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**CATÁLOGO  
PROTECTORES**



## **QUIENES SOMOS**

Somos una empresa de Servicios Petroleros, con experiencia en el sector hidrocarburífero, demostrando siempre: responsabilidad, honestidad, profesionalismo, trabajo en equipo; y precautelando el medio ambiente y la responsabilidad social; enfocándonos en la mejora continua e innovación para satisfacer las necesidades de nuestros clientes.



## **MISIÓN**

Desarrollar actividades para la Industria Hidrocarburífera, brindando servicios eficientes, eficaces y comprometidos con la seguridad y el medioambiente; con personal altamente calificado para contribuir con el desarrollo del Ecuador.

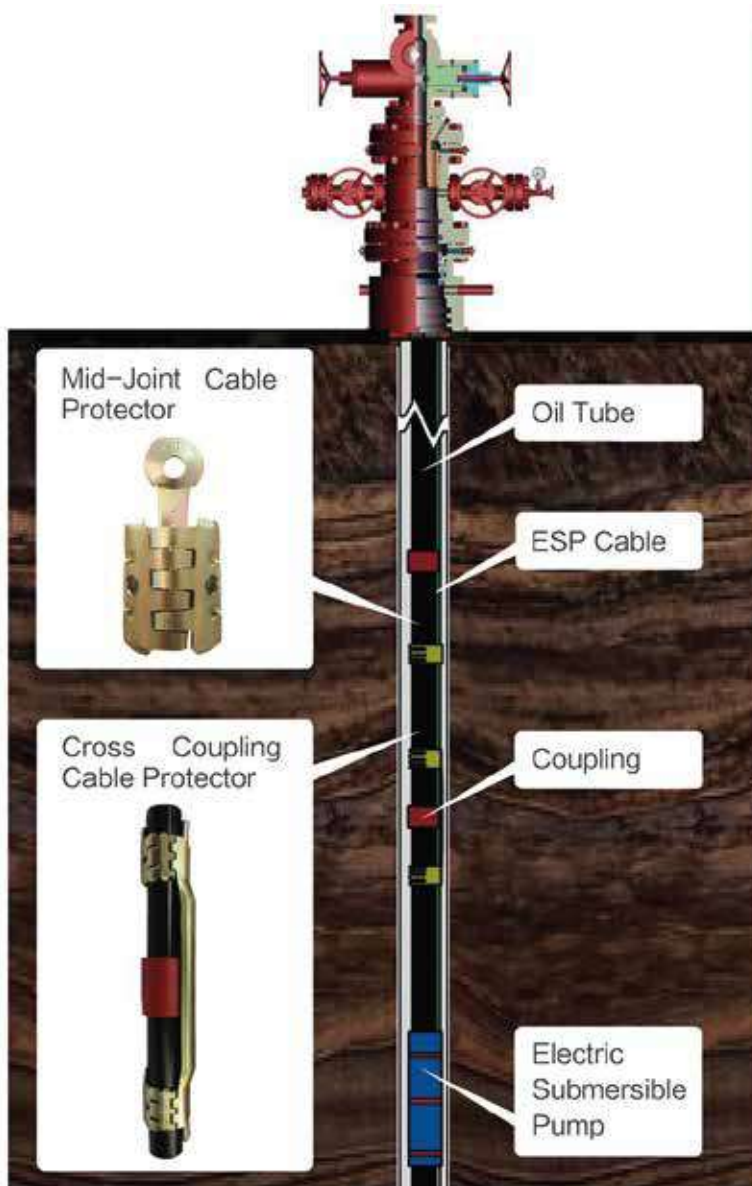


## **VISIÓN**

Ser una empresa referente en el Ecuador, y líder en la prestación de servicios a nivel nacional; con proyección internacional de servicios petroleros, con responsabilidad social y ambiental. Enfocándonos en la mejora continua, para satisfacer las necesidades de nuestros clientes.

# UNITOOLS CABLE PROTECTOR

UNITOOLS is the most professional manufacturer for cable protectors. Stable protection of ESP cable, control line and encapsulated bundles in the well bore.



Our cable protectors use channels to shield cables or lines as they transition across the coupling to prevent damage during installation or retrieval of completions.

Our cable protectors are widely used to protect the wide range of ESP cable, control line, umbilical lines or encapsulated bundles in the wellbore.

Our cable protector uses a compressive fit design to accommodate oversize or undersize tubing per API spec and securely engage the cable or lines to the tubing.

- ★ Quicky
- ★ Safely
- ★ Efficiently

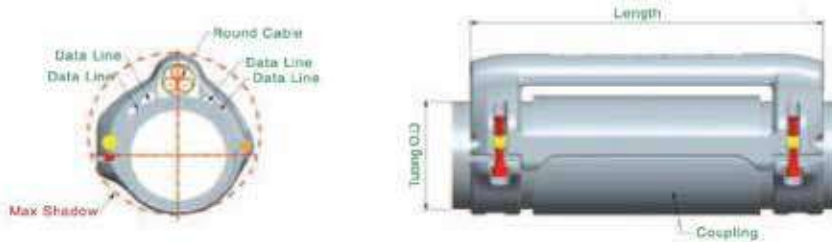


Manual and hydraulic  
Tools for rapid  
Intallation and removal

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# UNITOOLS CABLE PROTECTOR



电缆保护器产品一览表

Part of Cable Protectors System list

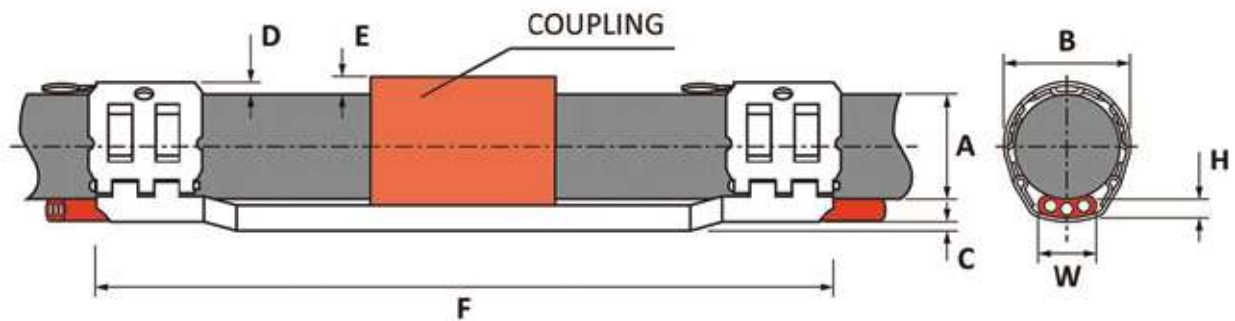
Material: Carbon steel or Stainless steel

型号 Pipe Size	油管扣型 Type of Pipe connection	电缆 Cable	数据线 Data Line	长度 Length	最大投影 Max Shadow	备注 Remark
2 3/8"	UP TBG (EUE)	无 (No Cable)	1/4", 3/8" and 11x11	230	φ 110	
		4#扁电缆 (Flat Cable)	1/4", 3/8"		φ 115	
		4#圆电缆 (Round Cable)	1/4", 3/8"		φ 120	
	UP TBG (EUE)	无 (No Cable)	1/4", 3/8" and 11x11	248	φ 128	
		2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 142 φ 143	
	TBG (NUE)	无 (No Cable)	1/4", 3/8" and 11x11	245	φ 123	
4#扁电缆 (Flat Cable) 4#圆电缆 (Round Cable)		1/4", 3/8" and 11x11	φ 128 φ 136			
2 7/8"	FOX (JFBEAR)	无 (No Cable)	1/4", 3/8" and 11x11	268	φ 123	
		4#扁电缆 (Flat Cable) 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 130 φ 136	
	NK3SB	无 (No Cable)	1/4", 3/8" and 11x11	328	φ 124	
		4#扁电缆 (Flat Cable) 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 127 φ 134	
	HUNTING (BGT1)	无 (No Cable)	1/4", 3/8" and 11x11	278	φ 124	
		4#扁电缆 (Flat Cable) 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 127 φ 134	
3 1/2"	UP TBG (EUE)	无 (No Cable)	1/4", 3/8" and 11x11	258	φ 146	
		1#, 2#, 4#扁电缆 (Flat Cable)	1/4", 3/8" and 11x11		φ 154	
		1#, 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 163	
	TBG (NUE)	无 (No Cable)	1/4", 3/8" and 11x11	256	φ 140	
		2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 150 φ 154	
	FOX (JFBEAR) (VAMTOP)	无 (No Cable)	1/4", 3/8" and 11x11	292	φ 140	
		1#, 2#, 4#扁电缆 (Flat Cable) 1#, 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 148 φ 150	
	NK3SB (NEWVAM)	无 (No Cable)	1/4", 3/8" and 11x11	332	φ 140	
		4#扁电缆 (Flat Cable) 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 142 φ 145	
	BGT1 (JC)	无 (No Cable)	1/4", 3/8" and 11x11	300	φ 140	
		2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 150 φ 154	
	4 1/2"	UP TBG (EUE)	无 (No Cable)	1/4", 3/8" and 11x11	272	φ 170
2#, 4#扁电缆 (Flat Cable)			1/4", 3/8" and 11x11	φ 175		
1#, 2#, 4#圆电缆 (Round Cable)			1/4", 3/8" and 11x11	φ 194		
TBG (NUE)		无 (No Cable)	1/4", 3/8" and 11x11	278	φ 166	
		2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 170 φ 182	
FOX		无 (No Cable)	1/4", 3/8" and 11x11	356	φ 166	
		2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 170 φ 174	
NK3SB (NEWVAM)		无 (No Cable)	1/4", 3/8" and 11x11	358	φ 166	
		2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 171 φ 175	
VAMTOP		无 (No Cable)	1/4", 3/8" and 11x11	305	φ 166	
		2#, 4#扁电缆 (Flat Cable)	1/4", 3/8" and 11x11		φ 171	
		2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 175	
BTC	无 (No Cable)	1/4", 3/8" and 11x11	350	φ 166		
	2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 168 φ 176		
LTC	无 (No Cable)	1/4", 3/8" and 11x11	295	φ 166		
	2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 170 φ 176		
BCSG	无 (No Cable)	1/4", 3/8" and 11x11	342	φ 166		
	2#, 4#扁电缆 (Flat Cable) 2#, 4#圆电缆 (Round Cable)	1/4", 3/8" and 11x11		φ 168 φ 175		
5 1/2"	BTC	无 (No Cable)	1/4", 3/8" and 11x11	350	φ 188	

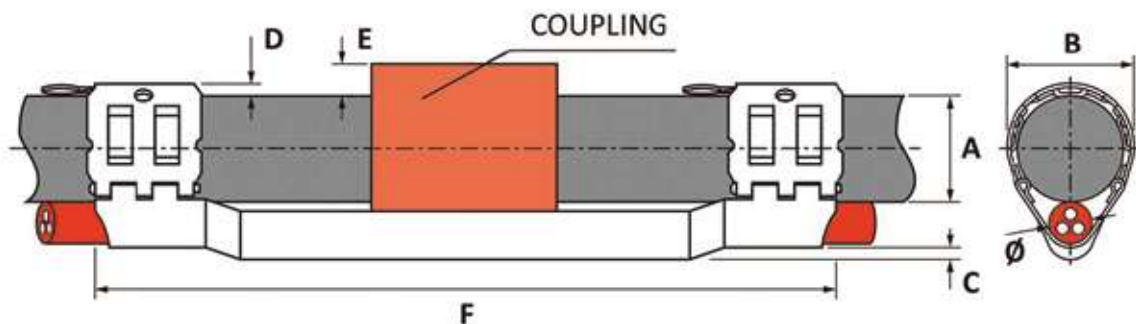
注: 可根据客户需求进行设计电缆保护器

Remark: We can design the products according to customers' requirements

# TECHNICAL SPECIFICATIONS

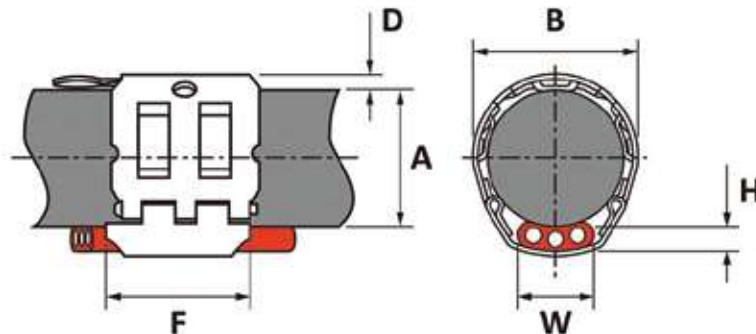


Production Tubing (A)	Collar OD (B)	Channel Offset (C)	
2-3/8"	3.16	0.39	D=0.38" for All Standard Protectors E=Coupling Dimension F=24.7" for All Standard Protectors  Calculation of Running OD $A+C+H+0.12"$ (material thickness) +(Larger of D or E)
2-7/8"	3.66	0.47	
3-1/2"	4.29	0.59	
4-1/2"	5.29	0.59	
5-1/2"	6.29	0.39	
7"	7.79	0.39	

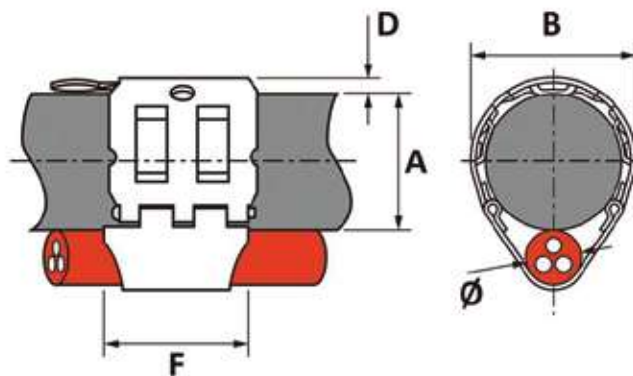


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5-1/2"	6.29	
7"	7.79	



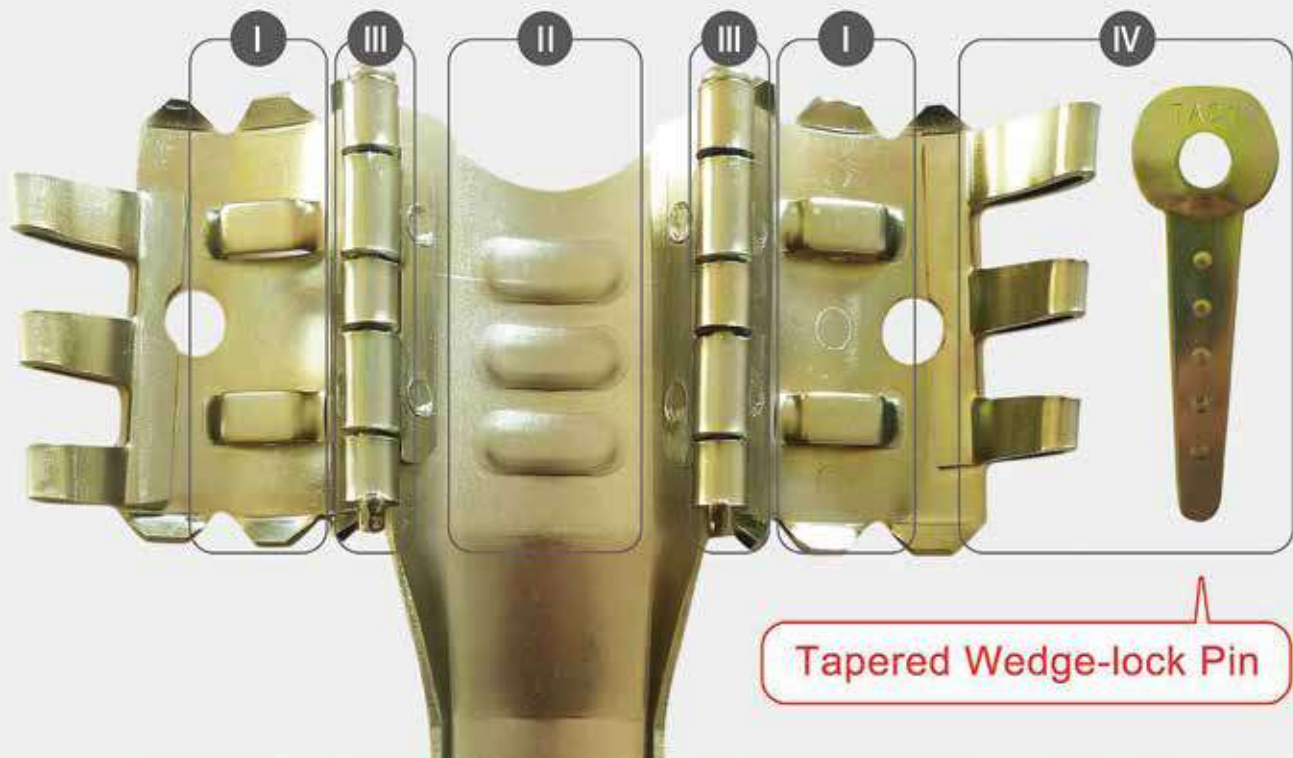
Production Tubing (A)	Collar OD (B)	
2-3/8"	3.16	D=0.38" for All Standard Protectors F=3.39" for All Standard Protectors  Calculation of Running OD A+C+Ø+0.12" (material thickness)
2-7/8"	3.66	
3-1/2"	4.29	
4-1/2"	5.29	
5-1/2"	6.29	
7"	7.79	

# TECHNICAL SPECIFICATIONS

- Configurations for ESP cable ,Control line, Chemical injection line.
- Interchangeable design to fit tubing sizes from 2-3/8" to 7"
- Our cable protectors have double protection to resist corrosion
- Choice of hydraulic or manual tools for installation and removal
- Materials and design can be customized to user specifications

Description	Tube Size	Cable Type	Cable Size
Cable Protector 2-3/8R6-8	2-3/8"	Round	Ø6-8mm
Cable Protector 2-3/8F11/34	2-3/8"	Flat	11mm SQUARE
Cable Protector 2-3/8R32-34	2-3/8"	Round	Ø32-34mm
Cable Protector 2-7/8R6-8	2-7/8"	Round	Ø6-8mm
Cable Protector 2-7/8R30-33	2-7/8"	Round	Ø30-33mm
Cable Protector 2-7/8R34-37	2-7/8"	Round	Ø34-37mm
Cable Protector 2-7/8F11/34	2-7/8"	Flat	11mm SQUARE
Cable Protector 2-7/8F16-19/56	2-7/8"	Flat	16-19mm SQUARE
Cable Protector 2-7/8F16-19/70	2-7/8"	Flat	16-19mm SQUARE
Cable Protector 3-1/2R6-8	3-1/2"	Round	Ø6-8mm
Cable Protector 3-1/2R30-33	3-1/2"	Round	Ø30-33mm
Cable Protector 3-1/2R34-37	3-1/2"	Round	Ø34-37mm
Cable Protector 3-1/2R38-42	3-1/2"	Round	Ø38-42mm
Cable Protector 3-1/2F11/34	3-1/2"	Flat	11mm SQUARE
Cable Protector 3-1/2F16-19/60	3-1/2"	Flat	16-19mm SQUARE
Cable Protector 3-1/2F19-23/70	3-1/2"	Flat	19-23mm SQUARE
Cable Protector 4-1/2R6-8	4-1/2"	Round	Ø6-8mm
Cable Protector 4-1/2R34-37	4-1/2"	Round	Ø34-37mm
Cable Protector 4-1/2R38-42	4-1/2"	Round	Ø38-42mm
Cable Protector 4-1/2F11/34	4-1/2"	Flat	11mm SQUARE
Cable Protector 4-1/2F16-19/60	4-1/2"	Flat	16-19mm SQUARE
Cable Protector 4-1/2F19-23/60	4-1/2"	Flat	19-23mm SQUARE
Cable Protector 5-1/2R6-8	5-1/2"	Round	Ø6-8mm
Cable Protector 5-1/2R34-37	5-1/2"	Round	Ø34-37mm
Cable Protector 5-1/2R38-42	5-1/2"	Round	Ø38-42mm
Cable Protector 5-1/2F11/34	5-1/2"	Flat	11mm SQUARE
Cable Protector 5-1/2F11-16/56	5-1/2"	Flat	11-16mm SQUARE
Cable Protector 5-1/2F16-19/70DUAL	5-1/2"	Flat	19-23mm SQUARE
Cable Protector 7R6-8	7"	Round	Ø6-8mm
Cable Protector 7F11/34	7"	Flat	11mm SQUARE

# PRODUCT FEATURES



- I They will have pre-deformation to facilitate clamping ESP cable, control line and chemical injection line.
- II Triple progressive convex pads on the channel improve gripping characteristics without compromising cable integrity.
- III Two hinge pin flanges make contact with the API tubular.
- IV Tapered wedge-lock pin with dimples to secure the clamp from slipping.