



HUGONG



TYPE

NVM350-500



**Read this manual carefully before
using the product.**

Table of contents

Page

1	General	3
2.	Safety instructions	3
3.	Assembly	4
4.	Use	4
5.	Maintenance	5
6.	Specifications	5
7.	Parts list	6
8.	Circuit diagram	8
9.	Warranty	9
10.	EC declaration	12

Storing the user manual

- Keep the user manual in an accessible place, close to the product.
- Ensure that the manual is stored in a dry place.
- Use the manual carefully and avoid damage.
- The product must not be used by persons who are not familiar with the instructions and procedures in this manual.

This user manual is an integral part of the product and must therefore be kept in a safe place. If the product is transferred to another user, the manual must be included.

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1. General

The NVM series is an IGBT inverter-controlled, semi-automatic DC welding installation suitable for MMA, MIG, MAG and TIG welding processes. The machines are designed for use in automation, metal furniture production, shipyards, pressure vessel production and steel construction, among other applications. They are equipped with protective circuits against overheating, overvoltage, undervoltage, overcurrent and phase failure. Thanks to their high mains voltage compensation ($\geq 15\%$), they are reliable and stable, even under varying workpiece conditions.
or net fluctuations.

Features:

- IGBT inverter technology (20 kHz)
- Closed-loop feedback control
- Continuously adjustable welding parameters
- Automatic arc termination, drip cut-off and soft wire feed
- Suitable for CO₂, MAG and MIG
- Suitable for wire types from $\varnothing 0.8$ mm to $\varnothing 1.6$ mm
- Compact, lightweight and efficient design

2. Safety instructions

2.1 Personal protective equipment (PPE)

- Always wear a welding helmet with a filter lens in accordance with ANSI Z87.1.
- Wear protective clothing, gloves and footwear against UV/IR radiation and splashes.
- Wear a safety harness when working at heights.
- Use hearing protection and safety goggles when tapping off slag.

2.2 Electrical safety

- Do not touch conductive parts during welding.
- Cable insulation must be intact.
- Never repair the machine while it is live.
- Earthing is mandatory before use.

2.3 Gas and vapour

- Ensure adequate ventilation or extraction.
- Do not weld on or near metal coatings that release toxic vapours.
- Never use the appliance to defrost pipes.

2.4 Radiation risk

- Protect skin and eyes from UV and IR radiation.
- Use shields to protect bystanders.

2.5 Fire hazard

- Remove flammable materials within 10 metres.
- Do not use lighters or matches during welding.
- Keep a fire extinguisher within reach.

2.6 Hot material

- Never touch welded parts with your bare hands.
- Avoid contact with the nozzle immediately after welding.

2.7 Electromagnetic interference

- Persons with pacemakers must not work in the vicinity.
- Cables must not be wrapped around the body.

2.8 Gas cylinders

- Always secure cylinders in an upright position.
- Use the correct pressure regulator and connectors.
- Never weld on gas cylinders.

2.9 Installation safety

- Ensure that the installation area is clean, dry and free of dust and gas.
- Avoid installation in direct sunlight or rain.
- Keep 50 cm of free space around the unit for ventilation.

2.10 Inspection

- Regular maintenance by a qualified technician is mandatory.
- Earthing and wiring must always be checked.

3. Assembly

3.1 Location requirements

- Operating temperature range: -10°C to +40°C (cooled)
- Storage: -25°C to +55°C
- Humidity ≤50% at 40°C, ≤90% at 20°C
- Max. altitude: 1000 m
- Wind ≤1 m/s at the workplace

3.2 Power requirements

- 3~AC power supply
- Oscillation must not deviate by more than ±15%

3.3 Power supply connection

- Connect to separate earth leakage protection
- No serial grounding, only parallel allowed

3.4 Wire supply connection

- Mount coil, insert wire, press down roller
- Use correct wire feed roller

3.5 Workpiece connection

- Earth cable on "-" and wire supply on "+" for solid wire
- Reverse for filled wire

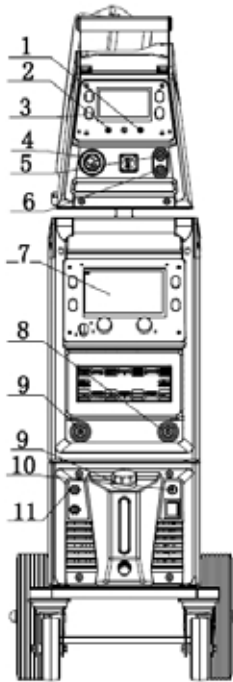
3.6 Gas connection

- Securely mount pressure regulator on cylinder
- Connect gas hose between cylinder and wire supply
- Connect the heater to the gas heater connection

3.7 Commissioning

- Check all connections
- Perform test welds and set parameters

4. Use



1. Current (wire feed speed) adjustment: Used to adjust the welding current (wire feed speed)
2. Voltage adjustment: Used to adjust the welding current
3. Manual wire feed button: Used to operate the wire feed at high speed
4. Torch connection: For connecting the welding torch
5. Water inlet connection: Where the water flows into the water-cooled torch
6. Return water connection: Where the water flows back from the torch to the water tank
7. Power source control panel: Function control of the power source
8. Power source output (positive): Connect to the wire feed unit (MIG)
9. Power source output (negative): Connect to the ground cable (MIG)
10. Water cooler inlet / water cooler fuse (3A)
11. Water cooler switch

4.1 Control elements

- LCD screen displays settings
- Buttons for mode selection, gas detection, parameter setting

4.2 Crater function

- Setting crater current and voltage

- Arc ends when torch button is pressed twice

4.3 Waveform control

- Reduces welding spatter by influencing the current flow

4.4 Wire feed

- Soft start during wire feed prevents welding spatter

4.5 Ball cutting & burn back

- Automatic removal of droplets after welding
- Burn-back after welding prevents wire sticking

5. Maintenance

- Periodic dust removal with compressed air
- Never clean while energised
- Check fan, cables and wire supply
- Only use original or equivalent parts
- Replace wear parts such as rollers, liners and nozzles in good time

6. Specifications

Power supply: 3~380V / 400V / 415V

Frequency: 50/60 Hz

MIG operating range: 30–350 A (NVM350), 30–500 A (NVM500)

MMA/TIG operating range: 25–500 A

Voltage range: 15.5–39 V

Duty cycle: 60%

Wire diameter: 0.8–1.6 mm

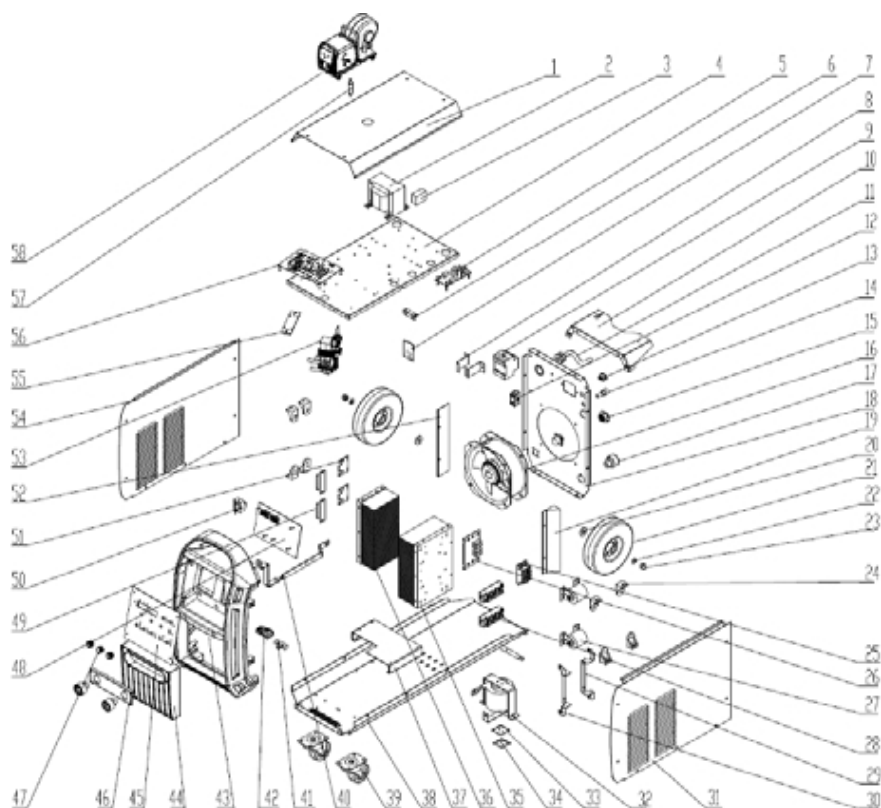
Efficiency: 85%

Protection class: IP21S

Dimensions: 1070×440×803 mm

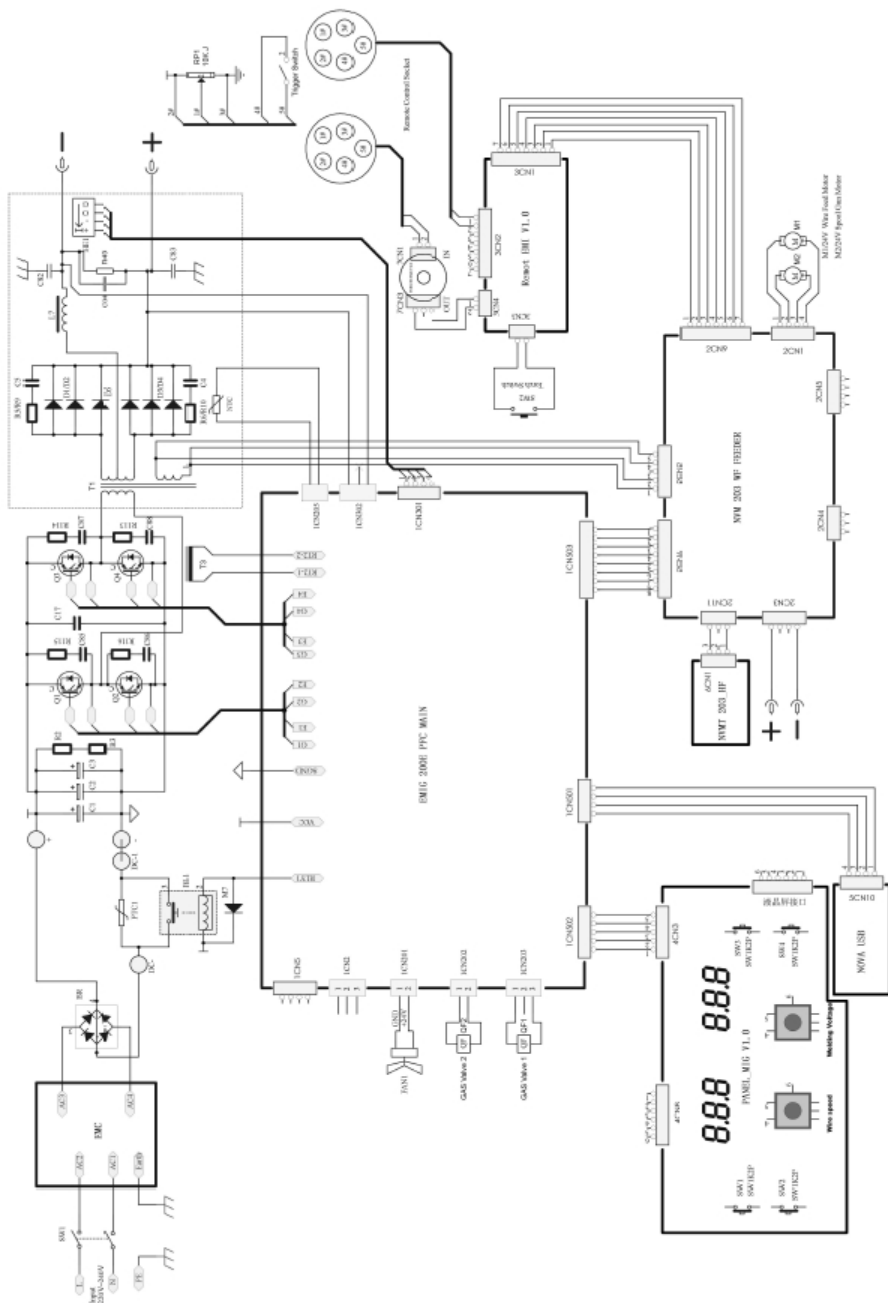
Weight: 70–80 kg

7. Parts lists



I			unit	dosage	Wearing parts
1	11010011794	outside shell	pcs	1	
2	20070230376	Power transformer	pcs	1	
3	20030300845	Switch is connected to the rectifier bridge	pcs	1	
4	11010050556	Mounting plate	pcs	1	
5	11050030124	Driver Board	pcs	1	★
6	11020015133	Current transformer support	pcs	1	
7	11050110723	Current sampling	pcs	1	★
	11020011828	Switch holder	pcs	2	
'	20070800005	Breaker	pcs	1	
10	11020015851	cylinder baffle	pcs	1	
11	11120270042	Power input wiring harness	pcs	1	
12	20070990393	Line pressing board	pcs	2	
13	20070570023	European power outlet	pcs	1	
14	20070520004	insurance holder	pcs	1	
15			pcs	1	
16	20070890054	Axial flow fan	pcs	1	
17	20070570062	Quick Euro connector	pcs	3	
18	11010032941	Back panel	pcs	1	
19	20050050781	Plastic windshield	pcs	1	
20			pcs	2	
21	20050070071	rubber wheel	pcs	2	
22	20060170043	More flat mat	pcs	2	
23	20060140059	Cap nut	pcs	2	
24	20050050	Radiator bracket	pcs		
25	20070370027	Three phase rectifier bridge	pcs	1	
26	11050080078	Inverse absorption plate	pcs	1	★
27	20070120122	Filter capacitor	pcs	2	
28	11050050195	IGBT welding	pcs	2	★
29	11030040089	IGBT positive bus	pcs	1	
30	11030040083		pcs	1	
31	11010021206	right panel	pcs	1	
32	11040030149	Output reactor assembly	pcs	1	
33	11020012657	Reactor shock absorber plate	pcs	1	
34			pcs	1	
35	20070430126	Radiator/IGBT	pcs	1	
36	20070430342	The radiator	pcs	1	
37	11020016441	Radiator plate	pcs	1	
38	11010042180	Chassis assembly	pcs	1	
39	20050070092	universal wheel	pcs	2	
40	11020016439	output busbar	pcs	1	
41	20030304203	Load plate and resistor connection wire	pcs	1	
42		output absorption plate	pcs	1	
43	20050051046	plastic panel	pcs	1	
44	20050051046	front panel fan window	pcs	1	
45	11020016440	screen printing plate	pcs	1	
46	11020015745	power source fixed plate	pcs	1	
47	2007	Potentiometer Knob	pcs	3	
48	11050070741	panel	pcs	1	★
49	20070280087	Quick recovery diode	pcs	2	
50	11110270062	Hall	pcs	1	
51	11050080079	Secondary absorption plate	pcs	2	★
52	110200150	Radiator windshield	pcs	1	
53	20070250325	main transformer	pcs	1	
54	11010021205	left panel	pcs	1	
55	11020015128	Transformer fixing plate welding	pcs	1	
56	11050021323	Silicone coated main control board	pcs		★
57	20200010604	feeder fixed axle	pcs		
58	11130550199	wire feeder assembly	pcs	1	

8. Circuit diagram



9. HUGONG warranty conditions

1. Warranty period

We offer the following on all our products:

- 2-year standard warranty on manufacturing and material defects from the date of purchase
- 5-year extended warranty, provided the product is registered within 30 days of purchase
- The extended warranty is only valid for the original owner and is not transferable. For business applications, different terms may apply, unless otherwise agreed in writing.

2. Unique HUGONG warranty:

5 years with official purchase via official sales point HUGONGWELDS.EU

The 5-year warranty on our HUGONG welding machines is unique in the market and underlines our commitment to quality, durability and service.

This comprehensive warranty applies only if:

- The machine was purchased from an authorised dealer listed on HUGONGWELDS.EU, the central platform for official HUGONG sales outlets and service partners.
- The product has been correctly registered online within 30 days of purchase
- Any repairs or maintenance are carried out exclusively by an authorised HUGONG service partner, as listed on HUGONG-WELDS.EU
- Repairs carried out by unauthorised parties will invalidate the warranty.
- The complete list of authorised dealers and service centres can be found at:
- www.hugongwelds.eu
- Purchases made through unauthorised sales channels or grey imports are not covered by the warranty conditions.
- Valkenpower B.V. is the official importer of HUGONG welding equipment for Western Europe. The 5-year extended warranty is provided exclusively by Valkenpower in collaboration with Hugong.

3. Warranty conditions (standard and extended)

To be eligible for warranty (standard or extended), the following conditions must be met:

- The product was purchased from a dealer recognised on HUGONG-WELDS.EU
- The product is used in accordance with the user manual and the prescribed maintenance instructions
- Maintenance and/or repairs are carried out exclusively by authorised HUGONG service partners
- For extended warranty: the product has been correctly registered within 30 days of purchase
- The original purchase invoice is available and can be provided.
- Please note: In the event of incorrect or improper use, the warranty will be void, including the standard warranty.

- If the product is not registered or is registered incorrectly within 30 days, only the standard 2-year warranty applies.

4. What does the warranty cover?

Within the valid warranty period, HUGONG covers:

- Manufacturing defects
- Material defects
- Functional defects under normal use We

will:

- Repair or replace the defective part
- Replace the entire product if necessary
- Or, in consultation, refund the purchase price (in part), minus depreciation
- The choice of solution is at the discretion of Valkenpower B.V. or an authorised service partner.

5. What is not covered by the warranty?

The warranty does not apply to:

- Normal wear and tear of parts such as:
- Electrodes, torches, cables, connectors, filters
- Hose couplings, switches, seals
- Water pumps in water coolers – these are considered wear parts
- Incorrect use, overloading or incorrect installation
- Modified or altered products without written permission
- Use of non-approved accessories or parts
- Ingress of dust, moisture or metal particles into the machine – this is not covered by the warranty and is considered user error
- Damage caused by external influences: moisture, dust, overheating, power surges, lightning, fire, corrosion or transport
- Use in rental applications, unless agreed in writing in advance

6. Warranty procedure

In the event of a defect:

Please contact our customer service or an authorised HUGONG dealer.

Please provide the following:

- Proof of purchase
- Serial number (legible on type plate)
- Description of the problem and circumstances

Shipping:

- The product must be returned safely packaged to the designated service point.
- Transport and shipping costs are at the customer's expense, unless otherwise agreed.
- During repair, there is no automatic right to a loan or replacement product.

**EC Declaration of Conformity - Declaration of conformity -
EG- Konformitätserklärung - Declaration de conformité
- Dichiarazione di conformità - Declaración de conformidad**

We, We, Wir, Nous, Noi, La empresa,
Valkenpower BV, Industrieweg 4, 6051 AE Maasbracht, Netherlands,
declare under our sole responsibility that the product declare under our sole
responsibility that the product
erklären in alleiniger Verantwortung, dass das Produkt
déclarons sous notre seule responsabilité que le produit
dichiariamo sotto la nostra responsabilità che il prodotto
declare under our sole responsibility that the product

Type	Description	Brand
Model	Description	Brand
Type	Description	Marke
Type	Description	Marque
Tipo	Description	Marca
Tipo	inverter device	Marca
NVM350-500		Hugong

To which this declaration relates is in conformity with the following standards:
To which this declaration relates is in conformity with the following document:
Auf welches sich diese Erklärung bezieht, den folgenden Normen entspricht:
Auquel se réfère cette déclaration est conforme à le document suivant:
The declaration refers to the following documents:
The present declaration refers to the following documents:

Low Voltage Directive, Niederspannungsrichtlinie, la Directive Basse Tension, la direttiva
bassa tensione, la norma Baja tensión:

2014/35/EC

Netherlands, Maasbracht, 14-08-
2025

Serial
number:

Director Valkenpower



B.A.H Valkenburg

Valkenpower BV, Industrieweg 4, 6051 AE Maasbracht, Netherlands

