

Sanitary Pipes / Fittings

Overview

Common Specifications

| Material | Standards |
|----------------------|-----------------------------------|
| 304 Stainless Steel | (No. 8A~15A) Pipe Stainless Steel |
| 316L Stainless Steel | (No. 1S~3S) JIS G3447 |

Common Specifications (Weld bead portion inside excluded)

| Surface Finish | Standards |
|----------------|---------------------|
| Inner Surface | #320~400 (Ra≤1.0μm) |
| Outer Surface | #320~400 (Ra≤2.5μm) |

Table of Applicable Standards

| Shape | Page | Standards |
|---|-------------|----------------------|
| Sanitary Pipes (1S~3S) | P1254~1256 | JIS G3447 |
| Sanitary Small Diameter Pipes (316L Stainless Steel 8A~15A) | P1254, 1256 | Pipe Stainless Steel |
| Clamp | P1255~1258 | IDF/ISO |
| Thread | P1256 | IDF |
| Flange | P1260 | JIS B2220 |

For detailed dimensions, refer to stipulated standards.

Table of Sanitary Pipes: Depending on Dimension Standard

| JIS G3447 (1994) | | | Pipe Stainless Steel | | | 3A (3A Sanitary Standards) | | | ISO | | DIN (DIN1 1850) (DIN) | | |
|------------------|----------|---------------|----------------------|----------|---------------|----------------------------|----------|---------------|----------|---------------|-----------------------|----------|---------------|
| Size | O.D. (D) | Thickness (t) | Size | O.D. (D) | Thickness (t) | Size | O.D. (D) | Thickness (t) | O.D. (D) | Thickness (t) | Size | O.D. (D) | Thickness (t) |
| - | - | - | 8A | 13.8 | 1.65 | - | - | - | 12 | 1 | DN10 | 12 | 1 |
| - | - | - | 10A | 17.3 | 1.65 | - | - | - | 17.2 | 1 | 15 | 18 | 1 |
| - | - | - | 15A | 21.7 | 2.1 | - | - | - | 21.3 | 1 | 20 | 22 | 1 |
| 1S | 25.4 | 1.2 | 20A | 27.2 | 2.1 | 1 | 25.4 | 1.25 | 25 | 1.2 | 25 | 28 | 1.5 |
| 1.25S | 31.8 | 1.2 | 25A | 34 | 2.8 | 1 1/4 | - | 1.65 | 33.7 | 1.2 | 32 | 34 | 1.5 |
| 1.5S | 38.1 | 1.2 | 32A | 42.7 | 2.8 | 1 1/2 | 38.1 | 1.25 | 38 | 1.2 | - | - | - |
| - | - | - | - | - | - | - | - | 1.65 | 40 | 1.2 | 40 | 40 | 1.5 |
| 2S | 50.8 | 1.5 | 40A | 48.6 | 2.8 | 2 | 50.8 | 1.65 | 51 | 1.2 | 50 | 52 | 1.5 |
| 2.5S | 63.5 | 2 | 50A | 60.5 | 2.8 | 2 1/2 | 63.5 | 1.65 | 63.5 | 1.6 | - | - | - |
| - | - | - | - | - | - | - | - | - | 70 | 1.6 | 65 | 70 | 2 |
| 3S | 76.3 | 2 | 65A | 76.3 | 3 | 3 | 76.2 | 1.65 | 76.1 | 1.6 | - | - | - |

Information about Sanitary Pipes

| Size | O.D. (D) | Thickness (t) | Area of I.D. mm ² | Cross-sectional Area of Pipes mm ² | Weight of Pipes kg/m | Capacity of Liquid in Pipes l/m | Flow Rate at Velocity of 1m/sec m ³ /h |
|-------|----------|---------------|------------------------------|---|----------------------|---------------------------------|---|
| 8A | 13.8 | 1.65 | 87 | 63 | 0.499 | 0.11 | 0.396 |
| 10A | 17.3 | 1.65 | 154 | 81.1 | 0.463 | 0.154 | 0.554 |
| 15A | 21.7 | 2.1 | 241 | 129 | 1.03 | 0.241 | 0.868 |
| 1S | 25.4 | 1.2 | 415 | 91.2 | 0.723 | 0.415 | 1.49 |
| 1.25S | 31.8 | 1.2 | 679 | 115 | 0.915 | 0.679 | 2.44 |
| 1.5S | 38.1 | 1.2 | 1001 | 139 | 1.1 | 1 | 3.6 |
| 2S | 50.8 | 1.5 | 1795 | 232 | 1.84 | 1.8 | 6.46 |
| 2.5S | 63.5 | 2 | 2781 | 386 | 3.06 | 2.78 | 10 |
| 3S | 76.3 | 2 | 4106 | 467 | 3.7 | 4.11 | 14.8 |

Weight of Pipe and Liquid (kg/m) = Weight of Pipe + Amount of Liquid in Pipe

Weight of pipe and liquid indicates a weight per length (m) when pipes is filled with water (calculated as specific gravity 1.0). For liquid with different specific gravity, multiply capacity of pipes by specific gravity, and add weight of pipes to it.

Use flow rate of 1m/sec for calculating flow rate and velocity in pipes and diameter of pipes.

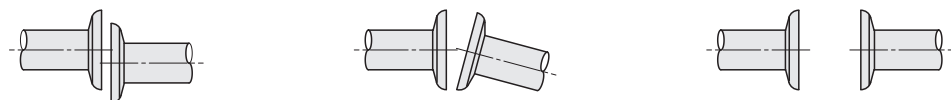
Ex.) For flow velocity when using 2S pipe at 10m³/h: V (Velocity of Flowing Fluid) = 10(m³/h)/6.46[(m³/h)/(1m/sec)]=1.55m/sec

Recommended Tightening Torque and Incompatible Mounting Method

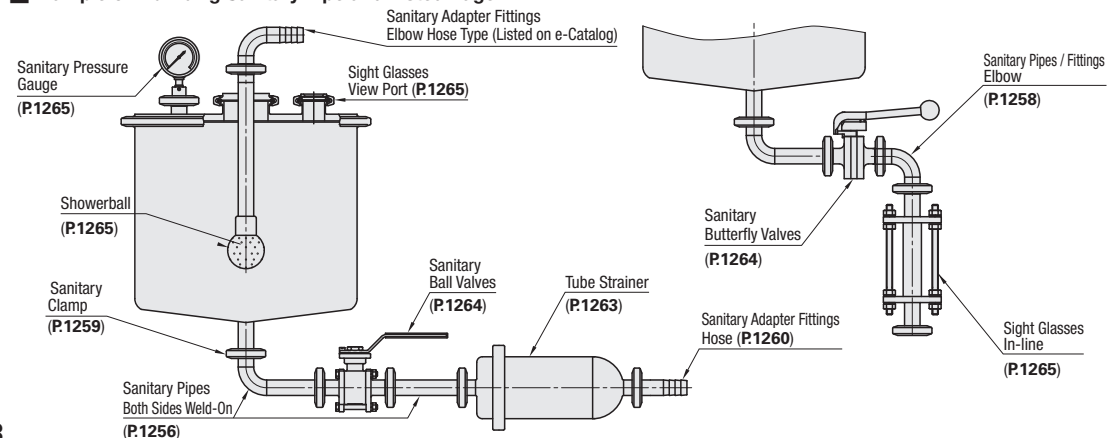
1S~3S, use 3N·m; 3N·m or lower for 8A~15A. Further tightening or loading of pipes may deform the gaskets and cause liquid slug, leakages and damages. When fluid leaks during use, retighten pipes with torque above. If this fails to stop leakage, replace gaskets.

<Incompatible Mounting Methods>

- 1) Pipes are not aligned.
- 2) Pipes are not horizontally aligned.
- 3) There is too much clearance between pipe fittings.



Example of Plumbing Sanitary Pipe and Listed Page



Sanitary Pipes

Standard / Weld-On Short Sleeve

Standard

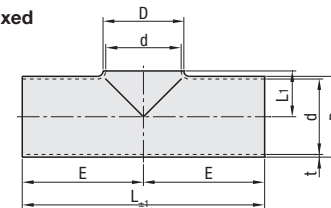
| Type | Material | Surface Finish | | Standards |
|------|----------------------|---------------------|---------------------|-----------------------------------|
| | | Inner Surface | Outer Surface | |
| SNPE | 304 Stainless Steel | #320~400 (Ra≤1.0μm) | #320~400 (Ra≤2.5μm) | (No. 8A~15A) Pipe Stainless Steel |
| SNPS | 316L Stainless Steel | #320~400 (Ra≤1.0μm) | #320~400 (Ra≤2.5μm) | (No. 1S~3S) JIS G3447 |

| Part Number | Type | No. | L 1mm Increment | D | d | t | Unit Price/mm SNPE | | Unit Price/mm SNPS | |
|-------------|---------|------|-----------------|------|------|---|--------------------|---------------------|--------------------|---------------------|
| | | | | | | | Unit Price | L Pipe Price /100mm | Unit Price | L Pipe Price /100mm |
| SNPS | 50~1500 | 8A | 13.8 | 10.5 | 1.65 | - | - | - | - | |
| | | 10A | 17.3 | 14 | 2.1 | - | - | - | - | |
| | | 15A | 21.7 | 17.5 | 2.1 | - | - | - | - | |
| SNPE SNPS | 50~1500 | 1S | 25.4 | 23 | 1.2 | - | - | - | - | |
| | | 1.5S | 38.1 | 35.7 | 1.5 | - | - | - | - | |
| | | 2S | 50.8 | 47.8 | 2 | - | - | - | - | |
| | | 2.5S | 63.5 | 59.5 | 2 | - | - | - | - | |
| 3S | 76.3 | 72.3 | 2 | - | - | - | - | | | |

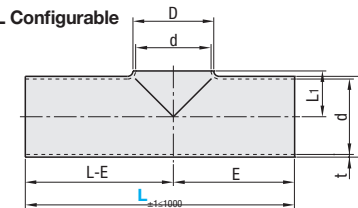
Weld-On Short Sleeve

| Type | L Fixed | | | Material | Standards | Common Specifications (Weld bead portion inside excluded) | |
|------|---------------------|-----------------------|---------------------|---------------------|-----------|---|---------------|
| | SNPW | SNPWL | SNPWW | | | Inner Surface | Outer Surface |
| SNPW | 304 Stainless Steel | (No. 1S~3S) JIS G3447 | #320~400 (Ra≤1.0μm) | #320~400 (Ra≤2.5μm) | | | |

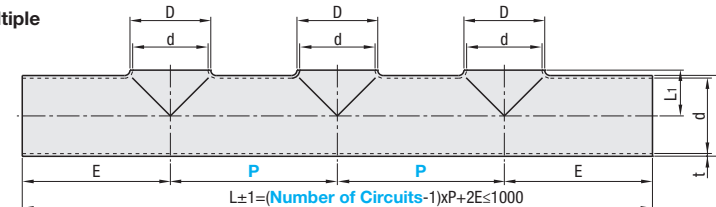
L Fixed



L Configurable



Multiple



*Drawing above indicates diagram at number of circuit 3. The branching direction is on the identical surface.

| Part Number | Type | No. | L | | D | d | L ₁ | t | E | Unit Price/mm SNPWL | |
|-------------|------|-----|----------|----------------------------|------|------|----------------|----|---|---------------------|---------------------|
| | | | Fixed | Configurable 1mm Increment | | | | | | Unit Price | L Pipe Price /100mm |
| SNPW SNPWL | 1S | 68 | 70~1000 | 25.4 | 23 | 14 | 1.2 | 34 | - | - | |
| | 1.5S | 98 | 100~1000 | 38.1 | 35.7 | 21 | 1.5 | 49 | - | - | |
| | 2S | 122 | 130~1000 | 50.8 | 47.8 | 28 | 2 | 61 | - | - | |
| | 2.5S | 168 | 170~1000 | 63.5 | 59.5 | 34 | 2 | 84 | - | - | |
| | 3S | 178 | 180~1000 | 76.3 | 72.3 | 40.5 | 2 | 89 | - | - | |

| Part Number | Type | No. | Number of Circuits | P 1mm Increment | D | d | L ₁ | t | E | Unit Price/mm SNPWW | | | |
|-------------|------|-----|--------------------|-----------------|------|------|----------------|----|---|---------------------|-------------------------|-------------------------|-------------------------|
| | | | | | | | | | | Unit Price | For Number of Circuit 2 | For Number of Circuit 3 | For Number of Circuit 4 |
| SNPWW | 1S | 2 | 68~300 | 25.4 | 23 | 14 | 1.2 | 34 | - | - | - | - | |
| | 1.5S | 3 | 98~300 | 38.1 | 35.7 | 21 | 1.5 | 49 | - | - | - | - | |
| | 2S | 4 | 122~300 | 50.8 | 47.8 | 28 | 2 | 61 | - | - | - | - | |
| | 2.5S | 4 | 168~300 | 63.5 | 59.5 | 34 | 2 | 84 | - | - | - | - | |
| | 3S | 4 | 178~300 | 76.3 | 72.3 | 40.5 | 2 | 89 | - | - | - | - | |

Specify P within range of L=(Number of Circuits-1)xP+2E≤1000.



Ordering Example
 Part Number - L
 SNPE2S - 500
 SNPWL1.5S - 365
 SNPWW2S - 2 - P150



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Days to Ship [Configure Online](#)