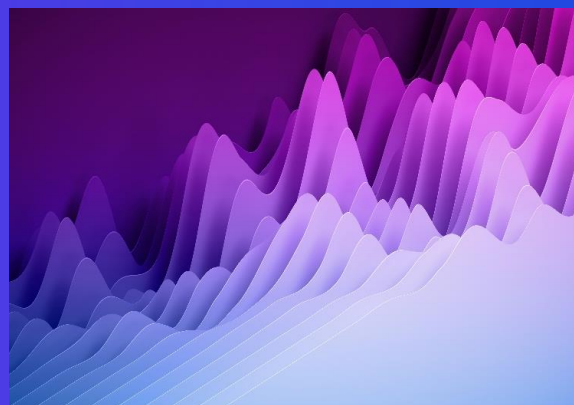


# Test & Measurement

## Q3 2022 Industry Update

October 2022



### Selected M&A highlights

- Sep 22:** **Element Materials Technology Group** acquired **National Technical Systems**, a US based provider of qualification testing, inspection & certification services to variety of industrial end markets
- Sep 22:** **Trescal** acquired **Metrozenzor**, a Romania based company which offers metrological verification, calibration, maintenance and scale repair services
- Sep 22:** **Indutrade** acquired **CaTeC Meetinstrumentatie**, a Netherlands based climate measurement technology company
- Sep 22:** **Socotec** acquired **CAG Groep**, the Netherlands based provider of building testing, inspection and certification services
- Aug 22:** **Eurofins Scientific** acquired **Analisis Biologicos Biotalde**, a Spain based company engaged in bio-analytical testing
- Aug 22:** **Oakley Capital** acquired a minority stake in **Phenna Group**, a UK based provider of testing, inspection, certification and compliance services. In parallel, Oakley has also acquired CTS Group, a UK based provider of testing and inspection services focused on the infrastructure market. CTS Group will become part of Phenna Group upon completion of both the transactions
- Aug 22:** **Axel Johnson** acquired **Regal Components**, a Sweden based company engaged in the development & production of sensors and electric drive systems for machine and vehicle manufacturers
- Aug 22:** **AEA Investors** acquired **Burke Porter Group**, a US based designer of automated diagnostic, testing and production solutions serving life science and speciality industrial end markets, for **US\$1.1bn**
- Aug 22:** **Agilent Technologies** acquired **Polymer Standards Service**, a Germany based provider of hardware and software solutions used in defining the makeup and creation of molecular structures
- Aug 22:** **FT System (Antares Vision Group)** acquired **Packital**, an Italy based company engaged in designing and producing inspection and control systems including checkweighers, metal detectors & X-rays
- Aug 22:** **Nordson** agreed to acquire **CyberOptics**, a US based provider of process yield and through-put improvement solutions for the global electronic assembly and semiconductor capital equipment markets (EV/EBITDA: 18.5x)
- Jul 22:** **SGS** acquired **proDERM Institute for Applied Dermatological Research** a Germany based provider of advanced clinical testing solutions for cosmetics, personal care and medical products
- Jul 22:** **Teledyne Technologies** acquired **NI Acoustics**, a Finland based company that provides comprehensive sound-based ultrasonic maintenance solutions for detecting and analyzing industrial defects (KPMG M&A advised NI Acoustics on the transaction)
- Jul 22:** **Rion** acquired **Norsonic**, the Norway based manufacturer of sound and vibration instruments and related software
- Jul 22:** **Humanetics**, a Bridgepoint investment, acquired **ATD-LabTech**, a Germany based company that offers Anthropomorphic Test Device (ATD) certification equipment, lab management software and dummy certification services
- Jul 22:** **SGS** acquired **Silver State Analytical Laboratories**, a US based company that provides analytical and microbiological testing solutions
- Jul 22:** **Aptasic** acquired **Bluetest Testservice**, a Germany based company that provides semiconductor testing services
- Jul 22:** **AlpHa Measurement Solutions** acquired **Fluorometrics Instruments**, a US based company that designs, develops, and manufactures fluorescence based optical chemical sensor systems and fiber optic chemical sensors
- Jul 22:** **Kiva Deutschland** acquired **MPA Dresden**, a Germany based laboratory testing business focused upon fire extinguisher testing and inspection services

### Public company valuations

#### Sensors













Company	Country	Year End Date	Market Cap (GBPm)	Net Debt / (Cash)	EV (GBPm)	Net debt / EBITDA (2022)	EV/Revenue Revenue (GBPm) Revenue growth			EVEBITDA EBITDA (GBPm) EBITDA %			EVEBIT EBIT (GBPm) EBIT %			2 Year CAGR 2021-2023	
							2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
Amphenol Corporation		Dec-21	35,744	2,903	38,712	1.1x	4.8x	3.5x	3.4x	19.5x	14.2x	13.4x	23.7x	17.0x	16.3x	19%	21%
							8,032	11,098	11,393	1,981	2,732	2,883	1,635	2,282	2,374		
							28%	38%	3%	25%	25%	25%	20%	21%	21%		
ams-OSRAM AG		Dec-21	1,492	1,685	3,156	2.1x	0.7x	0.7x	0.8x	4.7x	3.9x	3.8x	48.0x	10.2x	10.5x	(3%)	11%
							4,231	4,235	4,022	672	815	831	66	310	301		
							35%	0%	(5%)	16%	19%	21%	2%	7%	7%		
CTS Corporation		Dec-21	1,191	14	1,205	0.1x	3.2x	2.3x	2.1x	15.5x	9.5x	8.8x	22.3x	12.5x	11.7x	23%	33%
							379	532	572	78	128	138	54	96	103		
							22%	41%	7%	21%	24%	24%	14%	18%	18%		
discoverIE Group plc		Mar-22	617	51	669	0.9x	1.9x	1.6x	1.6x	13.5x	11.7x	11.1x	26.5x	15.9x	13.9x	9%	10%
							360	407	426	49	57	60	25	42	48		
							5%	13%	5%	14%	14%	14%	7%	10%	11%		
Keyence Corporation		Mar-22	72,055	(6,177)	65,878	n/a	14.6x	12.7x	11.6x	26.1x	22.6x	20.6x	22.2x	23.1x	21.0x	12%	13%
							4,511	5,192	5,692	2,521	2,916	3,202	2,962	2,856	3,142		
							26%	15%	10%	56%	56%	56%	66%	55%	55%		
Littelfuse, Inc.		Jan-22	4,414	103	4,517	0.2x	2.4x	1.9x	1.9x	9.2x	8.2x	7.7x	11.0x	10.4x	9.9x	15%	10%
							1,855	2,351	2,433	491	551	589	409	432	455		
							22%	27%	3%	26%	23%	24%	22%	18%	19%		
Methode Electronics, Inc.		Apr-22	1,219	61	1,280	0.4x	1.4x	1.2x	1.2x	8.6x	7.7x	6.8x	12.8x	12.1x	10.6x	9%	13%
							907	1,047	1,083	149	167	189	100	105	121		
							17%	15%	3%	16%	16%	17%	11%	10%	11%		
Murata Manufacturing Co., Ltd.		Mar-22	25,903	(2,011)	23,894	n/a	2.2x	2.0x	1.9x	6.9x	6.5x	6.1x	8.1x	9.1x	8.5x	5%	7%
							11,073	11,667	12,320	3,441	3,662	3,924	2,961	2,631	2,801		
							5%	5%	6%	31%	31%	32%	27%	23%	23%		
Sensata Technologies Holding plc		Dec-21	5,194	2,211	7,406	2.7x	2.6x	2.1x	1.9x	11.1x	9.0x	8.1x	15.3x	10.7x	9.8x	16%	17%
							2,822	3,599	3,812	670	819	916	483	689	757		
							26%	28%	6%	24%	23%	24%	17%	19%	20%		
Sensirion Holding AG		Dec-21	1,157	(99)	1,054	n/a	4.5x	3.5x	3.2x	14.8x	13.8x	14.1x	17.6x	17.0x	18.5x	18%	3%
							233	300	325	71	77	75	60	62	57		
							11%	29%	8%	31%	26%	23%	26%	21%	18%		
TE Connectivity Ltd.		Sep-21	31,677	2,752	34,513	0.8x	3.1x	2.4x	2.3x	12.7x	9.7x	9.2x	15.4x	12.8x	12.1x	17%	17%
							11,153	14,612	15,269	2,725	3,568	3,743	2,246	2,696	2,852		
							10%	31%	5%	24%	24%	25%	20%	18%	19%		
TT Electronics plc		Dec-21	247	142	391	2.4x	0.8x	0.7x	0.7x	8.6x	6.6x	5.8x	11.0x	8.8x	7.5x	11%	22%
							476	558	584	46	59	68	36	44	52		
							10%	17%	5%	10%	11%	12%	7%	8%	9%		
Min							0.7x	0.7x	0.7x	4.7x	3.9x	3.8x	8.1x	8.8x	7.5x	5%	3%
Mean							2.5x	2.0x	1.9x	12.6x	10.3x	9.6x	19.5x	13.3x	12.5x	14%	15%
Median							2.4x	2.0x	1.9x	11.9x	9.2x	8.4x	16.5x	12.3x	11.1x	15%	13%
Max							4.8x	3.5x	3.4x	26.1x	22.6x	20.6x	48.0x	23.1x	21.0x	23%	33%

Note: Multiples are based on enterprise value as of 30 September 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. Highlighted values are considered as outliers and are not included in calculations

Source: CapIQ

Instrumentation

Industrials











							EV/Revenue Revenue (GBPm) Revenue growth			EV/EBITDA EBITDA (GBPm) EBITDA %			EV/EBIT EBIT (GBPm) EBIT %			2 Year CAGR 2021-2023	
Company	Country	Year End Date	Market Cap (GBPm)	Net Debt / (Cash)	EV (GBPm)	Net debt / EBITDA (2022)	2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
AMETEK, Inc.		Dec-21	23,366	1,916	25,282	1.2x	6.2x 4,086 23%	4.7x 5,434 33%	4.5x 5,672 4%	20.5x 1,233 30%	15.2x 1,661 31%	14.4x 1,751 31%	25.6x 987 24%	19.1x 1,323 24%	17.9x 1,411 25%	18%	19%
Fortive Corporation		Dec-21	18,605	2,493	21,102	1.9x	5.4x 3,881 14%	4.1x 5,208 34%	3.9x 5,454 5%	21.3x 992 26%	15.8x 1,335 26%	14.8x 1,426 26%	31.5x 670 17%	23.4x 901 17%	20.7x 1,019 19%	19%	20%
Halma plc		Mar-22	7,740	275	8,007	0.7x	5.4x 1,474 11%	4.8x 1,661 13%	4.5x 1,793 8%	22.7x 352 24%	19.9x 402 24%	18.2x 440 25%	29.3x 273 19%	23.4x 342 21%	20.9x 384 21%	10%	12%
HORIBA, Ltd.		Dec-21	1,469	(375)	1,095	n/a	0.8x 1,439 8%	0.7x 1,562 9%	0.7x 1,571 1%	4.0x 273 19%	3.5x 310 20%	3.7x 297 19%	4.9x 222 15%	4.7x 233 15%	4.9x 224 14%	5%	4%
Keysight Technologies, Inc.		Oct-21	25,250	145	25,395	0.1x	6.9x 3,663 9%	5.2x 4,866 33%	4.9x 5,135 6%	23.2x 1,094 30%	16.0x 1,586 33%	15.2x 1,674 33%	28.1x 904 25%	17.9x 1,422 29%	16.8x 1,512 29%	18%	24%
MKS Instruments, Inc.		Dec-21	4,931	(44)	4,887	n/a	2.2x 2,178 28%	1.5x 3,230 48%	1.2x 4,061 26%	7.6x 647 30%	5.7x 851 26%	4.5x 1,077 26%	8.8x 558 26%	6.6x 741 23%	5.1x 949 23%	37%	29%
National Instruments Corporation		Dec-21	4,481	340	4,822	1.2x	4.4x 1,085 15%	3.2x 1,510 39%	2.9x 1,658 10%	26.9x 179 17%	17.3x 279 18%	13.7x 353 21%	43.8x 110 10%	18.0x 268 18%	14.4x 336 20%	24%	40%
Oxford Instruments plc		Mar-22	1,029	(68)	962	n/a	2.7x 355 12%	2.5x 381 7%	2.4x 397 4%	15.2x 63 18%	12.8x 75 20%	11.7x 82 21%	19.5x 49 14%	15.1x 64 17%	13.4x 72 18%	6%	14%
Renishaw plc		Jun-22	2,559	(237)	2,301	n/a	3.7x 619 15%	3.3x 688 11%	3.2x 715 4%	14.0x 165 27%	11.8x 195 28%	11.0x 209 29%	17.0x 135 22%	14.9x 154 22%	14.3x 161 22%	7%	13%
Roper Technologies, Inc.		Dec-21	34,215	3,767	37,982	1.9x	8.9x 4,267 20%	8.1x 4,696 10%	7.7x 4,945 5%	22.6x 1,683 39%	19.6x 1,939 41%	18.2x 2,088 42%	31.9x 1,191 28%	28.9x 1,314 28%	26.5x 1,432 29%	8%	11%
Shimadzu Corporation		Mar-22	6,936	(890)	6,046	n/a	2.3x 2,629 2%	2.2x 2,811 7%	2.0x 2,951 5%	12.6x 478 18%	11.7x 516 18%	11.0x 550 19%	13.4x 450 17%	14.7x 412 15%	13.7x 441 15%	6%	7%
Spectris plc		Dec-21	2,879	171	3,046	0.7x	2.4x 1,292 (3%)	2.4x 1,249 (3%)	2.3x 1,323 6%	13.4x 228 18%	12.5x 244 20%	11.6x 263 20%	17.5x 174 13%	14.6x 209 17%	13.4x 227 17%	1%	8%
Min							0.8x	0.7x	0.7x	4.0x	3.5x	3.7x	4.9x	4.7x	4.9x	1%	4%
Mean							4.3x	3.6x	3.4x	17.0x	13.5x	12.3x	22.6x	16.8x	15.2x	13%	17%
Median							4.1x	3.3x	3.1x	17.9x	14.0x	12.7x	22.6x	16.5x	14.3x	9%	13%
Max							8.9x	8.1x	7.7x	26.9x	19.9x	18.2x	43.8x	28.9x	26.5x	37%	40%

Note: Multiples are based on enterprise value as of 30 September 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.  
Highlighted values are considered as outliers and are not included in calculations

Source: CapIQ

Instrumentation









Life Sciences

							EV/Revenue Revenue (GBPm) Revenue growth			EV/EBITDA EBITDA (GBPm) EBITDA %			EV/EBIT EBIT (GBPm) EBIT %			2 Year CAGR 2021-2023	
Company	Country	Year End Date	Market Cap (GBPm)	Net Debt / (Cash)	EV (GBPm)	Net debt / EBITDA (2022)	2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
Agilent Technologies, Inc.		Oct-21	32,293	1,640	33,933	0.9x	7.3x 4,672 10%	5.5x 6,131 31%	5.2x 6,509 6%	25.4x 1,334 29%	18.5x 1,831 30%	17.2x 1,969 30%	29.8x 1,138 24%	20.6x 1,644 27%	19.2x 1,764 27%	18%	22%
Bio-Rad Laboratories, Inc.		Dec-21	11,124	(474)	10,650	n/a	4.9x 2,158 16%	4.2x 2,562 19%	3.9x 2,697 5%	19.5x 545 25%	16.8x 636 25%	15.3x 695 26%	25.5x 418 19%	21.7x 491 19%	19.5x 547 20%	12%	13%
Bruker Corporation		Dec-21	7,054	377	7,448	0.7x	4.2x 1,786 23%	3.3x 2,253 26%	3.3x 2,365 5%	18.5x 402 23%	14.1x 526 23%	13.1x 569 24%	23.2x 321 18%	16.6x 450 20%	15.3x 486 21%	15%	19%
Danaher Corporation		Dec-21	168,620	14,279	184,292	1.5x	8.5x 21,752 33%	6.7x 27,442 26%	6.6x 27,832 1%	23.5x 7,859 36%	18.8x 9,791 36%	18.4x 9,993 36%	29.9x 6,158 28%	24.8x 7,444 27%	24.2x 7,626 27%	13%	13%
Judges Scientific plc		Dec-21	464	27	491	0.9x	5.4x 91 14%	4.3x 114 25%	3.9x 125 10%	24.6x 20 22%	16.4x 30 26%	13.9x 35 28%	32.3x 15 17%	17.7x 28 24%	15.1x 33 26%	17%	33%
Mettler-Toledo International Inc.		Dec-21	21,897	1,497	23,394	1.3x	8.5x 2,746 22%	6.6x 3,533 29%	6.4x 3,672 4%	28.4x 824 30%	20.6x 1,134 32%	19.2x 1,219 33%	30.8x 758 28%	22.3x 1,049 27%	21.3x 1,096 30%	16%	22%
PerkinElmer, Inc.		Jan-22	13,631	3,583	17,214	3.1x	5.0x 3,418 (8%)	4.3x 3,989 17%	4.0x 4,307 8%	16.0x 1,076 31%	15.1x 1,144 29%	13.6x 1,265 29%	16.5x 1,044 31%	16.7x 1,030 26%	15.2x 1,130 26%	12%	8%
Sartorius Aktiengesellschaft		Dec-21	20,051	1,616	22,161	1.3x	7.6x 2,897 38%	6.1x 3,662 26%	5.4x 4,077 11%	23.2x 957 33%	17.9x 1,240 34%	16.0x 1,384 34%	28.2x 786 27%	22.2x 998 27%	19.9x 1,114 27%	19%	20%
Thermo Fisher Scientific Inc.		Dec-21	178,330	23,584	202,062	2.1x	7.0x 28,958 23%	5.2x 38,768 34%	5.1x 39,959 3%	20.8x 9,704 34%	18.4x 10,972 28%	17.7x 11,445 29%	26.2x 7,710 27%	20.7x 9,776 25%	20.0x 10,090 25%	17%	9%
Waters Corporation		Dec-21	14,483	956	15,439	1.0x	7.5x 2,057 19%	5.9x 2,629 28%	5.6x 2,764 5%	21.1x 733 36%	16.3x 945 36%	15.5x 995 36%	24.8x 623 30%	19.4x 797 30%	18.4x 840 30%	16%	17%
Min							4.2x	3.3x	3.1x	16.0x	14.1x	13.1x	16.5x	16.6x	15.1x	12%	8%
Mean							6.6x	5.2x	4.9x	22.1x	17.3x	16.0x	26.7x	20.3x	18.8x	15%	17%
Median							7.1x	5.4x	5.1x	22.1x	17.3x	15.8x	27.2x	20.7x	19.3x	16%	18%
Max							8.5x	6.7x	6.6x	28.4x	20.6x	19.2x	32.3x	24.8x	24.2x	19%	33%

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Highlighted values are considered as outliers and are not included in calculations

Source: CapIQ

## Test, Inspection & Certification services

							EV/Revenue Revenue (GBPm) Revenue growth			EV/EBITDA EBITDA (GBPm) EBITDA %			EV/EBIT EBIT (GBPm) EBIT %			2 Year CAGR 2021-2023	
Company	Country	Year End Date	Market Cap (GBPm)	Net Debt / (Cash)	EV (GBPm)	Net debt / EBITDA (2022)	2021	2022	2023	2021	2022	2023	2021	2022	2023	Sales	EBITDA
ALS Limited		Mar-22	2,835	636	3,340	1.9x	2.9x	2.5x	2.3x	12.4x	9.8x	8.8x	20.1x	13.0x	11.6x	13%	19%
							1,155	1,354	1,466	269	341	379	167	256	287		
							17%		8%	23%	25%	26%	14%	19%	20%		
Applus Services, S.A.		Dec-21	686	741	1,471	2.7x	1.0x	0.9x	0.8x	6.3x	5.4x	5.1x	14.0x	8.8x	8.2x	10%	11%
							1,492	1,728	1,812	235	273	290	105	166	180		
							7%	16%	5%	16%	16%	16%	7%	10%	10%		
Bureau Veritas SA		Dec-21	9,145	1,288	10,495	1.3x	2.5x	2.2x	2.1x	12.5x	10.6x	10.0x	17.2x	13.6x	12.7x	10%	12%
							4,184	4,860	5,106	840	989	1,045	610	773	825		
							1%	16%	5%	20%	20%	20%	15%	16%	16%		
Eurofins Scientific SE		Dec-21	10,348	2,260	12,664	1.6x	2.2x	2.1x	2.1x	8.0x	8.9x	9.0x	11.1x	12.8x	13.2x	3%	(6%)
							5,642	5,905	5,933	1,578	1,428	1,406	1,139	992	959		
							16%	5%	0%	28%	24%	24%	20%	17%	16%		
Exponent, Inc.		Dec-21	4,022	(124)	3,898	n/a	12.1x	9.4x	8.8x	42.6x	30.6x	28.4x	47.5x	31.4x	32.4x	18%	23%
							321	415	444	92	127	137	82	124	120		
							16%	29%	7%	29%	31%	31%	26%	30%	27%		
Intertek Group plc		Dec-21	5,973	1,191	7,201	1.7x	2.6x	2.3x	2.2x	11.5x	10.1x	9.3x	16.2x	13.8x	12.7x	10%	11%
							2,786	3,161	3,349	624	712	775	445	522	569		
							2%	13%	6%	22%	23%	23%	16%	17%	17%		
Mistras Group, Inc.		Dec-21	119	195	314	2.8x	0.6x	0.5x	0.5x	6.2x	4.5x	4.0x	19.3x	13.7x	11.5x	16%	25%
							500	635	668	51	71	79	16	23	27		
							15%	27%	5%	10%	11%	12%	3%	4%	4%		
SGS SA		Dec-21	14,557	2,589	17,208	1.8x	3.3x	2.8x	2.7x	14.7x	11.9x	11.4x	22.8x	17.1x	16.1x	11%	14%
							5,189	6,165	6,420	1,168	1,443	1,514	756	1,005	1,066		
							12%	19%	4%	23%	23%	24%	15%	16%	17%		
Min							0.6x	0.5x	0.5x	6.2x	4.5x	4.0x	11.1x	8.8x	8.2x	3%	11%
Mean							2.2x	1.9x	1.8x	10.2x	8.7x	8.2x	17.2x	13.3x	12.3x	10%	15%
Median							2.5x	2.2x	2.1x	11.5x	9.8x	9.0x	17.2x	13.6x	12.7x	10%	13%
Max							3.3x	2.8x	2.7x	14.7x	11.9x	11.4x	22.8x	17.1x	16.1x	16%	25%

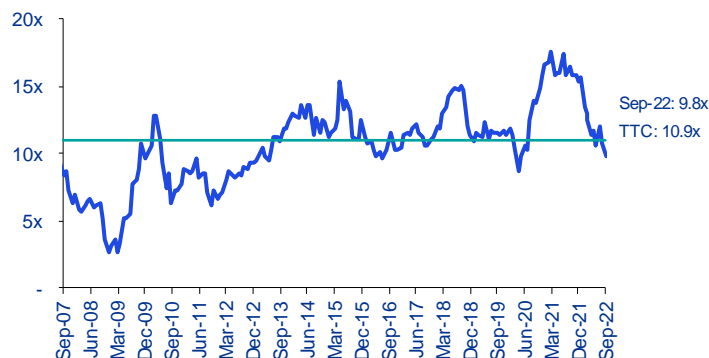
Note: Multiples are based on enterprise value as of 30 September 2022 and historical and forecast sales, EBITDA and EBIT, calendarised to 31 December. "nfm": not meaningful; "n/a": not available. Enterprise Value is adjusted for minority interest, preference equity, pension deficit and investments in associates.

Highlighted values are considered as outliers and are not included in calculations

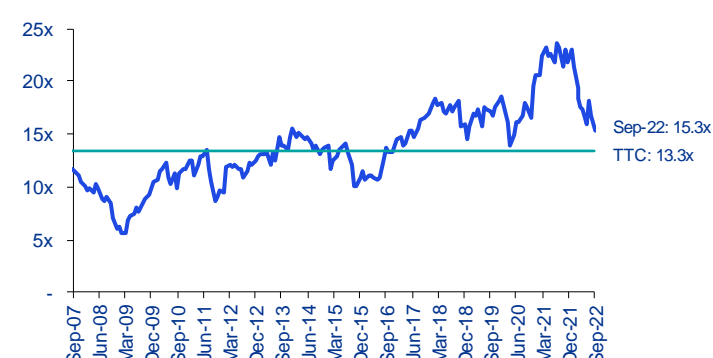
Source: CapIQ

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

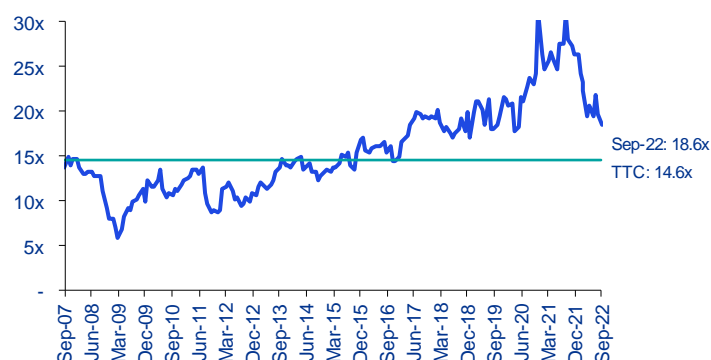
### Sensors



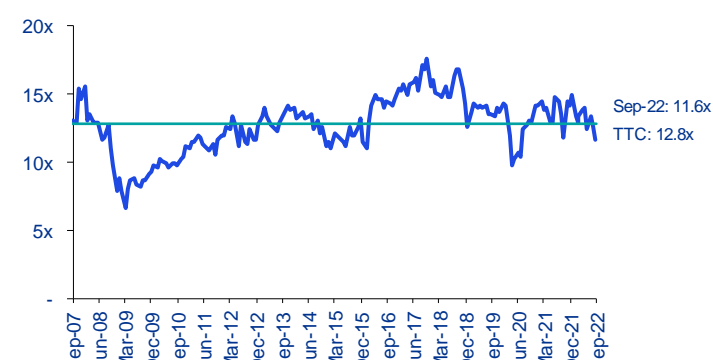
### Instrumentation – Industrials



### Instrumentation – Life Sciences





























### Test, Inspection & Certification services



— Median EBITDA — Median EBITDA through the cycle

## M&A Transaction History

### Sensors

Date	Target	Country	Target Description	Acquirer	Country	EV	EV/ EBITDA
May-22	OMEGA Engineering		Provider of a broad range of process measurement and control instrumentation to industrial	Dwyer Instruments (Arcline)		US\$525m	20.5x
Jun-21	Photon Control Inc.		Designs, manufactures and distributes a range of optical sensors and systems to measure temperature and position	MKS Instruments, Inc.		US\$312m	15.6x
Jun-21	Diversified Technical Systems		Manufacturer of data acquisition systems and sensors for product and safety testing	Vishay Precision Group		US\$47m	5.9x
Apr-21	Xirgo Technologies Inc		Provides telematics & data insight solutions for transport & logistics end markets	Sensata Technologies		US\$400m	16.0x
Jan-21	Flir Systems		Designer, manufacturer and marketer of camera systems for a wide variety of thermography and imaging applications	Teledyne Technologies Inc		US\$7,800m	18.9x
Dec-20	MTS Systems Corporation		Supplier of advanced test systems, motion simulators and precision sensors	Amphenol Corporation		US\$1.7bn	14.0x
Dec-20	OptaSense Holdings, Ltd		Fiber optic distributed monitoring solutions	Luna Innovations Incorporated		£29m	13.0x
Oct-19	Sens-Tech Ltd		Manufacturer of x-ray and light detector modules	discoverIE Group plc		£58m	5.9x
Jun-19	Sensys Networks, Inc.		Provides integrated wireless traffic data systems and traffic management solutions	TagMaster AB		US\$16m	9.4x
Jun-19	First Sensor AG		Manufacturer of sensors, detectors and emitters	TE Connectivity Ltd.		€308m	14.5x
Apr-19	Positek Limited		Designer and manufacturer of linear, rotary, tilt and submersible sensors	discoverIE Group plc		£4.6m	7.7x
Oct-18	Resideo Technologies, Inc.		Home comfort and security solutions and wholesale distributor of security and low-voltage products	Spin off from Honeywell International Inc.		US\$3,259m	14.0x
Jan-17	Variohm Holdings Limited		Manufacturer of position, pressure and temperature sensors	discoverIE Group plc		£13.9m	7.0x
	Min						5.9x
	Mean						12.5x
	Median						14.0x
	Max						20.5x

Source: CapitalIQ Prowess, MergerMarket and KPMG intel

## Instrumentation













### Industrials

Date	Target	Country	Target Description	Acquirer	Country	EV	EV/ EBITDA
Aug-22	CyberOptics Corporation		Developer and manufacturer of high-precision 3D optical sensing technology solutions	Nordson Corporation		US\$380m	18.5x
Jun-22	Industrial business segment of Roper tech.		Company engaged in designing and developing software and engineered products and solutions	CD&R		US\$5.1bn	19.6x
May-22	Dytran Instruments		Manufacturer of piezoelectric, MEMS-based and digital accelerometers	Spectris		US\$82m	15.8x
Jan-22	Zetec (Roper Technologies)		Zetec is engaged in nondestructive testing (NDT) solutions for critical inspection needs	Eddyfi/NDT (Novacap)		US\$350m	20.6x
Aug-21	NDC Technologies Inc.		Provider of precision measurement solutions for in-line manufacturing process control	Nordson Corporation		US\$180m	13.5x
Apr-21	Concurrent Real-Time, Inc.		Supplier of real-time operating systems for hardware-in-the-loop simulation applications	Spectris Plc		US\$167m	16.0x
Mar-21	Abaco Systems Inc		Provider of mission critical embedded computing systems for aerospace, defense and industrial applications	AMETEK Inc		US\$1,350m	13.5x
Dec-20	Brüel & Kjær Vibro (Spectris Subsidiary)		Supplier of machinery protection & condition monitoring systems for rotating & reciprocating industrial machinery	NSK Ltd		€180m	20.0x
Jul-20	Microwave Vision SA (52.06%)		Designs, manufactures and sells microwave test systems	Groupe HLD		€145m	10.2x
Feb-20	Sensit Technologies		Manufacturer of gas leak detection instruments for natural gas, fire services and industrial applications	Halma		US\$51.5m	11.7x
Feb-20	L3Harris Technologies (Security & Detection)		Provides airport and critical infrastructure screening products and other industrial automation products	Leidos Holdings		US\$1bn	13.3x
Dec-19	BTG Group Limited (Spectris Subsidiary)		Provider of integrated, highly specialised process measuring instruments for the paper industry	Voith GmbH		€319m	11.5x
Oct-19	Gatan, Inc.		Manufacturer of instrumentation used to enhance the operation and performance of electron microscopes	AMETEK, Inc.		US\$925m	14.9x
Oct-19	Rudolph Technologies		Manufacturer of process control metrology and defect inspection systems used by semiconductor manufacturers	Naometrics		US\$769m	13.4x
Aug-19	3M Gas and Flame Detection		Manufacturer of gas and flame detection products	Teledyne Technologies		US\$230m	11.0x
Nov-18	Spectro Scientific		Supplier of oil, fuel and fluid analysis instruments to industry, military and laboratories	AMETEK, Inc.		US\$190m	16.5x
	Min						10.2x
	Mean						15.0x
	Median						14.2x
	Max						20.6x

Source: CapitalIQ Prowess, MergerMarket and KPMG intel































## M&A Transaction History

### Instrumentation – Life Sciences

Date	Target	Country	Target Description	Acquirer	Country	EV	EV/ EBITDA
Aug-22	Frontage Clinical Services(88.1%)		Offers services in analytical testing and formulation development, drug metabolism and pharmacokinetics	Frontage Laboratories, Inc.		US\$15m	11.4x
Dec-21	Food Safety Business of 3M		Food safety business of 3M which sells test kits and other products to help foodmakers monitor sanitation & allergies	Neogen		US\$5.3bn	32.0x
Nov-21	SP Industries		Designer and manufacturer of high-grade biopharma processing equipment & life sciences equipment	ATS		US\$445m	15.3x
Jul-21	Luminex Corporation		Develops, manufactures and sells biological testing technologies and products	DiaSorin S.p.A.		US\$1.8bn	19.8x
Sep-20	Advanced Instruments		Provider of scientific and analytical instruments	Patricia Industries		£608m	24.1x
Oct-19	Danaher Corporation (Life Science business)		Life Sciences business of Danaher Corporation (FortéBio, Pall-Chromatography and SoloHill)	Sartorius AG		US\$750m	20.0x
Aug-19	BioTek Instruments Inc		Design, manufacture and distribution of innovative life science instrumentation	Agilent Technologies		US\$1.17bn	22.0x
Feb-19	Roper Technologies (Scientific-Imaging)		Scientific Imaging business (analytical and scientific instrumentation) of Roper Technologies, Inc.	Teledyne Technologies		US\$225m	11.0x
Feb-19	GE Biopharma		Provider of instruments, consumables and software that support the workflows of drug manufacturers	Danaher		US\$21.4bn	17.0x
Dec-17	EUROIMMUN Medical Laboratory		Develops, produces and distributes devices, software and consumables for human and veterinary medical diagnostics	PerkinElmer, Inc.		€1.2bn	19.2x
Sep-16	FEI Company		Supplier of instruments for nanoscale imaging, analysis and prototyping	Thermo Fisher Scientific		US\$4.4bn	19.3x
Apr-16	Newport Corporation		Supplier of technology products to scientific research, microelectronics, life and health sciences industries	MKS Instruments		US\$980m	17.5x
	Min						11.0x
	Mean						19.4x
	Median						19.3x
	Max						32.0x

Source: CapitalIQ Prowess, MergerMarket and KPMG intel

### Test, Inspection & Certification services

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

Source: CapitalIQ Prowess, MergerMarket and KPMG intel



## KPMG's global test & measurement credentials

  <p>acquired by</p>  <p>Aug 2022</p>	  <p>(subsidiaries of Western Energy Support and Technology)</p> <p>acquired by</p>  <p>Dec 2021</p>	  <p>acquired by</p>  <p>Dec 2021</p>	  <p>acquired by</p>  <p>Dec 2021</p>	  <p>acquired by</p>  <p>Dec 2021</p>	  <p>acquired by</p>  <p>Dec 2021</p>
  <p>acquired by</p>  <p>Sep 2021</p>	  <p>acquired by</p>  <p>Jul 2021</p>	  <p>acquired by</p>  <p>Jun 2021</p>	  <p>acquired by</p>  <p>May 2021</p>	 <p>portfolio company of</p>  <p>acquired by</p>  <p>Oct 2020</p>	  <p>acquired by</p>  <p>Nov 2019</p>
  <p>acquired by</p>  <p>Nov 2019</p>	  <p>portfolio company of</p>  <p>acquired by</p>  <p>Jan 2019</p>	  <p>acquired by</p>  <p>Jun 2018</p>	  <p>acquired by</p>  <p>Dec 2017</p>	  <p>Analytics laboratory business in Finland &amp; Estonia acquired by</p> <p>acquired by</p>  <p>Apr 2017</p>	  <p>acquired by</p>  <p>Mar 2017</p>
  <p>acquired by</p>  <p>May 2016</p>	  <p>acquired by</p>  <p>May 2016</p>	  <p>acquired by</p>  <p>Nov 2015</p>	  <p>acquired by</p>  <p>Sep 2013</p>	  <p>acquired by</p>  <p>Dec 2012</p>	  <p>acquired by</p>  <p>Jun 2012</p>
  <p>acquired by</p>  <p>Jun 2012</p>	  <p>acquired by</p>  <p>Feb 2012</p>	  <p>acquired by</p>  <p>Oct 2011</p>	  <p>Materials Testing subsidiary acquired by</p> <p>acquired by</p>  <p>May 2011</p>	  <p>acquired by</p>  <p>Feb 2010</p>	  <p>Materials Testing division acquired by</p> <p>acquired by</p>  <p>Oct 2008</p>

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