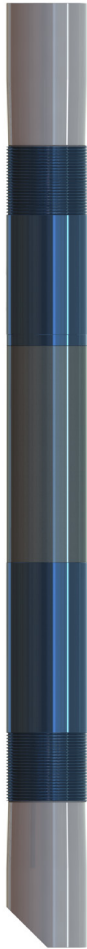


TECHNICAL INFORMATION:

PAT-4500-004, 4.5 INCH 15.1 PPF



CASING O.D. (in)	4.500
CASING WT. (lb/ft)	15.1
CASING I.D. (in)	3.826
PATCH MAX. RUNNING O.D. (in)	3.600
PATCH I.D. AFTER SETTING (in)	2.992
PATCH DRIFT I.D. (in)	2.867
BURST HYDRAULIC RATING (psi)	9000
COLLAPSE HYDRAULIC RATING (psi)	8000

QTY.	DESCRIPTION	PART NUMBER	MATERIAL
1	X-SPAN SYSTEM	PAT-4500-004	NOTED
1	PIN ELEMENT	PAT-4500-080	L80
1	BOX ELEMENT	PAT-4500-081	L80
1	TOP SWAGE	PAT-4500-084	4140
1	BOTTOM SWAGE	PAT-4500-085	4140
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	GTX-4500-110	L-80
		GTX-4500-110C	13 Cr L-80
	20 FT. SECTION	GTX-4500-120	L-80
		GTX-4500-120C	13 Cr L-80
	5 FT. SECTION	GTX-4500-105	L-80
		GTX-4500-105C	13 Cr L-80
	2 FT. SECTION	GTX-4500-102	L-80
		GTX-4500-102C	13 Cr 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.

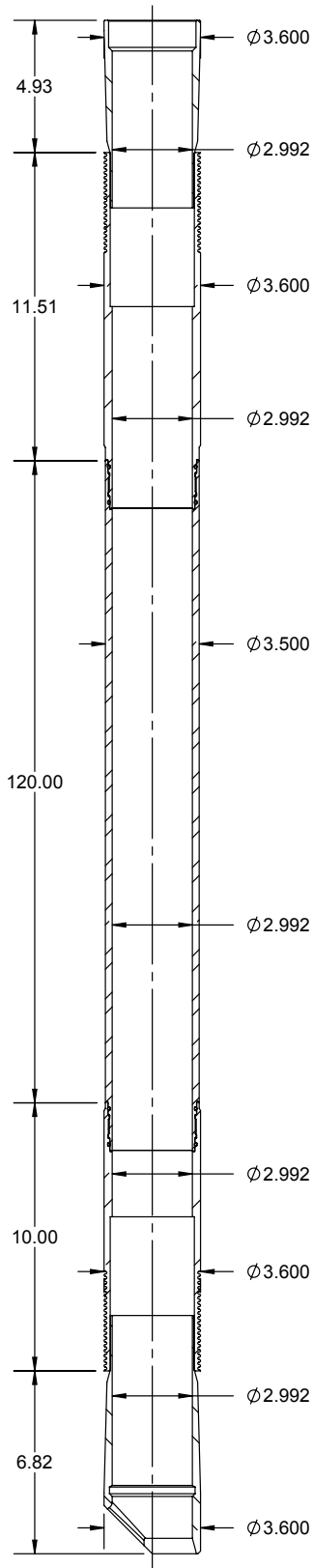
BENEFITS/CAPABILITIES:

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-4500-004, 4.5 INCH 15.1 PPF



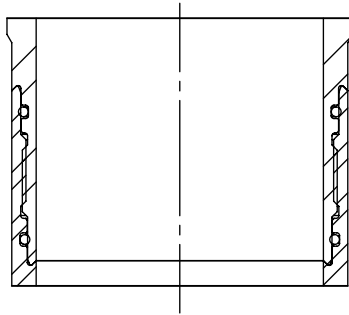
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COLLAPSE HYDRAULIC RATING (psi)	8000

QTY.	DESCRIPTION	PART NUMBER	MATERIAL
1	PIN ELEMENT	PAT-4500-080	L80
1	BOX ELEMENT	PAT-4500-081	L80
1	TOP SWAGE	PAT-4500-084	4140
1	BOTTOM SWAGE	PAT-4500-085	4140
N+1	O-RING	OOO-V569-151	VITON
N+1	O-RING	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	GTX-4500-110	L-80
1	SLEEVE NUT	SET-3250-420	4140 / 4142
1	SETTING SLEEVE LOCK NUT	SET-3250-421	4140 / 4142
1	SETTING SLEEVE	SET-3250-422	4140 / 4142
1	QUICK CHANGE ROD	SET-3250-130	4130 / 4140
1	QUICK CHANGE NUT	SET-3250-131	4130 / 4140
1	LOCK NUT	SET-3500-025	1213 / 1215
1	TOP ADAPTER ROD	SET-3250-132	4130 / 4140
N+1	ROD TANDEM CONNECTOR	SET-3250-133	4130 / 4140
N	10 FT. ROD	SET-3250-134	4130 / 4140
OPT	5 FT. ROD	SET-3250-135	4130 / 4140
1	BOTTOM ROD EXTENDED	SET-3250-136L	4130 / 4140
1	COLLET SUPPORT	SET-3250-446	4140 / 4142
1	COLLET ASSEMBLY	SET-3250-747	SEE TABLE
1	END SUB	SET-3250-745	4130 / 4140 / 4142
1	COLLET	SET-3250-746	4130 / 4140 / 4142
N	ROD SUPPORT	SET-3250-142A	ALUMINIUM

MINIMUM EQUIPMENT REQUIRED FOR 10 FT. SYSTEM

EXTENSION SPECIFICATIONS:

PAT-4500-004, 4.5 INCH 15.1 PPF



PART NUMBER	LENGTH (INCHES)	OAL (INCHES)	WEIGHT (LBS.)	MATERIAL
GTX-4500-120	240	241.82	172.8	L-80
GTX-4500-120C	240	241.82	172.8	13 Cr L-80
GTX-4500-110	120	121.82	86.4	L-80
GTX-4500-110C	120	121.82	86.4	13 Cr L-80
GTX-4500-105	60	61.82	43.2	L-80
GTX-4500-105C	60	61.82	43.2	13 Cr L-80
GTX-4500-102	24	25.82	17.28	L-80
GTX-4500-102C	24	25.82	17.28	13 Cr L-80

PATCH TENSILE RATING	63,000 LBF
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SYSTEM WEIGHTS:

	WEIGHT (LBS.)
PAT-4500-004	24.6
10 FT PATCH RUNNING WEIGHT	217.6
EA. ADDITIONAL 10 FT. LGTH ADD	148.4

SETTING TOOL OPTIONS:

HYDRAULIC			WEIGHT (LBS)
3-1/8 INCH HYDRAULIC	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-3250-000		206
3-1/4 INCH MULTISTAGE INTERNALLY STROKED SETTING TOOL	SET-3250-400		200
	BOTTOM ADAPTER	SET-3250-431	
	POWER CHARGE	JEC-5336-099	
		OPC-3250-000-MS	
	IGNITER	DET-5306-074	
		DET-5306-008	