Option retrofit : ON SAFEGUARD

- Optimal protection in tough surroundings
- Additional isolation protection
- Can be combined with durt filter
- Easy to set up
- Light and robust
- Impact-proof and break-proof
- Easy to clean

Already available
MIG/MAG

Step switched

- MIRA 151, 221, 251, 301
- SATURN 301, 351**
- WEGA 401**, 501, 601

- MIRA 301: 1.02, 2.20, 2.40
- ** compact & decompact

1.02*
1.02, 2.20, 2.40
1.02, 2.20, 2.40

Inverter

- PICOMIG
- Taurus
- Phoenix

AlphaQ
Picomig 180 PULS
Taurus 335 → Taurus 355

from 1. Quarter 2012
Taurus 335/355

Taurus Basic S

Taurus Synergic S
Taurus 405  
Start of 2012

Taurus 505  
Start of 2012
Taurus Basic S

Taurus Basic
Phoenix 335  ➤  Phoenix 355

From 1. Quarter 2012
• Six high-value welding processes – one machine
• coldArc – „reduced-energy“ short arc for welding and brazing
• forceArc – the powerful forced arc. Improve quality and save up to 50% of production costs
• Self-explanatory operating concept – extremely practical for every user
• Extended duty cycle and top performance – up to 550 A welding current
alpha Q Drive 4D

- Double wire feed unit
- Two welding tasks with just one power source for alternating welding of e.g. root and cover seams, solid and cored wire, different materials and wire thicknesses
- No changing of rollers, no torch conversion required, changeover times are greatly reduced
- The torch trigger is used for changeover between the wire feeds; no special torch or changeover on the machine required!
- 4-roller wire feed Equipped for 1.0 mm + 1.2 mm steel wires
- Pin reel type D300
- Dimensions: LxWxH in mm, 690 x 300 x 410. Weight 12 kg
Types of EWM short arcs

**coldArc**

**pipeSolution**

**rootArc**

*Only Phoenix and Taurus*
coldArc

- almost no spatter
- excellent bridging
- welding of thin plates
- brazing of thin and galvanized plates
- welding of root passes
- brazing with zinc based wires
- mixed joints (galvanized steel with aluminium)

Pipe Solution

- welding of root passes in all positions
- more arc pressure, especially in the over-head position
- very good bridging
- less spatter
Mixing of two processes: Standard and Puls via Superpulse function

1. Activate the switching between two processes
2. Activate Superpuls
3. Set the parameters according to the application

---

**without Tipping**

B.Ivanov  
Training NEWS

© 2010 EWM HIGHEC WELDING
Excellent welding in up-hill position with automatic change from rootarc to Impuls

- Secure rootwelding with rootArc
- Efficient filling with Impuls

Result

- No weaving necessary
- Excellent visual appearance

Easy to set, easy to use

Standard values stored in the jobs:

193 and 194 (AlphaQ)
206 and 207 (Phoenix)

Only turn on Superpulse function!

B.Ivanov Training NEWS © 2010 EWM HIGHTEC WELDING
Alternative to the welding with globular (transitional) arc, e.g. fine grained steels!

Small thicknesses:
coldarc + Impuls (AlphaQ)
rootarc + Impuls (Phoenix)

Big thicknesses:
forcearc + Impuls (AlphaQ, Phoenix)

Setup with PC300.NET in all jobs!
MIG/MAG Handfernsteller RG10 / RG11

• **MIG/MAG remote RG10:**
  • For Synergic machines
  • Wire speed (0.5 - 24 m/min)
  • Voltage correction (-10 V bis +10 V)

• **MIG/MAG remote RG11:**
  • Non-synergic machines
  • Wire speed (0.5 - 24 m/min)
  • Voltage (10 V bis 50 V)

*Already available*
LiftArc 1 und LiftArc 2 Zündungen für MIG/MAG

Die fachgerechte Brennerausrüstung ist für eine gute Funktion besonders wichtig!
Energy efficiency with the EWM Inverter technology

Wire: 1.2 mm
Material: SG2
Gas: 82% Argon - 18% CO2
Fillet weld on a T-joint 8mm steel plate.
Wire speed: 11.6 m/min

Step switched or thyristor - machine:
Wire speed: 11.6 m/min,
Current: 355A,
Plate thickness: 8mm,
Energy consumption from the net 3x400V:
16.08 kW

EWM Inverter machine with forcArc-technology – Taurus, Phoenix, alphaQ
Wire speed: 11.6 m/min,
Current: 355A,
Plate thickness: 8mm,
Energy consumption from the net 3x400V:
12.15 kW

© 2010 EWM HIGHTEC WELDING
Energy consumption from the net

Consumption in 100 hrs [kWh]

Welding speed / current

- ColdArc-Technology
- Inverter-Pulsed arc
- Step switched/Thyristor-short arc

<table>
<thead>
<tr>
<th>Speed/Curent</th>
<th>ColdArc-Technology</th>
<th>Inverter-Pulsed arc</th>
<th>Step switched/Thyristor-short arc</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,0m/min ca. 95A</td>
<td>220</td>
<td>260</td>
<td>250</td>
</tr>
<tr>
<td>4,0m/min ca. 120A</td>
<td>290</td>
<td>335</td>
<td>325</td>
</tr>
<tr>
<td>5,0m/min ca. 145A</td>
<td>360</td>
<td>410</td>
<td>400</td>
</tr>
</tbody>
</table>

© 2010 EWM HIGHTEC WELDING
Energy consumption from the net

Welding speed / current

<table>
<thead>
<tr>
<th>Welding speed</th>
<th>ColdArc-Technology</th>
<th>Inverter-Pulsed arc</th>
<th>Step switched/Thyristor-short arc</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0m/min ca. 290A</td>
<td>960</td>
<td>1020</td>
<td>1230</td>
</tr>
<tr>
<td>11.0m/min ca. 340A</td>
<td>1180</td>
<td>1290</td>
<td>1520</td>
</tr>
<tr>
<td>13.0m/min ca. 380A</td>
<td>1410</td>
<td>1590</td>
<td>1780</td>
</tr>
</tbody>
</table>
spotArc

1. Set time
2. Start the arc

spotmatic

1. Set time
2. Touch workpiece
3. Lift torch
EWM WIG-SpotArc-Brenner mit verbessertem Design

- higher stability and precision
- better cooling
- exact setting of the nozzle
- 5- or 8-pin socket
- Standard thungsten (175 mm)
WIG Handfernsteller RTG1

WIG Fernsteller RTG1:
• Welding current (0 % bis 100 %)

Already available
TIG hot wire - explanation of the process

With regard to the materials to be used, wall thicknesses and welding positions, **TIG welding** is a universal welding process. It makes it possible to produce welded joints of the highest quality.

**TIG cold wire welding** was developed firstly with the aim of making TIG welding easier and more convenient to use and secondly to increase the welding speed. In this process, the welding consumable is fed to the weld pool by a wire feed unit. Deposition rates, however, remain limited.

**TIG hot wire welding** is a further development of TIG cold wire welding. The consumable is heated by a separate power source using resistance heating of the wire stick-out between the contact tip of the hot wire torch and the molten pool. There are several advantages over the cold wire process due to the improved heat balance provided by this process:

- Up to 100% faster welding speed
- Up to 60% improvement in deposition rate
- Dilution reduced by up to 60%
- Greater fusion volume (30-50%) with the same welding performance
- Easier positional welding
Hot wire welding

Preheating the wire up to 120-150 A

TETRIX 270

Advantages compared to cold wire: considerably increased deposition rate and welding speed
Abschmelzleistung beim WIG Schweißen im Vergleich

<table>
<thead>
<tr>
<th></th>
<th>kg/h</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIG Manuell</td>
<td>1</td>
</tr>
<tr>
<td>WIG-KD</td>
<td>4</td>
</tr>
<tr>
<td>WIG-HD</td>
<td>6</td>
</tr>
</tbody>
</table>
TIG hot wire – available machines

<table>
<thead>
<tr>
<th>DC</th>
<th>AC/DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>351</td>
<td>351</td>
</tr>
<tr>
<td>451</td>
<td>451</td>
</tr>
<tr>
<td>551</td>
<td>551</td>
</tr>
</tbody>
</table>
Advantages of the TIG hot wire process

- High deposition rates
- High welding speed
- Low risk of a lack of fusion
- High-quality, fine-flaked seam
- Welding of high-alloy and special materials
- No spatter
- Smaller HAZ, less distortion
- Well suited for narrow gap welding
- Combined hot/cold wire system
- Synchronous welding
- Simple operation (synergy concept)
- Manual, mechanised and automated applications
EWM SERVICE SYSTEM SS02

- Zwei stabile, praktische Kunststoffkoffer mit je vier Schubladen
- Jede Schublade ist übersichtlich in beschriftete Einzelfächer unterteilt
- Stapelbar, koppelbar, leicht zu transportieren
- Umfasst die Bereiche Geräte-, Brenner- und Automatisierungsservice
- 160 verschiedene Artikel, ca. 2000 Teile
- Enthält gängige Kleinteile zur Reparatur und Wartung von EWM Produkten. Z.B.: Schrauben, Zylinderstifte, Abstandshalter
- Schmelzsicherungen, Kupplungen
- Taster, Schalter, Buchsen und Stecker inkl. Kontakte, Zugentlastungen, Drehknöpfe
- Staubschutzkappen und Blindkappen
- Mikroschalter und Tasterfedern
Thank you for your attention