



SPACE Tubo – Pipe Measuring System

The arms are certified with the ISO10360-2 norm that allows 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)
SPACE 1.8 Tubo	1800mm	0,056	0,025	0,020	7,9
SPACE 2.5 Tubo	2500mm	0,063	0,036	0,028	8,4
SPACE 3.2 Tubo	3200mm	0,072	0,045	0,035	8,8
SPACE 4.0 Tubo	4000mm	0,099	0,060	0,045	9,5
SPACE 5.0 Tubo	5000mm	0,122	0,090	0,060	11,5



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

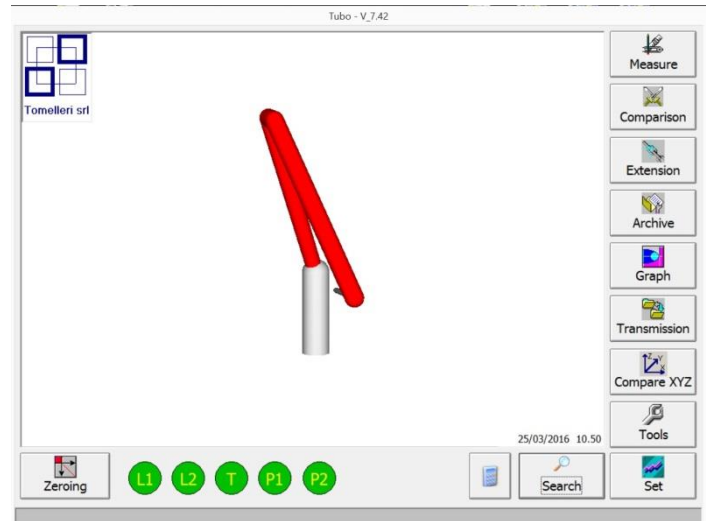


TOMELLERI ENGINEERING – SPACE Arms

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.



Tomelleri Engineering S.r.l. Viale del Lavoro 12/a - 37069 VILLAFRANCA (VR) ITALY
Tel +39 045 6304744 - Fax +39 045 6303657
www.tomelleri-spacearms.com - info@tomelleri.com