



MARC
Best
solution
for best
results



With MARC:
Welding of
pads and nuts
on punched
and unpunched
metal sheets.

Applications are
e.g. sprinkler
systems, ventilati-
on tubes, hinges,
pressure vessels,
exhaust systems.



Benefit with HBS

| | |
|--|---|
| Leading through technology, quality and service. | HBS Bolzenschweiss- Systeme GmbH & Co. KG Felix-Wankel-Strasse 18 85221 Dachau / Germany |
| 5 welding processes, 12 model series and more than 30 model variants. | Phone +49 8131 511-0 Fax +49 8131 511-100 post@hbs-info.com www.hbs-info.com |



MARC
Nut and pad welding
with magnetic rotating arc

MARC Innovative ARC welding technique

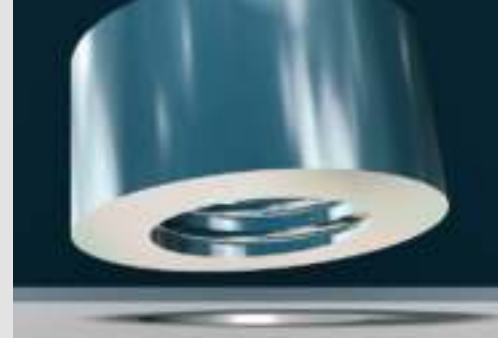
HBS presents MARC, a manual pad and nut welding system which is more and more replacing traditional processes all over the world due to the innovative procedure with a magnetic rotating ARC.

Regardless of whether only static stability is required or if additional, customer-specific connection properties (e.g., pressure tight) need to be fulfilled, you always achieve the best results – with considerable time and cost savings.

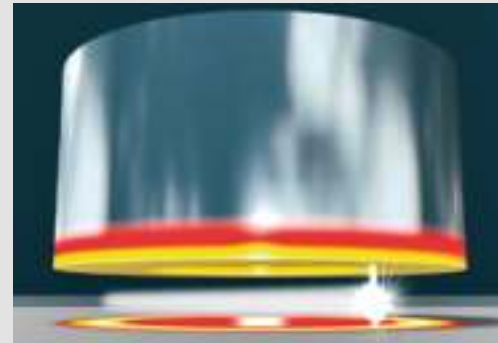
Spatter free joints can be achieved with a high welding cycle time of up to 10 welds/minute. This is especially suited for thin metal sheets from 1 mm upwards.

MARC provides the access to a new future to international trusts, medium-sized companies as well as to crafts enterprise.

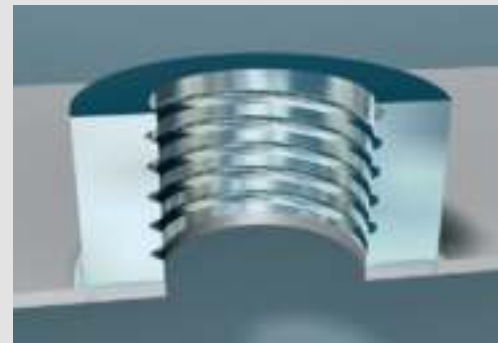
Optimum results, efficiency and a convincing price/performance ratio provide advantages with view to competition.



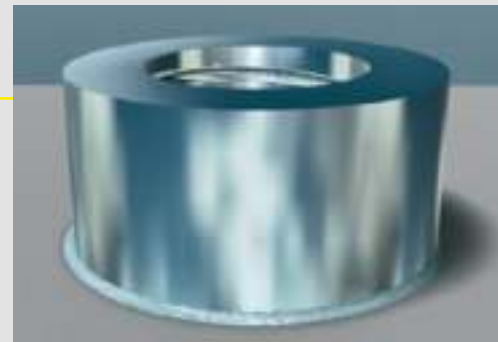
Joining of welding elements



A burning ARC is put into rotation in a controlled way. A ring-shaped weld pool is generated where the welding element is plunged in.



The very precise and clean welding process does require any subsequent machining of the work piece or welding element (e.g. caused by distortion or welding spatters at the thread).



Based on a very short welding time and low energy consumption, extraordinary welding results are achieved featured by high process stability and best economical efficiency.

Results in a matter of seconds

To equip metal sheets, tubes and profiles with threads meant a difficult drilling and thread milling or costly welding using classic procedures with stationary machines. MARC revolutionizes that standard welding methods, especially with thin metal sheets.

MARC not only brings significant investment savings and greater flexibility compared to stationary systems, but also considerable technical advantages, e.g., up to 100% higher welding sequence (compared to manual MIG/MAG welding procedures) with low heat input.



HBS offers self-developed welding elements specially matched to the process (hexagon nut and sleeve) that guarantee high positioning accuracy through a special geometry.

Top in all points:

- High mobility
- Only one-sided accessibility of the workpiece necessary
- Very short welding time (1 sec.)
- High cycle rate
- Self-centring welding nut (on hole)
- No weld spatter in thread
- Through-screwing
- Reworking on the workpiece/welding element no longer necessary
- Smaller and more uniform welding seam (I-seam)
- No welding consumables necessary
- Low energy requirements
- Uniform and minimal heat input (low distortion)
- Low joining force (max. 10N)

MARC 1 A

Value orientated model with non-cooled field former. Power unit: IT 1002 Welding gun: AM 12 A

MARC 1 W

With water cooled field former for higher welding rate. Power unit: IT 1002 Welding gun: AM 12 W Cooling unit: CU

MARC 1 CW

Water-cooled and controlled field former. Especially well suited for applications such as custom-made sleeves, nuts, studs, etc. (System on request).

MARC 3

Stationary pad welding systems for custom-made welding sleeves.

- High series production
- Welding head with linear motor
- Highest process reliability

| | MARC 1 A | MARC 1 W |
|------------------------|---------------------|-------------------------------|
| Welding range | M6 to M12 | M6 to M12 |
| Welding rate | up to 4 pieces/min* | up to 10 pieces/min* |
| Wall thickness | 1 to 3 mm** | 1 to 3 mm** |
| Welding current | 1,000 A | 1,000 A |
| Weight | 29 kg (IT 1002) | 29 kg (IT 1002) 24 kg (CU) |

* depending on nut diameter and type of material
** higher plate thickness on request

Due to a possible replacement of the manual welding gun, the unit is also suitable for manual stud welding.

MARC systems can be used in all metal working industries.

