

**Pines Technology Statement of Compliance****PURCHASE DESCRIPTION FOR THE  
PROCUREMENT OF A PIPE AND CONDUIT  
BENDING MACHINE****1.0. SCOPE.**

**1.1 Scope.** The following purchase description establishes the minimum requirements for the procurement of a pipe and conduit bending machine. **Will Comply**

**2.0. APPLICABLE DOCUMENTS.**

**2.1 General.** The documents listed in this section are cited in section 3 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in section 3 of this specification, whether or not they are listed. **Will Comply**

**2.2 Government Documents.**

**2.2.1 Specifications, Standards, and Handbooks.** The following specification forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

**DEPARTMENT OF DEFENSE****Item Unique Identification Marking (IUD)**

MIL-STD-130N: Identification Marking of U.S. Military Property (DEC 2007)

(Application for copies should be addressed to Air Force Product Data Systems Modernization Standards (TMSS) Office, 554 ELSG/SBP, 4375 Chidlaw Road, Bldg. 262, Room S008, Wright-Patterson AFB, OH 45433-5006, Phone (937) 257-0870 or 0853)

**Will Comply**

**2.3 Order of Precedence.** In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulation unless a specific exemption has been obtained.

**Will Comply**

**3.0. REQUIREMENTS**

**3.1 Design Will Comply**

**3.2 Machine Size and Capacity.** Alternate Equal or exceeds. Pines Motor horsepower is 15HP. Pines Basic Machine exceeds all listed Specs in Table 1. Pines Machine will bend all sizes from a minimum of 1D-5D. Some machine Constraints exist when a wiper die is utilized where 180 degree bending is not possible.

Table I

Bending Characteristic/Material	Capacity
Aluminum (6061) Ts = 25,000 psi	3.00" OD x .188" Wall Thickness x 2D CLR
Mild Steel (1010) Ts = 40,000 psi	3.00" OD x .109" Wall Thickness x 2D CLR
Stainless (304/321) Ts = 60,000 psi	3.00" OD x .065" Wall Thickness x 2D CLR
Pipe - IFS (A-106B) Ts - 60,000 psi	2" IPS OD x Schedule 80 x 3D CLR
Tube Diameter (Min - max)	no min to 3.00" OD max
Center Line Radius	15" Standard
Tube Length over Mandrel	120"
Direction of Bend	Clockwise
Drive System	20 Hp
Maximum Bend Angle	195°

**3.3 Tooling.** The machine shall include the following tooling that is required to have Full operational capacity. Alternate. Pines has provided 4 proposals to cover the tooling requirements. 2 Proposals for each machine offered. One proposal covers what the government has requested / The other proposal covers what is required to actually function. The items missing are highlighted in Yellow on the tooling "Required" proposals. An example of this is the missing 3.00" Collet Insert. 3.00" Tooling is requested yet the collet is missing.

Table II

Qty	Nomenclature	Description
1	Bend Die	.500 TOD X .500 CLR
1	Bend Die	.500 TOD X 1.000 CLR
1	Bend Die	.625 TOD X .625 CLR
1	Bend Die	.625 TOD X 1.250 CLR
1	Bend Die	.750 TOD X .750 CLR
1	Bend Die	.750 TOD X 1.500 CLR
1	Bend Die	.875 TOD X .875 CLR
1	Bend Die	.875 TOD X 1.750 CLR
1	Bend Die	1.000 TOD X 1.000 CLR
1	Bend Die	1.000 TOD X 2.000 CLR
1	Bend Die	1.125 TOD X 1.125 CLR
1	Bend Die	1.125 TOD X 2.250 CLR
1	Bend Die	1.250 TOD X 1.250 CLR
1	Bend Die	1.250 TOD X 2.500 CLR

1	Bend Die	1.375 TOD X 1.375 CLR
1	Bend Die	1.375 TOD X 1.750 CLR
1	Bend Die	1.500 TOD X 1.500 CLR
1	Bend Die	1.500 TOD X 3.000 CLR
1	Bend Die	1.625 TOD X 1.625 CLR
1	Bend Die	1.625 TOD X 3.250 CLR
1	Bend Die	1.750 TOD X 1.750 CLR
1	Bend Die	1.750 TOD X 3.500 CLR
1	Bend Die	1.875 TOD X 1.875 CLR

1	Bend Die	1.875 TOD X 3.750 CLR
1	Bend Die	2.000 TOD X 2.000 CLR
1	Bend Die	2.000 TOD X 4.000 CLR
1	Bend Die	3.000 TOD X 3.000 CLR
1	Bend Die	3.000 TOD X 6.000 CLR
1	Mandrel, BM	0.500-.035 1-BALL CHROME
1	Mandrel, BM	0.500-.049 1-BALL CHROME
1	Mandrel, BM	0.500-.065 PLUG CHROME
1	Mandrel, BM	0.625-.035 2-BALL CHROME
1	Mandrel, BM	0.625-.049 1-BALL CHROME
1	Mandrel, BM	0.625-.065 PLUG CHROME
1	Mandrel, BM	0.750-.049 2-BALL CHROME
1	Mandrel, BM	0.750-.065 1-BALL CHROME
1	Mandrel, BM	0.875-.065 1-BALL CHROME
1	Mandrel, BM	1.000-.065 2-BALL CHROME
1	Mandrel, BM	1.125-.065 2-BALL CHROME
1	Mandrel, BM	1.250-.065 2-BALL CHROME
1	Mandrel, BM	1.250-.095 1-BALL CHROME
1	Mandrel, BM	1.375-.065 3-BALL CHROME
1	Mandrel, BM	1.375-.095 1-BALL CHROME
1	Mandrel, BM	1.500-.065 3-BALL CHROME
1	Mandrel, BM	1.625-.065 3-BALL CHROME
1	Mandrel, BM	1.750-.065 3-BALL CHROME
1	Mandrel, BM	1.875-.065 3-BALL CHROME
1	Mandrel, BM	2.000-.065 3-BALL CHROME
1	Mandrel, BM	3.000-.065 4-BALL CHROME
1	Rod, Mandrel Assy.	5/16" 0
1	Rod, Mandrel Assy.	3/8" 0
1	Rod, Mandrel Assy.	5/8" 0
1	Rod, Mandrel Assy.	1" 0
1	Rod, Mandrel Assy.	1 3/4" 0
1	Clamp Die	.875 TOD
1	Clamp Die	1.000 TOD
1	Clamp Die	1.125 TOD
1	Clamp Die	1.250 TOD
1	Clamp Die	1.375 TOD
1	Clamp Die	1.500 TOD
1	Clamp Die	1.625 TOD

1	Clamp Die	1.750 TOD
1	Clamp Die	1.875 TOD
1	Clamp Die	2.000 TOD
1	Clamp Die	3.000 TOD
1	Clamp Die	1.500 TOD (P/N 950474-007)
1	Clamp Die	1.625 TOD (P/N 950474-009)
1	Clamp Die	1.750 TOD (P/N 950474-011)
1	Wiper Die	.625 TOD x .625 CLR
1	Wiper Die	.750 TOD x .750 CLR

1	Wiper Die	.875 TOD x .875 CLR
1	Wiper Die	1.000 TOD x 1.000 CLR
1	Wiper Die	1.125 TOD x 1.125 CLR
1	Wiper Die	1.250 TOD x 1.250 CLR
1	Wiper Die	1.375 TOD x 1.375 CLR
1	Wiper Die	1.500 TOD x 1.500 CLR
1	Wiper Die	1.500 TOD x 3.000 CLR
1	Wiper Die	1.625 TOD x 1.625 CLR
1	Wiper Die	1.625 TOD x 3.250 CLR
1	Wiper Die	1.750 TOD x 1.750 CLR
1	Wiper Die	1.750 TOD x 3.500 CLR
1	Wiper Die	1.875 TOD x 1.875 CLR
1	Wiper Die	1.875 TOD x 3.750 CLR
1	Wiper Die	2.000 TOD x 2.000 CLR
1	Wiper Die	2.000 TOD x 4.000 CLR
1	Wiper Die	3.000 TOD x 3.000 CLR
1	Wiper Die	3.000 TOD x 6.000 CLR
1	Wiper Die	.500 TOD x .500 CLR (P/N 970144-005)
1	Wiper Die	1.375 TOD x 1.750 CLR (P/N 970350-032)
1	Pressure Die	.500 TOD - 10" LG
1	Pressure Die	.625 TOD - 10" LG
1	Pressure Die	.750 TOD - 10" LG
1	Pressure Die	.875 TOD - 10" LG
1	Pressure Die	1.000 TOD - 10" LG
1	Pressure Die	1.125 TOD - 10" LG
1	Pressure Die	1.250 TOD - 10" LG
1	Pressure Die	1.375 TOD - 10" LG
1	Pressure Die	1.500 TOD - 10" LG
1	Pressure Die	1.625 TOD - 10" LG
1	Pressure Die	1.750 TOD - 18" LG
1	Pressure Die	1.875 TOD - 18" LG
1	Pressure Die	2.000 TOD - 18" LG
1	Pressure Die	3.000 TOD - 24" LG
1	Collet Insert	1/2 TOD
1	Collet Insert	5/8 TOD
1	Collet Insert	3/4 TOD
1	Collet Insert	7/8 TOD
1	Collet Insert	1 TOD

1	Collet Insert	1 1/8 TOD
1	Collet Insert	1 1/4 TOD
1	Collet Insert	1 3/8 TOD
1	Collet Insert	1 1/2 TOD
1	Collet Insert	1 5/8 TOD
1	Collet Insert	1 3/4 TOD
1	Collet Insert	1 7/8 TOD
1	Collet Insert	2 TOD

3.4

VIBB 12-11-1073

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**chine Features.** The machine shall include, but not be limited to, the following features.

- a. Synchro Carriage and Rail **Alternate Equal Three Axis Carriage Provided**
- b. Hydraulic Mandrel Extractor **Will Comply**
- c. Mandrel Lubrication **Will Comply**
- d. Wiper Die Bracket **Will Comply**
- e. Drop Away Clamp **Will Comply**
- f. Programmable Digital Controller **Will Comply**
- g. Three (3) Axis Bending with One (1) Powered Axis for the Degree of Bend (DOB) **Will Comply**

**3.5 Adjustment Equipment.** A tool kit with all equipment necessary for adjustment of the bender and installation of bending tooling shall be provided. **Will Comply Std Equipment.**

**3.6 Electrical Requirements.** The existing source voltage available at the facility is 240 V/ 3 Phase/ 60 Hz. The machine's electrical system shall be tolerant of voltage fluctuation often 10%. The electrical system shall be complete. This shall include any electrical transformer(s) that may be required to modify the existing source voltage to the proper operating voltage of the equipment. A properly rated and fused single disconnect device shall be utilized on the machine with means of lockout. **Will Comply**

**3.7 Identification Marking of Military Property.** An Item Unique Identification Marking (IUID) shall be provided in accordance with MIL-STD-130N and all applicable documents within the standard with Machine Readable Information (MRI) for item identification marking and automatic data capture. The application of Human Readable nformation (HRI) shall be used in combination with MRI and free text. **Will Comply. Please provide which construct is required.**

**3.8 Manuals.** Two (2) copies of the operations and maintenance manuals covering machine design, set-up and operating procedures and basic guides for tube bending shall be provided. **Will Comply. Pines Manuals are currently provided on CD. If printed manuals are required please advise.**

#### **4.0. QUALITY ASSURANCE.**

**4.1 Final Inspection/Acceptance.** Inspection and acceptance of the machine shall be at destination by the customer. Inspection and acceptance shall consist of a type and kind; quantity; condition. **Understood**