Gas Pressure Welding Machine Catalog
### MODEL DSP-120WFN

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRESSURE RANGE</strong></td>
<td>D19 – D51 (REBAR DIAMETER) SD345 – SD490 (REBAR HARDNESS)</td>
</tr>
<tr>
<td><strong>MOTOR &amp; OUTPUT</strong></td>
<td>SINGLE PHASE AC COMMUTATOR ELECTRIC MOTOR 300W</td>
</tr>
<tr>
<td><strong>VOLTAGE</strong></td>
<td>220V / 50HZ INPUT 540W 2.6A</td>
</tr>
<tr>
<td><strong>PUMP TYPE</strong></td>
<td>HIGH &amp; LOW PRESSURE 2 STAGE AUTO CHANGE-OVER VARIABLE CAPACITY TYPE TYPE</td>
</tr>
<tr>
<td><strong>PRESSURE ADJUST RANGE</strong></td>
<td>0 – 50 MPa</td>
</tr>
<tr>
<td><strong>OIL FLOW</strong></td>
<td>LOWER : 2.0 lit / min. 0.35 MPa</td>
</tr>
<tr>
<td></td>
<td>HIGH : 0.21 lit / min. 50 MPa</td>
</tr>
<tr>
<td><strong>TANK CAPACITY</strong></td>
<td>1.2 lit</td>
</tr>
<tr>
<td><strong>OPTION</strong></td>
<td>OPERATE SWITCH, POWER CORD, OIL HOSE</td>
</tr>
<tr>
<td><strong>SIZE</strong></td>
<td>L305XW150XH300 mm</td>
</tr>
<tr>
<td><strong>WEIGHT</strong></td>
<td>10.0 kg</td>
</tr>
</tbody>
</table>
**SPECIFICATION AND CUTTING DATA ARE INDICATED ON NEXT PAGE**
### SPECIFICATION AND DATA

**SDC Series**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SDC-25A</th>
<th>SDC-32D</th>
<th>SDC-38A</th>
<th>SDC-51E</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER</td>
<td>100V</td>
<td>100V</td>
<td>100V</td>
<td>100V</td>
</tr>
<tr>
<td>SAW SIZE</td>
<td>* INDICATED BELOW COLUMN</td>
<td>* INDICATED BELOW COLUMN</td>
<td>* INDICATED BELOW COLUMN</td>
<td>* INDICATED BELOW COLUMN</td>
</tr>
<tr>
<td>SIZE</td>
<td>L373XH170XW160 mm</td>
<td>L447XH216XW202 mm</td>
<td>L479XH209XW211 mm</td>
<td>L532XH231XW258 mm</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>5.0 kg</td>
<td>8.0 kg</td>
<td>9.4 kg</td>
<td>12.3 kg</td>
</tr>
</tbody>
</table>

**CHIP SAW (SPARE SAW)**

<table>
<thead>
<tr>
<th>REBAR SIZE</th>
<th>TIME</th>
<th>FIGURE</th>
<th>TIME</th>
<th>FIGURE</th>
<th>TIME</th>
<th>FIGURE</th>
<th>TIME</th>
<th>FIGURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>D10</td>
<td>7</td>
<td>800 – 1000</td>
<td>9</td>
<td>500 – 1100</td>
<td>6</td>
<td>1200 – 1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D13</td>
<td>7</td>
<td>800 – 1000</td>
<td>11</td>
<td>400 – 900</td>
<td>8</td>
<td>1100 – 1500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D16</td>
<td>7</td>
<td>800 – 1000</td>
<td>13</td>
<td>300 – 800</td>
<td>10</td>
<td>1000 – 1400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D19</td>
<td>8</td>
<td>800 – 1000</td>
<td>9</td>
<td>500 – 1100</td>
<td>6</td>
<td>1200 – 1600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D22</td>
<td>9</td>
<td>700 – 800</td>
<td>11</td>
<td>400 – 900</td>
<td>8</td>
<td>1100 – 1500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D25</td>
<td>10</td>
<td>500 – 600</td>
<td>13</td>
<td>300 – 800</td>
<td>10</td>
<td>1000 – 1400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D29</td>
<td>15</td>
<td>230 – 700</td>
<td>13</td>
<td>700 – 1100</td>
<td>15</td>
<td>500 – 800</td>
<td>14</td>
<td>650 – 800</td>
</tr>
<tr>
<td>D32</td>
<td>18</td>
<td>180 – 600</td>
<td>15</td>
<td>500 – 800</td>
<td>14</td>
<td>650 – 800</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D35</td>
<td>18</td>
<td>400 – 700</td>
<td>18</td>
<td>450 – 600</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D38</td>
<td>20</td>
<td>300 – 600</td>
<td>22</td>
<td>850 – 450</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D41</td>
<td>30</td>
<td>250 – 350</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D51</td>
<td>53</td>
<td>160 – 250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* THIS DATA IS DEPEND ON REBAR HARDNESS SD345

**SAW SIZE**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>TEETH</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SDC-25A</td>
<td>24</td>
<td>D=100 X T=1.6 mm</td>
</tr>
<tr>
<td>SDC-32D</td>
<td>24</td>
<td>D=122 X T=1.6 mm</td>
</tr>
<tr>
<td>SDC-38A</td>
<td>28</td>
<td>D=135 X T=1.6 mm</td>
</tr>
<tr>
<td>SDC-51E</td>
<td>36</td>
<td>D=180 X T=1.8 mm</td>
</tr>
</tbody>
</table>

* TIME : INDICATING RECOMMENDABLE CUTTING TIME

* FIGURE : INDICATING CUT-ABLE NUMBER OF REBAR BY ONE SAW LIFE

** 200V MOTOR MOUNTED DAIA SAW IS ALSO AVAILABLE.**

### SD Series

#### REBAR WELDING BASE

**Model** | **Rebar Size** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **d1** | **d2** | **Weight** |
--- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
SD-19E/EC | D12 – D18 | 314 | 144 | 50 | 70 | 30 | 54 | 126 | 38 | 63.5 | 4.8 kg |
SD-25E/EC | D19 – D25 | 361 | 165 | 63 | 70 | 34 | 67 | 142 | 48 | 63.5 | 6.8 kg |
SD-32E/EC | D19 – D32 | 380 | 170 | 70 | 70 | 39 | 70 | 148 | 52 | 65 | 8.4 kg |
SD-38E/EC | D32 – D41 | 446 | 200 | 90 | 66 | 50 | 87 | 179 | 60 | 70 | 14.0 kg |
SD-51E/EC | D41 – D51 | 480 | 260 | 110 | 82 | 59 | 95 | 200 | 77 | 82 | 23.8 kg |

Fixing bolt at next page is optional supply.

[http://www.daia-net.co.jp](http://www.daia-net.co.jp)
FIXING BOLT & CLAMP BOLT
FOR REBAR WELDING BASE

1 SPIKE TYPE FIXING BOLT
2 BALL PRESSED FIXING BOLT
3 ROUND HEAD FIXING BOLT
4 ANGLE FIX CLAMP BOLT
5 ANGLE ADJUSTABLE CLAMP BOLT
<table>
<thead>
<tr>
<th>TYPE</th>
<th>RW-0763B FOR SD-19/25/32</th>
<th>RW-0860B FOR SD-38</th>
<th>RW-1480B FOR SD-51</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYLINDER DIAMETER</td>
<td>36.0 mm</td>
<td>40.0 mm</td>
<td>51.0 mm</td>
</tr>
<tr>
<td>CROSS SECTION SPACE</td>
<td>10.17 mm²</td>
<td>12.56 mm²</td>
<td>20.42 mm²</td>
</tr>
<tr>
<td>PISTON STROKE</td>
<td>63.0 mm</td>
<td>60.0 mm</td>
<td>80.0 mm</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>2.0 kg</td>
<td>2.5 kg</td>
<td>4.0 kg</td>
</tr>
<tr>
<td>SIZE A (mm)</td>
<td>192.0</td>
<td>217.0</td>
<td>250.0</td>
</tr>
<tr>
<td>B</td>
<td>2.0</td>
<td>21.0</td>
<td>24.0</td>
</tr>
<tr>
<td>C</td>
<td>13.5</td>
<td>17.0</td>
<td>18.0</td>
</tr>
<tr>
<td>D1</td>
<td>47.4</td>
<td>52.0</td>
<td>63.0</td>
</tr>
<tr>
<td>D2</td>
<td>47.4</td>
<td>47.5</td>
<td>55.5</td>
</tr>
<tr>
<td>D3</td>
<td>23.0</td>
<td>23.0</td>
<td>26.0</td>
</tr>
<tr>
<td>D4</td>
<td>12.8</td>
<td>12.8</td>
<td>16.0</td>
</tr>
<tr>
<td>d</td>
<td>36.0</td>
<td>40.0</td>
<td>51.0</td>
</tr>
</tbody>
</table>
GAS MIXTURE TUBE & SUPER VALVE

SAKAGUCHI STYLE

HANSHIN STYLE

SUPER VALVE

OPERATION SWITCH

① BOX TYPE TOGGLE SWITCH
② BOX TYPE PUSH SWITCH
③ PISTOL TYPE PUSH SWITCH
④ PISTOL TYPE SEESAW SWITCH
<table>
<thead>
<tr>
<th>TYPE</th>
<th>REBAR SIZE</th>
<th>CHIPS</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>f</th>
<th>g</th>
<th>h</th>
<th>j</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBD-22B</td>
<td>D19 - D22</td>
<td>14</td>
<td>117</td>
<td>63</td>
<td>70</td>
<td>12</td>
<td>175</td>
<td>83</td>
<td>43.5</td>
<td>2</td>
<td>0.37</td>
</tr>
<tr>
<td>MBD-29B</td>
<td>D25 - D29</td>
<td>14</td>
<td>127</td>
<td>73.2</td>
<td>70</td>
<td>12</td>
<td>189</td>
<td>89</td>
<td>50</td>
<td>2</td>
<td>0.40</td>
</tr>
<tr>
<td>MBD-32C</td>
<td>D32</td>
<td>16</td>
<td>132</td>
<td>78</td>
<td>70</td>
<td>12</td>
<td>189</td>
<td>89</td>
<td>50</td>
<td>2</td>
<td>0.42</td>
</tr>
<tr>
<td>MBD-32B</td>
<td>D32</td>
<td>20</td>
<td>132</td>
<td>78</td>
<td>70</td>
<td>12</td>
<td>196</td>
<td>91</td>
<td>50.7</td>
<td>2</td>
<td>0.43</td>
</tr>
<tr>
<td>MBD-35B</td>
<td>D32 - D35</td>
<td>20</td>
<td>138</td>
<td>87</td>
<td>69</td>
<td>12</td>
<td>205</td>
<td>93</td>
<td>58</td>
<td>2</td>
<td>0.58</td>
</tr>
<tr>
<td>MBD-38BS</td>
<td>D35 - D38</td>
<td>26</td>
<td>147</td>
<td>94</td>
<td>87</td>
<td>12</td>
<td>222</td>
<td>99</td>
<td>59.4</td>
<td>2</td>
<td>0.58</td>
</tr>
<tr>
<td>MBD-38B</td>
<td>D35 - D38</td>
<td>26</td>
<td>161</td>
<td>94</td>
<td>87</td>
<td>12</td>
<td>230</td>
<td>115</td>
<td>59.4</td>
<td>2</td>
<td>0.58</td>
</tr>
<tr>
<td>MBD-41B</td>
<td>D38 - D41</td>
<td>26</td>
<td>171</td>
<td>102</td>
<td>86</td>
<td>12</td>
<td>240</td>
<td>119</td>
<td>66</td>
<td>2</td>
<td>0.66</td>
</tr>
<tr>
<td>MBD-51B</td>
<td>D51</td>
<td>32</td>
<td>188</td>
<td>120</td>
<td>95</td>
<td>12</td>
<td>265</td>
<td>128</td>
<td>70</td>
<td>2</td>
<td>0.77</td>
</tr>
</tbody>
</table>

MDB-38B / MDB-41B / MDB-51B ARE AIR-COOLED TYPE
ACCESSORY
FOR GAS PRESSURE WELDING

HIGH PRESSURE OIL HOSE

AVAILABLE LENGTH
1-12 meter

COUPLING
MALE/FEMALE WITH BALL

COUPLING
MALE/FEMALE WITHOUT BALL

OPERATION CORD

AVAILABLE LENGTH
3-10 meter

METAL SOCKET
MALE/FEMALE N TYPE

METAL SOCKET
MALE/FEMALE H TYPE

RATCHET WRENCH
RN21 TYPE

A TYPE
B TYPE

DAIA
<table>
<thead>
<tr>
<th>NO.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>091-02300-01</td>
<td>MONKEY WRENCH</td>
</tr>
<tr>
<td>2</td>
<td>091-24205-15</td>
<td>NIPPERS</td>
</tr>
<tr>
<td>3</td>
<td>092-19001-00</td>
<td>SCREW DRIVER (+)</td>
</tr>
<tr>
<td>4</td>
<td>092-22021-00</td>
<td>SCREW DRIVER (+)</td>
</tr>
<tr>
<td>5</td>
<td>092-22061-00</td>
<td>SCREW DRIVER (-)</td>
</tr>
<tr>
<td>6</td>
<td>092-90820-00</td>
<td>SEAL TAPE</td>
</tr>
<tr>
<td>7</td>
<td>092-F1320-P0</td>
<td>IRON TAPE MEASURE 2M</td>
</tr>
<tr>
<td>8</td>
<td>092-GN625-80</td>
<td>KNIFE TYPE HEX SOCKET WRENCH SET</td>
</tr>
<tr>
<td>9</td>
<td>092-J3000-00</td>
<td>OILER 350cc</td>
</tr>
<tr>
<td>10</td>
<td>092-S0000-00</td>
<td>ROCK LIGHTER</td>
</tr>
<tr>
<td>11</td>
<td>099-MT000-00</td>
<td>TOOL BOX</td>
</tr>
<tr>
<td>12</td>
<td>130-M0000-00</td>
<td>HOSE BAND (8 PCS.)</td>
</tr>
<tr>
<td>13</td>
<td>BNS-1</td>
<td>RING BURNER CHIP ADJUST JIG</td>
</tr>
<tr>
<td>14</td>
<td>KGM005</td>
<td>CARBON BRUSH FOR PUMP (2 PCS. PER BOX)</td>
</tr>
<tr>
<td>15</td>
<td>KMHZ184</td>
<td>CARBON BRUSH FOR DAIA SAW (2 PCS. PER BOX)</td>
</tr>
<tr>
<td>16</td>
<td>Z-0797A/B</td>
<td>RING BURNER CHIP HOLE CLEANING NEEDLE</td>
</tr>
<tr>
<td>17</td>
<td>ZZ0002</td>
<td>SPANNER SET (#14 AND #17)</td>
</tr>
</tbody>
</table>
ONE TOUCH COUPLER DETAIL
GAS CYLINDER SETTING

① PART NO.840-90P20-00
COUPLER FOR GAS MIXTURE TUBE(ACETYLENE)
② PART NO.840-90P10-00
COUPLER FOR GAS MIXTURE TUBE(OXYGEN)
③ PART NO.SKANS122-079
COUPLER FOR GAS HOSE(OXYGEN)
④ PART NO.SKANS122-078
COUPLER FOR GAS HOSE(ACETYLENE)
⑤ PART NO.130-M0000-00
HOSE BAND
⑥ PART NO.147-SGV20-00
COUPLER FOR GAS GAUGE(OXYGEN)
⑦ PART NO.SKANS122-607
OXYGEN GAS FLOW GAUGE
⑧ PART NO.147-SGV10-00
COUPLER FOR GAS GAUGE(ACETYLENE)
⑨ PART NO.SKANS122-606
ACETYLENE GAS FLOW GAUGE WITH FLASH BACK ARRESTER

GAS MIXTURE TUBE WITH SUPER VALVE
ACETYLENE/OXYGEN TWIN GAS HOSE
OXYGEN
ACETYLENE
PART NO.SKANSA08-056
ACETYLENE/OXYGEN TWIN GAS HOSE 20 MFTFRS

CONNECTION
SEPARATION
COUPLER

http://www.daia-net.co.jp
LightWeight and compact design

DB-7A Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>4.2 kg</td>
</tr>
<tr>
<td>Dimensions</td>
<td>260mm(W) x 176mm(L) x 79mm(H)</td>
</tr>
<tr>
<td>Bending Capacity</td>
<td>Max D25</td>
</tr>
<tr>
<td>Bending Angle</td>
<td>MAX 90°</td>
</tr>
</tbody>
</table>

* Hydraulic pump & Ram Cylinder are sold separately
CAN BE CUT AT THE END OF REINFORCING BAR
COMPACT AND LIGHT WEIGHT

<table>
<thead>
<tr>
<th>CUTTING RANGE</th>
<th>D10 – D19</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER</td>
<td>AC 100V 50/60 Hz</td>
</tr>
<tr>
<td>SIZE</td>
<td>L360 X H105 X W135 mm</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>3.5 kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CUTTING TIME &amp; CAPACITY</th>
<th>D10 : 5 SEC. 1,100 PCS./ 1 CHIP SAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>D19 : 6 SEC.</td>
<td>650 PCS./ 1 CHIP SAW</td>
</tr>
</tbody>
</table>

MODEL : SDF-19B0
THIS IS QUITE HELPFUL PUMP INSTEAD OF MANUAL PUMP!!
YOU ARE ONLY REQUIRED TO PUT 3 STEPS.
1. PUT RE-BAR SIZE BY TOUCH PANEL
2. PUT PRESSURE VOLUME OF PUMP BY TOUCH PANEL
3. PUMP SWITCH ON BY HAND SWITCH

AFTER ABOVE SIMPLE JOB, THEN PUMP LEAD YOUR WELDING WORK BY BUZZER SOUND AUTOMATICALLY UNTIL COMPLETION
SEMI-AUTO WELDING PROCESS BY APW-C51

1. CUT RE-BAR BY DAIA SAW (RIGHT ANGLE FACE)

2. RE-BAR FIX ON WELDING BASE

3. APW-C51 CHOOSE RE-BAR SIZE

4. PUT PRESSURE VALUE

5. KANGEN-EN FLAME

6. SWITCH ON THE PUMP

7. INSERT BURNER AND START HEATING

8. ADHESION

9. STICK FIRMY EACH OTHER

10. BUZZER SOUND COMING UP

11. FLAME CHANGE TO CHUUSEI-EN (1/2 FLAME OF KANGEN-EN)

12. BUZZER SOUND COMING UP

13. PRESSURE

14. HABAYAKI

15. BUZZER SOUND COMING UP

16. FINISH

17. GOOD SWELL

18. SWITCH ON THE PUMP THEN PRESSURE OF PUMP BACK TO FIRST PRESSURE VALUE

http://www.daia-net.co.jp
GAS PRESSURE WELDING IS DIFFERENT COMPARED WITH ANOTHER JOINING LIKE MECHANICAL JOINING. ATOM IN EINFORCE BAR MOVE BY HEAT AND JOIN THE STEEL EACH OTHER.

SUPREME STRENGTH

POWERFUL JOINING

LIGHT WEIGHT TOOLS & EASY OPERATION.
COMPLETE WORK TIME IS ABOUT 5 MINUTES FROM BAR SETTING.
JOINING TIME IS ABOUT 90 SECONDS ON D25 REBAR.

SAVE IRON
SAVE COST
ECONOMY

http://www.daia-net.co.jp
WHAT IS GAS PRESSURE WELDING?

Heat each reinforce bar at cross section by acetylene and oxygen mixture gas at about 1,200 - 1,300 degree and put pressure then join each bar firmly.

Reinforce bar is steel which is mixed by atom of iron and carbon. Atom of them in steel are stable at normal temperature and they are making regular arrangement.

Gas pressure welding stick each reinforce bar by their join of crystal.

Then we use heat to make re-arrangement of each atom easily at each reinforce bar joining.

Both atom start to move actively by heating at once and also change structure of crystal as before then diffuse. It means they start to be mixed of each atom.

Oxidation membrane going to thin by pressure at join section also hollow close by progress of above diffusion and then iron become one.
AT FIRST HEATING, USE KANGEN-EN (STRONG FLAME) AND AVOID OXIDATION ON EACH JOIN SURFACE

CUT REINFORCE BAR BY DAIA SAW SURFACE SHOULD BE RIGHT ANGLE.

HEAT / PRESSURE START.

CLEAN UP CROSS SECTION. RUST, CEMENT, PAINT, SAND, ETC. LIKE FOREIGN ARTICLE ON SURFACE ARE STRICTLY PROHIBITED.
JOINING BY HABAYAKI (HEAT RIGHT AND LEFT SIDE ABOUT 1D DISTANCE) BY CHUUSEI-EN (MEDIUM FLAME)

COMPLETED JOIN SWELL SIZE IS ABOUT 1.4D TO OUTER DIAMETER AND 1.2D TO LENGTH

**TYPE OF REINFORCE BAR JOINT**

- GAS PRESSURE WELDING
- ARC WELDING JOINT
- PILE ARC WELDING JOINT
- THEADING JOINT
- CRIMPING / COMPRESSION JOINT
GAS PRESSURE WELDING CAN SAVE YOUR COST AND QUANTITY OF REINFORCE BAR AT YOUR SITE DEFINITELY.

1. HOW WE CAN REDUCE THE COST OF REINFORCE BAR?
   WE HAVE MANY TYPES OF REINFORCE BAR JOINT LIKE WRAPPING BY WIRE BY HAND, ARK WELDING JOINT, PILE AREK WELDING JOINT, THREADING JOINT, ETC. FOR EXAMPLE AT WRAPPING JOINT BY WIRE, YOU SHOULD PUT BOTH REINFORCE BAR AT PARALLEL AND BIND BY WIRE AS BELOW.

   ![Diagram of Save Iron Wrapping](image1)

   IF YOU USE GAS PRESSURE WELDING LIKE RIGHT PICTURE, YOU CAN SAVE REINFORCE BAR LIKE ABOVE PICTURE.

   PLEASE CHECK NUMBER OF POINTS FOR WRAPPING AT YOUR SITE FIRST.

   AT PRESENT TECHNOLOGY OF GAS PRESSURE WELDING, WE CAN MAKE SWELL ON EACH REINFORCE BAR FROM D10 TO D51. SO YOU CAN SAVE HUGE IRON AND HUGE COST BY THIS GAS PRESSURE WELDING.

   THESE PICTURES ARE ONE MODEL HOW MANY WE MADE SWELL ON EACH SIZE OF REINFORCE BAR AT THIS CONSTRUCTION IN JAPAN.

   BUILDING SIZE : 4 STORIES WITHOUT BASEMENT AND TOTAL FLOOR 12,979.28 m².
   REINFORCE BAR : D19 ( SD345 ) = 1,165 SWELLS
                   D22 ( SD345 ) = 2,695 SWELLS
                   D25 ( SD345 ) = 12,143 SWELLS   TOTAL 16,003 SWELLS
CALCULATION OF SAVE COST OF IRON (REFER RE-BAR SIZE LIST)

D19 : 1,166 SWELLS X ¥81 X 2.25 = ¥ 212,504
D22 : 2,696 SWELLS X ¥81 X 3.04 = ¥ 663,863
D25 : 12,143 SWELLS X ¥81 X 3.98 = ¥ 3,914,660       TOTAL ¥ 4,791,027

¥81 = REINFORCE BAR COST PER KILOGRAM ON SD345
2.25/3.04/3.98 = WEIGHT PER KILOGRAM OF EACH REINFORCE BAR

ABOVE SIMPLE CALCULATION IS JUST REFERENCE FOR EASY UNDERSTANDING.
THIS CALCULATION IS CALCULATED BASED ON 1 METER WRAP ON EACH BAR AND
DO NOT INCLUDE SMALLER SIZE OF REINFORCE BAR LIKE D10, D13.

PLEASE REFLECT YOUR SITE AGAIN. WHAT SIZE OF REINFORCE BAR DO YOU USE ?
HOW MANY WRAP POINT IS EXISTED ?
WE RECOMMEND TO CALCULATE BY YOURSELF HOW AMOUNT YOU CAN SAVE BY THIS
GAS PRESSURE WELDING.

AS EXPLAINED ON FIRST PAGE, WE HAVE MANY TYPES OF REINFORCE BAR JOINT.
ARK WELDING, PILE ARK WELDING, THREADING ARE ALL WEAK AGAINST FORCE
FROM UP AND DOWN ALSO FROM LEFT SIDE AND RIGHT SIDE.
ESPECIALLY THREADING JOINT IS VERY EXPENSIVE.
THEN CONSIDERING MERIT, DEMERIT AND PERFORMANCE COST, GAS PRESSURE
WELDING IS MOST ADVANCED AT PRESENT.

2. COST OF ACETYLENE AND OXYGEN
WE USE ACETYLEN AND OXYGEN ON THIS GAS PRESSURE WELDING. COST PERFORMANCE
IS AS BELOW. BUT BEFORE CALCULATION, WE SUGGEST YOU AVERAGE WELDER’S
SKILL ON D25 IN JAPAN.

WORKING HOUR : 9 HOURS PER DAY INCLUDING 1 HOUR LUNCH TIME.
    NET WORKING TIME IS 8 HOURS BUT EXCEPT RAINY DAY.
ONE ACETYLEN CYLINDER : CONTAINS 7.2 kg PER CYLINDER BUT CHARACTERISTIC OF
    ACETYLEN FOR STABILITY, WE ARE UNABLE TO USE FULL
    QUANTITY. ACETYLEN FREEZE EASILY FOR LONG CONTINUAL
    USE. AVAILABLE QUANTITY WILL BE AROUND 6 kg.
ONE OXYGEN CYLINDER : CONTAINS 7,050 LITTER IN 47 LITTER SIZE CYLINDER AND
    CONSUMPTION IS ABOUT HALF OF ACETYLEN.

ONE WELDER CAN MAKE AROUND 120 SWELLS PER DAY. IT MEANS 15 SWELLS PER HOUR.
AND CONSUMPTION OF ACETYLEN IS ALMOST ONE CYLINDER PER DAY.

THUS COST CALCULATION OF GAS IS AS BELOW. FOR WELL UNDERSTANDING, WE PUT
GAS PRICE IN INDIA AS BELOW.

1 ACETYLEN RP 1,000. -  1 OXYGEN RP 200. - PER EACH ONE CYLINDER.

ACETYLEN = RP 1,000 ÷ 120 = RP 8.34
OXYGEN = RP 200 ÷ 2 ÷ 120 = RP 0.84       ONE SWELL GAS COST = RP 9.18

FOR YOUR INFORMATION, ONE SWELL CAN BE MADE AROUND 90 SECONDS ON D25.
SO ON DESK CALCULATION, WE CAN MAKE 40 SWELLS PER HOUR AND 320 SWELLS
FOR 8 HOURS. BUT WE NEED PREPARATION FOR WELDING BASE BY ASSISTANT FOR
CONTINUAL WELDING SO WE REALIZE 4 TO 5 MINUTES NEED TO MAKE ONE SWELL
AT THE SITE.
3. EXPLOIT (REUSE) YOUR SCRAP
DON'T YOU HAVE BIG SCRAP IN YOUR SITE?
I HAVE EVER SEEN BIG SCRAP IN ONE CONSTRUCTION SITE OUTSIDE OF JAPAN.
IT SEEMS 150 TO 200 TONS WITH LENGTH 2 TO 3 METER EACH REINFORCE BAR.
I WONDER WHY SO HUGE SCRAP ARE LAYING? MAYBE LENGTH OF REINFORCE BAR
IS 12 METERS AND CAN NOT BE USED EFFECTIVELY OR USEFULLY.
SO THAT HUGE SCRAP QUANTITY IS COMING UP, I THINK.

HOWEVER, IF YOU JOIN THESE REINFORCE BAR BY GAS PRESSURE WELDING, YOU
CAN SAVE OR EARN HUGE AND HUGE MONEY. DON'T YOU THINK SO?

GAS PRESSURE WELDING PROVIDE DREAM FOR YOU!!
PLEASE CALCULATE BY YOURSELF HOW AMOUNT WHICH AMOUNT WHAT AMOUNT ARE
LAYING IN THE SITE!!

GAS PRESSURE WELDING IS NOT ONLY FOUNDATION FOR STRONG STRUCTURE OF
CONSTRUCTION BUT ALSO GOLDEN EGG TO BEAR HUGE MONEY.

TRY TO CALCULATE COST OF ONE SWELL AT YOUR SITE!!
CONSUMPTION OF ACETYLENE & OXYGEN IS BASED ON D25 BAR

1. COST OF ACETYLENE ABOUT 50 GRAMES PER ONE SWELL
2. COST OF OXYGEN ABOUT 25 GRAMS PER ONE SWELL
3. COST OF POWER CONSUMPTION PER HOUR OR PER DAY
4. COST OF LABOUR CHARGE PER DAY FOR WELDER AND ASSISTANT
5. COST OF DEPRECIATION FOR ONE SET OF GAS PRESSURE WELDING DEVICE
6. ANY ADDITIONAL COST

TRY TO SAVE YOUR SCRAP!!
TRY TO CALCULATE HOW AMOUNT YOU CAN SAVE IF YOU REUSE YOUR SCRAP!!
## ROUND & SQUARE STEEL BAR (RE-BAR) SIZE LIST

### INDIA STANDARD

<table>
<thead>
<tr>
<th>DIAMETER (mm)</th>
<th>WEIGHT (kg)</th>
<th>CROSS SECTION AREA (cm²)</th>
<th>CIRCUMFERENCE (cm)</th>
<th>WEIGHT (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter in Inch</td>
<td>Per Meter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.154</td>
<td>0.200</td>
<td>1.57</td>
<td>0.20</td>
</tr>
<tr>
<td>6</td>
<td>0.222</td>
<td>0.283</td>
<td>1.88</td>
<td>0.28</td>
</tr>
<tr>
<td>8</td>
<td>0.395</td>
<td>0.503</td>
<td>2.51</td>
<td>0.50</td>
</tr>
<tr>
<td>10</td>
<td>0.620</td>
<td>0.785</td>
<td>3.14</td>
<td>0.78</td>
</tr>
<tr>
<td>12</td>
<td>0.888</td>
<td>1.131</td>
<td>3.77</td>
<td>1.13</td>
</tr>
<tr>
<td>14</td>
<td>1.208</td>
<td>1.539</td>
<td>4.40</td>
<td>1.54</td>
</tr>
<tr>
<td>16</td>
<td>1.578</td>
<td>2.010</td>
<td>5.03</td>
<td>2.01</td>
</tr>
<tr>
<td>18</td>
<td>2.000</td>
<td>2.545</td>
<td>5.65</td>
<td>2.54</td>
</tr>
<tr>
<td>20</td>
<td>2.465</td>
<td>3.142</td>
<td>6.28</td>
<td>3.14</td>
</tr>
<tr>
<td>22</td>
<td>2.983</td>
<td>3.801</td>
<td>6.91</td>
<td>3.80</td>
</tr>
<tr>
<td>25</td>
<td>3.852</td>
<td>4.909</td>
<td>7.85</td>
<td>4.91</td>
</tr>
<tr>
<td>28</td>
<td>4.832</td>
<td>6.158</td>
<td>8.80</td>
<td>6.15</td>
</tr>
<tr>
<td>32</td>
<td>6.311</td>
<td>8.042</td>
<td>10.05</td>
<td>8.04</td>
</tr>
<tr>
<td>36</td>
<td>7.990</td>
<td>10.180</td>
<td>11.31</td>
<td>10.17</td>
</tr>
<tr>
<td>40</td>
<td>9.860</td>
<td>12.566</td>
<td>12.57</td>
<td>12.56</td>
</tr>
<tr>
<td>45</td>
<td>12.49</td>
<td>15.904</td>
<td>14.14</td>
<td>15.90</td>
</tr>
<tr>
<td>50</td>
<td>14.41</td>
<td>19.635</td>
<td>15.71</td>
<td>19.62</td>
</tr>
<tr>
<td>56</td>
<td>19.34</td>
<td>24.630</td>
<td>17.59</td>
<td>24.62</td>
</tr>
<tr>
<td>63</td>
<td>24.47</td>
<td>31.172</td>
<td>19.79</td>
<td>31.16</td>
</tr>
</tbody>
</table>

### JAPAN STANDARD

<table>
<thead>
<tr>
<th>DIAMETER (mm)</th>
<th>WEIGHT (kg)</th>
<th>CROSS SECTION AREA (cm²)</th>
<th>CIRCUMFERENCE (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter in Inch</td>
<td>Per Meter</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.249</td>
<td>0.3167</td>
<td>2.0</td>
</tr>
<tr>
<td>10</td>
<td>0.560</td>
<td>0.7133</td>
<td>3.0</td>
</tr>
<tr>
<td>13</td>
<td>0.995</td>
<td>1.267</td>
<td>4.0</td>
</tr>
<tr>
<td>16</td>
<td>1.56</td>
<td>1.986</td>
<td>5.0</td>
</tr>
<tr>
<td>19</td>
<td>2.25</td>
<td>2.865</td>
<td>6.0</td>
</tr>
<tr>
<td>22</td>
<td>3.04</td>
<td>3.871</td>
<td>7.0</td>
</tr>
<tr>
<td>25</td>
<td>3.98</td>
<td>5.067</td>
<td>8.0</td>
</tr>
<tr>
<td>29</td>
<td>5.04</td>
<td>6.424</td>
<td>9.0</td>
</tr>
<tr>
<td>32</td>
<td>6.23</td>
<td>7.942</td>
<td>10.0</td>
</tr>
<tr>
<td>35</td>
<td>7.51</td>
<td>9.566</td>
<td>11.0</td>
</tr>
<tr>
<td>38</td>
<td>8.95</td>
<td>11.40</td>
<td>12.0</td>
</tr>
<tr>
<td>41</td>
<td>10.5</td>
<td>13.40</td>
<td>13.0</td>
</tr>
<tr>
<td>51</td>
<td>15.9</td>
<td>20.27</td>
<td>16.0</td>
</tr>
</tbody>
</table>
DAIA CORPORATION

Gas Pressure Welding Machine Catalog