

DASCO ESP

DEFENDER Guards Product Catalogue

Artificial Lift
Equipment Design,
Manufacturing &
Supply



Bridging the Gap Between Concept and Reality

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EXPERIENCE THE DASCO ADVANTAGE

At DASCO we create incredible solutions for the challenges faced with artificial lift systems.

In everything we do, we believe in thinking differently and challenging the status quo. We do this by making products beautifully designed and user-friendly. Yes, this is possible even in the energy industry!

Our mission is to deliver outstanding results and experiences to our customers. We achieve this by delivering products that are simple, elegant, and practical. Our products will be precisely tailored to your needs and do exactly what you need them to do, this is the DASCO ADVANTAGE.

“Bridging the Gap Between Concept and Reality” is not only our purpose but what we do each day at DASCO. When you work with us, you can expect to push the boundaries of design and performance, because this is at the heart of what we do.

THE DEFENDER GUARD ADVANTAGE

- Cable isolation from impact “360-degree frame loading”
- Encapsulated ESP cables / splices / capillary lines
- Designed to withstand drag from high DLS and horizontal applications
- Anti-rotation teeth
- Anti-slide teeth
- Leading tapered edges
- Clear identification
- Low profile for tight wellbores

Results

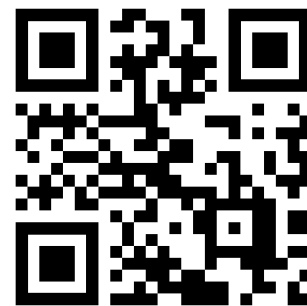
- Reduce re-run costs due to cable failures
- Longer ESP run life
- Reduced downhole hang-ups
- Reduced downhole guards sliding



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THE ULTIMATE IN POWER CABLE AND CAPILLARY LINE PROTECTION

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The DEFENDER GUARD SYSTEM -
Leading edge design for leading edge results



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DEFENDER CROSS COUPLING GUARD

DEFENDER CROSS COUPLING (COLLAR) guards prevent ESP cable failures and the high costs associated with them by isolating and centralizing the delicate cables in the wellbore. ESP high voltage cables are commonly damaged during the installation due to dragging or impacting against casing walls, connection upsets and wellbore debris. Cable damage leads to premature electrical failure and subsequent pulling of the ESP at a significant cost to the operator.

DEFENDER Advantages

- Cable hold – high cable hold with compression control
- Frame loading – impact forces do not compress the cable
- Field reusable – pull and rerun at the field level
- High frictional tubing hold – specialized teeth configurations to ensure maximum force and hold
- Low profile – small drift size for tight wellbores
- Encapsulated conduit – full ESP cable coverage & protection
- Tapered leading edge – rides over upsets and separated casing connections
- Structural shear planes – increased durability



TUBING	MATERIAL	CAP LINE A	CAP LINE B	CABLE SIZE
2.375"	Cast Alloy Steel	3/8 Cap Line	1/4 Cap Line	UP TO #4 AWG
2.875"	Cast Alloy Steel	3/8 Cap Line	1/4 Cap Line	UP TO #2 AWG
3.500"	Cast Alloy Steel	1/2 Cap Line	1/4 Cap Line	UP TO #1 AWG
4.500"	Cast Alloy Steel	1/2 Cap Line	1/4 Cap Line	UP TO #1 AWG
<i>Custom sizes & configurations available.</i>				



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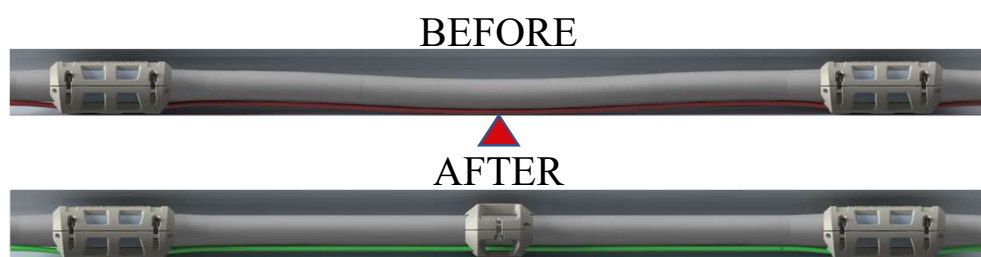
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DEFENDER MID JOINT GUARD

DEFENDER MID JOINT guards prevent ESP cable failures and the high costs that go with them by isolating and centralizing the delicate cables in the wellbore. Mid joint guards prevent tubing sag and deflection which causes the cable to rub against the casing when passing through a deviated or horizontal wellbore. The mid joint guard centralizes the tubing and cable between collar connections preventing cable contact with wellbore casing, debris and connection upsets.

DEFENDER Advantages

- Frame loading – impact forces do not compress the cable
- Field reusable – pull and rerun at the field level
- High frictional tubing hold – specialized teeth configurations to ensure maximum force and hold
- Low profile – small drift size for tight wellbores
- Encapsulated conduit – full ESP cable coverage & protection
- Tapered leading edge – rides over upsets and separated casing connections
- Structural shear planes – increased durability



TUBING	MATERIAL	CAP LINE A	CAP LINE B	CABLE SIZE
2.375"	Cast Alloy Steel	3/8 Cap Line	1/4 Cap Line	UP TO #4 AWG
2.875"	Cast Alloy Steel	3/8 Cap Line	1/4 Cap Line	UP TO #2 AWG
3.500"	Cast Alloy Steel	1/2 Cap Line	1/4 Cap Line	UP TO #1 AWG
4.500"	Cast Alloy Steel	1/2 Cap Line	1/4 Cap Line	UP TO #1 AWG
<i>Custom sizes & configurations available.</i>				



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DEFENDER CABLE SPLICE GUARD

DEFENDER CABLE SPLICE guards prevent ESP cable splice failures by encapsulating delicate cables splice in the wellbore. ESP cable splices are larger than standard cable profiles and therefore susceptible to rubbing against the casing when passing through deviated or horizontal wellbores, casing upsets and debris. Splice damage leads to premature electrical failure of the ESP cable and subsequent pulling of the ESP at a significant cost to the operator. The DEFENDER splice guard fully encapsulates the cable and capillary lines inside a steel channel ensuring a successful ESP installation.

DEFENDER Advantages

- Frame loading – impact forces do not compress the splice
- Field reusable – pull and rerun at the field level
- High frictional tubing hold – specialized teeth configurations to ensure maximum force and hold
- Low profile – small drift size for tight wellbores
- Encapsulated conduit – full cable splice coverage & protection
- Tapered leading edge – rides over upsets and separated casing connections
- Structural shear planes – increased durability



TUBING	SUBSTRATE	CONFIGURATION	
2.375"	1018, 4130, 4330, Cast Steel	0.250" Cap Line	UP TO # 4 AWG
2.875"	1018, 4130, 4330, Cast Steel	0.375" Cap Line	UP TO # 4 AWG
3.500"	1018, 4130, 4330, Cast Steel	0.500" Cap Line	UP TO # 1 AWG
4.500"	1018, 4130, 4330, Cast Steel	0.500" Cap Line	UP TO # 1 AWG
<i>Custom sizes & configurations available.</i>			



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DEFENDER MLE GUARDS

DEFENDER MLE (motor lead extension) guards prevent the MLE cable from physical damage and premature failure by fully covering and isolating the cable from the casing wall. MLE cables are located along the ESP housing and are smaller with less mechanical protection than main cables in order to allow for larger ESP equipment to fit into the wellbore. This leaves MLE cables more susceptible to physical damage from the casing wall, connection upsets and debris. MLE cable damage leads to premature electrical failure and subsequent pulling of the ESP at a significant cost to the operator.

The DEFENDER MLE guard uses a high radius low profile design to handle the tightest of wellbores. The use of a fully encapsulated cable conduit and mechanical shear planes protect the MLE from the casing wall regardless of orientation or wellbore deviation.

DEFENDER Advantages

- Low profile - high radius cap reduces MLE drift size
- Encapsulated conduit – full MLE cable coverage & protection
- Tapered leading edge – rides over upsets and separated casing
- Structural shear planes – increased durability
- Anti-rotation lugs – eliminates twisted MLE cables



ESP SERIES	SUBSTRATE	CAP LINE MAX	CABLE MAX
300	Cast Alloy Steel	0.250" Cap Line	# 6 AWG
400	Cast Alloy Steel	0.375" Cap Line	# 5 AWG
500	Cast Alloy Steel	0.500" Cap Line	# 4 AWG
600	Cast Alloy Steel	0.500" Cap Line	# 2 AWG
<i>Custom sizes & configurations available.</i>			



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RECONDITIONING

Cost of ownership is a principal metric of any purchase and guard systems are no different. DEFENDER guards have been designed for wellsite reuse and redress or full reconditioning at our facility located in Leduc, Alberta, Canada.

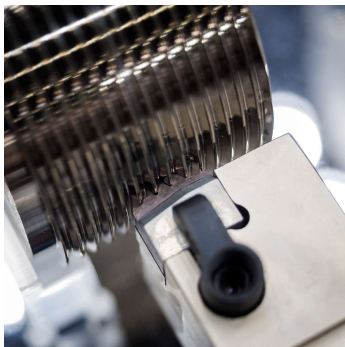
Reconditioning returns guards to a like-new condition, ready for reuse. Each guard is tested, and critical features, such as cable and tubing fitment, are re-qualified. Globally we offer a parts and service support so international companies can service the components in their region.

Standard Guard Reconditioning

- Structural damage inspection
- Hardware inspection and replacement
- Function and critical feature testing
- Heated solvent tank for removing heavy oils
- Sandblasting for scale removal
- Ultrasonic cleaning

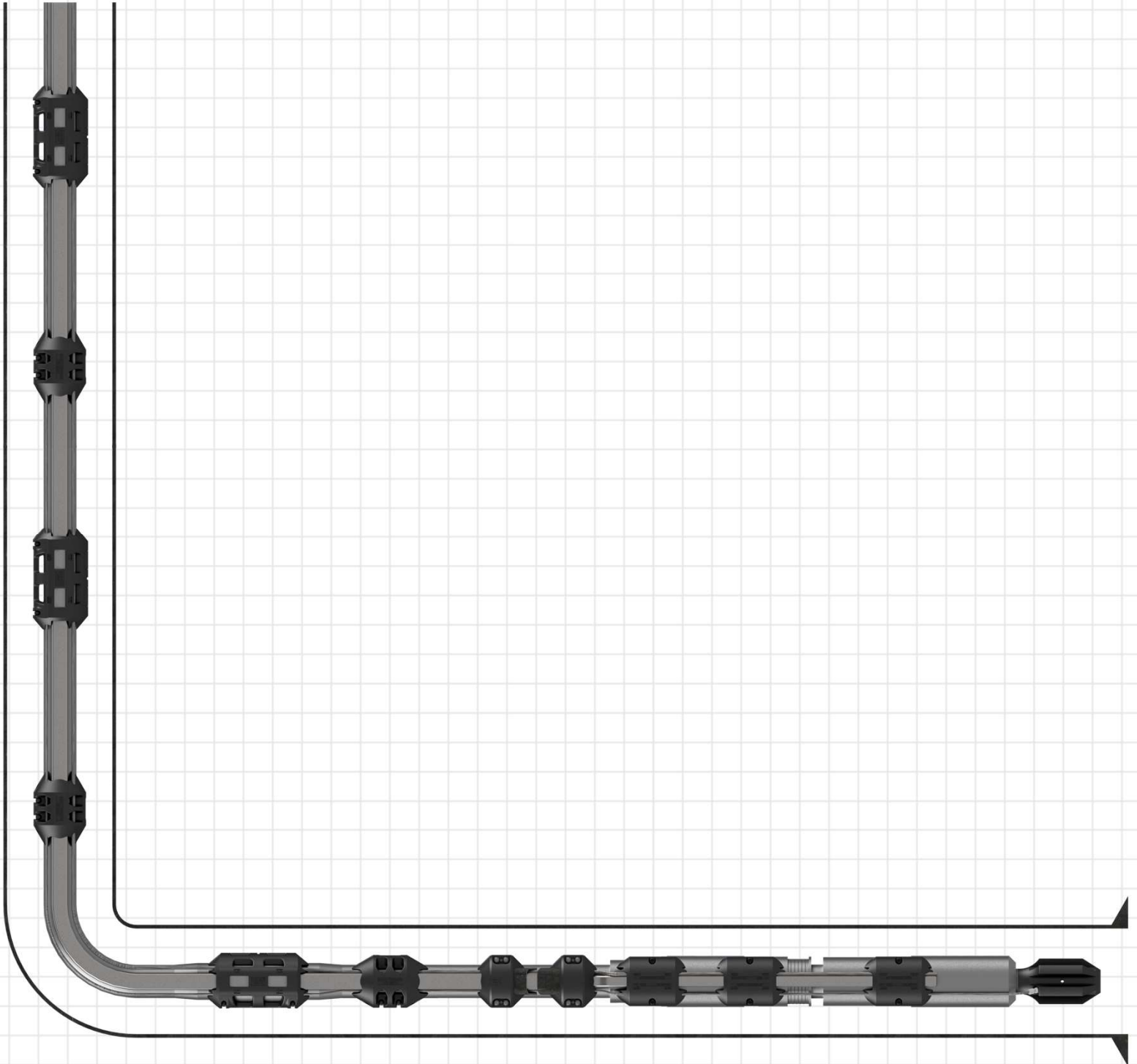
Additional Reconditioning Services

- Thread chasing
- Surface polishing (O-Ring grooves and bores)
- CNC lathe machining
- CNC milling
- Welding and fabrication
- Phosphate surface treatments



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