

# 2 GENERAL ARC WELDING



## WELDING TOOLS AND ACCESSORIES

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## The different types of cable

### Primary cables:

Three core for single phase or four core for three phase requirement. The current indication is the maximum accepted to be conform to the 287 IEC recommendation.

**Standard: H07RN-F**

### Secondary cables:

A single copper core between the power source and the clamp as well as between the power source and the electrode holder. The current indication is the maximum accepted to be conform to the 287 IEC recommendation.

For length over 10 meters, the section has to be increased.

For secondary cables, the European directive (2006/95/EC-low voltage directive) imposes the conformity to one of these two standards. It means that, for safety reasons (resistance to welding hot projections), PVC cables must not be used as welding cables, because they do not meet the standards' requirements.

**Standard: H01N2-E  
extra flexible**

**Standard: H01N2-D  
flexible**

### Reference documents:


- H07RN-F standard for primary cables
- H01N2-E and H01N2-D standards for secondary cables
- Harmonized standard CENELEC HD 516 S2: 1997 / HD 22.6
- § 4.4.5 Document change through amendment A1: 2003
- Communication in the framework (01/02/2005) of the low voltage directive





## Primary cables

H07RN-F

	A maxi *	To order Linear meter
3 x 1.5 mm <sup>2</sup>	16 A	W000010098
3 x 2.5 mm <sup>2</sup>	20 A	W000010099
4 x 2.5 mm <sup>2</sup>	20 A	W000010100
4 x 4 mm <sup>2</sup>	30 A	W000010101
4 x 6 mm <sup>2</sup>	37 A	W000010102
4 x 10 mm <sup>2</sup>	52 A	W000010103
4 x 16 mm <sup>2</sup>	69 A	W000010104
4 x 25 mm <sup>2</sup>	92 A	W000010105
4 x 35 mm <sup>2</sup>	114 A	W000010106


\* According EN 50565-1 (2014) - For a 60 °C temperature of the core and an ambient temperature: 30 °C

## Cable connectors DINSE type

Push and twist design




EN 60974-12

Description		A maxi *	To order Linear meter
1 - Male	10-25 mm <sup>2</sup>	200 A	W000010559
	35-50 mm <sup>2</sup>	400 A	W000010560
	70-95 mm <sup>2</sup>	600 A	W000010561
2 - Female	10-25 mm <sup>2</sup>	200 A	W000010562
	35-50 mm <sup>2</sup>	400 A	W000010563
	70-95 mm <sup>2</sup>	600 A	W000010564
Male + Female	35-95 mm <sup>2</sup>	600 A	W000010641

## Secondary cables

Extra flexible (H01N2-E) - Flexible (H01N2-D)

	A maxi *			Extra flexible (H01N2-E)	Flexible (H01N2-D)	
	at 100%	at 60%	at 35%	Linear meter	Coil 50 m	Linear meter
16 mm <sup>2</sup>	135 A	139 A	150 A	W000010137	W000260274	W000260272
25 mm <sup>2</sup>	180 A	190 A	213 A	W000010138	W000260275	W000260273
35 mm <sup>2</sup>	225 A	243 A	279 A	W000010139	W000260276	W000260271
50 mm <sup>2</sup>	285 A	316 A	371 A	W000010140	W000260277	W000260270
70 mm <sup>2</sup>	355 A	403 A	482 A	W000010141	W000260278	W000260269
95 mm <sup>2</sup>	430 A	498 A	606 A	W000010142	W000260279	W000260268
120 mm <sup>2</sup>	500 A	587 A	721 A	W000010143	-	-

\* According EN 50565-1 (2014) - For an ambient temperature: 25 °C

## Cables lugs



2007-752

- ◆ Screw type
- ◆ Diameter: 11 mm
- ◆ Cable: 0-25 mm<sup>2</sup>

To order W000010094



2007-753

- ◆ Screw type
- ◆ Diameter: 14 mm
- ◆ Cable: 25-35 mm<sup>2</sup>

To order W000010095



2007-754

- ◆ Screw type
- ◆ Diameter: 14 mm
- ◆ Cable: 35-50 mm<sup>2</sup>

To order W000010096



2007-755

- ◆ Screw type
- ◆ Diameter: 16 mm
- ◆ Cable: 50-70 mm<sup>2</sup>

To order W000010640

- ◆ Screw type
- ◆ Diameter: 16 mm
- ◆ Cable: 70-100 mm<sup>2</sup>

To order W000335165

# CLAMPS



## The choice of a clamp follows several criteria.

It firstly depends on the maximum amperage you are using.

Then, the kind of contact is important. For light duty or normal use, steel clamps **HIPPO** type, or brass clamps **CROCODILE** type are perfect. For heavy duty or intensive use, you can choose **MUSCLOR**, **DRAGON** or **SERRE-JOINT** types.

Lastly the **MAGNETIC** type is ideal for large component parts and the **ROTARY** for heavy use where the cable turns around the clamp.

## Clamp for normal use

Choice criteria	A maxi	Jaw opening (mm)
HIPPO 200	200	38
HIPPO 400	400	50
HIPPO 600	600	50
CROCODILE 300	300	38
CROCODILE 600	600	38



## HIPPO 200 / 400 / 600



2004-634

### Customer's benefit:

- ◆ Economical steel clamps.

#### HIPPO 200

**To order** W000010579

#### HIPPO 400

**To order** W000010580

#### HIPPO 600

**To order** W000010597

### Technical characteristics:

	HIPPO 200	HIPPO 400	HIPPO 600
Amperage	200 at 35%	400 at 35%	600 at 35%
Cable Ø (mm <sup>2</sup> )	25	70	70
Weight	208 g	362 g	376 g

## CROCODILE 300 / 600



2007-756

### Customer's benefit CROCODILE 300:

- ◆ Brass clamps.
- ◆ Brass jaws.

#### CROCODILE 300

**To order** W000010577

### Customer's benefit CROCODILE 600:

- ◆ Very good contact surface.

#### CROCODILE 600

**To order** W000010578

### Technical characteristics:

	CROCODILE 300	CROCODILE 600
Amperage	300 at 35%	600 at 35%
Cable Ø (mm <sup>2</sup> )	50	95
Weight	405 g	634 g



## MAGNETIC 500 / 600



**MAGNETIC 500**  
**To order** W000010553

**Customer's benefit:**

- ◆ Large surface contact.
- ◆ Can be placed close to the welding position insuring good electrical contact.

**MAGNETIC 600**  
**To order** W000010554

**Technical characteristics:**

	MAGNETIC 500	MAGNETIC 600
Amperage	500 at 35%	600 at 35%
Cable Ø (mm <sup>2</sup> )	70	95
Weight	815 g	1722 g

## Clamp for bulky parts

Choice criteria	A maxi	Jaw opening (mm)
MAGNETIC 500	500	N/A
MAGNETIC 600	600	N/A
ROTARY 800	800	82
ECR 1500-1	1500	N/A

## ROTARY 800

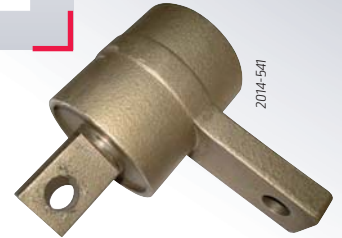
**Customer's benefit:**

- ◆ Brass clamps.
- ◆ Brass jaws.

**To order** W000010555

**Technical characteristics:**

	ROTARY 800
Amperage	800 at 35%
Cable Ø (mm <sup>2</sup> )	2 x 95
Weight	3319 g



## ECR 1500-1

**Customer's benefit:**

- ◆ Rotating clamps for heavy duty works in submerged arc welding.

**To order** W000374086

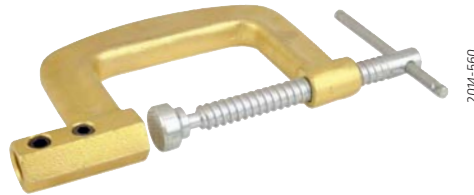
**Technical characteristics:**

	ECR 1500-1
Amperage	1500 at 100%
Weight	2614 g

## Clamp for heavy duty use

Choice criteria	A maxi	Jaw opening (mm)
MUSCLOR 300	300	38
MUSCLOR 600	500	38
SERRE-JOINT 500	500	60
SERRE-JOINT 800	800	75
DRAGON 600	600	38

## SERRE-JOINT 500 / 800



**SERRE-JOINT 500**  
**To order** W000010987

**SERRE-JOINT 800**  
**To order** W000010988

**Customer's benefit SERRE-JOINT 500:**

- ◆ Cable fixed with brass sleeve.
- ◆ Improved grip through clamp tightening capacity.

**Customer's benefit SERRE-JOINT 800:**

- ◆ Cable fixed with brass sleeve.
- ◆ Improved grip through clamp tightening capacity.
- ◆ 3 positions of brass guide.

**Technical characteristics:**

	SERRE-JOINT 500	SERRE-JOINT 800
Amperage	500 at 35%	800 at 35%
Cable Ø (mm <sup>2</sup> )	95	95
Weight	744 g	1187 g

## MUSCLOR 300 / 600



**MUSCLOR 300**  
**To order** W000010583

**Customer's benefit:**

- ◆ Heavy duty brass clamps, powerful jaws giving excellent grip.

**MUSCLOR 600**  
**To order** W000010584

**Technical characteristics:**

	MUSCLOR 300	MUSCLOR 600
Amperage	300 at 35%	600 at 35%
Cable Ø (mm <sup>2</sup> )	50	95
Weight	480 g	762 g

## DRAGON 600

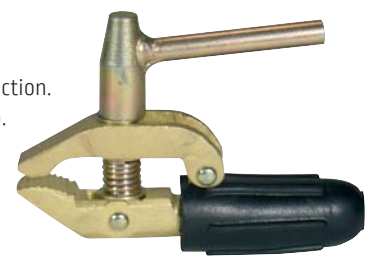
**Customer's benefit:**

- ◆ Brass jaws, rubber sheath cable protection.
- ◆ Screw tightening giving excellent grip.

**Technical characteristics:**

	DRAGON 600
Amperage	600 at 35%
Cable Ø (mm <sup>2</sup> )	95
Weight	816 g

**To order** W000010582



# MAGNETIC GROUND CLAMPS

# MAGSWITCH

WARRANTY  
**1**  
YEAR

## Magnetic ground clamps and positioners

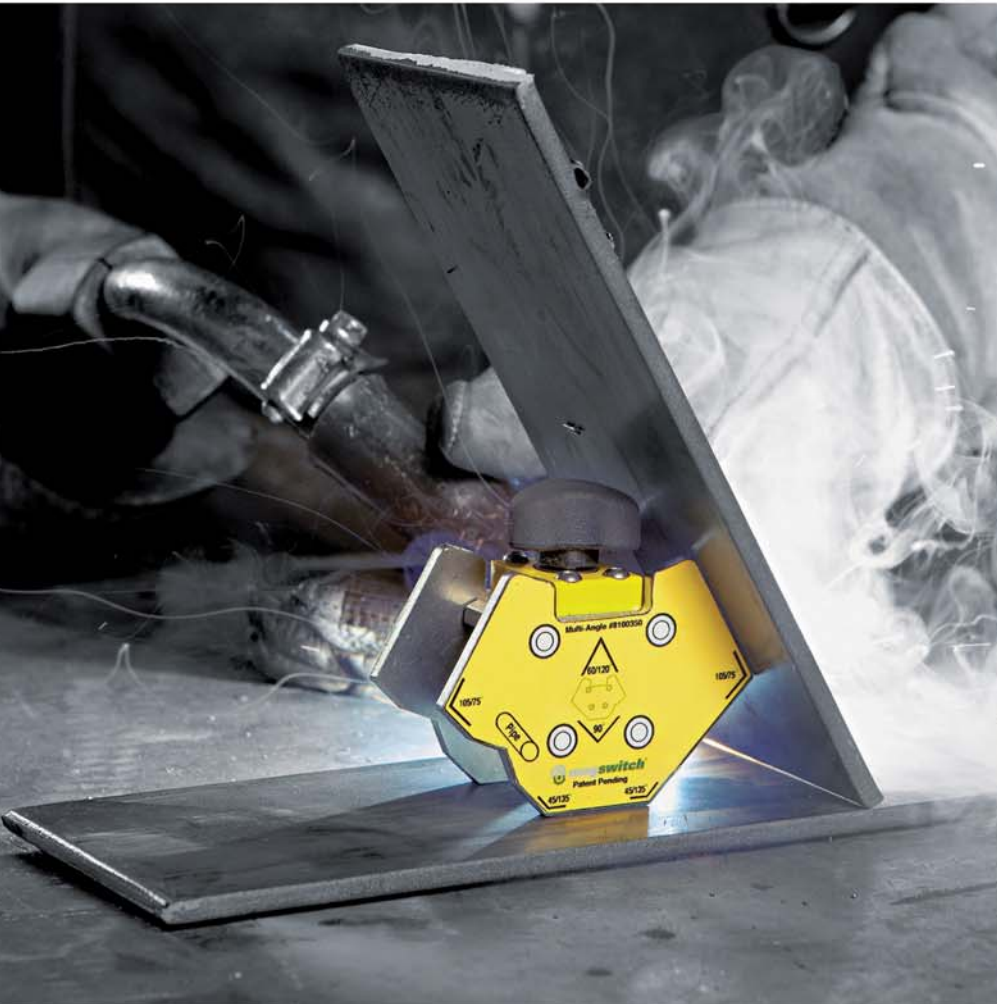
Productivity in time saving with faster set ups, convenience of no hassle use, and safety advantages of using your hands less and less to handle and position steel cannot be ignored.

From the point you receive steel in, to how you move it through your plant, to how you fabricate it, there is a MAGSWITCH tool that will improve safety and productivity. MAGSWITCH is simply a more productive way to do the job.

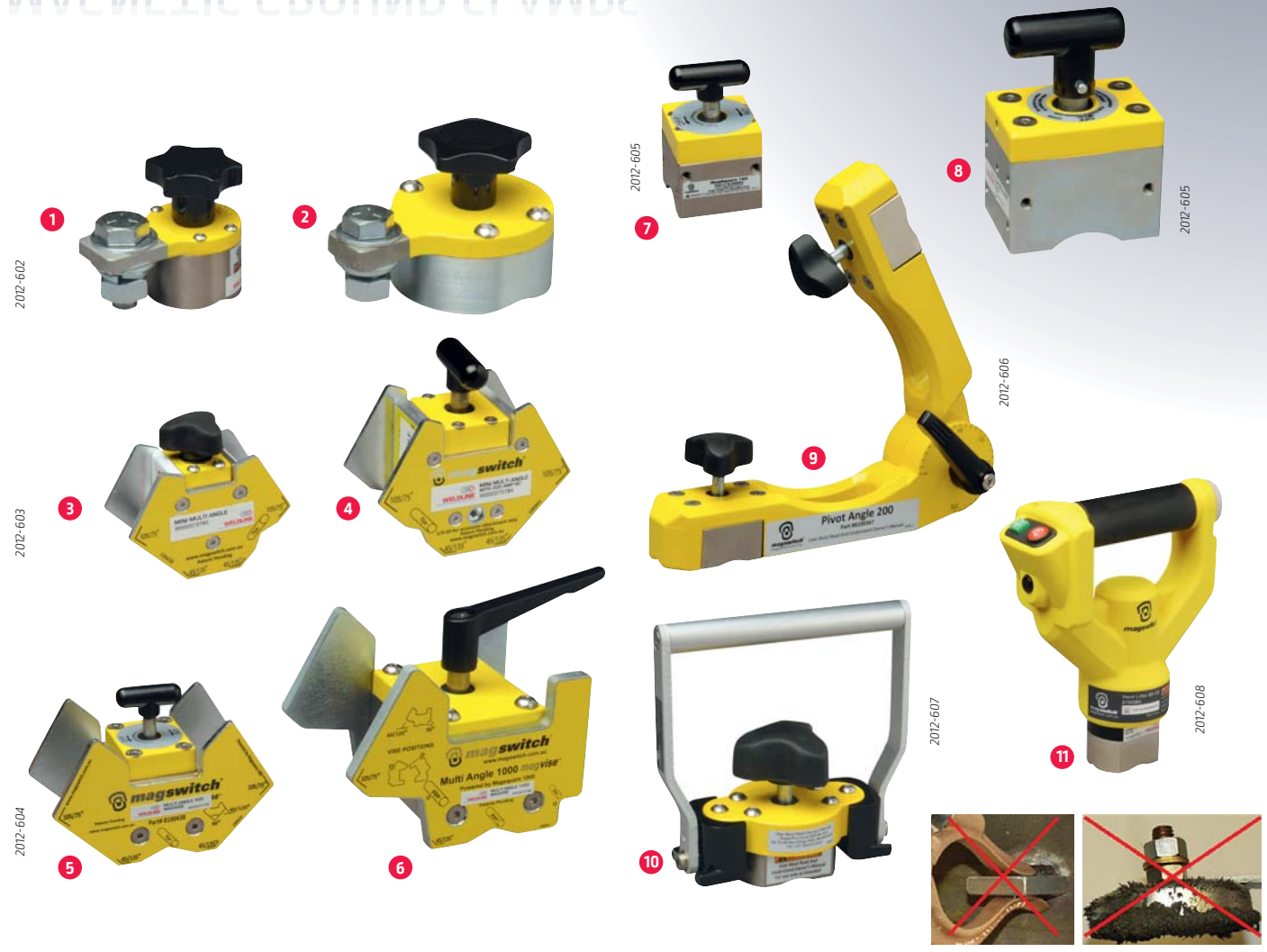
As you look at the products, consider these core common features of each tool:

- ◆ Complete on/off control.
- ◆ Precise placement/no fighting magnets.
- ◆ Super strong - does the big work.
- ◆ Holds strong on thin steel.

**MAGSWITCH is indeed technology that “changes the way things are done”.**



# MAGNETIC GROUND CLAMPS



Name	Dimension (mm)			Weight (kg)	Hold on thick steel (kg)	Welding current (A)	Feature & benefit	Cat Nr
	H	W	D					
1 Magnetic ground clamp 300	57	40	69	0,3	40	300 A	Quickly set up	W000373781
2 Magnetic ground clamp 600	66	101	69	0,8	89	600 A		W000373782
3 Mini Multi Angle	65	72	32	0,18	40	N/A	Incredible strong	W000373783
4 Mini Multi Angle/300A ground	87	89	42	0,36	67	300 A		W000373784
5 Muti Angle 400 Mag-Vise	95	129	65	1,13	178	N/A	Super strong hold all slides	W000373785
6 Multi Angle 1000 Mag-Vise	146	184	110	4,25	446	N/A		W000373786
7 Mag Square 150	65	40	40	0,3	67	N/A	Positioning with incredible strong	W000373787
8 Mag Square 600	106	52	75	1,5	268	N/A		W000373788
9 Pivot Angle 200	240	240	91	1,72	90	N/A	From 22 to 270 degrees	W000373789
10 Hand Lifter 60 m Manual	140	120	60	0,64	27	N/A	For sheet dragging or small steel handing works	W000373790
11 Hand Lifter 60 CE, Cordless electric	209	173	75	1,45	27	N/A	For removing parts from cutting tables	W000373791

# HAMMERS / BRUSHES

## Chipping hammers

The choice of a hammer depends on the kind of steel you are working with (*carbon or stainless steel*) and design, for example wooden handle or not.



**Steel head, wooden handle**

Weight	660 g	<b>To order</b> W000010801
Lenght	315 mm	

2004-632



**Steel hammer G type, tubular handle**

Weight	410 g	<b>To order</b> W000010646
Lenght	300 mm	

2005-271



**Steel head, red rubber grip**

Weight	240 g	<b>To order</b> W000010800
Lenght	260 mm	

2004-639



**Stainless steel hammer, red rubber grip**

Weight	230 g	<b>To order</b> W000010556
Lenght	255 mm	

2012-058



**Carbon steel English type, spring handle**

Weight	290 g	<b>To order</b> W000335164
Lenght	265 mm	

2012-624

## Wire brushes

**4 rows brass coated steel wires**

**To order** W000010162



0951-11

**4 rows steel wires**

**To order** W000010163



0951-13

**2 rows stainless steel wires**

**To order** W000010164



0951-04

**4 rows stainless steel wires**

**To order** W000010165



0951-12

**Special brush for aluminium**

**To order** W000010166

This brush is specially designed to clean aluminium parts before TIG or MIG welding.



1415-51

**Rivet wire brush**

CARBON STEEL

**To order** W000335161

STAINLESS STEEL

**To order** W000335160



2007-815



# MAGLITE®

Blister packed

WARRANTY  
**10**  
YEARS

Name	AA	2D	3D	4D
Colour	Black			
Composition	Torch, black nylon case, 2 battery LR6	Torch		
Weight	106 g	421 g	506 g	562 g
Diameter	18 mm	-	-	-
Length	145 mm	254 mm	307 mm	369 mm
Battery (type)	2 LR6	2 LR20	3 LR20	4 LR20
<b>To order</b>				
MAGLITE®	W000211967	W000211968	W000211969	W000211970



## MAG Charger

- ◆ Nickel-cadmium battery (charger included).
- ◆ Rechargeable up to 1000 times: the most powerful torch.

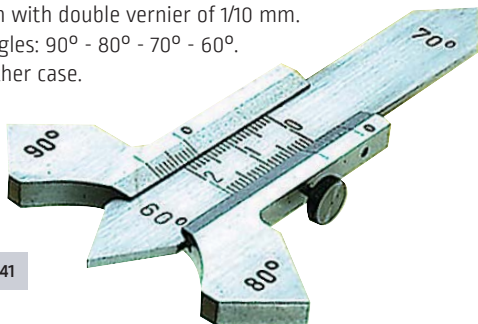
**To order** W000211929



Spare parts for MAGLITE® charger		To order
Designation	Bulbs	W000211654
Spare bulbs		To order
Designation	2D	W000211973
	3D	W000211974
	4D	W000211975

## Welding gauge

- ◆ Accurate measure of the thickness of the welding beads, flat as well as angles of 90°.
- ◆ Capacity of 20 mm with double vernier of 1/10 mm.
- ◆ 4 bevel control angles: 90° - 80° - 70° - 60°.
- ◆ Delivered in a leather case.



**To order** W000011041

## Temperature control stick

- ◆ Easy to use surface indicator.
- ◆ ± 1% accuracy.

Designation and temperature	Per pack of 12 pieces
100 (101 °C - 213 °F)	W000010156
120 (121 °C - 250 °F)	W000011042
150 (149 °C - 300 °F)	W000010157
177 (177 °C - 350 °F)	W000011045
200 (198 °C - 388 °F)	W000010158
250 (253 °C - 488 °F)	W000010159
300 (302 °C - 575 °F)	W000010160
350 (343 °C - 650 °F)	W000010161
370 (371 °C - 700 °F)	W000011043



# ACCESSORIES

## MIG pliers (original FIX®)

Useful to:

- ◆ Cut the wire
- ◆ Clean the nozzles
- ◆ Unscrew the tips
- ◆ Unscrew the nozzles



Nozzle Ø 12-15 mm

To order W000010453

Nozzle Ø 15-18 mm

To order W000010454

## MIG torch stand

Simple stand with magnetic base to keep your work place clean.



To order W000010802



## FLOWELD

- ◆ Designed to measure gas flow at the front of MIG/MAG torch
- ◆ Maximum flowrate: 20 l/min (Ar, CO<sub>2</sub> or mixed gas)
- ◆ Accuracy +- 10%
- ◆ Unbreakable

To order W000335159

# MARKERS

## Paint Marker



The Valve Action is a fast-drying liquid paint marker, that provides long-lasting, wear- and weather-resistant marks, that are safe for almost any surface. Most versatile liquid paint marker in the world, the xylene-free paint reduces user health risks.

Designation	To order
Paint Marker White	W000383103
Paint Marker Yellow	W000383104
Paint Marker Red	W000383105
Paint Marker Blue	W000383106
Paint Marker Green	W000383107
Paint Marker Black	W000383108
Paint Marker Orange	W000383109



## Paint Tube



Markal Stylmark is a metal-ball tip marker to mark most surfaces. The aluminum squeeze tube and thick paint makes it suitable for rough, vertical and overhead surfaces with excellent adhesion on oily and wet surfaces. Xylene-free paint reduces user health risk.

Designation	To order
Paint Tube White	W000383110
Paint Tube Yellow	W000383111
Paint Tube Red	W000383112



## Paintstik



Quik Stik is a smooth-marking solid paint crayon that dries quickly to leave a bold, permanent mark on most surfaces. The durable plastic twist-up holder prevents breakage. Keep hands, clothing, and toolboxes clean with the industry's largest twist-up solid paint marker.

Designation	To order
Paintstik White	W000383113
Paintstik Yellow	W000383114
Paintstik Red	W000383115



## Welding Chalk



The soapstone welding crayon is resistant to heat up to 2000 °C (3630 °F) and will not contaminate welds.

To order W000383116

