

Transducers, Brackets and Adaptors

VJ Tech supplies a wide range of analogue and digital transducers and all necessary brackets and adaptors to attach them to our equipment. They all work seamlessly with the full complement of our data acquisition systems (be it data loggers, junction boxes or controllers). We supply:

- Displacement Dial Gauges (Digital & Mechanical)
- LSCT Displacement Transducers
- Potentiometric Displacement Transducers
- On-Sample Displacement Transducers
- External Load Transducers (S-Beam and Z-Beam)
- Internal (Submersible) Load Transducers
- Load Rings (with either mechanical or digital dial gauges)
- Pressure Transducers
- Automatic Volume Change Transducers



Selection of Transducers

Mechanical Dial Gauges

Our Mechanical Dial Gauges are accurate, reliable and easy to read and are available as an alternative to Digital Dial Gauges for manual tests.



Ordering Information & Specification

Product	Range	Divisions	Rotation
VJT0105-M	0 - 12 mm	0.002 mm	Clockwise
VJT0105-MAC	0 - 12 mm	0.002 mm	Anti-Clockwise
VJT0110-M	0 - 25 mm	0.01 mm	Clockwise
VJT0115-M	0 - 50 mm	0.01 mm	Clockwise

Digital Dial Gauges

Our Digital Dial Gauges are accurate and reliable and simple to use. They feature an LCD display, imperial/metric conversion, direction change, zero setting and on/off settings.



Ordering Information & Specification

Product	Range	Resolution	Accuracy
VJT0105-MIT	0 - 12.5 mm	0.001 mm	0.003 mm
VJT0110-MIT	0 - 25 mm	0.001 mm	0.003 mm
VJT0115-MIT	0 - 50 mm	0.01/0.001 mm	0.006 mm

LSCT Displacement Transducers

VJ Tech linear displacement transducers give infinite resolution and excellent linearity. They are reliable and of rugged stainless steel construction with low voltage and current consumption, and come fitted with a 2M cable and 5-pin DIN plug.

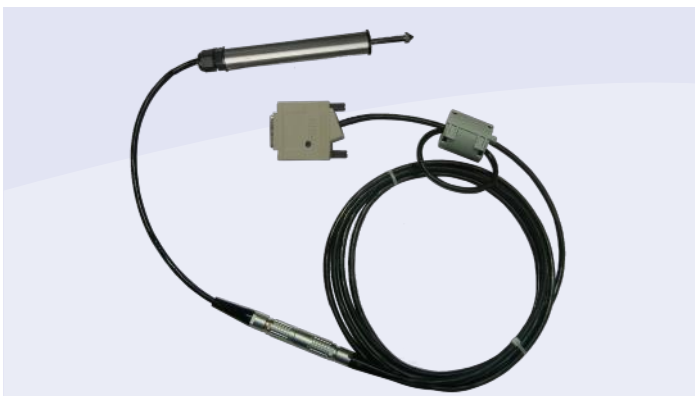


Ordering Information & Specification

Product Number	Range	Non-Linearity (best fit)	Excitation	Nominal (F.S.) Output	Operating Temp.	Weight
VJT0269	0 - 5 mm	<0.1% of full scale	2 to 10V AC or DC	5.0 mV/V	-10 to +70°C	125g
VJT0270	0 - 10 mm	<0.1% of full scale	2 to 10V AC or DC	5.4 mV/V	-10 to +70°C	130g
VJT0271	0 - 25 mm	<0.1% of full scale	2 to 10V AC or DC	7.3 mV/V	-10 to +70°C	140g
VJT0272	0 - 50 mm	<0.1% of full scale	2 to 10V AC or DC	8.7 mV/V	-10 to +70°C	180g
VJT0273	0 - 100 mm	<0.12% of full scale	2 to 10V AC or DC	7.5 mV/V	-10 to +70°C	320g

LSCT Displacement Transducers for Dynamic Instruments

VJ Tech linear displacement transducers for dynamic instruments are adapted for our Dynamic Servo Controllers and have the same electrical and environmental properties.

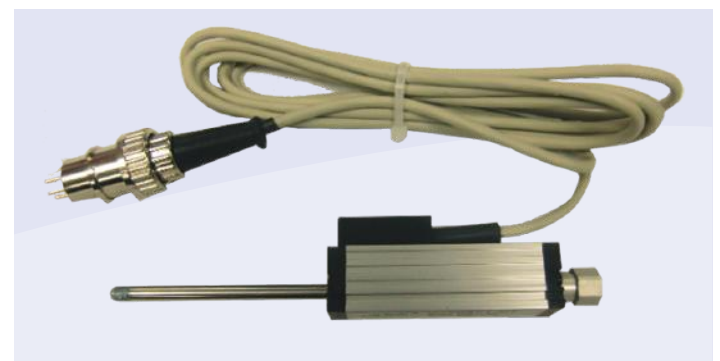


Ordering Information

Product Number	Range	Weight
VJT0270/DYN	0 - 10 mm	160g
VJT0271/DYN	0 - 25 mm	170g
VJT0272/DYN	0 - 50 mm	210g

Potentiometric Transducers

VJ Tech potentiometric displacement transducers give excellent resolution and excellent linearity. They are reliable and of rugged construction with low voltage and current consumption and are supplied complete with 5-pin DIN plug attenuated specifically for VJ Tech equipment.

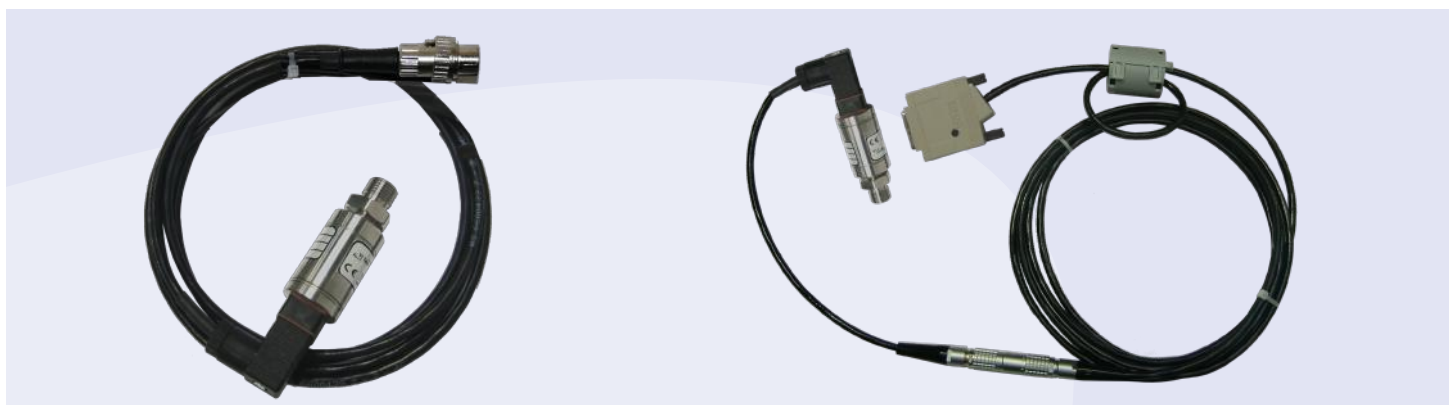


Ordering Information & Specification

Product Number	Range	Linearity	Weight
VJT0270-PT	0 - 10 mm	+/- 0.075%	80g
VJT0271-PT	0 - 25 mm	+/- 0.075%	120g
VJT0272-PT	0 - 50 mm	+/- 0.075%	150g
VJT0273-75PT	0 - 75 mm	+/- 0.075%	170g

Pressure Transducers for both Standard and Dynamic Instruments

We supply a range of accurate and very stable pressure transducers to provide reliable data for both Standard and Dynamic tests. They are of stainless steel construction with low voltage and current consumption and come fitted with a 2m cable and a 5-pin DIN plug for Standard Instruments or a Sensor plug and ferrite for Dynamic Instruments. They are all Ingress protected to IP65 and capable of operating between -20 to +135°C. A de-airing block is available for use with the pressure transducers.



Ordering Information & Specification

Product Number	VJT0250-G	VJT0250/DYN	VJT0260-G	VJT0260/DYN	VJT0259-G	VJT0259/DYN
Range	0 - 10 bar	0 - 10 bar	0 - 20 bar	0 - 20 bar	0 - 30 bar	0 - 30 bar
Excitation	10V DC					
Rated Pressure Span O/P	100.0 (+/- 0.1) mV DC					
Accuracy	<+/-0.25% of rated Load					
Weight	150g	170g	180g	210g	200g	230g

S-Beam External Load Transducers

We supply a wide range of S-Beam external Load Cells which are widely used and highly accurate. They are very robust and are constructed from stainless steel to either IP65 or IP68 (depending on capacity).

They all come fitted with a 2m cable and 5-pin DIN plug.



Ordering Information & Specification

	VJTS0360	VJTS0361	VJTS0362	VJTS0363	VJTS0365	VJTS0366	VJTS0367	VJTS0368
Capacity	2.5 kN	5 kN	10 kN	20 kN	50 kN	100 kN	200 kN	250 kN
Nominal Output	2.0 mV/V							
Accuracy	<0.030% of Full Scale Output							
Excitation	10V DC (recommended), 15V DC (maximum)							
Operating Temp.	-20 to +60°C (safe), -10 to +40°C (compensated)							
Construction	Stainless steel to IP65				Stainless steel to IP68			

Internal Submersible Load Transducers

VJ Tech Internal Submersible Load Cells (ISLCs) are designed for use within Static or Dynamic Triaxial cells, being insensitive to the cell confining pressure. The ISLCs are fully waterproof (IP68 rated) to ensure long term reliability.

For Static Triaxial Cells, the Load Cell is fitted to a 15.5 mm dia.ram for the 50 mm Triaxial Cell. For 75, 100 and 150 mm diameter Cells, the Load Cell is fitted to a 25 mm dia.ram. These ISLCs are fitted with a DIN Plug at the end of the cable.

For Dynamic Triaxial Cells, the Load Cell is fitted to a 16 mm dia.ram for the 50 mm Dynamic Triaxial Cell. For 75, 100 and 150 mm diameter Cells, the Load Cell is fitted to a 25 mm dia.ram. These ISLCs are fitted with a LEMO connector and a Dynamic Plug for the DSC3000 at the end of the cable.



VJT0352B - ISLC (10kN) with 25mm diameter ram

VJT0352B-DYN - Dynamic ISLC (10kN) with 25 mm dia ram, Lemo Connector and plug

Ordering Information & Specification

Load Cells fitted with 5-Pin DIN Plug on Pro Series

Fitted to 15.5 mm dia. ram	VJT0349A	VJT0350A	VJT0354A	VJT0351A	VJT0352A*	VJT0353A*
Fitted to 25 mm dia. ram	VJT0349B	VJT0350B	VJT0354B	VJT0351B	VJT0352B*	VJT0353B* VJT0359B*

Load Cells fitted with Dynamic Plug for DSC3000

Fitted with 16 mm dia. ram	VJT0349A /DYN	VJT0350A /DYN	VJT0354A /DYN	VJT0351A /DYN	VJT0352A /DYN*		
Fitted with 25 mm dia. ram	VJT0349B /DYN	VJT0350B /DYN	VJT0354B /DYN	VJT0351B /DYN	VJT0352B /DYN*	VJT0353B /DYN*	VJT0359B /DYN*
Capacity	1 kN	2 kN	3 kN	5 kN	10 kN*	25 kN*	50 kN*

Nominal Output	2.0 mV/V (1.4 mV/V on 1kN)						
Accuracy	<0.1% of Full Scale Output						
Excitation	10V DC (recommended), 15V DC (maximum)						
Operating Temperature	+5 to +50°C (safe)						
Construction	Stainless steel hermetically sealed to IP68						

* Please note this ISLC can only reach 5kN in tension

Compact ISLCs for the ShearSCAN Pro

The Compact Internal Submersible Load Cell (ISLC) can be used for the ShearSCAN Pro only, instead of an S-Beam Load Cell.

It provides more accurate readings, because it is fitted inside the water bath and is therefore closer to the sample. It also avoids any Ram friction produced when the load Cell is fitted outside the water bath.

Ordering Information & Specification

	VJT0350C (2kN)	VJT0351D (5kN)	VJT0352C (10kN)
Nominal Output	20 mV/V		
Accuracy	<0.1% of Full Scale Output		
Excitation	10V DC (recommended), 15V DC (maximum)		
Operating Temperature	0°C TO +70°C		
Construction	Stainless steel hermetically sealed to IP68		



VJT0352C - Compact ISLC (10kN) (ShearSCAN Pro only)

Load Rings

VJ Tech supplies Load Rings fitted with either digital or mechanical dial gauges as preferred.

They are available in a wide range of capacities and work seamlessly with the full complement of our equipment and data logging acquisition systems.

They are supplied in a case with a works calibration certificate. they are all 247 mm high and the case dimensions are 24 x 26 x 100 mm.

Ordering Information & Specification

Capacity (calibrated in compression)	Mechanical Dial Gauge 0-12 mm x 0.002 mm	Digital Dial Gauge 0-12.7 mm x 0.001 mm	Weight
0.5 kN	VJT0200	VJT0200- MIT*	3.25 kg
1 kN	VJT0201	VJT0201- MIT*	3.75 kg
2 kN	VJT0202	VJT0202- MIT*	3.9 kg
3 kN	VJT0203	VJT0203- MIT*	4.25 kg
5 kN	VJT0205	VJT0205- MIT*	4.65 kg
10 kN	VJT0210	VJT0210- MIT*	4.8 kg
20 kN	VJT0220	VJT0220- MIT*	5.25 kg
30 kN	VJT0223	VJT0223- MIT*	5.55 kg
40 kN	VJT0225	VJT0225- MIT*	5.75 kg
50 kN	VJT0226	VJT0226- MIT*	6.1 kg
100 kN	VJT0227	VJT0227- MIT*	6.25 kg

* not suitable for feedback control, or load measurement

Accessories

VJT0282	Adaptor bracket for mounting LSCT transducer in line with dial gauge on Load Ring
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VJT0205 - Load Ring with Mechanical Dial Gauge (5kN)



VJT0205-MIT - Load Ring with Digital Dial Gauge (5kN)

Automatic Volume Change Transducers

The VJ Tech designed Automatic Volume Change unit is used with our Triaxial cells for continuous and precise measurement of volume change during soil testing.

The top chamber has an initial capacity of 100ml. When used in conjunction with the changeover valve box, this capacity becomes unlimited. The changing volume within the cylinder moves a piston, connected to a transducer or dial gauge.

Resulting data can either be recorded by an Advanced machine or sent to a data logger. This permits the accurate determination of volume change within the soil sample and can also be used in permeability testing.

We also manufacture an Automatic Volume Change unit to be used with contaminated samples, for specialized use.

Ordering Information

VJT0310	Top Chamber
VJT0301	Changeover Valve Box only
VJT0300	Top Chamber and Changeover Valve Box only
VJT0300D-MIT	Automatic Volume Change complete with Digital Dial Gauge
VJT0300A	Automatic Volume Change complete with LCST transducer and bracket
VJT0300-CONT	Automatic Volume Change for contaminated samples

Specifications

VJT No.	Capacity	Accuracy	Weight
VJT0310	100 ml	> ± 0.05 ml	4.75 kg
VJT0300	Unlimited	> ± 0.05 ml	8 kg
VJT0300D-MIT	Unlimited	> ± 0.05 ml	8.15 kg
VJT0300A	Unlimited	> ± 0.05 ml	8.2 kg
VJT0300-CONT	100 ml	> ± 0.05 ml	7 kg



VJT0300 - Automatic Volume Change without Transducer



VJT0300A - Automatic Volume Change with LCST



VJT0300-CONT - Automatic Volume Change for contaminated samples

Adaptors & Brackets for S-Beam External Load Cells and Transducers

VJ Tech supplies a number of different brackets and adaptors to attach the different LSCT, Digital Dial Gauge and S-Beam transducers to the various items of equipment (Marshall, CBR, Triaxial and Lever Loading Shear).

All VJ Tech part numbers listed for Digital Dial Gauges and brackets can also be used for mechanical dial gauges.



Ordering Information

Tests		Marshall	CBR	Triaxial		Lever Loading Shear		ShearSCAN
Sensors				15.5 mm Ram	25 mm Ram	Horizontal Disp.	Vertical Disp.	
Displacement LSCT Transducers	VJT0270	VJT0281A	N/A	VJT0281B	VJT0281C	VJT0284	VJT0284	VJT0284
	VJT0271	VJT0281A	N/A	VJT0281B	VJT0281C	VJT0284	VJT0284	VJT0284
	VJT0272	VJT0281A	N/A	VJT0281B	VJT0281C	VJT0284	VJT0284	VJT0284
Digital Dial Gauges	VJT0105-MIT	VJT5562A	VJT0287C	VJT0283A	VJT0283B	N/A	N/A	N/A
	VJT0105-MIT	VJT5562A	VJT0287C	VJT0283A	VJT0283B	N/A	N/A	N/A
	VJT0105-MIT	VJT5562A	VJT0287C	VJT0283A	VJT0283B	N/A	N/A	N/A
S-Beam Load Cell	VJTS0360	N/A	VJT0287C	VJT0287B	VJT0281F VJT0281-PT	VJT2700C	VJT2700C	N/A
	VJTS0361	N/A	VJT0287C	VJT0287B	VJT0281F VJT0281F-PT	VJT2700C	VJT2700C	N/A
	VJTS0362	N/A	VJT0287C	VJT0287B	VJT0281J VJT0281J-PT	N/A	N/A	N/A
	VJTS0363	N/A	VJT0287C	VJT0287B	VJT0281J VJT0281J-PT	N/A	N/A	N/A
	VJTS0365	VJT0288B	VJT0285A	VJT0281K	VJT0281J VJT0281J-PT	N/A	N/A	N/A
	VJTS0366	VJT0281M	VJT0281N	VJT0281P	VJT0281Q VJT0281Q-PT	N/A	N/A	N/A