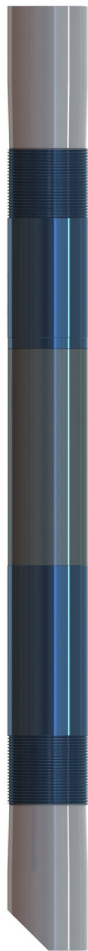


TECHNICAL INFORMATION:

PAT-4500-0189-3001, 4.5 INCH 18.9 PPF.



CASING O.D. (in)	4.5
CASING WT. (lb/ft)	18.9
CASING I.D. (in)	3.64
PATCH MAX. RUNNING O.D. (in)	3.485
PATCH I.D. AFTER SETTING (in)	2.930
PATCH DRIFT I.D. (in)	2.805
BURST HYDRAULIC RATING (psi)	10000
COLLAPSE HYDRAULIC RATING (psi)	10000

QTY.	DESCRIPTION	PART NUMBER	MATERIAL
	X-SPAN SYSTEM	PAT-4500-0189-3001	NOTED
1	PIN ELEMENT	PAT-4500-0189-3210	13 Cr
1	BOX ELEMENT	PAT-4500-0189-3410	13 Cr
1	TOP SWAGE	PAT-4500-0189-3110	SUPER/HYPER CHROME
1	BOTTOM SWAGE	PAT-4500-0189-3310	SUPER/HYPER CHROME
1	O-RING	OOO-V569-151	VITON
1	O-RING	OOO-V569-152	VITON
1	72K SHEAR RING	PAT-4500-772	4140 / 4142
1	10 FT SECTION	PAT-4500-0189-3010	13 CR
		PAT-4500-0189-1010	L-80
	5 FT SECTION	PAT-4500-0189-3005	13 CR
		PAT-4500-0189-1005	L-80

MINIMUM EQUIPMENT REQUIRED FOR A FULL SYSTEM CONSISTS OF ONE SHORT ASSEMBLY AND ONE SECTION.

PRODUCT OFFERINGS:

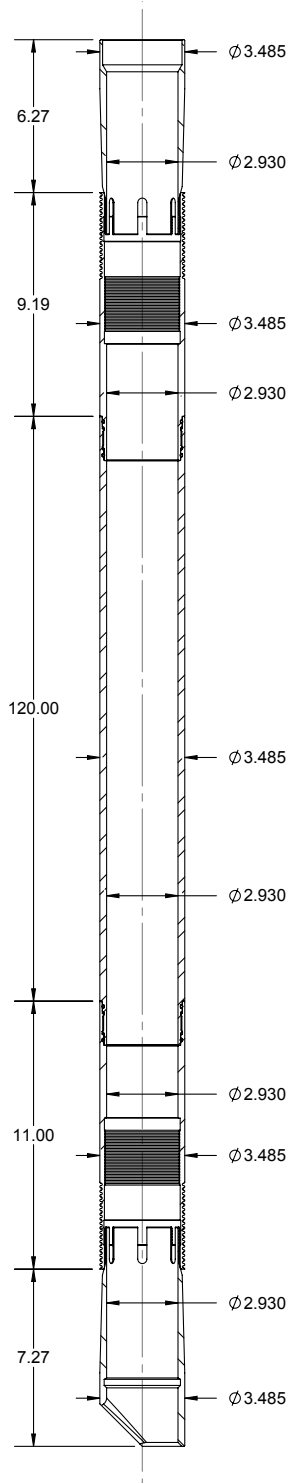
The Owen X-SPAN® System is an economical, proven, durable and dependable sealing system for the isolation of perforations, splits, corrosion or leaks in all types of tubulars and conditions. This system can utilize a multitude of deployment methods in all types of well bores. The large bore assures easy passage of service tools including bridge plugs, drop balls, seal bore assemblies, logging tools and perforating systems. The minimal surface equipment required for deploying the patch and rig less intervention results in significant savings for the operator.

BENEFITS/CAPABILITIES:

The X-SPAN® System Offers:

- A proven, durable and dependable seal
- Deployment on electric wireline, tubing, drill pipe or coil tubing in vertical, deviated or horizontal or geothermal well bores
- An economical and reliable solution for a broad range of applications
- A large bore for easy passage of service tools
- Minimal surface equipment required for deployment

TECHNICAL INFORMATION: PAT-4500-0189-3001, 4.5 INCH 18.9 PPF.



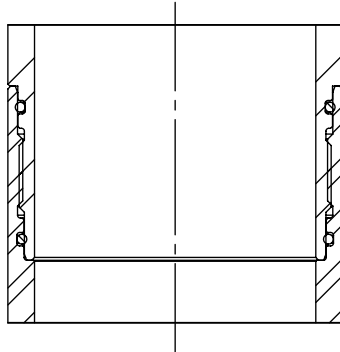
CASING O.D. (in)	4.5
CASING WT. (lb/ft)	18.9
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PATCH DRIFT I.D. (in)	2.805
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COLLAPSE HYDRAULIC RATING (psi)	10000

QTY.	DESCRIPTION	PART NUMBER	MATERIAL
1	PIN ELEMENT	PAT-4500-0189-3210	13 Cr
1	BOX ELEMENT	PAT-4500-0189-3410	13 Cr
1	TOP SWAGE	PAT-4500-0189-3110	SUPER/HYPER CHROME
1	BOTTOM SWAGE	PAT-4500-0189-3310	SUPER/HYPER CHROME
N+1	O-RING,VITON	OOO-V569-151	VITON
N+1	O-RING, VITON	OOO-V569-152	VITON
1	72K SHEAR RING	PAT-4500-772	4140 / 4142
1	SET SCREW 1/4 INCH X 20 TPI, 5/16 INCH	PUR-0501-030	ALLOY
N	10 FT SECTION	PAT-4500-0189-3010	13 CR
1	SLEEVE NUT	SET-3250-420	4140/4142
1	SETTING SLEEVE LOCK NUT	SET-3250-421	4140/4142
1	SETTING SLEEVE	SET-3250-411A	4140 / 4130 / 4142
1	QUICK CHANGE ROD	SET-3250-130	4130/4140
1	QUICK CHANGE NUT	SET-3250-131	4130/4140
1	TOP ADAPTER ROD	SET-3250-132	4130/4140
N+1	ROD TANDEM CONNECTOR	SET-3250-133	4140/4130
N	10 FT. ROD	SET-3250-134	4140 / 4130
OPT.	5 FT ROD	SET-3250-135	4140 / 4130
1	BOTTOM ROD EXTENDED	SET-3250-136L	4140/4130
1	COLLET ASSEMBLY	SET-3250-767	SEE TABLE
	END SUB	SET-3250-765	4130 / 4140 / 4142
	COLLET	SET-3250-766	4130 / 4140 / 4142
1	COLLET SUPPORT	SET-3250-446S	4140-4142
N	ROD SUPPORT	SET-3250-142C	4140 / 4142

MINIMUM EQUIPMENT REQUIRED FOR 10 FT. SYSTEM

EXTENSION SPECIFICATIONS:

PAT-4500-0189-3001, 4.5 INCH 18.9 PPF.



PART NUMBER	LENGTH	OAL	WEIGHT	MATERIAL
PAT-4500-0189-3010	120	121.82	94.5	13 CR
PAT-4500-0189-1010	120	121.82	94.5	L-80
PAT-4500-0189-3005	60	61.82	47.2	13 CR
PAT-4500-0189-1005	60	61.82	47.2	L-80

PATCH TENSILE RATING	74,000 LBF
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SYSTEM WEIGHTS

	WEIGHT (LBS.)
PAT-4500-0189-3001	21.7
10 FT PATCH RUNNING WEIGHT	233.4
EA. ADDITIONAL 10 FT. LGTH ADD	156.5

SETTING TOOL OPTIONS:

HYDRAULIC			WEIGHT (LBS)
3-1/8 INCH HYDARULIC	SET-3125-010		300
	SCREEN SUB	TT0798-288A	
	CIRCULATION SUB	SET-2875-010	
	DUMP SUB	OT0710-288B-000	

PYROTECHNIC			WEIGHT (LBS)
3-1/4 INCH MULTISTAGE SETTING TOOL	SET-3250-010		206
	BOTTOM ADAPTER	SET-3250-431	
	POWER CHARGE	JEC-5336-099	
		OPC-3250-000-MS	
	IGNITER	DET-5306-074	
		DET-5306-008	