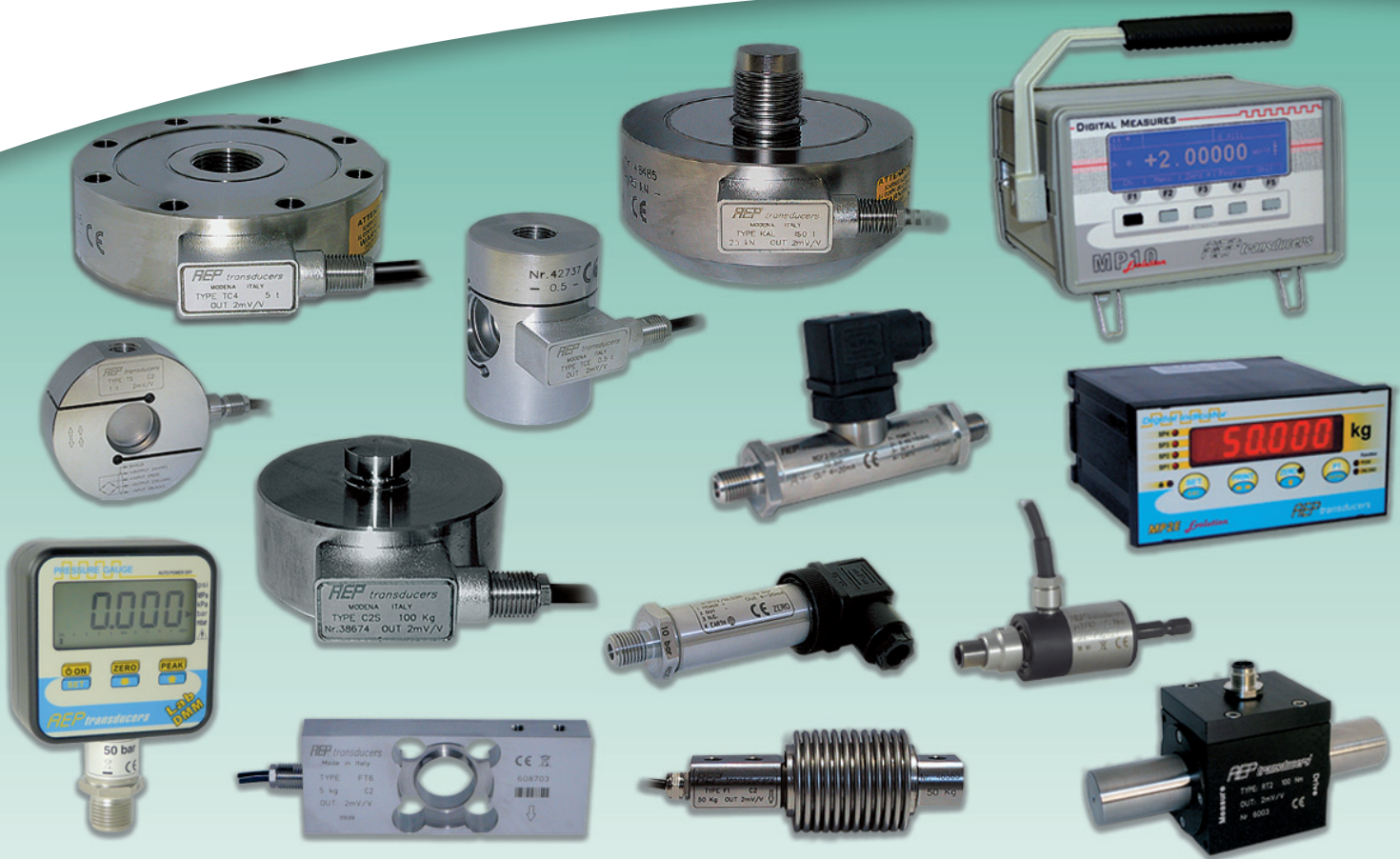




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Dasa-Rägister
 EN ISO 9001 (2008)
 IQ-1100-01



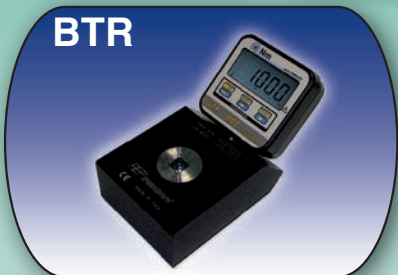
Centro SIT n° 93

Centro di taratura SIT per le grandezze: FORZA, PRESSIONE, VUOTO e MOMENTO TORCENTE
 SIT calibration centre for quantities: FORCE, PRESSURE, VACUUM and TORQUE

Dynamomètres / Capteurs de force

Type:	TCETM	μKAL	KAL	C8S	CLF	TC8	TC4	DCTC4 DCVTC4	CM
Type of measure									
Nominal Load									
50 N		•							
100 N		•							
200 N		•							
500 N		•							
1 kN		•							•
2.5 kN		•							•
3 kN		•							•
5 kN	•	•				•	•	•	•
10 kN	•	•	•	•		•	•	•	•
25 kN	•	•	•	•		•	•	•	•
35 kN									
50 kN	•	•	•	•		•	•	•	•
75 kN	•	•	•	•		•	•	•	•
100 kN	•	•	•	•		•	•	•	•
200 kN									
300 kN									
500 kN									
600 kN					•				
750 kN					•				
1 MN					•				
2 MN					•				
3 MN					•				
5 MN					•				
Linearity	0.03%	0.02%	0.02%	0.03%	0.05%	0.03%	0.05%	0.05%	0.20%
Hysteresis									
ISO 376 Class	00-0.5-1	00-0.5-1	00-0.5-1	0.5-1	1	0.5-1	1		
Note	Easy Applications	Higt Precision and Stability	Higt Precision and Stability	Low Profile		Low Profile Low Deflection	Low profile	Low Profile With Indicator	Low profile
Material	Stainless Steel								
Protection Class	IP67	IP50	IP67	IP67	IP65	IP67	IP67	IP40	IP67
Output	2mV/V							Display	2mV/V

TITAN line



Couplemètres

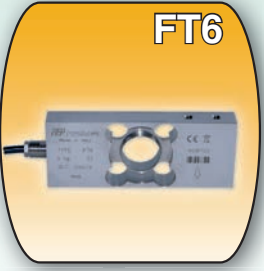
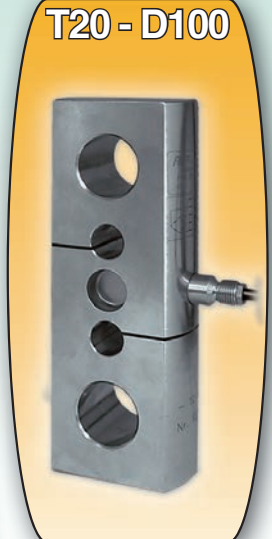


Type:	BTR	TRS	TRX	RT2	μTOR
Type of measure	STATIC	STATIC	STATIC	ROTATING	ROTATING
Nominal Torque					
0.5 Nm	•	•			
2.5 Nm	•	•			
5 Nm	•	•			•
10 Nm	•	•			•
25 Nm	•	•			•
50 Nm	•	•		•	
100 Nm	•	•		•	
250 Nm	•	•	•	•	
500 Nm	•	•	•	•	
1000 Nm	•	•	•	•	
2000 Nm	•		•	•	
3000 Nm			•	•	
5000 Nm			•	•	
Accuracy	0.20%	0.20%	0.03%	0.20%	0.20%
EA 10-14 Class			0,05 0,1		
Note	Compact Size Low cost	Compact Size Low cost	Higt Precision and Stability	Nominal Speed 4000 rpm Contact Transmission	Nominal Speed 4000 rpm Contact Transmission
Material	Aluminium	Stainless Steel			
Protection Class	IP40	IP40	IP67	IP40	IP40
Output	Display	2mV/V		2mV/V ± 10Vdc	2mV/V

Capteurs de force et de pesage

Type:	CLS	CBS	C2S	TCA	TCE	TS	T20	D100	F1	FT1	FT2	FT6
Type of measure												
Nominal Load	According to OIML R60		According to OIML R60 				According to OIML R60 		According to OIML R60 		According to OIML R60 	According to OIML R60
1 kg				•								
2 kg				•								
2.5 kg									•			
5 kg				•					•			•
10 kg				•					•			•
15 kg									•			
20 kg									•			•
25 kg				•					•			
50 kg				•					•			•
100 kg			•						•			•
200 kg									•			
250 kg		•	•									
300 kg						•						
350 kg						•				•		
500 kg		•	•			•						
1 t		•	•			•				•		•
2 t						•				•		•
2.5 t		•	•			•						
3 t						•				•		
5 t		•	•			•	•			•	•	
7.5 t		•	•			•	•			•		
10 t		•	•			•	•				•	
15 t		•	•			•	•					
20 t		•	•			•	•					
30 t	•	•	•			•	•					
50 t	•	•	•			•	•					
60 t	•					•	•					
75 t		•	•			•	•					
100 t	•	•				•	•					
200 t	•	•				•	•					
300 t	•	•				•	•					
500 t	•	•				•	•					
Combined Error	0.023%	0.03%	0.018%	0.03%	0.03%	0.015%	0.019%	0.10%	0.020%	0.020%	0.019%	0.028%
OIML R60 Class	C1 - C2		C2 - C3			C2-C3-C4	C2 - C3		C2 - C3	C2 - C3	C2 - C3	C2
Material	Stainless Steel			Alluminium			Stainless Steel					
Protection Class	IP68	IP68	IP68	IP20	IP67	IP68	IP68	IP65	IP67	IP68	IP68	IP67
Output	2mV/V (AMP version output 4-20mA or ±10Vdc)											

TITAN line



Capteurs de pression



DF2



TP38



TP8



TP1



TP15



TP3 - TP12
TP14



Lab TP14



TP16

Type:	TP38	TP3	TP12	TP14	LabTP14	TP15	DF2	TP8	TP1	TP16
Pressure										
ABSOLUTE	10 bar	•	•	•	•	•				
	5 bar	•	•	•	•	•				
	2.5 bar	•	•	•	•	•				
	1 bar	•	•	•	•	•				
	0.5 bar	•	•	•	•	•				
RELATIVE	-1 bar	•	•	•	•	•	•			
	0.5 bar	•	•	•	•	•				
	1 bar	•	•	•	•	•				
	2.5 bar	•	•	•	•	•				
	5 bar	•	•	•	•	•				
	10 bar	•	•	•	•	•			•	•
ABSOLUTE	20 bar	•	•	•	•	•			•	•
	50 bar	•	•	•	•	•			•	•
	100 bar	•	•	•	•	•			•	•
	250 bar	•	•	•	•	•			•	•
	350 bar	•	•	•	•	•			•	•
	500 bar	•	•	•	•	•			•	•
	700 bar	•	•	•	•	•			•	•
	1000 bar	•	•	•	•	•			•	•
	1500 bar	•	•	•	•	•			•	•
	2000 bar	•	•	•	•	•			•	•
Accuracy	1.0%	0.50%	0.20%	0.10%	0.05%	0.50%	0.20%	0.25%	0.20%	0.10%
Output mA	4-20mA (2 or 3 Wires)							/		
Output Volt	0-5Volt or 0-10Volt							2mV/V		

THE ORIGINALS

Manomètres

Type:	LabDMM	Bit02B	PGE	DMM	DME	DFP	Idroscan
Pressure							
ABSOLUTE	10 bar	•	•				
	5 bar	•	•				
	2.5 bar	•	•				
	1 bar	•	•				
	0.5 bar	•	•				
RELATIVE	-1 bar	•	•		•		•
	0.5 bar	•					
	1 bar	•		•	•		
	2.5 bar	•		•	•		
	5 bar	•		•	•		
	10 bar	•		•	•		
	20 bar	•		•	•		
	50 bar	•		•	•		
	100 bar	•		•	•		
	250 bar	•		•	•		
	350 bar	•		•	•		
	500 bar	•		•	•		
	700 bar	•		•	•		
	1000 bar	•		•	•		
	1500 bar	•		•	•		
2000 bar	•		•	•			
Accuracy	0.05%	0.20%	0.50%	0.15%	0.20%	0.10%	0.20%
Note	Internal battery Autonomy 1 years RS232C	Internal battery Autonomy 1 years RS232C Temperature reading	Internal battery Autonomy 1 years RS232C Temperature reading	Power: 24 Vdc RS232C 2 Set Point Analogue out	Power: 24 Vdc 2 Set Point	Internal battery PRESSURE ↓ FORCE	Internal battery DATALOGGER RECORDER RS232C Temperature reading

Built-in case



DMM



Idroscan



DFP



LabDMM
Bit02 - PGE



DME



Instrumentations

Product	INPUT		OUTPUT
WIMOD	<i>WIRELESS</i> Load cell	2 mV/V 1 mV/V 3 mV/V	200 m 200 m PC - PLC MP2E
MP1 Max. Res.: ± 9.999 div.	Max. 4 (350 Ω) 	2 mV/V 1 mV/V 3 mV/V 4-20 mA 0-20 mA 0-5 V 0-10 V	2 SET POINT Analogue Out 4-20 mA 0-5 Volt 0-10 Volt PLC - RECORDER
MP2E Max. Res.: ± 50.000 div.	Max. 6 (350 Ω) 	2 mV/V 1 mV/V 3 mV/V 4-20 mA 0-20 mA ±5 V ±10 V	4 SET POINT ← RS232C → ← RS485 → ← USB → Analogue Out 4-20 mA 0-20 mA ±5 V ±10 V PLC - PC Modbus PLC - RECORDER
MP2000 Max. Res.: ± 300.000 div.	Max. 6 (350 Ω) 	2 mV/V 1 mV/V 3 mV/V 4-20 mA 0-20 mA ±5 V ±10 V	4 SET POINT ← RS232C → ← RS485 → ← USB → Analogue Out 4-20 mA ±5 V ±10 V Printer out PLC - PC PLC - RECORDER
MP4 Max. Res.: ± 50.000 div.	Max. 6 (350 Ω) kg bar Displacement mm PT100 °C	2 mV/V 1 mV/V 3 mV/V 4-20 mA 0-20 mA ±5 V ±10 V	10 SET POINT ← RS232C → ← RS485 → Analogue Out 4-20 mA ±5 V ±10 V Printer out 4 independent channel PLC - PC PLC - RECORDER
MP10 Max. Res.: ± 200.000 div.	 Calibration PC2M	2 mV/V 1 mV/V 3 mV/V 2 mV/V	← RS232C → Printer out PC
MP6A Max. Res.: ± 50.000 div.	Torque Nm Displacement mm	2 mV/V 1 mV/V 3 mV/V 2 mV/V	Analogue Out ← RS232C → ← RS485 → ← USB → Printer out PLC - RECORDER PLC - PC
DFI e DFIW Max. Res.: ± 25.000 div.	Torque Nm 	2 mV/V 1 mV/V 3 mV/V 2 mV/V	Internal battery ← RS232C → PC
TA4/2	Max. 6 (350 Ω) 	2 mV/V 1 mV/V 3 mV/V	Analogue Out 4-20 mA 0-20 mA ±5 V ±10 V 0-10 V PLC - PC
TA5F	Max. 6 (350 Ω) 	2 mV/V 1 mV/V 3 mV/V	← RS232C → ← RS485 → PLC - PC Modbus
TAUSB	Max. 4 (350 Ω) 	2 mV/V 1 mV/V 3 mV/V	← USB → PC
LDT	Trasduttore di spostamento Displacement transducer 	5 mm 10 mm 25 mm 50 mm	→ 2 mV/V → 5V PLC - RECORDER



Macchine campione di forza a pesi diretti.
Dead-weight force sample machines.

Il Laboratorio Metrologico **AEP transducers**, attrezzato come Centro di taratura per le grandezze **FORZA, PRESSIONE, VUOTO e MOMENTO TORCENTE** è entrato a far parte del SIT "Servizio di taratura in Italia" nel 1996, emettendo oltre **15000** certificati di taratura riconosciuti in tutti i paesi firmatari dell'accordo Multilaterale della **European co-operation for Accreditation (EA)**.

L'accreditamento è stato concesso dal SIT valutando l'organizzazione interna del Laboratorio, la competenza tecnica del personale, ed i risultati ottenuti dai confronti sperimentali (AUDIT) con i campioni nazionali dell'Istituto Nazionale di Ricerca Metrologica I.N.R.I.M.

Per raggiungere questo prestigioso obiettivo la Società ha realizzato all'interno del Centro una struttura organizzativa operante in conformità alla norma **UNI CEI EN ISO/IEC 17025** ed ai requisiti SIT.

Le tarature vengono eseguite secondo procedure accreditate dal SIT, realizzate in base alle seguenti normative e raccomandazioni internazionali: OIML R60; ISO 376; ASTM E74; EA-10/17; EA-10/14; UNI EN 26789.

Oltre alle attività SIT, il personale tecnico del Laboratorio collabora con il personale dell'Istituto Nazionale di Ricerca Metrologica per quanto riguarda la metrologia applicata ai campioni di trasferimento, ai confronti nazionali ed internazionali ed allo sviluppo delle normative tecniche di prodotto.



Banco torsionometrico a pesi diretti con guida ad aria.
Dead-weight torque bench with air bearing.

*AEP transducers Metrological laboratory, a calibration centre for **FORCE, PRESSURE, VACUUM and TORQUE**, is a member of SIT, "Italian Calibration Service" since 1996, issuing over **15000** certificates acknowledged by the countries that signed the multilateral agreement of **European co-operation for the Accreditation (EA)**.*

The accreditation was given by SIT appraising the internal organization of the laboratory, the technical competence of its staff and the results of experimental comparisons (AUDIT) with national samples belonging the Metrological Research National Institute I.N.R.I.M.

*To achieve this reputable target, the Company gave the Metrological Laboratory an organization that currently works in compliance with **UNI CEI EN ISO/IEC 17025** and the requirements imposed by SIT.*

Calibrations are performed according to procedures accredited by SIT, in accordance with the following international standards and recommendations: OIML R60; ISO 376; ASTM E74; EA-10/17; EA-10/14; UNI EN 26789.

Besides activities dealing with SIT, the technical staff cooperates with the personnel at National Primary Metrological Institute for what concerns metrology applied to transfer samples, participates to national and international interlaboratory comparisons and supports the development of technical standards about products.



Grandezza Quantity	Strumenti Instrument	Campi di misura Range	Incertezza Uncertainty	Norme di riferimento Reference standards
FORZA <i>Trazione e Compressione</i> FORCE <i>Tension and Compression</i>	Celle di carico <i>Load cells</i>	1 N ÷ 50 kN (0.1 kg ÷ 5 t)	0.01%	OIML R60
	Dinamometri <i>Dynamometers</i>	1 N ÷ 50 kN (0.1 kg ÷ 5 t)	0.01%	ISO 376 ASTM E74 (00, 0.5, 1, 2) (AA)
		10 ÷ 1000 kN (1 t ÷ 100 t)	0.05%	ISO 376 ASTM E74 (1, 2) (A)
PRESSIONE RELATIVA RELATIVE PRESSURE	Manometri <i>Pressure gauge</i>	VACUUM: -1,4kPa ÷ -100kPa (-1 bar)	(0.64 + 7,8 x 10 ⁻⁵) Pa	EA 10-17
		Gas: 1,4 kPa ÷ 180kPa (1,8 bar)	(0.64 + 7,8 x 10 ⁻⁵) Pa	
	Trasduttori di pressione <i>Pressure transducers</i>	Gas: 0.014MPa ÷ 7 MPa (70 bar)	(260 + 5,1 x 10 ⁻⁵) Pa	
		Oil: 0.04MPa ÷ 160MPa (1600bar)	(250 + 6,6 x 10 ⁻⁵) Pa	
Trasmittitori di pressione <i>Pressure transmitters</i>	Oil: 160.1MPa ÷ 200MPa (2000bar)	1 x 10 ⁻⁴ Pa		
	Torsionometri <i>Torque transducers</i>	1 ÷ 2000 Nm	0.01%	EA 10-14
MOMENTO TORCENTE TORQUE	Chiavi dinamometriche a giraviti a lettura diretta e a scatto <i>Indicating torque tools and setting torque tools</i>	1 ÷ 2000 Nm	0.50%	UNI EN 26789