



Industrial Technology Virtual Learning

CTE

May 20th, 2020



Machine Technology 2

Purchasing Do-It Yourself Welders

May 20th, 2020

Objective: This lesson provides objective, informative and practical information into the common types of welders, certain manufactures of welders, safety equipment, basic welding equipment and purchasing a welder.

Bell Ringer

So you want to start welding at home in your garage or workshop?
Make a list of some of the equipment that you will need to get started.

Purchasing Do-It-Yourself Welders

Lesson April 22 , 2020 “Do-It-Yourself Welder Guide” familiarized you with each welding process and which one best fits your needs, let’s review the Four most common types of welding are;

- MIG- Which welder uses a wire welding electrode on a spool that is fed automatically at a constant pre-selected speed
- TIG- An arc welding process that uses a non-consumable tungsten electrode to produce the weld
- Arc/Stick/Rod-The process that uses an electric current flowing from a gap between the metal and the welding stick
- Flux Core Arc- A wire-feed process similar to MIG welding, but differs because it does not require a shielding gas

Manufactures

The Top Four Producers of Welding Equipment

- **Lincoln** The Lincoln Electric logo consists of a red square with the word "LINCOLN" in white capital letters inside a black rounded rectangle, and the word "ELECTRIC" in white capital letters inside a white rounded rectangle below it.
- **ESAB** The ESAB logo features the word "ESAB" in black capital letters on a yellow background, with a stylized black and white graphic of a welding torch or electrode tip above the text.
- **Miller** The Miller logo consists of a blue circle containing three white diagonal stripes, followed by the word "Miller" in black capital letters with a registered trademark symbol.
- **Hobart** The Hobart logo features a stylized orange and grey circular graphic on the left, followed by the word "HOBART" in orange capital letters and "WELDING PRODUCTS" in grey capital letters below it.

When buying a welder, consider the following factors:

- Primary power requirements - 110V vs 240V?
- Portability, size and weight -
- Welding output and duty cycle - The length of time that the welder can be used before it needs to cool within a period of ten minutes.
- Electrode/Wire selection -
- Shielding gas requirements – Renting tanks? Tank Storage, Flu Core?

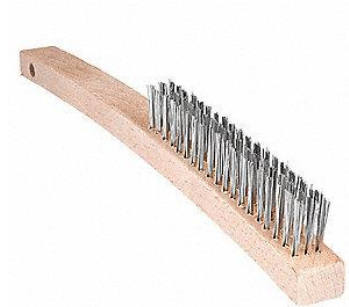
Basic Safety Equipment

- Safety Glasses
- Welding Bandana
- Welding Jacket
- Auto Darkening Helmet
- Welding Gloves
- Leather Shoes
- Cuffless Pants



Basic Accessories/Equipment

- Slag Hammer
- Wire Brush
- C-Clamps
- Tip Cleaner
- Flint Striker
- Linemen's Pliers
- Needle Nose Pliers
- Square



More Basic Accessories/Equipment

- Welding Curtain
- Ventilation
- Welding Table
- Welding Floor Mats
- Welding Magnets



References

- <https://toolsfocus.com/top-welding-machine-brands/>
- <https://training.esabna.com/mod/page/view.php?id=984>
- <https://makemoneywelding.com/17-must-have-welding-tools-for-beginners/>

Research Assignment

Use the information gained in lesson April 22 , 2020 “Do-It-Yourself Welder Guide,” and information in today's lesson to find the specific manufacture and model of the welder that you would like to purchase.

Manufacture _____

Type of Welder _____

Power Source _____

Price _____

Safety Equipment Cost

Please use the internet to look up the prices for the following pieces of safety equipment.

- Safety Glasses.....\$ _____
- Welding Bandana.....\$ _____
- Welding Jacket.....\$ _____
- Auto Darkening Helmet.....\$ _____
- Welding Gloves.....\$ _____
- Total.....\$ _____

Basic Welding Equipment/Assecories

Please use the internet to look up the prices for the following welding equipment.

- Slag Hammer.....\$ _____
- Wire Brush.....\$ _____
- C-Clamps.....\$ _____
- Tip Cleaner.....\$ _____
- Flint Striker.....\$ _____
- Linemen's Pliers.....\$ _____
- Needle Nose Pliers.....\$ _____
- Square.....\$ _____
- Welding Curtain.....\$ _____
- Ventilation.....\$ _____
- Welding Table.....\$ _____
- Welding Magnets.....\$ _____