

Notes on Sheet 4

SUBMITTED FOR APPROVAL


LIST OF MATERIAL

| ITEM | QTY | DESCRIPTION | MATERIAL |
|------|-----|----------------------|--------------|
| 6 | 4 | HOUSING BOLTING | C'STEEL |
| 5 | 4 | SPIDER STRAP BOLTING | C'STEEL |
| 4 | 2 | LEG | A366 C'STEEL |
| 3 | 4 | SPIDER | A366 C'STEEL |
| 2 | 4 | SPIDER STRAP | A366 C'STEEL |
| 1 | 2 | HOUSING | A366 C'STEEL |

**9500 SERIES
COPPER TUBE ALIGNMENT GUIDES**



Hyspan Precision Products, Inc. Tel 619.421.1355
 1685 Brandywine Avenue Fax 619.421.1702
 Chula Vista, CA 91911.....sales@hyspan.com

| ITEM | PART NUMBER | COPPER TUBE SIZE (NOM) | ACTUAL TUBE OD (IN) | QTY | INSULATION THICKNESS (IN) | AXIAL TRAVEL E (IN) | HOUSING NUMBER | CENTER-LINE HEIGHT D (IN) | DIMENSION (IN) | | | | | | WEIGHT (LB) |
|--|-------------|------------------------|---------------------|-----|---------------------------|---------------------|---|---------------------------|----------------|---|------|-------|--------------|-------|-------------|
| | | | | | | | | | A | B | C | L | W | H | |
| | 9512-2.03-3 | 3/4 | 7/8 | | 2.03 | 3 | 1 | 3.5 | 8.44 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9512-2.56-3 | 3/4 | 7/8 | | 2.56 | 3 | 2 | 3.88 | 9.50 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9512-3.09-6 | 3/4 | 7/8 | | 3.09 | 6 | 4 | 4.88 | 10.63 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9512-3.84-6 | 3/4 | 7/8 | | 3.84 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9512-4.65-6 | 3/4 | 7/8 | | 4.65 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9516-1.90-3 | 1 | 1 1/8 | | 1.90 | 3 | 1 | 3.5 | 8.44 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9516-2.44-3 | 1 | 1 1/8 | | 2.44 | 3 | 2 | 3.88 | 9.50 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9516-2.96-6 | 1 | 1 1/8 | | 2.96 | 6 | 4 | 4.88 | 10.63 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9516-3.71-6 | 1 | 1 1/8 | | 3.71 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9516-4.52-6 | 1 | 1 1/8 | | 4.52 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9520-1.77-3 | 1 1/4 | 1 3/8 | | 1.77 | 3 | 1 | 3.5 | 8.44 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9520-2.31-3 | 1 1/4 | 1 3/8 | | 2.31 | 3 | 2 | 3.88 | 9.50 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9520-2.84-6 | 1 1/4 | 1 3/8 | | 2.84 | 6 | 4 | 4.88 | 10.63 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9520-3.59-6 | 1 1/4 | 1 3/8 | | 3.59 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9520-4.40-6 | 1 1/4 | 1 3/8 | | 4.40 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9523-1.65-3 | 1 1/2 | 1 5/8 | | 1.65 | 3 | 1 | 3.5 | 8.44 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9523-2.18-3 | 1 1/2 | 1 5/8 | | 2.18 | 3 | 2 | 3.88 | 9.50 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9523-2.71-6 | 1 1/2 | 1 5/8 | | 2.71 | 6 | 4 | 4.88 | 10.63 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9523-3.46-6 | 1 1/2 | 1 5/8 | | 3.46 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9523-4.27-6 | 1 1/2 | 1 5/8 | | 4.27 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9529-1.93-3 | 2 | 2 1/8 | | 1.93 | 3 | 2 | 3.88 | 9.50 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9529-2.46-6 | 2 | 2 1/8 | | 2.46 | 6 | 4 | 4.88 | 10.63 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9529-3.21-6 | 2 | 2 1/8 | | 3.21 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9529-4.02-6 | 2 | 2 1/8 | | 4.02 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9529-5.53-6 | 2 | 2 1/8 | | 5.53 | 6 | 7 | 8.5 | 17.38 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| | 9533-1.65-3 | 2 1/2 | 2 5/8 | | 1.65 | 3 | 2 | 3.88 | 9.50 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9533-2.18-6 | 2 1/2 | 2 5/8 | | 2.18 | 6 | 4 | 4.88 | 10.63 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9533-2.93-6 | 2 1/2 | 2 5/8 | | 2.93 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9533-3.74-6 | 2 1/2 | 2 5/8 | | 3.74 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9533-5.25-6 | 2 1/2 | 2 5/8 | | 5.25 | 6 | 7 | 8.5 | 17.38 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| | 9537-1.93-6 | 3 | 3 1/8 | | 1.93 | 6 | 4 | 4.88 | 10.63 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9537-2.68-6 | 3 | 3 1/8 | | 2.68 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9537-3.49-6 | 3 | 3 1/8 | | 3.49 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9537-5.00-6 | 3 | 3 1/8 | | 5.00 | 6 | 7 | 8.5 | 17.38 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| | 9545-2.18-6 | 4 | 4 1/8 | | 2.18 | 6 | 5 | 5.5 | 12.13 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9545-2.99-6 | 4 | 4 1/8 | | 2.99 | 6 | 6 | 6.5 | 13.75 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9545-4.50-6 | 4 | 4 1/8 | | 4.50 | 6 | 7 | 8.5 | 17.38 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| FOR 9500 SERIES WITH 45 DEGREE HOUSING, SEE PAGES 3-4 | | | | | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 9500 SERIES COPPER TUBE ALIGNMENT GUIDES | | | | | | |  | | | Hyspan Precision Products, Inc. Tel 619-421-1355 1685 Brandywine Avenue Fax 619-421-1702 Chula Vista, CA 91911 sales@hyspan.com | | | | | |
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| ITEM | PART NUMBER | COPPER TUBE SIZE (NOM) | ACTUAL TUBE OD (IN) | QTY | INSULATION THICKNESS (IN) | AXIAL TRAVEL E (IN) | HOUSING # | CENTER-LINE HEIGHT D (IN) | DIMENSION (IN) | | | | | | WEIGHT (LB) |
|------|----------------|------------------------|---------------------|-----|---------------------------|---------------------|-----------|---------------------------|----------------|-------|------|-------|-----|-------|-------------|
| | | | | | | | | | F | B | C | L | W | H | |
| | 9512-2.03-3-45 | 3/4 | 7/8 | | 2.03 | 3 | 1 | 3.5 | 5.77 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9512-2.56-3-45 | 3/4 | 7/8 | | 2.56 | 3 | 2 | 3.88 | 6.84 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9512-3.09-6-45 | 3/4 | 7/8 | | 3.09 | 6 | 4 | 4.88 | 8.00 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9512-3.84-6-45 | 3/4 | 7/8 | | 3.84 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9512-4.65-6-45 | 3/4 | 7/8 | | 4.65 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9516-1.90-3-45 | 1 | 1 1/8 | | 1.90 | 3 | 1 | 3.5 | 5.77 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9516-2.44-3-45 | 1 | 1 1/8 | | 2.44 | 3 | 2 | 3.88 | 6.84 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9516-2.96-6-45 | 1 | 1 1/8 | | 2.96 | 6 | 4 | 4.88 | 8.00 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9516-3.71-6-45 | 1 | 1 1/8 | | 3.71 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9516-4.52-6-45 | 1 | 1 1/8 | | 4.52 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9520-1.77-3-45 | 1 1/4 | 1 3/8 | | 1.77 | 3 | 1 | 3.5 | 5.77 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9520-2.31-3-45 | 1 1/4 | 1 3/8 | | 2.31 | 3 | 2 | 3.88 | 6.84 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9520-2.84-6-45 | 1 1/4 | 1 3/8 | | 2.84 | 6 | 4 | 4.88 | 8.00 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9520-3.59-6-45 | 1 1/4 | 1 3/8 | | 3.59 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9520-4.40-6-45 | 1 1/4 | 1 3/8 | | 4.40 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9523-1.65-3-45 | 1 1/2 | 1 5/8 | | 1.65 | 3 | 1 | 3.5 | 5.77 | 6.34 | 3.00 | 7.06 | 1.5 | 0.625 | 8 |
| | 9523-2.18-3-45 | 1 1/2 | 1 5/8 | | 2.18 | 3 | 2 | 3.88 | 6.84 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9523-2.71-6-45 | 1 1/2 | 1 5/8 | | 2.71 | 6 | 4 | 4.88 | 8.00 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9523-3.46-6-45 | 1 1/2 | 1 5/8 | | 3.46 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9523-4.27-6-45 | 1 1/2 | 1 5/8 | | 4.27 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9529-1.93-3-45 | 2 | 2 1/8 | | 1.93 | 3 | 2 | 3.88 | 6.84 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9529-2.46-6-45 | 2 | 2 1/8 | | 2.46 | 6 | 4 | 4.88 | 8.00 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9529-3.21-6-45 | 2 | 2 1/8 | | 3.21 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9529-4.02-6-45 | 2 | 2 1/8 | | 4.02 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9529-5.53-6-45 | 2 | 2 1/8 | | 5.53 | 6 | 7 | 8.5 | 14.25 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| | 9533-1.65-3-45 | 2 1/2 | 2 5/8 | | 1.65 | 3 | 2 | 3.88 | 6.84 | 7.25 | 3.00 | 7.81 | 1.5 | 0.625 | 9 |
| | 9533-2.18-6-45 | 2 1/2 | 2 5/8 | | 2.18 | 6 | 4 | 4.88 | 8.00 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9533-2.93-6-45 | 2 1/2 | 2 5/8 | | 2.93 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9533-3.74-6-45 | 2 1/2 | 2 5/8 | | 3.74 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9533-5.25-6-45 | 2 1/2 | 2 5/8 | | 5.25 | 6 | 7 | 8.5 | 14.25 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| | 9537-1.93-6-45 | 3 | 3 1/8 | | 1.93 | 6 | 4 | 4.88 | 8.00 | 8.81 | 6.00 | 6.75 | 4.0 | 0.625 | 14 |
| | 9537-2.68-6-45 | 3 | 3 1/8 | | 2.68 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9537-3.49-6-45 | 3 | 3 1/8 | | 3.49 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9537-5.00-6-45 | 3 | 3 1/8 | | 5.00 | 6 | 7 | 8.5 | 14.25 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| | 9545-2.18-6-45 | 4 | 4 1/8 | | 2.18 | 6 | 5 | 5.5 | 9.50 | 10.19 | 6.00 | 7.50 | 4.0 | 0.625 | 17 |
| | 9545-2.99-6-45 | 4 | 4 1/8 | | 2.99 | 6 | 6 | 6.5 | 11.12 | 12.00 | 6.00 | 7.16 | 4.0 | 0.625 | 20 |
| | 9545-4.50-6-45 | 4 | 4 1/8 | | 4.50 | 6 | 7 | 8.5 | 14.25 | 15.53 | 6.00 | 11.00 | 4.0 | 0.750 | 35 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

**9500 SERIES with 45 DEGREE HOUSING
COPPER TUBE ALIGNMENT GUIDES**



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PREPARED BY

DATE

SHEET 3 OF 4

| ITEM | PART NUMBER | COPPER TUBE SIZE (NOM) | ACTUAL TUBE OD (IN) | QTY | INSULATION THICKNESS (IN) | AXIAL TRAVEL E (IN) | HOUSING # | CENTER-LINE HEIGHT D (IN) | DIMENSION (IN) | | | | | | |
|------|-------------|------------------------|---------------------|-----|---------------------------|---------------------|-----------|---------------------------|----------------|---|---|---|---|---|-------------|
| | | | | | | | | | F | B | C | L | W | H | WEIGHT (LB) |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

NOTES:

APPLICATION: Hyspan Series 9500 Tube Alignment Guides are intended to maintain the longitudinal position of pipe centerlines without axial restraint. They are to be used in conjunction with hangers, rollers, or other supports that react the pipe and media weight.

CONSTRUCTION: All component parts are made from heavy gauge pressed steel and joined together by fusion welding. Bolt and mounting holes are precision located for ease of assembly and installation. ALL 304 stainless steel construction is available. ALL welding per ASME Boiler and Pressure Vessel Code Section IX.

FINISH: All surfaces are coated with a protective black enamel paint. The steel interface with the copper tube is coated with permanent heavy dielectric material. Hot dipped galvanized coating available.

INSTALLATION: The location and quantity of guides varies with each piping system and should be determined from recommendations for each expansion joint or compensator at the design conditions. The assembly and installation of each Hyspan guide must be in accordance with the drawings on this submittal for the maximum rated travel.

**9500 SERIES with 45 DEGREE HOUSING
COPPER TUBE ALIGNMENT GUIDES**



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