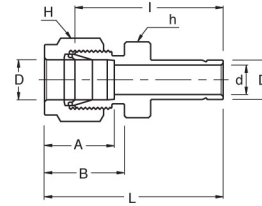
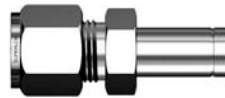


**Stub Tube Connector,
An Tube & O-Ring Seal**



PAP-R
Reducer

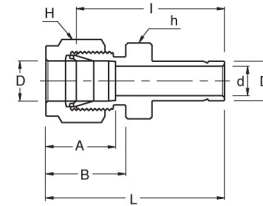
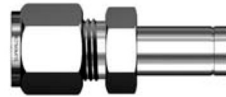


Connects Fractional Tubes To Fractional PAP Port

| Part No. | Tube O.D. | | d Min | Width Across Flat | | A | B | I | L |
|---------------|-----------|-----------------------|----------|-------------------|----------|-------|-------|-------|-------|
| | D (inch) | D ₁ (inch) | | h (inch) | H (inch) | | | | |
| PAP-R 2 - 1 | 1/8 | 1/16 | 0.76 | 7/16 | 7/16 | 12.70 | 15.24 | 22.35 | 28.95 |
| PAP-R 2 - 2 | 1/8 | 1/8 | 2.03 | 7/16 | 7/16 | 12.70 | 15.24 | 26.92 | 33.52 |
| PAP-R 2 - 3 | 1/8 | 3/16 | 2.28 | 7/16 | 7/16 | 12.70 | 15.24 | 27.68 | 34.29 |
| PAP-R 2 - 4 | 1/8 | 1/4 | 2.28 | 7/16 | 7/16 | 12.70 | 15.24 | 29.46 | 36.06 |
| PAP-R 2 - 6 | 1/8 | 3/8 | 2.28 | 7/16 | 7/16 | 12.70 | 15.24 | 30.98 | 37.59 |
| PAP-R 2 - 8 | 1/8 | 1/2 | 2.28 | 9/16 | 7/16 | 12.70 | 15.24 | 37.59 | 44.19 |
| PAP-R 3 - 2 | 3/16 | 1/8 | 2.03 | 7/16 | 1/2 | 13.71 | 16.00 | 28.19 | 34.79 |
| PAP-R 3 - 4 | 3/16 | 1/4 | 3.04 | 7/16 | 1/2 | 13.71 | 16.00 | 30.48 | 37.08 |
| PAP-R 4 - 2 | 1/4 | 1/8 | 2.03 | 1/2 | 9/16 | 15.24 | 17.78 | 29.46 | 36.83 |
| PAP-R 4 - 3 | 1/4 | 3/16 | 3.04 | 1/2 | 9/16 | 15.24 | 17.78 | 30.22 | 37.59 |
| PAP-R 4 - 4 | 1/4 | 1/4 | 4.82 | 1/2 | 9/16 | 15.24 | 17.78 | 31.75 | 39.11 |
| PAP-R 4 - 5 | 1/4 | 5/16 | 4.82 | 1/2 | 9/16 | 15.24 | 17.78 | 32.51 | 39.87 |
| PAP-R 4 - 6 | 1/4 | 3/8 | 4.82 | 1/2 | 9/16 | 15.24 | 17.78 | 33.27 | 40.64 |
| PAP-R 4 - 8 | 1/4 | 1/2 | 4.82 | 9/16 | 9/16 | 15.24 | 17.78 | 38.86 | 46.22 |
| PAP-R 4 - 10 | 1/4 | 5/8 | 4.82 | 11/16 | 9/16 | 15.24 | 17.78 | 40.64 | 48.00 |
| PAP-R 4 - 12 | 1/4 | 3/4 | 4.82 | 13/16 | 9/16 | 15.24 | 17.78 | 41.40 | 47.75 |
| PAP-R 5 - 6 | 5/16 | 3/8 | 6.35 | 9/16 | 5/8 | 16.25 | 18.54 | 34.54 | 41.91 |
| PAP-R 5 - 8 | 5/16 | 1/2 | 6.35 | 9/16 | 5/8 | 16.25 | 18.54 | 40.13 | 47.49 |
| PAP-R 6 - 4 | 3/8 | 1/4 | 4.82 | 5/8 | 11/16 | 16.76 | 19.30 | 34.03 | 41.40 |
| PAP-R 6 - 6 | 3/8 | 3/8 | 7.11 | 5/8 | 11/16 | 16.76 | 19.30 | 35.81 | 43.18 |
| PAP-R 6 - 8 | 3/8 | 1/2 | 7.11 | 5/8 | 11/16 | 16.76 | 19.30 | 41.14 | 48.51 |
| PAP-R 6 - 10 | 3/8 | 5/8 | 7.11 | 11/16 | 11/16 | 16.76 | 19.30 | 42.92 | 50.29 |
| PAP-R 6 - 12 | 3/8 | 3/4 | 7.11 | 13/16 | 11/16 | 16.76 | 19.30 | 42.92 | 50.29 |
| PAP-R 8 - 4 | 1/2 | 1/4 | 4.82 | 13/16 | 7/8 | 22.86 | 21.84 | 34.79 | 44.95 |
| PAP-R 8 - 9 | 1/2 | 3/8 | 7.11 | 13/16 | 7/8 | 22.86 | 21.84 | 36.57 | 46.73 |
| PAP-R 8 - 8 | 1/2 | 1/2 | 9.90 | 13/16 | 7/8 | 22.86 | 21.84 | 42.16 | 52.32 |
| PAP-R 8 - 10 | 1/2 | 5/8 | 10.41 | 13/16 | 7/8 | 22.86 | 21.84 | 43.68 | 53.84 |
| PAP-R 8 - 12 | 1/2 | 3/4 | 10.41 | 13/16 | 7/8 | 22.86 | 21.84 | 43.68 | 53.84 |
| PAP-R 8 - 16 | 1/2 | 1 | 10.41 | 1-1/16 | 7/8 | 22.86 | 21.84 | 50.03 | 60.19 |
| PAP-R 10 - 12 | 5/8 | 3/4 | 12.70 | 15/16 | 1 | 24.38 | 21.84 | 44.45 | 54.61 |
| PAP-R 10 - 14 | 5/8 | 7/8 | 12.70 | 15/16 | 1 | 24.38 | 21.84 | 45.97 | 56.13 |
| PAP-R 10 - 16 | 5/8 | 1 | 12.70 | 1-1/16 | 1 | 24.38 | 21.84 | 50.80 | 60.96 |
| PAP-R 12 - 8 | 3/4 | 1/2 | 9.90 | 1-1/16 | 1-1/8 | 24.38 | 21.84 | 44.45 | 54.61 |
| PAP-R 12 - 16 | 3/4 | 1 | 15.74 | 1-1/16 | 1-1/8 | 24.38 | 21.84 | 52.32 | 62.48 |

* Fractional Tube to Metric PAP port are available upon request

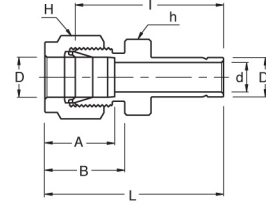
• All dimensions in millimeters unless specified as "inch"

**PAP-R
Reducer**

Connects Metric Tubes To Metric PAP Port

| Part No. | Tube O.D. | | d Min | Width Across Flat | | A | B | I | L |
|-----------------|-----------|----------------|----------|-------------------|----|------|------|------|------|
| | D | D ₁ | | h | H | | | | |
| PAP-R 3M - 4M | 3 | 4 | 2.4 | 12 | 12 | 12.9 | 15.3 | 28.4 | 35.0 |
| PAP-R 3M - 6M | 3 | 6 | 2.4 | 12 | 12 | 12.9 | 15.3 | 29.5 | 36.1 |
| PAP-R 3M - 10M | 3 | 10 | 2.4 | 14 | 12 | 12.9 | 15.3 | 31.8 | 38.4 |
| PAP-R 4M - 6M | 4 | 6 | 2.4 | 12 | 12 | 13.7 | 16.1 | 30.5 | 37.1 |
| PAP-R 6M - 3M | 6 | 3 | 1.8 | 14 | 14 | 15.3 | 17.7 | 29.5 | 36.9 |
| PAP-R 6M - 8M | 6 | 8 | 4.8 | 14 | 14 | 15.3 | 17.7 | 32.5 | 39.9 |
| PAP-R 6M - 10M | 6 | 10 | 4.8 | 14 | 14 | 15.3 | 17.7 | 33.3 | 40.7 |
| PAP-R 6M - 12M | 6 | 12 | 4.8 | 14 | 14 | 15.3 | 17.7 | 38.9 | 46.3 |
| PAP-R 8M - 6M | 8 | 6 | 4.6 | 15 | 16 | 16.2 | 18.6 | 32.8 | 40.3 |
| PAP-R 8M - 10M | 8 | 10 | 6.4 | 15 | 16 | 16.2 | 18.6 | 34.5 | 42.0 |
| PAP-R 8M - 12M | 8 | 12 | 6.4 | 15 | 16 | 16.2 | 18.6 | 40.1 | 47.6 |
| PAP-R 10M - 6M | 10 | 6 | 4.6 | 18 | 19 | 17.2 | 19.5 | 34.8 | 42.4 |
| PAP-R 10M - 8M | 10 | 8 | 6.4 | 18 | 19 | 17.2 | 19.5 | 35.8 | 43.4 |
| PAP-R 10M - 12M | 10 | 12 | 7.9 | 18 | 19 | 17.2 | 19.5 | 42.2 | 49.8 |
| PAP-R 10M - 15M | 10 | 15 | 7.9 | 18 | 19 | 17.2 | 19.5 | 43.7 | 51.3 |
| PAP-R 10M - 18M | 10 | 18 | 7.9 | 22 | 19 | 17.2 | 19.5 | 43.7 | 51.3 |
| PAP-R 12M - 6M | 12 | 6 | 4.6 | 22 | 22 | 22.8 | 22.0 | 34.8 | 44.9 |
| PAP-R 12M - 8M | 12 | 8 | 6.4 | 22 | 22 | 22.8 | 22.0 | 35.8 | 45.9 |
| PAP-R 12M - 10M | 12 | 10 | 7.7 | 22 | 22 | 22.8 | 22.0 | 36.6 | 46.7 |
| PAP-R 12M - 16M | 12 | 16 | 9.5 | 22 | 22 | 22.8 | 22.0 | 43.7 | 53.8 |
| PAP-R 12M - 18M | 12 | 18 | 9.5 | 22 | 22 | 22.8 | 22.0 | 43.7 | 53.8 |
| PAP-R 12M - 20M | 12 | 20 | 9.5 | 22 | 22 | 22.8 | 22.0 | 46.0 | 56.1 |
| PAP-R 12M - 22M | 12 | 22 | 9.5 | 24 | 22 | 22.8 | 22.0 | 46.0 | 56.1 |
| PAP-R 12M - 25M | 12 | 25 | 9.5 | 27 | 22 | 22.8 | 22.0 | 52.3 | 62.4 |
| PAP-R 16M - 12M | 16 | 12 | 9.1 | 24 | 25 | 24.4 | 22.0 | 42.9 | 53.0 |
| PAP-R 18M - 12M | 18 | 12 | 9.1 | 27 | 30 | 24.4 | 22.0 | 44.5 | 54.6 |
| PAP-R 18M - 16M | 18 | 16 | 12.7 | 27 | 30 | 24.4 | 22.0 | 46.0 | 56.1 |
| PAP-R 18M - 20M | 18 | 20 | 15.1 | 27 | 30 | 24.4 | 22.0 | 47.5 | 57.6 |
| PAP-R 18M - 22M | 18 | 22 | 15.1 | 27 | 30 | 24.4 | 22.0 | 47.5 | 57.6 |
| PAP-R 18M - 25M | 18 | 25 | 15.1 | 27 | 30 | 24.4 | 22.0 | 52.3 | 62.4 |
| PAP-R 20M - 16M | 20 | 16 | 12.7 | 30 | 32 | 26.0 | 22.0 | 47.8 | 57.9 |
| PAP-R 20M - 18M | 20 | 18 | 13.9 | 30 | 32 | 26.0 | 22.0 | 47.8 | 57.9 |
| PAP-R 20M - 22M | 20 | 22 | 15.8 | 30 | 32 | 26.0 | 22.0 | 49.3 | 59.4 |
| PAP-R 20M - 25M | 20 | 25 | 15.8 | 30 | 32 | 26.0 | 22.0 | 54.1 | 64.2 |
| PAP-R 22M - 18M | 22 | 18 | 13.9 | 30 | 32 | 26.0 | 22.0 | 47.8 | 57.9 |
| PAP-R 22M - 20M | 22 | 20 | 15.1 | 30 | 32 | 26.0 | 22.0 | 49.3 | 59.4 |
| PAP-R 22M - 25M | 22 | 25 | 18.3 | 30 | 32 | 26.0 | 22.0 | 54.1 | 64.2 |
| PAP-R 25M - 18M | 25 | 18 | 13.9 | 35 | 38 | 31.3 | 26.5 | 50.8 | 63.1 |
| PAP-R 25M - 20M | 25 | 20 | 15.1 | 35 | 38 | 31.3 | 26.5 | 52.3 | 64.6 |

• All dimensions in millimeters unless specified as "inch"

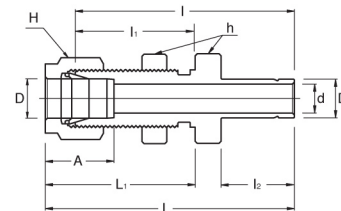
PAP-R
Reducer



Connects Metric Tubes To Fractional **PAP** Port

| Part No. | Tube O.D. | | d Min | Width Across Flat | | A | B | I | L |
|----------------|-----------|-----------------------|-------|-------------------|----|------|------|------|------|
| | D | D ₁ (inch) | | h | H | | | | |
| PAP-R 3M - 2 | 3 | 1/8 | 2.0 | 12 | 12 | 12.9 | 15.3 | 26.9 | 33.5 |
| PAP-R 3M - 4 | 3 | 1/4 | 2.4 | 12 | 12 | 12.9 | 15.3 | 29.5 | 36.1 |
| PAP-R 6M - 4 | 6 | 1/4 | 4.8 | 14 | 14 | 15.3 | 17.7 | 31.8 | 39.2 |
| PAP-R 6M - 5 | 6 | 5/16 | 4.8 | 14 | 14 | 15.3 | 17.7 | 32.5 | 39.9 |
| PAP-R 6M - 6 | 6 | 3/8 | 4.8 | 14 | 14 | 15.3 | 17.7 | 33.3 | 40.7 |
| PAP-R 6M - 8 | 6 | 1/2 | 4.8 | 14 | 14 | 15.3 | 17.7 | 38.9 | 46.3 |
| PAP-R 8M - 6 | 8 | 3/8 | 6.4 | 15 | 16 | 16.2 | 18.6 | 34.5 | 42.0 |
| PAP-R 8M - 8 | 8 | 1/2 | 6.4 | 15 | 16 | 16.2 | 18.6 | 40.1 | 47.6 |
| PAP-R 10M - 6 | 10 | 3/8 | 7.1 | 18 | 19 | 17.2 | 19.5 | 36.6 | 44.2 |
| PAP-R 10M - 8 | 10 | 1/2 | 7.9 | 18 | 19 | 17.2 | 19.5 | 42.2 | 49.8 |
| PAP-R 12M - 8 | 12 | 1/2 | 9.5 | 22 | 22 | 22.8 | 22.0 | 42.2 | 52.3 |
| PAP-R 12M - 12 | 12 | 3/4 | 9.5 | 22 | 22 | 22.8 | 22.0 | 43.7 | 53.8 |
| PAP-R 18M - 12 | 18 | 3/4 | 15.1 | 27 | 30 | 24.4 | 22.0 | 46.0 | 56.1 |
| PAP-R 18M - 10 | 18 | 1 | 15.1 | 27 | 30 | 24.4 | 22.0 | 52.3 | 62.4 |

PAP-BR
Bulkhead Reducer

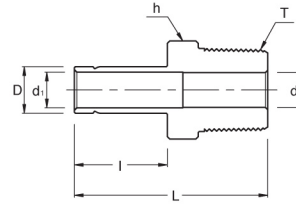


Connects Fractional Tubes To Fractional **PAP** Port

| Part No. | Tube O.D. D (inch) | d Min | Width Across Flat | | A | I | I ₁ | I ₂ | L | L ₁ | Panel Hole Drill Size | Panel Max. Thickness |
|----------------|--------------------|-------|-------------------|----------|-------|-------|----------------|----------------|--------|----------------|-----------------------|----------------------|
| | | | h (inch) | H (inch) | | | | | | | | |
| PAP-BR 2 - 2 | 1/8 | 2.03 | 1/2 | 7/16 | 12.70 | 42.92 | 24.63 | 13.46 | 49.53 | 31.24 | 8.33 | 12.70 |
| PAP-BR 4 - 4 | 1/4 | 4.82 | 5/8 | 9/16 | 15.24 | 48.51 | 26.16 | 15.74 | 55.88 | 33.52 | 11.50 | 10.16 |
| PAP-BR 6 - 6 | 3/8 | 7.11 | 3/4 | 11/16 | 16.76 | 53.84 | 29.46 | 17.52 | 61.21 | 36.83 | 14.68 | 11.17 |
| PAP-BR 8 - 8 | 1/2 | 10.41 | 15/16 | 7/8 | 22.86 | 62.73 | 31.75 | 23.11 | 72.89 | 41.91 | 19.44 | 12.70 |
| PAP-BR 10 - 10 | 5/8 | 12.70 | 1-1/16 | 1 | 24.38 | 65.02 | 32.51 | 24.70 | 75.18 | 42.67 | 22.62 | 12.70 |
| PAP-BR 16 - 16 | 1 | 20.32 | 1-5/8 | 1-1/2 | 31.24 | 88.13 | 45.21 | 31.70 | 100.33 | 57.40 | 33.73 | 19.05 |

• All dimensions in millimeters unless specified as "inch"

PAP-MA
Male Adapter



Connects Fractional PAP Port To Female NPT Thread

| Part No. | Tube O.D. D (inch) | T* (NPT) | d (Min) | d ₁ | Width Across Flat h (inch) | l | L |
|-----------------|--------------------|----------|---------|----------------|----------------------------|-------|-------|
| PAP-MA 2 - 2N | 1/8 | 1/8 | 4.82 | 2.28 | 7/16 | 13.45 | 29.50 |
| PAP-MA 2 - 4N | 1/8 | 1/4 | 7.11 | 2.28 | 9/16 | 13.45 | 34.80 |
| PAP-MA 3 - 2N | 3/16 | 1/8 | 4.82 | 3.04 | 7/16 | 14.20 | 30.22 |
| PAP-MA 3 - 4N | 3/16 | 1/4 | 7.11 | 3.04 | 9/16 | 14.20 | 35.56 |
| PAP-MA 4 - 2N | 1/4 | 1/8 | 4.82 | 4.82 | 7/16 | 15.75 | 31.80 |
| PAP-MA 4 - 4N | 1/4 | 1/4 | 4.82 | 4.82 | 9/16 | 15.75 | 37.08 |
| PAP-MA 4 - 6N | 1/4 | 3/8 | 4.82 | 4.82 | 11/16 | 15.75 | 37.84 |
| PAP-MA 4 - 8N | 1/4 | 1/2 | 4.82 | 4.82 | 7/8 | 15.75 | 43.43 |
| PAP-MA 5 - 2N | 5/16 | 1/8 | 4.82 | 6.35 | 7/16 | 16.80 | 32.76 |
| PAP-MA 5 - 4N | 5/16 | 1/4 | 6.35 | 6.35 | 9/16 | 16.80 | 38.10 |
| PAP-MA 6 - 2N | 3/8 | 1/8 | 4.82 | 7.11 | 7/16 | 17.50 | 33.50 |
| PAP-MA 6 - 4N | 3/8 | 1/4 | 7.11 | 7.11 | 9/16 | 17.50 | 38.90 |
| PAP-MA 6 - 6N | 3/8 | 3/8 | 7.11 | 7.11 | 11/16 | 17.50 | 39.60 |
| PAP-MA 6 - 8N | 3/8 | 1/2 | 7.11 | 7.11 | 7/8 | 17.50 | 45.20 |
| PAP-MA 8 - 4N | 1/2 | 1/4 | 7.11 | 9.90 | 9/16 | 23.20 | 44.50 |
| PAP-MA 8 - 6N | 1/2 | 3/8 | 9.90 | 9.90 | 11/16 | 23.20 | 45.20 |
| PAP-MA 8 - 8N | 1/2 | 1/2 | 9.90 | 9.90 | 7/8 | 23.20 | 50.80 |
| PAP-MA 10 - 6N | 5/8 | 3/8 | 9.90 | 12.70 | 11/16 | 24.70 | 47.40 |
| PAP-MA 10 - 8N | 5/8 | 1/2 | 11.94 | 12.70 | 7/8 | 24.70 | 52.30 |
| PAP-MA 10 - 12N | 5/8 | 3/4 | 14.98 | 12.70 | 1-1/16 | 24.70 | 52.30 |
| PAP-MA 12 - 8N | 3/4 | 1/2 | 11.94 | 14.98 | 7/8 | 24.70 | 52.30 |
| PAP-MA 12 - 12N | 3/4 | 3/4 | 14.98 | 14.98 | 1-1/16 | 24.70 | 52.30 |
| PAP-MA 12 - 16N | 3/4 | 1 | 20.32 | 14.98 | 1-3/8 | 24.70 | 57.91 |
| PAP-MA 14 - 12N | 7/8 | 3/4 | 14.98 | 17.27 | 1-1/16 | 26.70 | 54.30 |
| PAP-MA 16 - 12N | 1 | 3/4 | 15.74 | 20.32 | 1-1/16 | 31.70 | 58.70 |
| PAP-MA 16 - 16N | 1 | 1 | 20.32 | 20.32 | 1-3/8 | 31.70 | 66.00 |

* ISO Tapered Threads are available upon request

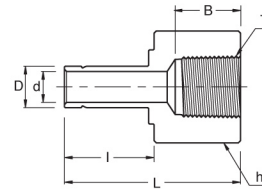
Connects Metric PAP Port To Female NPT Thread

| Part No. | Tube O.D. (D) | T* (NPT) | d (Min) | d ₁ | Width Across Flat (h) | l | L |
|------------------|---------------|----------|---------|----------------|-----------------------|-------|------|
| PAP-MA 6M - 2N | 6 | 1/8 | 4.6 | 4.6 | 12 | 15.75 | 32.8 |
| PAP-MA 6M - 4N | 6 | 1/4 | 4.6 | 4.6 | 14 | 15.75 | 38.1 |
| PAP-MA 7M - 4N | 8 | 1/4 | 6.3 | 6.3 | 14 | 16.50 | 39.1 |
| PAP-MA 10M - 4N | 10 | 1/4 | 7.7 | 7.7 | 14 | 17.50 | 39.9 |
| PAP-MA 10M - 6N | 10 | 3/8 | 7.7 | 7.7 | 18 | 17.50 | 40.6 |
| PAP-MA 10M - 8N | 10 | 1/2 | 11.9 | 7.7 | 22 | 17.50 | 46.2 |
| PAP-MA 12M - 4N | 12 | 1/4 | 7.1 | 9.1 | 16 | 23.50 | 46.5 |
| PAP-MA 12M - 8N | 12 | 1/2 | 11.9 | 9.1 | 22 | 23.50 | 52.0 |
| PAP-MA 18M - 12N | 18 | 3/4 | 15.9 | 13.9 | 27 | 24.90 | 54.8 |

* ISO Tapered Threads are available upon request

• All dimensions in millimeters unless specified as "inch"

PAP-FA
Female Adapter



Connects Fractional **PAP** Port To Male NPT Thread

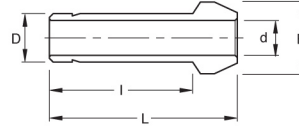
| Part No. | Tube O.D. D (inch) | T* (NPT) | d (Min) | Width Across Flat h (inch) | I | L |
|-----------------|--------------------|----------|---------|----------------------------|-------|-------|
| PAP-FA 2 - 2N | 1/8 | 1/8 | 2.28 | 9/16 | 13.45 | 31.50 |
| PAP-FA 2 - 4N | 1/8 | 1/4 | 2.28 | 3/4 | 13.45 | 35.30 |
| PAP-FA 3 - 2N | 3/16 | 1/8 | 3.04 | 9/16 | 14.20 | 32.00 |
| PAP-FA 3 - 4N | 3/16 | 1/4 | 3.04 | 3/4 | 14.20 | 35.81 |
| PAP-FA 4 - 2N | 1/4 | 1/8 | 4.82 | 9/16 | 15.75 | 33.02 |
| PAP-FA 4 - 4N | 1/4 | 1/4 | 4.82 | 3/4 | 15.75 | 37.10 |
| PAP-FA 4 - 6N | 1/4 | 3/8 | 4.82 | 7/8 | 15.75 | 39.37 |
| PAP-FA 4 - 8N | 1/4 | 1/2 | 4.82 | 1-1/16 | 15.75 | 45.50 |
| PAP-FA 5 - 2N | 5/16 | 1/8 | 6.35 | 9/16 | 16.80 | 34.29 |
| PAP-FA 5 - 4N | 5/16 | 1/4 | 6.35 | 3/4 | 16.80 | 37.59 |
| PAP-FA 6 - 2N | 3/8 | 1/8 | 7.11 | 9/16 | 17.50 | 34.29 |
| PAP-FA 6 - 4N | 3/8 | 1/4 | 7.11 | 3/4 | 17.50 | 38.10 |
| PAP-FA 6 - 6N | 3/8 | 3/8 | 7.11 | 7/8 | 17.50 | 40.38 |
| PAP-FA 6 - 8N | 3/8 | 1/2 | 7.11 | 1-1/16 | 17.50 | 46.73 |
| PAP-FA 8 - 4N | 1/2 | 1/4 | 9.90 | 3/4 | 23.20 | 43.43 |
| PAP-FA 8 - 6N | 1/2 | 3/8 | 9.90 | 7/8 | 23.20 | 45.46 |
| PAP-FA 8 - 8N | 1/2 | 1/2 | 9.90 | 1-1/16 | 23.20 | 51.80 |
| PAP-FA 10 - 6N | 5/8 | 3/8 | 12.70 | 7/8 | 24.70 | 48.26 |
| PAP-FA 10 - 8N | 5/8 | 1/2 | 12.70 | 1-1/16 | 24.70 | 53.08 |
| PAP-FA 12 - 8N | 3/4 | 1/2 | 14.98 | 1-1/16 | 24.70 | 52.83 |
| PAP-FA 12 - 12N | 3/4 | 3/4 | 14.98 | 1-5/16 | 24.70 | 54.86 |
| PAP-FA 12 - 16N | 3/4 | 1 | 14.98 | 1-5/8 | 24.70 | 58.42 |
| PAP-FA 14 - 12N | 7/8 | 3/4 | 17.27 | 1-5/16 | 26.70 | 57.15 |
| PAP-FA 16 - 12N | 1 | 3/4 | 20.32 | 1-5/16 | 31.70 | 60.70 |
| PAP-FA 16 - 16N | 1 | 1 | 20.32 | 1-5/8 | 31.70 | 64.26 |

Connects Metric **PAP** Port To Male NPT Thread

| Part No. | Tube O.D. (D) | T* (NPT) | d (Min) | Width Across Flat (h) | I | L |
|------------------|---------------|----------|---------|-----------------------|-------|------|
| PAP-FA 3M - 2N | 3 | 1/8 | 1.8 | 14 | 13.15 | 31.2 |
| PAP-FA 6M - 2N | 6 | 1/8 | 4.6 | 14 | 15.75 | 32.5 |
| PAP-FA 6M - 4N | 6 | 1/4 | 4.6 | 19 | 15.75 | 37.1 |
| PAP-FA 8M - 4N | 8 | 1/4 | 6.3 | 19 | 16.50 | 37.6 |
| PAP-FA 10M - 4N | 10 | 1/4 | 7.7 | 19 | 17.50 | 38.1 |
| PAP-FA 10M - 6N | 10 | 3/8 | 7.7 | 22 | 17.50 | 40.1 |
| PAP-FA 10M - 8N | 10 | 1/2 | 7.7 | 27 | 17.50 | 46.5 |
| PAP-FA 12M - 4N | 12 | 1/4 | 9.1 | 19 | 23.50 | 43.7 |
| PAP-FA 12M - 6N | 12 | 3/8 | 9.1 | 22 | 23.50 | 46.0 |
| PAP-FA 12M - 8N | 12 | 1/2 | 9.1 | 27 | 23.50 | 52.3 |
| PAP-FA 18M - 12N | 18 | 3/4 | 13.9 | 32 | 24.90 | 54.8 |

* All dimensions in millimeters unless specified as "inch"

PAP-PC
Port Connector



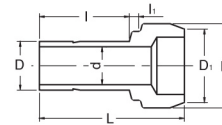
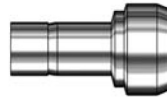
Connects Fractional PAP Ports

| Part No. | Tube O.D.(D) (inch) | d (Min) | E | I | L |
|-------------|---------------------|---------|-------|-------|-------|
| PAP-PC - 2 | 1/8 | 2.28 | 6.09 | 15.75 | 22.35 |
| PAP-PC - 4 | 1/4 | 4.82 | 9.39 | 18.79 | 24.63 |
| PAP-PC - 5 | 5/16 | 6.35 | 10.92 | 20.06 | 25.90 |
| PAP-PC - 6 | 3/8 | 7.11 | 12.70 | 20.32 | 26.16 |
| PAP-PC - 8 | 1/2 | 9.90 | 15.74 | 25.90 | 35.81 |
| PAP-PC - 12 | 3/4 | 14.98 | 22.09 | 27.68 | 37.33 |
| PAP-PC - 16 | 1 | 20.32 | 28.44 | 34.54 | 48.00 |

Connects Metric PAP Ports

| Part No. | Tube O.D. (D) | d (Min) | E | I | L |
|--------------|---------------|---------|------|------|------|
| PAP-PC - 3M | 3 | 2.1 | 6.0 | 15.7 | 22.2 |
| PAP-PC - 6M | 6 | 4.4 | 9.0 | 18.7 | 24.6 |
| PAP-PC - 8M | 8 | 6.3 | 11.0 | 20.0 | 25.9 |
| PAP-PC - 10M | 10 | 8.2 | 13.1 | 20.2 | 26.1 |
| PAP-PC - 12M | 12 | 9.1 | 15.0 | 26.0 | 35.8 |
| PAP-PC - 16M | 16 | 12.7 | 19.0 | 27.6 | 37.4 |

PAP-RPC
Reducing Port Connector

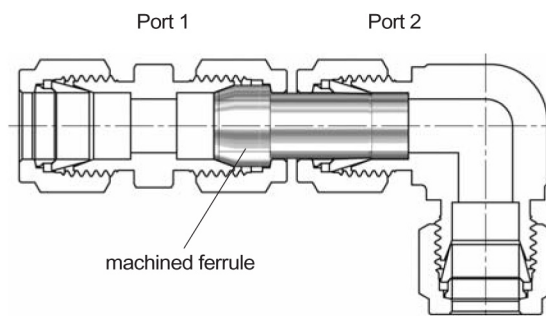


Connects Fractional PAP Port To Male AN

| Part No. | Tube O.D. D ₁ (inch) | Reduced Tube O.D. D (inch) | d | E | I | h | L |
|-----------------|---------------------------------|----------------------------|-------|-------|-------|------|-------|
| PAP-RPC 2 - 1 | 1/8 | 1/16 | 0.76 | 6.09 | 8.63 | 2.03 | 17.27 |
| PAP-RPC 4 - 1 | 1/4 | 1/16 | 0.76 | 9.39 | 8.63 | 3.55 | 18.03 |
| PAP-RPC 4 - 2 | 1/4 | 1/8 | 2.28 | 9.39 | 13.46 | 3.30 | 22.60 |
| PAP-RPC 6 - 2 | 3/8 | 1/8 | 2.28 | 12.70 | 13.46 | 3.81 | 23.11 |
| PAP-RPC 6 - 4 | 3/8 | 1/4 | 4.82 | 12.70 | 15.74 | 3.30 | 24.89 |
| PAP-RPC 8 - 4 | 1/2 | 1/4 | 4.82 | 15.74 | 15.74 | 3.81 | 29.21 |
| PAP-RPC 8 - 6 | 1/2 | 3/8 | 7.11 | 15.74 | 17.52 | 3.30 | 30.48 |
| PAP-RPC 12 - 8 | 3/4 | 1/2 | 9.90 | 22.09 | 24.38 | 3.81 | 37.84 |
| PAP-RPC 16 - 8 | 1 | 1/2 | 9.90 | 28.44 | 24.38 | 4.82 | 42.67 |
| PAP-RPC 16 - 12 | 1 | 3/4 | 14.98 | 28.44 | 25.90 | 4.06 | 43.43 |

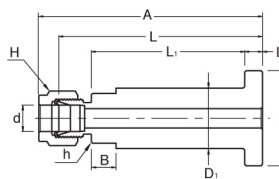
* ISO Tapered Threads are available upon request

Installation Instructions
Port Connector



• All dimensions in millimeters unless specified as "inch"

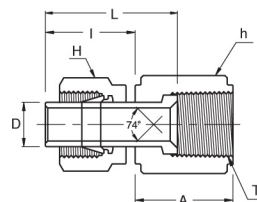
PAP-FTC
Flange Lapped
 Tubes Connector



Connects Fractional Tubes

| Part No. | Tube Size (inch) | Flange Seat | Dimensions | | | | | | | | | |
|----------------|------------------|-------------|------------|-----|----------------|------|-----|----------|----------|------|----------------|---------|
| | | | A | B | L ₁ | L | I | h (inch) | H (inch) | D | D ₁ | d (Min) |
| PAP-FTC 4 - SM | 1/4 | SM | 80.8 | 8.9 | 56.5 | 74.9 | 6.5 | 11/16 | 9/16 | 34.5 | 21.1 | 4.8 |
| PAP-FTC 4 - SR | 1/4 | SR | 80.8 | 8.9 | 56.5 | 74.9 | 6.5 | 11/16 | 9/16 | 34.5 | 21.1 | 4.8 |
| PAP-FTC 6 - SM | 3/8 | SM | 82.3 | 8.9 | 56.5 | 74.9 | 6.5 | 11/16 | 11/16 | 34.5 | 21.1 | 7.1 |
| PAP-FTC 6 - SR | 3/8 | SR | 82.3 | 8.9 | 56.5 | 74.9 | 6.5 | 11/16 | 11/16 | 34.5 | 21.1 | 7.1 |
| PAP-FTC 8 - SM | 1/2 | SM | 85.1 | 8.9 | 56.5 | 74.9 | 6.5 | 3/4 | 7/8 | 34.5 | 21.1 | 10.4 |
| PAP-FTC 8 - SR | 1/2 | SR | 85.1 | 8.9 | 56.5 | 74.9 | 6.5 | 3/4 | 7/8 | 34.5 | 21.1 | 10.4 |

PAP-AF
An Flare



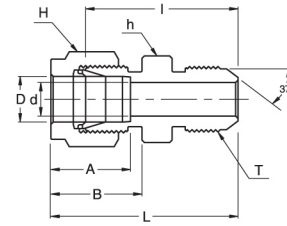
Connects Fractional PAP Port To Male AN

| Part No. | Tube O.D. D (inch) | AN Tube Flare Size | Straight Thread T (U) | Width Across Flat | | A | I | L |
|---------------|--------------------|--------------------|-----------------------|-------------------|----------|-------|-------|-------|
| | | | | h (inch) | H (inch) | | | |
| PAP-AF 2 - 2U | 1/8 | 1/8 | 5/16-24 | 3/8 | 7/16 | 13.71 | 13.46 | 18.54 |
| PAP-AF 2 - 4U | 1/8 | 1/4 | 7/16-20 | 9/16 | 7/16 | 15.74 | 13.46 | 19.05 |
| PAP-AF 4 - 4U | 1/4 | 1/4 | 7/16-20 | 9/16 | 9/16 | 15.74 | 15.74 | 21.33 |
| PAP-AF 6 - 6U | 3/8 | 3/8 | 9/16-18 | 11/16 | 11/16 | 18.28 | 17.52 | 24.89 |
| PAP-AF 8 - 8U | 1/2 | 1/2 | 3/4-16 | 7/8 | 7/8 | 21.59 | 23.11 | 31.75 |

• All dimensions in millimeters unless specified as "inch"

PAP-AU

An Union

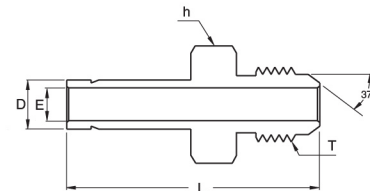
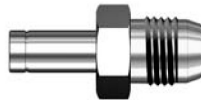


Connects Fractional Tubes To An Flared Tubes

| Part No. | Tube O.D. D (inch) | AN Tube Flare Size (inch) | Straight Thread T (U) | d Min | Width Across Flat | | A | B | I | L |
|-----------------|--------------------|---------------------------|-----------------------|-------|-------------------|----------|-------|-------|-------|-------|
| | | | | | h (inch) | H (inch) | | | | |
| PAP-AU 4 - 2U | 1/8 | 1/8 | 5/16-24 | 1.52 | 7/16 | 7/16 | 12.70 | 15.24 | 25.65 | 32.25 |
| PAP-AU 4 - 4U | 1/8 | 1/4 | 7/16-20 | 2.28 | 1/2 | 7/16 | 12.70 | 15.24 | 28.44 | 35.05 |
| PAP-AU 4 - 4U | 1/4 | 1/4 | 7/16-20 | 4.31 | 1/2 | 9/16 | 15.24 | 17.78 | 30.22 | 37.59 |
| PAP-AU 5 - 5U | 5/16 | 5/16 | 1/2-20 | 5.84 | 9/16 | 5/8 | 16.25 | 18.54 | 30.98 | 38.35 |
| PAP-AU 6 - 4U | 3/8 | 1/4 | 7/16-20 | 4.31 | 5/8 | 11/16 | 16.76 | 19.30 | 32.25 | 39.62 |
| PAP-AU 6 - 6U | 3/8 | 3/8 | 9/16-18 | 7.11 | 5/8 | 11/16 | 16.76 | 19.30 | 32.25 | 39.62 |
| PAP-AU 8 - 8U | 1/2 | 1/2 | 3/4-16 | 9.90 | 13/16 | 7/8 | 22.86 | 21.84 | 35.81 | 45.97 |
| PAP-AU 12 - 12U | 3/4 | 3/4 | 1-1/16-12 | 15.49 | 1-1/8 | 1-1/8 | 24.38 | 21.84 | 43.18 | 53.34 |
| PAP-AU 16 - 16U | 1 | 1 | 1-5/16-12 | 21.33 | 1-3/8 | 1-1/2 | 31.24 | 26.41 | 49.27 | 61.46 |

PAP-AA

An Adapter

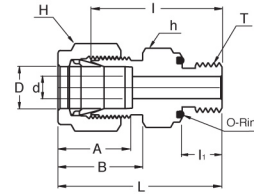


Connects Fractional PAP Port To AN Flared Tubes

| Part No. | Tube O.D. D (inch) | AN Tube Flare Size (inch) | Straight Thread T (U) | Width Across Flat h (inch) | E | L |
|-----------------|--------------------|---------------------------|-----------------------|----------------------------|-------|-------|
| PAP-AA 4 - 4U | 1/4 | 1/4 | 7/16-20 | 1/2 | 4.82 | 37.08 |
| PAP-AA 5 - 4U | 3/8 | 1/4 | 7/16-20 | 1/2 | 7.11 | 38.86 |
| PAP-AA 6 - 6U | 3/8 | 3/8 | 9/16-18 | 5/8 | 7.11 | 39.62 |
| PAP-AA 8 - 8U | 1/2 | 1/2 | 3/4-16 | 13/16 | 9.90 | 48.51 |
| PAP-AA 12 - 12U | 3/4 | 3/4 | 1-1/16-12 | 1-1/8 | 14.98 | 56.13 |
| PAP-AA 16 - 16U | 1 | 1 | 1-5/16-12 | 1-3/8 | 20.32 | 65.53 |

• All dimensions in millimeters unless specified as "inch"

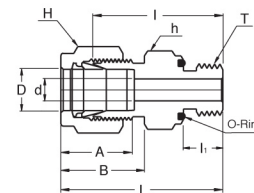
PAP-OSC
O-Seal Straight
Thread Connector



Connects Fractional Tube To Female Straight Thread

| Part No. | Tube O.D. D (inch) | Straight Thread T (U) | d Min | Width Across Flat | | A | B | I | I ₁ | L | O-Ring Uniform Size Number |
|------------------|--------------------|-----------------------|-------|-------------------|----------|-------|-------|-------|----------------|-------|----------------------------|
| | | | | h (inch) | H (inch) | | | | | | |
| PAP-OSC 2 - 2U | 1/8 | 5/16-24 | 2.28 | 9/16 | 7/16 | 12.70 | 15.24 | 26.16 | 8.63 | 32.76 | -011 |
| PAP-OSC 3 - 3U | 3/16 | 3/8-24 | 3.05 | 5/8 | 1/2 | 13.71 | 16.00 | 27.68 | 9.65 | 34.29 | -012 |
| PAP-OSC 4 - 4U | 1/4 | 7/16-20 | 4.82 | 3/4 | 9/16 | 15.24 | 17.78 | 30.98 | 10.41 | 38.35 | -111 |
| PAP-OSC 5 - 5U | 5/16 | 1/2-20 | 6.35 | 7/8 | 5/8 | 16.25 | 18.54 | 33.27 | 11.17 | 40.64 | -112 |
| PAP-OSC 6 - 6U | 3/8 | 9/16-18 | 7.11 | 15/16 | 11/16 | 16.76 | 19.30 | 35.05 | 11.93 | 42.41 | -114 |
| PAP-OSC 8 - 8U | 1/2 | 3/4-16 | 10.41 | 1-1/8 | 7/8 | 22.86 | 21.84 | 35.81 | 11.93 | 45.97 | -116 |
| PAP-OSC 12 - 12U | 3/4 | 1-1/16-12 | 15.75 | 1-1/2 | 1-1/8 | 24.38 | 21.84 | 42.16 | 14.22 | 52.32 | -215 |
| PAP-OSC 16 - 16U | 1 | 1-5/16-12 | 22.35 | 1-3/4 | 1-1/2 | 31.24 | 26.41 | 45.97 | 14.22 | 58.16 | -219 |

PAP-OPC
O-Seal Pipe
Thread Connector

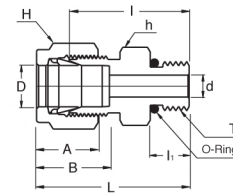
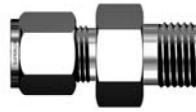


Connects Fractional Tube To Female NPT Thread

| Part No. | Tube O.D. D (inch) | T* (NPT) | d Min | Width Across Flat | | A | B | I | I ₁ | L | O-Ring Uniform Size Number |
|----------------|--------------------|----------|-------|-------------------|----------|-------|-------|-------|----------------|-------|----------------------------|
| | | | | h (inch) | H (inch) | | | | | | |
| PAP-OPC 2 - 2N | 1/8 | 1/8 | 2.28 | 3/4 | 7/16 | 12.70 | 15.24 | 26.16 | 7.11 | 32.76 | -111 |
| PAP-OPC 4 - 2N | 1/4 | 1/8 | 4.82 | 3/4 | 9/16 | 15.24 | 17.78 | 27.68 | 7.11 | 35.05 | -111 |
| PAP-OPC 4 - 4N | 1/4 | 1/4 | 4.82 | 15/16 | 9/16 | 15.24 | 17.78 | 30.98 | 9.65 | 38.35 | -113 |
| PAP-OPC 6 - 4N | 3/8 | 1/4 | 7.11 | 15/16 | 11/16 | 16.76 | 19.30 | 32.51 | 9.65 | 39.87 | -113 |
| PAP-OPC 6 - 6N | 3/8 | 3/8 | 7.11 | 1-1/8 | 11/16 | 16.76 | 19.30 | 34.03 | 10.41 | 41.40 | -116 |
| PAP-OPC 6 - 8N | 3/8 | 1/2 | 7.11 | 1-5/16 | 11/16 | 16.76 | 19.30 | 39.62 | 13.46 | 46.99 | -212 |
| PAP-OPC 8 - 8N | 1/2 | 1/2 | 10.41 | 1-5/16 | 7/8 | 22.86 | 21.84 | 39.62 | 13.46 | 49.78 | -212 |

* All dimensions in millimeters unless specified as "inch"

PAP-SMC
SAE/MS Male Connector



Connects Fractional Tubes To SAE/MS Straight Thread Boss

| Part No. | Tube O.D. D (inch) | Straight Thread T (U) | d Min | Width Across Flat | | A | B | I | I ₁ | L | O-Ring Uniform Size Number |
|------------------|--------------------|-----------------------|-------|-------------------|----------|-------|-------|-------|----------------|-------|----------------------------|
| | | | | h (inch) | H (inch) | | | | | | |
| PAP-SMC 2 - 2U | 1/8 | 5/16-24 | 2.28 | 7/16 | 7/16 | 12.70 | 15.24 | 23.36 | 7.62 | 29.97 | 3-902 |
| PAP-SMC 4 - 4U | 1/4 | 7/16-20 | 4.82 | 9/16 | 9/16 | 15.24 | 17.78 | 26.67 | 9.14 | 34.03 | 3-904 |
| PAP-SMC 4 - 6U | 1/4 | 9/16-18 | 4.82 | 11/16 | 9/16 | 15.24 | 17.78 | 28.19 | 9.90 | 35.56 | 3-906 |
| PAP-SMC 4 - 8U | 1/4 | 3/4-16 | 4.82 | 7/8 | 9/16 | 15.24 | 17.78 | 30.22 | 11.17 | 37.59 | 3-908 |
| PAP-SMC 4 - 10U | 1/4 | 7/8-14 | 4.82 | 1 | 9/16 | 15.24 | 17.78 | 33.27 | 12.70 | 40.64 | 3-910 |
| PAP-SMC 5 - 5U | 5/16 | 1/2-20 | 6.35 | 5/8 | 5/8 | 16.25 | 18.54 | 27.43 | 9.14 | 34.79 | 3-905 |
| PAP-SMC 6 - 4U | 3/8 | 7/16-20 | 5.08 | 5/8 | 11/16 | 16.76 | 19.30 | 28.19 | 9.14 | 35.56 | 3-904 |
| PAP-SMC 6 - 6U | 3/8 | 9/16-18 | 7.11 | 11/16 | 11/16 | 16.76 | 19.30 | 29.71 | 9.90 | 37.08 | 3-906 |
| PAP-SMC 6 - 8U | 3/8 | 3/4-16 | 7.11 | 7/8 | 11/16 | 16.76 | 19.30 | 31.75 | 11.17 | 39.11 | 3-908 |
| PAP-SMC 6 - 10U | 3/8 | 7/8-14 | 7.11 | 1 | 11/16 | 16.76 | 19.30 | 34.79 | 12.70 | 42.16 | 3-910 |
| PAP-SMC 8 - 6U | 1/2 | 9/16-18 | 7.11 | 13/16 | 7/8 | 22.86 | 21.84 | 28.95 | 9.90 | 39.11 | 3-906 |
| PAP-SMC 8 - 8U | 1/2 | 3/4-16 | 10.41 | 7/8 | 7/8 | 22.86 | 21.84 | 31.75 | 11.17 | 41.91 | 3-908 |
| PAP-SMC 8 - 10U | 1/2 | 7/8-14 | 10.41 | 1 | 7/8 | 22.86 | 21.84 | 34.79 | 12.70 | 44.95 | 3-910 |
| PAP-SMC 8 - 13U | 1/2 | 1-1/16-12 | 10.41 | 1-1/4 | 7/8 | 22.86 | 21.84 | 38.86 | 14.98 | 49.02 | 3-912 |
| PAP-SMC 10 - 8U | 5/8 | 3/4-16 | 10.66 | 15/16 | 1 | 24.38 | 21.84 | 31.75 | 11.17 | 41.91 | 3-908 |
| PAP-SMC 10 - 10U | 5/8 | 7/8-14 | 12.70 | 1 | 1 | 24.38 | 21.84 | 35.05 | 12.70 | 45.21 | 3-910 |
| PAP-SMC 12 - 8U | 3/4 | 3/4-16 | 10.66 | 1-1/16 | 1-1/8 | 24.38 | 21.84 | 35.81 | 11.17 | 45.97 | 3-908 |
| PAP-SMC 12 - 12U | 3/4 | 1-1/16-12 | 15.74 | 1-1/4 | 1-1/8 | 24.38 | 21.84 | 38.86 | 14.98 | 49.02 | 3-912 |
| PAP-SMC 14 - 14U | 7/8 | 1-3/16-12 | 18.28 | 1-3/8 | 1-1/4 | 25.90 | 21.84 | 38.86 | 14.98 | 49.02 | 3-914 |
| PAP-SMC 16 - 12U | 1 | 1-1/16-12 | 16.76 | 1-3/8 | 1-1/2 | 31.24 | 26.41 | 41.14 | 14.98 | 53.34 | 3-912 |
| PAP-SMC 16 - 16U | 1 | 1-5/16-12 | 22.35 | 1-1/2 | 1-1/2 | 31.24 | 26.41 | 42.16 | 14.98 | 54.35 | 3-916 |

• All dimensions in millimeters unless specified as "inch"