

## SPACE Tubo – Pipe Measuring System

The only arms certified with the ISO10360-2 norms that allow the verification and the annual calibration and certification at the customer premises by the exclusive TOMELLERI procedures

The perfect equipment for pipe inspection with laser fork and a dedicated software.

Based on the SPACE arm design, it's a portable articulated arm CMM ideal for quick and accurate inspection of pipes and any other parts within its range.

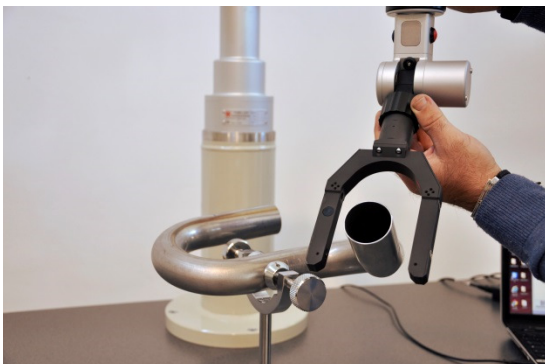
**SPACE Tubo** is available in several sizes: from 1.8m to 5.0m diameter, and in 6 or 7 axis configuration. The counter-balance system with a double spring also gives the machine characteristics of precision light-weight and easy handling.

The portable arm unit can be placed on the top of the table with a support or just directly on the rigid laminate top surface.

Otherwise you can use the mobile tripod.



SPACE TUBO – (6 axes with laser fork) *=2 sigma error **with 50mm fork					
SPACE Tubo	Measuring range	Volumetric accuracy with Laser Fork**	Touch probe point accuracy*	Point Repeatability*	Weight (Kg)
<b>SPACE 1.8 Tubo</b>	1800mm	<b>0,056</b>	<b>0,025</b>	<b>0,020</b>	7,9
<b>SPACE 2.5 Tubo</b>	2500mm	<b>0,063</b>	<b>0,036</b>	<b>0,028</b>	8,4
<b>SPACE 3.2 Tubo</b>	3200mm	<b>0,072</b>	<b>0,045</b>	<b>0,035</b>	8,8
<b>SPACE 4.0 Tubo</b>	4000mm	<b>0,099</b>	<b>0,060</b>	<b>0,045</b>	9,5
<b>SPACE 5.0 Tubo</b>	5000mm	<b>0,122</b>	<b>0,090</b>	<b>0,060</b>	11,5



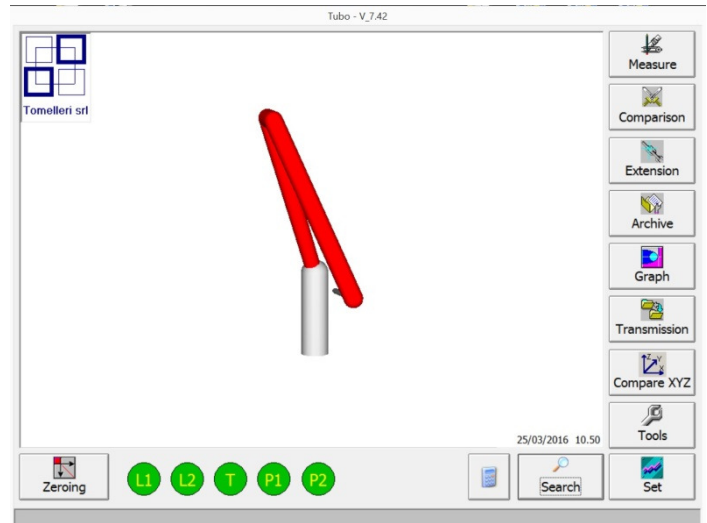
Pipe measurement by laser fork and touch probe (LP2 Renishaw™)



The **SPACE Tubo system** includes also our software **Tomelleri TUBO** for pipe measurement.

### Measurement by laser fork or probe:

- ✓ of straight tubes
- ✓ of bent tubes measuring just the straight lengths
- ✓ of bends (survey the bending radius)
- ✓ of consecutive bends (absence of straight length between one bend and the other one, also called bend-to-bend)
- ✓ of scaled tube
- ✓ of secondary tubes welded to the main tube
- ✓ of RCV (variable radius bend) tubes
- ✓ of tubes having non circular section (profiles)
- ✓ Possibility to change tube diameter during the measuring procedure



### Comparison and correction:

- ✓ Comparison and correction (classic mode) linked to the CNC
- ✓ Spring-back correction (20–120)
- ✓ Alignment: possibility to obtain the data of the measured tube regarding (aligned) a master tube that is already in memory, to an external reference or to a drawing (manual and automatic procedure).
- ✓ Creation of material archive for the spring-back compensation to apply to the bending program.

### LASER FORK

5 forks size are available (mm):  
30, 50, 80, 150, 200



**ALL the SPACE arms products are MADE IN ITALY.**

