



# Procon Engineering

(A Division of National Oilwell Varco UK Limited)



## Series SP90 – Load Measuring Shear Pin

Capacities 2te to 50te

IP 67 sealed

High accuracy

Stainless steel

Long term integrity and reliability

High safe overload capability, 300%

1 mV/V output

High ultimate load, 600%

Off-shore compatible

Facility for anti-rotation pin

Continuous tension monitoring

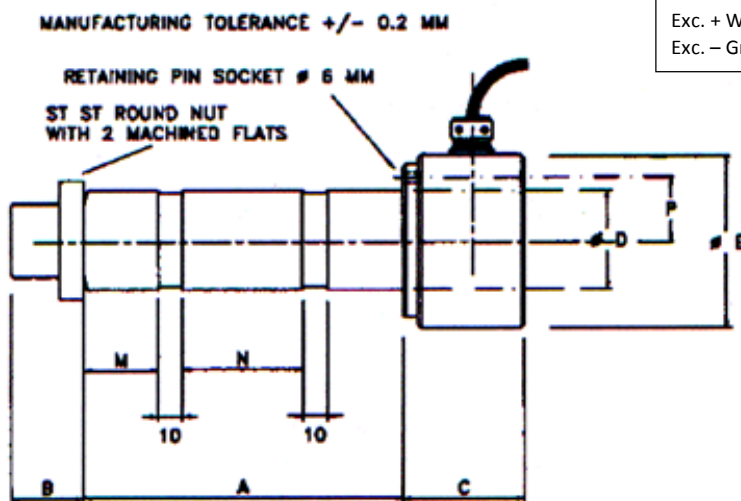
A range of load measuring clevis hollow pins working on sensing shear forces produced by tension load. These pins are designed to be incorporated into shackles used in lifting gear such as cranes and hoists. The load sensing pin is manufactured from high tensile stainless steel or aerospace released stainless steel to suit your application. The load pin can be supplied with a suitable shackle if required for incorporation into the customer's own system.

# Series SP90 – Load Measuring Shear Pin

## Technical Specification Sheet

SPECIFICATION		
		units
Standard Load Ranges	2, 5, 10, 20, 50	te
Full Load Output	1.0 ± 0.2	mV/V
Excitation Voltage	10	V
Safe Service Load	300	%
Proof Load (SWL)	200	%
Ultimate Load	600	%
Combined error (non-linearity and hysteresis)	< 0.5	%
Output at Zero load	< ± 2	%
Input Resistance	350 ± 20	ohms
Output Resistance	350 ± 10	ohms
Operational Temperature Range	-20 to +80	°C
Compensated Temperature Range	-10 to +80	°C
Temperature Coefficient on Zero	< ± 0.01	%/°C
Temperature Coefficient on Span	< ± 0.05	%/°C
Environmental Protection	IP 67	
Fatigue Life (calculated)	10 <sup>6</sup>	cycles
Insulation	>500 at 100 Vdc	M ohms
Electrical connections	6 core 7/0.2, screened polyurethane cable., 5 metres.	
Construction	Load pin – stainless steel type 17 - 4 PH.	

All percentages are related to Full Rated Load



### Cable Connections

Exc. + White    Sense + Yellow    Output + Red  
 Exc. – Green    Sense – Black    Output – Blue

RANGE (Te)	LOAD PIN							
	A	B	C	D	E	M	N	P
2	58.8nom	20	40	19	51	10.8	17.2	17.5
5	93.6nom	29.5	37	28.6	51	20.4	32.8	20.0
10	115nom	32	37	34.9	70	28.1	41.5	26.3
15	137nom	38	37	41.2	89	36.2	50.5	32.0
20	162nom	38	37	50.8	102	39.5	63.0	38.2
30	184nom	58	40	56.8	114	45.8	72.5	42.8
50	238nom	58	40	69.8	127	61.5	95.0	49.3

Procon Engineering's policy is one of continuous product enhancement.

We therefore reserve the right to incorporate technical modifications without prior notification. E&OE.

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