





JOIN! Your Full Welding Solutions for Lasting Connections

HIGH-QUALITY PIPELINE MANUAL WELDING WITH CELLULOSIC AND BASIC STICK ELECTRODES

TERRA MP 350 RC power source together with RC 100 MP remote control with extended cables and Böhler Welding pipeline stick electrodes FOX-CEL, FOX EV and BVD types is the perfect combination for any pipeline manual welding jobsite

Main benefits

- » Save 50 % time with BVD stick electrodes compared with the welding with the basic vertical up type
- » Smooth operation and less arc off time thanks to the perfect combination of the high-tech welding equipment with top-quality welding consumables
- » Decrease in repairing rate thanks to the ideal strike-on and the special arc control features (hot start, arc force, anti-sticking)

Product features	User benefits								
<div data-bbox="135 1205 359 1444">  </div> <p data-bbox="119 1473 359 1601">TERRA MP 350 RC is a robust and reliable three phase new generation inverter power source, ideal for pipeline welding</p> <table border="1" data-bbox="411 1189 1082 1456"> <thead> <tr> <th colspan="2">High power at 100% of duty cycle</th> </tr> </thead> <tbody> <tr> <td>Adjustment range</td> <td>3A – 350 A</td> </tr> <tr> <td>Duty cycle MMA – 40 °C</td> <td>40 % – 350 A 60 % – 310 A 100 % – 290 A</td> </tr> <tr> <td>Duty cycle MMA – 25 °C</td> <td>100 % – 350 A</td> </tr> </tbody> </table> <div data-bbox="108 1736 391 1821">  </div> <p data-bbox="411 1485 1061 1821">High temperature, shockproof, abrasion resistant plastic case</p> <ul style="list-style-type: none"> » Air flow ducting and fully encapsulated PC board to avoid dust contamination » Index of protection IP23S i.e. highest level of safety in outdoor use, even in bad weather conditions » Special electronics resistant to extreme temperatures » ExCELLent performance with long power supply extension cables » Built-in adjustable arc control features (hot start, arc force, anti-sticking) » Compatible with diesel engine generators » Inverter modulation allowing to easily strike-on Cellulosic stick electrodes regardless Open Circuit Voltage (OCV) 	High power at 100% of duty cycle		Adjustment range	3A – 350 A	Duty cycle MMA – 40 °C	40 % – 350 A 60 % – 310 A 100 % – 290 A	Duty cycle MMA – 25 °C	100 % – 350 A	<ul style="list-style-type: none"> » Usable in hard working environments » Compact, robust and light hence ideal to be fitted into welding tractors » ExCELLent welding behavior proven with Böhler Welding stick electrodes.
High power at 100% of duty cycle									
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Product features	User benefits	
RC 100 MP		
 <p>RC 100 MP is a remote control designed for pipeline welders featuring a robust and protected structure and an integrated placing tools</p>	<ul style="list-style-type: none"> » Aluminum Casing » Big regulation knob » Metallic "Rollbar" » Rear casing magnet » Separate connection cable » Current regulation » Reading of voltage and current » Power-on signal 	<ul style="list-style-type: none"> » Robust & light » Better operability » Protection against shocks and falls and possible to hang-up » Possible to hold the remote control on steel » Supplied with different length cables and in case of damage, only the cable needs to be replaced » Pre-set of min and max values on equipment panel possible » Pre-set of regulation step on equipment panel possible » Current might be changed even if visualization is settled on voltage » High safety
Pipeline Stick Electrodes		
 <p>Cellulosic FOX CEL and basic vertical down BVD stick electrodes are specifically conceived and designed for the optimal pipeline welding</p>	<ul style="list-style-type: none"> » Basic types FOX EV (vertical-up) and BVD (vertical-down) are characterized by outstanding mechanical properties including high CTOD values and easy handling » Cellulosic provide exCELLent impact values and the best operability even under challenging weather. They are HIC and SSCC tested and can be used in sour applications 	<ul style="list-style-type: none"> » Avoid redrying! FOX EV types available in DrySystem™. Vertical down BVD types in sealed metal cans » Vertical Down BVD types provide exceptional striking characteristics and the avoidance of start porosity, with a deposition rate 80 – 100 % higher than for vertical up welding. » Broad portfolio NACE compliant and fitting for sour service » Mechanical properties also met in case of demanding requirements
Personal Protection & Accessories		
	<ul style="list-style-type: none"> » Helmets such as Guardian 62 Complete and Guardian 62F Air Complete, gloves, glasses and clothes are ideal for the pipeline jobsite. Additionally, Böhler Welding also provides a full range of electrode holders and ground clamps » Light weight products with robust headgear, soft sweatbands and highest ADF clarity with true color technology 	<ul style="list-style-type: none"> » Suitable for a wide range of welding and grinding applications » High quality » Durable » Comfortable
Weldtech-Application-Service		
	<ul style="list-style-type: none"> » For voestalpine Böhler Welding, being a Full Welding Solutions provider means acting as a partner for pipeline contractors through the weldTECH Application Services, which include a team of welding engineers experienced in pipeline construction 	<ul style="list-style-type: none"> » Support for testing, qualification and problem solving
Calculation Tools		
	<ul style="list-style-type: none"> » The Welding Calculator App supports the planning and optimization of welding tasks such as the calculation of cooling time, preheating temperature or the calculation of the required filler metal quantities. available for Android in the Google Play Store and for iOS in the App Store 	<ul style="list-style-type: none"> » Useful tool for estimations and evaluations when starting a jobsite

Typical applications

» Onshore Pipeline Construction



FOX CEL and FOX CEL 70-P with TERRA MP 350 RC

Perfect pipeline weld performed with FOX CEL and FOX CEL 70-P with TERRA MP 350 RC on an 88 inches very large pipeline. Optimal bead shape, smooth transitions and perfect root and cap passes.

Product Range

FOX CEL Stick Electrodes Product Portfolio

CELLULOSIC	EN CLASSIFICATION	AWS CLASSIFICATION
BÖHLER FOX CEL	E 38 3 C 2 1	E6010
BÖHLER FOX CEL+	E 38 3 C 2 1	E6010
BÖHLER FOX CEL Mo	E 42 3 Mo C 2 5	E7010-A1
BÖHLER FOX CEL 70-P	E 42 3 C 2 5	E7010-P1
BÖHLER FOX CEL 75	E 42 3 Mo C 2 5	E7010-P1
BÖHLER FOX CEL 80-P	E 46 3 Ni C 2 5	E8010-P1
BÖHLER FOX CEL 85	E 46 4 Ni C 2 5	E8010-P1
BÖHLER FOX CEL 90	E 50 3 Ni C 2 5	E9010-P1

FOX BVD Stick Electrodes Product Portfolio

BASIC	EN CLASSIFICATION	AWS CLASSIFICATION
BÖHLER FOX BVD 85	E 46 5 1Ni B 4 5 H5	E8045-P2H4R
BÖHLER FOX BVD 90	E 55 5 Z2Ni B 4 5 H5	E9045-P2H4R (mod.)
BÖHLER FOX BVD 85	E 62 5 Z2Ni B 4 5	E10018-G

FOX CEL AND BVD VERTICAL DOWN SOLUTIONS

PIPE GRADE EN	PIPE GRADE API 5L	ROOT	H-F-C CELLULOSIC	H-F-C BASIC
L290-L360	X42-X52	FOX CEL/Fox CEL+ ⁽¹⁾	FOX CEL/Fox CEL+	BVD 85
L415	X60	FOX CEL/Fox CEL+ ⁽¹⁾	FOX CEL Mo/ FOX CEL 70-P/FOX CEL 75 ⁽²⁾	BVD 85
L450	X65	FOX CEL/Fox CEL+ ⁽¹⁾	FOX CEL Mo/ FOX CEL 70-P/FOX CEL 75 ⁽²⁾ /FOX CEL 80-P/FOX CEL 85 ⁽³⁾⁽⁴⁾	BVD 85
L485	X70	FOX CEL/Fox CEL+ ⁽¹⁾	FOX CEL 80-P/FOX CEL 85 ⁽³⁾	BVD 90
L555	X80	FOX CEL/Fox CEL+ ⁽¹⁾		BVD 90 / BVD 100

(1): FOX CEL+ is for root pass in DC+

(2): FOX CEL 70-P offers more intensive arc and more fluidity than FOX CEL 75

(3): FOX CEL 80-P offers more intensive arc and more fluidity than FOX CEL 85

(4): FOX CEL 80-P and FOX CEL 85 are over-matching solution for L450/X65