

### MEGMEET Electrical Co., Ltd MEGMEET Welding Technology Co., Ltd

Add: 4-5th Floor, Block 2, New Materials Industrial Park, No28, Langshan Road, Nanshan District, Shenzhen, Guangdong Province, China

www.megmeet.com (MEGMEET Electrical)

www.megmeet-welding.com (MEGMEET Welding Technology)

E-mail: welding@megmeet.com Tel: +86-755-8660 0555

MEGMEET Germany GmbH

Add: Stadtheider Str. 26-28, 33609 Bielefeld, Germany

Tel: +49 521 588 131 40

Email: welding@megmeet.com

Tel: +91 12442 14460

MEGMEET (Thailand) Co., Ltd Add: 7/375 Moo 6, Tambon M abyangporn, Pluak Daeng, Rayong 21140

Tel: +66 (0) 33 012 666 Email: welding@megmeet.com MEGMEET Electrical India Pvt Ltd Add: Plot No. 140, Sector 7, IMT Manesar, Gurugram - 122052, Haryana

Email: welding@megmeet.com

### Follow us:









MEGMEET's strong technical strength, extensive industry application experience, relentless attention to customer needs, and the spirit of continuous innovation enable us to bring tailor-made products and solutions to help customers achieve greater success.

\*MEGMEET Welding Technology Co., Ltd is continuously striving to develop and innovate for new product. We reserves the right of changing the technical specifications and Copyright 2024 © MEGMEET Welding Technology Co., Ltd



# Dex2 M Series

Full Digital IGBT Inverter Multi-functional MIG Welding Machine





### Dex2 M Series

Full Digital IGBT Inverter Multi-functional MIG Welding Machine









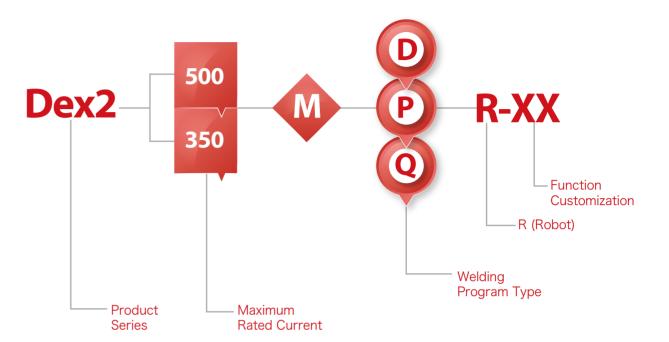






- Optimal welding programs in LSA (low-spatter-arc welding realized by software algorithm), quick pulse, high-speed weld and others. Be weldable in multiple materials: carbon steel, stainless steel, aluminum alloy and others;
- "Chopper" control technology is applied in software to precisely control droplet, and reduce spatter by more than 50%;
- · Unique quick pulse process integrates advantages of pulse and DC short circuit, and welding speed is increased by more than 20% compared with conventional pulse welding;
- Wider voltage range, high current and low voltage, lower heat input, higher fusion efficiency, thin plate welding is comparable to TAP-TYPE machine;
- Adaptive arc-start retraction technology increases arc start success rate to almost 100%;
- Inverter frequency up to 110KHz enables higher control precision and more stable arc;
- · Comprehensive communication interfaces are able to communicate with different
- Touch sensing function with 80-400 voltage is easier to break down the rust on the surface of workpiece;
- · Acting national standard of first-level energy efficiency;
- IOT interface is reserved to connect with Megmeet SMARC cloud system;
- · U-disk upgrade function ensures customers to easily obtain Megmeet's most cutting-edge welding technology;
- · Application industries: engineering machinery, steel structures, special vehicles, auto parts, two/tricycles, containers, petroleum and petrochemical industries, etc.







### Dex2 500MD/350MD

✓ LSA(Low Spatter Arc) CO₂/MAG

## Dex2 500MQ/350MQ

### Dex2 500MP/350MP











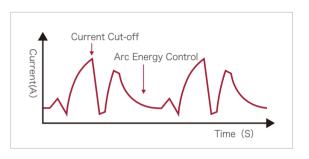
## LSA (Low Spatter Arc by Software Algorithm)

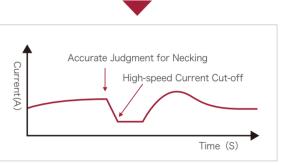
Fine management in droplet transfer through software algorithm so that short-circuit transfer of droplet is softly cut off, which greatly reduces spatter caused by liquid-bridge bursting and electromagnetic repulsion, and helps fusion pool more stable and weld shape more beautiful.

### Welding Features:

- · Compared with conventional DC welding, spatter quantity is cut down by 50%, which reduces cleaning and grinding time and improves production efficiency;
- Fluctuation of fusion pool is small, weld surface is more delicate, and weld shape is more beautiful;
- Lower heat input and less deformation;
- · Stronger gap adaptability.













LSA (low spatter and low heat input)





## Quick Pulse Technology(QPT)

Unique quick pulse welding technology adopts three-level main power topology. High-speed sampling and control advantages, brought by the inverter frequency up to 110kHz, can reach critical state between short circuit and pulse spray transition.

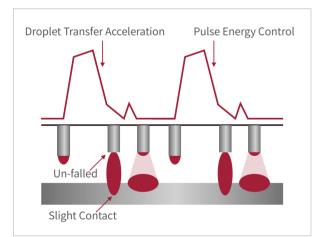
With shorter droplet transition distance, lower arc and faster welding speed, pulse speed is increased by more than 20%. Service life of wearing parts is lengthened and weld shape is better, meeting actual needs of manual welding.

### Pain Points in Conventional Pulse Welding

- Speed is slow: 30% slower than DC welding;
- · Weld formation is difficult to control: high heat input, long arc and many undercuts;
- · High Requirements in Mixed Gas: high requirement in the 80/20 gas ratio and resulted higher cost;
- · Accessories Loss: high voltage and high pulse peak value bring serious heating to torch, and high cost of accessories and shorter service life.



- · Welding speed is faster and welding speed is increased by 20%, compared with conventional pulse;
- · Short arc length, good stiffness, strong anti-interference ability, more suitable for high-speed welding of medium and thick plates, supporting concentrated arc energy and better penetration;
- · Low arc heat input increases service life of accessories;
- · Wide voltage range, strong welding adaptability, simpler operation, more popular by welders.







**Construction Machinery** 



Boiler Membrane Wall

## High Speed DC Welding

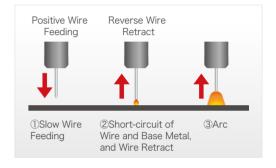
- · With wider adaptive range of voltage, the same current is able to match lower voltage (10% lower than other welding machines);
- · Lower heat input, higher deposition efficiency, thin-plate welding performance be comparable with tap-type machine.





# Wire Retraction Function in Arc Starting

· When welding machine detects arc starting signal, wire will retract in high speed, which greatly improves the quality and success rate of arc starting, and greatly reduces various arc staring issues.





## Up-down Torch (optional)

• Up-down torch is optional to conveniently adjust welding parameters on the torch(current, voltage, etc).





## ✓ High Reliability



Strong environmental adaptability, suitable for working under tough environment



Stable and reliable: stability is the base of intelligent welding machines!



Consistency: consistent performance by any machine, our quality is consistent anytime and anywhere!





## 400V High-voltage Touch Sensing Function

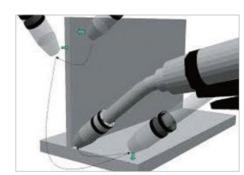
- · Built-in high-voltage touch sensing function with adjustable range 80~400V, no need to separately buy high-voltage touch sense device;
- · High reliability and effective penetration of oil stains, rust, water stains, etc., fast touch-sense with high precision, and strong adaptability to robots;
- · Current-limiting design ensures welding within safe current range, effectively protecting the safety of welders and welding machines;



## U-disk Interface

· To ensure customers conveniently obtaining Megmeet's foremost welding programs and function customization;

New software can be programmed into welding machines through U disk.

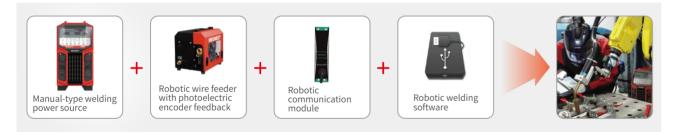






## Intelligent Upgrade

· With additional robotic accessories package, manual-type welding power source can be expanded to robotic welding power source to help users save money.



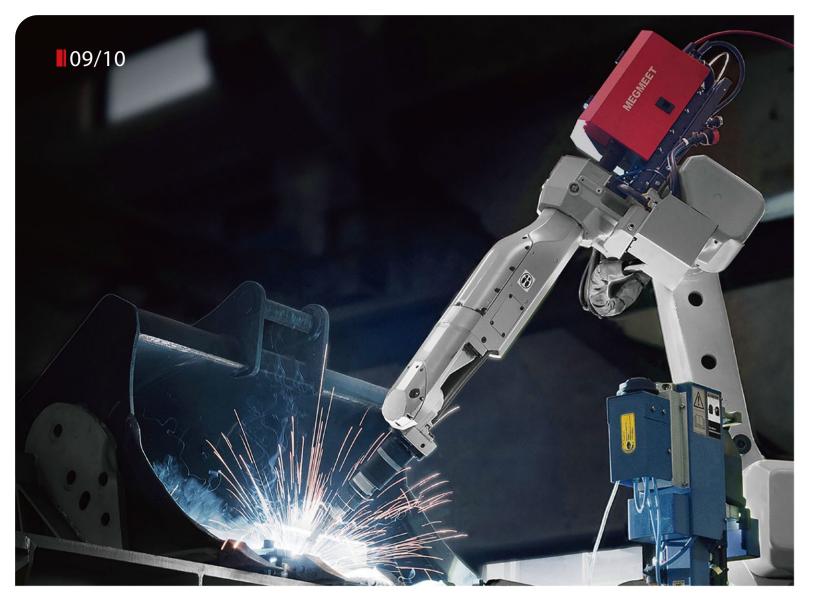
## Water Cooler (Optional)

| Circulating Water Cooler AnyCool-66 |                            |  |  |  |  |
|-------------------------------------|----------------------------|--|--|--|--|
| Water cooler power supply           | Powered by welding machine |  |  |  |  |
| Rated power                         | 370W                       |  |  |  |  |
| Rated voltage                       | 380V AC                    |  |  |  |  |
| Cooling water capacity              | 6.8L                       |  |  |  |  |
| Cooling water flow                  | 3.5L/min                   |  |  |  |  |
| Cooling water maximum lift          | 20m                        |  |  |  |  |
| Flow alarm                          | √                          |  |  |  |  |



### **Product Specification**

| i roddet op                             |                    |                    |                      |                    | <ul><li>Standar</li></ul> | d Optional         |
|---|--------------------|--------------------|----------------------|--------------------|---------------------------|--------------------|
| Manual type                             | Dex2 500MD         | Dex2 350MD         | Dex2 500MP           | Dex2 350MP         | Dex2 500MQ                | Dex2 350MQ         |
| Robotic type                            | Dex2 500MDR        | Dex2 350MDR        | Dex2 500MPR          | Dex2 350MPR        | Dex2 500MQR               | Dex2 350MQR        |
| Welding Programs                        |                    |                    |                      |                    |                           |                    |
| LSA (Low Spatter Arc by Software)       | •                  | •                  | •                    | •                  | •                         | •                  |
| DC                                      | •                  | •                  | •                    | •                  | •                         | •                  |
| Standard pulse                          | -                  | -                  | •                    | •                  | •                         | •                  |
| Quick pulse                             | -                  | -                  | •                    | •                  | •                         | •                  |
| Flux Core Carbon Steel/DC               | •                  | •                  | •                    | •                  | •                         | •                  |
| Carbon steel                            | •                  | •                  | •                    | •                  | •                         | •                  |
| Stainless steel                         | •                  | •                  | •                    | •                  | •                         | •                  |
| Aluminum alloy                          | -                  | -                  | -                    | -                  | •                         | •                  |
| Function                                |                    |                    |                      |                    |                           |                    |
| U-disk interface                        | •                  | •                  | •                    | •                  | •                         | •                  |
| SMARC interface                         | 0                  | 0                  | 0                    | 0                  | 0                         | 0                  |
| Push-pull welding torch interface       | 0                  | 0                  | 0                    | 0                  | 0                         | 0                  |
| Wire feeder AV LED display (manual type | e) O               | 0                  | 0                    | 0                  | 0                         | 0                  |
| Technical Parameters                    |                    |                    |                      |                    |                           |                    |
| Control Method                          | Digital IGE        | 3T Control         | Digital IGBT Control |                    | Digital IGBT Control      |                    |
| Input voltage                           | 3-phase AC 3       | 380 V (土25%)       | 3-phase AC 3         | 380 V (土25%)       | 3-phase AC 3              | 380 V (土25%)       |
| Input frequency                         | 40~70Hz            | 40~70Hz            | 40~70Hz              | 40~70Hz            | 40~70Hz                   | 40~70Hz            |
| Inverter switching frequency            | 110kHz             | 110kHz             | 110kHz               | 110kHz             | 110kHz                    | 110kHz             |
| Rated input capacity                    | 23.3KVA/21.4KW     | 13.4KVA/12.3KW     | 23.3KVA/21.4KW       | 13.4KVA/12.3KW     | 23.3KVA/21.4KW            | 13.4KVA/12.3KW     |
| No-load voltage                         | 77V                | 77V                | 77V                  | 77V                | 77V                       | 77V                |
| Rated output current                    | 500A               | 350A               | 500A                 | 350A               | 500A                      | 350A               |
| Rated output voltage                    | 39V                | 31.5V              | 39V                  | 31.5V              | 39V                       | 31.5V              |
| Duty cycle                              | 100%@500A          | 100%@350A          | 100%@500A            | 100%@350A          | 100%@500A                 | 100%@350A          |
| Power factor                            | 0.92               | 0.92               | 0.92                 | 0.92               | 0.92                      | 0.92               |
| Efficiency                              | 91%@500A           | 89%@350A           | 91%@500A             | 89%@350A           | 91%@500A                  | 89%@350A           |
| Output characteristics                  | CV                 | CV                 | CV                   | CV                 | CV                        | CV                 |
| Wire feeding speed                      | 0.5~28m/min        | 0.5~28m/min        | 0.5~28m/min          | 0.5~28m/min        | 0.5~28m/min               | 0.5~28m/min        |
| Parameter JOB                           | 50 sets            | 50 sets            | 50 sets              | 50 sets            | 50 sets                   | 50 sets            |
| Operating temperature                   |                    | -10°C~40°C (we     | elding power source  | can be started at  | -39°C)                    |                    |
| Dimension(L×W×H)                        |                    |                    | 647×291×57           | 2mm                |                           |                    |
| Weight                                  | 37kg               | 37kg               | 37kg                 | 37kg               | 37kg                      | 37kg               |
| Enclosure rating                        | IP23 S             | IP23 S             | IP23 S               | IP23 S             | IP23 S                    | IP23 S             |
| Insulation class                        | Н                  | Н                  | Н                    | Н                  | Н                         | Н                  |
| Cooling method                          | Forced air cooling | Forced air cooling | Forced air cooling   | Forced air cooling | Forced air cooling        | Forced air cooling |







Embedded-Type communication module supports multiple types of communication protocols















### Dex2 Series Communication Protocols with Robots

|          | TAST(Thru-         | Touch<br>Sensing | Communication Protocols with Robots |           |         |             |             |          |          |
|----------|--------------------|------------------|-------------------------------------|-----------|---------|-------------|-------------|----------|----------|
| Function | arc Seam Tracking) | 80-400V          | Analog                              | DeviceNet | CANopen | MEGMEET CAN | EtherNet/IP | EtherCAT | Profinet |
|          | •                  | •                | 0                                   | 0         | 0       | 0           | *           | *        | *        |

● Standard ○ Optional ※ Customized

### Robotic Wire Feeder Selection

|                          | Model Name  | Wire feeding drive control mode | Dimensions<br>(L×W×H) | Welding Torch<br>Interface | Weight |         |  |
|--------------------------|-------------|---------------------------------|-----------------------|----------------------------|--------|---------|--|
|                          | WF1-50ZE    | Worm Gear                       | 230×170×170mm         | European type              | 6kg    | UFGNEET |  |
| Non Push-pull            | WF1-50ZER   | Worm Gear                       | 230×170×170mm         | Asian type                 | 6kg    |         |  |
| Application              | WF1-50PW-7  | Worm Gear                       | 223×152×221mm         | European type              | 7kg    | MEGMEET |  |
|                          | WF1-50PWR-7 | Worm Gear                       | 223×152×221mm         | Asian type                 | 7kg    |         |  |
| Push-pull<br>Application | WF1-50PW-T7 | Worm Gear                       | 277×191×223mm         | European type              | 8kg    | 2 6     |  |

### Manual Wire Feeder Selection

|                                 | Push-pull Application                         | Non Push-pull Application |                           |                           |  |  |
|---------------------------------|---|---------------------------|---------------------------|---------------------------|--|--|
|                                 | Enclosed wire feeder                          | Enclosed wire feeder      | Open wire feeder          |                           |  |  |
|                                 |   |                           |                           |                           |  |  |
| Model Name                      | WF22-50PW-T7                                  | WF22-50PW-D7D             | WF2-50PW-D7D              | WF2-50PWR-MD-7            |  |  |
| V/A LED display                 | Yes   | Yes                       | Yes                       | N/A                       |  |  |
| Wire feeding drive control mode | Code disc control<br>Back electromotive force | Back electromotive force  | Back electromotive force  | Back electromotive force  |  |  |
| Wire feeder rated voltage       | 24V   | 24V                       | 24V                       | 24V                       |  |  |
| Wire feeding speed              | 0.5~28m/min                                   | 0.5~28m/min               | 0.5~28m/min               | 0.5~28m/min               |  |  |
| Wire feeding roller diameter    | φ0.8∼1.6mm                                    | φ0.8∼1.6mm                | φ0.8~1.6mm                | φ0.8∼1.6mm                |  |  |
| Wire spool type                 | Standard wire spool                           | Standard wire spool       | Standard wire spool       | Standard wire spool       |  |  |
| Drive unit                      | Double drive four rollers                     | Double drive four rollers | Double drive four rollers | Double drive four rollers |  |  |
| Wire feeder torch interface     | European interface                            | European interface        | Asian interface           | Asian interface           |  |  |
| Dimension (L×W×H)               | 680×300×400mm                                 | 680×300×400mm             | 500×215×357mm             | 500×215×357mm             |  |  |
| Weight                          | 19kg  | 19kg                      | 9kg                       | 9kg                       |  |  |