21900	25200	29800	100°	120°	90°	70°	—	—	—
12EX 220000 WFL		60.0	8840	11000	15300	18100	20000	23300	26300	29200	33700	39700	100°	120°	90°	70°	—	—	—
14EX 225000 WFL	14"(350A) JIS10K	70.0	11100	13700	19100	22600	25000	29200	32900	36600	42100	49600	100°	120°	90°	70°	—	—	—
14EX 230000 WFL		70.0	13300	16100	22900	27100	30000	35000	39500	43900	50500	59600	100°	120°	90°	70°	—	—	—
16EX 240000 WFL	16"(400A) JIS10K	80.0	17700	21900	30500	36100	40000	46600	52600	58500	67300	79400	100°	120°	90°	70°	—	—	—
16EX 250000 WFL		80.0	22100	27400	38200	45200	50000	58300	65800	73100	84200	99300	100°	120°	90°	70°	—	—	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

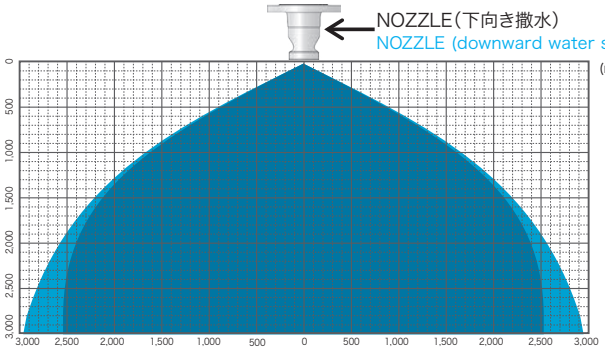
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

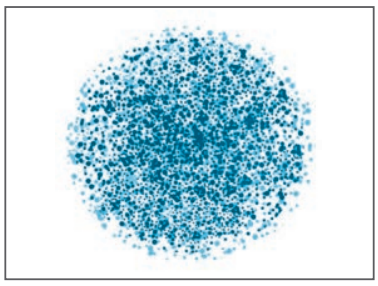


※圧力0.2MPa時
*At pressure of 0.2MPa

……2EX2300WFL,2EX2370WFL
……3EX21200WFL

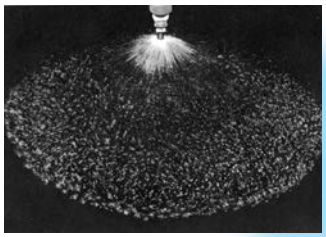
◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



超広角円形全面撒水型（両端ねじ込みタイプ）

EX2-WTC type NOZZLE



FULL CONE SUPER WIDE ANGLE SPRAY (Twin connection model)

◆ 特性 Characteristics

・全面均一に撒水する
Water is sprinkled uniformly over the entire surface.
・0.2MPaで120°の超広角円形全面撒水
Water is sprinkled over the entire surface in a circular pattern at an extremely wide angle of 120° at 0.2 MPa.
・高圧域では角度が狭くなる
The angle becomes narrow in the high-pressure region.
・小流量から大流量まで各種ラインナップ
The EX2 model comes in various types, from small flow rate to large flow rate.

◆ 主用途 Main applications

・球形貯槽表面、塔槽類外表面等への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the surfaces of spherical storage tanks, the outer surfaces of towers and tanks, etc.
・排煙、排ガスの冷却/吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment
・貯槽内への液化ガス撒布等、徐冷/冷却
Slow cooling and cooling, such as sprinkling of liquefied gas into a storage tank
・鋼材、鋼板等の冷却/洗浄/表面処理
Cooling, washing, and surface treatment of steel materials, steel sheets, etc.

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

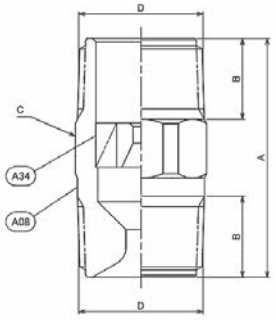
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316)

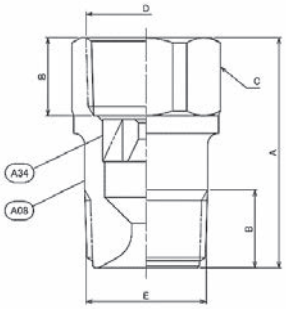
Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/4 EX2-WTC	30	11	HEX.14	R1/4	0.03
M3/8 EX2-WTC	35	13	HEX.17	R3/8	0.05
M1/2 EX2-WTC	44	16	HEX.21	R1/2	0.1
M3/4 EX2-WTC	52	19	HEX.29	R3/4	0.2
M1 EX2-WTC	65	22	HEX.35	R1	0.3



Item list	
A08	NOZZLE BODY
A34	CORE

Nominal diameter	Dimensions (mm)			connection		Weight (kg)
	A	B	C	D	E	
F1/4 EX2-WTC	30	11	HEX.17	Rc1/4	R1/4	0.03
F3/8 EX2-WTC	35	13	HEX.21	Rc3/8	R3/8	0.05
F1/2 EX2-WTC	44	16	HEX.26	Rc1/2	R1/2	0.1
F3/4 EX2-WTC	52	19	HEX.32	Rc3/4	R3/4	0.2
F1 EX2-WTC	65	22	HEX.41	Rc1	R1	0.3



◆ 型番選定 Selection of model number

(例)
Example:

M	1/4	EX2	3	WTC	／	SUS316

材質【ステンレス鋼：SUS316】
Material [stainless steel: SUS316]

設計圧(0.2MPa)時の撒水量(流量) L/min【3.0L/min】
Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.0 L/min]

型番タイプ【超広角円形全面撒水型（両端ねじ込みタイプ）:EX2-WTC】
Model number type
[FULL CONE SUPER WIDE ANGLE SPRAY(Twin connection model): EX2-WTC]

接続ネジサイズ
Connection thread size
【管用テーパオネジ1/4(R1/4)】
[Taper male thread for piping 1/4 (R1/4)]

M：オネジ(R)
M: Male thread (R)

◆ 撒水データ Watering data

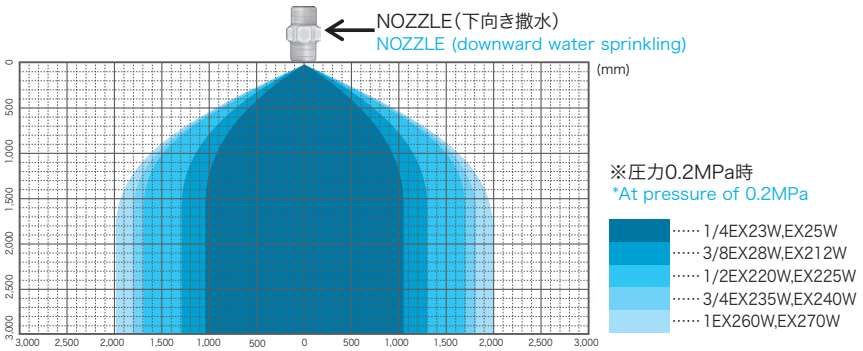
ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0. 2MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 23 WTC	PT1/4 (8A)	1.2	—	1.55	2.15	2.6	3.0	3.6	4.1	4.45	5.15	6.0	—	110°	90°	85°	—	450	250
1/4EX 25 WTC		1.5	2.0	2.6	3.65	4.35	5.0	5.95	6.8	7.35	8.6	10.0	100°	110°	90°	85°	900	550	300
3/8EX 28 WTC	PT3/8 (10A)	1.75	3.25	4.15	5.9	7.05	8.0	9.4	10.8	11.6	13.7	16.0	105°	120°	100°	85°	950	600	350
3/8EX 212 WTC		2.0	4.95	6.3	8.75	10.5	12.0	14.2	16.2	17.5	20.6	24.0	105°	120°	100°	85°	1000	650	350
1/2EX 216 WTC	PT1/2 (15A)	2.25	6.6	8.4	11.5	14.0	16.0	19.1	21.5	23.3	27.4	32.0	105°	120°	100°	85°	1050	700	400
1/2EX 220 WTC		3.0	8.05	10.5	15.8	18.0	20.0	23.0	26.6	28.4	33.1	39.4	105°	120°	100°	85°	1100	750	400
1/2EX 225 WTC		3.0	9.9	13.0	18.8	22.2	25.0	29.1	33.5	36.1	42.1	49.6	105°	120°	100°	85°	1150	800	400
3/4EX 230 WTC	PT3/4 (20A)	3.0	11.6	15.5	21.6	26.2	30.0	35.3	40.5	44.1	51.3	60.0	105°	120°	100°	85°	1200	850	450
3/4EX 235 WTC		4.0	14.3	18.6	26.2	31.1	35.0	41.1	46.9	51.1	59.2	69.6	105°	120°	100°	85°	1250	850	450
3/4EX240 WTC		4.0	17.2	21.9	30.0	36.1	40.0	47.0	53.2	58.0	66.9	79.2	105°	120°	100°	85°	1300	900	500
1EX 242 WTC	PT1 (25A)	4.0	19.4	24.7	31.6	37.6	42.0	49.5	56.4	62.2	72.7	83.6	105°	120°	100°	85°	1300	900	500
1EX 250 WTC		5.3	24.7	31.3	37.0	44.3	50.0	59.2	67.9	75.7	89.4	100	105°	120°	100°	85°	1350	950	550
1EX 260 WTC		5.5	27.8	35.6	44.0	53.2	60.0	70.0	78.9	86.3	101	117	105°	120°	100°	85°	1350	950	550
1EX 270 WTC		5.5	30.3	39.3	55.5	62.0	70.0	80.3	89.0	95.4	111	132	105°	120°	100°	85°	1400	950	550

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

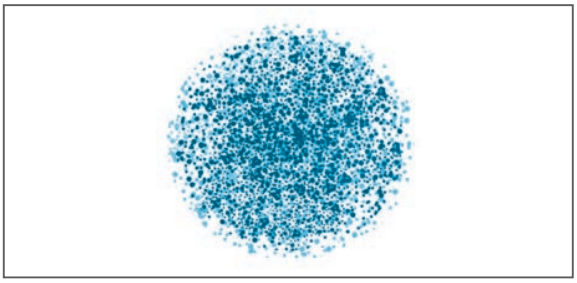
ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



◆ 撒水イメージ

Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



円形全面撒水型

EX4 type NOZZLE

FULL CONE SPRAY

◆ 特性 Characteristics

・全面均一に撒水する
Water is sprinkled uniformly over the entire surface.
・インパクトはEX2型より若干強い
The impact is slightly stronger than the EX2 type.
・粒子はEX2型より若干小さい
Water particles are slightly smaller than those of the EX2 type.
・小流量から大流量まで各種ラインナップ
The EX2 type comes in various types, from small flow rate to large flow rate.
・EX2型より撒水角度は狭い
The water sprinkling angle is narrower than the EX2 type.

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）(chromium-plated)
・SUS304/SUS316/SUS316L
・SCS13/SCS14/SCS16
・PVC/PP/PTFE

◆ 主用途 Main applications

・枕形貯槽表面への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the surfaces of pillow type storage tanks
・除塵、防塵等、排ガス処理設備
Exhaust gas treatment equipment, such as dust removal equipment and dust prevention equipment
・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・貯槽内への液化ガス撒布等、徐冷・冷却
Slow cooling and cooling, such as sprinkling of liquefied gas into a storage tank
・各種ガス製造装置
Various gas manufacturing devices
・洗浄機、洗ビン機等、産業機器
Industrial machinery, such as washing machines and pin washing machines

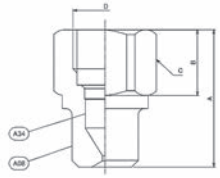
◆ 接続 Connections

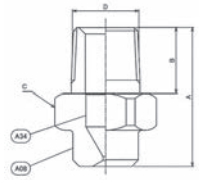
・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316)
Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/8 EX4	21	10	HEX.14	Rc1/8		0.02

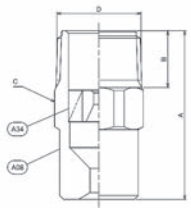
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/8 EX4	21	10	HEX.14	R1/8		0.02
M1/4 EX4	22	11	HEX.17	R1/4		0.005

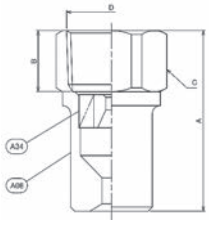




Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/4 EX4	30	11	HEX.14	R1/4		0.03
M3/8 EX4	35	13	HEX.17	R3/8		0.05
M1/2 EX4	44	16	HEX.21	R1/2		0.1
M3/4 EX4	52	19	HEX.29	R3/4		0.2
M1 EX4	65	22	HEX.35	R1		0.3

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/4 EX4	30	11	HEX.17	Rc1/4		0.03
F3/8 EX4	35	13	HEX.21	Rc3/8		0.05
F1/2 EX4	44	16	HEX.26	Rc1/2		0.1
F3/4 EX4	52	19	HEX.32	Rc3/4		0.2
F1 EX4	65	22	HEX.41	Rc1		0.3

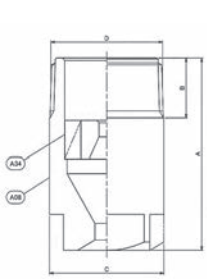


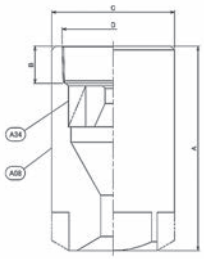


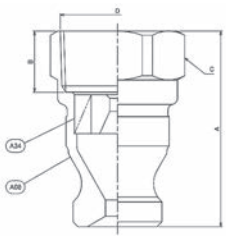
Item list	
A08	NOZZLE BODY
A34	CORE

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1 1/2 EX4	80	25	Φ 49	R 1 1/2		0.8
F1 1/2 EX4	80	25	Φ 55	Rc1 1/2		0.9
F2 EX4	110	25	Φ 70	Rc 2		1.8
F2 1/2 EX4	150	32	Φ 90	Rc2 1/2		4.5
F3 EX4	180	40	Φ 108	Rc3		6.5
F4 EX4	220	40	Φ 136	Rc4		10.0

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F 1 1/2 EX4	80	25	HEX.56	Rc 1 1/2		0.85
F2 EX4	110	25	HEX.70	Rc2		1.8
F2 1/2 EX4	150	32	HEX.88	Rc 2 1/2		4.5
F3 EX4	180	40	HEX.102	Rc3		6.0
F4 EX4	220	40	HEX.130	Rc4		10.0
F5 EX4	260	50	HEX.165	Rc5		16.0
F6 EX4	300	50	HEX.190	Rc6		24.0







◆ 型番選定 Selection of model number

(例)
Example :

M	1/4	EX4	16	／	SUS316

材質【ステンレス鋼：SUS316】
Material [stainless steel: SUS316]

設計圧(0.2MPa)時の撒水量(流量) L/min【1.6L/min】
Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [1.6 L/min]

型番タイプ【円形全面撒水型：EX4】
Model number type [FULL CONE SPRAY: EX4]

接続ネジサイズ
Connection thread size

【管用テーパオネジ1/4(R1/4)】
[Taper male thread for piping 1/4 (R1/4)]

M：オネジ（R）
M: Male thread (R)

F：メネジ（Rc）
F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/8EX 407	PT1/8 (6A)	0.8	—	0.35	0.5	0.6	0.7	0.85	1.0	1.1	1.25	1.4	—	50°	45°	40°	—	450	250
1/8EX 410		0.8	—	0.5	0.7	0.85	1.0	1.2	1.4	1.55	1.8	2.0	—	50°	45°	40°	900	550	300
1/4EX 416	PT1/4 (8A)	1.2	—	0.8	1.15	1.35	1.6	1.95	2.2	2.45	2.28	3.2	—	50°	45°	40°	950	600	350
1/4EX 424		1.2	0.95	1.2	1.7	2.05	2.4	2.9	3.3	3.6	4.15	4.8	50°	60°	55°	50°	1000	650	350
1/4EX 426		1.2	1.0	1.3	1.85	2.2	2.6	3.15	3.6	3.9	4.5	5.2	50°	60°	55°	50°	—	—	—
1/4EX 432		1.4	1.25	1.6	2.25	2.75	3.2	3.9	4.4	4.75	5.5	6.4	50°	60°	55°	50°	—	—	—
1/4EX 438		1.4	1.5	1.95	2.7	3.3	3.8	4.65	5.15	5.65	6.5	7.6	50°	60°	55°	50°	—	—	—
1/4EX 440		1.4	1.6	2.05	2.85	3.45	4.0	4.85	5.45	5.95	6.85	8.0	50°	60°	55°	50°	—	—	—
3/8EX 444	PT3/8 (10A)	1.7	1.75	2.3	3.1	3.8	4.4	5.3	5.9	6.5	7.45	8.75	60°	70°	65°	55°	1050	700	400
3/8EX 452		1.75	2.1	2.7	3.7	4.55	5.2	6.3	7.1	7.75	8.85	10.4	60°	70°	65°	55°	1100	750	400
3/8EX 465		2.0	2.6	3.35	4.6	5.65	6.5	7.85	8.85	9.65	11.1	13.0	60°	70°	65°	55°	1150	800	400
3/8EX 470		2.0	2.75	3.6	5.0	6.1	7.0	8.45	9.6	10.5	12	14.0	60°	70°	65°	55°	—	—	—
3/8EX 482		2.0	3.25	4.2	5.85	7.2	8.2	9.7	11.1	12.2	14.1	16.4	60°	70°	65°	55°	—	—	—
1/2EX 4100	PT1/2 (15A)	2.25	3.95	5.1	7.15	8.75	10.0	11.6	13.3	14.7	17.1	20.0	60°	70°	65°	55°	1200	850	450
1/2EX 4120		2.25	4.75	6.15	8.6	10.5	12.0	14.0	15.9	17.5	20.3	23.9	60°	70°	65°	55°	1250	850	450
1/2EX 4150		3.0	5.95	7.75	10.8	13.1	15.0	17.5	19.8	21.6	25.1	29.6	60°	70°	65°	55°	1300	900	500
1/2EX 4180		3.0	7.2	9.3	13.0	15.8	18.0	21.5	24.3	26.3	30.6	36.8	60°	70°	65°	55°	—	—	—
1/2EX 4200		3.0	8.05	10.3	14.5	17.6	20.0	24.3	27.5	29.6	34.5	40.0	60°	70°	65°	55°	—	—	—
3/4EX 4220	PT3/4 (20A)	3.0	8.75	11.3	15.9	19.4	22.0	26.4	30.0	32.8	38.1	44.0	60°	70°	65°	55°	1300	900	500
3/4EX 4250		3.7	9.8	12.7	18.1	22.0	25.0	29.7	33.7	37.5	43.4	50.0	60°	70°	65°	55°	1350	950	550
3/4EX 4280		4.0	11.1	14.3	20.2	24.6	28.0	33.2	37.6	41.5	48.3	56.0	60°	70°	65°	55°	1350	950	550
1EX 4300	PT1 (25A)	4.0	11.9	15.3	21.5	26.2	30.0	35.4	40.3	43.9	51.3	60.0	60°	70°	65°	55°	1400	950	550
1EX 4340		5.0	13.4	17.3	24.4	29.7	34.0	40.6	46.2	50.2	58.4	68.0	60°	70°	65°	55°	1450	1000	600
1EX 4400		5.0	15.7	20.3	28.7	35.0	40.0	48.3	55.0	59.6	69	80.0	60°	70°	65°	55°	1450	1000	600
1EX 4460		5.2	18.2	23.6	32.9	40.2	46.0	55.4	62.8	68.2	79.3	92.0	60°	70°	65°	55°	1500	1000	600
1EX 4520		5.5	20.9	26.9	37.2	45.5	52.0	62.4	70.6	76.8	89.6	104	60°	70°	65°	55°	1500	1050	600
1 1/2EX 4600	PT1 1/2 (40A)	6.5	23.9	30.7	42.4	52.0	60.0	70.7	80.5	87.4	97.4	114	60°	70°	65°	55°	1600	1100	—
1 1/2EX 4750		6.5	30.2	38.7	53.8	65.5	75.0	89.0	101	110	125	146	60°	70°	65°	55°	1600	1100	—
1 1/2EX 41000		8.0	40.7	52.0	72.8	88.0	100	120	135	148	171	200	60°	70°	65°	55°	1650	1150	—
1 1/2EX 41200		8.0	48.6	62.0	86.1	105	120	143	161	176	205	239	60°	70°	65°	55°	—	—	—
1 1/2EX 41300		8.0	52.6	67.2	93.2	114	130	155	175	191	222	250	60°	70°	65°	55°	1650	1150	—
1 1/2EX 41600		8.0	64.3	82.2	113	139	160	190	215	233	272	318	60°	70°	65°	55°	1700	1200	—
2EX 42000	PT2 (50A)	10.0	78.5	103	147	177	200	235	264	292	345	400	60°	70°	65°	55°	1700	1200	—
2EX 42500		10.0	98.5	128	182	220	250	295	333	366	430	500	60°	70°	65°	55°	1750	1250	—
2EX 43000		11.0	119	153	215	262	300	355	403	441	514	600	60°	70°	65°	55°	—	—	—
2EX 43400		11.0	136	174	244	297	340	404	456	498	582	680	60°	70°	65°	55°	—	—	—
2 1/2EX44000	PT2 1/2 (65A)	12.5	160	204	287	350	400	475	537	586	685	800	60°	70°	65°	55°	1800	1300	—
2 1/2EX 44500		12.5	181	230	323	394	450	536	604	656	770	900	60°	70°	65°	55°	1850	1350	—
2 1/2EX 45700		12.5	229	291	410	499	570	679	765	831	976	1140	60°	70°	65°	55°	1950	1450	—
3EX 47000	PT3 (80A)	17.5	281	358	503	612	700	833	939	1020	1200	1400	60°	70°	60°	50°	2300	1600	—
3EX 49000		17.5	361	460	647	787	900	1070	1210	1310	1540	1800	60°	70°	60°	50°	2500	1800	—
4EX 410000	PT4 (100A)	25.0	402	511	718	875	1000	1190	1340	1460	1710	2000	60°	70°	60°	50°	2700	2000	—
4EX 412000		25.0	482	613	862	1050	1200	1430	1610	1750	2050	2400	60°	70°	60°	50°	3000	2300	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
：Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

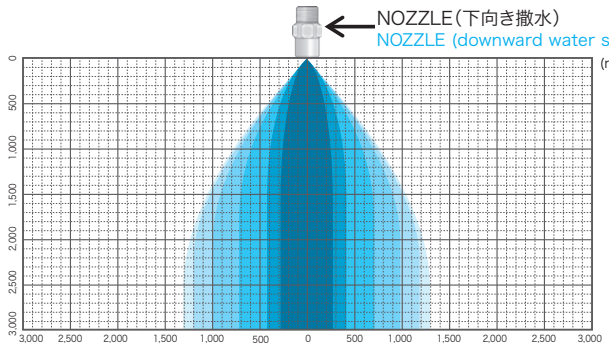
接続：旧JIS規格で表記しています。Connections：Written according to the old JIS standard.

最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance：Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure：Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

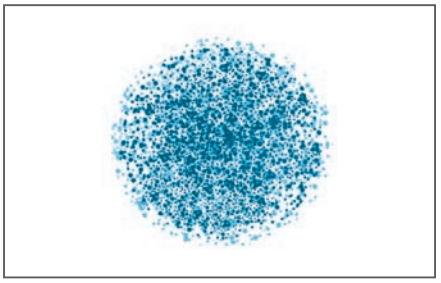


※圧力0.2MPa時
*At pressure of 0.2MPa

- 1/8EX407,EX410
- 1/4EX424,EX426
- 3/8EX482
- 1/2EX4180,EX4200
- 1EX4520
- 1 1/2EX41600

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



円形全面撒水型（フランジモデル）

EX4-FL type NOZZLE

FULL CONE SPRAY (Flange model)

◆ 特性 Characteristics

・円形全面に同芯方向へ撒水
Water is sprinkled over the entire surface in a circular pattern in the concentric direction.
・設計圧力0.2MPaにおいて70˚に撒水
Water is sprinkled at 70˚ at the design pressure of 0.2MPa.

◆ 主用途 Main applications

・除塵、集塵等、排ガス処理設備
Exhaust gas treatment equipment, such as dust removal equipment and dust collection equipment
・排煙、排ガスの冷却/吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・各種化学プロセス用
For various chemical processes
・海水淡水化装置脱気用
For deaeration of seawater desalination systems

◆ 材質 Material

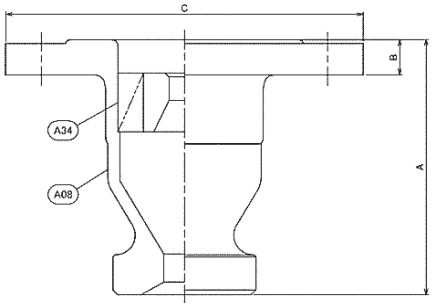
・SCS13/SCS14/SCS16

◆ 接続 Connections

・JIS B 2220 ステンレス鋼フランジ
Stainless steel flange specified in JIS B 2220
・JPI-7S-15-2011 石油工業用フランジ（クラス150）
Japan Petroleum Institute Flanges specified in JPI-7S-15-2011(class 150)

◆ 重量&寸法(SCS13) Weight & dimensions(SCS13)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
2 EX4-FL	100	16	Φ155	JIS10K	4.2
2 1/2 EX4-FL	130	18	Φ175	JIS10K	5.6
3 EX4-FL	150	18	Φ185	JIS10K	7.0
4 EX4-FL	185	18	Φ210	JIS10K	11.0
5 EX4-FL	220	20	Φ250	JIS10K	18.0
6 EX4-FL	260	22	Φ280	JIS10K	26.0
8 EX4-FL	330	22	Φ330	JIS10K	45.0
10 EX4-FL	430	24	Φ400	JIS10K	69.0
12 EX4-FL	460	24	Φ445	JIS10K	98.0



Item list	
A08	NOZZLE BODY
A34	CORE

◆ 型番選定 Selection of model number

(例)
Example:

2	EX4	2000	FL	／	SCS13

- SCS13 — 材質【ステンレス鋼鋳鋼：SCS13】 Material [cast stainless steel: SCS13]
- 2000 — 設計圧(0.2MPa)時の撒水量(流量) L/min【200L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [200 L/min]
- EX4 — 型番タイプ【円形全面撒水型(フランジモデル)：EX4-FL】 Model number type [FULL CONE SPRAY(Flange model): EX4-FL]
- 2 — 【2インチ(50A)JIS10Kフランジ】 [2” (50A) JIS10K flange]

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7M Pa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.5 MPa
2EX 42000 FL	2"(50A) JIS10K	10.0	78.5	103	147	177	200	235	264	292	345	400	60°	70°	65°	55°	1600	1100	800
2EX 42500 FL		10.0	98.5	128	182	220	250	295	333	366	430	500	60°	70°	65°	55°	1600	1100	800
2EX 43000 FL		11.0	119	153	215	262	300	355	403	441	514	600	60°	70°	65°	55°	1650	1150	800
2EX 43400 FL		11.0	136	174	244	297	340	404	456	498	598	680	60°	70°	65°	55°	1650	1150	800
2 1/2EX 44000 FL	2 1/2"(65A) JIS10K	12.5	160	204	287	350	400	475	537	586	685	800	60°	70°	65°	55°	1700	1200	850
2 1/2EX 44500 FL		12.5	181	230	323	394	450	536	604	656	770	900	60°	70°	65°	55°	1700	1200	850
2 1/2EX 45700 FL		12.5	229	291	410	499	570	679	765	831	976	1140	60°	70°	65°	55°	1750	1250	950
3EX 47000 FL	3"(80A) JIS10K	17.5	281	358	503	612	700	833	939	1020	1200	1400	60°	70°	60°	50°	1800	1300	1000
3EX 49000 FL		17.5	361	460	647	785	900	1070	121	1310	1540	1800	60°	70°	60°	50°	1850	1350	1050
4EX 410000 FL	4"(100A) JIS10K	25.0	402	511	718	875	1000	1190	1340	1460	1710	2000	60°	70°	60°	50°	1900	1400	1100
4EX 412000 FL		25.0	482	613	862	1050	1200	1430	1610	1750	2050	2400	60°	70°	60°	50°	1950	1450	1150
5EX 420000 FL	5"(125A) JIS10K	30.0	785	1030	1470	1770	2000	2350	2460	2920	3450	4000	60°	70°	60°	50°	2700	2000	—
5EX 430000 FL		30.0	1190	1530	2150	2620	3000	3550	4030	4410	5140	6000	60°	70°	60°	50°	3000	2300	—
6EX 435000 FL	6"(150A) JIS10K	35.0	1400	1790	2510	3060	3500	4160	4700	5130	6000	7000	60°	70°	60°	50°	3300	2600	—
6EX 440000 FL		35.0	1600	2040	2870	3500	4000	4750	5370	5860	6850	8000	60°	70°	60°	50°	3700	3000	—
8EX 450000 FL	8"(200A) JIS10K	40.0	2000	2540	3590	4370	5000	5940	6710	7330	8570	10000	60°	70°	60°	50°	—	—	—
8EX 460000 FL		40.0	2400	3060	4300	5350	6000	7130	8050	8790	10300	12000	60°	70°	60°	50°	—	—	—
10EX 4100000 FL	10"(250A) JIS10K	50.0	4020	5110	7180	8750	10000	11900	13400	14600	17100	20000	60°	70°	60°	50°	—	—	—
10EX 4120000 FL		50.0	4800	6120	8600	10500	12000	14300	16100	18600	20600	24000	60°	70°	60°	50°	—	—	—
12EX 4150000 FL	12"(300A) JIS10K	60.0	6000	7650	10800	13100	15000	17800	20100	22000	25700	30000	60°	70°	60°	50°	—	—	—
12EX 4200000 FL		60.0	7850	10300	14700	17700	20000	23500	26400	29200	34500	40000	60°	70°	60°	50°	—	—	—
14EX 4250000 FL	14"(350A) JIS10K	70.0	10000	12800	17900	21900	25000	29700	33600	36600	42800	50000	60°	70°	60°	50°	—	—	—
14EX 4300000 FL		70.0	11900	15300	21500	26200	30000	35500	40300	44100	51400	60000	60°	70°	60°	50°	—	—	—
16EX 4400000 FL	16"(400A) JIS10K	80.0	16000	20400	28700	35000	40000	47500	53700	58600	68500	80000	60°	70°	60°	50°	—	—	—
16EX 4500000 FL		80.0	20000	25500	35900	43700	50000	59400	67100	73300	85700	100300	60°	70°	60°	50°	—	—	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

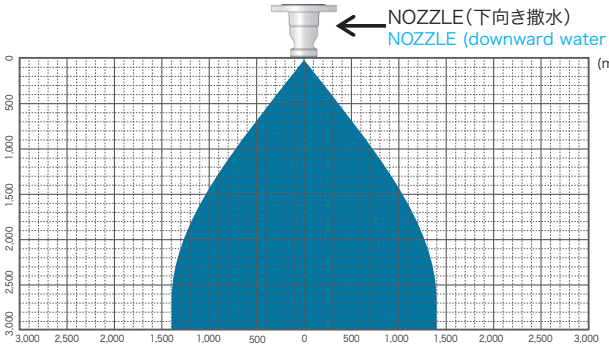
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

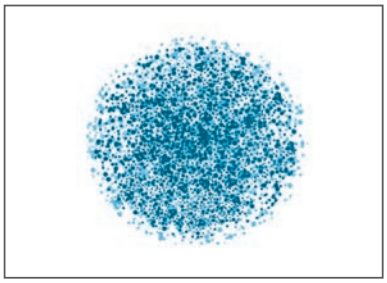


※圧力0.2MPa時
*At pressure of 0.2MPa

2EX43000FL,2EX43400FL

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



円形全面撒水型（両端ねじ込みタイプ）

EX4-TC type NOZZLE

FULL CONE SPRAY(Twin connection model)

◆ 特性 Characteristics

・全面均一に撒水する
Water is sprinkled uniformly over the entire surface.
・インパクトはEX2型より若干強い
The impact is slightly stronger than the EX2 type.
・粒子はEX2型より若干小さい
Water particles are slightly smaller than those of the EX2 type.
・小流量から大流量まで各種ラインナップ
The EX2 type comes in various types, from small flow rate to large flow rate.
・EX2型より撒水角度は狭い
The water sprinkling angle is narrower than the EX2 type.

◆ 主用途 Main applications

・枕形貯槽表面への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the surfaces of pillow type storage tanks
・除塵、防塵等、排ガス処理設備
Exhaust gas treatment equipment, such as dust removal equipment and dust prevention equipment
・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・貯槽内への液化ガス撒布等、徐冷・冷却
Slow cooling and cooling, such as sprinkling of liquefied gas into a storage tank
・各種ガス製造装置
Various gas manufacturing devices
・洗浄機、洗ビン機等、産業機器
Industrial machinery, such as washing machines and pin washing machines

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
C3604B/BSCR（chromium-plated）
・SUS304/SUS316/SUS316L
SUS304/SUS316/SUS316L
・PVC/PP/PTFE
PVC/PP/PTFE

◆ 接続 Connections

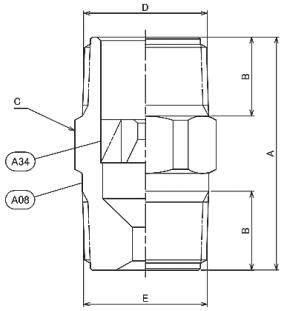
・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

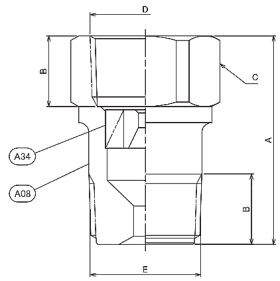
◆ 重量&寸法(SUS316)

Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/4 EX4-TC	30	11	HEX.14	R1/4	0.03
M3/8 EX4-TC	35	13	HEX.17	R3/8	0.05
M1/2 EX4-TC	44	16	HEX.21	R1/2	0.1
M3/4 EX4-TC	52	19	HEX.29	R3/4	0.2
M1 EX4-TC	65	22	HEX.35	R1	0.3

Nominal diameter	Dimensions (mm)			connection		Weight (kg)
	A	B	C	D	E	
F1/4 EX4-TC	30	11	HEX.17	Rc1/4	R1/4	0.03
F3/8 EX4-TC	35	13	HEX.21	Rc3/8	R3/8	0.05
F1/2 EX4-TC	44	16	HEX.26	Rc1/2	R1/2	0.1
F3/4 EX4-TC	52	19	HEX.32	Rc3/4	R3/4	0.2
F1 EX4-TC	65	22	HEX.41	Rc1	R1	0.3





Item list	
A08	NOZZLE BODY
A34	CORE

◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX4 | 16 | TC ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 16：設計圧(0.2MPa)時の撒水量(流量) L/min【1.6L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [1.6 L/min]
- TC：型番タイプ【円形全面撒水型（両端ねじ込みタイプ）:EX4-TC】 Model number type [FULL CONE SPRAY (Twin connection model): EX4-TC]
- EX4：接続ネジサイズ Connection thread size
- 1/4：【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/8EX 407 TC	PT1/8 (6A)	0.8	—	0.35	0.5	0.6	0.7	0.85	1.0	1.1	1.25	1.4	—	50°	45°	40°	—	450	250
1/8EX 410 TC		0.8	—	0.5	0.7	0.85	1.0	1.2	1.4	1.55	1.8	2.0	—	50°	45°	40°	900	550	300
1/4EX 416 TC	PT1/4 (8A)	1.2	—	0.8	1.15	1.35	1.6	1.95	2.2	2.45	2.28	3.2	—	50°	45°	40°	950	600	350
1/4EX 424 TC		1.2	0.95	1.2	1.7	2.05	2.4	2.9	3.3	3.6	4.15	4.8	50°	60°	55°	50°	1000	650	350
1/4EX 426 TC		1.2	1.0	1.3	1.85	2.2	2.6	3.15	3.6	3.9	4.5	5.2	50°	60°	55°	50°	—	—	—
1/4EX 432 TC		1.4	1.25	1.6	2.25	2.75	3.2	3.9	4.4	4.75	5.5	6.4	50°	60°	55°	50°	—	—	—
1/4EX 438 TC		1.4	1.5	1.95	2.7	3.3	3.8	4.65	5.15	5.65	6.5	7.6	50°	60°	55°	50°	—	—	—
1/4EX 440 TC		1.4	1.6	2.05	2.85	3.45	4.0	4.85	5.45	5.95	6.85	8.0	50°	60°	55°	50°	—	—	—
3/8EX 444 TC	PT3/8 (10A)	1.7	1.75	2.3	3.1	3.8	4.4	5.3	5.9	6.5	7.45	8.75	60°	70°	65°	55°	1050	700	400
3/8EX 452 TC		1.75	2.1	2.7	3.7	4.55	5.2	6.3	7.1	7.75	8.85	10.4	60°	70°	65°	55°	1100	750	400
3/8EX 465 TC		2.0	2.6	3.35	4.6	5.65	6.5	7.85	8.85	9.65	11.1	13.0	60°	70°	65°	55°	1150	800	400
3/8EX 470 TC		2.0	2.75	3.6	5.0	6.1	7.0	8.45	9.6	10.5	12.0	14.0	60°	70°	65°	55°	—	—	—
3/8EX 482 TC		2.0	3.25	4.2	5.85	7.2	8.2	9.7	11.1	12.2	14.1	16.4	60°	70°	65°	55°	—	—	—
1/2EX 4100 TC	PT1/2 (15A)	2.25	3.95	5.1	7.15	8.75	10.0	11.6	13.3	14.7	17.1	20.0	60°	70°	65°	55°	1200	850	450
1/2EX 4120 TC		2.25	4.75	6.15	8.6	10.5	12.0	14	15.9	17.5	20.3	23.9	60°	70°	65°	55°	1250	850	450
1/2EX 4150 TC		3.0	5.95	7.75	10.8	13.1	15.0	17.5	19.8	21.6	25.1	29.6	60°	70°	65°	55°	1300	900	500
1/2EX 4180 TC		3.0	7.2	9.3	13.0	15.8	18.0	21.5	24.3	26.3	30.6	36.8	60°	70°	65°	55°	—	—	—
1/2EX 4200 TC		3.0	8.05	10.3	14.5	17.6	20.0	24.3	27.5	29.6	34.5	40.0	60°	70°	65°	55°	—	—	—
3/4EX 4220 TC	PT3/4 20A	3.0	8.75	11.3	15.9	19.4	22.0	26.4	30.0	32.8	38.1	44.0	60°	70°	65°	55°	1300	900	500
3/4EX 4250 TC		3.7	9.8	12.7	18.1	22.0	25.0	29.7	33.7	37.5	43.4	50.0	60°	70°	65°	55°	1350	950	550
3/4EX 4280 TC		4.0	11.1	14.3	20.2	24.6	28.0	33.2	37.6	41.5	48.3	56.0	60°	70°	65°	55°	1350	950	550
1EX 4300 TC	PT1 (25A)	4.0	11.9	15.3	21.5	26.2	30.0	35.4	40.3	43.9	51.3	60.0	60°	70°	65°	55°	1400	950	550
1EX 4340 TC		5.0	13.4	17.3	24.4	29.7	34.0	40.6	46.2	50.2	58.4	68.0	60°	70°	65°	55°	1450	1000	600
1EX 4400 TC		5.0	15.7	20.3	28.7	35.0	40.0	48.3	55.0	59.6	69.0	80.0	60°	70°	65°	55°	1450	1000	600
1EX 4460 TC		5.2	18.2	23.6	32.9	40.2	46.0	55.4	62.8	68.2	79.3	92.0	60°	70°	65°	55°	1500	1000	600
1EX 4520 TC		5.5	20.9	26.9	37.2	45.5	52.0	62.4	70.6	76.8	89.6	104	60°	70°	65°	55°	1500	1050	600

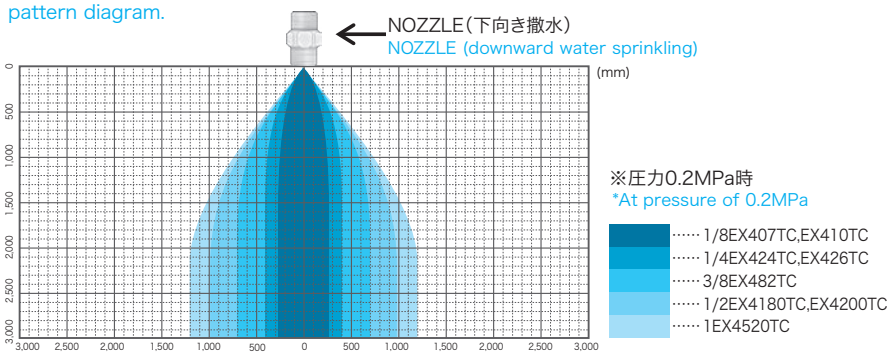
：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

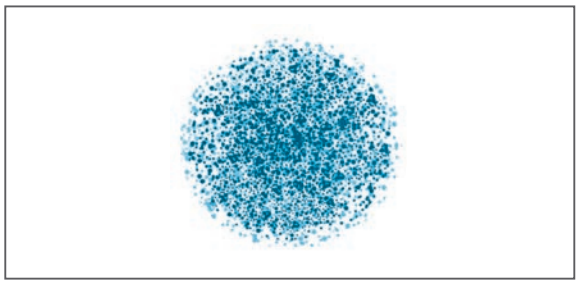
ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



◆ 撒水イメージ Image of water sprinkling

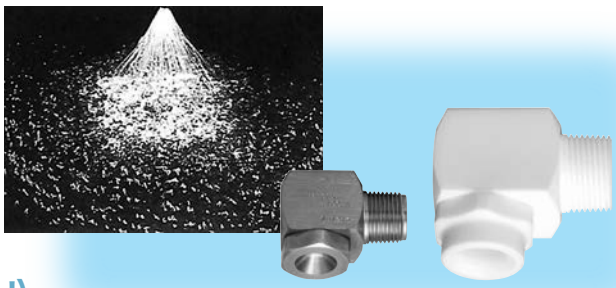
上から見た撒水図　Water spraying diagram from above



コアレス円形全面撒水型（アングル型ねじ込みタイプ）

EX4-HN type NOZZLE

FULL CONE CORELESS SPRAY (Angle model)



◆ 特性 Characteristics

・内部に羽根等が無く、目詰まりしない
This spray nozzle has no blades, etc. inside and does not clog.
・構造がシンプルで取扱い易い
This spray nozzle is easy to handle because of the simple structure.
・使用圧力範囲が広い
The operating pressure range is wide.
・粗粒であるがインパクトはソフト
Water particles are coarse, but the impact is soft.

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS316L
・PVC/PP/PTFE

◆ 接続 Connections

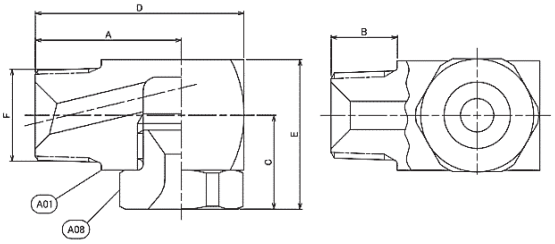
・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 主用途 Main applications

・防災設備用
For disaster prevention equipment
・エアーレーション方式曝気槽の消泡装置
Defoaming devices for aeration type tanks
・薬液撒布装置
Chemical solution sprinkling devices
・処理水、循環水等、不純物の多い液体の撒水装置
Sprinkling devices for liquids containing a large amount of impurities, such as treated water and circulating water
・汚泥脱水処理装置
Sludge dehydration treatment devices
・汚泥焼却処理装置
Sludge incineration treatment devices
・ゴミ焼却処理装置
Garbage incineration treatment devices
・脱臭装置
Deodorizing devices
・スカム破砕
Scum crushing
・その他、廃液、廃水処理装置
Other effluent and wastewater treatment devices

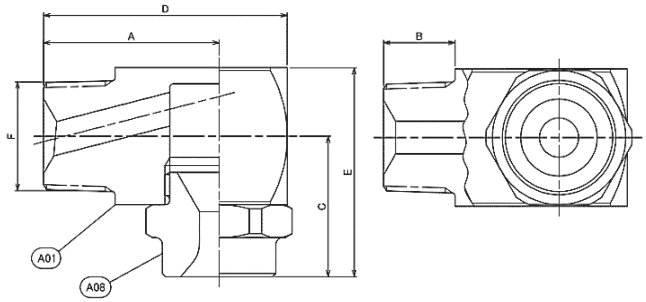
◆ 重量&寸法(SUS316L) Weight & dimensions(SUS316L)

Nominal diameter	Dimensions (mm)					connection	Weight (kg)
	A	B	C	D	E	F	
M1/4 EX4-HN	23	11	14	32	23	R1/4	0.06
M3/8 EX4-HN	29	14	17	40	28	R3/8	0.12
M1/2 EX4-HN	35	17	21	48	34	R1/2	0.2
M3/4 EX4-HN	42	19	27	60	43	R3/4	0.35



Item list	
A08	NOZZLE CAP
A34	BODY

Nominal diameter	Dimensions (mm)					connection	Weight (kg)
	A	B	C	D	E	F	
M1 EX4-HN	54	22	43	75	64	R1	1.5



◆ 型番選定 Selection of model number

(例)
Example :

M	1/4	EX4	50	HN	／	SUS316L

材質【ステンレス鋼：SUS316L】
Material [stainless steel : SUS316L]

設計圧(0.2MPa)時の撒水量(流量) L/min【5.0L/min】
Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [5.0 L/min]

型番タイプ【コアレス円形全面撒水型(アングル型ねじ込みタイプ):EX4-HN】
Model number type [FULL CONE CORELESS SPRAY(Angle model): EX4-HN]

接続ネジサイズ
Connection thread size

【管用テーパオネジ1/4(R1/4)】
[Taper male thread for piping 1/4 (R1/4)]

M：オネジ（R）
M: Male thread (R)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)								撒水角度 Water sprinkling angle			平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.2 MPa	0.7 MPa
M1/4EX 450 HN	PT1/4 (8A)	2.6	2.0	2.6	3.6	4.4	5.0	6.0	7.0	7.6	60°	70°	70°	950	600	350
M1/4EX 4100 HN		3.7	4.2	5.2	7.2	8.8	10.0	12.0	14.0	15.0	60°	70°	70°	1000	650	350
M3/8EX 4100 HN	PT3/8 (10A)	3.7	4.2	5.2	7.2	8.8	10.0	12.0	14.0	15.0	60°	70°	70°	1050	700	400
M3/8EX 4150 HN		4.3	6.3	7.7	11.0	13.0	15.0	18.0	21.0	22.5	65°	70°	70°	1100	750	400
M3/8EX 4200 HN		5.2	7.75	9.7	14.1	17.2	20.0	24.3	27.8	30.4	65°	70°	70°	1150	800	400
M3/8EX 4250 HN		6.0	10.5	13.0	18.0	22.0	25.0	30.0	35.0	38.0	65°	70°	70°	—	—	—
M1/2EX 4200 HN	PT1/2 (15A)	5.2	7.75	9.7	14.1	17.2	20.0	24.3	27.8	22.5	70°	80°	80°	1200	850	450
M1/2EX 4250 HN		6.0	10.5	13.0	18.0	22.0	25.0	30.0	35.0	38.0	70°	80°	80°	1250	850	450
M1/2EX 4300 HN		6.5	12.5	15.5	21.0	26.0	30.0	36.0	42.0	45.0	70°	80°	80°	1300	900	500
M1/2EX 4350 HN		7.0	14.7	17.8	24.8	30.2	35.0	42.5	49.0	53.0	70°	80°	80°	—	—	—
M1/2EX 4400 HN		7.3	15.8	20.0	28.3	34.5	40.0	49.7	56.1	61.1	70°	80°	80°	—	—	—
M1/2EX 4450 HN		8.0	18.4	23.0	31.5	39.0	45.0	55.0	63.0	70.0	70°	80°	80°	—	—	—
M1/2EX 4500 HN		8.5	21.0	26.0	36.0	44.0	50.0	60.0	69.0	75.0	70°	80°	80°	—	—	—
M3/4EX 4400 HN	PT3/4 (20A)	7.3	15.8	20.0	28.3	34.5	40.0	49.7	56.1	61.1	70°	80°	80°	1300	900	500
M3/4EX 4500 HN		8.5	21.0	26.0	36.0	44.0	50.0	60.0	69.0	75.0	70°	80°	80°	1350	950	550
M3/4EX 4600 HN		9.0	25.0	31.0	43.0	53.0	60.0	72.0	83.0	92.0	70°	80°	80°	—	—	—
M3/4EX 4700 HN		9.2	29.0	36.0	50.0	61.0	70.0	84.0	97.0	105	70°	80°	80°	—	—	—
M3/4EX 4800 HN		10.0	33.2	42.0	56.0	69.0	80.0	98.0	113	125	70°	80°	80°	—	—	—
M3/4EX 4900 HN		10.4	37.6	47.0	64.0	78.5	90.0	109	125	138	70°	80°	80°	—	—	—
M3/4EX 41000 HN		11.0	42.0	52.0	72.0	88.0	100	120	138	151	70°	80°	80°	1350	950	550
M1EX 4800 HN	PT1 (25A)	10.0	33.2	42.0	56.0	69.0	80.0	98.0	113	125	70°	80°	80°	1400	950	550
M1EX 41000 HN		11.0	42.0	52.0	72.0	88.0	100	120	138	151	70°	80°	80°	1450	1000	600
M1EX 41200 HN		12.0	50.0	62.0	86.0	105	120	145	165	180	70°	80°	80°	1450	1000	600
M1EX 41500 HN		14.0	63.0	78.0	110	130	150	180	206	226	70°	80°	80°	1500	1000	600

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
：Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

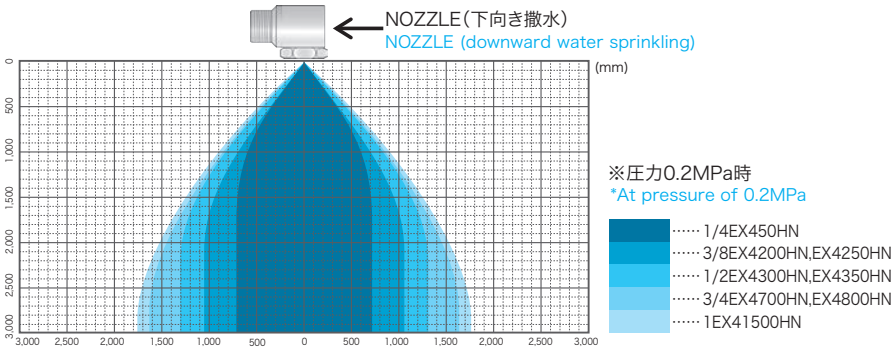
接続：旧JIS規格で表記しています。Connections : Written according to the old JIS standard.

最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、0.5MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.5 MPa specified in this table.

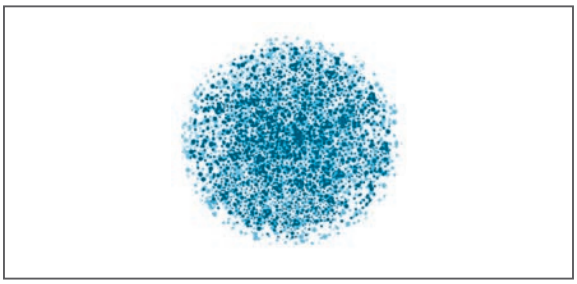
◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



円形全面撒水型（樹脂成形品）

EX4 type NOZZLE

FULL CONE SPRAY

(RESIN MOLDED PRODUCT)

◆ 特性 Characteristics

・全面均一に撒水する
Water is sprinkled uniformly over the entire surface.
・インパクトはEX2型より若干強い
The impact is slightly stronger than the EX2 type.
・粒子はEX2型より若干小さい
Water particles are slightly smaller than those of the EX2 type.
・EX2型より撒水角度は狭い
The water sprinkling angle is narrower than the EX2 type.
・安価、軽量
Inexpensive and lightweight.

◆ 主用途 Main applications

・ケミカルエッジング等、化学薬品プロセス
Chemical processes, such as chemical edging
・除塵、防塵等、排ガス処理設備
Exhaust gas treatment equipment, such as dust removal equipment and dust prevention equipment

◆ 材質 Material

・PP-PI / PVDF-PI

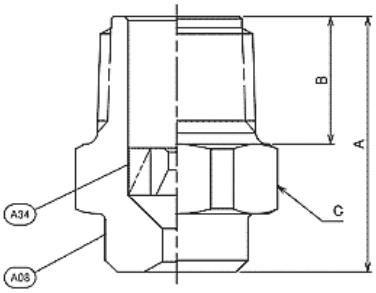
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量&寸法(PP-PI) Weight & dimensions(PP-PI)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/4 EX4	22	11	HEX.17	R1/4	0.005

Item list	
A08	NOZZLE BODY
A34	CORE



◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX4 | 16 ／ PP-PI

- PP-PI：材質【ポリプロピレン成形品：PP-PI】 Material [polypropylene molded product : PP-PI]
- 16：設計圧(0.2MPa)時の撒水量(流量) L/min【1.6L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [1.6 L/min]
- EX4：型番タイプ【円形全面撒水型：EX4】 Model number type [FULL CONE SPRAY: EX4]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 416	PT1/4 (8A)	1.2	—	0.8	1.15	1.35	1.6	1.95	2.2	2.45	2.28	3.2	—	50°	45°	40°	950	600	350
1/4EX 424		1.2	0.95	1.2	1.7	2.05	2.4	2.9	3.3	3.6	4.15	4.8	50°	60°	55°	50°	1000	650	350
1/4EX 426		1.2	1.0	1.3	1.85	2.2	2.6	3.15	3.6	3.9	4.5	5.2	50°	60°	55°	50°	—	—	—
1/4EX 432		1.4	1.25	1.6	2.25	2.75	3.2	3.9	4.4	4.75	5.5	6.4	50°	60°	55°	50°	—	—	—
1/4EX 438		1.4	1.5	1.95	2.7	3.3	3.8	4.65	5.15	5.65	6.5	7.6	50°	60°	55°	50°	—	—	—
1/4EX 440		1.4	1.6	2.05	2.85	3.45	4.0	4.85	5.45	5.95	6.85	8.0	50°	60°	55°	50°	—	—	—

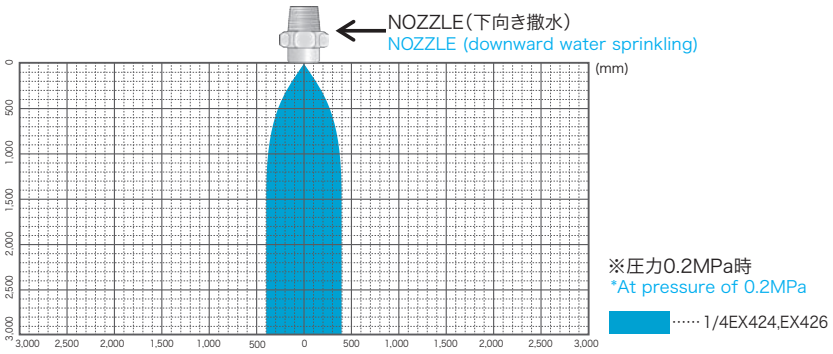
：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

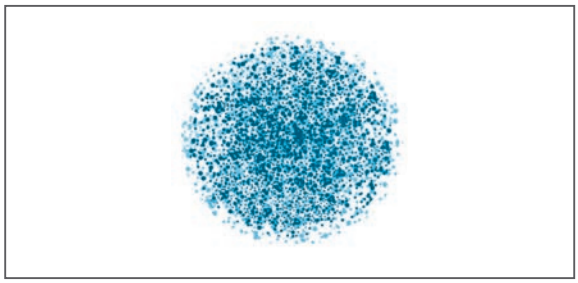


※圧力0.2MPa時
*At pressure of 0.2MPa

…… 1/4EX424,EX426

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



狭角円形全面撒水型

EX4-N type NOZZLE

FULL CONE NARROW SPRAY

◆ 特性 Characteristics

・狭角円形全面に同芯方向へ撒水
Water is sprinkled over the entire surface in a circular pattern at a narrow angle in the concentric direction.
・設計圧力0.2MPaにおいて30°に撒水
Water is sprinkled at 30° at the design pressure of 0.2MPa.

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

◆ 主用途 Main applications

・枕形貯槽表面への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the surfaces of pillow type storage tanks
・除塵、防塵等、排ガス処理設備
Exhaust gas treatment equipment, such as dust removal equipment and dust prevention equipment
・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・貯槽内への液化ガス撒布等、徐冷・冷却
Slow cooling and cooling, such as sprinkling of liquefied gas into a storage tank
・各種ガス製造装置
Various gas manufacturing devices
・洗浄機、洗ビン機等、産業機器
Industrial machinery, such as washing machines and pin washing machines

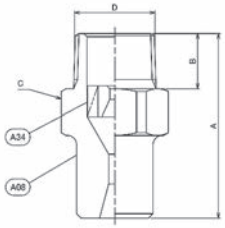
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

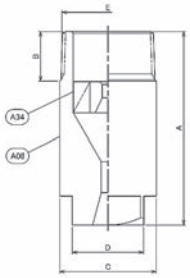
Item list	
A08	NOZZLE BODY
A34	CORE

◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

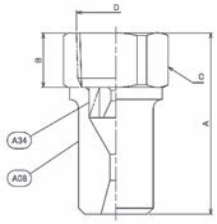
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/4 EX4-N	28	10	HEX.17	R1/4		0.04
M3/8 EX4-N	36	13	HEX.21	R3/8		0.07
M1/2 EX4-N	50	15	HEX.26	R1/2		0.12
M3/4 EX4-N	60	18	HEX.32	R3/4		0.24
M1 EX4-N	75	22	HEX.41	R1		0.36



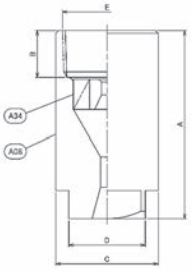
Nominal diameter	Dimensions (mm) A	B	C	D	E	connection	Weight (kg)
M1 1/2 EX4-N	100	25	Φ49	SQ.37	R1 1/2		0.95
M2 EX4-N	120	25	Φ60	SQ.47	R2		1.53
M2 1/2 EX4-N	180	32	Φ76	SQ.60	R2 1/2		3.28
M3 EX4-N	220	40	Φ90	SQ.70	R3		5.07
M4 EX4-N	250	40	Φ115	SQ.90	R4		12.21



Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/4 EX4-N	28	10	HEX.17	Rc1/4		0.04
F3/8 EX4-N	36	13	HEX.21	Rc3/8		0.07
F1/2 EX4-N	50	15	HEX.26	Rc1/2		0.14
F3/4 EX4-N	60	18	HEX.32	Rc3/4		0.3
F1 EX4-N	75	22	HEX.41	Rc1		0.42



Nominal diameter	Dimensions (mm) A	B	C	D	E	connection	Weight (kg)
F1 1/2 EX4-N	100	25	Φ55	SQ.41	Rc1 1/2		0.41
F2 EX4-N	130	25	Φ70	SQ.54	Rc2		0.76
F2 1/2 EX4-N	180	32	Φ90	SQ.70	Rc2 1/2		1.6
F3 EX4-N	220	40	Φ108	SQ.83	Rc3		2.74
F4 EX4-N	250	40	Φ136	SQ.105	Rc4		5.32



◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX4 | 16 | N ／ SUS316

- 材質【ステンレス鋼：SUS316】
  Material [stainless steel: SUS316]
- 設計圧(0.2MPa)時の撒水量(流量) L/min【1.6L/min】
  Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [1.6 L/min]
- 型番タイプ【狭角円形全面撒水型：EX4-N】
  Model number type [FULL CONE NARROW SPRAY: EX4-N]
- 接続ネジサイズ
  Connection thread size
  - 【管用テーパオネジ1/4(R1/4)】
    [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R)
  M: Male thread (R)
  F：メネジ(Rc)
  F: Female thread (Rc)

◆ 撒水データ Watering data

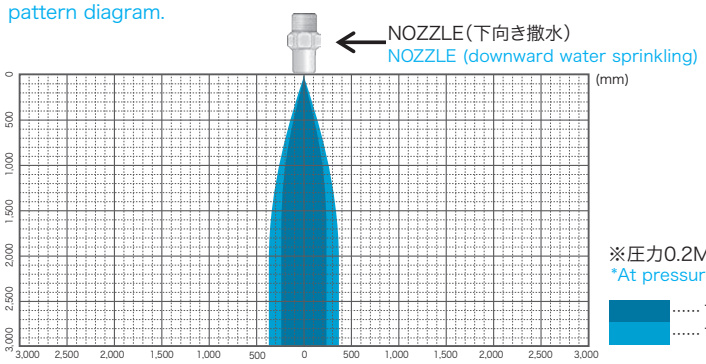
ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 416 N	PT1/4 (8A)	1.2	—	0.8	1.15	1.35	1.6	1.95	2.2	2.45	2.28	3.2	—	30°	25°	22°	—	350	150
1/4EX 424 N		1.2	0.95	1.2	1.7	2.05	2.4	2.9	3.3	3.6	4.15	4.8	15°	30°	25°	22°	700	400	200
1/4EX 426 N		1.2	1.0	1.3	1.85	2.2	2.6	3.15	3.6	3.9	4.5	5.2	15°	30°	25°	22°	700	400	200
1/4EX 432 N		1.4	1.25	1.6	2.25	2.75	3.2	3.9	4.4	4.75	5.5	6.4	15°	30°	25°	22°	750	450	250
1/4EX 438 N		1.4	1.5	1.95	2.7	3.3	3.8	4.65	5.15	5.65	6.5	7.6	15°	30°	25°	22°	800	500	300
1/4EX 440 N		1.4	1.6	2.05	2.85	3.45	4.0	4.85	5.45	5.95	6.85	8.0	15°	30°	25°	22°	800	500	300
3/8EX 444 N	PT3/8 (10A)	1.7	1.75	2.3	3.1	3.8	4.4	5.3	5.9	6.5	7.45	8.75	15°	30°	25°	22°	850	500	300
3/8EX 452 N		1.75	2.1	2.7	3.7	4.55	5.2	6.3	7.1	7.75	8.85	10.4	15°	30°	25°	22°	900	550	300
3/8EX 465 N		2.0	2.6	3.35	4.6	5.65	6.5	7.85	8.85	9.65	11.1	13.0	15°	30°	25°	22°	900	550	300
3/8EX 470 N		2.0	2.75	3.6	5.0	6.1	7.0	8.45	9.6	10.5	12.0	14.0	15°	30°	25°	22°	950	600	350
3/8EX 482 N		2.0	3.25	4.2	5.85	7.2	8.2	9.7	11.1	12.2	14.1	16.4	15°	30°	25°	22°	950	600	350
1/2EX 4100 N	PT1/2 (15A)	2.25	3.95	5.1	7.15	8.75	10.0	11.6	13.3	14.7	17.1	20.0	15°	30°	25°	22°	1000	650	350
1/2EX 4120 N		2.25	4.75	6.15	8.6	10.5	12.0	14.0	15.9	17.5	20.3	23.9	15°	30°	25°	22°	1000	650	350
1/2EX 4150 N		3.0	5.95	7.75	10.8	13.1	15.0	17.5	19.8	21.6	25.1	29.6	15°	30°	25°	22°	1050	700	400
1/2EX 4180 N		3.0	7.2	9.3	13.0	15.8	18.0	21.5	24.3	26.3	30.6	36.8	15°	30°	25°	22°	1050	700	400
1/2EX 4200 N		3.0	8.05	10.3	14.5	17.6	20.0	24.3	27.5	29.6	34.5	40.0	15°	30°	25°	22°	1100	750	400
3/4EX 4220 N	PT3/4 (20A)	3.0	8.75	11.3	15.9	19.4	22.0	26.4	30.0	32.8	38.1	44.0	15°	30°	25°	22°	1150	800	400
3/4EX 4250 N		3.7	9.8	12.7	18.1	22.0	25.0	29.7	33.7	37.5	43.4	50.0	15°	30°	25°	22°	1150	800	400
3/4EX 4280 N		4.0	11.1	14.3	20.2	24.6	28.0	33.2	37.6	41.5	48.3	56.0	15°	30°	25°	22°	1200	850	450
1EX 4300 N	PT1 (25A)	4.0	11.9	15.3	21.5	26.2	30.0	35.4	40.3	43.9	51.3	60.0	15°	30°	25°	22°	1200	850	450
1EX 4340 N		5.0	13.4	17.3	24.4	29.7	34.0	40.6	46.2	50.2	58.4	68.0	15°	30°	25°	22°	1250	850	450
1EX 4400 N		5.0	15.7	20.3	28.7	35.0	40.0	48.3	55.0	59.6	69.0	80.0	15°	30°	25°	22°	1300	900	500
1EX 4460 N		5.2	18.2	23.6	32.9	40.2	46.0	55.4	62.8	68.2	79.3	92.0	15°	30°	25°	22°	1300	900	550
1EX 4520 N		5.5	20.9	26.9	37.2	45.5	52.0	62.4	70.6	76.8	89.6	104	15°	30°	25°	22°	1350	950	550
1 1/2EX 4600 N	PT1 1/2 (40A)	6.5	23.9	30.7	42.4	52.0	60.0	70.7	80.5	87.4	97.4	114	15°	30°	25°	22°	1350	950	550
1 1/2EX 4750 N		6.5	30.2	38.7	53.8	65.5	75.0	89.0	101	110	125	146	15°	30°	25°	22°	1400	950	550
1 1/2EX 41000 N		8.0	40.7	52.0	72.8	88.0	100	120	135	148	171	200	15°	30°	25°	22°	1450	1000	600
1 1/2EX 41200 N		8.0	48.6	62.0	86.1	105	120	143	161	176	205	239	15°	30°	25°	22°	1450	1000	600
1 1/2EX 41300 N		8.0	52.6	67.2	93.2	114	130	155	175	191	222	250	15°	30°	25°	22°	1500	1000	600
1 1/2EX 41600 N		8.0	64.3	82.2	113	139	160	190	215	233	272	318	15°	30°	25°	22°	1550	1050	600
2EX 42000 N	PT2 (50A)	10.0	78.5	103	147	177	200	235	264	292	345	400	15°	30°	25°	22°	1600	1100	—
2EX 42500 N		10.0	98.5	128	182	220	250	295	333	366	430	500	15°	30°	25°	22°	1600	1100	—
2EX 43000 N		11.0	119	153	215	262	300	355	403	441	514	600	15°	30°	25°	22°	1650	1150	—
2EX 43400 N		11.0	136	174	244	297	340	404	456	498	582	680	15°	30°	25°	22°	1650	1150	—
2 1/2EX44000 N	PT2 1/2 (65A)	12.5	160	204	287	350	400	475	537	586	685	800	15°	30°	25°	22°	1700	1200	—
2 1/2EX 44500 N		12.5	181	230	323	394	450	536	604	656	770	900	15°	30°	25°	22°	1700	1200	—
2 1/2EX 45700 N		12.5	229	291	410	499	570	679	765	831	976	1140	15°	30°	25°	22°	1750	1250	—
3EX 47000 N	PT3 (80A)	17.5	281	358	503	612	700	833	939	1020	1200	1400	15°	30°	25°	22°	1800	1300	—
3EX 49000 N		17.5	361	460	647	787	900	1070	1210	1310	1540	1800	15°	30°	25°	22°	1850	1350	—
4EX 410000 N	PT4 (100A)	25.0	402	511	718	875	1000	1190	1340	1460	1710	2000	15°	30°	25°	22°	1900	1400	—
4EX 412000 N		25.0	482	613	862	1050	1200	1430	1610	1750	2050	2400	15°	30°	25°	22°	1950	1450	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

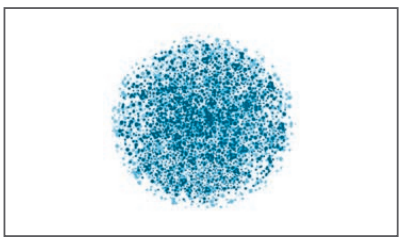
ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



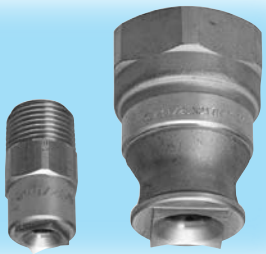
※圧力0.2MPa時
*At pressure of 0.2MPa
1/4EX416N
1/2EX4100N

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



広角四角形全面撒水型
EX2-SQ type NOZZLE
FULL CONE WIDE ANGLE SQUARE SPRAY



◆ 特性 Characteristics

・低圧域での撒水に適している
This spray nozzle is suitable for water sprinkling in a low-pressure range.
・インパクトはEX2型より若干弱い
The impact is slightly weaker than the EX2 type.
・粒子は粗い
Water particles are coarse.

◆ 主用途 Main applications

・消泡等、下水処理設備
Sewage treatment equipment, such as defoaming equipment
・各種塔槽類外表面等への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for the outer surfaces of various towers and tanks, etc.
・各種洗浄装置
Various washing devices

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）(chromium-plated)
・SUS304/SUS316/SUS316L
・SCS13/SCS14/SCS16
・PVC/PP/PTFE

◆ 接続 Connections

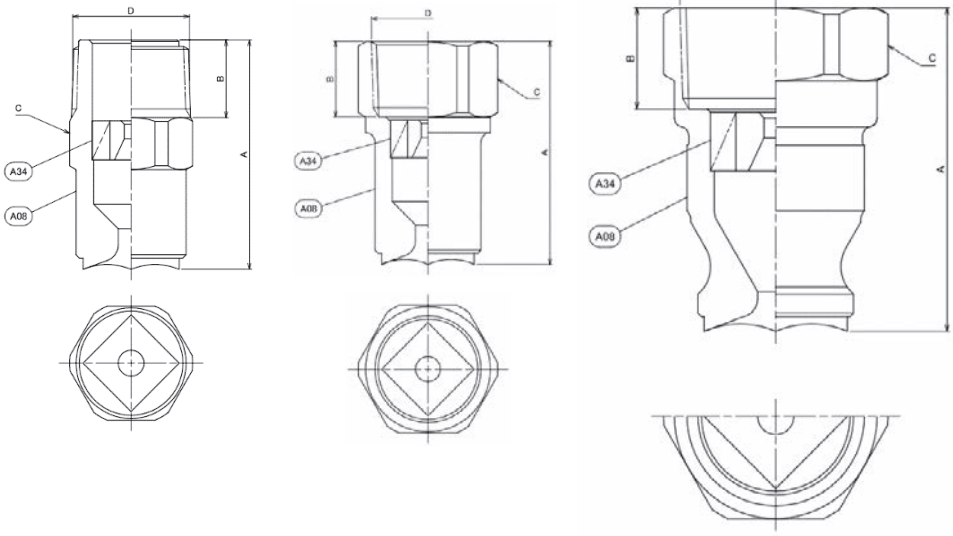
・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316) Weight & dimensions(SUS36)

Nominal diameter		Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/4	EX2-SQ	30	11	HEX.14	R1/4		0.03
M3/8	EX2-SQ	35	13	HEX.17	R3/8		0.05
M1/2	EX2-SQ	44	16	HEX.21	R1/2		0.1
M3/4	EX2-SQ	52	19	HEX.29	R3/4		0.2
M1	EX2-SQ	65	22	HEX.35	R1		0.3

Nominal diameter		Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/4	EX2-SQ	30	11	HEX.17	Rc1/4		0.03
F3/8	EX2-SQ	35	13	HEX.21	Rc3/8		0.06
F1/2	EX2-SQ	44	16	HEX.26	Rc1/2		0.12
F3/4	EX2-SQ	52	19	HEX.32	Rc3/4		0.25
F1	EX2-SQ	65	22	HEX.41	Rc1		0.35
F1 1/2	EX2-SQ	80	25	HEX.56	Rc1 1/2		0.85
F2	EX2-SQ	110	25	HEX.70	Rc2		1.8
F2 1/2	EX2-SQ	150	32	HEX.88	Rc2 1/2		4.5
F3	EX2-SQ	180	40	HEX.102	Rc3		6.0

Item list	
A08	NOZZLE BODY
A34	CORE



◆ 型番選定 Selection of model number

(例) Example : M | 1/4 | EX2 | 8 | SQ ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 8：設計圧(0.2MPa)時の撒水量(流量) L/min【8.0L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [8.0 L/min]
- EX2-SQ：型番タイプ【広角四角形全面撒水型：EX2-SQ】 Model number type [FULL CONE WIDE ANGLE SQUARE SPRAY: EX2-SQ]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ（R） M: Male thread (R)
- F：メネジ（Rc） F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)								撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)			
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.03 MPa	0.1 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.1 MPa	0.2 MPa	0.7 MPa
1/4EX 28 SQ	PT1/4 (8A)	1.5	3.15	4.0	5.65	6.95	8.0	9.25	10.4	11.3	90°	100°	95°	80°	950	700	600	400
3/8EX 212 SQ	PT3/8 (10A)	2.0	4.95	7.9	8.85	10.6	12.0	14.3	16.2	17.7	90°	100°	95°	80°	1000	750	650	450
1/2EX 221 SQ	PT1/2 (15A)	2.75	8.9	11.1	15.3	18.4	21.0	25.2	29.0	32.2	100°	110°	100°	85°	1100	850	750	500
3/4EX 242 SQ	PT3/4 (20A)	4.0	18.0	22.9	32.3	37.1	42.0	49.1	55.8	61.2	100°	110°	100°	85°	1300	1000	900	650
1EX 248 SQ	PT1 (25A)	4.8	20.4	25.8	35.8	42.3	48.0	57.6	65.2	70.8	100°	110°	100°	85°	1350	1050	950	700
1 1/2EX 2170 SQ	PT1 1/2 (40A)	8.0	68.6	89.3	130	151	170	200	226	246	100°	110°	100°	85°	1550	1300	1100	800
2EX 2330 SQ	PT2 (50A)	11.0	128	165	233	286	330	391	441	482	100°	110°	100°	85°	1650	1350	1150	800
2 1/2EX 2500 SQ	PT2 1/2 (65A)	12.5	209	263	389	442	500	589	671	725	100°	110°	100°	85°	1700	1400	1200	900
3EX 21000 SQ	PT3 (80A)	17.5	402	511	718	875	1000	1190	1340	1460	100°	110°	98°	80°	1850	1550	1350	1050

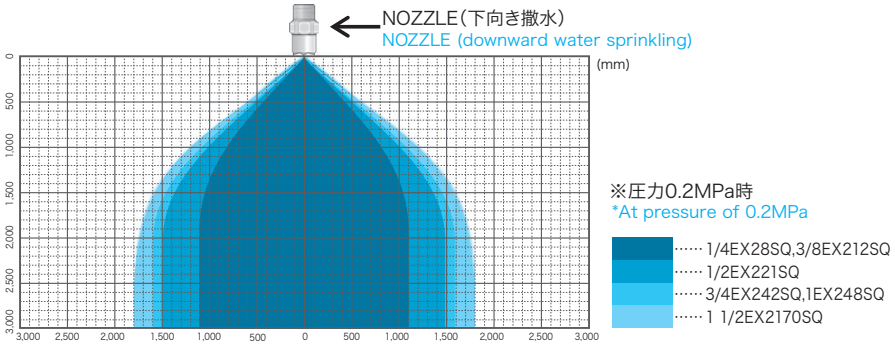
：標準設計圧力（0.1MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.1 MPa)

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接　　続：旧JIS規格で表記しています
Connections : Written according to the old JIS standard
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、0.5MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.3 MPa specified in this table.

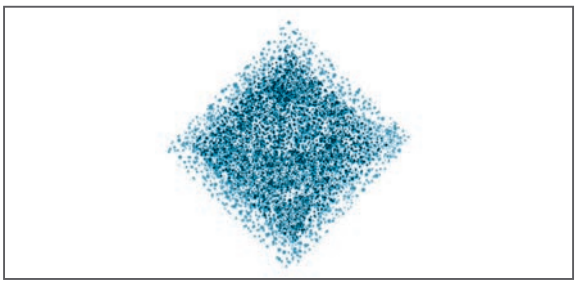
◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



四角形全面撒水型
EX4-SQ type NOZZLE
FULL CONE SQUARE SPRAY

◆ 特性 Characteristics
・広範囲の圧力域にて安定した撒水
Stable water sprinkling is ensured over a wide pressure range.
・インパクトは EX2-SQ型より若干強い
The impact is slightly stronger than the EX2-SQ type.

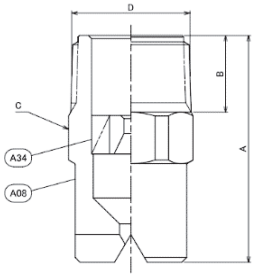
◆ 主用途 Main applications
・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・各種洗浄装置
Various washing devices

◆ 材質 Material
・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

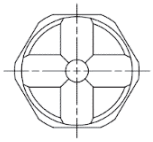
◆ 接続 Connections
・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316)
Weight & dimensions(SUS316)

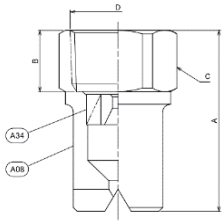
Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/4 EX4-SQ	30	11	HEX.14	R1/4	0.03
M3/8 EX4-SQ	35	13	HEX.17	R3/8	0.05
M1/2 EX4-SQ	44	16	HEX.21	R1/2	0.1
M3/4 EX4-SQ	52	19	HEX.29	R3/4	0.2
M1 EX4-SQ	65	22	HEX.35	R1	0.3

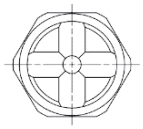


Item list	
A08	NOZZLE BODY
A34	CORE



Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
F1/4 EX4-SQ	30	11	HEX.17	Rc1/4	0.03
F3/8 EX4-SQ	35	13	HEX.21	Rc3/8	0.05
F1/2 EX4-SQ	44	16	HEX.26	Rc1/2	0.1
F3/4 EX4-SQ	52	19	HEX.32	Rc3/4	0.2
F1 EX4-SQ	65	22	HEX.41	Rc1	0.3





◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX4 | 32 | SQ ／ SUS316

- SUS316 — 材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 32 — 設計圧(0.2MPa)時の撒水量(流量) L/min【3.2L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.2 L/min]
- SQ — 型番タイプ【四角形全面撒水型：EX4-SQ】 Model number type [FULL CONE SQUARE SPRAY: EX4-SQ]
- 1/4 — 接続ネジサイズ Connection thread size → 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M — M：オネジ(R) M: Male thread (R) / F：メネジ(Rc) F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)								撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)			
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.03 MPa	0.1 MPa	0.2 MPa	0.5 MPa	0.03 MPa	0.1 MPa	0.2 MPa	0.5 MPa
1/4EX 432 SQ	PT1/4 (8A)	1.4	1.25	1.6	2.25	2.75	3.2	3.9	4.4	4.75	60°	80°	75°	60°	750	550	450	300
1/4EX 440 SQ		1.4	1.6	2.05	2.85	3.45	4.0	4.85	5.45	5.95	60°	80°	75°	60°	800	600	500	350
3/8EX 452 SQ	PT3/8 (10A)	1.75	2.1	2.7	3.7	4.45	5.2	6.3	7.1	7.75	70°	80°	78°	65°	900	650	550	350
3/8EX 470 SQ		2.0	2.75	3.6	5.0	6.1	7.0	8.45	9.6	10.5	70°	80°	78°	65°	950	700	600	400
1/2EX 4100 SQ	PT1/2 (15A)	2.25	3.95	5.1	7.15	8.75	10.0	11.6	13.3	14.7	70°	80°	78°	65°	1000	750	650	450
1/2EX 4200 SQ		3.0	8.05	10.3	14.5	17.6	20.0	24.3	27.5	29.7	70°	80°	78°	65°	1100	850	750	500
3/4EX 4250 SQ	PT3/4 (20A)	3.0	9.8	12.7	18.1	22.0	25.0	29.7	33.7	37.5	70°	80°	78°	65°	1150	900	800	550
3/4EX 4280 SQ		4.0	11.1	14.3	20.2	24.6	28.0	33.2	37.6	41.5	70°	80°	78°	65°	1200	950	850	600
1EX 4300 SQ	PT1 (25A)	4.0	11.9	15.3	21.5	26.2	30.0	35.4	40.3	43.9	70°	80°	78°	65°	1200	950	850	600
1EX 4400 SQ		5.0	15.7	20.3	28.7	35.0	40.0	48.3	55.0	59.6	70°	80°	78°	65°	1300	1000	900	650

：標準設計圧力（0.1MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.1 MPa)

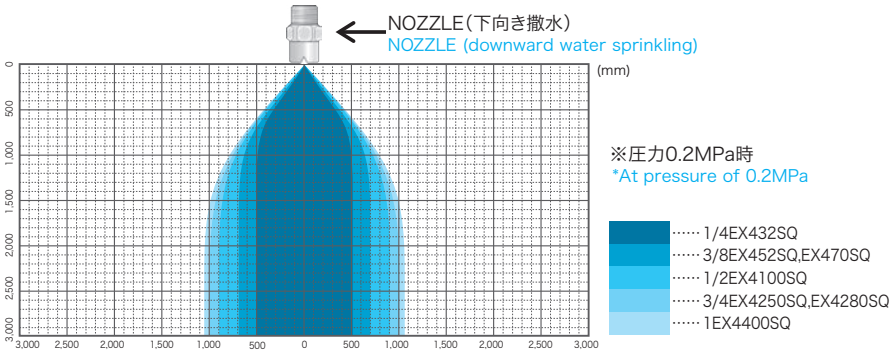
：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接　　続：旧JIS規格で表記しています
Connections : Written according to the old JIS standard
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、0.5MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.3 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

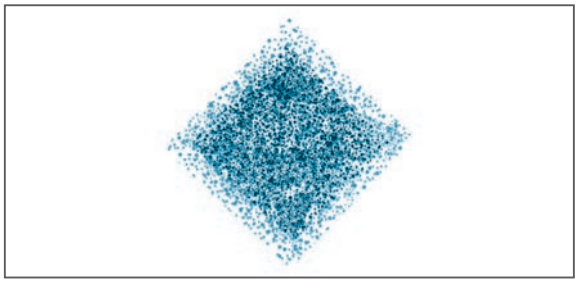
ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



◆ 撒水イメージ Image of water sprinkling

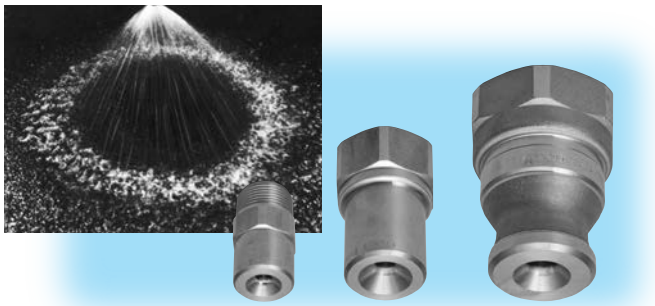
上から見た撒水図　Water spraying diagram from above



広角円環撒水型

EX5 type NOZZLE

HOLLOW CONE WIDE ANGLE SPRAY



◆ 特性 ◆ Characteristics

・広角円環状に同芯方向へ撒水する
Water is sprinkled at a wide angle in an annular pattern in the concentric direction.
・0.2MPaで90˚の広角円環撒水
Water is sprinkled in a circular pattern at a wide angle of 90˚ at 0.2 MPa.

◆ 材質 Material

・C3604B/BSCR（chromium-plated）
(chrome plating)
・SUS304/SUS316/SUS316L
・SCS13/SCS14/SCS16
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 主用途 Main applications

・排煙、排ガスの冷却・吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・空気、ガス等の洗浄
Cleaning of air, gases, etc.
・液化ガス撒布等、徐冷・冷却
Slow cooling and cooling, such as sprinkling of liquefied gas
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment
・各種塔装類、容器内雰囲気の冷却
Cooling of various tower fittings and of the inside atmospheres of containers

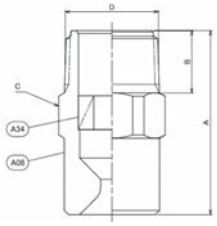
◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

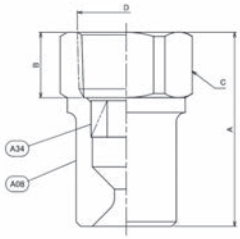
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/4 EX5	30	11	HEX.14	R1/4		0.03
M3/8 EX5	35	13	HEX.17	R3/8		0.05
M1/2 EX5	44	16	HEX.21	R1/2		0.1
M3/4 EX5	52	19	HEX.29	R3/4		0.2
M1 EX5	65	22	HEX.35	R1		0.3

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/4 EX5	30	11	HEX.17	Rc1/4		0.03
F3/8 EX5	35	13	HEX.21	Rc3/8		0.05
F1/2 EX5	44	16	HEX.26	Rc1/2		0.1
F3/4 EX5	52	19	HEX.32	Rc3/4		0.2
F1 EX5	65	22	HEX.41	Rc1		0.3

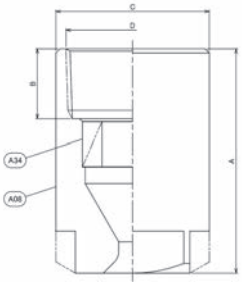
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1 1/2 EX5	80	25	Φ 49	R 1 1/2		0.8
F1 1/2 EX5	80	25	Φ 55	Rc1 1/2		0.9
F2 EX5	110	25	Φ 70	Rc 2		1.8
F2 1/2 EX5	150	32	Φ 90	Rc2 1/2		4.5
F3 EX5	180	40	Φ 108	Rc3		6.5
F4 EX5	220	40	Φ 136	Rc4		10.0

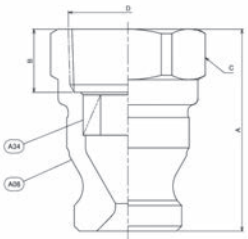
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F 1 1/2 EX5	80	25	HEX.56	Rc 1 1/2		0.85
F2 EX5	110	25	HEX.70	Rc2		1.8
F2 1/2 EX5	150	32	HEX.88	Rc 2 1/2		4.5
F3 EX5	180	40	HEX.102	Rc3		6.0
F4 EX5	220	40	HEX.130	Rc4		10.0
F5 EX5	260	50	HEX.165	Rc5		16.0
F6 EX5	300	50	HEX.190	Rc6		24.0





Item list	
A08	NOZZLE BODY
A34	CORE





◆ 型番選定 Selection of model number

(例)
Example :

M	1/4	EX5	3	／	SUS316

材質【ステンレス鋼：SUS316】
Material [stainless steel: SUS316]

設計圧(0.2MPa)時の撒水量(流量) L/min【3.0L/min】
Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.0 L/min]

型番タイプ【広角円環撒水型：EX5】
Model number type [HOLLOW CONE WIDE ANGLE SPRAY: EX5]

接続ネジサイズ
Connection thread size
【管用テーパオネジ1/4(R1/4)】
[Taper male thread for piping 1/4 (R1/4)]

M：オネジ（R）
M: Male thread (R)
F：メネジ（Rc）
F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 53	PT1/4 (8A)	1.5	—	1.55	2.15	2.6	3.0	3.6	4.1	4.45	5.15	6.0	—	90°	92°	93°	—	450	250
3/8EX 55	PT3/8 (10A)	1.75	2.0	2.6	3.65	4.35	5.0	5.95	6.8	7.35	8.6	10.0	75°	90°	92°	93°	900	550	300
3/8EX 58		2.0	3.25	4.15	5.9	7.05	8.0	9.4	10.8	11.6	13.7	16.0	85°	90°	92°	93°	950	600	350
1/2EX 512	PT1/2 (15A)	2.25	4.95	6.3	8.75	10.5	12.0	14.2	16.2	17.5	20.6	24.0	85°	90°	92°	93°	1000	650	350
1/2EX 516		3.0	6.6	8.4	11.5	14.0	16.0	19.1	21.5	23.3	27.4	32.0	85°	90°	92°	93°	1050	700	400
1/2EX 520		3.0	8.05	10.5	15.8	18.0	20.0	23.0	26.6	28.4	33.1	39.4	85°	90°	92°	93°	1100	750	400
3/4EX 525	PT3/4 (20A)	3.0	9.9	13.0	18.8	22.2	25.0	29.1	33.5	36.1	42.1	49.6	85°	90°	92°	93°	1150	800	400
3/4EX 530		4.0	11.6	15.5	21.6	26.2	30.0	35.3	40.5	44.1	51.3	60.0	85°	90°	92°	93°	1200	850	450
3/4EX 535		4.0	14.3	18.6	26.2	31.1	35.0	41.1	46.9	51.1	59.2	69.6	85°	90°	92°	93°	1250	850	450
1EX540	PT1 25A)	4.0	17.2	21.9	30.0	36.1	40.0	47.0	53.2	58	66.9	79.2	85°	90°	92°	93°	1300	900	500
1EX 542		4.0	19.4	24.7	31.6	37.6	42.0	49.5	56.4	62.2	72.7	83.6	85°	90°	92°	93°	1300	900	500
1EX 550		5.5	24.7	31.3	37.0	44.3	50.0	59.2	67.9	75.7	89.4	100	85°	90°	92°	93°	1350	950	550
1EX 560		5.5	27.8	35.6	44.0	53.2	60.0	70.0	78.9	86.3	101	117	85°	90°	92°	93°	1350	950	550
1 1/2EX 570	PT1 1/2 (40A)	6.5	30.3	39.3	55.5	62	70	80.3	89	95.4	111	132	85°	90°	92°	93°	1400	950	550
1 1/2EX 584		6.5	35.7	45.5	63.9	74.2	84	97.8	110	118	137	162	85°	90°	92°	93°	1400	950	550
1 1/2EX 595		6.5	39.6	49.5	69.1	83.6	95	112	128	138	160	188	85°	90°	92°	93°	1450	1000	600
1 1/2EX 5100		7.5	41.6	52.1	72.7	88	100	118	133	144	168	198	85°	90°	92°	93°	1450	1000	600
1 1/2EX 5120		7.5	49.9	62.4	87.2	106	120	141	157	172	200	237	85°	90°	92°	93°	1500	1000	600
1 1/2EX 5150		8.0	64.6	81.6	114	135	150	176	197	215	249	295	85°	90°	92°	93°	1500	1050	600
2EX 5180	PT2 (50A)	10.0	77.2	96.2	134	160	180	212	239	263	305	357	85°	90°	92°	93°	1550	1100	650
2EX 5200		11.0	85.7	107	149	177	200	236	266	292	339	397	85°	90°	92°	93°	1600	1100	—
2EX 5250		11.0	107	131	181	219	250	295	336	371	432	500	85°	90°	92°	93°	1600	1100	—
2EX 5300		11.0	120	156	222	265	300	359	406	444	513	600	85°	90°	92°	93°	1650	1150	—
2EX 5370		11.0	147	192	273	326	370	437	496	544	629	736	85°	90°	92°	93°	1650	1150	—
2 1/2EX 5470	PT2 1/2 (65A)	12.5	186	243	345	414	470	548	624	687	794	930	85°	90°	92°	93°	1700	1200	—
2 1/2EX 5500		12.5	209	263	389	442	500	589	671	725	841	984	85°	90°	92°	93°	1700	1200	—
3EX 5600	PT3 (80A)	17.5	258	323	462	536	600	703	797	874	1010	1190	85°	90°	92°	93°	1750	1250	—
3EX 5700		17.5	301	376	539	625	700	820	930	1020	1180	1380	85°	90°	92°	93°	1800	1300	—
3EX 5920		17.5	396	495	707	822	920	1080	1220	1340	1550	1820	85°	90°	92°	93°	1850	1350	—
4EX 51200	PT4 (100A)	25.0	530	658	916	1080	1200	1400	1580	1760	2020	2380	85°	90°	92°	93°	1950	1450	—
4EX 51500		25.0	663	823	1150	1360	1500	1750	1970	2190	2530	2980	85°	90°	92°	93°	2300	1600	—
5EX52000	PT5 (125A)	25.0	884	1100	1530	1810	2000	2330	2630	2930	3370	3970	85°	90°	92°	93°	2500	1800	—
5EX 52500		30.0	1110	1370	1910	2260	2500	2920	3290	3660	4210	4970	85°	90°	92°	93°	2700	2000	—
6EX 53000	PT6 (150A)	35.0	1330	1650	2290	2710	3000	3500	3950	4390	5050	5960	85°	90°	92°	93°	3000	2300	—
6EX 53500		35.0	1550	1920	2670	3160	3500	4080	4600	5120	5890	6950	85°	90°	92°	93°	3300	2600	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。Connections : Written according to the old JIS standard.

最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
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If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose,
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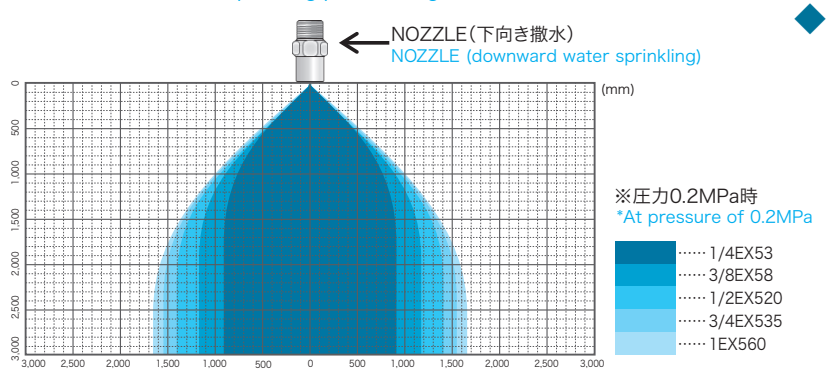
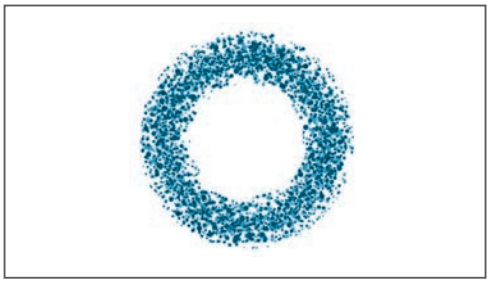


◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



広角円環撒水型

円環撒水型（アングル型ねじ込みタイプ）

EX5-L type NOZZLE

HOLLOW CONE SPRAY (Angle model)

◆ 特性 Characteristics

・内部に羽根等が無く、目詰りしない
This spray nozzle has no blades, etc. inside and does not clog.
・粒子は EX4型より若干細かい
Water particles are slightly smaller than those of the EX4 type.

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS316L
※1/4 インチから1インチのみ
※size1/4" to 1" only
・SCS13/SCS14/SCS16
※1インチ以上
※Larger than 1" only
・PVC/PP/PTFE

◆ 主用途 Main applications

・排煙、排ガスの冷却・吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・空気、ガス等の洗浄
Cleaning of air, gases, etc.
・液化ガス撒布等、徐冷・冷却
Slow cooling and cooling, such as sprinkling of liquefied gas
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment
・各種塔装類、容器内雰囲気の冷却
Cooling of various tower fittings and of the inside atmospheres of containers

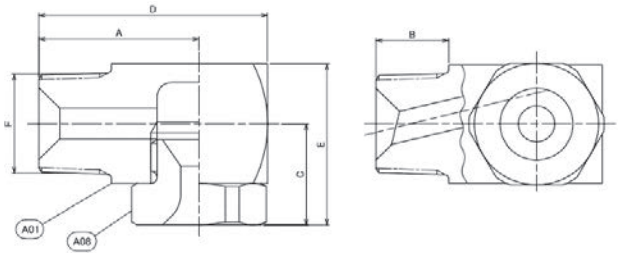
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316L)

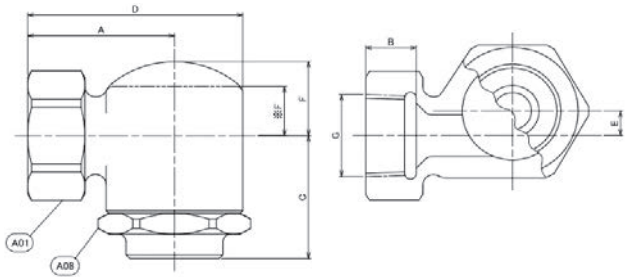
Weight & dimensions (SUS316L)

Nominal diameter	Dimensions (mm)					connection	Weight (kg)
	A	B	C	D	E	F	
M1/4 EX5-L	23	11	14	32	23	R1/4	0.06
M3/8 EX5-L	29	14	17	40	28	R3/8	0.12
M1/2 EX5-L	35	17	21	48	34	R1/2	0.2
M3/4 EX5-L	42	19	27	60	43	R3/4	0.35



(SCS13)

Nominal diameter	Dimensions (mm)						connection	Weight (kg)
	A	B	C	D	E	F	G	
F1 EX5-L	58	20	50	85	10	30	Rc1	1.5
F1 1/2 EX5-L	75	25	68	110	15	23※	Rc1 1/2	2.2
F2 EX5-L	80	25	80	120	15	45	Rc2	3.0
F2 1/2 EX5-L	95	32	90	143	15	55	Rc2 1/2	8.0
F3 EX5-L	113	40	110	175	23	60	Rc3	12.0



Item list	
A08	NOZZLE CAP
A01	BODY

◆ 型番選定 Selection of model number

(例)
Example:

M	1/4	EX5	2	L	／	SUS316L

- SUS316L：材質【ステンレス鋼：SUS316L】 Material [stainless steel: SUS316L]
- 2：設計圧(0.2MPa)時の撒水量(流量) L/min【2.0L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [2.0 L/min]
- EX5：型番タイプ【円環撒水型（アングル型ねじ込みタイプ）：EX5-L】 Model number type [HOLLOW CONE SPRAY(Angle model): EX5-L]
- 1/4：接続ネジサイズ Connection thread size → 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)
  F：メネジ(Rc) F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 52 L	PT1/4 (8A)	2.5	—	1.0	1.4	1.75	2.0	2.4	2.8	3.1	3.45	3.7	—	90°	95°	95°	950	600	350
1/4EX 53 L		3.3	—	1.5	2.1	2.6	3.0	3.65	4.2	4.7	5.15	5.5	—	90°	95°	95°	1000	650	350
1/4EX 55 L		3.8	—	2.5	3.55	4.35	5.0	6.15	7.0	7.75	8.3	8.65	—	90°	95°	95°	—	—	—
1/4EX 57 L		4.8	2.75	3.5	4.95	6.05	7.0	8.55	9.8	10.9	12.0	12.9	75°	90°	95°	100°	—	—	—
3/8EX 510 L	PT3/8 (10A)	6.0	3.85	5.0	7.1	8.65	10.0	12.3	14.0	15.6	17.1	18.5	75°	90°	95°	100°	1050	700	400
3/8EX 513 L		6.0	5.05	6.5	9.2	11.3	13.0	15.9	18.2	20.3	22.3	24.0	75°	90°	95°	100°	1100	750	400
3/8EX 516 L		6.5	6.3	8.05	11.3	13.9	16.0	19.5	22.3	24.8	27.2	29.3	75°	90°	95°	100°	1150	800	400
3/8EX 519 L		7.0	7.4	9.55	13.5	16.5	19.0	23.1	26.6	29.4	32.3	34.7	75°	90°	95°	100°	—	—	—
1/2EX 523 L	PT1/2 (15A)	8.5	8.95	11.6	16.4	20.0	23.0	27.9	31.9	35.6	39.0	41.8	75°	90°	95°	100°	1200	850	450
1/2EX 530 L		8.5	11.7	15.1	21.2	26.0	30.0	36.4	41.9	46.3	50.7	54.7	75°	90°	95°	100°	1250	850	450
1/2EX 538 L		10.0	14.8	19.1	26.9	32.9	38.0	46.1	52.7	58.6	64.2	69.3	75°	90°	95°	100°	—	—	—
3/4EX 545 L	PT3/4 (20A)	11.5	17.6	22.6	31.8	39.0	45.0	54.3	62.4	69.7	76.4	81.8	80°	90°	95°	100°	1300	900	500
3/4EX 550 L		11.5	19.5	25.0	35.4	43.3	50.0	60.6	69.9	77.5	84.9	91.2	80°	90°	95°	100°	1350	950	550
1EX 554 L	PT1 (25A)	12.0	21.4	27.5	38.8	46.9	54.0	65.9	75.6	83.4	91.4	98.6	80°	90°	95°	100°	1400	950	550
1EX 570 L		13.0	27.7	35.4	49.8	60.6	70.0	85.6	98.0	109	119	128	80°	90°	95°	100°	1450	1000	600
1 1/2EX 5100 L	PT1 1/2 (40A)	16.0	40.6	50.9	70.7	86.0	100	123	140	156	172	186	80°	90°	95°	100°	—	—	—
1 1/2EX 5150 L		22.0	59.1	75.5	106	130	150	184	210	234	257	275	80°	90°	95°	100°	—	—	—
1 1/2EX 5195 L		24.0	76.3	98.0	138	169	195	239	273	304	331	359	80°	90°	95°	100°	—	—	—
2EX 5235 L	PT2 (50A)	24.0	91.0	118	166	204	235	288	329	363	399	434	80°	90°	95°	100°	—	—	—
2EX 5300 L		27.0	117	150	212	260	300	367	420	467	512	550	80°	90°	95°	100°	—	—	—
2EX 5380 L		32.0	148	191	269	329	380	465	537	592	648	708	80°	90°	95°	100°	—	—	—
2 1/2EX 5450 L	PT2 1/2 (65A)	37.0	176	226	318	390	450	543	624	697	764	818	80°	90°	95°	100°	—	—	—
2 1/2EX 5600 L		42.0	235	302	424	520	600	724	832	930	1015	1090	80°	90°	95°	100°	—	—	—
3EX 5800 L	PT3 (80A)	45.0	325	407	566	693	800	984	1120	1248	1376	1488	80°	90°	95°	100°	—	—	—
3EX 51000 L		48.0	406	509	707	866	1000	1230	1400	1560	1720	1860	80°	90°	95°	100°	—	—	—

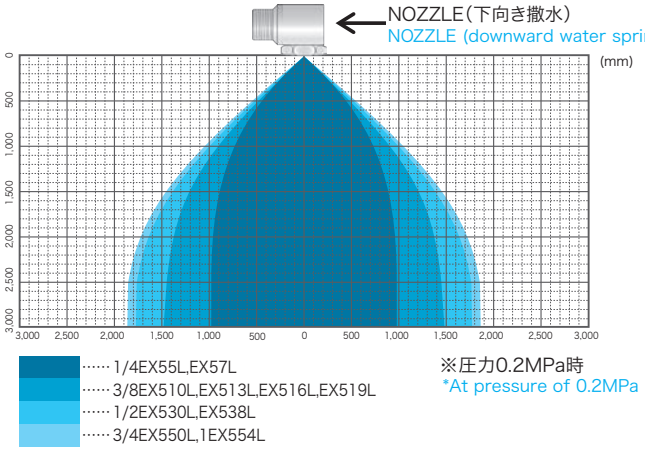
：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
：Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections：Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance：Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、0.7MPaを超える場合は別途ご相談ください。
Operating pressure：Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.7 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

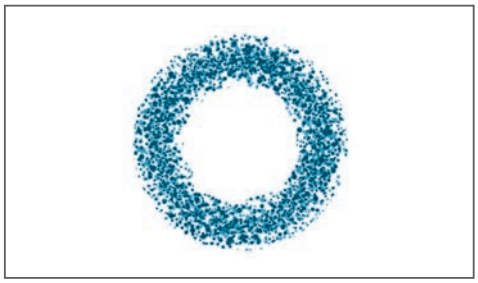
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



※圧力0.2MPa時
*At pressure of 0.2MPa

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above

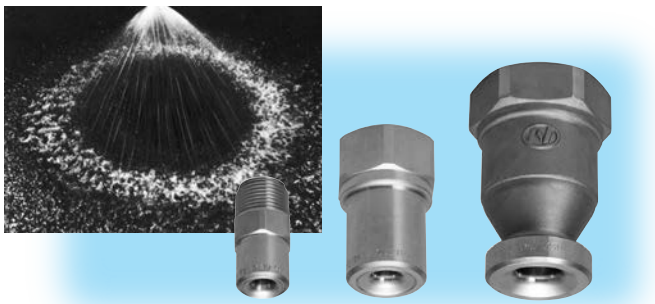


超広角円環撒水型

EX5-W type NOZZLE

HOLLOW CONE

SUPER WIDE ANGLE SPRAY



◆ 特性 Characteristics

・超広角円環状に同芯方向へ撒水する
Water is sprinkled in an annular pattern at an extremely wide angle in the concentric direction.
・0.2MPaで120°の超広角円環撒水
Water is sprinkled in an annular pattern at an extremely wide angle of 120° at 0.2 MPa.

◆ 主用途 Main applications

・排煙、排ガスの冷却・吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・空気、ガス等の洗浄
Cleaning of air, gases, etc.
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・SCS13/SCS14/SCS16
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

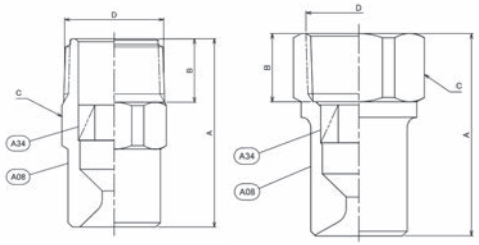
◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1/4 EX5-W	30	11	HEX.14	R1/4		0.03
M3/8 EX5-W	35	13	HEX.17	R3/8		0.05
M1/2 EX5-W	44	16	HEX.21	R1/2		0.1
M3/4 EX5-W	52	19	HEX.29	R3/4		0.2
M1 EX5-W	65	22	HEX.35	R1		0.3

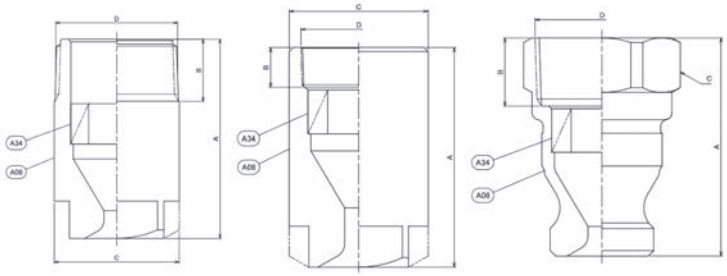
Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F1/4 EX5-W	30	11	HEX.17	Rc1/4		0.03
F3/8 EX5-W	35	13	HEX.21	Rc3/8		0.05
F1/2 EX5-W	44	16	HEX.26	Rc1/2		0.1
F3/4 EX5-W	52	19	HEX.32	Rc3/4		0.2
F1 EX5-W	65	22	HEX.41	Rc1		0.3

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
M1 1/2 EX5-W	80	25	Φ 49	R 1 1/2		0.8
F1 1/2 EX5-W	80	25	Φ 55	Rc1 1/2		0.9
F2 EX5-W	110	25	Φ 70	Rc 2		1.8
F2 1/2 EX5-W	150	32	Φ 90	Rc2 1/2		4.5
F3 EX5-W	180	40	Φ 108	Rc3		6.5
F4 EX5-W	220	40	Φ 136	Rc4		10.0

Nominal diameter	Dimensions (mm) A	B	C	D	connection	Weight (kg)
F 1 1/2 EX5-W	80	25	HEX.56	Rc 1 1/2		0.85
F2 EX5-W	110	25	HEX.70	Rc2		1.8
F2 1/2 EX5-W	150	32	HEX.88	Rc 2 1/2		4.5
F3 EX5-W	180	40	HEX.102	Rc3		6.0
F4 EX5-W	220	40	HEX.130	Rc4		10.0
F5 EX5-W	260	50	HEX.165	Rc5		16.0
F6 EX5-W	300	50	HEX.190	Rc6		24.0



Item list	
A08	NOZZLE BODY
A34	CORE



◆ 型番選定 Selection of model number

(例) Example: M | 1/4 | EX5 | 3 | W ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 3：設計圧(0.2MPa)時の撒水量(流量) L/min【3.0L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.0 L/min]
- EX5：型番タイプ【超広角円環撒水型：EX5-W】 Model number type [HOLLOW CONE SUPER WIDE ANGLE SPRAY: EX5-W]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)
  F：メネジ(Rc) F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 53 W	PT1/4(8A)	1.5	—	1.55	2.15	2.6	3.0	3.6	4.1	4.45	5.15	6.0	—	110°	115°	117°	—	450	250
3/8EX 55 W	PT3/8 (10A)	1.75	2.0	2.6	3.65	4.35	5.0	5.95	6.8	7.35	8.6	10.0	100°	110°	115°	117°	900	550	300
3/8EX 58 W		2.0	3.25	4.15	5.9	7.05	8.0	9.4	10.8	11.6	13.7	16.0	105°	120°	125°	127°	950	600	350
1/2EX 512 W	PT1/2 (15A)	2.25	4.95	6.3	8.75	10.5	12.0	14.2	16.2	17.5	20.6	24.0	105°	120°	125°	127°	1000	650	350
1/2EX 516 W		3.0	6.6	8.4	11.5	14.0	16.0	19.1	21.5	23.3	27.4	32.0	105°	120°	125°	127°	1050	700	400
1/2EX 520 W		3.0	8.05	10.5	15.8	18.0	20.0	23.0	26.6	28.4	33.1	39.4	105°	120°	125°	127°	1100	750	400
3/4EX 525 W	PT3/4 (20A)	3.0	9.9	13.0	18.8	22.2	25.0	29.1	33.5	36.1	42.1	49.6	105°	120°	125°	127°	1150	800	400
3/4EX 530 W		4.0	11.6	15.5	21.6	26.2	30.0	35.3	40.5	44.1	51.3	60.0	105°	120°	125°	127°	1200	850	450
3/4EX 535 W		4.0	14.3	18.6	26.2	31.1	35.0	41.1	46.9	51.1	59.2	69.6	105°	120°	125°	127°	1250	850	450
1EX540 W	PT1 (25A)	4.0	17.2	21.9	30.0	36.1	40.0	47.0	53.2	58.0	66.9	79.2	105°	120°	125°	127°	1300	900	500
1EX 542 W		4.0	19.4	24.7	31.6	37.6	42.0	49.5	56.4	62.2	72.7	83.6	105°	120°	125°	127°	1300	900	500
1EX 550 W		5.3	24.7	31.3	37.0	44.3	50.0	59.2	67.9	75.7	89.4	100	105°	120°	125°	127°	1350	950	550
1EX 560 W		5.5	27.8	35.6	44.0	53.2	60.0	70.0	78.9	86.3	101	117	105°	120°	125°	127°	1350	950	550
1 1/2EX 570 W	PT1 1/2 (40A)	6.5	30.3	39.3	55.5	62.0	70.0	80.3	89.0	95.4	111	132	105°	120°	125°	127°	1400	950	550
1 1/2EX 584 W		6.5	35.7	45.5	63.9	74.2	84.0	97.8	110	118	137	162	105°	120°	125°	127°	1400	950	550
1 1/2EX 595 W		6.5	39.6	49.5	69.1	83.6	95.0	112	128	138	160	188	105°	120°	125°	127°	1450	1000	600
1 1/2EX 5100 W		7.5	41.6	52.1	72.7	88.0	100	118	133	144	168	198	105°	120°	125°	127°	1450	1000	600
1 1/2EX 5120 W		7.5	49.9	62.4	87.2	106	120	141	157	172	200	237	105°	120°	125°	127°	1500	1000	600
1 1/2EX 5150 W		8.0	64.6	81.6	114	135	150	176	197	215	249	295	105°	120°	125°	127°	1500	1050	600
2EX 5180 W	PT2 (50A)	10.0	77.2	96.2	134	160	180	212	239	263	305	357	105°	120°	125°	127°	1550	1100	650
2EX 5200 W		11.0	85.7	107	149	177	200	236	266	292	339	397	105°	120°	125°	127°	1600	1100	—
2EX 5250 W		11.0	107	131	181	219	250	295	336	371	432	500	105°	120°	125°	127°	1600	1100	—
2EX 5300 W		11.0	120	156	222	265	300	359	406	444	513	600	105°	120°	125°	127°	1650	1150	—
2EX 5370 W		11.0	147	192	273	326	370	437	496	544	629	736	105°	120°	125°	127°	1650	1150	—
2 1/2EX 5470 W	PT2 1/2 (65A)	12.5	186	243	345	414	470	548	624	687	794	930	105°	120°	125°	127°	1700	1200	—
2 1/2EX 5500 W		12.5	209	263	389	442	500	589	671	725	841	984	105°	120°	125°	127°	1700	1200	—
3EX 5600 W	PT3 (80A)	17.5	258	323	462	536	600	703	797	874	1010	1190	105°	120°	125°	127°	1750	1250	—
3EX 5700 W		17.5	301	376	539	625	700	820	930	1020	1180	1380	105°	120°	125°	127°	1800	1300	—
3EX 5920 W		17.5	396	495	707	822	920	1080	1220	1340	1550	1820	105°	120°	125°	127°	1850	1350	—
4EX 51200 W	PT4 (100A)	25.0	530	658	916	1080	1200	1400	1580	1760	2020	2380	105°	120°	125°	127°	1950	1450	—
4EX 51500 W		25.0	663	823	1150	1360	1500	1750	1970	2190	2530	2980	105°	120°	125°	127°	2300	1600	—
5EX52000 W	PT5 (125A)	25.0	884	1100	1530	1810	2000	2330	2630	2930	3370	3970	105°	120°	125°	127°	2500	1800	—
5EX 52500 W		30.0	1110	1370	1910	2260	2500	2920	3290	3660	4210	4970	105°	120°	125°	127°	2700	2000	—
6EX 53000 W	PT6 (150A)	35.0	1330	1650	2290	2710	3000	3500	3950	4390	5050	5960	105°	120°	125°	127°	3000	2300	—
6EX 53500 W		35.0	1550	1920	2670	3160	3500	4080	4600	5120	5890	6950	105°	120°	125°	127°	3300	2600	—

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

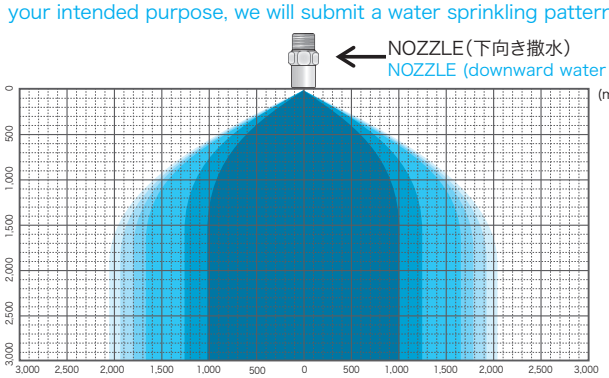
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

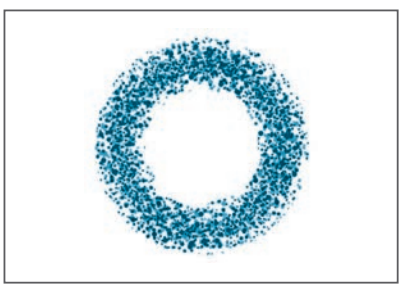


※圧力0.2MPa時
*At pressure of 0.2MPa

- 1/4EX53W
- 3/8EX58W
- 1/2EX520W
- 3/4EX535W
- 1EX560W
- 2EX5180W

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above

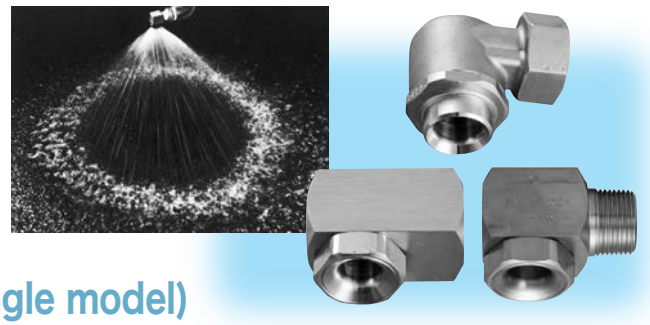


超広角円環撒水型

広角円環撒水型（アングル型ねじ込みタイプ）

EX5-WL type NOZZLE

HOLLOW CONE WIDE ANGLE SPRAY (Angle model)



◆ 特性 Characteristics

・内部に羽根等が無く、目詰りしない
This spray nozzle has no blades, etc. inside and does not clog.
・粒子は EX4型より若干細かい
Water particles are slightly smaller than those of the EX4 type.

◆ 主用途 Main applications

・排煙、排ガスの冷却・吸収等、各種公害防止機器
Various types of pollution prevention equipment for cooling and absorption of flue gases and exhaust gases, etc.
・空気、ガス等の洗浄
Cleaning of air, gases, etc.
・汚泥焼却等下水処理設備及び排水廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as sludge incineration equipment

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS316L
※1/4インチから1インチのみ
※size1/4" to 1" only
・SCS13/SCS14/SCS16
※1インチ以上
※Larger than 1" only
・PVC/PP/PTFE

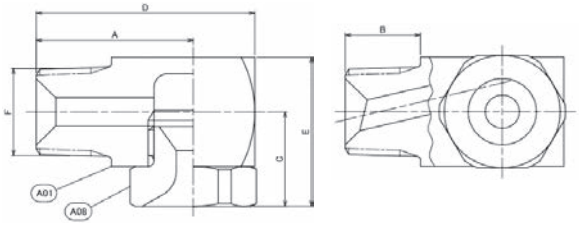
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316L)

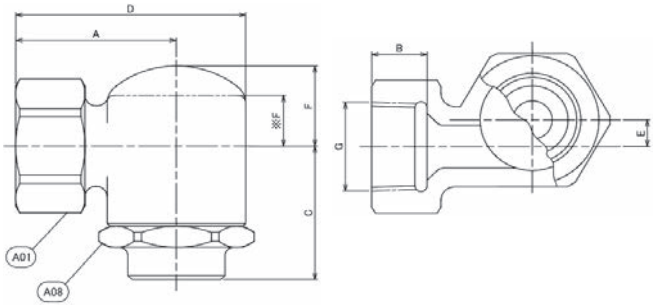
Weight & dimensions (SUS316L)

Nominal diameter	Dimensions (mm)					connection	Weight (kg)
	A	B	C	D	E	F	
M1/4 EX5-WL	23	11	14	32	-	R1/4	0.06
M3/8 EX5-WL	29	14	17	40	-	R3/8	0.12
M1/2 EX5-WL	35	17	21	48	-	R1/2	0.2
M3/4 EX5-WL	42	19	27	60	-	R3/4	0.35



(SCS13)

Nominal diameter	Dimensions (mm)						connection	Weight (kg)
	A	B	C	D	E	F	G	
F1 EX5-WL	58	20	50	85	10	30	Rc1	1.5
F1 1/2 EX5-WL	75	25	68	110	15	23※	Rc1 1/2	2.2
F2 EX5-WL	80	25	80	120	15	45	Rc2	3.0
F2 1/2 EX5-WL	95	32	90	143	15	55	Rc2 1/2	8.0
F3 EX5-WL	113	40	110	175	23	60	Rc3	12.0



Item list	
A08	NOZZLE CAP
A01	BODY

◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX5 | 2 | WL ／ SUS316L

- SUS316L：材質【ステンレス鋼：SUS316L】
  Material [stainless steel: SUS316L]
- 2：設計圧(0.2MPa)時の撒水量(流量) L/min【2.0L/min】
  Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [2.0 L/min]
- WL：型番タイプ【広角円環撒水型（アングル型ねじ込みタイプ）：EX5-WL】
  Model number type [HOLLOW CONE WIDE ANGLE SPRAY(Angle model): EX5-WL]
- EX5：接続ネジサイズ
  Connection thread size
- 1/4：【管用テーパオネジ1/4(R1/4)】
  [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R)
  M: Male thread (R)
  F：メネジ(Rc)
  F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 52 WL	PT1/4 (8A)	2.5	—	1.0	1.4	1.75	2.0	2.4	2.8	3.1	3.45	3.7	—	120°	120°	125°	950	600	350
1/4EX 53 WL		3.3	—	1.5	2.1	2.6	3.0	3.65	4.2	4.7	5.15	5.5	—	120°	120°	125°	1000	650	350
1/4EX 55 WL		3.8	—	2.5	3.55	4.35	5.0	6.15	7.0	7.75	8.3	8.65	—	120°	120°	125°	—	—	—
1/4EX 57 WL		4.8	2.75	3.5	4.95	6.05	7.0	8.55	9.8	10.9	12.0	12.9	125°	120°	125°	125°	—	—	—
3/8EX 510 WL	PT3/8 (10A)	6.0	3.85	5.0	7.1	8.65	10.0	12.3	14.0	15.6	17.1	18.5	125°	120°	125°	125°	1050	700	400
3/8EX 513 WL		6.0	5.05	6.5	9.2	11.3	13.0	15.9	18.2	20.3	22.3	24	125°	120°	125°	125°	1100	750	400
3/8EX 516 WL		6.5	6.3	8.05	11.3	13.9	16.0	19.5	22.3	24.8	27.2	29.3	125°	120°	125°	125°	1150	800	400
3/8EX 519 WL		7.0	7.4	9.55	13.5	16.5	19.0	23.1	26.6	29.4	32.3	34.7	125°	120°	125°	125°	—	—	—
1/2EX 523 WL	PT1/2 (15A)	8.5	8.95	11.6	16.4	20.0	23.0	27.9	31.9	35.6	39.0	41.8	120°	120°	125°	125°	1200	850	450
1/2EX 530 WL		8.5	11.7	15.1	21.2	26.0	30.0	36.4	41.9	46.3	50.7	54.7	120°	120°	125°	125°	1250	850	450
1/2EX 538 WL		10.0	14.8	19.1	26.9	32.9	38.0	46.1	52.7	58.6	64.2	69.3	120°	120°	125°	125°	—	—	—
3/4EX 545 WL	PT3/4 (20A)	11.5	17.6	22.6	31.8	39.0	45.0	54.3	62.4	69.7	76.4	81.8	120°	120°	125°	125°	1300	900	500
3/4EX 550 WL		11.5	19.5	25.0	35.4	43.3	50.0	60.6	69.9	77.5	84.9	91.2	120°	120°	125°	125°	1350	950	550
1EX 554 WL	PT1 (25A)	12.0	21.4	27.5	38.8	46.9	54.0	65.9	75.6	83.4	91.4	98.6	120°	120°	125°	125°	1400	950	550
1EX 570 WL		13.0	27.7	35.4	49.8	60.6	70.0	85.6	98.0	109	119	128	120°	120°	125°	125°	1450	1000	600
1 1/2EX 5100 WL	PT1 1/2 (40A)	16.0	40.6	50.9	70.7	86.0	100	123	140	156	172	186	120°	120°	125°	125°	—	—	—
1 1/2EX 5150 WL		22.0	59.1	75.5	106	130	150	184	210	234	257	275	120°	120°	125°	125°	—	—	—
1 1/2EX 5195 WL		24.0	76.3	98.0	138	169	195	239	273	304	331	359	120°	120°	125°	125°	—	—	—
2EX 5235 WL	PT2 (50A)	24.0	91.0	118	166	204	235	288	329	363	399	434	120°	120°	125°	125°	—	—	—
2EX 5300 WL		27.0	117	150	212	260	300	367	420	467	512	550	120°	120°	125°	125°	—	—	—
2EX 5380 WL		32.0	148	191	269	329	380	465	537	592	648	708	120°	120°	125°	125°	—	—	—
2 1/2EX 5450 WL	PT2 1/2 (65A)	37.0	176	226	318	390	450	543	624	697	764	818	120°	120°	125°	125°	—	—	—
2 1/2EX 5600 WL		42.0	235	302	424	520	600	724	832	930	1015	1090	120°	120°	125°	125°	—	—	—
3EX 5800 WL	PT3 (80A)	45.0	325	407	566	693	800	984	1120	1248	1376	1488	120°	120°	125°	125°	—	—	—
3EX 51000 WL		48.0	406	509	707	866	1000	1230	1400	1560	1720	1860	120°	120°	125°	125°	—	—	—

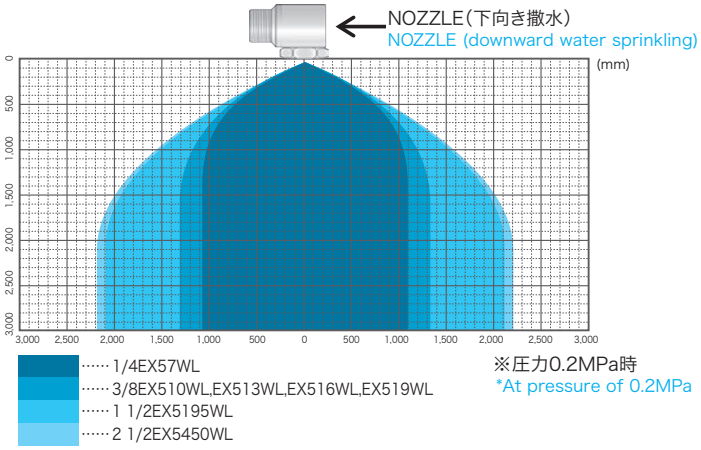
：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、0.7MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.7 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

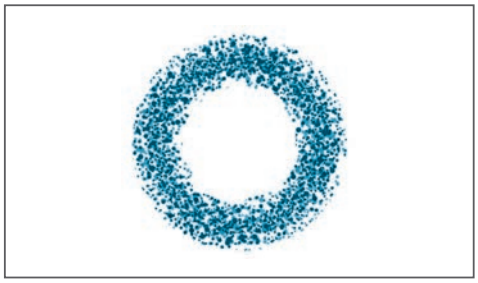
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



※圧力0.2MPa時
*At pressure of 0.2MPa

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above

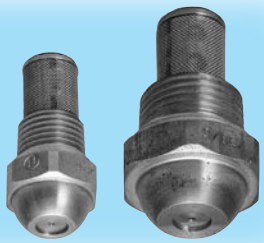


広角円環撒水型

液圧円環噴霧型

EX5 type NOZZLE

HOLLOW CONE HYDRAULIC MIST SPRAY



◆ 特性 Characteristics

・円環状に同芯方向へ撒水する
Water is sprinkled in an annular pattern in the concentric direction.
・0.5MPaで65～75°の円環撒水
Water is sprinkled in an annular pattern at an angle of 60 to 80° at 0.5 MPa.
・液圧のみで少量の液体を微細に噴霧
A small amount of liquid can be finely atomized only with the liquid pressure.
・80meshのストレーナを標準装備
A 80-mesh strainer is provided as a standard item.

◆ 主用途 Main applications

・加湿、調湿等、空調設備
Air conditioning equipment, such as humidification equipment and humidity control equipment
・噴霧乾燥
Spray drying
・燃料噴霧
Fuel spraying

◆ 材質 Material

・C3604B

・SUS316

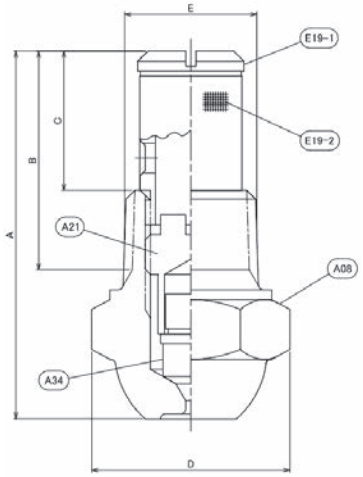
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316)

Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)				connection	Weight (kg)
	A	B	C	D	E	
M1/4 EX5-	37	22	14	HEX.17	R1/4	0.04
M3/8 EX5-	37	22	14	HEX.21	R3/8	0.04



Item list	
A08	NOZZLE
A21	SUPPORTER
A34	CORE
E19-1	STRAINER
E19-2	SCREEN（80mesh）

◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX5 | - | 03 ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 03：最小間隙【0.3mm】 Minimum clearance[0.3mm]
- EX5：型番タイプ【液圧円環噴霧型：EX5】 Model number type [HOLLOW CONE HYDRAULIC MIST SPRAY: EX5]
- 1/4：接続ネジサイズ Connection thread size
  - 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)

◆ 撒水データ Watering data

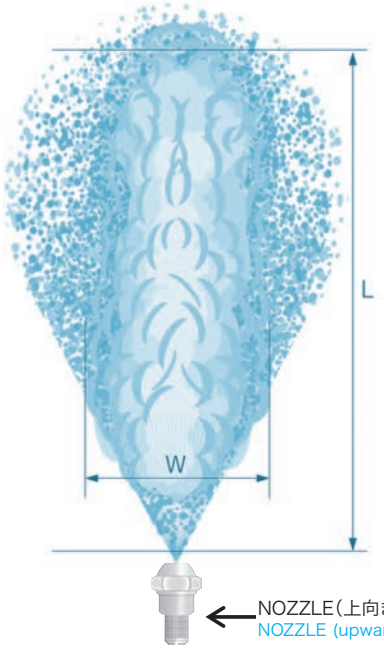
ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(cc/min) Amount of water to be sprinkled at each pressure (cc/min)									撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	0.8 MPa	0.9 MPa	1.0 MPa	0.2 MPa	0.5 MPa	0.8 MPa	1.0 MPa	0.2 MPa	0.5 MPa	1.0 MPa
M1/4EX 5-03	PT1/4 (8A)	0.3	70.0	82.6	94.2	104	114	122	128	135	135	58°	65°	66°	67°	150	100	60
M1/4EX 5-04		0.4	130	155	178	197	215	231	242	256	256	58°	65°	66°	67°	180	120	80
M1/4EX 5-05		0.5	155	187	215	239	260	280	294	308	308	68°	75°	76°	77°	200	140	90
M1/4EX 5-06		0.6	185	225	259	289	315	340	357	382	382	68°	75°	76°	77°	230	150	100
M1/4EX 5-08		0.8	240	292	336	375	409	441	463	496	496	68°	75°	76°	77°	200	180	130
M1/4EX 5-10		1.0	300	365	420	469	511	551	578	613	613	68°	75°	76°	77°	300	200	160
M1/4EX 5-12		1.2	460	563	649	727	795	861	913	968	968	68°	75°	76°	77°	330	230	190
M3/8EX 5-03	PT3/8 (10A)	0.3	70.0	82.6	94.2	104	114	122	128	135	135	58°	65°	66°	67°	150	100	60
M3/8EX 5-04		0.4	130	155	178	197	215	231	242	256	256	58°	65°	66°	67°	180	120	80
M3/8EX 5-05		0.5	155	187	215	239	260	280	294	308	308	68°	75°	76°	77°	200	140	90
M3/8EX 5-06		0.6	185	225	259	289	315	340	357	382	382	68°	75°	76°	77°	230	150	100
M3/8EX 5-08		0.8	240	292	336	375	409	441	463	496	496	68°	75°	76°	77°	200	180	130
M3/8EX 5-10		1.0	300	365	420	469	511	551	578	613	613	68°	75°	76°	77°	300	200	160
M3/8EX 5-12		1.2	460	563	649	727	795	861	913	968	968	68°	75°	76°	77°	330	230	190

：標準設計圧力（0.5MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.5 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：：本表中の0.2MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.2 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

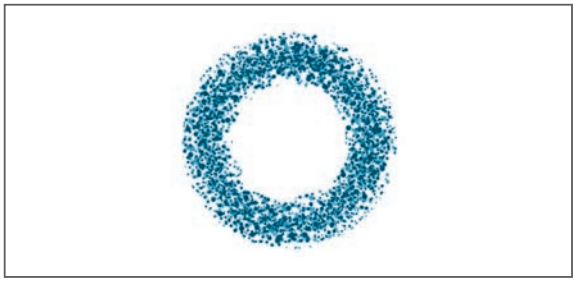
ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



ノズル番号 Nozzle No.		各圧力における撒水寸法 Water spray dimensions at each pressure	
		0.5MPa	1.0MPa
M1/4EX5-03	W(mm)	400	300
M3/8EX5-03	L(mm)	800	1,200
M1/4EX5-04	W(mm)	400	300
M3/8EX5-04	L(mm)	800	1,300
M1/4EX5-06	W(mm)	400	400
M3/8EX5-06	L(mm)	900	1,300
M1/4EX5-08	W(mm)	400	400
M3/8EX5-08	L(mm)	900	1,400
M1/4EX5-10	W(mm)	500	400
M3/8EX5-10	L(mm)	1,000	1,400
M1/4EX5-12	W(mm)	500	500
M3/8EX5-12	L(mm)	1,000	1,500

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



フラット撒水型

EX6 type NOZZLE

FLAT SPRAY

◆ 特性 Characteristics

・内部に羽根が無く目詰りしない
This spray nozzle has no blades inside and does not clog.
・インパクトが強く粒子も粗い
The impact is strong, and water particles are also coarse.
・ 0.2MPaで90°のフラットに撒水し
圧力が高くなるに従って角度が広がる
Water is sprinkled flat at 90° at 0.2 MPa,
and the angle becomes wider as the pressure increases.
・広範囲の圧力域にて安定した撒水
Stable water sprinkling is ensured over a wide pressure range.
・小流量から大流量迄各種揃っている
The EX6 model comes in various types,
from small flow rate to large flow rate.

◆ 主用途 Main applications

・貯槽側壁面、塔槽類外表面等への防災設備及び 冷却設備
Disaster prevention equipment and cooling equipment for the side wall surfaces of storage tanks, the outer surfaces of towers and tanks, etc.
・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・洗浄機、洗ピン機等、各種産業機械
Various types of industrial machinery,
such as washing machines and pin washing machines

◆ 材質 Material

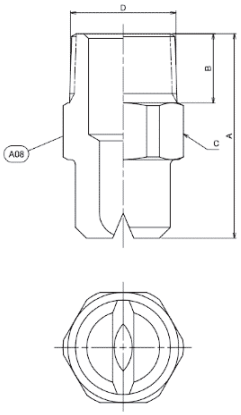
・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

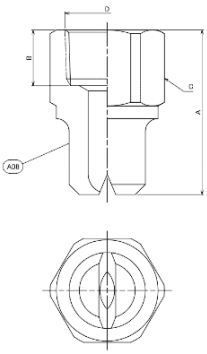
◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm) A	B	C	connection D	Weight (kg)
M1/8 EX6	22	10	HEX.10	R1/8	0.01
M1/4 EX6	28	11	HEX.14	R1/4	0.025
M3/8 EX6	34	13	HEX.17	R3/8	0.04
M1/2 EX6	40	16	HEX.21	R1/2	0.07
M3/4 EX6	50	18	HEX.29	R3/4	0.15
M1 EX6	65	22	HEX.35	R1	0.32



Item list	
A08	NOZZLE BODY

Nominal diameter	Dimensions (mm) A	B	C	connection D	Weight (kg)
F1/8 EX6	22	10	HEX.14	Rc1/8	0.015
F1/4 EX6	28	11	HEX.17	Rc1/4	0.03
F3/8 EX6	34	13	HEX.21	Rc3/8	0.05
F1/2 EX6	40	16	HEX.26	Rc1/2	0.08
F3/4 EX6	50	18	HEX.32	Rc3/4	0.18
F1 EX6	65	22	HEX.41	Rc1	0.38



◆ 型番選定 Selection of model number

(例) Example:

M | 1/4 | EX6 | 65 ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 65：設計圧(0.2MPa)時の撒水量(流量) L/min【6.5L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [6.5 L/min]
- EX6：型番タイプ【フラット撒水型：EX6】 Model number type [FLAT SPRAY: EX6]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ（R） M: Male thread (R)
  F：メネジ（Rc） F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/8EX 620	PT1/8 (6A)	1.0	0.8	1.0	1.45	1.75	2.0	2.45	2.85	3.15	3.7	4.4	70°	90°	95°	100°	—	450	250
1/8EX 626		1.1	1.05	1.3	1.85	2.25	2.6	3.2	3.7	4.05	4.8	5.7	70°	90°	95°	100°	900	550	300
1/8EX 634		1.3	1.35	1.7	2.4	2.95	3.4	4.15	4.75	5.25	6.25	7.4	70°	90°	95°	100°	—	—	—
1/8EX 640		1.3	1.6	2.0	2.85	3.45	4.0	4.9	5.65	6.25	7.4	8.75	70°	90°	95°	100°	—	—	—
1/8EX 655		1.5	2.15	2.8	3.9	4.75	5.5	6.75	7.75	8.6	10.2	12.1	70°	90°	95°	100°	—	—	—
1/4EX 665	PT1/4 (8A)	1.8	2.6	3.3	4.6	5.65	6.5	8.0	9.1	10.2	12.2	14.3	75°	90°	95°	100°	950	600	350
1/4EX 675		2.0	3.0	3.8	5.3	6.5	7.5	9.2	10.6	11.7	13.9	16.5	75°	90°	95°	100°	1000	650	350
1/4EX 6100		2.3	4.0	5.05	7.02	8.65	10.0	12.3	14.1	16.0	18.8	22.1	75°	90°	95°	100°	—	—	—
1/4EX 6130		2.7	5.15	6.55	9.15	11.3	13.0	15.9	18.4	20.4	24.1	28.6	75°	90°	95°	100°	—	—	—
1/4EX 6150		3.0	5.85	7.5	10.5	13.0	15.0	18.3	21.2	23.8	28.2	33.2	75°	90°	95°	100°	—	—	—
3/8EX 6200	PT3/8 (10A)	3.1	7.85	10.0	14.1	17.3	20.0	24.5	28.3	31.6	37.1	43.8	80°	90°	95°	100°	1050	700	400
3/8EX 6220		3.2	8.65	11.0	15.6	19.1	22.0	26.9	31.1	34.7	40.8	48.2	80°	90°	95°	100°	1100	750	400
3/8EX 6250		3.4	9.55	12.4	17.6	21.7	25.0	30.7	35.4	39.8	47.0	55.3	80°	90°	95°	100°	1150	800	400
3/8EX 6300		3.6	11.6	14.9	21.0	26.0	30.0	36.9	42.4	47.5	56.0	66.0	80°	90°	95°	100°	—	—	—
3/8EX 6350		4.0	13.6	17.5	24.8	30.3	35.0	42.9	49.5	55.3	65.4	76.7	80°	90°	95°	100°	—	—	—
1/2EX 6400	PT1/2 (15A)	4.4	15.3	19.8	27.8	34.6	40.0	48.7	56.0	62.1	73.6	87.2	80°	90°	95°	100°	1200	850	450
1/2EX 6450		4.6	17.8	22.8	31.9	39.0	45.0	55.0	63.0	70.3	82.8	98.6	80°	90°	95°	100°	1250	850	450
1/2EX 6500		4.8	19.6	25.0	35.4	43.3	50.0	62.4	70.7	78.9	93.5	111	80°	90°	95°	100°	1300	900	500
1/2EX 6550		5.2	21.7	27.8	38.9	47.6	55.0	67.4	77.8	86.8	102	121	80°	90°	95°	100°	—	—	—
3/4EX 6600	PT3/4 (20A)	5.6	23.7	30.3	41.1	51.4	60.0	72.7	84.0	89.7	107	128	80°	90°	95°	100°	1300	900	500
3/4EX 6800		6.4	31.6	40.4	56.6	69.3	80.0	98.0	113	126	148	175	80°	90°	95°	100°	1350	950	550
1EX 61000	PT1 (25A)	7.2	39.9	50.5	71.6	86.6	100	115	139	152	182	218	80°	90°	95°	100°	1400	950	550

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

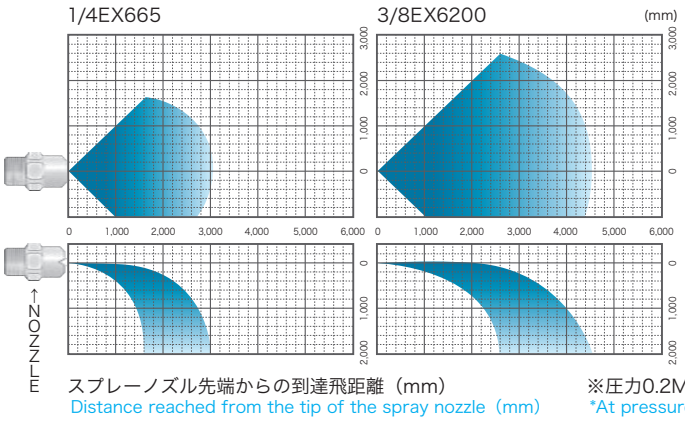
接続：旧JIS規格で表記しています。
Connections : : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

本撒水パターンは床と平行に横向き撒水したものです。（本図の上部が平面図、下部が側面図）
This watering pattern involves watering horizontally, parallel to the floor. (The top of this figure is a plan view, and the bottom is a side view.)

水平撒水広がり寸法　IHorizontal water diffusion dimension

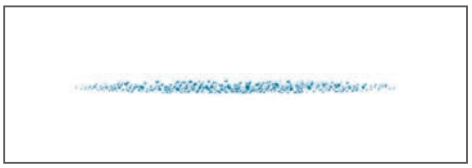


スプレーノズル先端からの到達飛距離（mm）
Distance reached from the tip of the spray nozzle（mm）

※圧力0.2MPa時
*At pressure of 0.2MPa

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



広角フラット撒水型
EX6-W type NOZZLE
FLAT WIDE ANGLE SPRAY

◆ 特性 Characteristics

・内部に羽根が無く目詰りしない
This spray nozzle has no blades inside and does not clog.
・インパクトが強く粒子も粗い
The impact is strong, and water particles are also coarse.
・0.2MPaで120°の広角フラットに撒水し圧力が高くなるに従って角度が広がる
Water is sprinkled flat at a wide angle of 120° at 0.2 MPa, and the angle becomes wider as the pressure increases.
・広範囲の圧力域にて安定した撒水
Stable water sprinkling is ensured over a wide pressure range.

◆ 主用途 Main applications

・貯槽側壁面、塔槽類外表面等への防災設備及び 冷却設備
Disaster prevention equipment and cooling equipment for the side wall surfaces of storage tanks, the outer surfaces of towers and tanks, etc.
・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・流れ作業上での洗浄設備
Cleaning equipment on assembly lines
・消泡等,下水処理設備
Sewage treatment equipment, such as defoaming equipment

◆ 材質 Material

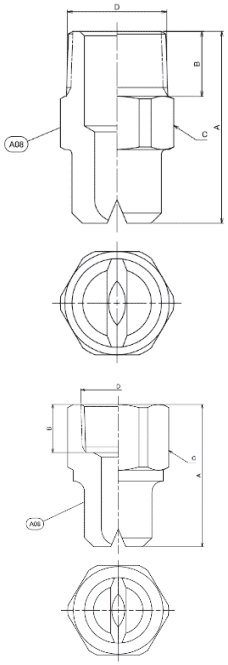
・C3604B/BSCR（クロムメッキ）(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316)
Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/4 EX6-W	28	11	HEX.14	R1/4	0.025
M3/8 EX6-W	34	13	HEX.17	R3/8	0.04
M1/2 EX6-W	40	16	HEX.21	R1/2	0.07
M3/4 EX6-W	50	18	HEX.29	R3/4	0.15
M1 EX6-W	65	22	HEX.35	R1	0.32



Item list	
A08	NOZZLE BODY

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
F1/4 EX6-W	28	11	HEX.17	Rc1/4	0.03
F3/8 EX6-W	34	13	HEX.21	Rc3/8	0.05
F1/2 EX6-W	40	16	HEX.26	Rc1/2	0.08
F3/4 EX6-W	50	18	HEX.32	Rc3/4	0.18
F1 EX6-W	65	22	HEX.41	Rc1	0.38

◆ 型番選定 Selection of model number

(例) Example: M | 1/4 | EX6 | 65 | W ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel : SUS316]
- 65：設計圧(0.2MPa)時の撒水量(流量) L/min【6.5L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [6.5 L/min]
- EX6：型番タイプ【広角フラット撒水型：EX6-W】 Model number type [FLAT WIDE ANGLE SPRAY : EX6-W]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)
  F：メネジ(Rc) F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/4EX 665 W	PT1/4 (8A)	1.8	2.6	3.3	4.6	5.65	6.5	8.0	9.1	10.2	12.2	14.3	100°	120°	125°	130°	950	600	350
1/4EX 675 W		2.0	3.0	3.8	5.3	6.5	7.5	9.2	10.6	11.7	13.9	16.5	100°	120°	125°	130°	1000	650	350
1/4EX 6100 W		2.3	4.0	5.05	7.02	8.65	10	12.3	14.1	16.0	18.8	22.1	100°	120°	125°	130°	—	—	—
1/4EX 6130 W		2.7	5.15	6.55	9.15	11.3	13	15.9	18.4	20.4	24.1	28.6	100°	120°	125°	130°	—	—	—
1/4EX 6150 W		3.0	5.85	7.5	10.5	13.0	15.0	18.3	21.2	23.8	28.2	33.2	100°	120°	125°	130°	—	—	—
3/8EX 6200 W	PT3/8 (10A)	3.1	7.85	10.0	14.1	17.3	20.0	24.5	28.3	31.6	37.1	43.8	105°	120°	125°	130°	1050	700	400
3/8EX 6220 W		3.2	8.65	11.0	15.6	19.1	22.0	26.9	31.1	34.7	40.8	48.2	105°	120°	125°	130°	1100	750	400
3/8EX 6250 W		3.4	9.55	12.4	17.6	21.7	25.0	30.7	35.4	39.8	47.0	55.3	105°	120°	125°	130°	1150	800	400
3/8EX 6300 W		3.6	11.6	14.9	21.0	26.0	30.0	36.9	42.4	47.5	56.0	66.0	105°	120°	125°	130°	—	—	—
3/8EX 6350 W		4.0	13.6	17.5	24.8	30.3	35.0	42.9	49.5	55.3	65.4	76.7	105°	120°	125°	130°	—	—	—
1/2EX 6400 W	PT1/2 (15A)	4.4	15.3	19.8	27.8	34.6	40.0	48.7	56.0	62.1	73.6	87.2	105°	120°	125°	130°	1200	850	450
1/2EX 6450 W		4.6	17.8	22.8	31.9	39.0	45.0	55.0	63.0	70.3	82.8	98.6	105°	120°	125°	130°	1250	850	450
1/2EX 6500 W		4.8	19.6	25.0	35.4	43.3	50.0	62.4	70.7	78.9	93.5	111	105°	120°	125°	130°	1300	900	500
1/2EX 6550 W		5.2	21.7	27.8	38.9	47.6	55.0	67.4	77.8	86.8	102	121	105°	120°	125°	130°	—	—	—
3/4EX 6600 W	PT3/4 (20A)	5.6	23.7	30.3	41.1	51.4	60.0	72.7	84.0	89.7	107	128	105°	120°	125°	130°	1300	900	500
3/4EX 6800 W		6.4	31.6	40.4	56.6	69.3	80.0	98.0	113	126	148	175	105°	120°	125°	130°	1350	950	550
1EX 61000 W	PT1 (25A)	7.2	39.9	50.5	71.6	86.6	100	115	139	152	182	218	105°	120°	125°	130°	1400	950	550

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

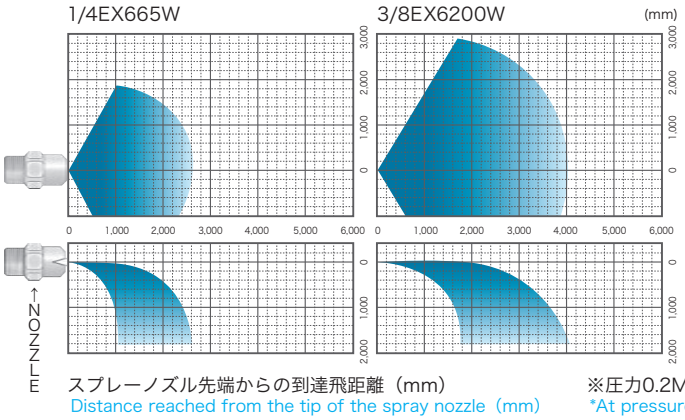
接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

本撒水パターンは床と平行に横向き撒水したものです。（本図の上部が平面図、下部が側面図）
This watering pattern involves watering horizontally, parallel to the floor. (The top of this figure is a plan view, and the bottom is a side view.)

水平撒水広がり寸法　IHorizontal water diffusion dimension

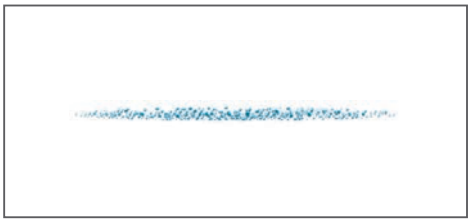


スプレーノズル先端からの到達飛距離（mm）
Distance reached from the tip of the spray nozzle（mm）

※圧力0.2MPa時
*At pressure of 0.2MPa

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



狭角(60°)フラット撒水型

EX6-M type NOZZLE

FLAT MIDDLE ANGLE SPRAY

◆ 特性 Characteristics

・内部に羽根が無く目詰りしない
This spray nozzle has no blades inside and does not clog.
・インパクトが強く粒子も粗い
The impact is strong, and water particles are also coarse.
・ 0.2MPaで60°の狭角フラットに撒水し
圧力が高くなるに従って角度が広がる
Water is sprinkled flat at a narrow angle of 60° at 0.2 MPa, and the angle becomes wider as the pressure increases.
・広範囲の圧力域にて安定した撒水
Stable water sprinkling is ensured over a wide pressure range.

◆ 主用途 Main applications

・貯槽側壁面、塔槽類外表面等への防災設備及び 冷却設備
Disaster prevention equipment and cooling equipment for the side wall surfaces of storage tanks, the outer surfaces of towers and tanks, etc.
・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・高圧洗浄等、各種洗浄設備
Various types of washing equipment, such as high-pressure washing equipment

◆ 材質 Material

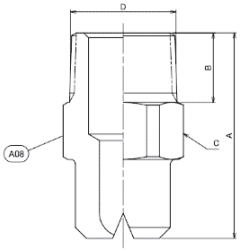
・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

◆ 接続 Connections

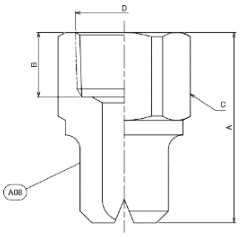
・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

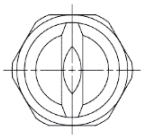
Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/8 EX6-M	22	10	HEX.10	R1/8	0.01
M1/4 EX6-M	28	11	HEX.14	R1/4	0.025
M3/8 EX6-M	34	13	HEX.17	R3/8	0.04
M1/2 EX6-M	40	16	HEX.21	R1/2	0.07
M3/4 EX6-M	50	18	HEX.29	R3/4	0.15
M1 EX6-M	65	22	HEX.35	R1	0.32

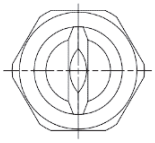


Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
F1/8 EX6-M	22	10	HEX.14	Rc1/8	0.015
F1/4 EX6-M	28	11	HEX.17	Rc1/4	0.03
F3/8 EX6-M	34	13	HEX.21	Rc3/8	0.05
F1/2 EX6-M	40	16	HEX.26	Rc1/2	0.08
F3/4 EX6-M	50	18	HEX.32	Rc3/4	0.18
F1 EX6-M	65	22	HEX.41	Rc1	0.38



Item list	
A08	NOZZLE BODY





◆ 型番選定 Selection of model number

(例) Example:

M | 1/4 | EX6 | 65 | M ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 65：設計圧(0.2MPa)時の撒水量(流量) L/min【6.5L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [6.5 L/min]
- EX6：型番タイプ【狭角(60°)フラット撒水型：EX6-M】 Model number type [FLAT MIDDLE ANGLE SPRAY: EX6-M]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ（R） M: Male thread (R)
  F：メネジ（Rc） F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/8EX 620 M	PT1/8 (6A)	1.0	0.8	1.0	1.45	1.75	2.0	2.45	2.85	3.15	3.7	4.4	45°	60°	60°	65°	—	450	250
1/8EX 626 M		1.1	1.05	1.3	1.85	2.25	2.6	3.2	3.7	4.05	4.8	5.7	45°	60°	60°	65°	900	550	300
1/8EX 634 M		1.3	1.35	1.7	2.4	2.95	3.4	4.15	4.75	5.25	6.25	7.4	45°	60°	60°	65°	—	—	—
1/8EX 640 M		1.3	1.6	2.0	2.85	3.45	4.0	4.9	5.65	6.25	7.4	8.75	45°	60°	60°	65°	—	—	—
1/8EX 655 M		1.5	2.15	2.8	3.9	4.75	5.5	6.75	7.75	8.6	10.2	12.1	45°	60°	60°	65°	—	—	—
1/4EX 665 M	PT1/4 (8A)	1.8	2.6	3.3	4.6	5.65	6.5	8.0	9.1	10.2	12.2	14.3	50°	60°	65°	70°	950	600	350
1/4EX 675 M		2.0	3.0	3.8	5.3	6.5	7.5	9.2	10.6	11.7	13.9	16.5	50°	60°	65°	70°	1000	650	350
1/4EX 6100 M		2.3	4.0	5.05	7.02	8.65	10.0	12.3	14.1	16.0	18.8	22.1	50°	60°	65°	70°	—	—	—
1/4EX 6130 M		2.7	5.15	6.55	9.15	11.3	13.0	15.9	18.4	20.4	24.1	28.6	50°	60°	65°	70°	—	—	—
1/4EX 6150 M		3.0	5.85	7.5	10.5	13.0	15.0	18.3	21.2	23.8	28.2	33.2	50°	60°	65°	70°	—	—	—
3/8EX 6200 M	PT3/8 (10A)	3.1	7.85	10.0	14.1	17.3	20.0	24.5	28.3	31.6	37.1	43.8	50°	60°	65°	70°	1050	700	400
3/8EX 6220 M		3.2	8.65	11.0	15.6	19.1	22.0	26.9	31.1	34.7	40.8	48.2	50°	60°	65°	70°	1100	750	400
3/8EX 6250 M		3.4	9.55	12.4	17.6	21.7	25.0	30.7	35.4	39.8	47.0	55.3	50°	60°	65°	70°	1150	800	400
3/8EX 6300 M		3.6	11.6	14.9	21.0	26.0	30.0	36.9	42.4	47.5	56.0	66.0	50°	60°	65°	70°	—	—	—
3/8EX 6350 M		4.0	13.6	17.5	24.8	30.3	35.0	42.9	49.5	55.3	65.4	76.7	50°	60°	65°	70°	—	—	—
1/2EX 6400 M	PT1/2 (15A)	4.4	15.3	19.8	27.8	34.6	40.0	48.7	56.0	62.1	73.6	87.2	50°	60°	65°	70°	1200	850	450
1/2EX 6450 M		4.6	17.8	22.8	31.9	39.0	45.0	55.0	63.0	70.3	82.8	98.6	50°	60°	65°	70°	1250	850	450
1/2EX 6500 M		4.8	19.6	25.0	35.4	43.3	50.0	62.4	70.7	78.9	93.5	111	50°	60°	65°	70°	1300	900	500
1/2EX 6550 M		5.2	21.7	27.8	38.9	47.6	55.0	67.4	77.8	86.8	102	121	50°	60°	65°	70°	—	—	—
3/4EX 6600 M	PT3/4 (20A)	5.6	23.7	30.3	41.1	51.4	60.0	72.7	84.0	89.7	107	128	50°	60°	65°	70°	1300	900	500
3/4EX 6800 M		6.4	31.6	40.4	56.6	69.3	80.0	98.0	113	126	148	175	50°	60°	65°	70°	1350	950	550
1EX 61000 M	PT1 (25A)	7.2	39.9	50.5	71.6	86.6	100	115	139	152	182	218	50°	60°	65°	70°	1400	950	550

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

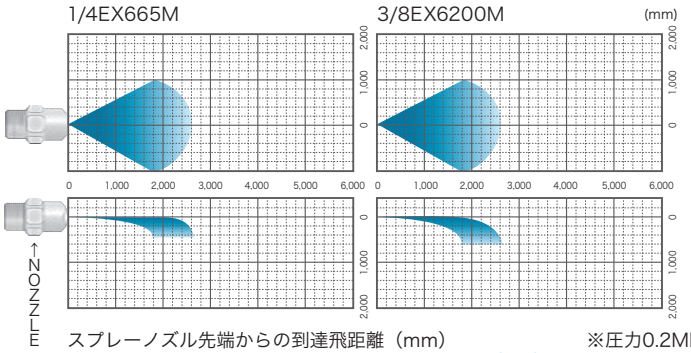
接続：旧JIS規格で表記しています。
Connections : : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

本撒水パターンは床と平行に横向き撒水したものです。（本図の上部が平面図、下部が側面図）
This watering pattern involves watering horizontally, parallel to the floor. (The top of this figure is a plan view, and the bottom is a side view.)

水平撒水広がり寸法　Horizontal water diffusion dimension

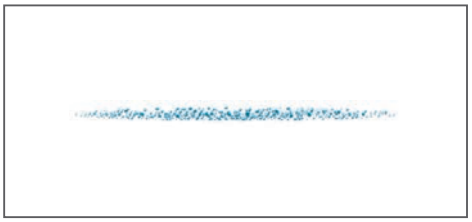


スプレーノズル先端からの到達飛距離（mm）
Distance reached from the tip of the spray nozzle（mm）

※圧力0.2MPa時
*At pressure of 0.2MPa

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



狭角(30°)フラット撒水型

EX6-N type NOZZLE

FLAT NARROW ANGLE SPRAY

◆ 特性 Characteristics

・内部に羽根が無く目詰りしない
This spray nozzle has no blades inside and does not clog.
・インパクトが強く粒子も粗い
The impact is strong, and water particles are also coarse.
・ 0.2MPaで30°の狭角フラットに撒水する
Water is sprinkled flat at a narrow angle of 30° at 0.2 MPa.
・広範囲の圧力域にて安定した撒水
Stable water sprinkling is ensured over a wide pressure range.

◆ 主用途 Main applications

・貯槽側壁面、塔槽類外表面等への防災設備及び 冷却設備
Disaster prevention equipment and cooling equipment for the side wall surfaces of storage tanks, the outer surfaces of towers and tanks, etc.
・高所水幕設備
Water curtain equipment at high elevations
・高圧洗浄等、各種洗浄設備
Various types of washing equipment, such as high-pressure washing equipment

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

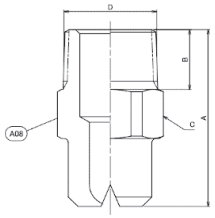
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

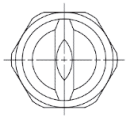
◆ 重量&寸法(SUS316)

Weight & dimensions(SUS316)

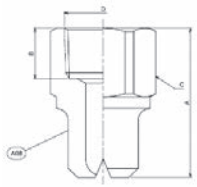
Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/8 EX6-N	22	10	HEX.10	R1/8	0.01
M1/4 EX6-N	28	11	HEX.14	R1/4	0.025
M3/8 EX6-N	34	13	HEX.17	R3/8	0.04
M1/2 EX6-N	40	16	HEX.21	R1/2	0.07
M3/4 EX6-N	50	18	HEX.29	R3/4	0.15
M1 EX6-N	65	22	HEX.35	R1	0.32



Item list	
A08	NOZZLE BODY



Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
F1/8 EX6-N	22	10	HEX.14	Rc1/8	0.015
F1/4 EX6-N	28	11	HEX.17	Rc1/4	0.03
F3/8 EX6-N	34	13	HEX.21	Rc3/8	0.05
F1/2 EX6-N	40	16	HEX.26	Rc1/2	0.08
F3/4 EX6-N	50	18	HEX.32	Rc3/4	0.18
F1 EX6-N	65	22	HEX.41	Rc1	0.38



◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | EX6 | 65 | N ／ SUS316

- 材質【ステンレス鋼：SUS316】
  Material [stainless steel: SUS316]
- 設計圧(0.2MPa)時の撒水量(流量) L/min【6.5L/min】
  Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [6.5 L/min]
- 型番タイプ【狭角(30°)フラット撒水型：EX6-N】
  Model number type [FLAT NARROW ANGLE SPRAY: EX6-N]
- 接続ネジサイズ
  Connection thread size
  - 【管用テーパオネジ1/4(R1/4)】
    [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R)
  M: Male thread (R)
  F：メネジ(Rc)
  F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa	0.03 MPa	0.2 MPa	0.7 MPa
1/8EX 620 N	PT1/8 (6A)	1.0	0.8	1.0	1.45	1.75	2.0	2.45	2.85	3.15	3.7	4.4	15°	30°	30°	35°	—	450	250
1/8EX 626 N		1.1	1.05	1.3	1.85	2.25	2.6	3.2	3.7	4.05	4.8	5.7	15°	30°	30°	35°	900	550	300
1/8EX 634 N		1.3	1.35	1.7	2.4	2.95	3.4	4.15	4.75	5.25	6.25	7.4	15°	30°	30°	35°	—	—	—
1/8EX 640 N		1.3	1.6	2.0	2.85	3.45	4.0	4.9	5.65	6.25	7.4	8.75	15°	30°	30°	35°	—	—	—
1/8EX 655 N		1.5	2.15	2.8	3.9	4.75	5.5	6.75	7.75	8.6	10.2	12.1	15°	30°	30°	35°	—	—	—
1/4EX 665 N	PT1/4 (8A)	1.8	2.6	3.3	4.6	5.65	6.5	8.0	9.1	10.2	12.2	14.3	20°	30°	35°	40°	950	600	350
1/4EX 675 N		2.0	3.0	3.8	5.3	6.5	7.5	9.2	10.6	11.7	13.9	16.5	20°	30°	35°	40°	1000	650	350
1/4EX 6100 N		2.3	4.0	5.05	7.02	8.65	10.0	12.3	14.1	16.0	18.8	22.1	20°	30°	35°	40°	—	—	—
1/4EX 6130 N		2.7	5.15	6.55	9.15	11.3	13.0	15.9	18.4	20.4	24.1	28.6	20°	30°	35°	40°	—	—	—
1/4EX 6150 N		3.0	5.85	7.5	10.5	13.0	15.0	18.3	21.2	23.8	28.2	33.2	20°	30°	35°	40°	—	—	—
3/8EX 6200 N	PT3/8 (10A)	3.1	7.85	10.0	14.1	17.3	20.0	24.5	28.3	31.6	37.1	43.8	20°	30°	35°	40°	1050	700	400
3/8EX 6220 N		3.2	8.65	11.0	15.6	19.1	22.0	26.9	31.1	34.7	40.8	48.2	20°	30°	35°	40°	1100	750	400
3/8EX 6250 N		3.4	9.55	12.4	17.6	21.7	25.0	30.7	35.4	39.8	47.0	55.3	20°	30°	35°	40°	1150	800	400
3/8EX 6300 N		3.6	11.6	14.9	21.0	26.0	30.0	36.9	42.4	47.5	56.0	66.0	20°	30°	35°	40°	—	—	—
3/8EX 6350 N		4.0	13.6	17.5	24.8	30.3	35.0	42.9	49.5	55.3	65.4	76.7	20°	30°	35°	40°	—	—	—
1/2EX 6400 N	PT1/2 (15A)	4.4	15.3	19.8	27.8	34.6	40.0	48.7	56.0	62.1	73.6	87.2	20°	30°	35°	40°	1200	850	450
1/2EX 6450 N		4.6	17.8	22.8	31.9	39.0	45.0	55.0	63.0	70.3	82.8	98.6	20°	30°	35°	40°	1250	850	450
1/2EX 6500 N		4.8	19.6	25.0	35.4	43.3	50.0	62.4	70.7	78.9	93.5	111	20°	30°	35°	40°	1300	900	500
1/2EX 6550 N		5.2	21.7	27.8	38.9	47.6	55.0	67.4	77.8	86.8	102	121	20°	30°	35°	40°	—	—	—
3/4EX 6600 N	PT3/4 (20A)	5.6	23.7	30.3	41.1	51.4	60.0	72.7	84.0	89.7	107	128	20°	30°	35°	40°	1300	900	500
3/4EX 6800 N		6.4	31.6	40.4	56.6	69.3	80.0	98.0	113	126	148	175	20°	30°	35°	40°	1350	950	550
1EX 61000 N	PT1 (25A)	7.2	39.9	50.5	71.6	86.6	100	115	139	152	182	218	20°	30°	35°	40°	1400	950	550

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

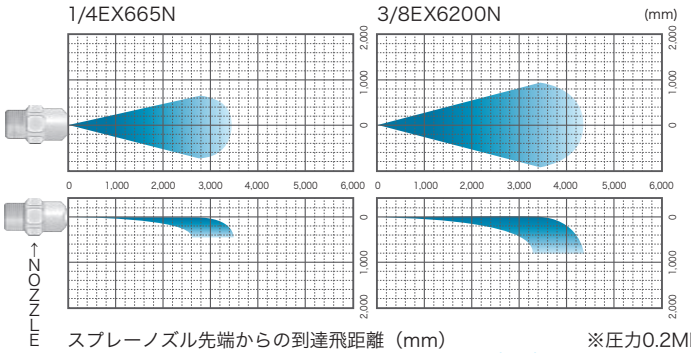
接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

本撒水パターンは床と平行に横向き撒水したものです。（本図の上部が平面図、下部が側面図）
This watering pattern involves watering horizontally, parallel to the floor. (The top of this figure is a plan view, and the bottom is a side view.)

水平撒水広がり寸法　lHorizontal water diffusion dimension

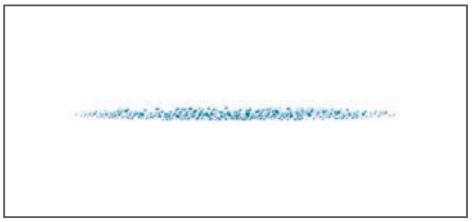


スプレーノズル先端からの到達飛距離（mm）
Distance reached from the tip of the spray nozzle（mm）

※圧力0.2MPa時
*At pressure of 0.2MPa

◆ 撒水イメージ Image of water sprinkling

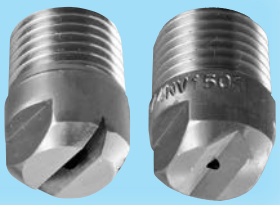
上から見た撒水図
Water spraying diagram from above



フラット撒水型（低流量タイプ）

NV type NOZZLE

FLAT SPRAY (Low flow type)



◆ 特性 Characteristics

・EX6型の小流量型
Small flow rate type of the EX6 type
・撒水量、撒水角度ともに各種性能のノズルがある
Nozzles are available with different performance levels both in the amount of water to be sprinkled and in the water sprinkling angle.
・広範囲の圧力域にて安定撒水
Stable water sprinkling is ensured over a wide pressure range.

◆ 主用途 Main applications

・連続鋳造設備及び鋼材、鋼板等の冷却・洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.
・流れ作業上での冷却/洗浄/塗布/撒布設備
Cooling, washing, application, and water sprinkling equipment on assembly lines

◆ 材質 Material

・C3604B

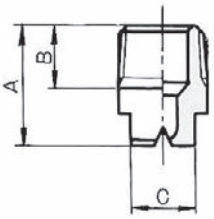
・SUS304/SUS316/SUS316L

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
1/4NV	19	10	10	R1/4	0.02



Item list	
A08	NOZZLE BODY

◆ 型番選定 Selection of model number

(例) Example:

1/4 | NV | 95 | 01 ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 01：設計圧(0.3MPa)時の撒水量(流量) L/min【0.4L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.3 MPa) L/min [0.4 L/min]
- 95：設計圧(0.3MPa)時の撒水角度【95°】 Water sprinkling angle at the design pressure (0.3 MPa) [95°]
- NV：型番タイプ【フラット撒水型（低流量タイプ）：NV】 Model number type [FLAT SPRAY（Low flow type）: NV]
- 1/4：接続ネジサイズ Connection thread size ―【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]

◆ 撒水パターン Water sprinkling pattern

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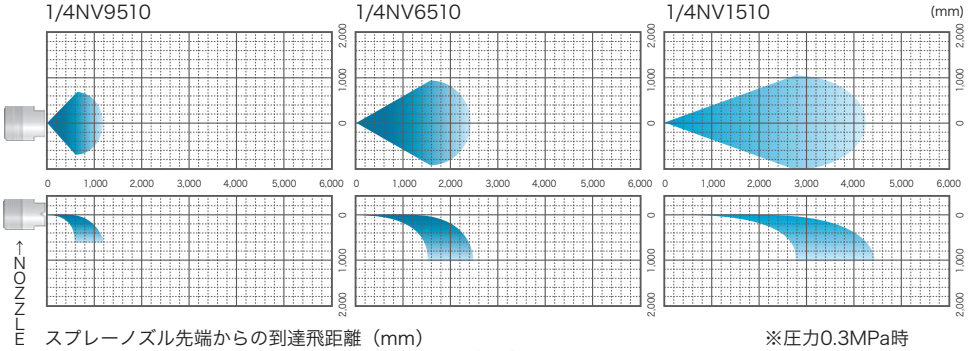
This watering pattern involves watering horizontally, parallel to the floor. (The top of this figure is a plan view, and the bottom is a side view.)

水平撒水広がり寸法 IHorizontal water diffusion dimension

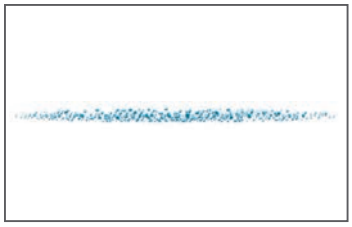


スプレーノズル先端からの到達飛距離（mm）
Distance reached from the tip of the spray nozzle（mm）

※圧力0.3MPa時
*At pressure of 0.3MPa

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above



フラット撒水型

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)									撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.05 MPa	0.3 MPa	0.5 MPa	0.7 MPa	0.05 MPa	0.3 MPa	0.7 MPa
1/4NV 9501	PT1/4 (8A)	0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	70°	95°	100°	105°	500	200	100
1/4NV 95015		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	70°	95°	100°	105°	500	200	100
1/4NV 9502		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	75°	95°	100°	105°	550	250	100
1/4NV 9503		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	75°	95°	100°	105°	550	250	100
1/4NV 9504		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	75°	95°	100°	105°	600	300	150
1/4NV 9506		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	75°	95°	100°	105°	600	350	200
1/4NV 9508		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.8	5.7	80°	95°	100°	105°	600	350	200
1/4NV 9510		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	80°	95°	100°	105°	700	450	300
1/4NV 9515		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	80°	95°	100°	105°	700	450	300
1/4NV 9520		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	80°	95°	100°	105°	750	450	300
1/4NV 8001		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	60°	80°	85°	90°	500	200	100
1/4NV 80015		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	60°	80°	85°	90°	500	200	100
1/4NV 8002		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	65°	80°	85°	90°	550	250	100
1/4NV 8003		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	65°	80°	85°	90°	550	250	100
1/4NV 8004		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	65°	80°	85°	90°	600	300	150
1/4NV 8006		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	65°	80°	85°	90°	600	350	200
1/4NV 8008		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.8	5.7	70°	80°	85°	90°	600	350	200
1/4NV 8010		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	70°	80°	85°	90°	700	450	300
1/4NV 8015		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	70°	80°	85°	90°	700	450	300
1/4NV 8020		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	70°	80°	85°	90°	750	450	300
1/4NV 6501		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	45°	65°	70°	75°	500	200	100
1/4NV 65015		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	45°	65°	70°	75°	500	200	100
1/4NV 6502		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	50°	65°	70°	75°	550	250	100
1/4NV 6503		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	50°	65°	70°	75°	550	250	100
1/4NV 6504		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	50°	65°	70°	75°	600	300	150
1/4NV 6506		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	50°	65°	70°	75°	600	350	200
1/4NV 6508		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.8	5.7	55°	65°	70°	75°	600	350	200
1/4NV 6510		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	55°	65°	70°	75°	700	450	300
1/4NV 6515		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	55°	65°	70°	75°	700	450	300
1/4NV 6520		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	55°	65°	70°	75°	750	450	300
1/4NV 5001		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	35°	50°	55°	55°	500	200	100
1/4NV 50015		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	35°	50°	55°	55°	500	200	100
1/4NV 5002		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	40°	50°	55°	55°	550	250	100
1/4NV 5003		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	40°	50°	55°	55°	550	250	100
1/4NV 5004		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	40°	50°	55°	55°	600	300	150
1/4NV 5006		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	40°	50°	55°	55°	600	350	200
1/4NV 5008		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.8	5.7	40°	50°	55°	55°	600	350	200
1/4NV 5010		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	40°	50°	55°	55°	700	450	300
1/4NV 5015		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	40°	50°	55°	55°	700	450	300
1/4NV 5020		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	40°	50°	55°	55°	750	450	300
1/4NV 4001		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	25°	40°	45°	45°	500	200	100
1/4NV 40015		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	25°	40°	45°	45°	500	200	100
1/4NV 4002		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	30°	40°	45°	45°	550	250	100
1/4NV 4003		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	30°	40°	45°	45°	550	250	100
1/4NV 4004		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	30°	40°	45°	45°	600	300	150
1/4NV 4006		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	30°	40°	45°	45°	600	350	200
1/4NV 4008		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.8	5.7	30°	40°	45°	45°	600	350	200
1/4NV 4010		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	30°	40°	45°	45°	700	450	300
1/4NV 4015		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	30°	40°	45°	45°	700	450	300
1/4NV 4020		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	30°	40°	45°	45°	750	450	300
1/4NV 2501		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	10°	25°	30°	30°	500	200	100
1/4NV 25015		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	10°	25°	30°	30°	500	200	100
1/4NV 2502		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	15°	25°	30°	30°	550	250	100
1/4NV 2503		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	15°	25°	30°	30°	550	250	100
1/4NV 2504		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	15°	25°	30°	30°	600	300	150
1/4NV 2506		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	15°	25°	30°	30°	600	350	200
1/4NV 2508		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.8	5.7	15°	25°	30°	30°	600	350	200
1/4NV 2510		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	15°	25°	30°	30°	700	450	300
1/4NV 2515		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	15°	25°	30°	30°	700	450	300
1/4NV 2520		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	15°	25°	30°	30°	750	450	300
1/4NV 1502		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	5°	15°	20°	20°	550	250	100
1/4NV 1503		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	5°	15°	20°	20°	550	250	100
1/4NV 1504		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	5°	15°	20°	20°	600	300	150
1/4NV 1506		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	5°	15°	20°	20°	600	350	200
1/4NV 1508		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.8	5.7	5°	15°	20°	20°	600	350	200
1/4NV 1510		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	5°	15°	20°	20°	700	450	300

：標準設計圧力（0.3MPa）における撒水量、撒水角度、平均粒子径
Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.3 MPa)

接　　続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

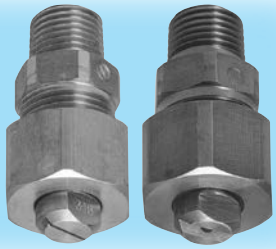
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：：本表中の0.05MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.05 MPa or exceeds 1.0 MPa specified in this table.

フラット撒水型（セパレート型）

S type NOZZLE

FLAT SEPARATE SPRAY



◆ 特性 Characteristics

・設計圧力0.3MPaにおいて15～95° に撒水
Water is sprinkled at 15 to 95° at the design pressure of 0.3 MPa.

・ボディとノズルキャップ及びノズルチップで構成、分解可能
This spray nozzle consists of a body, a nozzle cap, and a nozzle tip and can be disassembled.

・80meshストレーナを標準装備（※印の型式）
A 80-mesh strainer is provided as a standard item (models marked with *).

◆ 主用途 Main applications

・連続鋳造設備及び鋼材、鋼板等の冷却、洗浄
Cooling and washing of continuous casting equipment, steel materials, steel sheets, etc.

・流れ作業上での冷却/洗浄/塗布/撒布設備
Cooling, washing, application, and water sprinkling equipment on assembly lines

◆ 材質 Material

・C3604B

・SUS316

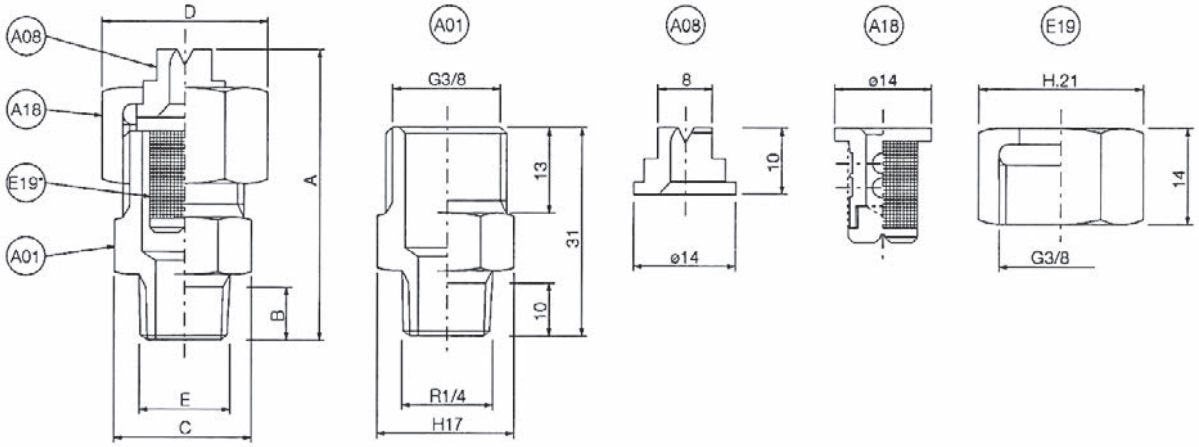
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)				connection	Weight (kg)
	A	B	C	D	E	
M1/4S ※	43	10	HEX.17	HEX.21	R1/4	0.065
M1/4S	41	10	HEX.17	HEX.21	R1/4	0.06

Item list	
A01	BODY
A08	NOZZLE
A18	CAP NUT
E19※	STRAINER（80mesh）



◆ 型番選定 Selection of model number

(例) Example:

M	1/4	S	04	95	／	SUS316

- SUS316 — 材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 95 — 設計圧(0.3MPa)時の撒水角度【95°】 Water sprinkling angle at the design pressure (0.3 MPa) [95°]
- 04 — 設計圧(0.3MPa)時の撒水量(流量) L/min【0.4L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.3 MPa) L/min [0.4 L/min]
- S — 型番タイプ【フラット撒水型(セパレート型):S】 Model number type [FLAT SEPARATE SPRAY: S]
- M, 1/4 — 接続ネジサイズ Connection thread size — 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)									撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)		
			0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.05 MPa	0.3 MPa	0.5 MPa	0.7 MPa	0.05 MPa	0.3 MPa	0.7 MPa
M1/4 S0495※	PT1/4 (8A)	0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	70°	95°	100°	105°	500	200	100
M1/4 S0695※		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	70°	95°	100°	105°	500	200	100
M1/4 S0895※		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	75°	95°	100°	105°	550	250	100
M1/4 S1295※		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	75°	95°	100°	105°	550	250	100
M1/4 S1695※		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	75°	95°	100°	105°	600	300	150
M1/4 S2495※		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	75°	95°	100°	105°	600	350	200
M1/4 S3295		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.80	5.70	80°	95°	100°	105°	600	350	200
M1/4 S4095		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	80°	95°	100°	105°	700	450	300
M1/4 S6095		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	80°	95°	100°	105°	700	450	300
M1/4 S8095		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	80°	95°	100°	105°	750	450	300
M1/4 S0480※		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	60°	80°	85°	90°	500	200	100
M1/4 S0680※		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	60°	80°	85°	90°	500	200	100
M1/4 S0880※		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	65°	80°	85°	90°	550	250	100
M1/4 S1280※		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	65°	80°	85°	90°	550	250	100
M1/4 S1680※		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	65°	80°	85°	90°	600	300	150
M1/4 S2480※		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	65°	80°	85°	90°	600	350	200
M1/4 S3280		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.80	5.70	70°	80°	85°	90°	600	350	200
M1/4 S4080		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	70°	80°	85°	90°	700	450	300
M1/4 S6080		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	70°	80°	85°	90°	700	450	300
M1/4 S8080		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	70°	80°	85°	90°	750	450	300
M1/4 S0465※		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	45°	65°	70°	75°	500	200	100
M1/4 S0665※		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	45°	65°	70°	75°	500	200	100
M1/4 S0865※		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	50°	65°	70°	75°	550	250	100
M1/4 S1265※		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	50°	65°	70°	75°	550	250	100
M1/4 S1665※		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	50°	65°	70°	75°	600	300	150
M1/4 S2465※		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	50°	65°	70°	75°	600	350	200
M1/4 S3265		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.80	5.70	55°	65°	70°	75°	600	350	200
M1/4 S4065		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	55°	65°	70°	75°	700	450	300
M1/4 S6065		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	55°	65°	70°	75°	700	450	300
M1/4 S8065		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	55°	65°	70°	75°	750	450	300
M1/4 S0450※		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	35°	50°	55°	55°	500	200	100
M1/4 S0650※		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	35°	50°	55°	55°	500	200	100
M1/4 S0850※		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	40°	50°	55°	55°	550	250	100
M1/4 S1250※		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	40°	50°	55°	55°	550	250	100
M1/4 S1650※		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	40°	50°	55°	55°	600	300	150
M1/4 S2450※		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	40°	50°	55°	55°	600	350	200
M1/4 S3250		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.80	5.70	40°	50°	55°	55°	600	350	200
M1/4 S4050		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	40°	50°	55°	55°	700	450	300
M1/4 S6050		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	40°	50°	55°	55°	700	450	300
M1/4 S8050		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	40°	50°	55°	55°	750	450	300
M1/4 S0440※		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	25°	40°	45°	45°	500	200	100
M1/4 S0640※		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	25°	40°	45°	45°	500	200	100
M1/4 S0840※		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	30°	40°	45°	45°	550	250	100
M1/4 S1240※		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	30°	40°	45°	45°	550	250	100
M1/4 S1640※		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	30°	40°	45°	45°	600	300	150
M1/4 S2440※		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	30°	40°	45°	45°	600	350	200
M1/4 S3240		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.80	5.70	30°	40°	45°	45°	600	350	200
M1/4 S4040		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	30°	40°	45°	45°	700	450	300
M1/4 S6040		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	30°	40°	45°	45°	700	450	300
M1/4 S8040		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	30°	40°	45°	45°	750	450	300
M1/4 S0425※		0.2	0.17	0.23	0.28	0.33	0.40	0.46	0.51	0.61	0.72	10°	25°	30°	30°	500	200	100
M1/4 S0625※		0.4	0.25	0.35	0.43	0.49	0.60	0.69	0.77	0.91	1.07	10°	25°	30°	30°	500	200	100
M1/4 S0825※		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	15°	25°	30°	30°	550	250	100
M1/4 S1225※		0.7	0.5	0.7	0.85	0.98	1.20	1.38	1.53	1.81	2.15	15°	25°	30°	30°	550	250	100
M1/4 S1625※		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	15°	25°	30°	30°	600	300	150
M1/4 S2425※		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	15°	25°	30°	30°	600	350	200
M1/4 S3225		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.80	5.70	15°	25°	30°	30°	600	350	200
M1/4 S4025		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	15°	25°	30°	30°	700	450	300
M1/4 S6025		2.2	2.50	3.50	4.26	4.90	6.00	6.89	7.68	9.14	10.74	15°	25°	30°	30°	700	450	300
M1/4 S8025		2.2	3.31	4.65	5.66	6.53	8.00	9.19	10.24	12.1	14.31	15°	25°	30°	30°	750	450	300
M1/4 S0815※		0.6	0.33	0.47	0.57	0.66	0.80	0.92	1.02	1.21	1.43	5°	15°	20°	20°	550	250	100
M1/4 S1215※		0.7	0.50	0.70	0.85	0.98	1.20	1.38	1.53	1.81	2.15	5°	15°	20°	20°	550	250	100
M1/4 S1615※		1.0	0.67	0.93	1.14	1.31	1.60	1.83	2.03	2.39	2.85	5°	15°	20°	20°	600	300	150
M1/4 S2415※		13.0	1.00	1.40	1.70	1.96	2.40	2.75	3.06	3.59	4.27	5°	15°	20°	20°	600	350	200
M1/4 S3215		1.5	1.32	1.86	2.27	2.61	3.20	3.67	4.07	4.80	5.70	5°	15°	20°	20°	600	350	200
M1/4 S4015		1.8	1.66	2.32	2.83	3.27	4.00	4.59	5.11	6.05	7.16	5°	15°	20°	20°	700	450	300

：標準設計圧力（0.3MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.3 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

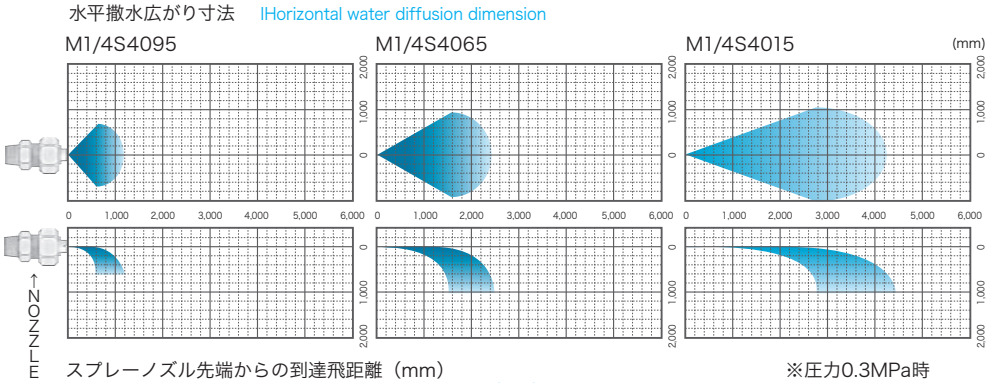
使用圧力：：本表中の0.05MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.05 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

本撒水パターンは床と平行に横向き撒水したものです。（本図の上部が平面図、下部が側面図）
This watering pattern involves watering horizontally, parallel to the floor. (The top of this figure is a plan view, and the bottom is a side view.)

水平撒水広がり寸法　IHorizontal water diffusion dimension

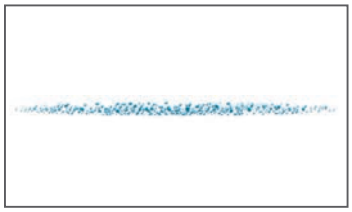


スプレーノズル先端からの到達飛距離（mm）
Distance reached from the tip of the spray nozzle（mm）

※圧力0.3MPa時
*At pressure of 0.3MPa

◆ 撒水イメージ Image of water sprinkling

上から見た撒水図
Water spraying diagram from above

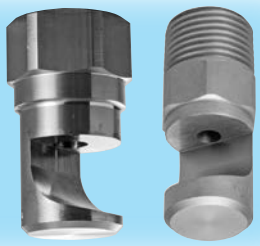


フラット撒水型（セパレート型）

超広角フラット撒水型

FN type NOZZLE

FLAT SUPER WIDE ANGLE SPRAY



◆ 特性 Characteristics

・内部に羽根が無く目詰りしない
This spray nozzle has no blades inside and does not clog.
・外部のデフレクターにより撒水させるので、
インパクトはEX6型より弱く、粒子も細かい
Since water is sprinkled by an external deflector,
the impact is weaker and water particles are also smaller
than those of the EX6 type.
・低圧域での撒水に適している
This spray nozzle is suitable for water sprinkling in
a low-pressure range.

◆ 主用途 Main applications

・エアーレーション方式曝気槽の消泡装置等の
下水処理設備
Sewage treatment equipment, such as defoaming devices
for aeration type tanks
・貯槽側壁面等への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for
side wall surfaces of storage tanks
・流れ作業上での低圧洗浄、撒水設備
Low-pressure washing and water sprinkling equipment on
assembly lines

◆ 材質 Material

・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

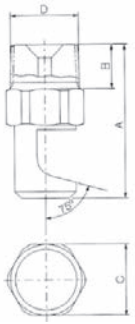
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in
ANSI/ASME B 1.20.1

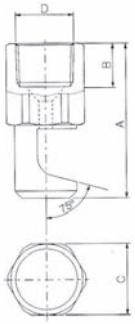
◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)				Weight (kg)
	A	B	C	D	connection
M1/8 FN	25	10	HEX.10	R1/8	0.015
M1/4 FN	32	11	HEX.14	R1/4	0.03
M3/8 FN	43	13	HEX.17	R3/8	0.07
M1/2 FN	52	16	HEX.21	R1/2	0.15
M3/4 FN	60	18	HEX.29	R3/4	0.32

Item list	
A08	NOZZLE BODY



Nominal diameter	Dimensions (mm)				Weight (kg)
	A	B	C	D	connection
F1/8 FN	25	10	HEX.14	Rc1/8	0.025
F1/4 FN	32	11	HEX.17	Rc1/4	0.035
F3/8 FN	43	13	HEX.21	Rc3/8	0.09
F1/2 FN	52	16	HEX.26	Rc1/2	0.18
F3/4 FN	60	18	HEX.32	Rc3/4	0.4



◆ 型番選定 Selection of model number

(例) Example:

M | 1/4 | FN | 32 ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [Stainless Steel: SUS316]
- 32：設計圧(0.2MPa)時の撒水量(流量) L/min【3.2L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.2 L/min]
- FN：型番タイプ【超広角フラット撒水型：FN】 Model number type [FLAT SUPER WIDE ANGLE SPRAY: FN]
- 1/4：接続ネジサイズ Connection thread size → 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ（R） M: Male thread (R)
  F：メネジ（Rc） F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)						撒水角度 Water sprinkling angle				平均粒子径(μm) Average particle size (μm)			
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.03 MPa	0.1 MPa	0.2 MPa	0.3 MPa	0.03 MPa	0.1 MPa	0.2 MPa	0.3 MPa
1/8FN 10	PT1/8 (6A)	1.0	–	0.5	0.7	0.85	1.0	1.2	–	100°	110°	120°	–	400	300	250
1/8FN 16		1.3	0.6	0.8	1.1	1.35	1.6	1.95	70°	100°	110°	120°	700	450	350	300
1/4FN 32	PT1/4 (8A)	2.0	1.25	1.6	2.25	2.75	3.2	3.9	100°	130°	135°	140°	750	550	450	400
1/4FN 64		2.8	2.45	3.15	4.6	5.5	6.4	7.75	100°	130°	135°	140°	900	650	550	450
3/8FN 128	PT3/8 (10A)	4.0	4.8	6.25	8.9	11.0	12.8	15.8	100°	130°	135°	140°	1000	750	650	550
3/8FN 190		4.8	7.3	9.4	13.3	16.3	19.0	23.4	100°	130°	135°	140°	1100	850	750	650
1/2FN 255	PT1/2 (15A)	5.6	9.8	12.6	17.9	21.9	25.5	31.4	110°	140°	148°	150°	1150	900	800	700
1/2FN 382		6.7	14.9	19.1	26.6	32.8	38.2	46.1	110°	140°	148°	150°	1250	950	850	750
3/4FN 550	PT3/4 (20A)	7.7	21.7	27.8	38.9	47.6	55.0	67.4	110°	140°	152°	155°	1350	1050	950	850
3/4FN 800		9.4	31.6	40.4	56.6	69.3	80.0	98.0	110°	140°	152°	155°	1400	1100	950	850

：標準設計圧力（0.1MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.1 MPa)

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

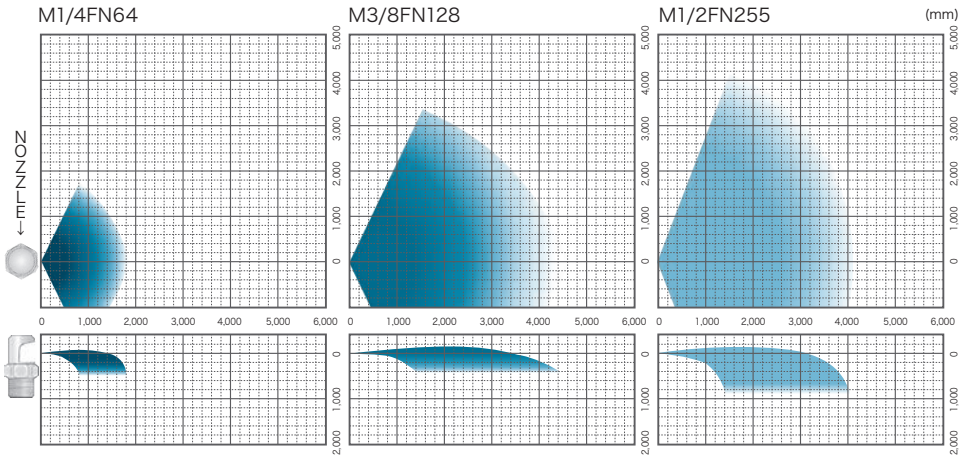
接　　続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、0.3MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.3 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

本撒水パターンは床と平行に横向き撒水したものです。（本図の上部が平面図、下部が側面図）
This watering pattern involves watering horizontally, parallel to the floor. (The top of this figure is a plan view, and the bottom is a side view.)

水平撒水広がり寸法　IHorizontal water diffusion dimension



スプレーノズル先端からの到達飛距離（mm）
Distance reached from the tip of the spray nozzle（mm）

※圧力0.2MPa時
*At pressure of 0.2MPa

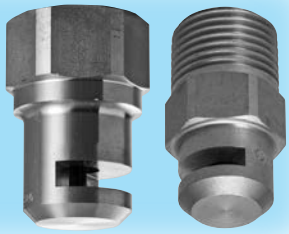
超広角フラット撒水型

超広角ドレンチャーフラット撒水型

DFN type NOZZLE

DRENCHER FLAT

SUPER WIDE ANGLE SPRAY



◆ 特性 Characteristics

・広範囲の圧力域にて安定した撒水
Stable water sprinkling is ensured over a wide pressure range.
・インパクトはFN型より強い
The impact is stronger than the FN type.

◆ 主用途 Main applications

・貯槽側壁面等への防災設備及び冷却設備
Disaster prevention equipment and cooling equipment for side wall surfaces of storage tanks
・低所及び下向きの水幕設備
Water curtain equipment at low elevations and downward water curtain equipment

◆ 材質 Material

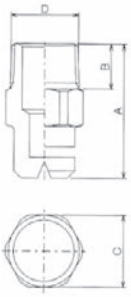
・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
M1/4 DFN	28	11	HEX.14	R1/4	0.025
M3/8 DFN	34	13	HEX.17	R3/8	0.04
M1/2 DFN	40	16	HEX.21	R1/2	0.07
M3/4 DFN	50	18	HEX.29	R3/4	0.15



Item list	
A08	NOZZLE BODY

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C	D	
F1/4 DFN	28	11	HEX.17	Rc1/4	0.035
F3/8 DFN	34	13	HEX.21	Rc3/8	0.09
F1/2 DFN	40	16	HEX.26	Rc1/2	0.18
F3/4 DFN	50	18	HEX.32	Rc3/4	0.4

◆ 型番選定 Selection of model number

(例)
Example: M | 1/4 | DFN | 32 ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 32：設計圧(0.2MPa)時の撒水量(流量) L/min【3.2L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [3.2 L/min]
- DFN：型番タイプ【超広角ドレンチャーフラット撒水型：DFN】 Model number type [DRENCHER FLAT SUPER WIDE ANGLE SPRAY: DFN]
- 1/4：接続ネジサイズ Connection thread size → 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- M：オネジ(R) M: Male thread (R)
  F：メネジ(Rc) F: Female thread (Rc)

◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle			平均粒子径(μm) Average particle size (μm)		
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.03 MPa	0.2 MPa	1.0 MPa	0.03 MPa	0.2 MPa	1.0 MPa
1/4DFN 32	PT1/4 (8A)	1.2	1.25	1.6	2.25	2.75	3.2	3.9	4.55	4.98	5.9	7.0	80°	140°	170°	750	450	200
1/4DFN 64		1.7	2.45	3.15	4.6	5.5	6.4	7.75	8.96	10.0	12.0	14.0	90°	140°	170°	900	550	250
3/8DFN 128	PT3/8 (10A)	2.4	4.8	6.25	8.9	11.0	12.8	15.8	18.0	20.5	24.1	28.2	120°	160°	190°	1000	650	300
3/8DFN 190		2.9	7.3	9.4	13.3	16.3	19.0	23.4	26.9	30.1	35.7	42.0	120°	160°	190°	1100	750	350
1/2DFN 255	PT1/2 (15A)	3.4	9.8	12.6	17.9	21.9	25.5	31.4	36.0	40.2	47.3	55.8	120°	160°	190°	1150	800	350
1/2DFN 382		4.0	14.9	19.1	26.6	32.8	38.2	46.1	54.0	60.3	71.3	83.7	120°	160°	190°	1250	850	400
3/4DFN 550	PT3/4 (20A)	4.6	21.7	27.8	38.9	47.6	55.0	67.4	77.8	86.8	102	121	140°	180°	200°	1350	950	450
3/4DFN 800		5.6	31.6	40.4	56.6	69.3	80.0	98.0	113	126	148	175	140°	180°	200°	1400	950	450

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

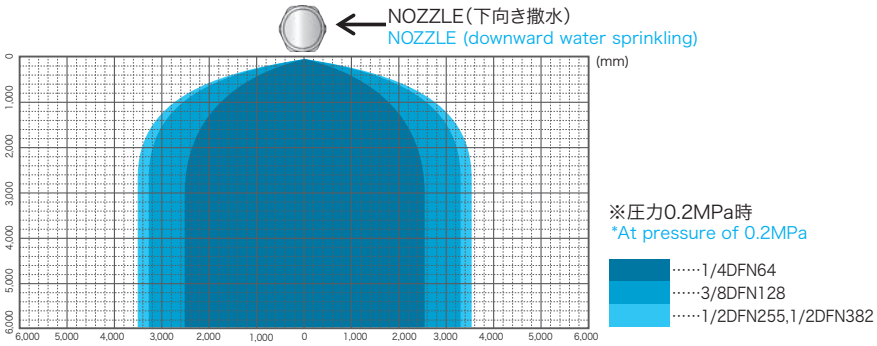
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.

使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.

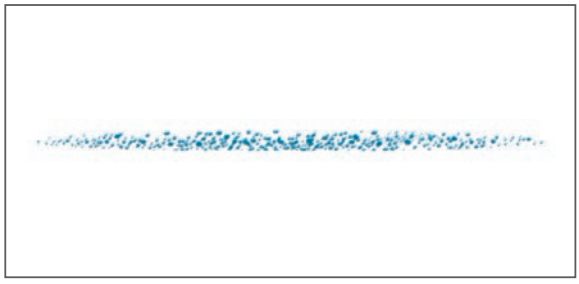


※圧力0.2MPa時
*At pressure of 0.2MPa

……1/4DFN64
……3/8DFN128
……1/2DFN255,1/2DFN382

◆ 撒水イメージ Image of water sprinkling

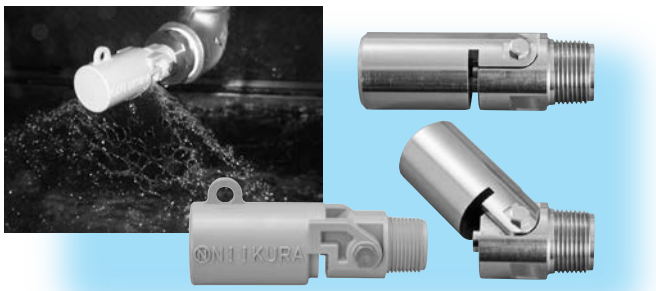
上から見た撒水図　Water spraying diagram from above



超広角フラット撒水型（カウンターウエイト方式）

FN-CW type NOZZLE

FLAT SUPER WIDE ANGLE SPRAY



◆ 特性 Characteristics

・ノズル出口の閉塞時にデフレクターを動かすだけで簡単に異物除去できる
Foreign substances can be easily removed by simply moving the defrector when the nozzle outlet is blocked.
※デフレクターの持ち上げ工具はオプションです
* Deflector lifting tool is optional
・構造がシンプルで軽量、取付が簡単
This spray nozzle is easy to attach because of the simple structure and light weight.
・低圧域での撒水に適している
This spray nozzle is suitable for water sprinkling in a low-pressure range.

◆ 主用途 Main applications

・エアレーション方式曝気槽の消泡装置等、下水処理、排水/廃液処理設備
Sewage treatment equipment and drainage/effluent treatment equipment, such as defoaming devices for aeration type tanks
・表面流による藻、ボウフラ等発生防止
Prevention of the occurrence of algae, mosquito larvae, etc. due to surface flows

◆ 材質 Material

・SUS304
SUS304
・ABS樹脂
ABS resin

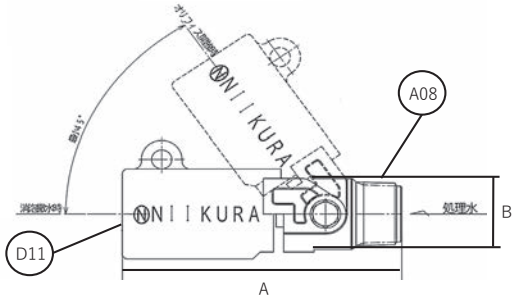
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

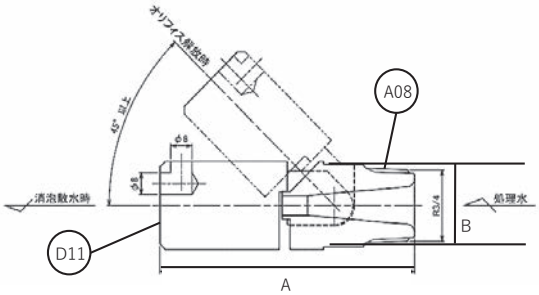
◆ 重量と寸法 Weight&Dimensions

Nominal diameter	Dimensions (mm)		connection	Weight (kg)
	A	B		
M3/4FN120CWA	110	30	R3/4	0.32
M3/4FN120CWS	95	30	R3/4	0.49

Item list	
A08	NOZZLE BODY
D11	DEFLECTOR

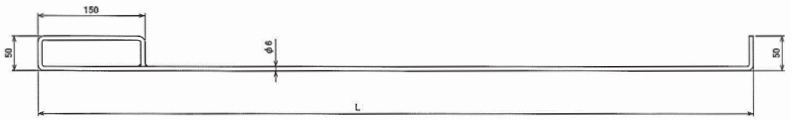


M3/4FN120CWA



M3/4FN120CWS

※オプション
Option



Nominaldiameter	Dimensions (mm)
	L
点検棒 CHECK DEVICE FOR NOZZLE	1,200
	1,500

Item list		
B02	ROD	SUS304

◆ 型番選定 Selection of model number

(例) Example:

M	3/4	FN	120	CW	S

S：材質（S:SUS304　A:ABS樹脂）【ステンレス鋼：SUS304】
Material（S:SUS304　A:ABS RESIN）[stainless steel: SUS316]

120：設計圧(0.03MPa)時の撒水角度【120°】
Water sprinkling angle at the design pressure (0.03 MPa) [120°]

CW：型番タイプ【超広角フラット撒水型（カウンターウエイト方式）:FN-CW】
Model number type [FLAT SUPER WIDE ANGLE SPRAY (COUNTERWEIGHT TYPE): FN-CW]

3/4：接続ネジサイズ Connection thread size【管用テーパオネジ3/4(R3/4)】
[Taper male thread for piping 3/4 (R3/4)]

◆撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)					撒水角度 Water sprinkling angle			平均粒子径(μm) Average particle size (μm)		
		0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.03 MPa	0.1 MPa	0.2 MPa	0.03 MPa	0.1 MPa	0.2 MPa
M3/4FN 120CWA	PT3/4 (20A)	5.5	7.1	10.0	12.3	14.2	120°	135°	147°	1000	750	650
M3/4FN 120CWS		5.5	7.1	10.0	12.3	14.2	120°	135°	147°	1000	750	650

：標準設計圧力（0.03MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.03 MPa)

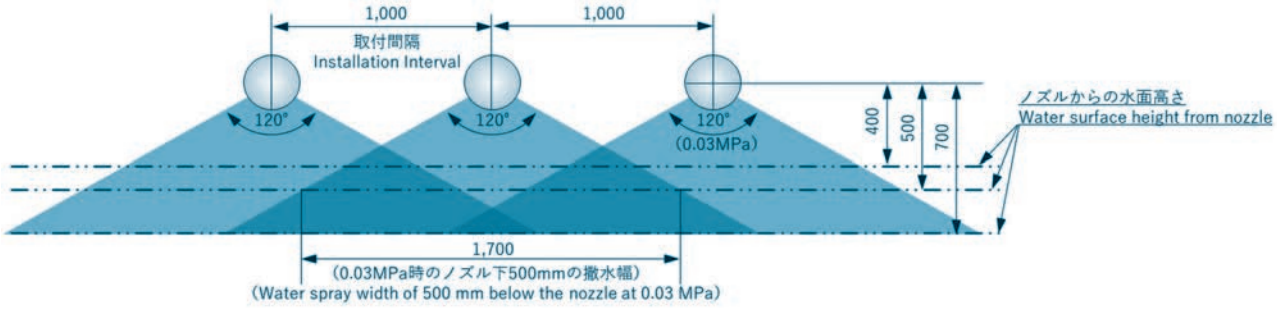
：標準設計圧力（0.1MPa）における撒水量、撒水角度、平均粒子径
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.1 MPa)

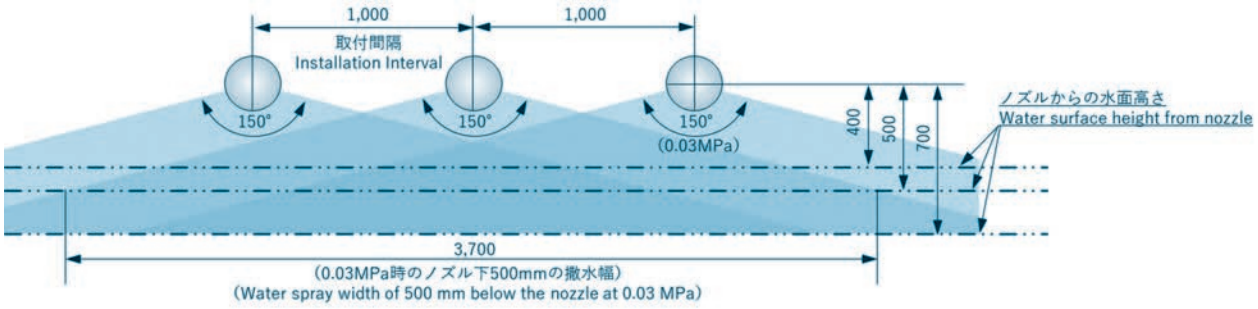
接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

使用圧力：本表中の0.03MPa以下、0.2MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.2 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern

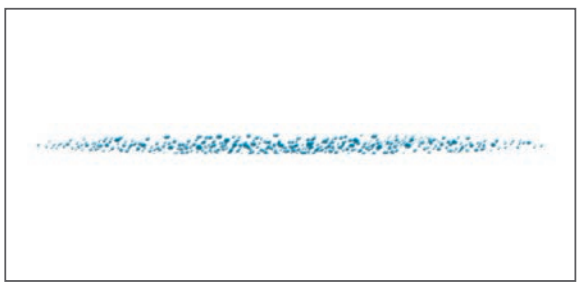
ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.





◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



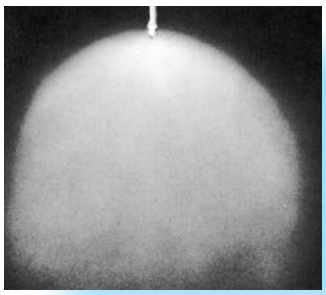
超広角フラット撒水型

クリアボール

CB4 type NOZZLE

FULL CONE FOG JET SPRAY

CLEAR BALL



◆ 特性 Characteristics

・内径50㎜と80㎜の小挿入孔径に使用可能
This spray nozzle can be used for small-diameter insertion holes with inner diameters of 50 mm and 80 mm.
・内面全面用、上部用、下部用の機種有
Types for internal entire surfaces, for upper areas, and for lower areas are available.
・広範囲に撒水可能
Water can be sprinkled over a wide area.

◆ 主用途 Main applications

・各種塔槽内及び容器内面の洗浄
Washing of the insides of various towers and tanks and the internal surfaces of containers
・発酵槽、原液槽、飲食料品塔槽内面のCIP
Internal surfaces of fermenters, stock solution tanks, and food and beverage storage towers and tanks
・反応釜、重合釜内面のケミカル洗浄
Chemical washing of the internal surfaces of reaction kettles and polymerization kettles
・ライニング槽内壁の洗浄
Washing of the internal walls of lining tanks

◆ 材質 Material

・SCS16（SUS316L相当）
(Equivalent to SUS316L)

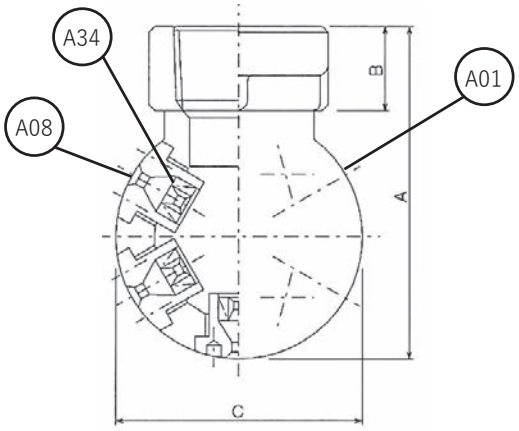
◆ 接続 Connection

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量&寸法(SCS16)

Weight & dimensions(SCS16)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
F3/4 CB4	67	17	49	Rc3/4	0.5
F1 CB4	99	20	76	Rc1	1.2



Item list	
A08	NOZZLE TIP
A01	BODY
A34	CORE

◆ 型番選定 Selection of model number

(例) Example:

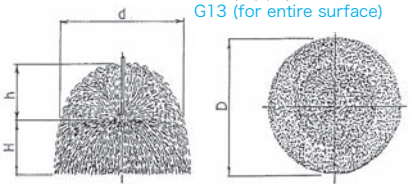
F | 3/4 | CB4 | 16 ／ G13 ／ SCS16

- SCS16：材質【ステンレス鋼：SCS16】 Material [cast stainless steel: SCS16]
- G13：撒水パターン G13【全面用】 Water sprinkling pattern G13 [for entire surface]
- 16：設計圧(0.2MPa)時の撒水量(流量) L/min【1.6L/min/個】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [1.6 L/min/piece]
- CB4：型番タイプ【クリアボール：CB4】 Model number type [CLEAR BALL: CB4]
- F / 3/4：接続ネジサイズ Connection thread size ―【管用テーパメネジ3/4(Rc3/4)】 [Taper female thread for piping 3/4 (Rc3/4)]

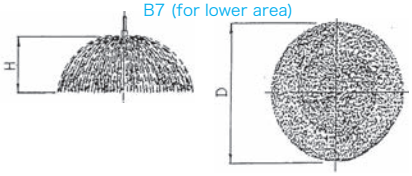
◆ 撒水データ Watering data

ノズル番号 Nozzle No.	撒水パターン Water sprinkling pattern	接続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)							平均粒子径(μm) Average particle size (μm)			各圧力における撒水パターン寸法(mm) Dimensions of water sprinkling patterns at different pressures (mm)					
				0.05 MPa	0.1 MPa	0.2 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.05 MPa	0.2 MPa	1.0 MPa	0.2MPa H2,000mm			1.0MPa H2,000mm		
														h	d	D	h	d	D
F3/4 CB416	G13	PT3/4 (20A)	1.2	10.4	15.0	20.8	28.6	31.9	36.4	41.6	600	350	100	850	1,800	2,100	550	1,100	1,200
F3/4 CB424			1.2	15.6	22.1	31.2	42.9	46.8	54.0	62.4	600	400	150	950	2,000	2,300	600	1,300	1,400
F3/4 CB426			1.2	16.9	24.1	33.8	46.8	50.7	58.5	67.6	600	400	150	1,000	2,100	2,500	700	1,500	1,600
F3/4 CB432			1.4	20.8	28.3	41.6	57.2	61.8	71.5	83.2	650	450	200	1,100	2,300	2,700	750	1,600	1,800
F3/4 CB438			1.4	25.4	35.1	49.4	67.0	73.5	84.5	96.8	700	500	250	1,200	2,500	2,900	850	1,800	2,000
F3/4 CB440			1.4	26.7	37.1	52.0	70.9	77.4	89.1	104	700	500	250	1,300	2,700	3,100	950	2,000	2,200
F3/4 CB416	B7		1.2	5.6	8.05	11.2	15.4	17.2	19.6	22.4	600	350	100	–	–	2,100	–	–	1,200
F3/4 CB424			1.2	8.4	11.9	16.8	23.1	25.2	29.1	33.6	600	400	150	–	–	2,300	–	–	1,400
F3/4 CB426			1.2	9.1	13.0	18.2	25.2	27.3	31.5	36.4	600	400	150	–	–	2,500	–	–	1,600
F3/4 CB432			1.4	11.2	15.8	22.4	30.8	33.3	38.5	44.8	650	450	200	–	–	2,700	–	–	1,800
F3/4 CB438			1.4	13.7	18.9	26.6	36.1	39.6	45.5	53.2	700	500	250	–	–	2,900	–	–	2,000
F3/4 CB440			1.4	14.4	20.0	28.0	38.2	41.7	48.0	56.0	700	500	250	–	–	3,100	–	–	2,200
F3/4 CB416	T6		1.2	4.8	6.9	9.6	13.2	14.7	16.8	19.2	600	350	100	850	1,800	–	550	1,100	–
F3/4 CB424			1.2	7.2	10.2	14.4	19.8	21.6	24.9	28.8	600	400	150	950	2,000	–	600	1,300	–
F3/4 CB426			1.2	7.8	11.1	15.6	21.6	23.4	27.0	31.2	600	400	150	1,000	2,100	–	700	1,500	–
F3/4 CB432			1.4	9.6	13.5	19.2	26.4	28.5	33.0	38.4	650	450	200	1,100	2,300	–	750	1,600	–
F3/4 CB438			1.4	11.7	16.2	22.8	30.9	33.9	39.0	45.6	700	500	250	1,200	2,500	–	850	1,800	–
F3/4 CB440			1.4	12.3	17.1	24.0	32.7	35.7	41.1	48.0	700	500	250	1,300	2,700	–	950	2,000	–
F1 CB444	G13	PT1 (25A)	1.7	29.9	40.3	57.2	76.7	84.5	96.9	114	700	500	250	1,300	2,700	3,300	1,000	2,100	2,300
F1 CB452			1.75	35.1	48.1	67.6	92.3	101	115	135	750	550	250	1,400	3,000	3,500	1,100	2,200	2,500
F1 CB465			2.0	43.6	59.8	84.5	115	125	144	169	750	550	250	1,500	3,200	3,700	1,100	2,300	2,600
F1 CB470			2.0	46.8	65.0	91.0	125	137	156	182	800	600	300	1,600	3,400	3,900	1,200	2,500	2,800
F1 CB482			2.0	54.6	76.1	107	144	159	183	213	800	600	300	1,700	3,600	4,100	1,200	2,500	2,900
F1 CB444	B7		1.7	16.1	21.7	30.8	41.3	45.5	52.2	61.3	700	500	250	–	–	3,300	–	–	2,300
F1 CB452			1.75	18.9	25.9	36.4	49.7	54.3	62.0	72.8	750	550	250	–	–	3,500	–	–	2,500
F1 CB465			2.0	23.5	32.2	45.5	62.0	67.6	77.7	91.0	750	550	250	–	–	3,700	–	–	2,600
F1 CB470			2.0	25.2	35.0	49.0	67.2	73.5	84.0	98.0	800	600	300	–	–	3,900	–	–	2,800
F1 CB482			2.0	29.4	41.0	57.4	77.7	85.4	98.7	115	800	600	300	–	–	4,100	–	–	2,900
F1 CB444	T6		1.7	13.8	18.6	26.4	35.4	39.0	44.7	52.5	700	500	250	1,300	2,700	–	1,000	2,100	–
F1 CB452			1.75	16.2	22.2	31.2	42.6	46.5	53.1	62.4	750	550	250	1,400	3,000	–	1,100	2,200	–
F1 CB465			2.0	20.1	27.6	39.0	53.1	57.9	66.6	78.0	750	550	250	1,500	3,200	–	1,100	2,300	–
F1 CB470			2.0	21.6	30.0	42.0	57.6	63.0	72.0	84.0	800	600	300	1,600	3,400	–	1,200	2,500	–
F1 CB482			2.0	25.2	35.1	49.2	66.6	73.2	84.6	98.4	800	600	300	1,700	3,600	–	1,200	2,500	–

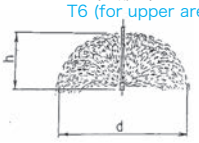
G13 (全面用) G13 (for entire surface)



B7 (下部用) B7 (for lower area)



T6 (上部用) T6 (for upper area)



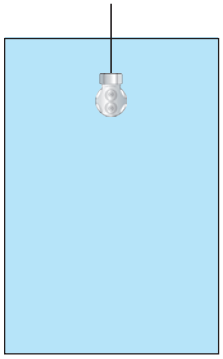
：標準設計圧力（0.2MPa）における撒水量、平均粒子径、撒水パターン寸法
Amount of water to be sprinkled, dimensions of water sprinkling patterns, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connection : Written according to the old JIS standard.

使用圧力：本表中の0.05MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

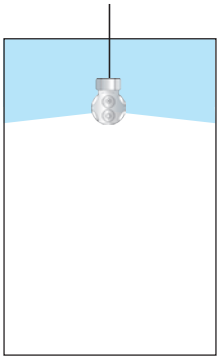
◆ 撒水パターン Water sprinkling pattern

全面用 for entire surface



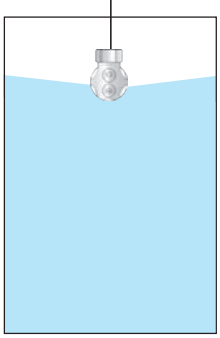
CB4-G13

上部用 for upper area



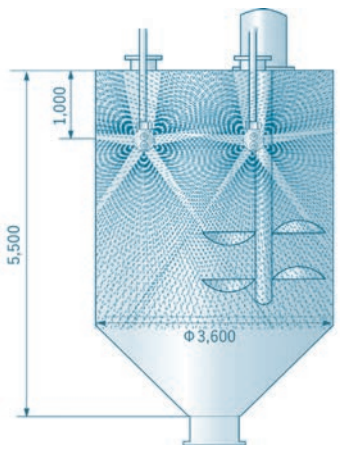
CB4-T6

下部用 for lower area

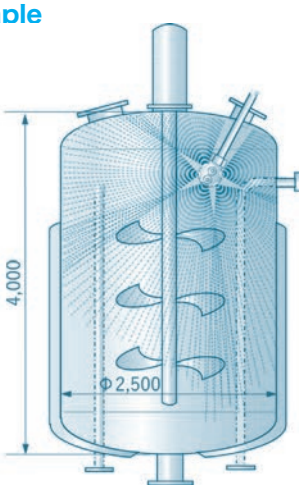


CB4-B7

◆ 設置例 Installation example



MIXING REACTOR TANK
F1CB4-G13 Type
at 0.2~0.3 MPa
LIQUID ： WATER



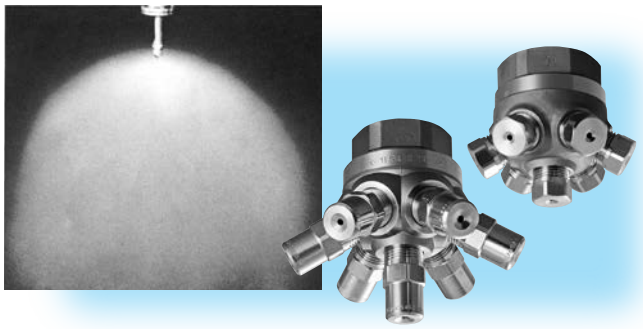
REACTOR VESSEL
F1CB4-G13 Type
at 0.2~0.3 MPa
LIQUID ： WATER

クリアボール

フォグジェット円形全面撒水型

FG4 type NOZZLE

FULL CONE FOG JET SPRAY



◆ 特性 Characteristics

・粒子は細かいが流量を多く流すことができる
Water particles are small, but this spray nozzle allows water to flow at a high flow rate.
・広範囲に撒水可能
Water can be sprinkled over a wide area.

◆ 主用途 Main applications

・各種塔槽類、容器内雰囲気の冷却/容器洗浄
Cooling of various towers and tanks and of the inside atmospheres of containers, washing of containers
・集塵/除塵/防塵設備
Dust collection equipment, dust removal equipment, and dust prevention equipment
・防災設備
Disaster prevention equipment

◆ 材質 Material

・SCS14（SUS316相当）
(Equivalent to SUS316)
・SCS16（SUS316L相当）
(Equivalent to SUS316L)

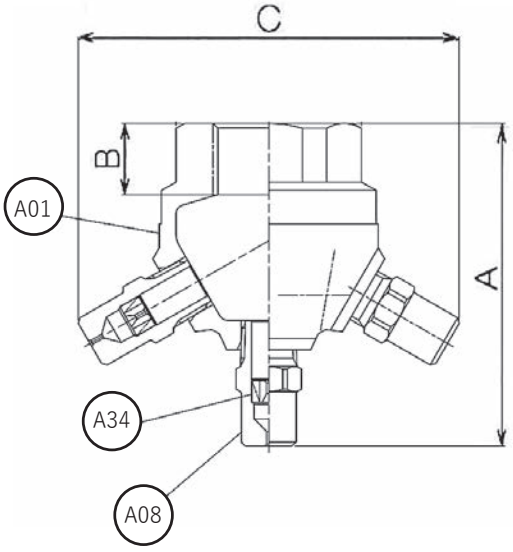
◆ 接続 Connections

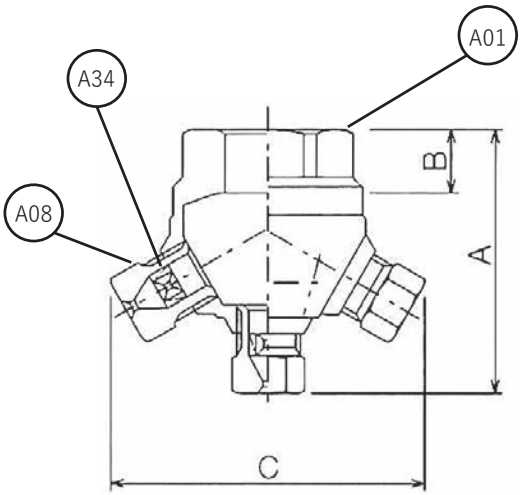
・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量&寸法(SCS14) Weight & dimensions(SCS14)

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
F3/4 FG4	75	17	90	Rc3/4	0.6
F1 FG4	79	20	103	Rc1	1.0
F1 1/2 FG4	83	23	97	Rc1 1/2	1.5

Item list	
A08	NOZZLE TIP
A01	BODY
A34	CORE





◆ 型番選定 Selection of model number

(例)
Example:

F	3/4	FG4	16	/	SCS14

- SCS14 ― 材質【ステンレス鋳鋼：SCS14】 Material [cast stainless steel: SCS14]
- 16 ― 設計圧(0.2MPa)時の撒水量(流量) L/min【1.6L/min/個】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [1.6 L/min/piece]
- FG4 ― 型番タイプ【フォグジェット円形全面撒水型：FG4】 Model number type [FULL CONE FOG JET SPRAY: FG4]
- 3/4 ― 接続ネジサイズ Connection thread size ― 【管用テーパメネジ3/4(Rc3/4)】 [Taper female thread for piping 3/4 (Rc3/4)]
- F ― 【管用テーパメネジ3/4(Rc3/4)】 [Taper female thread for piping 3/4 (Rc3/4)]

◆ 撒水データ Watering data

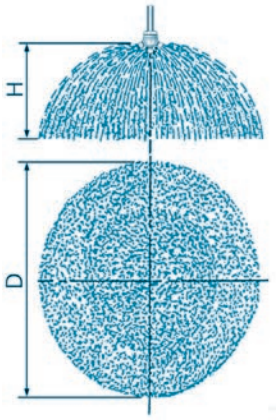
ノズル番号 Nozzle No.	接　続 Connection	最小間隙(mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)							撒水角度 Water sprinkling angle			各圧力における撒水パターン寸法(mm) Dimensions of water sprinkling patterns at different pressures (mm)	
			0.05 MPa	0.1 MPa	0.2 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1.0 MPa	0.05 MPa	0.2 MPa	1.0 MPa	0.2MPa　H2,000mm D	1.0MPa　H2,000mm D
F3/4 FG416	PT3/4 (20A)	1.2	5.6	7.9	11.2	15.4	17.0	19.6	22.4	600	350	100	2,100	1,200
F3/4 FG424		1.2	8.4	11.9	16.8	23.1	25.4	29.2	33.6	600	400	150	2,300	1,400
F3/4 FG426		1.2	9.1	12.9	18.2	25.1	27.4	31.6	36.4	600	400	150	2,500	1,600
F3/4 FG432		1.4	11.2	15.8	22.4	30.8	33.4	38.6	44.8	650	450	200	2,700	1,800
F3/4 FG438		1.4	13.7	18.8	26.6	36.2	39.4	45.5	53.1	700	500	250	2,900	2,000
F3/4 FG440		1.4	14.4	19.8	28.0	38.1	41.5	47.9	55.9	700	500	250	3,100	2,200
F1 FG444	PT1 (25A)	1.7	16.1	21.8	30.8	41.4	45.4	52.3	61.3	700	500	250	3,300	2,300
F1 FG452		1.75	18.9	25.8	36.4	49.6	54.1	62.1	72.7	750	550	250	3,500	2,500
F1 FG465		2.0	23.5	32.3	45.5	61.9	67.6	77.6	90.8	750	550	250	3,700	2,600
F1 FG470		2.0	25.2	34.9	49.0	67.3	73.5	84.0	98	800	600	300	3,900	2,800
F1 FG482		2.0	29.4	41.0	57.4	77.6	85.3	98.4	115	800	600	300	4,100	2,900
F1 1/2 FG4100	PT1 1/2 (40A)	2.25	35.7	50.1	70.0	93.0	103	120	140	850	650	300	4,200	3,000
F1 1/2 FG4120		2.25	43.1	60.3	84.0	111	122	142	167	850	650	300	4,300	3,100
F1 1/2 FG4150		3.0	54.3	75.4	105	138	151	176	207	900	700	350	4,500	3,200
F1 1/2 FG4180		3.0	65.1	90.8	126	170	184	214	250	900	700	350	4,700	3,300
F1 1/2 FG4200		3.0	72.1	101	140	192	208	242	280	950	750	350	4,800	3,500
F1 1/2 FG4220		3.0	79.1	111	154	210	230	304	308	1000	800	350	4,900	3,700
F1 1/2 FG4250		3.7	88.9	127	175	236	262	304	350	1000	800	350	5,100	3,900

：標準設計圧力（0.2MPa）における撒水量、平均粒子径、撒水パターン寸法
: Amount of water to be sprinkled, dimensions of water sprinkling patterns, and average particle size at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

使用圧力：本表中の0.05MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.05 MPa or exceeds 1.0 MPa specified in this table.

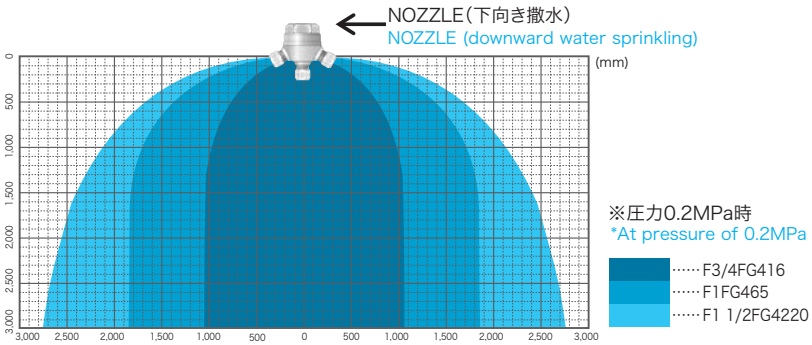
撒水パターン寸法
Dimensions of water sprinkling patterns



◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、
撒水パターン図を提出致します。

If you need to confirm whether it is possible to sprinkle water in the area of your intended purpose, we will submit a water sprinkling pattern diagram.



回転式スプリンクラーノズル (小挿入孔径用)

SPR-E15 type NOZZLE

SPRINKLER SPRAY

(for small insertion hole diameter)

◆ 特性 Characteristics

・最大外形45㎜で小挿入孔径に使用可能
This spray nozzle can be used for small-diameter insertion holes with a maximum external dimension of 45 mm.
・自圧にて回転するので他の駆動装置が不要
Since it rotates under its own pressure, no other driving device is required.
・内面全域に撒水可能
Water can be sprinkled over the entire internal area.
・上部、側部、下部、全周洗浄機種が選択可能
Upper area, side, lower area, and all-around washing types can be selected.

◆ 主用途 Main applications

・内径２m以下の容器内壁面洗浄
Washing of the internal wall surfaces of containers with an internal diameter of 2 m or less
・発酵槽、原液槽など食品、飲料品塔槽のCIP洗浄
CIP washing of food and beverage towers and tanks, such as fermenters and stock solution tank
・薬品槽等のケミカル洗浄
Chemical washing of chemical tanks, etc.

◆ 材質 Material

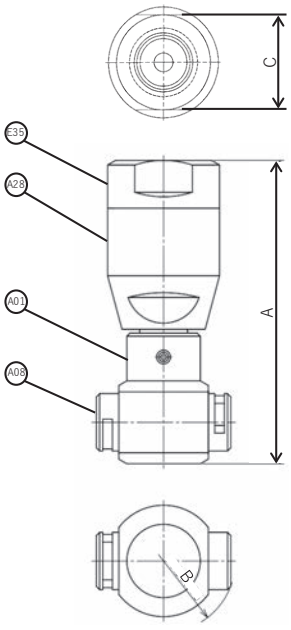
・SUS316 / SUS316L

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量と寸法 Weight&Dimensions

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
SPR-E15	105	45	30	Rc1/2	0.55



Item list	
A08	NOZZLE TIP
A01	BODY
A28	CASING
E35	CONNECTER ORIFICE

◆ 型番選定 Selection of model number

(例) Example: SPR – E15 A – 5 ／ SUS316

- SUS316 — 材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 5 — オリフィス径【φ5.0】 Orifice diameter [φ5.0]
- A — 洗浄パターン【A:全周洗浄用】 Water sprinkling pattern [for all-around washing]
- E15 — 型番タイプ【回転式スプリンクラーノズル（小挿入孔径用）：SPR-E15】 Model number type [SPRINKLER SPRAY(for small insertion hole diameter): SPR-E15]
- 接続ネジサイズ Connection thread size — 【管用テーパメネジ1/2(Rc1/2)】 [Taper female thread for piping 1/2 (Rc1/2)]

◆ 撒水データ Watering data

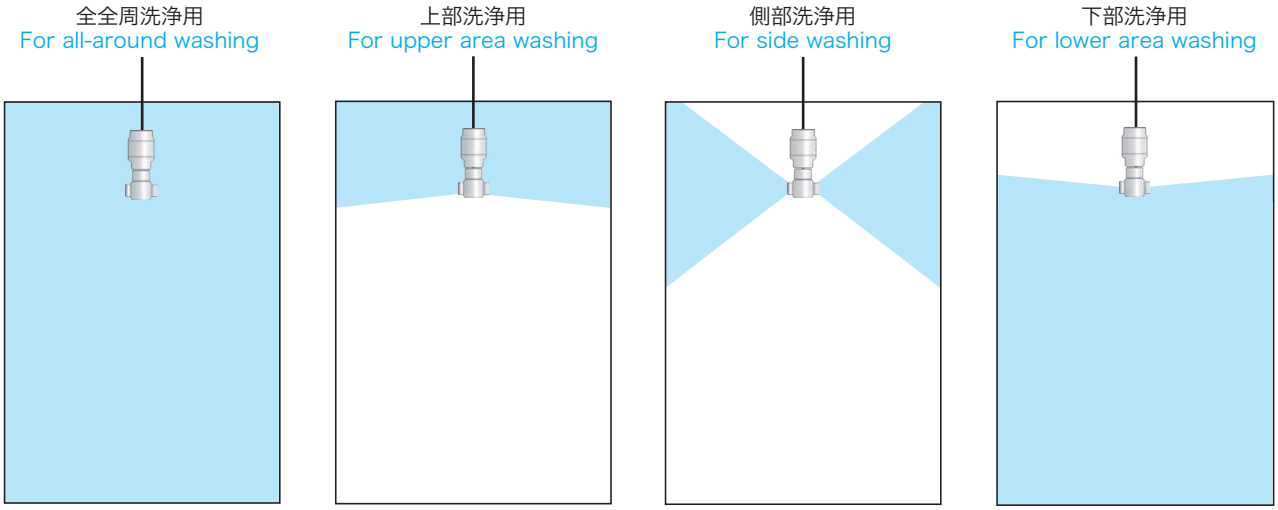
ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)					
			0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa
SPR-E15A～D-5	PT1/2 (15A)	3.0	10.5	14.7	17.8	20.2	24.3	27.2
SPR-E15A～D-6		3.0	14.2	20.0	24.3	27.7	33.0	37.5
SPR-E15A～D-7		3.0	19.0	26.7	32.5	37.3	44.9	51.0
SPR-E15A～D-8		3.0	22.1	30.5	36.9	42.5	51.2	58.1

：標準設計圧力（0.2MPa）における撒水量
: Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

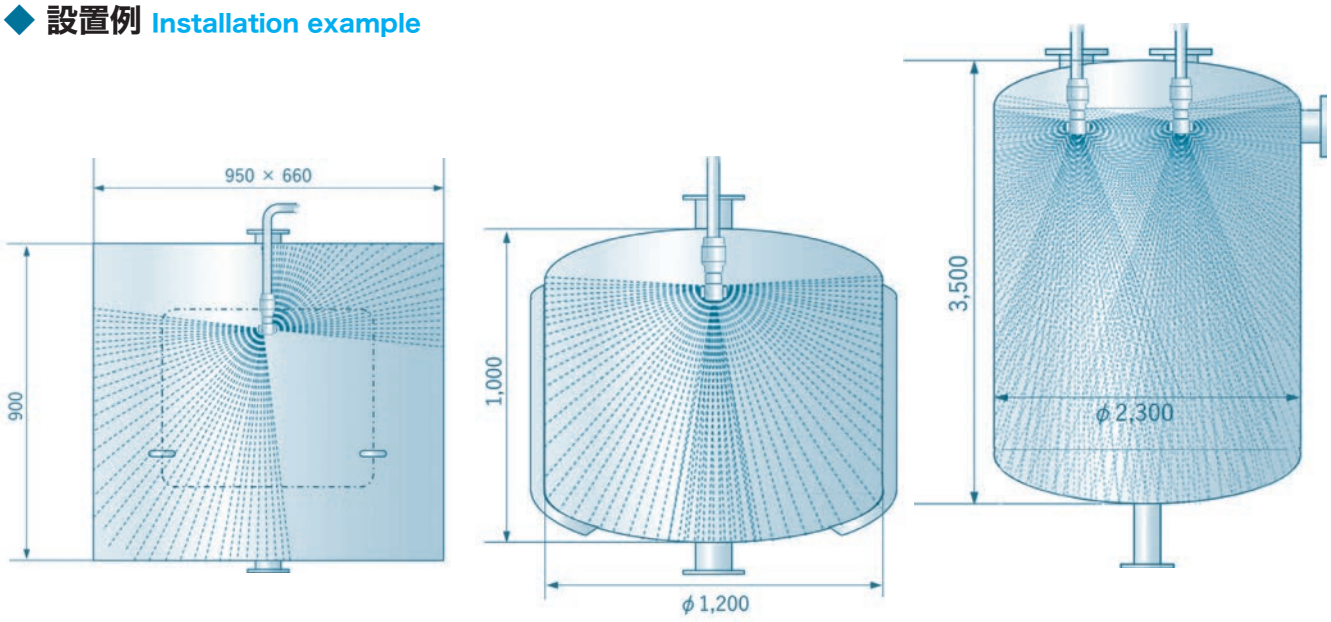
接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

使用圧力：本表中の0.05MPa以下、0.4MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.05 MPa or exceeds 0.4 MPa specified in this table.

◆ 撒水パターン Water sprinkling pattern



◆ 設置例 Installation example



STERILIZER TANK
SPR-E15A Type　at 0.2~0.3 MPa
LIQUID：WATER(AFTER STEAMING)

EDIBLE OIL VESSEL
SPR-E15D Type　at 0.2~0.3 MPa
LIQUID：HOT WATER

CHEMICAL TANK
SPR-E15D Type　at 0.2~0.3 MPa
LIQUID：
NEUTRALIZATION CHEMICAL
(AFTER WATERING)

回転式スプリンクラーノズル

SPR type NOZZLE

SPRINKLER SPRAY

◆ 特性 Characteristics

・コンパクトで軽量なので取扱い易い
This spray nozzle is easy to handle because of the compact size and light weight.
・自圧にて回転するので他の駆動装置が不要
Since it rotates under its own pressure, no other driving device is required.
・内面全域に撒水可能
Water can be sprinkled over the entire internal area.

◆ 主用途 Main applications

・各種塔槽類、容器内壁面の洗浄
Washing of the internal wall surfaces of various towers and tanks and containers
・発酵槽、原液槽など食品、飲料品塔槽のCIP洗浄
CIP washing of food and beverage towers and tanks, such as fermenters and stock solution tank
・薬品槽等のケミカル洗浄
Chemical washing of chemical tanks, etc.

◆ 材質 Material

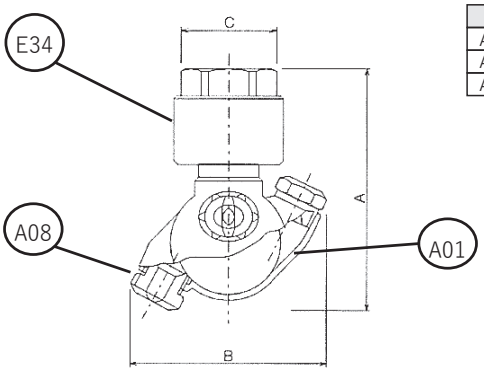
・SCS14（SUS316相当）
(Equivalent to SUS316)
・SCS16（SUS316L相当）
(Equivalent to SUS316L)

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量と寸法 Weight&Dimensions

Nominal diameter	Dimensions (mm)			connection	Weight (kg)
	A	B	C		
3/4 SPR	115	90	HEX.41	Rc3/4	0.9



Item list	
A08	NOZZLE TIP
A01	BODY
A34	ADAPTER

◆ 型番選定 Selection of model number

（例）Example:

3/4 | SPR | 80 ／ SCS14

- SCS14 — 材質【ステンレス鋳鋼：SCS14（※BODYのみ※その他はSUS316）】
  Material [cast stainless steel: SCS14 (*only body, *SUS316 for other components)]
- 80 — 設計圧(0.2MPa)時の撒水量(流量) L/min【80L/min】
  Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [80 L/min]
- SPR — 型番タイプ【回転式スプリンクラーノズル：SPR】
  Model number type [SPRINKLER SPRAY: SPR]
- 3/4 — 接続ネジサイズ Connection thread size — 【管用テーパメネジ3/4(Rc3/4)】
  [Taper female thread for piping 3/4 (Rc3/4)]

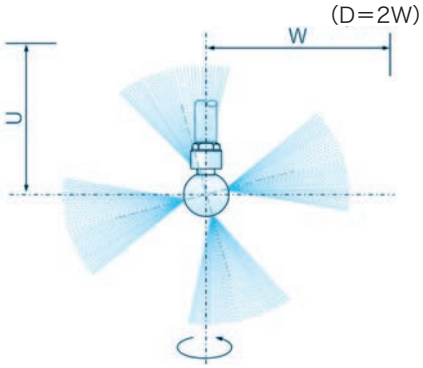
◆ 撒水データ Watering data

ノズル番号 Nozzle No.	接　続 Connection	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)								各圧力における撒水パターン寸法(mm) Dimensions of water sprinkling patterns at different pressures (mm)			
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.2MPa		0.5MPa	
											D	U	D	U
3/4 SPR 80	PT3/4 (20A)	2.5	34	42	58	70	80	96	110	120	9,000	3,000	5,200	2,800
3/4 SPR 100		2.8	42	52	72	88	100	120	138	151	9,400	100	7,000	2,900
3/4 SPR 150		3.0	63	78	110	130	150	180	206	226	10,400	3,200	7,200	3,000
3/4 SPR 200		3.4	84	105	145	175	200	240	276	300	10,600	3,300	8,200	3,000

：標準設計圧力（0.2MPa）における撒水量、撒水パターン寸法
Amount of water to be sprinkled, water sprinkling angle, and average particle size at the standard design pressure (0.2 MPa)

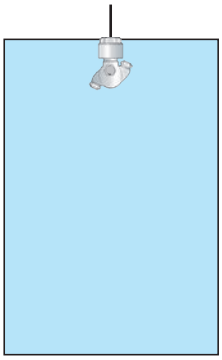
接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.

使用圧力：本表中の0.03MPa以下、0.5MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 0.5 MPa specified in this table.

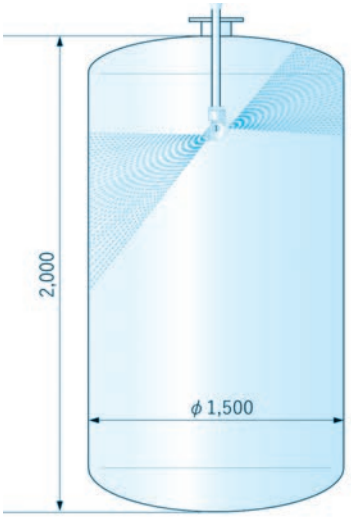


◆ 撒水パターン Water sprinkling pattern

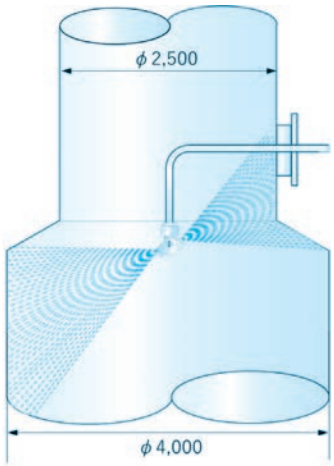
全面撒水
Water sprinkling over entire surface



◆ 設置例 Installation example



FILM MATERIAL TANK
F3/4SPR Type　at 0.2~0.3 MPa
LIQUID ： PURE WATER , METHANOL

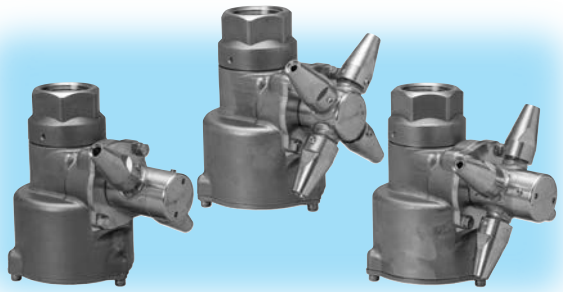


SPRAY DRYER DUCT
F3/4SPR Type　at 0.2~0.3 MPa
LIQUID ： WATER

回転洗浄機

JW-25 type JET WASHER

TANK CLEANING GEAR



◆ 特性 Characteristics

・軽量、コンパクトでシンプルなデザイン
Light weight, compact size, and simple design
・洗浄液圧による自己回転機構
Self-rotation mechanism by washing fluid pressure
・槽内全域を高効率洗浄
High-efficiency washing of the entire area inside the tank
・低圧洗浄機なので高圧ポンプ不要
This spray nozzle requires no high-pressure pump because it is for low-pressure washing machines.
・温水洗浄、溶剤洗浄にも使用可能
This spray nozzle can also be used for hot water washing and solvent washing.
・バフ研磨施工可能
Buff polishing is possible.

◆ 主用途 Main applications

・各種塔槽内の自動洗浄
Automatic washing of the insides of various towers and tanks
・各種装置、容器内の自動洗浄
Automatic washing of the insides of various devices and containers

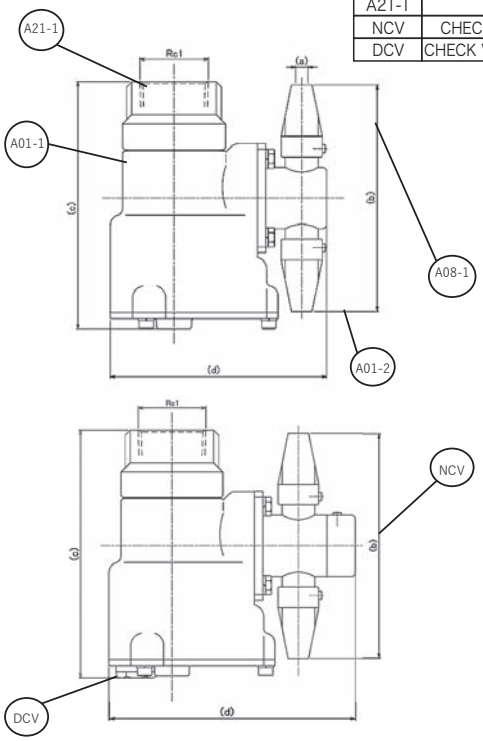
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ（Rc1：25A）
Taper thread for piping specified in JIS B 0203 piping

◆ 材質 Material

・SCS14

Item list	
A01-1	UPPER BODY
A01-2	LOWER BODY
A08-1	JET NOZZLE
A21-1	SUPPORTER
NCV	CHECK VALVE (FOR NOZZLES)
DCV	CHECK VALVE (FOR DRAIN HOLES)



◆ 重量と寸法 Weight&Dimensions

Nominal diameter	Dimensions (mm) a	b	c	d	connection	Weight (kg)
JW-25-G0-NH260	6	110	120	105	Rc1	1.7
JW-25-G0-NM260						
JW-25-G0-NL260						
JW-25-G0-NH270	7					
JW-25-G0-NM270						
JW-25-G0-NL270						
JW-25-G0-NH440	4					1.8
JW-25-G0-NM440						
JW-25-G0-NL440						
JW-25-G0-NH445	4.5					
JW-25-G0-NM445						
JW-25-G0-NL445						
JW-25-G0-VH260	6		121	121		1.8
JW-25-G0-VM260						
JW-25-G0-VL260						
JW-25-G0-VH270	7					
JW-25-G0-VM270						
JW-25-G0-VL270						
JW-25-G0-VH440	4					1.9
JW-25-G0-VM440						
JW-25-G0-VL440						
JW-25-G0-VH445	4.5					
JW-25-G0-VM445						
JW-25-G0-VL445						

◆ 型番選定 Selection of model number

(例) Example: JW – 25 – G0 – N H 2 60

- 型番タイプ【回転洗浄機（JET WASHER）：JW】
  Model number type [TANK CLEANING GEAR(JET WASHER): JW]
- 接続ネジサイズ Connection thread size ―― 【管用テーパメネジ1(Rc1)：25A】 [Taper female thread for piping 1 (Rc1):25A]
- 洗浄機用途【G：General（汎用）】
  Application of washing machine [G: General]
- オプション【N：Normal（オプションなし）V：Valve（逆止弁付）】
  Option [N: Normal (without options), V: Valve (with check valve)]
- ギヤ回転減速比【H：High Speed　M：Middle Speed　L：Low Speed】
  Gear rotation deceleration ratio [H: High Speed, M: Middle Speed, L: Low Speed]
- ノズルの本数【2：2本ノズル　4：4本ノズル】
  Number of nozzles [2: 2 nozzles, 4: 4 nozzles]
- ノズルの口径【60：φ6　70：φ7　40：φ4　45：φ4.5】
  Nozzle bore [60: φ6, 70: φ7, 40: φ4, 45: φ4.5]

◆ 流量データ flow rate data

ノズル本数 Number of nozzles	ノズル口径 Nozzle diameter	各圧力における流量(L/min) Amount of water to be sprinkled at each pressure (L/min)								
		0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	0.8 MPa	0.9 MPa	1.0 MPa
2	φ6.0	57.1	65.2	71.4	76.9	81.1	85.7	90.9	95.2	100
	φ7.0	78.9	85.7	95.2	103.4	111.1	120	125	133.3	139.5
4	φ4.0	54.1	63.2	69.0	74.1	76.9	82.2	87.0	90.9	95.2
	φ4.5	61.9	72.3	78.9	85.7	90.9	96.8	101.7	107.1	113.2

：標準設計圧力（0.4MPa）における撒水量、回転時間
: Amount of water to be sprinkled and rotation time at the standard design pressure (0.4 MPa)

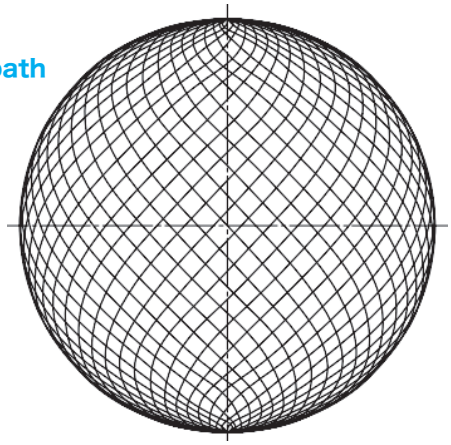
使用圧力：本表中の0.2MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.2 MPa or exceeds 1.0 MPa specified in this table.
使用温度：10℃～95℃
Operating temperature : 10 to 95° C
飛距離：約５m～７m
Sprinkling distance : Approx. 5 to 7 meters

◆ 回転時間 Rotation time

ギア回転減速比 Gear rotation deceleration ratio	ノズル本数 Number of nozzles	ノズル口径 Nozzle diameter		各圧力における回転時間 Rotation times at different pressures			
				0.2MPa	0.4MPa	0.8MPa	1.0MPa
H	2	φ6.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	11.14	8.79	6.68	6.11
			1サイクル時間(min) 1-cycle time (min)	2:02	1:36	1:13	1:07
		φ7.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	7.43	6.00	4.42	4.00
			1サイクル時間(min) 1-cycle time (min)	1:21	1:06	0:48	0:43
	4	φ4.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	11.83	9.54	7.88	7.20
			1サイクル時間(min) 1-cycle time (min)	2:10	1:44	1:26	1:19
		φ4.5	ノズル1回転時間(sec) Time per nozzle rotation (sec)	9.63	7.55	5.76	5.26
			1サイクル時間(min) 1-cycle time (min)	1:45	1:23	1:03	0:57
M	2	φ6.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	14.40	11.56	9.21	8.56
			1サイクル時間(min) 1-cycle time (min)	2:38	2:07	1:41	1:34
		φ7.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	9.65	8.07	6.30	5.63
			1サイクル時間(min) 1-cycle time (min)	1:46	1:28	1:09	1:01
	4	φ4.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	15.81	13.14	10.48	9.52
			1サイクル時間(min) 1-cycle time (min)	2:53	2:24	1:55	1:44
		φ4.5	ノズル1回転時間(sec) Time per nozzle rotation (sec)	13.17	10.05	8.03	7.27
			1サイクル時間(min) 1-cycle time (min)	2:24	1:05	1:28	1:19
L	2	φ6.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	22.63	18.05	14.19	12.92
			1サイクル時間(min) 1-cycle time (min)	4:08	3:18	2:36	2:22
		φ7.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	15.58	12.14	9.46	8.60
			1サイクル時間(min) 1-cycle time (min)	2:51	2:13	1:44	1:34
	4	φ4.0	ノズル1回転時間(sec) Time per nozzle rotation (sec)	27.12	21.70	16.53	14.86
			1サイクル時間(min) 1-cycle time (min)	4:58	3:58	3:01	2:43
		φ4.5	ノズル1回転時間(sec) Time per nozzle rotation (sec)	21.68	16.12	12.21	11.10
			1サイクル時間(min) 1-cycle time (min)	3:58	2:57	2:14	2:02

1サイクル時間：全面洗浄にかかる時間
1-cycle time : Time required to wash the entire surface

◆ 洗浄軌跡 Washing path



回転洗浄機

JWP-40 type JET WASHER

TANK CLEANING GEAR

◆ 特性 Characteristics

・軽量、コンパクトでシンプルなデザイン
Light weight, compact size, and simple design
・洗浄液圧による自己回転機構
Self-rotation mechanism by washing fluid pressure
・槽内全域を高効率洗浄
High-efficiency washing of the entire area inside the tank
・低圧洗浄機なので高圧ポンプ不要
This spray nozzle requires no high-pressure pump because it is for low-pressure washing machines.
・温水洗浄、溶剤洗浄にも使用可能
This spray nozzle can also be used for hot water washing and solvent washing.
・バフ研磨施工可能
Buff polishing is possible.

◆ 主用途 Main applications

・各種塔槽内の自動洗浄
Automatic washing of the insides of various towers and tanks
・各種装置、容器内の自動洗浄
Automatic washing of the insides of various devices and containers

◆ 材質 Material

・SCS14

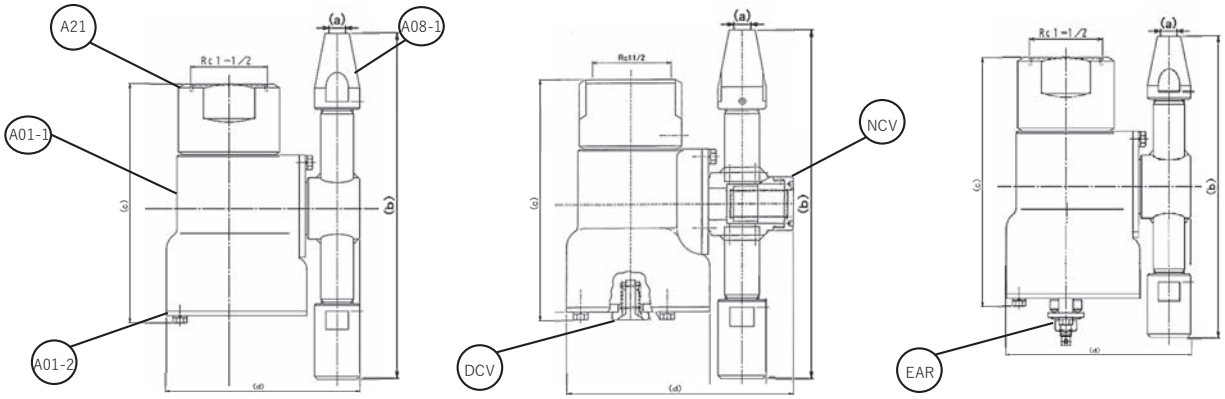
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ（Rc1 1/2：40A）
Taper thread for piping specified in JIS B 0203 piping

◆ 重量と寸法 Weight&Dimensions

Nominal diameter	Dimensions (mm)				connection	Weight (kg)
	a	b	c	d		
JWP-40	8	220	152	125	Rc1 1/2	3.4
JWP-40E						3.5
JWP-40CV				145		3.6

Item list	
A01-1	UPPER BODY
A01-2	LOWER BODY
A08	NOZZLE
A21	SUPPORTER
NCV	CHECK VALVE (FOR NOZZLES)
DCV	CHECK VALVE (FOR DRAIN HOLES)
EAR	EARTH



◆ 型番選定 Selection of model number

(例)
Example: JWP – 40

接続ネジサイズ
Connection thread size
【管用テーパメネジ1 1/2(Rc1 1/2)：40A】
[Taper female thread for piping 1 1/2 (Rc1 1/2):40A]

型番タイプ【回転洗浄機（JET WASHER)：JWP】
Model number type [TANK CLEANING GEAR(JET WASHER): JWP]

◆ 流量データ flow rate data

型　番 Model number	ノズル口径 Nozzle diameter	各圧力における流量(L/min) Amount of water to be sprinkled at each pressure (L/min)						
		0.3 MPa	0.4 MPa	0.5 MPa	0.6 MPa	0.7 MPa	0.8 MPa	0.9 MPa
JWP-40	φ8.0	158.2	179.9	199.9	214.9	228.2	241.5	251.5

：標準設計圧力（0.4MPa）における撒水量、回転時間
: Amount of water to be sprinkled and rotation time at the standard design pressure (0.4 MPa)

使用圧力：本表中の0.3MPa以下、0.9MPaを超える場合は別途ご相談ください
Operating pressure : Please consult us separately if the pressure is below 0.3 MPa or exceeds 0.9 MPa specified in this table.

使用温度：10℃～95℃
Operating temperature : 10 to 95° C

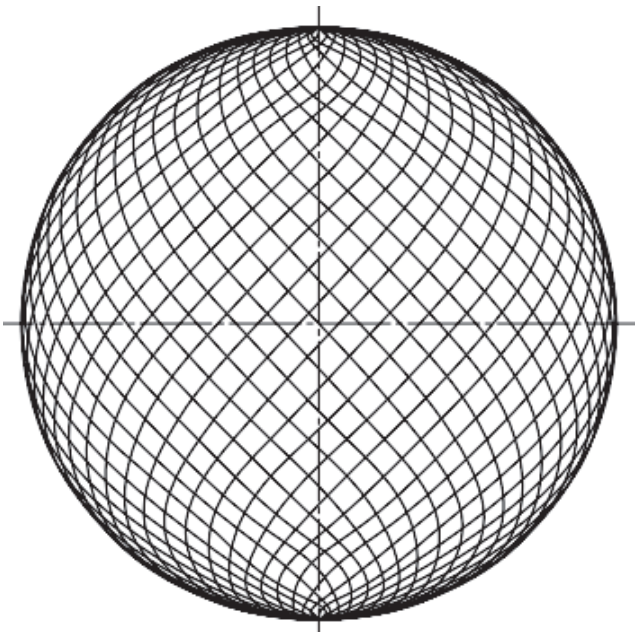
飛距離：約5m～12m
Sprinkling distance : Approx. 5 to 12 meters

◆ 回転時間 Rotation time

型　番 Model number	ノズル口径 Nozzle diameter		各圧力における回転時間 Rotation times at different pressures			
			0.3 MPa	0.4 MPa	0.8 MPa	0.9 MPa
JWP-40	φ8.0	本体1回転時間(sec) Time per nozzle body rotation (sec)	19.4	16.9	11.7	11.2
		1サイクル時間(min) 1-cycle time (min)	3:48	3:18	2:18	2:12

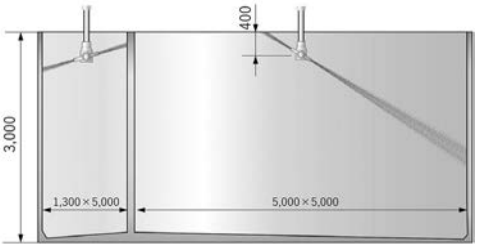
1サイクル時間：全面洗浄にかかる時間
1-cycle time : Time required to wash the entire surface

◆ 洗浄軌跡 Washing path

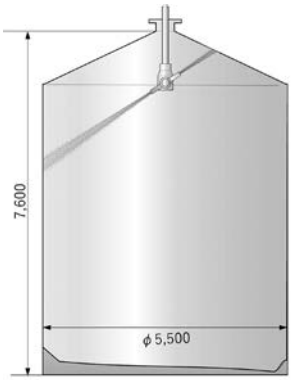


回転洗浄機 設置例

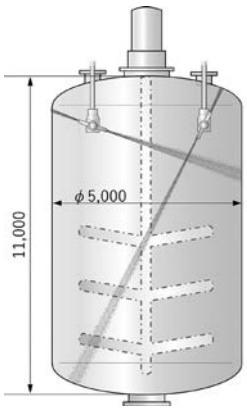
Installation example



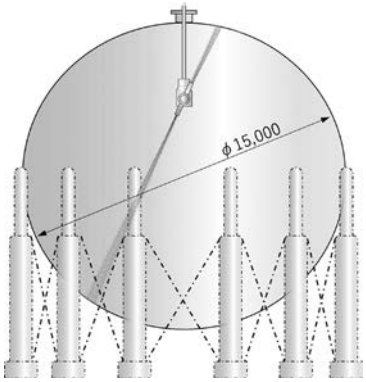
PULP CHEST
JW-25 Type , JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



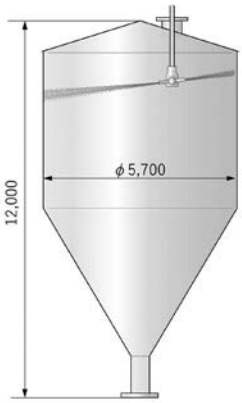
PULP TANK
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



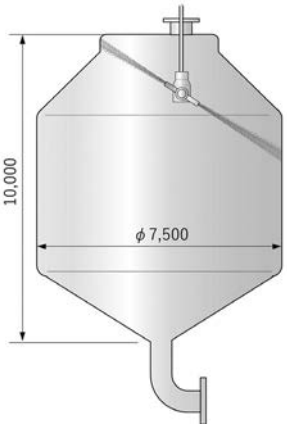
REACTOR VESSEL
JW-25 Type , JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



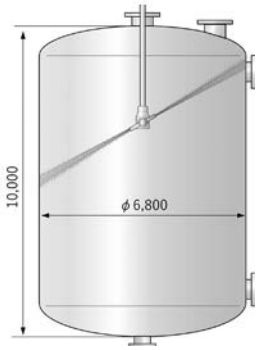
BALL TYPE STORAGE TANK
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



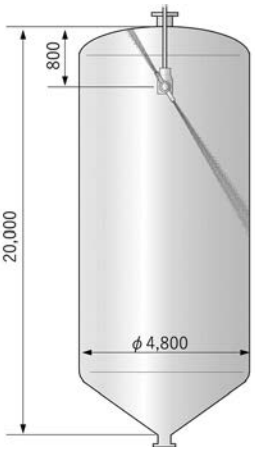
P.V.C. STORAGE TANK (SILO)
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



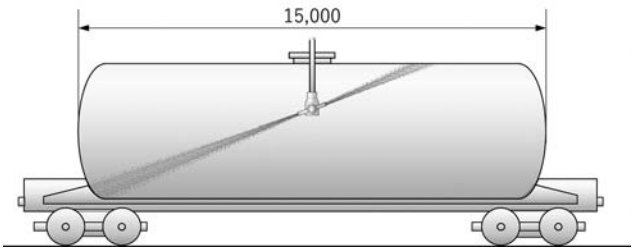
MASH STORAGE TANK
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



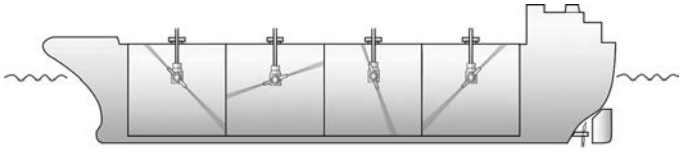
FERMENTATION TANK
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



PLASTICS PELLET SILO
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER



TANK CAR
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER , HOT WATER



CHEMICAL TANKER
JWP-40 Type　at 0.4~0.6 MPa
LIQUID ： WATER , SEA WATER , HOT WATER

回転洗浄機のアフターメンテナンス

Customer service and maintenance of rotary washing machines

弊社では“任せて安心”の製品メンテナンスを承っております。
確かな技術と経験を持ったエンジニアが、各部品の摩耗・損傷・劣化の状況を確認し、
必要に応じて部品交換を実施致します。

Niikura Kogyo offers “dependable and well-proven” after-sales maintenance of products.
Engineers having reliable skills and rich experience check components for wear, damage,
and deterioration and replace them as needed.

◆ ご返却整備の流れ
Flow of return and maintenance

機器を弊社工場へ発送して頂きます。
※送料はお客様ご負担となります。

Send your equipment to our factory.
*Please note that the customer is responsible for the shipping charge of the returned equipment.

▼

機器が到着次第、受入検査を実施し、機器の状態を確認致します。

Upon the receipt of your equipment, we will perform an acceptance inspection to check its state.

▼

各部品の状態を確認しながら分解、清掃を進め、必要に応じて部品交換を行います。

We will disassemble and clean the equipment while checking the state of each component, and will replace them as needed.

▼

整備完了後、作動を実施し、健全な状態であることを確認致します。

After the maintenance is completed, we will operate the equipment to confirm that it is in a sound state.

▼

お客様のご指定の発送方法にて納品致します。
※送料はお客様ご負担となります。

We will return your equipment according to the shipping method you will designate.
*Please note that the customer is responsible for the shipping charge of the returned equipment.

▼

整備完了後に整備報告書を必要に応じて提出致します。

After the maintenance is completed, we will pass a maintenance report to you at your request.

受入検査 Acceptance inspection

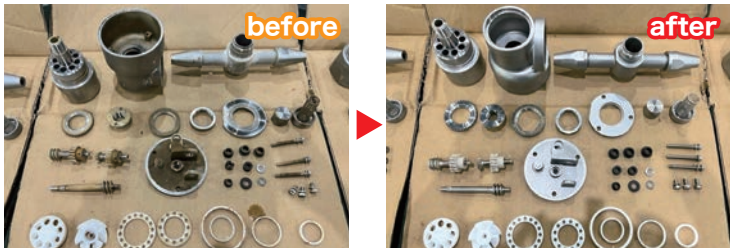
機器が到着後、性能などの状態を確認するため、作動試験を実施します。

After your equipment reaches us, we will perform an operation test to check its performance and state.


内部の清掃 Internal cleaning

長くご使用頂いている機器は内部に腐食や付着物などがあり、作動不良や製品損傷の原因になります。適切な清掃が必要です。

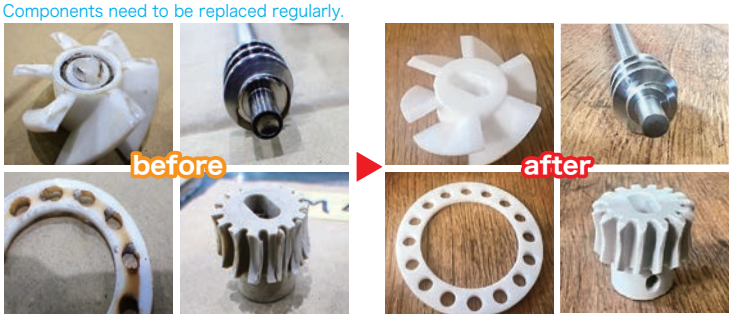
Equipment that has been used for a long time may have suffered corrosion or deposits inside, which may cause malfunctions or product damage.
Appropriate cleaning is required.



部品交換 Replacement of components

各部品の劣化・摩耗など状況を確認の上、交換させて頂きます。
劣化や摩耗は回転不良に繋がります。定期的な交換が必要です。

After checking respective components for deterioration, wear, etc., we will replace them.
Deterioration and wear result in rotation failures.
Components need to be replaced regularly.



性能検査 Performance inspection

整備完了後に製品性能が間違いないことを確認するために性能検査を実施致します。

After the maintenance is completed, we will perform a performance inspection to confirm that the performance of the product is appropriate.


棒状直進噴射型

EX6-0 type NOZZLE

SOLID JET NON ANGLE SPRAY

◆ 特性 Characteristics

・ノズルボディのみで構成され目詰まりし難い
This spray nozzle consists only of a nozzle body and is less likely to clog.
・棒状（0°）で同芯方向へ直進噴射
Water is injected straight in a shaft-like pattern (0°) in the concentric direction.

◆ 主用途 Main applications

・洗ビン装置のビン底インパクト洗浄
Bottle bottom impact washing by bottle washing devices
・高所用水幕防災設備
Water curtain disaster prevention equipment at high elevations.
・側溝及びピットの洗浄
Washing of side ditches and pits
・噴水
Fountains

◆ 材質 Material

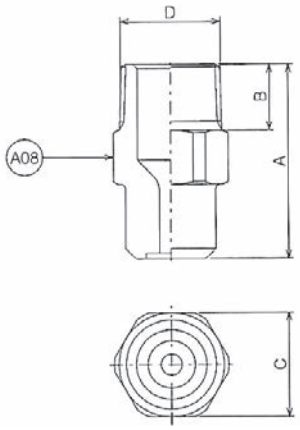
・C3604B/BSCR（クロムメッキ）
(chromium-plated)
・SUS304/SUS316/SUS316L
・PVC/PP/PTFE

◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping.
・ANSI/ASME B 1.20.1 アメリカ管用テーパネジ
Taper thread for American piping specified in ANSI/ASME B 1.20.1

◆ 重量&寸法(SUS316) Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm) A	B	C	connection D	Weight (kg)
M1/8 EX6-0	22	10	HEX.10	R1/8	0.01
M1/4 EX6-0	28	11	HEX.14	R1/4	0.025
M3/8 EX6-0	34	13	HEX.17	R3/8	0.04
M1/2 EX6-0	40	16	HEX.21	R1/2	0.07
M3/4 EX6-0	50	18	HEX.29	R3/4	0.15
M1 EX6-0	65	22	HEX.35	R1	0.32



Item list	
A08	NOZZLE TIP

◆ 型番選定 Selection of model number

(例) Example:

M | 1/4 | EX6 | 65 | – | 0 ／ SUS316

- SUS316：材質【ステンレス鋼：SUS316】 Material [stainless steel: SUS316]
- 65：設計圧(0.2MPa)時の撒水量(流量) L/min【6.5L/min】 Amount of water to be sprinkled (flow rate) at the design pressure (0.2 MPa) L/min [6.5 L/min]
- EX6：型番タイプ【棒状直進噴射型：EX6-0】 Model number type [SOLID JET NON ANGLE SPRAY: EX6-0]
- 1/4：接続ネジサイズ Connection thread size【管用テーパオネジ1/4(R1/4)】 [Taper thread for piping 1/4 (R1/4)]
- M：オネジ（R） Male Thread (R)

◆ 撒水データ Watering data

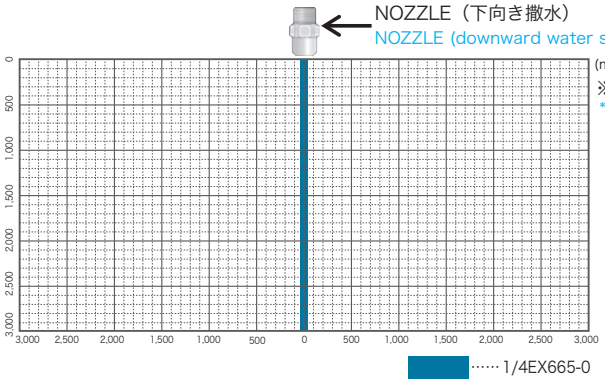
ノズル番号	接　続	最小間隙 (mm) minimum clearance	各圧力における撒水量(L/min) Amount of water to be sprinkled at each pressure (L/min)										撒水角度 Water sprinkling angle			
			0.03 MPa	0.05 MPa	0.1 MPa	0.15 MPa	0.2 MPa	0.3 MPa	0.4 MPa	0.5 MPa	0.7 MPa	1 MPa	0.03 MPa	0.2 MPa	0.5 MPa	0.7 MPa
M1/8EX 610-0	PT1/8 (6A)	1.2	0.4	0.5	0.73	0.88	1.0	1.22	1.42	1.57	1.85	2.2	0°	0°	0°	0°
M1/8EX 615-0		1.5	0.6	0.75	1.09	1.32	1.5	1.83	2.13	2.36	2.77	3.3	0°	0°	0°	0°
M1/8EX 620-0		1.8	0.8	1.0	1.45	1.75	2.0	2.45	2.85	3.15	3.7	4.4	0°	0°	0°	0°
M1/8EX 626-0		2.0	1.05	1.3	1.85	2.25	2.26	3.2	3.7	4.05	4.8	5.7	0°	0°	0°	0°
M1/8EX 630-0		2.2	1.2	1.5	2.18	2.63	3.0	3.66	4.27	4.72	5.55	6.6	0°	0°	0°	0°
M1/8EX 634-0		2.3	1.35	1.7	2.4	2.95	3.4	4.15	4.75	5.25	6.25	7.4	0°	0°	0°	0°
M1/8EX 640-0		2.5	1.6	2.0	2.85	3.45	4.0	4.9	5.65	6.25	7.4	8.75	0°	0°	0°	0°
M1/8EX 645-0		2.7	1.8	2.25	3.21	3.88	4.5	5.51	6.35	7.03	8.32	9.84	0°	0°	0°	0°
M1/8EX 650-0		2.8	2.0	2.5	3.57	4.32	5.0	6.12	7.07	7.82	9.25	11.0	0°	0°	0°	0°
M1/8EX 655-0		2.9	2.15	2.8	3.9	4.75	5.5	6.75	7.75	8.6	10.2	12.1	0°	0°	0°	0°
M1/4EX 665-0	PT1/4 (8A)	3.2	2.6	3.3	4.6	5.65	6.5	8.0	9.1	10.2	12.2	14.3	0°	0°	0°	0°
M1/4EX 675-0		3.5	3.0	3.8	5.3	6.5	7.5	9.2	10.6	11.7	13.9	16.5	0°	0°	0°	0°
M1/4EX 690-0		3.6	3.6	4.55	6.32	7.79	9.0	11.0	12.6	14.4	16.9	19.8	0°	0°	0°	0°
M1/4EX 6100-0		3.7	4.0	5.05	7.02	8.65	10.0	12.3	14.1	16.0	18.8	22.1	0°	0°	0°	0°
M1/4EX 6130-0		4.0	5.15	5.55	9.15	11.3	13.0	15.9	18.4	20.4	24.1	28.6	0°	0°	0°	0°
M1/4EX 6150-0		4.3	5.85	7.5	10.5	13.0	15.0	18.3	21.2	23.8	2.2	33.2	0°	0°	0°	0°
M3/8EX 6200-0	PT3/8 (10A)	4.9	7.85	10.0	14.1	17.3	20.0	24.5	28.3	31.6	37.1	43.8	0°	0°	0°	0°
M3/8EX 6220-0		5.2	8.65	11.0	15.6	19.1	22.0	26.9	31.1	34.7	40.8	48.2	0°	0°	0°	0°
M3/8EX 6250-0		5.5	9.95	12.4	17.6	21.7	25.0	30.7	35.4	39.8	47.0	55.3	0°	0°	0°	0°
M3/8EX 6300-0		5.8	11.6	14.9	21.0	26.0	30.0	36.9	42.4	47.5	56.0	66.0	0°	0°	0°	0°
M3/8EX 6350-0		6.3	13.6	17.5	24.8	30.3	35.0	42.9	49.5	55.3	65.4	76.7	0°	0°	0°	0°
M1/2EX 6400-0	PT1/2 (15A)	6.6	15.3	19.8	27.8	34.6	40.0	48.7	56.0	62.1	73.6	87.2	0°	0°	0°	0°
M1/2EX 6450-0		7.0	17.8	22.8	31.9	39.0	45.0	55.0	63.0	70.3	82.8	98.6	0°	0°	0°	0°
M1/2EX 6500-0		7.6	19.6	25.0	35.4	43.3	50.0	62.4	70.7	78.9	93.5	111	0°	0°	0°	0°
M1/2EX 6550-0		7.9	21.7	27.8	38.9	47.6	55.0	67.4	77.8	86.8	102	121	0°	0°	0°	0°
M3/4EX 6600-0	PT3/4 (20A)	8.3	23.7	30.3	41.1	51.4	60.0	72.7	84	89.7	107	128	0°	0°	0°	0°
M3/4EX 6700-0		8.9	27.7	35.4	48.3	60.0	70.0	84.8	98.0	104	124	149	0°	0°	0°	0°
M3/4EX 6800-0		9.5	31.6	40.4	56.6	69.3	80.0	98.0	113	126	148	175	0°	0°	0°	0°
M3/4EX 6900-0		10.1	35.6	45.5	63.7	78.0	90.0	110	127	141	166	196	0°	0°	0°	0°
M1EX 61000-0	PT1 (25A)	10.8	39.9	50.5	71.6	86.6	100	115	139	152	182	218	0°	0°	0°	0°
M1EX 61200-0		11.8	47.9	60.6	86.0	104	120	138	166	182	218	261	0°	0°	0°	0°

：標準設計圧力（0.2MPa）における撒水量、撒水角度、平均粒子径
Amount of water to be sprinkled, water sprinkling angle at the standard design pressure (0.2 MPa)

接続：旧JIS規格で表記しています。
Connections : Written according to the old JIS standard.
最小間隙：スプレーノズル内部の最も狭い部位の寸法（㎜）を表示しています。
Minimum clearance : Indicates the dimension (mm) of the narrowest portion inside the spray nozzle.
使用圧力：本表中の0.03MPa以下、1.0MPaを超える場合は別途ご相談ください。
Operating pressure : Please consult us separately if the pressure is below 0.03 MPa or exceeds 1.0 MPa specified in this table.

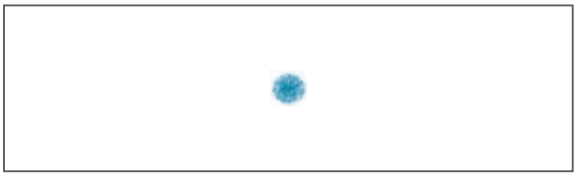
◆ 撒水パターン Water sprinkling pattern

ご使用目的の範囲に撒水可能か、確認が必要な場合につきましては、撒水パターン図を提出致します。
If it is necessary to confirm whether water can be sprinkled within the range of the intended use, we will submit a watering pattern diagram.

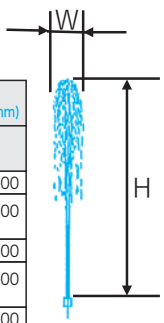


◆ 撒水イメージ Image of water sprinkling

上から見た撒水図　Water spraying diagram from above



◆ 上向き撒水寸法 Upward watering dimension

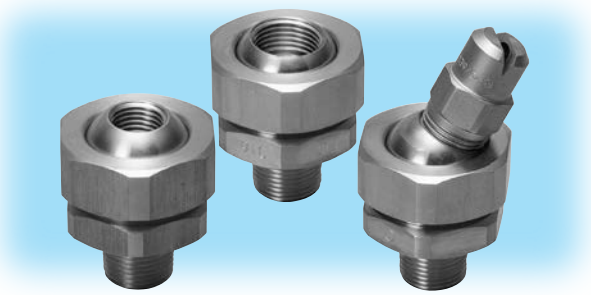


型番 Model number			各圧力における撒水パターン寸法(mm) Dimensions of water sprinkling patterns at different pressures (mm)			
			0.03	0.2	0.5	0.7
M1/4EX665-0	寸法 size	H（mm）	1,500	7,500	8,500	8,700
		W（mm）	約 300 (apporx.)	約 800 (apporx.)	約 900 (apporx.)	約 900 (apporx.)
M3/8EX6200-0		H（mm）	1,600	7,700	8,700	8,900
		W（mm）	約 300 (apporx.)	約 900 (apporx.)	約 900 (apporx.)	約 900 (apporx.)
M1/2EX6500-0		H（mm）	1,700	8,200	9,200	9,500
		W（mm）	約 300 (apporx.)	約 900 (apporx.)	約 900 (apporx.)	約 900 (apporx.)
M1EX61000-0		H（mm）	1,800	8,500	9,600	9,900
		W（mm）	約 300 (apporx.)	約 900 (apporx.)	約 900 (apporx.)	約 900 (apporx.)

ボールジョイント

BJ series

BALL JOINT ADAPTER



◆ 特性 Characteristics

・スプレーノズルを取付けたまま、
片側25°(360°回転)の範囲に任意固定できる
This spray nozzle can be fixed freely within a 25° (360° rotation) range on one side in the attached state.
・スプレーノズルの撒水方向を微調整できる
The water sprinkling direction of the spray nozzle can be fine-adjusted.

◆ 主用途 Main applications

・撒水方向を微調整する必要がある機器
Equipment that requires fine adjustment of the water sprinkling direction
・撒水方向を取付位置より25°以内で偏心させる場合
When making the water sprinkling direction eccentric within 25° from the installation position

◆ 材質 Material

・SUS316／SUS316L／C3604B

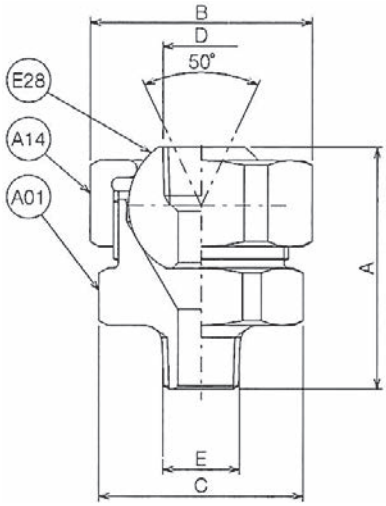
◆ 接続 Connections

・JIS B 0203 配管用テーパーネジ
Taper thread for piping specified in JIS B 0203 piping

◆ 重量&寸法(SU316)

Weight & dimensions(SUS316)

Nominal diameter	Dimensions (mm)					Weight (kg)
	A	B	C	D	E	
1/8 BJ	37	HEX.29	HEX.26	Rc1/8	R1/8	0.15
1/8 × 1/4 BJ	37	HEX.29	HEX.26	Rc1/8	R1/4	0.15
1/4 BJ	40	HEX.35	HEX.32	Rc1/4	R1/4	0.3
1/4 × 3/8 BJ	44	HEX.35	HEX.32	Rc1/4	R3/8	0.3
3/8 BJ	44	HEX.35	HEX.32	Rc3/8	R3/8	0.5
3/8 × 1/2 BJ	48	HEX.35	HEX.32	Rc3/8	R1/2	0.5
1/2 BJ	50	HEX.41	HEX.41	Rc1/2	R1/2	1.0
1/2 × 3/4 BJ	54	HEX.41	HEX.41	Rc1/2	R3/4	1.0
3/4 BJ	60	HEX.55	HEX.55	Rc3/4	R3/4	1.5
3/4 × 1 BJ	62	HEX.55	HEX.55	Rc3/4	R1	1.5
1 BJ	66	HEX.60	HEX.55	Rc1	R1	1.7



Item list	
A01	BODY
A14	CAP NUT
E28	BALL

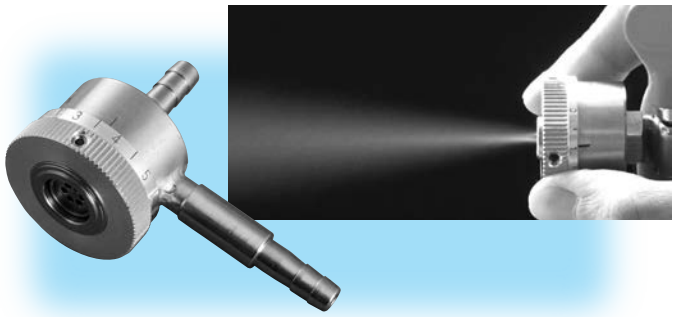
◆ 型番選定 Selection of model number

(例) Example: 1/8 × 1/4 BJ ／ SUS316

- SUS316 — 材質【ステンレス鋼：SUS316】 Material [stainless steel : SUS316]
- BJ — 型番タイプ【ボールジョイント：BJ】 Model number type [BALL JOINT ADAPTER: BJ]
- 1/4 — 接続ネジサイズ Connection thread size — 【管用テーパオネジ1/4(R1/4)】 [Taper male thread for piping 1/4 (R1/4)]
- 1/8 — スプレーノズル取付側接続ネジサイズ Spray nozzle installation side connection thread size — 【管用テーパメネジ1/8(Rc1/8)】 [Taper female thread for piping 1/8 (Rc1/8)]

二流体噴霧ノズル
MICROMIZER series
PSA2

AIR ATOMIZING NOZZLE



◆ 特性 Characteristics

・液体を微粒子化して均一な粒子を噴霧する
This spray nozzle atomizes a liquid and sprays uniform particles.
・噴霧流体を加圧供給しても、圧縮空気を供給しないと噴霧されないため、前ダレ・ボタ落ちが無い
This spray nozzle is free of seepage and drips before spraying because the fluid to be sprayed will not be sprayed unless compressed air is supplied even if it is pressurized.
・ダイヤル操作により噴霧量を調整できる
The amount of fluid to be sprayed can be adjusted by operating the dial.

◆ 主用途 Main applications

・加湿、調湿、減温等の空調、温調設備
Air conditioning equipment and temperature control equipment, such as humidification equipment, humidity control equipment, and desuperheaters
・ガス冷却、脱硫、脱硝、防除塵等の環境設備
Environmental equipment, such as gas cooling equipment, desulfurization equipment, denitrification equipment, and dust prevention/removal equipment
・離型剤、乳剤、油等の粘性液体噴霧
Spraying of viscous liquids, such as mold release agents, emulsions, and oils

◆ 材質 Material

・SUS304

◆ 接続 Connections

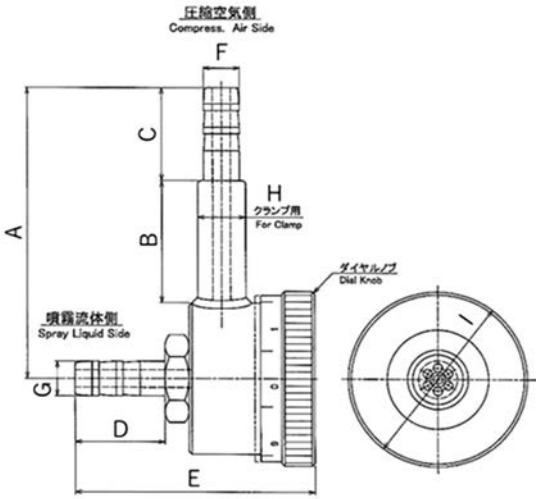
・ホース継手 φ6
Hose joint φ6

◆ 仕様 Specification

・標準空気圧力：0.4MPa
Standard air pressure : 0.4MPa
・最低空気圧力：0.2MPa
Minimum air pressure : 0.2MPa
・最大空気圧力：0.4MPa
Maximum air pressure : 0.4MPa

◆ 重量と寸法 Weight&Dimensions

Nominal diameter	Dimensions (mm)									Weight (kg)
	A	B	C	D	E	F	G	H	I	
PSA2	50	21	16	15	40	φ6	φ6	φ8	φ30	0.08



◆ 流量データ Flow rate data

型番 Mode number	ダイアル量 Dial amount	空気圧 (MPa) Air pressure (MPa)	水圧(MPa) Water pressure(MPa) 液流量※(×10⁻³L/min) Fluid flow rate*(x 10⁻³L/min)			
			0.1MPa	0.2MPa	0.3MPa	0.4MPa
PSA2	1	0.2	1.0	1.5	2.5	3.5
		0.3	5.0	14.5	18.5	19.0
		0.4	5.5	12.5	18.0	16.5
		0.5	3.0	9.5	17.0	13.0
	2	0.2	24.5	48.5	64.5	85.0
		0.3	36.5	60.0	76.5	89.0
		0.4	32.0	60.5	73.5	89.5
		0.5	21.5	57.5	74.5	87.5
	3	0.2	76.5	113.5	141.5	165.5
		0.3	68.5	108.0	138.5	161.0
		0.4	66.0	100.0	131.0	156.5
		0.5	50.5	98.5	129.5	154.5
	4	0.2	113.5	152.5	206.5	240.5
		0.3	96.5	149.5	201.5	231.0
		0.4	95.0	145.0	190.5	224.5
		0.5	69.5	139.0	182.5	217.5
	5	0.2	145.5	208.0	256.5	301.5
		0.3	132.5	195.5	251.0	300.5
		0.4	116.0	191.5	241.5	293.5
		0.5	100.5	182.0	244.5	295.0
	6	0.2	165.0	246.0	309.5	367.5
		0.3	156.5	248.5	304.5	364.5
		0.4	149.5	231.5	311.5	371.5
		0.5	63.5	204.5	290.5	345.5
	7	0.2	214.5	312.5	392.5	452.5
		0.3	213.5	313.5	381.5	445.5
		0.4	181.5	290.5	369.5	438.5
		0.5	167.5	273.0	354.5	426.5
	8	0.2	250.5	352.0	434.5	495.5
		0.3	237.5	345.5	429.5	504.0
		0.4	200.0	327.5	410.0	485.0
		0.5	180.0	277.0	382.0	463.5
	9	0.2	279.5	380.0	455.0	529.5
		0.3	268.0	365.5	438.5	515.5
		0.4	245.5	340.0	420.5	500.0
		0.5	210.0	325.5	410.0	489.5

※液流量は水道水（18℃）を使用
*For the fluid flow rate, tap water (18° C) is used.

ミスト噴霧ノズル
MIST DIY
Mist Spray Nozzle

◆ 特徴 Features

・水道圧だけでミストを噴霧できる
Can be sprayed as a mist using only the water supply pressure.
・水道の蛇口に簡単取付が可能
Easy to attach to water faucet.
・ミスト噴霧による気化熱の作用で体感温度を
約3～5℃下げることができる
The effective temperature can be lowered by approximately 3 to 5 degrees Celsius due to the heat of vaporization caused by mist spraying.
・30m以上延長することができる ※使用条件による
Can be extended to over 30m ※Depends on usage conditions.
・部品の単品購入が可能です
Each parts can be purchased separately.
※蛇口ニップル・チューブコネクタは単品購入不可
※Faucet nipples and tube connectors cannot be purchased separately.

◆ 主用途 Main applications

・熱中症対策 Prevention of heatstroke
・涼感演出 Creating a cool feeling
・園芸の水撒き Gardening watering
・打ち水 Sprinking water over the roads to lower the temperature

◆ セット内容 The whole set of MIST DIY


チューブ
tube


蛇口ニップル
nipple of faucet

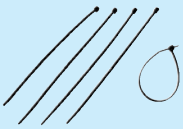

継手
joint

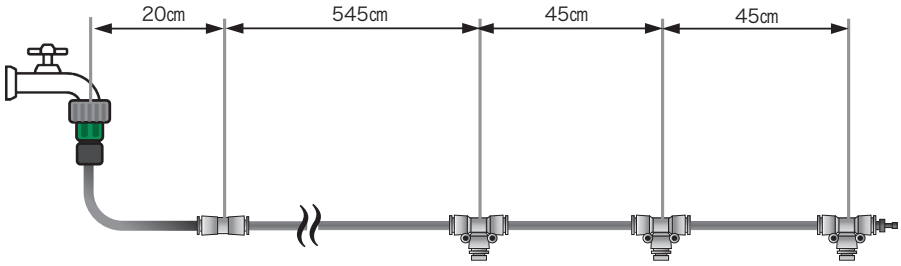

エンドキャップ
cap of end


ケーブルクリップ
cable clip for tube


チューブコネクタ
tube and faucet nipple connector


ミストノズル
mist nozzle


ケーブルタイ
cable tie



◆ 設置方法 Installation method

1. 蛇口にニップルを装着
Attach the nipple to the faucet

2. ワンタッチで簡単に接続
Easy one-touch connection

3. チューブを固定したら設置完了
Once the tube is fixed, the installation is complete.

4. 蛇口をひねればミストが広がる
When you turn on the faucet, the mist spreads.

◆ 導入事例
Case study

@NIIKURA.FUJIGOTEMBA

保育園
Nursery school

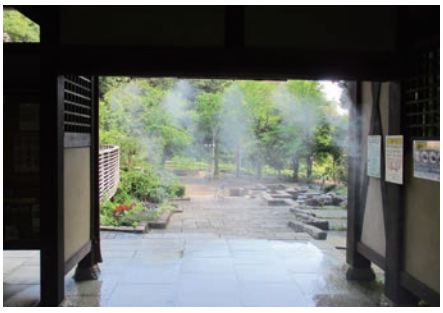
駅前広場
Square in front of the station

工場
Factory

学校
School

園芸
Gardening

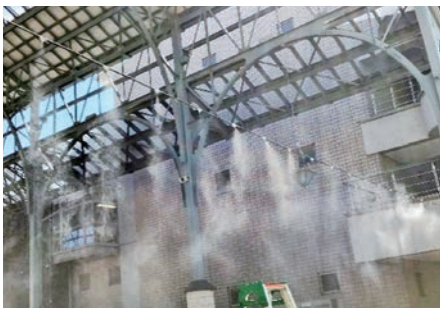
ゴルフ場
Golf course



建物入口
Building entrance

公園
Park

ドッグラン
Dog park



アーケード
Arcade

公園
Park

動物園
Zoo

ミスト噴霧ノズル

新倉工業株式會社

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