WELDING

REQUIRED TOOLS, SAFETY EQUIPMENT & TEXTS

Updated 8/05/2021

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| **Oxy-Acetylene Welding (OAW) (For classes: Weld 101 and weld 102)** | | | | | | | |
| 1. Welding and cutting goggles shade #4 or #5 | | | | |  |  |  |
| 2. Light duty leather welding gloves. | | | |  |  |  |  |
| 3. Standard OAW tip cleaners. | | |  |  |  |  |  |
| 4. Spark lighter (striker). | | |  |  |  |  |  |
| 5. Safety glasses. (clear) | | |  |  |  |  |  |
| 6. Ear plugs. | |  |  |  |  |  |  |
| 7. Welding respirator, particle mask. | | | |  |  |  |  |
| 8. Pliers |  |  |  |  |  |  |  |
| 9. 2- Paint markers | |  |  |  |  |  |  |
| 10. 2- soapstone markers. | | |  |  |  |  |  |
| 11. Welding Tips for a series 100 Victor welding torch…# 0, #00, #1 | | | | | | |  |
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| **Shielded Metal Arc Welding (SMAW) (For classes: Weld 105, 106, 138, and 143)** | | | | | | | |
| 1. Welding helmet, electronic with full range of lens selection #8 - #13. (standard #10 flip front) | | | | | | | |
| 2. Heavy leather gloves. (consumable, 2-pairs) | | | | |  |  |  |
| 3. Leather welding jacket or sleeves. | | | |  |  |  |  |
| 4. Leather apron or chaps. | | |  |  |  |  |  |
| 5. Leather steel-toed work boots 8" high or higher. | | | | |  |  |  |
| 6. Slag hammer. | |  |  |  |  |  |  |
| 7. Wire brush. | |  |  |  |  |  |  |
| 8. Welders cap. | |  |  |  |  |  |  |
| 9. Vise grips. | |  |  |  |  |  |  |
| 10. 4 1/2" or 5" angle grinder. Twisted wire wheel & grinding disc wheels. | | | | | | | (extra wheels) |
| 11. Welders respirator/particle mask. | | | |  |  |  |  |
| 12. Flashlight. | |  |  |  |  |  |  |
| 13. 12' tape measure. | | |  |  |  |  |  |
| 14. 6" center punch. | |  |  |  |  |  |  |
| 15. 12" combination square. | | |  |  |  |  |  |
| 16. 10" adjustable wrench. | | |  |  |  |  |  |
| 17. 9-piece folding Allen wrench set 5/64" - 1/4". | | | | |  |  |  |
| 18. Scribe. |  |  |  |  |  |  |  |
| 19. 2- soapstones. | |  |  |  |  |  |  |
| 20. 2- paint pen markers. | | |  |  |  |  |  |
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| **Flux Core Arc Welding (FCAW-G) (For Classes: Weld 110 and 140)** | | | | | | | |
| *In addition to the above arc welding gear:* | | | | **Note...The following consumables must match.** | | | |
| *Bernard MIG/Dualsheild guns* | | |  |  |  |  |  |
| 1. Gas diffuser. | |  |  |  |  |  |  |
| 2. Insulator cap. | |  |  |  |  |  |  |
| 3. Contact tip. | |  |  |  |  |  |  |
| 4. Gas nozzle. | |  |  |  |  |  |  |
| 5. MIG pliers. | |  |  |  |  |  |  |
| **See below for sample part numbers.** | | | |  |  |  |  |
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| **Flux Core Arc Welding Self Shielded (FCAW-S) (For Classes: Weld 110 and 140)** | | | | | | | |
| Additional consumables for Lincoln innershield 350 / 400 amp guns. | | | | | | |  |
| 1. 60° gooseneck | | LIN KP 1928-1 | |  |  |  |  |
| 2. 5/64" contact tips. | | LIN KP 2100-4B1 | |  |  |  |  |
| 3. .072" contact tips. | | LIN KP 2100-1B1 | |  |  |  |  |
| 4. 1/16" contact tips. | | LIN KP 2100-2B1 | |  |  |  |  |
| 5. Tip insulator. | |  |  |  |  |  |  |
| 6. Hand shield. | |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Gas Metal Arc Welding (GMAW) (For Classes: Weld 111 and 140)** | | | | | | | |
| *In addition to the above arc welding gear:* | | | | **Note...The following consumables must match.** | | | |
| *Bernard MIG guns.* | |  |  |  |  |  |  |
| 1. Gas diffuser. | |  |  |  |  |  |  |
| 2. Insulator cap. | |  |  |  |  |  |  |
| 3. Contact tip. | |  |  |  |  |  |  |
| 4. Gas nozzle. | |  |  |  |  |  |  |
| 5. MIG pliers. | |  |  |  |  |  |  |
| **See below for sample part numbers.** | | | |  |  |  |  |
|  |  |  |  |  |  |  |  |
| **Gas Tungsten Arc Welding (GTAW) (For classes: Weld 114, 115, and Weld 142)** | | | | | | | |
| **The Following TIG consumables must fit our CK series 2 torches.** | | | | | | |  |
| Buy the following consumable parts individually or in the NW college CK TIG Kit. | | | | | | | |
| 1. 1-each 1/16", 3/23", 1/8" collet bodies. | | | | |  |  |  |
| 2. 1-each 1/16", 3/23", 1/8" collets.  3. 1-each 1/16", 3/23", 1/8" tungsten…red, gold, gray, green (for aluminum), or white (for aluminum. (gray least preferred)  4. Heat shield.  5. Back cap.  6. 1-each #4, #5, #6, and #7 gas nozzles.  7. 1-each #4, #5, #6 and #7 ceramic cups (non gas lens style)  8. 1-each #4, #5, #6 and #7 ceramic cups (for gas lenses) | | | | | | | |
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| **Sample parts for the GMAW and FCAW-G processes.** | | | | | | | |
| GMAW  Centerfire gas diffuser #D-1 | | |  |  |  |  |  |
| Centerfire 5/8" ID gas Nozzle #N5818C | | | | |  |  |  |
| Centerfire .035" T-035, .045" T-045, .052" T-052, 1/16" T-062 contact tips. | | | | | | |  |
| Anti-stick Nozzle spray | | |  |  |  |  |  |
| FCAW-G  Centerfire gas diffuser #D-1 | | | | | |  |  |
| Heavy-duty FasTip style Gas diffuser #D118 | | | | |  |  |  |
| Heavy duty FasTip contact tips for .035", .045", .052", 1/16" | | | | | | | |
| Copper nozzle 5/8" #N51C58 | | | |  |  |  |  |
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| **Required Text Books For Welding Theory** | | | | | | | |

Weld 130 (winter only) - Blueprint Book is OER (The book is provided through Canvas for free)

Weld 104 (fall only), 135 (winter only), and 136 (spring only) (available in the RTC bookstore):

NCCER Welding Trainee guide Level 1 Fifth edition ISBN: 9780134163116

NCCER Welding Trainee guide Level 2 Fifth edition ISBN: 9780134163109

NCCER Welding Trainee guide Level 4 Fifth edition ISBN: 9780134514222

Welding tools can be bought at:

Central Welding Supply:

1200 Union Ave NE, Renton, WA 98059 -- 425 255 5926 (this one is the closest to the college)

If you mention you are an RTC student you can get a 10% discount on your purchase.

Instructors:

Elisa Stuart [Estuart@rtc.edu](mailto:Estuart@rtc.edu) (425) 235- 2352 X 2483

Rick Geist [rgeist@rtc.edu](mailto:rgeist@rtc.edu) (425) 235-2341

3000 NE Fourth St

Renton, WA 98056

This is the official Renton Technical College tool list, if you have any questions please contact the instructors above.