

Stud Welding Equipment - Arc

VISAR 650 – TECHNICAL DATA SHEET



Visar 650

Stud welding unit
For Arc stud welding
(short cycle drawn arc welding
(BH 10), drawn arc welding (BH 100))
according to current standards

Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

Technical Data	
Welding range	BH 100: dia. 1/4 ga to 5/16" (dia. 2 to 8 mm), #4 to 3/8" (M3 to M10) (type RD) BH 10: dia. 1/4 ga to 1/4" (dia. 2 to 6 mm), #4 to 1/4" (M3 to M6)
Welding material	Mild steel, stainless steel
Welding rate	M3 = 40 studs/min M8 = 12 studs/min
Welding current	650 A (max.)
Current adjustment range	100 to 650 A
Welding time	5 to 200 ms (stepless)
Primary power	100 to 240 V, 1 phase, 50/60 Hz, 16 AT
Primary plug	2-pin grounded safety plug
Connected load	3 kVA
Cooling type	F (temperature controlled cooling fan)
IP-code	IP 44
Dimension L x W x H	18.66" x 13.27" x 13.82" (474 x 337 x 351 mm) with handle
Weight	39.68 lbs (18 kg)
Suitable stud welding gun	A 12, welding cable length 15.91' (4.8 m) (not possible to extend),
Order No	93-66-0650 (Visar 650) 93-40-020 (Ground cable) 93-20-270 (A 12 – Stud welding gun) 93-40-022 (PSC-1 – Ceramic leg assembly) 88-24-466 (Toolbag)

(Technical data may change)



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Stud Welding Equipment - Arc

VISAR 650 | VISAR 650 (SHIELD GAS VERSION)

VISAR 650



- Robust inverter unit with single-phase mains connection (100 to 240 V)
- Compact lightweight unit (18 kg) with high protection class (IP 44)
- Current setting range from 25 to 650 A

M3 to M10 (type RD) - #4 to 7/16" (type RD)

VISAR 650 (SHIELD. GAS VERSION)



Further development:

- with display and shielding gas connection
- USB port for saving and loading welding programs
- Comprehensive customer-specific setting options as well as detailed process optimisation and control

M3 to M10 (type RD) - #4 to 7/16" (type RD)

Welding process	Arc = Drawn arc stud welding, SC = Short cycle stud welding				Arc = Drawn arc stud welding, SC = Short cycle stud welding			
Welding material	Mild Steel - Stainless Steel				Mild Steel - Stainless Steel - Aluminum ¹⁾ Welding element is not standardized according to DIN EN ISO 13918, but manufactured by the manufacturer's discretion. The welding parameters should be determined by test weldings.			
Technology	Inverter				Inverter			
Equipment								
Welding with ceramic ferrule	x				x			
Welding with shielding gas	--				x			
Process control	--				x			
Display	--				Digital			
Welding range	Arc: M3 to M10 (type RD), dia. 2 to 8 mm / #4 to 7/16" (type RD), dia. 14 ga to 5/16" SC: M3 to M6, dia. 2 to 6 mm #4 to 1/4", dia. 14 ga to 1/4"				Arc: M3 to M10 (type RD), dia. 2 to 8 mm / #4 to 7/16" (type RD), dia. 14 ga to 5/16" SC: M3 to M6, dia. 2 to 6 mm #4 to 1/4", dia. 14 ga to 1/4"			
Welding rate (Duty cycle ²⁾)	25 °C	100 %	50 %	35 %	25 °C	100%	50%	35%
	F [studs/ min]	8/min.	14/min.	18/min.	F [studs/ min]	8/min.	14/min.	18/min.
	τ [ms]	160	160	160	τ [ms]	160	160	160
	I ₂ [A]	650	650	650	I ₂ [A]	650	650	650
	U ₂ [V]	30	30	30	U ₂ [V]	30	30	30

2) The term "duty cycle" refers to the ratio of welding duration to work pause of a stud welding unit. It describes the uninterrupted operating time of a unit over a period of 10 minutes. The largest possible studs are used in the test.

100 % duty cycle = 10 min. of continuous welding, no shutdown due to over-temperature.

50 % duty cycle = 5 min. of welding followed by 5 min. pause.

35 % duty cycle = 3.5 min. of welding followed by 6.5 min. pause.

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Stud Welding Equipment - Arc

VISAR 650 | VISAR 650 (SHIELD GAS VERSION) - (CONTINUED)

VISAR 650



- Robust inverter unit with single-phase mains connection (100 to 240 V)
- Compact lightweight unit (18 kg) with high protection class (IP 44)
- Current setting range from 25 to 650 A

M3 to M10 (type RD) - #4 to 7/16" (type RD)

VISAR 650 (SHIELD. GAS VERSION)



- Further development:
- with display and shielding gas connection
 - USB port for saving and loading welding programs
 - Comprehensive customer-specific setting options as well as detailed process optimization and control

M3 to M10 (type RD) - #4 to 7/16" (type RD)

Welding current	650 A (max.)	650 A (max.)
Current adjustment range	25 - 650 A	25 - 650 A
Welding time	5 - 200 ms (stepless)	5 - 200 ms (stepless)
Primary power	100 - 240 V, 1 phase, 50/60 Hz, 16 AT	100 - 240 V, 1 phase, 50/60 Hz, 16 AT
Primary plug	16 A, 2-pin grounded safety plug (plug type F; CEE 7/4)	16 A, 2-pin grounded safety plug (plug type F; CEE 7/4)
Connected load	3 kVA	3 kVA
Cooling type	F (temperature controlled cooling fan)	F (temperature controlled cooling fan)
IP Code	IP 44	IP 44
Dimension LxWxH (without handle)	474 x 337 x 351 mm / 18.66" x 13.27" x 13.82"	474 x 337 x 351 mm / 18.66" x 13.27" x 13.82"
Weight	18 kg / 40 lbs	18 kg / 40 lbs
Suitable guns	A 12, A 12-FL (welding cable not possible to extend)	A 12, A 12-FL (welding cable not possible to extend)
Order No.	93-60-0650 (Plug E+F; Europe + China) 93-66-0650 (Plug B; USA, Canada + China) 93-40-020 (Ground cable, 5 m, 25 mm ² , 2 vice grips 10") 88-24-466 (Toolbag) (Accessories and welding gun are not included)	93-60-0652 (Plug E+F; Europe + China) 93-66-0652 (Plug B; USA, Canada + China) 93-40-020 (Ground cable, 5 m, 25 mm ² , 2 vice grips 10") 88-24-466 (Toolbag) (Accessories and welding gun are not included)



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