



SAFETY ASSESSMENT  
FEDERATION

# Guidance

## In-Service Inspection-Equipment & Instruments

The Control of Substances Hazardous to Health Regulations 2002 (as amended) (COSHH), the Control of Lead at Work Regulations 2002 (CLAW) and the Control of Asbestos Regulations 2012 (CAR)

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## **SITUATION**

When undertaking LEV inspection and testing as required by COSHH, SAFed member companies will need to have access to a range of appropriate guidance and information relating to instruments. Such information is collated within this Guidance.

## **GUIDANCE**

The following listing of instruments is offered to SAFed member companies to aid them in undertaking their responsibilities when undertaking LEV thorough examination and testing.



**LEVC 01 — Issue 05— Dated 12<sup>th</sup> April 2021 — Equipment and Instruments — Table 1 — Manometers**

Abbreviations — **PI** = Pressure Instruments — **VI** = Velocity Instruments — **VA** = Visual aids — **ST** = Specialist test — **RT** = Real Time Monitoring

**Table 1 — Manometers**

No	Type	Generic name	Instrument title	Supplier	Supplier code	Range	Calibration frequency	Comments
	PI	Manometer	Water tube	Buck & Hickman	Manoflex 12"	0-12"	Not applicable	
1.	PI	Manometer	Electronic manometer ATEX Rated	Digitron	P200UL	Lo 0 -19.99 mbar Hi 0 – 100 mbar	12 months	20°C to 30°C -0.1% rdg +0.1% fs + 1 digit -20°C to 50°C -0.15% rdg +0.15% fs + 1 digit Maximum overpressure is 1000 mbar
2.	PI	Manometer	Electronic manometer ATEX Rated	Digitron	P200L	Lo 0 -199.99 mbar Hi 0 – 500 mbar	12 months	20°C to 30°C -0.1% rdg +0.1% fs + 1 digit -20°C to 50°C -0.15% rdg +0.15% fs + 1 digit Maximum overpressure is 2000 mbar
3.	PI	Manometer	Electronic manometer ATEX Rated	Digitron	P200M	Lo 0 -199.99 mbar Hi 0 – 1000 mbar	12 months	20°C to 30°C -0.1% rdg +0.1% fs + 1 digit -20°C to 50°C -0.15% rdg +0.15% fs + 1 digit Maximum overpressure is 2000 mbar
4.	PI	Manometer	Electronic manometer ATEX Rated	Digitron	P200H	Lo 0 - 199.9 mbar	12 months	20°C to 30°C -0.1% rdg +0.1% fs + 1 digit

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No	Type	Generic name	Instrument title	Supplier	Supplier code	Range	Calibration frequency	Comments
						Hi 0 - 2000 mbar (0-20 kPa)		-20°C to 50°C -0.15% rdg +0.15% fs + 1 digit Maximum overpressure is 4000 mbar
5.	PI	Manometer	Electronic manometer	Digitron	P202IP	0-130 mbar 0-13 kPa	12 months	Accuracy From -10°C to +50°C 0.15%rdg +0.15%fs +1 digit Non-IS Overrange 750 mbar
6.	PI	Manometer	Electronic — Pressure ranges 477-3	Dwyer	477-3-FM	0-50 kPa	12 months	Accuracy +/- 0.5% FS
7.	PI	Manometer	Magnehelic Gauge 0-1"	Kistler Instruments		0-1"	24 months	
8.	PI	Manometer	Electronic manometer	Kistler Instruments	477-2	0-100 mbar	24 months	
9.	PI	Manometer	Micromanometer	TSI / TSI [formerly Airflow Developments]	PVM610 and PVM620	Pressure: -3735 – +3735 Pa Velocity: 1.27 – 78.7 m/s	12 months or 24 months	Accuracy Pressure: +/- 1% of reading +/- 1 Pa Velocity: +/- 1.5% at 10.16 m/s
10.	PI	Manometer	Digital	TSI [formerly Airflow Developments]	DM2	-200 – +200 kPa	12 months or 24 months	Accuracy =< 0.5% Full Scale +/- 1 digit
11.	PI	Manometer	Micromanometer	TSI [formerly Airflow Developments]	PVM100	0 – 76 m/s 0 – 3500 Pa	12 months	Accuracy +/- 1% of reading +/- 1 digit

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No	Type	Generic name	Instrument title	Supplier	Supplier code	Range	Calibration frequency	Comments
								Has a direct velocity readout facility and can average readings. It has a limited range.
12.	PI	Manometer	Pressure micromanometer	Testo	510i	-150 to + 150 hPa	12 months or 24 months	Bluetooth interface via app. Accuracy +/- 0.2 hPa

**LEVC 01 — Issue 05— Dated 12th April 2021 — Equipment and instruments — Table 2 — Anemometer — Hot wire**

Abbreviations — **PI** = Pressure Instruments — **VI** = Velocity Instruments — **VA** = Visual aids — **ST** = Specialist test — **RT** = Real Time Monitoring

**Table 2 — Anemometer — Hot wire**

No	Type	Generic name	Instrument title	Supplier	Supplier code	Range	Calibration frequency	Comments
13.	VI	Anemometer	Type K — Thermocouple (Hot wire) Thermometers — Airspeed with temperature — Duplication?		KM 4007	0-30 m s <sup>-1</sup>	12 months	
14.	VI	Velometer	Velometer	AEI	-	Various	12 months	+/- 3% FSD Expensive £1.5K
15.	VI	Anemometer	Thermal — Digital display	TSI [formerly Airflow Developments]	TA5	0-2 m s <sup>-1</sup> 0-15 m s <sup>-1</sup> 0-30 m s <sup>-1</sup>	12 months	Accuracy +/- 2% +/- 1 digit +/- 2% +/- 1 digit +/- 2% +/- 1 digit
16.	VI	Anemometer	Thermal — Analogue display	TSI [formerly Airflow Developments]	TA2 [obsolete spares limited]	0-2 m s <sup>-1</sup> 0-15 m s <sup>-1</sup> 0-30 m s <sup>-1</sup>	12 months or 24 months	Accuracy +/- 3% FSD +/- 2% FSD +/- 2% FSD reliable, non-directional
17.	VI	Anemometer	Thermal — Digital display	TSI [formerly Airflow Developments]	TA4	0-30 m s <sup>-1</sup>	12 months	+/- 3% of reading +/- 1 digit
18.	VI	Anemometer	Thermal	TSI [formerly Airflow Developments]	TA45	0 – 30 m/s	12 months or 24 months	Accuracy Better than +/- 3% of reading +/- 1 digit or +/- 0.06 m/s +/- 1 digit, whichever is the greater
19.	VI	Anemometer	Thermal	TSI / TSI [formerly Airflow Developments]	TA 410	0 – 20 m/s	12 months or 24 months	Accuracy +/- 5% of reading or +/- 0.025 m/s whichever is greater



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Monitoring

No	Type	Generic name	Instrument title	Supplier	Supplier code	Range	Calibration frequency	Comments
20.	VI	Anemometer	Thermal	Testo	405i	0-30 m/s	12 months or 24 months	Bluetooth interface via app. Accuracy +/- 0.3m/s

**LEVC 01 — Issue 05 — Dated 12th April 2021 — Equipment and instruments — Table 3 — Anemometer — Rotating vane**  
 Abbreviations — **PI** = Pressure Instruments — **VI** = Velocity Instruments — **VA** = Visual aids — **ST** = Specialist test — **RT** = Real Time  
 Monitoring

**Table 3 — Anemometer — Rotating vane**

No	Type	Generic name	Instrument title	Supplier	Supplier code	Range	Calibration frequency	Comments
21.	VI	Anemometer	Pocket Anemometer	Kestrel	1000	0.3 – 40 m/s	12 months or 24 months	Accuracy 3 % of reading +/- least significant digit Practical use has found that accuracy is poor in air velocities of less than 1 m/s.
22.	VI	Anemometer	Rotary Vane	Leda	1000	0.1-30 m s <sup>-1</sup>	12 months	Twin head unit, has built-in timer but is twice the price of the TSI [formerly Airflow Developments] units
23.	VI	Anemometer	Rotating Vane	TSI [formerly Airflow Developments]	LCA 30is	0.25-30 m/s	12 months	Accuracy Better than +/- 1% of reading +/- 1 digit Velocity or direct reading of volume flow — Intrinsically safe — Certified by BASEEFA to Ex ia IIC T5. Zone 0 hazardous areas reading of air velocity (m s <sup>-1</sup> )
24.	VI	Anemometer	Rotating Vane	TSI [formerly Airflow Developments]	LCA301 and LCA501	0.25 – 30 m/s	12 months or 24 months	Accuracy +/- 1.0% of reading +/- 0.02 m/s
25.	VI	Anemometer	Rotating Vane	TSI [formerly Airflow Developments]	LCA6000	0.25-30 m/s	12 months	Accuracy Better than +/- 1% of reading +/- 1 digit

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No	Type	Generic name	Instrument title	Supplier	Supplier code	Range	Calibration frequency	Comments
26.	VI	Anemometer	Rotating Vane ATEX Rated	Omni	Miniar 20Ex	MIEX202132 85 mm diameter head 0 – 20 m/s  MIEX202134 85 mm diameter head 0 – 40 m/s  MIEX202262 85 mm diameter head 0 – 20 m/s		Expensive meter is approximately £2.2k before selecting measure heads and a case  Meter 0 – 50° C MIEX202132 85 mm diameter head Suitable for media temperatures up to 140°C. Range 0-20m/s with a ±1.0% MIEX202134 85 mm diameter head Suitable for media temperatures up to 140°C. Range 0-40m/s with a ±1.0%  Eex Class II: Chemical Industry  Other sized heads are available although are over £1000 each