

# Industry update Test & Measurement Q1 2022



## Selected M&A highlights

- Mar 22: **National Instruments** acquired the test systems business of **Kratzer Automation**, a Europe based provider of test solutions for the automotive industry
- Mar 22: **Apax Partners** acquired **Alcumus**, UK based provider of technology-enabled compliance risk management and certification services, for **GBP 600m**
- Mar 22: **Keysight Technologies** acquired **JSCnets**, Germany based developer of automated test equipment for verification of smart communication systems
- Mar 22: **Thermo Fisher Scientific** acquired **Max Analytical Technologies**, US based provider of FTIR gas analysers and continuous monitoring systems
- Mar 22: **SGS** acquired **Gas Analysis Services**, Ireland based provider of gas testing, lab services and related instruments
- Feb 22: **CTS Corporation** acquired **Tewa Temperature Sensors**, Poland based manufacturer of thermistor and temperature probe sensors, for **USD 25m**
- Feb 22: **Laboratory Corporation of America** acquired **Personal Genome Diagnostics**, US based provider of genetic analysis for diagnosis of cancers, for **USD 575m**
- Feb 22: **Applus Services** acquired **Lightship Security**, Spain based provider of IT product security certifications
- Feb 22: Consortium of companies led by **FS Investments Solutions** acquired **LeddarTech**, Canada based provider of detection and ranging systems, for **USD 116m**
- Feb 22: **IXO Private Equity** along with **IDIA Capital Investissement** acquired a stake in **Acoem France**, a France-based provider of smart monitoring, diagnosis, vibrations and acoustics solutions for **EUR 35m**
- Feb 22: **Limerston Capital** acquired **Wickham Laboratories**, UK based pharmaceutical and medical device testing company in the fields of microbiology and toxicology
- Feb 22: **Eurofins Scientific** acquired **SPW Analytical**, Australia based provider of soil, plant and water analytical testing services, for **USD 11m**
- Jan 22: **Trescal** acquired **Classic Technology**, Ireland based provider of UKAS calibration laboratory for pressure, temperature, electrical and mass
- Jan 22: **Temasek Holdings** acquired **Element Materials Technology**, UK based company offering testing, inspection and certification services for various materials and products, for **USD 7bn**
- Jan 22: **Eddyfi NDT** acquired **Zetec**, US based provider of non-destructive testing (NDT) solutions, for **USD 350m (20.6x EV/EBITDA)**
- Jan 22: **Leonard Green & Partners** acquired **Pace Analytical Services**, US based provider of analytical testing and emergency disaster response services
- Jan 22: **Spectris** acquired **Creoptix**, Switzerland based provider of bioanalytical instruments for drug discovery and life sciences
- Jan 22: **Bruker** acquired **Prolab Instruments**, Switzerland based provider of automation devices and analytical instruments to the pharmaceutical industry













## Public company valuations Sensors

Company	Country	Year End Date	Market Cap (GBPm)	Net Debt / (Cash)	EV (GBPm)	Net debt / EBITDA (2022)	EV/Revenue Revenue growth			EV/EBITDA EBITDA %			EV/EBIT EBIT %			2 Year CAGR 2021-2023	
							2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
Amphenol Corporation		Dec-21	34,332	2,813	37,301	1.3x	4.6x	4.1x	3.9x	18.8x	16.7x	15.5x	22.8x	20.4x	18.9x	9%	10%
ams-OSRAM AG		Dec-21	3,078	1,729	4,862	2.1x	8,032	9,028	9,578	1,981	2,236	2,411	1,635	1,826	1,975		
CTS Corporation		Dec-21	864	(49)	815	n/a	28%	12%	6%	25%	25%	25%	20%	20%	21%	1%	18%
discoverIE Group plc		Mar-21	749	123	873	2.3x	11x	12x	11x	72x	59x	52x	n/mf	13.7x	9.8x		
Keyence Corporation		Mar-21	86,982	(6,003)	80,979	n/a	4,231	4,179	4,286	672	830	940	66	356	497		
Littelfuse, Inc.		Jan-22	4,685	140	4,856	0.3x	35%	(1%)	3%	16%	20%	22%	2%	9%	12%		
Methode Electronics, Inc.		May-21	1,215	61	1,276	0.4x	2.2x	2.0x	1.8x	10.5x	8.5x	7.9x	15.1x	11.9x	10.8x	8%	15%
Murata Manufacturing Co., Ltd.		Mar-21	32,536	(2,441)	30,096	n/a	379	415	444	78	96	103	54	69	75		
Sensata Technologies Holding plc		Dec-21	6,098	1,910	8,035	2.4x	22%	10%	7%	21%	23%	23%	14%	17%	17%		
Sensirion Holding AG		Dec-21	1,476	(91)	1,382	n/a	2.2x	2.2x	2.1x	17.3x	16.2x	15.5x	24.5x	20.8x	19.4x	0%	6%
TE Connectivity Ltd.		Sep-21	32,441	2,282	34,803	0.8x	403	392	406	51	54	56	36	42	45		
TT Electronics plc		Dec-21	362	103	467	1.7x	(12%)	(3%)	4%	13%	14%	14%	9%	11%	11%		
Min							n/mf	n/mf	n/mf	31.4x	28.5x	25.8x	30.7x	29.1x	26.1x	10%	10%
Mean							4,595	5,003	5,534	2,576	2,838	3,144	2,637	2,786	3,102		
Median							2.7x	2.5x	2.3x	11.7x	10.8x	10.8x	15.0x	13.8x	13.4x		
Max							17,91	1,929	2,081	414	450	448	325	352	362	8%	4%
							18%	8%	8%	23%	23%	22%	18%	18%	17%		
							1.5x	1.4x	1.3x	8.7x	7.7x	6.9x	12.1x	11.1x	9.7x		
							826	913	961	147	165	184	105	115	131	8%	12%
							(3%)	11%	5%	18%	18%	19%	13%	13%	14%		
							2.6x	2.6x	2.4x	8.6x	8.0x	7.4x	11.5x	11.3x	10.4x	4%	8%
							11,404	11,564	12,292	3,513	3,741	4,062	2,621	2,654	2,894		
							(5%)	1%	6%	31%	32%	33%	23%	23%	24%		
							2.8x	2.5x	2.3x	12.0x	10.2x	9.1x	16.6x	12.0x	10.7x		
							2,822	3,212	3,476	670	788	879	483	670	750	11%	15%
							26%	14%	8%	24%	25%	25%	17%	21%	22%		
							5.9x	5.2x	4.6x	19.4x	20.6x	21.5x	23.1x	30.1x	32.6x		
							233	265	299	71	67	64	60	46	42		
							11%	14%	13%	31%	25%	22%	26%	17%	14%		
							3.1x	2.8x	2.6x	12.8x	11.5x	10.6x	15.5x	15.0x	13.6x		
							11,090	12,269	13,185	2,717	3,032	3,290	2,245	2,317	2,551	9%	10%
							9%	11%	7%	24%	25%	25%	20%	19%	19%		
							1.0x	0.9x	0.9x	12.9x	7.8x	6.8x	23.2x	10.9x	9.0x		
							476	524	543	36	60	69	20	43	52	7%	38%
							10%	10%	4%	8%	11%	13%	4%	8%	9%		
							1.0x	0.9x	0.9x	7.2x	5.9x	5.2x	11.5x	10.9x	9.0x		
							2.7x	2.5x	2.3x	14.3x	12.7x	11.9x	19.1x	16.7x	15.4x	0%	4%
							2.6x	2.5x	2.3x	12.4x	10.5x	9.9x	16.6x	13.7x	12.1x	7%	13%
							5.9x	5.2x	4.6x	31.4x	28.5x	25.8x	30.7x	30.1x	32.6x	8%	10%
																13%	38%

Note: Multiples are based on enterprise value as of 31 March 2022 and historical and forecast sales, EBITDA and EBIT, calendarised to 31 December. "nmf": not meaningful; "n/a": not available. Enterprise Value is adjusted for minority interest, preference equity, pension deficit and investments in associates.

# Test & Measurement - Q1 2022 Industry update











## Instrumentation – Industrials

Company	Country	Year End Date	Market Cap (GBPm)	Net Debt / (Cash)	EV (GBPm)	Net debt / EBITDA (2022)	EV/Revenue Revenue (GBPm) Revenue growth			EV/EBITDA EBITDA (GBPm) EBITDA %			EV/EBIT EBIT (GBPm) EBIT %			2 Year CAGR 2021-2023	
							2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
AMETEK, Inc.		Dec-21	23,421	1,753	25,174	1.2x	6.1x 4,096 23%	5.4x 4,653 14%	5.1x 4,940 6%	20.4x 1,233 30%	17.9x 1,403 30%	16.8x 1,497 30%	25.5x 987 24%	22.5x 1,120 24%	20.7x 1,216 25%	10%	10%
Fortive Corporation		Dec-21	16,643	2,455	19,200	2.1x	4.9x 3,881 14%	4.3x 4,418 14%	4.1x 4,680 6%	19.3x 992 26%	16.3x 1,180 27%	14.9x 1,290 28%	28.7x 670 17%	24.3x 789 18%	21.4x 897 19%	10%	14%
Halma plc		Mar-21	9,507	280	9,778	0.7x	6.7x 1,452 10%	6.2x 1,582 9%	5.8x 1,692 7%	27.1x 361 25%	24.5x 399 25%	22.7x 431 25%	32.6x 300 21%	28.6x 342 22%	26.3x 371 22%	8%	9%
HORIBA, Ltd.		Dec-21	1,771	(365)	1,418	n/a	1.0x 1,439 8%	0.9x 1,514 5%	0.9x 1,532 1%	5.2x 273 19%	4.8x 295 19%	4.9x 291 19%	6.4x 222 15%	6.4x 220 15%	6.4x 221 14%	3%	3%
Keysight Technologies, Inc.		Oct-21	21,869	28	21,896	0.0x	6.0x 3,652 9%	5.4x 4,057 11%	5.1x 4,279 5%	20.2x 1,085 30%	17.0x 1,286 32%	16.0x 1,371 32%	24.5x 893 24%	19.2x 1,143 28%	17.8x 1,229 29%	8%	12%
MKS Instruments, Inc.		Dec-21	6,335	(8)	6,346	n/a	2.9x 2,178 28%	2.6x 2,403 10%	2.5x 2,516 5%	9.8x 647 30%	9.1x 699 29%	8.7x 726 29%	11.4x 558 26%	10.2x 620 26%	9.7x 657 26%	7%	6%
National Instruments Corporation		Dec-21	4,077	98	4,175	0.3x	3.8x 1,085 15%	3.2x 1,307 20%	3.0x 1,379 6%	23.3x 179 17%	14.3x 292 22%	13.0x 322 23%	37.9x 110 10%	18.6x 225 17%	16.6x 251 18%	13%	34%
Oxford Instruments plc		Mar-21	1,215	(57)	1,158	n/a	3.4x 742 3%	3.2x 364 0%	3.0x 380 4%	16.4x 71 21%	15.5x 75 21%	14.5x 80 21%	19.5x 60 17%	17.9x 65 18%	16.8x 69 18%	5%	6%
Renishaw plc		Jun-21	2,816	(203)	2,595	n/a	4.2x 617 15%	3.8x 680 10%	3.6x 717 5%	14.8x 177 31%	12.2x 212 31%	11.7x 222 31%	18.2x 143 23%	15.4x 169 25%	14.8x 174 24%	8%	12%
Roper Technologies, Inc.		Dec-21	37,937	5,762	43,700	3.1x	10.2x 4,267 20%	9.3x 4,696 10%	8.8x 4,975 6%	26.0x 1,683 39%	23.4x 1,870 40%	21.6x 2,027 41%	36.7x 1,191 28%	32.9x 1,327 28%	30.2x 1,448 29%	8%	10%
Shimadzu Corporation		Mar-21	7,817	(836)	6,982	n/a	2.5x 2,753 (6%)	2.5x 2,768 1%	2.4x 2,889 4%	14.1x 495 18%	13.7x 511 18%	12.9x 541 18%	17.2x 406 15%	17.3x 405 15%	16.2x 430 15%	2%	4%
Spectris plc		Dec-21	2,879	(102)	2,800	n/a	2.2x 1,292 (3%)	2.1x 1,329 3%	2.0x 1,389 4%	12.3x 228 18%	10.3x 272 20%	9.7x 290 21%	16.1x 174 13%	12.3x 227 17%	11.3x 247 18%	4%	13%
Min							1.0x	0.9x	0.9x	5.2x	4.8x	4.9x	6.4x	6.4x	6.4x	2%	3%
Mean							4.5x	4.1x	3.9x	17.4x	14.9x	13.9x	22.9x	18.8x	17.4x	7%	11%
Median							4.0x	3.5x	3.3x	17.9x	14.9x	13.7x	22.0x	18.2x	16.7x	8%	10%
Max							10.2x	9.3x	8.8x	27.1x	24.5x	22.7x	37.9x	32.9x	30.2x	13%	34%

Note: Multiples are based on enterprise value as of 31 March 2022 and historical and forecast sales, EBITDA and EBIT, calendarised to 31 December. "nmf": not meaningful; "n/a": not available. Enterprise Value is adjusted for minority interest, preference equity, pension deficit and investments in associates.

Source: CapIQ

## Instrumentation – Life Sciences









Company	Country	Year End Date	Market Cap (GBPm)	Net Debt / (Cash)	EV (GBPm)	Net debt / EBITDA (2022)	EV/Revenue Revenue (GBPm) Revenue growth			EV/EBITDA EBITDA (GBPm) EBITDA %			EV/EBIT EBIT (GBPm) EBIT %			2 Year CAGR 2021-2023	
							2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
Agilent Technologies, Inc.		Oct-21	30,212	1,301	31,513	0.9x	6.8x 4,667 10%	6.1x 5,181 11%	5.7x 5,552 7%	23.7x 1,327 28%	20.8x 1,518 29%	19.0x 1,660 30%	27.9x 1,131 24%	23.2x 1,360 26%	21.2x 1,486 27%	9%	12%
Bio-Rad Laboratories, Inc.		Dec-21	12,919	(477)	12,457	n/a	5.8x 2,158 16%	5.6x 2,220 3%	5.2x 2,383 7%	22.9x 545 25%	20.9x 596 27%	19.2x 650 27%	29.8x 418 19%	27.1x 459 21%	24.5x 509 21%	5%	9%
Bruker Corporation		Dec-21	7,375	180	7,644	0.4x	4.3x 1,786 23%	3.9x 1,950 9%	3.7x 2,074 6%	19.0x 402 23%	16.5x 463 24%	15.5x 468 24%	23.8x 321 18%	19.7x 388 20%	17.9x 427 21%	8%	11%
Danaher Corporation		Dec-21	159,750	15,277	178,049	1.8x	8.2x 21,752 33%	7.6x 23,555 8%	7.2x 24,726 5%	22.7x 7,859 36%	21.1x 8,450 36%	20.1x 8,850 36%	28.8x 6,158 28%	27.7x 6,417 27%	26.3x 6,769 27%	7%	6%
Judges Scientific plc		Dec-21	432	3	437	0.1x	4.8x 91 14%	4.6x 95 4%	4.4x 99 4%	21.9x 20 22%	20.5x 21 22%	18.2x 24 24%	28.7x 15 17%	21.8x 20 21%	20.0x 22 22%	4%	10%
Mettler-Toledo International Inc.		Dec-21	23,751	1,257	25,043	1.3x	9.1x 2,746 22%	8.3x 3,002 9%	7.9x 3,179 6%	30.4x 824 30%	26.4x 950 32%	24.3x 1,030 32%	33.0x 758 28%	28.7x 874 27%	26.4x 949 29%	8%	12%
PerkinElmer, Inc.		Jan-22	16,741	3,391	20,273	3.3x	6.1x 3,306 (11%)	5.8x 3,478 5%	5.4x 3,733 7%	20.6x 985 30%	19.9x 1,019 29%	18.3x 1,108 30%	22.0x 920 28%	22.0x 922 27%	19.9x 1,017 27%	6%	6%
Sartorius Aktiengesellschaft		Dec-21	21,585	1,440	23,480	1.2x	8.1x 2,897 38%	6.8x 3,450 19%	6.2x 3,763 9%	24.5x 957 33%	19.9x 1,181 34%	18.4x 1,274 34%	29.9x 786 27%	25.5x 921 27%	22.9x 1,025 27%	14%	15%
Thermo Fisher Scientific Inc.		Dec-21	175,775	23,531	199,651	2.6x	6.9x 28,958 23%	6.2x 32,064 11%	5.9x 33,860 6%	18.4x 10,878 36%	22.1x 9,025 28%	18.8x 10,614 31%	21.8x 8,150 32%	24.6x 8,127 25%	23.1x 8,642 26%	8%	nmf
Waters Corporation		Dec-21	14,289	766	15,067	1.0x	7.3x 2,057 19%	6.7x 2,233 9%	6.4x 2,358 6%	20.6x 733 36%	18.8x 800 36%	17.8x 847 36%	24.2x 623 30%	22.3x 676 30%	20.9x 720 31%	7%	8%
Min							4.3x	3.9x	3.7x	18.4x	16.5x	15.5x	21.8x	19.7x	17.9x	4%	6%
Mean							6.7x	6.2x	5.8x	22.5x	20.7x	19.0x	27.0x	24.3x	22.3x	8%	10%
Median							6.8x	6.2x	5.8x	22.3x	20.6x	18.6x	26.3x	23.9x	22.1x	7%	10%
Max							9.1x	8.3x	7.9x	30.4x	26.4x	24.3x	33.0x	28.7x	26.4x	14%	15%

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Source: CapIQ

# Test & Measurement - Q1 2022 Industry update

## Test, Inspection & Certification services

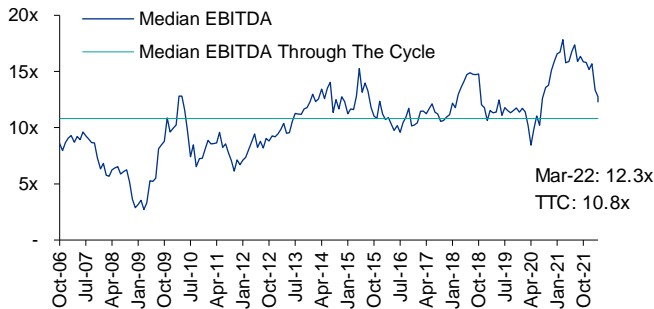
Company	Country	Year End Date	Market Cap (GBpm)	Net Debt / (Cash)	EV (GBpm)	Net debt / EBITDA (2022)	EV/Revenue Revenue (GBpm) Revenue growth			EV/EBITDA EBITDA (GBpm) EBITDA %			EV/EBIT EBIT (GBpm) EBIT %			2 Year CAGR 2021 2023	
							2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
ALSLimited		Mar-21	3,699	463	4,157	1.4x	3.7x	3.3x	3.1x	14.9x	12.8x	12.2x	20.6x	17.0x	16.0x	9%	11%
Applus Services, S.A.		Dec-21	902	663	1,605	2.5x	1.1x	1.0x	0.9x	6.8x	6.2x	5.8x	15.3x	9.6x	8.8x	7%	8%
Bureau Veritas SA		Dec-21	9,912	1,233	11,359	1.3x	1.492	1.622	1.700	235	260	277	105	167	183	6%	9%
Eurofins Scientific SE		Dec-21	14,610	1,880	16,572	1.4x	2.7x	2.5x	2.4x	13.5x	12.1x	11.5x	18.6x	15.4x	14.4x	n/mf	n/mf
Exponent, Inc.		Dec-21	4,284	(209)	4,075	n/a	4.184	4.520	4.742	841	942	992	612	740	788	8%	13%
Intertek Group plc		Dec-21	8,417	1,026	9,475	1.4x	2.2x	3.1x	3.0x	15.7x	13.3x	12.5x	21.3x	17.9x	16.6x	7%	10%
Mistras Group, Inc.		Dec-21	149	174	323	2.7x	2.786	3.054	3.200	624	710	759	445	531	571	8%	18%
SGS SA		Dec-21	15,942	1,885	17,875	1.4x	0.6x	0.6x	0.6x	6.3x	5.1x	4.6x	19.8x	13.9x	10.3x	6%	10%
Min							3.21	351	376	92	108	117	82	93	103		
Mean							16%	9%	7%	29%	31%	31%	26%	27%	28%		
Median							3.4x	3.1x	3.0x	15.2x	13.3x	12.5x	21.3x	17.9x	16.6x		
Max							2.786	3.054	3.200	624	710	759	445	531	571		

Note: Multiples are based on enterprise value as of 31 March 2022 and historical and forecast sales, EBITDA and EBIT, calendarised to 31 December. "nmf": not meaningful; "n/a": not available. Enterprise Value is adjusted for minority interest, preference equity, pension deficit and investments in associates.  
Exponent Inc: Considered as an outlier and excluded from calculations

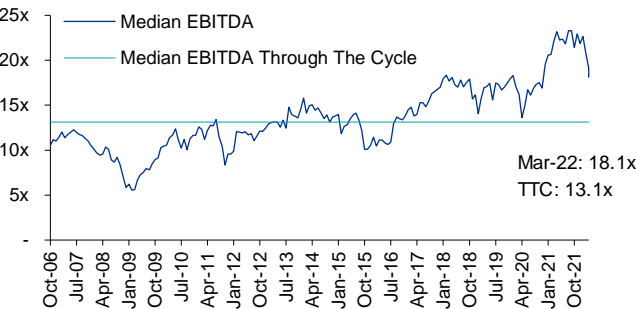
Source: CapIQ

## Public company valuations – Through the cycle (EV/LTM EBITDA)

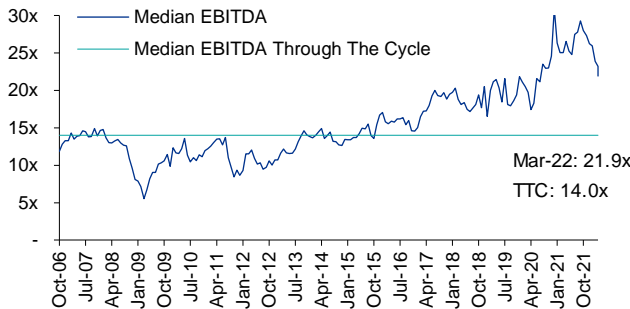
### Sensors



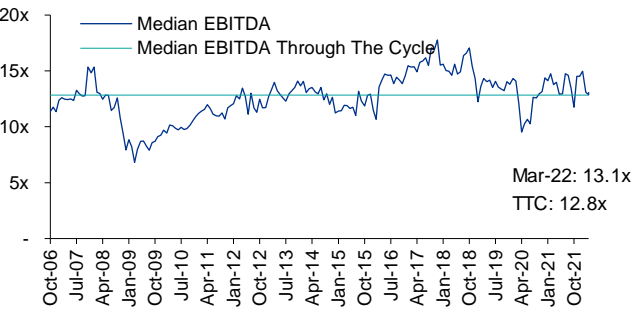
### Instrumentation – Industrials



### Instrumentation – Life Sciences



### Test, Inspection & Certification services



























Note: The companies used in the public company valuations make up the constituents of the TTC analysis. Multiples are based on LTM basis. Enterprise Value is adjusted for minority interest, preference equity, pension deficit and investments in associates.  
Source: CapIQ

# Test & Measurement - Q1 2022 Industry update





























## M&A transaction history

### Sensors

Target	Country	Target Description	Acquirer	Country	Date	EV	EV/EBITDA
Photon Control Inc.		Designs, manufactures and distributes a range of optical sensors and systems to measure temperature and position	MKS Instruments, Inc.		Jun-21	USD 312m	15.6x
Diversified Technical Systems		Manufacturer of data acquisition systems and sensors for product and safety testing	Vishay Precision Group		Jun-21	USD 47m	5.9x
Xirgo Technologies Inc.		Provides telematics & data insight solutions for transport & logistics end markets	Sensata Technologies		Apr-21	USD 400m	16.0x
Flir Systems		Designer, manufacturer and marketer of camera systems for a wide variety of thermography and imaging applications	Teledyne Technologies Incorporated		Jan-21	USD 7,800m	18.9x
MTS Systems Corporation		Supplier of advanced test systems, motion simulators and precision sensors	Amphenol Corporation		Dec-20	USD 1.7bn	14.0x
OptaSense Holdings, Ltd		Fiber optic distributed monitoring solutions	Luna Innovations Incorporated		Dec-20	GBP 29m	13.0x
Sens-Tech Ltd		Manufacturer of x-ray and light detector modules	discoverIE Group plc		Oct-19	GBP 58m	5.9x
Sensys Networks, Inc.		Provides integrated wireless traffic data systems and traffic management solutions	TagMaster AB		Jun-19	USD 16m	9.4x
First Sensor AG		Manufacturer of sensors, detectors and emitters	TE Connectivity Ltd.		Jun-19	EUR 308m	14.5x
Positek Limited		Designer and manufacturer of linear, rotary, tilt and submersible sensors	discoverIE Group plc		Apr-19	GBP 4.6m	7.7x
Resideo Technologies, Inc.		Home comfort and security solutions and wholesale distributor of security and low-voltage products	Spin off from Honeywell International Inc.		Oct-18	USD 3,259m	14.0x
Variohm Holdings Limited		Manufacturer of position, pressure and temperature sensors	discoverIE Group plc		Jan-17	GBP 13.9m	7.0x
Min							5.9x
Mean							11.8x
Median							13.5x
Max							18.9x

Source: CapIQ, MergerMarket and KPMG intel

### Instrumentation – Industrials























Target	Country	Target Description	Acquirer	Country	Date	EV	EV/EBITDA
Zetec (Roper Technologies)		Zetec is engaged in nondestructive testing (NDT) solutions for critical inspection needs	Eddyfi/NDT (Novacap)		Jan-22	USD 350m	20.6x
NDC Technologies Inc.		Provider of precision measurement solutions for in-line manufacturing process control	Nordson Corporation		Aug-21	USD 180m	13.5x
Concurrent Real-Time, Inc.		Supplier of real-time operating systems for hardware-in-the-loop simulation applications	Spectris Plc		Apr-21	USD 167m	16.0x
Abaco Systems Inc		Provider of mission critical embedded computing systems for aerospace, defense and industrial applications	AMETEK Inc		Mar-21	USD 1,350m	13.5x
Brüel & Kjær Vibro (Spectris Subsidiary)		Supplier of machinery protection and condition monitoring systems for rotating and reciprocating industrial machinery	NSK Ltd		Dec-20	EUR 180m	20.0x
Microwave Vision SA (52.06%)		Designs, manufactures and sells microwave test systems	Groupe HLD		Jul-20	EUR 145m	10.2x
Sensit Technologies		Manufacturer of gas leak detection instruments for natural gas, fire services and industrial applications	Halma		Feb-20	USD 51.5m	11.7x
L3Harris Technologies (Security & Detection)		Provides airport and critical infrastructure screening products and other industrial automation products	Leidos Holdings		Feb-20	USD 1bn	13.3x
BTG Group Limited (Spectris Subsidiary)		Provider of integrated, highly specialised process measuring instruments for the paper industry	Voith GmbH		Dec-19	EUR 319m	11.5x
Gatan, Inc.		Manufacturer of instrumentation used to enhance the operation and performance of electron microscopes	AMETEK, Inc.		Oct-19	USD 925m	14.9x
Rudolph Technologies		Manufacturer of process control metrology and defect inspection systems used by semiconductor manufacturers	Naometrics		Oct-19	USD 769m	13.4x
3M Gas and Flame Detection		Manufacturer of gas and flame detection products	Teledyne Technologies		Aug-19	USD 230m	11.0x
Spectro Scientific		Supplier of oil, fuel and fluid analysis instruments to industry, military and laboratories	AMETEK, Inc.		Nov-18	USD 190m	16.5x
Oxford Instruments (Industrial Analysis Part)		Industrial analysis business of Oxford Instruments Plc	Hitachi High-Technologies Corp		Jul-17	GBP 80m	9.8x
Min							9.8x
Mean							14.0x
Median							13.5x
Max							20.6x

Source: CapIQ, MergerMarket and KPMG intel

# Test & Measurement – Q1 2022 Industry update































## M&A transaction history

### Instrumentation – Life Sciences

Target	Country	Target Description	Acquirer	Country	Date	EV	EV/EBITDA
Food Safety Business of 3M		Food safety business of 3M which sells test kits and other products to help foodmakers monitor sanitation & allergies	Neogen		Dec-21	US 5,300m	32.0x
SP Industries		Designer and manufacturer of high-grade biopharma processing equipment & life sciences equipment	ATS		Nov-21	USD 445m	15.3x
Luminex Corporation		Develops, manufactures and sells biological testing technologies and products	DisSorin S.p.A.		Jul-21	USD 1,800bn	19.8x
Advanced Instruments		Provider of scientific and analytical instruments	Patricia Industries		Sep-20	GBP 608m	24.1x
Danaher Corporation (Life Science business)		Life Sciences business of Danaher Corporation (FortéBio, Pall-Chromatography and Solohill)	Sartorius AG		Oct-19	USD 750m	20.0x
BioTek Instruments Inc		Design, manufacture and distribution of innovative life science instrumentation	Agilent Technologies		Aug-19	USD 1.17bn	22.0x
Roper Technologies (Scientific-Imaging)		Scientific Imaging business (analytical and scientific instrumentation) of Roper Technologies, Inc.	Teledyne Technologies		Feb-19	USD 225m	11.0x
GE Biopharma		Provider of instruments, consumables and software that support the workflows of drug manufacturers	Danaher		Feb-19	USD 21.4bn	17.0x
EUROIMMUN Medical Laboratory		Develops, produces and distributes devices, software and consumables for human and veterinary medical diagnostics	PerkinElmer, Inc.		Dec-17	EUR 1.2bn	19.2x
FEI Company		Supplier of instruments for nanoscale imaging, analysis and prototyping	Thermo Fisher Scientific		Sep-16	USD 4.4bn	19.3x
Newport Corporation		Supplier of technology products to scientific research, microelectronics, life and health sciences industries	MKS Instruments		Apr-16	USD 980m	17.5x
Min							11.0x
Mean							19.7x
Median							19.3x
Max							32.0x

Source: MergerMarket and KPMG intel

### Test, Inspection & Certification services

Target	Country	Target Description	Acquirer	Country	Date	EV	EV/EBITDA
Institute of Calibration & Technology		Provides measuring instrument calibrations, repair of dysfunctional measuring instruments	Trescal		Aug-21	AUD 60m	9.2x
SAI Global Assurance		Provides assurance services, including management systems certification and second party audits	Intertek Group Plc		May-21	AUD 855m	15.5x
SYNLAB Analytics & Services B.V.		Provides inspection, verification, testing and certification and other laboratory services	SGS SA		Dec-20	GBP 491m	16.2x
Millbrook (Spectris Subsidiary)		Provides vehicle test, validation and engineering services to automotive, transport, tyre and petrochemical industries	UTAC CERAM		Dec-20	GBP 133m	12.0x
QPS Evaluation Services		Product certification company for a wide range of industrial, medical and electrical & electronic (E&E) products	Applus Services S.A		Dec-20	EUR 42m	9.0x
LGC Group		Provider of proficiency testing schemes, genomics reagents and instrumentation, research and measurement services	Cinven Partners LLP and Astorg Partners		Apr-20	GBP 3.0bn	17.5x
Onstream Pipeline Inspection		Provider of pipeline inspection and data analytics services	MISTRAS Group		Feb-19	USD 190m	11.9x
Covance Inc.		Provider of innovative product design and product integrity services	Eurofins Scientific		Aug-18	USD 670m	23.6x
Alchemy Systems		Provider of web-based training and communication platform focusing on workplace injuries and food safety	Intertek Group Plc		Aug-18	USD 480m	21.8x
CLS		Provider of scientific laboratory and consultancy services	Spectris		Jan-18	GBP 163m	18.0x
Trescal SAS		Engaged in providing verification, calibration and measurement services	Omers Private Equity		Jan-18	EUR 670m	14.9x
EAG Laboratories		Surface analysis and materials characterisation provider delivering innovative analytical services and solutions	Eurofins Scientific		Dec-17	USD 780m	11.8x
Exova Group plc		Provider of testing, calibration and consulting services	Element Materials Technology		Jun-17	USD 1.06bn	12.5x
Millbrook Group		Vehicle test, validation and engineering service provider for the automotive markets	Spectris Plc		Sep-16	GBP 122m	12.5x
WIL Research Laboratories		Provider of safety assessment and manufacturing services to biopharmaceutical and agricultural companies	Charles River Laboratories		Apr-16	USD 585m	12.9x
Min							9.0x
Mean							14.6x
Median							12.9x
Max							23.6x

Source: CapiQ, MergerMarket and KPMG intel

# Test & Measurement - Q1 2022 Industry update

## KPMG's global test & measurement credentials

  <b>CEESI</b> <b>GRAFTEL</b> <small>(subsidiaries of Western energy Support and Technology)</small> acquired by  Dec 2021	   acquired by  Dec 2021	  <b>LI-COR</b> acquired by <b>Battery</b> Dec 2021	  <b>AlphaSense</b> acquired by <b>AMETEK</b> Dec 2021	  <b>TOXIKON</b> <small>RIGHT FROM THE START</small> acquired by  Dec 2021	  <b>Goodfellow</b> acquired by <b>Battery</b> Sep 2021
   acquired by  Jul 2021	   acquired by  Jun 2021	   acquired by <b>SFW</b> <small>CAPITAL PARTNERS</small> May 2021	   portfolio company of <b>Apax</b> <small>PARTNERS</small> acquired by  Oct 2020	   acquired by  Nov 2019	   acquired by  Nov 2019
   portfolio company of  acquired by  Jan 2019	   acquired by <b>WARBURG PINCUS</b> Jun 2018	   acquired by <b>AMETEK</b> Dec 2017	   Analytics laboratory business in Finland & Estonia acquired by  Apr 2017	   acquired by  Mar 2017	   acquired by  May 2016
   acquired by  May 2016	  <b>CONTROLTEC</b> <small>CONTROL TECHNOLOGIES LTD</small> acquired by <b>DELPHI</b> Nov 2015	   acquired by <b>Exova</b> Sep 2013	   acquired by <b>Indutrade</b> Dec 2012	   acquired by  Jun 2012	  <b>sebaKMT</b> acquired by <b>Megger</b> Jun 2012
   acquired by  Feb 2012	  <b>spectris</b> acquired by <b>Sixnet</b> Oct 2011	  <b>STORK</b> Materials Testing subsidiary acquired by  May 2011	   acquired by  Feb 2010	  <b>Bodycote</b> acquired by  Oct 2008	   acquired by <b>ITW</b> Jul 2008

## UK Test & Measurement Team



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