

Ball pac

HYUNDAI WELDING's patented marble system for welding wires provide more consistent starts, more accurate weld tracking, and excellent feedability, which are essential for robotic and automated welding applications. The high-capacity design also significantly reduces downtime between wire changes. Decreased downtime means increased productivity.



HYUNDAI WELDING

HYUNDAI WELDING is a global manufacturer of welding consumables and equipment. As the top leading manufacturer of welding consumables in Korea, and with a global network of sales, distribution and manufacturing plants, HYUNDAI WELDING has developed into a key player in the international welding industry.

Our company is fully committed to the ever-changing needs of our customers and has evolved in just under 50 years to provide welding expertise and breakthroughs in welding technology. HYUNDAI WELDING understands customer needs and offers customers world-class products and world-class solutions.

PRODUCT INFORMATION

Our patented marble system regulates the resistance on top of the wire, compressing the wire to ensure that only one strand is picked up at a time.

The system uses the shape and weight of the marbles to consistently pull the wire up and out of the Ball pac® drum. It does this without the usual resistance found in other systems, allowing wire to be extracted with minimum resistance and enhanced feeding reliability.

Product Packages	Drum Dimensions and Weight	Cap Dimensions
440 lbs (200kg) 551 lbs (250kg) 661 lbs (300kg)	Diameter 20.1 in (510mm) Height 31.9 in (810mm) Weight 22 lbs (10kg)	Diameter 20.1 in (510mm) Height 11.8 in (300mm)
882 lbs (400kg) 926 lbs (420kg) 992 lbs (450kg)	Diameter 26 in (660mm) Height 31.9 in (810mm) Weight 33 lbs (15kg)	Diameter 26 in (660mm) Height 19.7 in (500mm)
Wire Diameters	Wire Types	Conduit
.035 in (0.9mm) .039 in (1.0mm) .045 in (1.1mm) .052 in (1.4mm) 1/16 in (1.6mm)	Solid / Flux Cored Stainless Steel	Type Flexible Diameter 0.43 in (11mm) Length 3.28-16.4 ft (1-5m)



PRODUCT FEATURES

HYUNDAI WELDING's solid wires are 'pre-tensioned' resulting in little to no cast and helix when exiting the Ball pac®. The straightness of the wire provides more accurate and consistent welds and tracking during a weld. This is ideal for automated and robotic applications.

Excellent Feeding

The Ball pac® minimizes friction normally resulting from twisted or tangled welding wire. This results in smooth wire feeding and stable arc, two essential elements of effective welding.



Anti-tangling & Twist Proof Design

Hyundai Ball pac® has proven its superior quality and strong performance in various industries over many years. This patented marble system functions as an anti-tangling device that prevents welding wires from tangling and twisting inside the drum.



Protection Against Damage and Deformation

Because the welding wire is pre-installed in our factories inside a metal container, the welding wire is effectively protected from damage and deformation resulting from stacking during shipping and storage.

Accurate Tracking of Welding Seams

Welding wire is wound inside the drum under tension so that it can be extracted straight out of the drum without rotation. Ensuring that the welding wire is straight allows for more accurate tracking of welding seams.

Reduced Downtime and Improved Productivity

The Ball pac® design increases the weight of welding wire available in a single drum. This substantially reduces downtime between wire changes improving productivity. Design features that reduce intervention during welding activity are particularly suited to robotic and automated welding processes.



**Patent & Trademark
Principal Register**

Patent

US. 5,746,380 / AU. 681988

Utility Model

KR. 135931 / JP. 3040923 / CN. ZL 96 2 18535.3

Trademark Principal Register

KR. 378634 / US. 2139642 / JP. 4181764

Instructions for Use

1. Open the supplied bag of marbles and spread them evenly over the wire.
2. Remove the one-touch elastic band, steel bar, and pads.
3. Pull the end of the wire through the feeding hole at the top of the cap.



Removing the elastic band



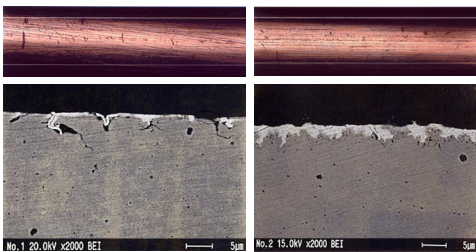
Removing the steel bar and pads



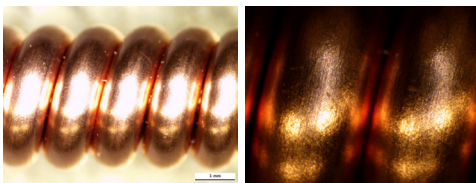
E-LINE SOLID WIRES

For demanding applications such as automotive industry, HYUNDAI WELDING introduces E-Line – a unique electrically copper-coated wire with a thinner, more homogeneous and better adhering coating than with any chemically copper-coated wire available on the market. The presence of less copper with a stronger adhesion results in a reduced risk of liner clogging by copper flaking. This contributes highly to a stable GMAW process for longer periods of time in automotive welding applications and may lengthen intervals of operation between maintenance of the welding equipment.

The surface of E-Line wires is extremely smooth. The wire surface is first thoroughly cleaned. Any imperfections from the drawing process are subsequently levelled by copper during the electrically coating process. This extremely even and smooth wire surface – which is cleaned again - gives improved glide in liner and contact tip with minimal voltage/current fluctuations and thereby a superior arc stability. This brings advantages with all arc types used in the automotive industry – short arc, pulse arc and spray arc – in terms of a consistent nice weld appearance with minimal spatter and reduced post weld cleaning. E-Line also features improved start behaviour with reduced arc start time and less start failures, which is beneficial for robotic welding with many starts and stops.

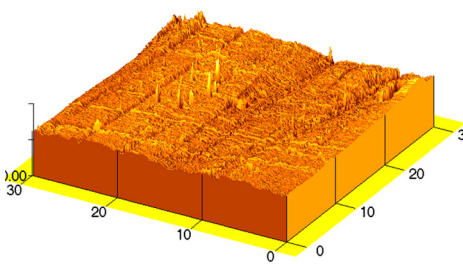


Note: Chemically, with copper sulphate coated wire (left) and electrically coated wire (E-Line). The copper coating of E-Line wires fills up the natural imperfections from the drawing process and adheres better to the wire surface.

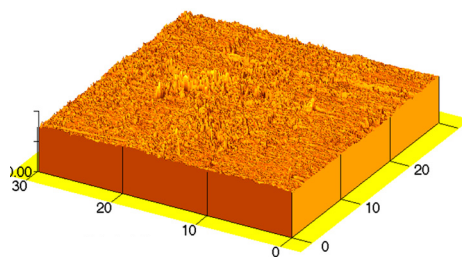


Note: Electrically copper-coated wire after extreme deformation showing perfect adhesion of copper on the E-Line surface. It reduces the risk of liner clogging by copper flaking. Visually the colour is brighter than chemically copper coating.

Chemically coated wire

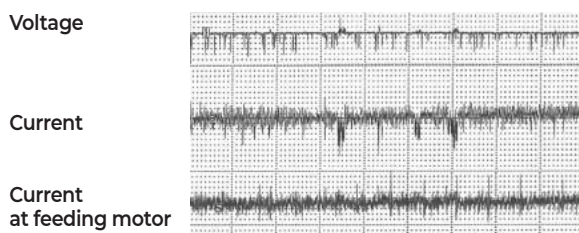


E-Line wire

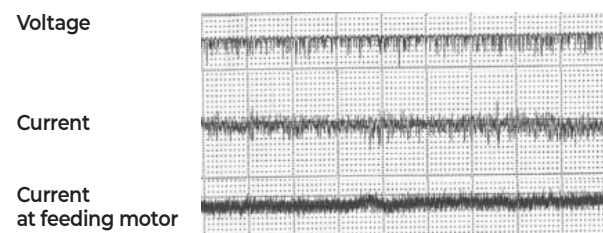


Note: Surface roughness of chemically coated solid wire (left) and E-Line wire measured over 4 mm wire length.

Chemically coated wire



E-Line wire



Note: Electroplated welding wire provides stable arc characteristics during the welding process.