

SPECIFICATIONS		4642	4644	4647	4649	
Lever or Pneumatic Operation		Lever	Lever	Pneumatic	Pneumatic	
Adjustable arms depth		●	●	●	●	
<b>Nominal power 50%</b>	<b>kVA</b>	<b>20</b>	<b>25</b>	<b>20</b>	<b>25</b>	
Max welding power	kVA	39	55	39	55	
No load secondary voltage	V	4	4.6	4	4.6	
Able to weld aluminum	kA	-	-	-	-	
Max welding current on steel, shortest throat	kA	9.6	11.6	9.6	11.6	
Thermal current 100%	kA	3.5	3.8	3.5	3.8	
Supply	*V *Hz	230-440 60	230-440 60	230-440 60	230-440 60	
Delay fuses	220-230-240 V	A	63	80	63	80
	440-460-480 V	A	126	160	126	160
Mains cables section for	L=10 m	mm <sup>2</sup>	10	16	10	16
	L=30 m	mm <sup>2</sup>	10	16	10	16
Insulation class	F	F	F	F	F	
Compressed air	**bar	-	-	6.5-10	6.5-10	
Consumption for 100 spots	N/m <sup>3</sup>	-	-	4.3	4.3	
Min throat depth	in (mm)	15.0 (380)	15.0 (380)	15.0 (380)	15.0 (380)	
Max electrode force	lbs (daN)	330 (150)	330 (150)	363 (165)	363 (165)	
Electrode stroke	in (mm)	0.4-2.4 (10-60)	0.4-2.4 (10-60)	0.4-2.4 (10-60)	0.4-2.4 (10-60)	
Max throat depth	in (mm)	27.6 (700)	27.6 (700)	27.6 (700)	27.6 (700)	
Max electrode force	lbs (daN)	176 (80)	176 (80)	198 (90)	198 (90)	
Electrode stroke	in (mm)	0.6-3.9 (15-105)	0.6-3.9 (15-105)	0.6-3.9 (15-105)	0.6-3.9 (15-105)	
Short circuit current with L max	kA	8.8	10.5	8.8	10.5	
Water cooling	gpm (lpm)	.8 (3)	1 (3.7)	.8 (3)	1 (3.7)	
Min. water pressure	psi (**bar)	36 (2.5)	36 (2.5)	36 (2.5)	36 (2.5)	
Aerial noise produced	dB(A)	<70	<70	<70	<70	
Measure condition	working stroke	in (mm)	0.8 (20)	0.8 (20)	0.8 (20)	0.8 (20)
	welding time	cycles	26	20	26	20
	welding current	kA	9	11	9	11
	working rating	weld/min	10	10	10	10
Net weight (approximately)	lbs (kg)	321 (146)	326 (148)	317 (144)	321 (146)	
Arms diameter	in (mm)	1.6 (40)	1.6 (40)	1.6 (40)	1.6 (40)	
Electrode-holders diameter	in (mm)	0.9 (22)	0.9 (22)	0.9 (22)	0.9 (22)	
Electrode-taper		1MT/4RW	1MT/4RW	1MT/4RW	1MT/4RW	

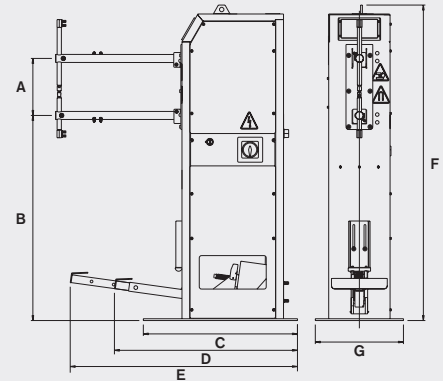
\* Different voltages and frequencies available. \*\* kPa = bar x 100

### TE 90 PROGRAMMABLE PARAMETERS

Squeeze time	1 - 99 cycles
Slope time	0 - 29 cycles
Welding time	1 - 99 cycles
Welding current	1 - 99%
Cold time	1 - 50 cycles
Impulses number	0-9
Hold time	1 - 99 cycles
Off time	0 - 99 cycles
Welding time 2	0 - 99 cycles
Welding current 2	0 - 99%

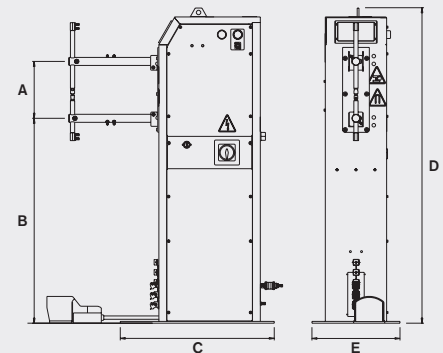
Specifications subject to change without notice.

### FOOT OPERATED SPOT WELDERS

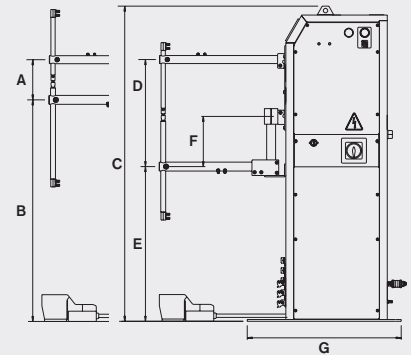


A 10.0 in (255 mm) D 32.3 in (820 mm) G 15.6 in (395 mm)  
 B 36.2 in (919 mm) E 40.2 in (1020 mm)  
 C 27.2 in (690 mm) F 55.7 in (1414 mm)

### AIR OPERATED SPOT WELDERS



A 10.0 in (255 mm) C 27.2 in (690 mm) E 15.6 in (395 mm)  
 B 36.2 in (919 mm) D 55.7 in (1414 mm)



A 7.1 in (180 mm) D 18.9 in (480 mm) G 27.2 in (690 mm)  
 B 39.1 in (994 mm) E 27.3 in (694 mm)  
 C 55.7 in (1414 mm) F 8.9 in (225 mm)



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A Resistance Welding Solutions, Inc. Company



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# TECNA<sup>®</sup>

## ROCKER ARM SPOT WELDERS 20-25 KVA

Models

4642

4644

4647

4649



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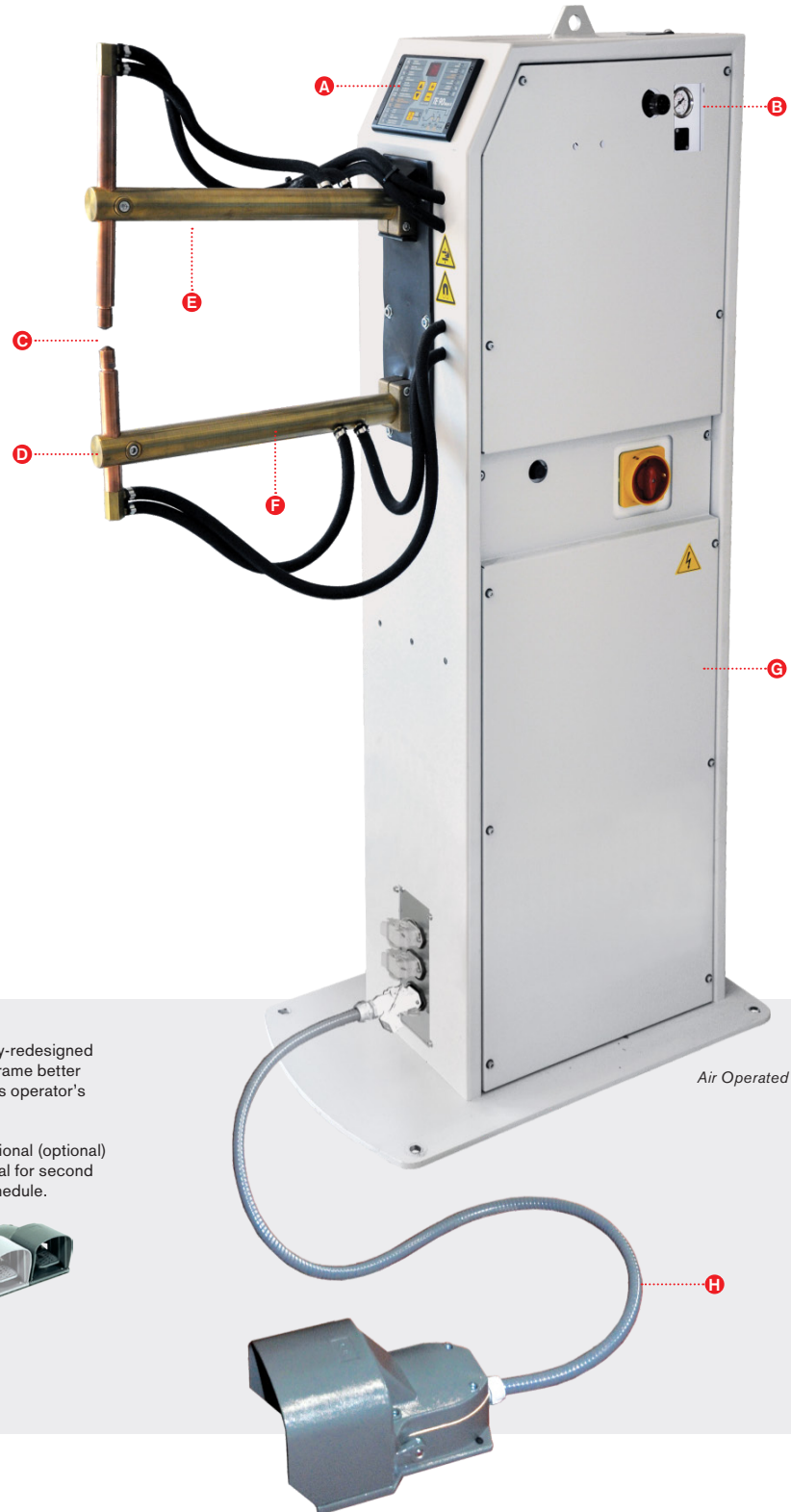
# TECNA SPOT WELDERS ARE DESIGNED TO MEET ALL OF YOUR SPOT WELDING NEEDS.

## AIR OPERATED WELDERS

- Lubrication-free cylinder eliminates oil mist in the shop environment.
- Integrated air regulator for electrode force adjustment.
- Reduce shop noise with integrated speed controls, shock absorber for end of cylinder stroke, air exhaust silencers.
- Two-stage electric foot switch for initiation (1st stage closes tips without welding, 2nd stage initiates weld schedule).
- Pre-configured for connection of optional second footswitch (Part Number 70284).
- Second footswitch allows use of two different weld time/weld current settings. This option is useful when multiple weld settings need to be used on the same piece.

## FOOT OPERATED WELDERS

Adjustable electrode force; a microswitch starts the welding cycle when the desired pre-set value is reached. The foot pedal is adjustable in length.



*Air Operated*

**A** The TE90 control unit faces the operator, to allow viewing weld data during weld cycle.

**B** Pneumatic regulator, speed controls and pressure gauge are placed toward the top of the welder, for easier reading and adjustment.

**C** Adjustable electrode stroke.

**D** Chromium Copper Electrode Holders offer long service life, and are designed for straight and angled mounting.

**E** Water-cooled transformer, arms and electrodes. Epoxy resin-coated transformer.

**F** Adjustable-length arms offer better operational flexibility.

**G** Newly-redesigned welder frame better facilitates operator's work.

**H** Additional (optional) foot pedal for second weld schedule.





Providing Solutions.

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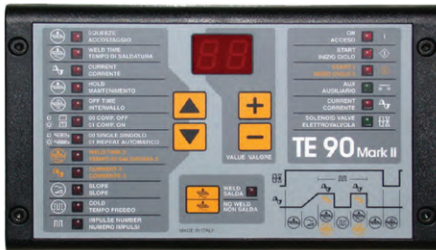
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## CONTROLS

### CONTROL UNIT TE 90 MARK II

TE-90 is a microprocessor-based welding control for single-phase AC resistance welders. The weld control manages the welder's operation, including the SCR, which regulates the weld current. The TE90 weld control can operate with both manual and pneumatically operated welders.

- Phase shift control for weld current adjustment.
- Simplified programming uses only 4 buttons.
- Dual presets for time and current, selectable using two independent footswitches.
- Slope and pulse functions.
- Single and Repeat modes.
- Secondary current compensation function for welding oxidized sheets & rods.
- First phase shift delay adjustment. Allows balancing line current.
- Control also operates 24VDC solenoid valve, 7.2W Max, output protected against short circuits.



## CONFIGURATIONS & PERFORMANCE

Thickness in (mm)	Arms Length in (mm)	Electrode Ø	Welding Time (cycles)	Spots/h
<b>kVA 20</b>				
0.03+0.03 (0.8+0.8)	9.0 (230)	1MT/4RW	5	4000
0.06+0.06 (1.5+1.5)	9.0 (230)	1MT/4RW	12	3400
0.1+0.1 (3+3)	9.0 (230)	1MT/4RW	55	400
0.04+0.04 (1+1)	21.7 (550)	1MT/4RW	5	4000
0.08+0.08 (2+2)	21.7 (550)	1MT/4RW	40	1200
0.08+0.08 (2+2)	27.6 (700)	1MT/4RW	50	1100
<b>kVA 25</b>				
0.03+0.03 (0.8+0.8)	9.0 (230)	1MT/4RW	5	4000
0.06+0.06 (1.5+1.5)	9.0 (230)	1MT/4RW	12	3400
0.1+0.1 (3+3)	9.0 (230)	1MT/4RW	55	400
0.04+0.04 (1+1)	21.7 (550)	1MT/4RW	5	4000
0.08+0.08 (2+2)	21.7 (550)	1MT/4RW	40	1200
0.08+0.08 (2+2)	27.6 (700)	1MT/4RW	50	1100
0.2+0.2 (4+4)	9.0 (230)	1MT/4RW	80	220
Ø 0.2+0.2 (6+6)	21.7 (550)	1MT/4RW	15	4000
Ø 0.3+0.3 (8+8)	9.0 (230)	1MT/4RW	20	1600
Ø 0.5+0.5 (12+12)	9.0 (230)	1MT/4RW	40	500

Model	Arms Length in (mm)	Thickness - CRS in (mm)	Thickness Ø in (mm)
4642	15.0-27.6 (380-700)	0.1 + 0.1 (3+3)	0.4 + 0.4 (10+10)
4644	15.0-27.6 (380-700)	0.2 + 0.2 (4+4)	0.5 + 0.5 (12+12)
4647	15.0-27.6 (380-700)	0.1 + 0.1 (3+3)	0.4 + 0.4 (10+10)
4649	15.0-27.6 (380-700)	0.2 + 0.2 (4+4)	0.5 + 0.5 (12+12)

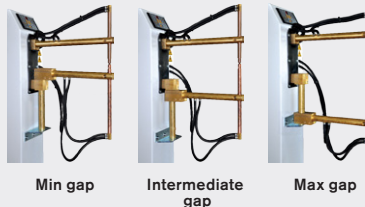
Adjustable Throat Depth to suit your working requirements.



Foot Operated

Adjustable Arm Gap assembly also available on all models.

Note that larger arm gap reduces weld current.



Min gap Intermediate gap Max gap



Adjustable Arms Large Gap Assembly