

# On-Sample Transducer System

On-sample transducers are used for small strain testing and minimize errors caused by deformations of the loading system, additional strain as the Top Cap is lowered onto the specimen and any irregular movement of the ends of the sample caused by the friction of the Top Cap and Base Pedestal.

## On-Sample System Setup

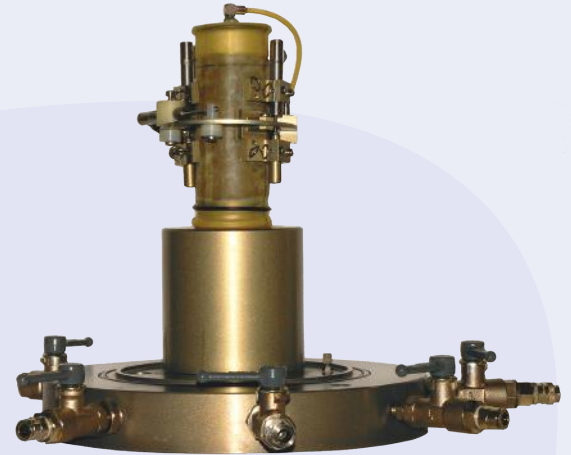
The on-sample sets are available for 50, 70 and 100 mm diameter samples and consist of 1 Radial Caliper, 2 Axial Calipers, 3 LVDT submersible Transducers, a 3-Channel On-Sample Signal Conditioning Unit and all associated cables.

The On-Sample transducers measure the deformation directly on the stable central section of the test specimen with high accuracy. In order to aid in the correct positioning of the radial and axial calipers, the locations are marked out on the membrane before sample assembly. A suitable contact adhesive is applied to the back of the mounting pads before placement to eliminate water ingress into the sample and they are secured with stainless steel pins before the adhesive dries.

The cables from the Radial and Axial Calipers are sealed as they exit the Triaxial Cell Base using cable bungs and are connected via Lemo connectors to the VJ Tech 3-Channel On-Sample Signal Conditioning Unit, which in turn is connected to a VJ Tech MiniScanner Pro data logger. The outputs from the Transducers are recorded by the VJ Tech Clisp Studio csSPATH software used for testing.



On-Sample LVDT Set (50mm diameter)



On-Sample Setup

## Specification

<b>Accuracy:</b>	0.1% FRO
<b>Maximum Pressure:</b>	3.5 MPa
<b>Strain measurement:</b>	0-5 mm
<b>3-Channel Signal Conditioning Unit Dimensions:</b>	310 x 260 x 110 mm
<b>3-Channel Signal Conditioning Unit Weight:</b>	4.35 Kg

## Features

- 3 submersible LVDTs (0-5 mm Displacement)
- Radial caliper mounting assembly for 50mm diameter samples
- 2 axial caliper mounting assemblies for 50mm diameter samples
- 3-channel On-Sample Signal Conditioning Unit for interface to the MiniScanner Pro data logger
- 3 cables from Transducers (with bulkhead cable sealing connections for Triaxial cell) to Lemo plugs for ease of assembly
- 3 cables to connect from Lemo plugs to On-Sample Signal Conditioning Unit
- 3 extension cables to connect 3-channel On-Sample Signal Conditioning Unit to MiniScanner Pro
- Adapted Triaxial Cell capable of On-Sample Transducer, Bender and Standard Triaxial testing
- 50 mm Top Cap and Base Pedestal for 100 mm Cell
- MiniScanner Pro data logger
- Clisp Studio software

## Ordering Information

<b>VJT0277</b>	On-Sample LVDT Set (50mm diameter) comprising the following 3 items;
<b>VJT0277A</b>	50 mm On-Sample Radial Caliper with Transducer
<b>VJT0277B</b>	50 mm On-Sample Axial Caliper with Transducer
<b>VJT0277-EL3</b>	3-Channel On-Sample Signal Conditioning Unit with associated cables
<b>VJT0400-BE</b>	100 mm Triaxial Cell for On-Sample Transducer, Bender Element or Standard Triaxial testing
<b>VJT0575</b>	Base Pedestal 50 mm for 100 mm Cell
<b>VJT0574</b>	Top Cap 50 mm for 100 mm Cell
<b>VJT1000A-P</b>	MiniScanner Pro Data Logger

## Additional Ordering Information

<b>VJT0278</b>	On-Sample LVDT Set (70mm diameter) (3 items)
<b>VJT0477A</b>	Base Pedestal 70 mm for 100 mm Cell
<b>VJT0476</b>	Top Cap 70 mm for 100 mm Cell
<b>VJT0450-BE</b>	150 mm Triaxial Cell for On-Sample Transducer, Bender Element or Standard Triaxial testing
<b>VJT0279</b>	On-Sample LVDT Set (100mm diameter) (3 items)
<b>VJT0402</b>	Base Pedestal 100 mm for 100 mm Cell
<b>VJT0452A</b>	Base Pedestal 100 mm for 150 mm Cell
<b>VJT0405</b>	Top Cap 100 mm for 100 & 150 mm Cells
<b>VJT-csSPATH</b>	Clisp Studio Stress Path Module