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Interim report 2018

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Highlights

Continuing operations	**6 months to 31st December 2017**	Restated* 6 months to 31st December 2016	Year ended 30th June 2017
Revenue (£'000)	**279,458**	238,081	536,807
Adjusted[1] profit before tax (£'000)	**62,301**	36,139	109,079
Adjusted[1] earnings per share (pence)	**72.7**	41.4	132.4
Proposed dividend per share (pence)	**14.0**	12.5	52.0
Statutory profit before tax (£'000)	**66,158**	25,274	117,101
Statutory earnings per share (pence)	**77.0**	29.4	141.3

*Note 12, 'Restatement of previous first half year', details the adjustments made to previously disclosed interim figures.

[1]Note 13, 'Alternative performance measures', defines how adjusted profit before tax and earnings per share are calculated.

Chairman's statement

I am pleased to report our group results for the six months to 31st December 2017. Unless otherwise stated these results are based on continuing operations.

Highlights

- First half year revenue of £279.5m, compared with restated* previous year of £238.1m.
- Revenue growth of 17%; 20% at constant exchange rates.
- First half year adjusted[1] profit before tax of £62.3m, compared with adjusted restated previous year of £36.1m, an increase of 73%.
- First half year statutory profit before tax of £66.2m, compared with restated £25.3m last year.

Trading results

Continuing operations	First half 2018	First half 2017	Change	Change at constant exchange rates
Group revenue	£279.5m	£238.1m	+17%	+20%
Comprising:				
Far East	£125.2m	£109.1m	+15%	+21%
Americas	£58.8m	£48.5m	+21%	+26%
Europe	£71.8m	£59.4m	+21%	+18%
UK	£14.7m	£13.0m	+13%	-
Other	£9.0m	£8.1m	+11%	-

Revenue for the six months ended 31st December 2017 was £279.5m, compared with an adjusted restated £238.1m for the corresponding period last year, an increase of 17%, with an underlying growth of 20% at constant exchange rates. Geographically, there was revenue growth in all regions as illustrated above.

Adjusted profit before tax for the first half year increased by 73% to £62.3m, compared with a restated £36.1m last year. Statutory profit before tax for the first half year was £66.2m, compared with a restated £25.3m last year. Adjusted earnings per share were 72.7p, compared with 41.4p last year. Statutory earnings per share were 77.0p, compared with 29.4p last year.

Metrology

Revenue from our metrology business for the first six months was £264.3m, compared with £224.6m last year. Adjusted operating profit was £63.2m, compared with £42.0m for the comparable period last year.

There has been growth in all metrology products lines, with particularly strong growth in our additive manufacturing and measurement and automation products lines.

During the first half of the year, our additive manufacturing products line introduced the RenAM 500Q four laser additive manufacturing system, InfiniAM Spectral software for AM process monitoring and InfiniAM Central software for remote monitoring of AM builds. The RenAM 500Q significantly improves the productivity of the most commonly used machine platform size. The machine tool products line launched an enhanced version of the NC4 non-contact tool setting system and the encoder products line launched the RESOLUTE™ FS (functional safety) encoder.

Healthcare

Revenue from our healthcare business for the first six months was £15.2m, compared with £13.5m last year with an adjusted operating loss of £1.9m, compared with a loss of £6.0m for the comparable period last year.

We have experienced growth in our spectroscopy and neurological products lines. Revenue in the neurological products line has benefited from an increase in sales of devices for clinical trials.

We are expecting good growth in the second half of the financial year with a further reduction in losses anticipated.

Continued investment for long-term growth

We continue our long-standing commitment to investment in research and development, and net engineering expenditure increased by 7% to £39.1m, compared with £36.4m last year.

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Chairman's statement (continued)

Capital expenditure for the first half year was £16.1m. Expenditure on property totalled £2.4m, including the acquisition and refurbishment of a property for our R&D facility in Exeter. Expenditure on plant and equipment was £7.8m, and we continued to expand our manufacturing facilities, mainly in the UK, and continued to invest in our global IT and distribution infrastructure.

Working capital

Net cash balances at 31st December 2017 were £69.1m, compared with £14.0m at 31st December 2016 and £51.9m at 30th June 2017.

During the first half of the year, certain forward contracts used for cash flow hedging, which did not qualify for hedge accounting under International Accounting Standard IAS39, have been restructured with the respective banks. Each agreement now contains a forward contract that qualifies for hedge accounting.

Inventory balances at 31st December 2017 were £99.1m, an increase of £11.4m compared with 30th June 2017. The increase arises due to increased trading levels and expected future demand, particularly in our additive manufacturing products line.

Directors and employees

As announced yesterday, I will be handing over my role as Chief Executive to William Lee, currently Group Sales and Marketing Director, with effect from 1st February 2018. I will remain Executive Chairman with responsibility for group innovation and product strategy.

The workforce at the end of December 2017 was 4,584, an increase of 54 since June 2017. Included in the net increase were 87 graduates and apprentices. The directors thank employees for their valued support and contribution as the Group continues to develop and expand.

Outlook

Notwithstanding current economic uncertainties, the Board remains confident in the future prospects of the Group. We continue to anticipate growth in both revenue and profit in this financial year and expect full year revenue to be in the range of £575m to £605m and adjusted profit before tax to be in the range of £127m to £147m. Statutory profit before tax is expected to be in the range of £136m to £156m.

Dividend

The Board has approved an interim dividend of 14.0 pence net per share which will be paid on 9th April 2018 to shareholders on the register on 9th March 2018.

Investor Day

An investor day is being held on 10th May 2018 and registration details will be published in due course.

Sir David R McMurtry

CBE, RDI, FRS, FREng, CEng, FIMechE

Chairman and Chief Executive

25th January 2018

Footnote

*Previous year interim figures have been restated for the following:

Certain foreign currency forward contracts used as hedging instruments did not qualify for hedge accounting as they did not meet the hedge effectiveness criteria set out in the International Accounting Standard IAS39 'Financial Instruments: Recognition and Measurement. To ensure technical compliance with this standard it has been deemed necessary to restate the 2017 interim financial statements resulting in a £10.9 net reduction to the profit before tax for that period and an increase in other comprehensive income by the same amount.

In June 2017, after an extensive review of the spatial measurements business, the Board decided to discontinue this line of business. This business has been accounted for as a discontinued activity, with comparative figures for the previous year being restated accordingly. See note 12 for further details.

[1]Note 13, 'Alternative performance measures', defines how adjusted profit before tax and earnings per share are calculated.

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Consolidated income statement

Unaudited

Continuing operations	Notes	6 months to 31st December 2017 £'000	Restated* 6 months to 31st December 2016 £'000	Audited Year ended 30th June 2017 £'000
Revenue	2	**279,458**	238,081	536,807
Cost of sales		**(134,494)**	(121,239)	(251,384)
Gross profit		**144,964**	116,842	285,423
Distribution costs		**(59,162)**	(54,559)	(112,691)
Administrative expenses		**(24,098)**	(24,558)	(52,376)
Profit/(loss) from the fair value of financial instruments		**3,508**	(12,577)	(3,601)
Operating profit		**65,212**	25,148	116,755
Financial income	3	**308**	368	766
Financial expenses	3	**(946)**	(1,112)	(2,256)
Share of profits from associates and joint ventures		**1,584**	870	1,836
Profit before tax		**66,158**	25,274	117,101
Income tax expense	4	**(10,076)**	(3,973)	(14,343)
Profit for the period from continuing operations		**56,082**	21,301	102,758
Profit/(loss) for the period from discontinued operations	5	**791**	(3,872)	(13,931)
Profit for the period		**56,873**	17,429	88,827
Profit attributable to:				
Equity shareholders of the parent company		**56,855**	17,559	88,955
Non-controlling interest		**18**	(130)	(128)
Profit for the period		**56,873**	17,429	88,827
		pence	pence	pence
Dividend per share arising in respect of the period	10	**14.0**	12.5	52.0
Earnings per share from continuing operations (basic and diluted)	6	**77.0**	29.4	141.3
Earnings/(loss) per share from discontinued operations (basic and diluted)	6	**1.09**	(5.3)	(19.1)

*Note 12, 'Restatement of previous first half year', details the adjustments made to previously disclosed interim figures.

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Consolidated statement of comprehensive income and expense

Unaudited

	6 months to 31st December 2017 £'000	Restated 6 months to 31st December 2016 £'000	Audited Year ended 30th June 2017 £'000
Profit for the period	**56,873**	17,429	88,827
Other items recognised directly in equity:			
Items that will not be reclassified to the Consolidated income statement:			
Remeasurement of defined benefit pension liabilities	**(2,908)**	(2,525)	(1,608)
Deferred tax on remeasurement of defined benefit pension liabilities	**646**	728	(835)
Total for items that will not be reclassified	**(2,262)**	(1,797)	(2,443)
Items that may be reclassified subsequently to the Consolidated income statement:			
Foreign exchange translation differences	**(1,764)**	5,490	3,889
Comprehensive income and expense of associates and joint ventures	**46**	84	173
Effective portion of changes in fair value of cash flow hedges, net of recycling	**27,918**	(7,736)	8,495
Deferred tax on effective portion of changes in fair value of cash flow hedges	**(5,186)**	1,470	(1,573)
Total for items that may be reclassified	**21,014**	(692)	10,984
Total other comprehensive income and expense, net of tax	**18,752**	(2,489)	8,541
Total comprehensive income and expense for the period	**75,625**	14,940	97,368
Attributable to:			
Equity shareholders of the parent company	**75,607**	15,070	97,496
Non-controlling interest	**18**	(130)	(128)
Total comprehensive income and expense for the period	**75,625**	14,940	97,368

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Consolidated balance sheet

Unaudited

	Notes	At 31st December 2017 £'000	Restated* At 31st December 2016 £'000	Audited At 30th June 2017 £'000
Assets				
Property, plant and equipment	7	**228,306**	230,595	228,050
Intangible assets	8	**54,881**	60,790	54,507
Investments in associates and joint ventures	9	**8,434**	6,256	7,311
Long-term loans to associates and joint ventures		**3,933**	-	3,080
Deferred tax assets		**33,404**	44,330	39,115
Derivatives	10	**11,153**	505	3,546
Total non-current assets		**340,111**	342,476	335,609
Current assets				
Inventories		**99,076**	90,802	87,697
Trade receivables		**116,882**	111,753	137,507
Current tax		**1,194**	2,740	2,276
Other receivables		**18,917**	16,615	15,907
Derivatives	10	**802**	99	-
Pension scheme cash escrow account	11	**12,877**	15,317	12,850
Cash and cash equivalents		**69,127**	26,490	51,942
Total current assets		**318,875**	263,816	308,179
Current liabilities				
Trade payables		**16,461**	20,025	19,544
Overdraft		**-**	12,519	-
Current tax		**5,764**	1,130	2,803
Provisions		**3,064**	2,793	2,960
Derivatives	10	**19,264**	31,180	25,261
Other payables		**27,965**	19,707	37,304
Total current liabilities		**72,518**	87,354	87,872
Net current assets		**246,357**	176,462	220,307
Non-current liabilities				
Employee benefits	11	**67,817**	68,725	66,787
Deferred tax liabilities		**13,862**	21,999	13,844
Derivatives	10	**14,104**	57,729	31,471
Total non-current liabilities		**95,783**	148,453	112,102
Total assets less total liabilities		**490,685**	370,485	443,814
Equity				
Share capital	10	**14,558**	14,558	14,558
Share premium		**42**	42	42
Currency translation reserve	10	**8,792**	12,022	10,510
Cash flow hedging reserve	10	**(8,317)**	(44,237)	(31,049)
Retained earnings		**476,642**	389,152	450,803
Other reserve	10	**(460)**	(460)	(460)
Equity attributable to the shareholders of the parent company		**491,257**	371,077	444,404
Non-controlling interest	10	**(572)**	(592)	(590)
Total equity		**490,685**	370,485	443,814

*Note 12, 'Restatement of previous first half year', details the adjustments made to previously disclosed interim figures.

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Consolidated statement of changes in equity

Unaudited

	Share capital £'000	Share premium £'000	Currency translation reserve £'000	Cash flow hedging reserve £'000	Retained earnings £'000	Other reserve £'000	Non-controlling interest £'000	Total £'000
Balance at 1st July 2016 as initially reported	14,558	42	6,448	(56,460)	420,419	(460)	(3,162)	381,385
Restatement	-	-	-	18,489	(18,489)	-	-	-
Balance at 1st July 2016 restated	14,558	42	6,448	(37,971)	401,930	(460)	(3,162)	381,385
Profit/(loss) for the period	-	-	-	-	17,559	-	(130)	17,429
Other comprehensive income and expense (net of tax)								
Remeasurement of defined benefit pension liabilities	-	-	-	-	(1,797)	-	-	(1,797)
Foreign exchange translation differences	-	-	5,490	-	-	-	-	5,490
Relating to associates and joint ventures	-	-	84	-	-	-	-	84
Changes in fair value of cash flow hedges	-	-	-	(6,266)	-	-	-	(6,266)
Total other comprehensive income and expense	-	-	5,574	(6,266)	(1,797)	-	-	(2,489)
Total comprehensive income and expense	-	-	5,574	(6,266)	15,762	-	(130)	14,940
Transactions with owners recorded in equity								
Acquisition of non-controlling interest	-	-	-	-	(2,700)	-	2,700	-
Dividends paid	-	-	-	-	(25,840)	-	-	(25,840)
Balance at 31st December 2016	14,558	42	12,022	(44,237)	389,152	(460)	(592)	370,485
Profit for the period	-	-	-	-	71,396	-	2	71,398
Other comprehensive income and expense (net of tax)								
Remeasurement of defined benefit pension liabilities	-	-	-	-	(646)	-	-	(646)
Foreign exchange translation differences	-	-	(1,601)	-	-	-	-	(1,601)
Relating to associates and joint ventures	-	-	89	-	-	-	-	89
Changes in fair value of cash flow hedges	-	-	-	13,188	-	-	-	13,188
Total other comprehensive income and expense	-	-	(1,512)	13,188	(646)	-	-	11,030
Total comprehensive income and expense	-	-	(1,512)	13,188	70,750	-	2	82,428
Transactions with owners recorded in equity								
Dividends paid	-	-	-	-	(9,099)	-	-	(9,099)
Balance at 30th June 2017	14,558	42	10,510	(31,049)	450,803	(460)	(590)	443,814
Profit for the period	-	-	-	-	56,855	-	18	56,873
Other comprehensive income and expense (net of tax)								
Remeasurement of defined benefit pension liabilities	-	-	-	-	(2,264)	-	-	(2,264)
Foreign exchange translation differences	-	-	(1,764)	-	-	-	-	(1,764)
Relating to associates and joint ventures	-	-	46	-	-	-	-	46
Changes in fair value of cash flow hedges	-	-	-	22,732	-	-	-	22,732
Total other comprehensive income and expense	-	-	(1,718)	22,732	(2,264)	-	-	18,750
Total comprehensive income and expense	-	-	(1,718)	22,732	54,591	-	18	75,623
Transactions with owners recorded in equity								
Dividends paid	-	-	-	-	(28,752)	-	-	(28,752)
Balance at 31st December 2017	**14,558**	**42**	**8,792**	**(8,317)**	**476,642**	**(460)**	**(572)**	**490,685**

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Consolidated statement of cash flow

Unaudited

	6 months to 31st December 2017 £'000	Restated 6 months to 31st December 2016 £'000	Audited Year ended 30th June 2017 £'000
Cash flows from operating activities			
Profit for the period	**56,873**	17,429	88,827
Amortisation of development costs	**6,059**	5,756	13,645
Amortisation of other intangibles	**788**	2,605	10,230
Depreciation	**12,758**	10,716	22,192
Loss/(profit) on sale of property, plant and equipment	**(160)**	170	2,085
Losses/(gains) from the fair value of financial instruments	**(3,857)**	10,865	(8,022)
Share of profits from associates and joint ventures	**(1,584)**	(870)	(1,836)
Financial income	**(308)**	(368)	(766)
Financial expenses	**946**	1,112	2,256
Tax expense	**10,261**	3,897	13,132
	24,903	33,883	52,916
Decrease/(increase) in inventories	**(11,379)**	4,157	7,262
Decrease/(increase) in trade and other receivables	**13,174**	8,358	(21,062)
(Decrease)/increase in trade and other payables	**(11,160)**	(1,428)	14,699
Increase in provisions	**104**	418	585
	(9,261)	11,505	1,484
Defined benefit pension contributions	**(2,532)**	(2,415)	(4,204)
Income taxes paid	**(5,015)**	(9,075)	(23,768)
Cash flows from operating activities	**64,968**	51,327	115,255
Investing activities			
Purchase of property, plant and equipment	**(16,050)**	(25,896)	(42,637)
Development costs capitalised	**(7,160)**	(7,177)	(15,886)
Purchase of other intangibles	**(383)**	(80)	(754)
Investments in subsidiaries, associates and joint ventures	**-**	-	-
Sale of property, plant and equipment	**1,571**	439	5,526
Sale of property, plant and equipment relating to discontinued activities	**-**	960	960
Interest received	**308**	368	766
Dividends received from associates and joint ventures	**507**	356	356
Payments (to)/from pension scheme escrow account (net)	**(27)**	(38)	2,429
Cash flows from investing activities	**(21,234)**	(31,068)	(49,240)
Financing activities			
Interest paid	**(292)**	(320)	(696)
Dividends paid	**(28,752)**	(25,840)	(34,939)
Cash flows from financing activities	**(29,044)**	(26,160)	(35,635)
Net increase/(decrease) in cash and cash equivalents	**14,690**	(5,901)	30,380
Cash and cash equivalents at the beginning of the period	**51,942**	21,303	21,303
Effect of exchange rate fluctuations on cash held	**2,495**	(1,431)	259
Cash and cash equivalents at the end of the period	**69,127**	13,971	51,942

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Responsibility statement

The condensed set of financial statements is the responsibility of, and has been approved by, the Directors. We confirm that to the best of our knowledge:

- As required by DTR 4.2 of the Disclosure Rules and Transparency Rules, the condensed set of financial statements, which has been prepared in accordance with the applicable set of accounting standards, gives a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and the undertakings included in the consolidation as a whole. The Interim report has been prepared in accordance with the EU endorsed standard IAS 34, 'Interim financial reporting'.

- The Interim report includes a fair review of the information required by:

  (a) DTR 4.2.7 of the Disclosure Rules and Transparency Rules, being an indication of important events that have occurred during the first six months of the financial year and their impact on the condensed set of financial statements; and a description of the principal risks and uncertainties for the remaining six months of the year; and

  (b) DTR 4.2.8 of the Disclosure Rules and Transparency Rules, being related party transactions that have taken place in the first six months of the current financial year and that have materially affected the financial position or performance of the entity during that period; and any changes in the related party transactions described in the last annual report that could do so.

On behalf of the Board

A C G Roberts FCA
Group Finance Director
25th January 2018

Notes

1. Status of Interim report and accounting policies

The Interim report, which has not been audited, was approved by the directors on 25th January 2018.

General information
The Interim report has been prepared in accordance with the EU endorsed standard IAS 34, 'Interim financial reporting'. This interim financial information has been prepared on the basis of the accounting policies adopted in the most recent annual financial statements, these being for the year ended 30th June 2017, as revised for the implementation of specified new amended endorsed standards or interpretations.

Given the nature of some forward-looking information included in this report, which the directors have given in good faith, this information should be treated with due caution. The Interim report is available on our website www.renishaw.com.

The interim financial information for the six months to 31st December 2017 and the comparative figures for the six months to 31st December 2016 are unaudited. The comparative figures for the financial year ended 30th June 2017 are not the Company's statutory accounts for that financial year. Those accounts have been reported on by the Company's auditors and delivered to the registrar of companies. The report of the auditors was (i) unqualified, (ii) did not include a reference to any matters to which the auditors drew attention by way of emphasis without qualifying their report, and (iii) did not contain a statement under section 498 (2) or (3) of the Companies Act 2006, relating to the accounting records of the Company.

Going concern
The Group has considerable financial resources at its disposal and the directors have considered the current financial projections. As a consequence, the directors believe that the Group is well placed to manage its business risks successfully.

After making enquiries, the directors have a reasonable expectation that the Group has adequate resources to continue in operational existence for the foreseeable future. Accordingly, they continue to adopt the going concern basis in preparing the Interim report.

Accounting policies
The accounting policies applied and significant estimates used by the Group in this Interim report are the same as those applied by the Group for the year ended 30th June 2017. Note, IFRS 15, Revenue from contracts with customers, effective for accounting periods beginning on or after 1st January 2018, has not yet been applied. The introduction of this standard is not expected to have a material impact on the results of the Group due to the relatively straightforward contractual terms and conditions with customers. An assessment of the impact will be concluded in the second half of the financial year and the outcome will be included in the 2018 Annual Report.

2. Segmental information

Renishaw's business is metrology, the science of measurement. The Group manages its business in two business segments, Metrology, being the traditional core business, and Healthcare.

Our products / Metrology
Our metrology products help manufacturers to maximise production output, significantly reduce the time taken to produce and inspect components, and keep their machines running reliably. In the fields of industrial automation and motion systems, our position measurement and calibration systems allow machine builders to manufacture highly accurate and reliable products.

The product range includes the following:

Co-ordinate measuring machine (CMM) products
Sensors, software and control systems for three-dimensional CMMs, including touch-trigger and scanning probes, automated probe changers, motorised indexing probe heads and 5-axis measurement systems, which enable the highly accurate measurement of manufactured components and finished assemblies.

Machine tool probe systems
Sensors and software for computer numerically controlled (CNC) metal-cutting machine tools that allow the automation of setting and on-machine measurement operations, leading to more productivity from existing machines and reductions in scrap and rework. These include laser tool setters, contact tool setters, tool breakage detectors, touch probes, contact scanning systems and high-accuracy inspection probes.

Styli for probe systems
Precision styli that attach to probe sensors for CMMs, machine tools and Equator™ gauging systems to ensure that accurate measurement data is acquired at the point of contact.

Performance testing products
Calibration and testing products to determine the positioning accuracy of a wide range of industrial and scientific machinery to international standards, including a laser interferometer, rotary axis calibrator, wireless telescoping ballbar and software for data capture and analysis.

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Notes (continued)

2. Segmental information (continued)

Gauging
Equator™ enables process control by delivering highly repeatable, thermally insensitive, versatile and reprogrammable gauging to the shop floor, both as a standalone device and as part of an automated manufacturing cell. Combined with INTUO™ software, Equator is also an ideal alternative to traditional manual gauging, with training in a few hours, allowing engineers to program parts in minutes.

Fixtures
Modular and custom fixtures used to hold parts securely for dimensional inspection on CMM, vision and gauging systems.

Position encoders
Position encoders that ensure accurate linear and rotary motion control in a wide range of applications from electronics, flat panel displays, robotics and semiconductors to medical, precision machining and print production. These include magnetic encoders, incremental optical encoders, absolute optical encoders and laser interferometer encoders.

Additive manufacturing (AM)
Advanced metal AM systems for direct manufacturing of 3D-printed metallic components. A total solution is offered from systems, materials, ancillaries and software through to consultancy, training and support for a range of industries including industrial, healthcare and mould tooling.

Vacuum casting
Vacuum casting machines from entry-level to high capacity for rapid prototyping and production of polymer end-use parts.

Our products / Healthcare
Our technologies are helping within applications such as craniomaxillofacial surgery, dentistry, neurosurgery, chemical analysis and nanotechnology research. These include engineering solutions for stereotactic neurosurgery, analytical tools that identify and characterise the chemistry and structure of materials, the supply of implants to hospitals and specialist design centres for craniomaxillofacial surgery, and products and services that allow dental laboratories to manufacture high-quality dental restorations.

The product range includes the following:

Dental scanners
3D contact scanners and non-contact optical scanners used for digitising of dental preparations and the measurement of implant locations for tooth-supported frameworks and custom abutments.

Dental computer-aided design (CAD) software
Dental CAD software that allows set-up of scanning routines and enables laboratory staff to design abutments and structures for crowns and bridges, including powerful anatomic design functions.

Dental structures manufacturing service
A central manufacturing service that can handle CAD files from a wide variety of dental CAD systems to produce structures for crowns and bridges in zirconia, cobalt chrome, PMMA (used for temporary restorations) and wax, and abutments in cobalt chrome.

Craniomaxillofacial custom-made implants
Additively manufactured from titanium, custom-made craniomaxillofacial implants are structural implants that are used in the reconstruction of a patient's head, face or jaw. These are most commonly required after oncology treatment or as a result of trauma.

Neurosurgical robot
A stereotactic robot that provides a platform solution for a broad range of functional neurosurgical procedures including deep brain stimulation (DBS), stereoelectroencephalography (SEEG), neuroendoscopy and stereotactic biopsies, and is being used within the context of trials for both neurosurgical disorders and brain oncology.

Neurosurgical planning software
Software that allows advanced planning of targets and trajectories for stereotactic neurosurgery.

Neurosurgical implants and devices
Implantable devices that allow surgeons to verify expected DBS electrode position relative to targeted anatomy using magnetic resonance imaging (MRI) for the treatment of Parkinson's disease, other movement disorders and neuropathic pain.

Neurosurgical accessories
Specialist electrodes and instruments for use in epilepsy neurosurgery, manufactured by DIXI Medical.

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Notes (continued)

2. Segmental information (continued)

Raman microscopes
Scientists and engineers worldwide use Renishaw's research-grade inVia Raman microscope for the non-destructive chemical analysis and imaging of materials. Its high-speed, high-quality results and upgradeability are valued in fields as diverse as nanotechnology, biology and pharmaceuticals.

Hybrid Raman systems
Renishaw's hybrid systems unite the chemical analysis power of Raman spectroscopy with the high spatial resolution of other techniques, such as atomic force microscopy and scanning electron microscopy. These new instruments are vital tools for investigating materials and devices for nanotechnology applications.

Turn-key Raman analysis
The RA800 benchtop platform provides companies with a high performance chemical imaging and analysis system that can be tailored for the needs of their customers. RA800 gives research-grade Raman microscopy performance in a Class 1 laser-safe, simple-to-use form.

Segmental financial results were:

6 months to 31st December 2017	**Metrology £'000**	**Healthcare £'000**	**Total £'000**
Revenue	**264,307**	**15,151**	**279,458**
Depreciation and amortisation	**18,561**	**1,044**	**19,605**
Operating profit/(loss) before gain from fair value of financial instruments	**63,561**	**(1,857)**	**61,704**
Share of profits from associates and joint ventures	**1,584**	**-**	**1,584**
Net financial expense	**-**	**-**	**(638)**
Profit from the fair value of financial instruments	**-**	**-**	**3,508**
Profit before tax	**-**	**-**	**66,158**
6 months to 31st December 2016 (restated)			
Revenue	224,627	13,454	238,081
Depreciation and amortisation	15,402	1,783	17,185
Operating profit/(loss) before loss from fair value of financial instruments	43,632	(5,907)	37,725
Share of profits from associates and joint ventures	870	-	870
Net financial expense	-	-	(744)
Losses from the fair value of financial instruments	-	-	(12,577)
Profit before tax	-	-	25,274
Year ended 30th June 2017			
Revenue	503,378	33,429	536,807
Depreciation and amortisation	32,983	3,831	36,814
Operating profit/(loss) before loss from fair value of financial instruments	126,830	(6,474)	120,356
Share of profits from associates and joint ventures	1,836	-	1,836
Net financial expense	-	-	(1,490)
Losses from the fair value of financial instruments	-	-	(3,601)
Profit before tax	-	-	117,101

There is no allocation of assets and liabilities to operating segments. Depreciation is included within certain other overhead expenditure which is allocated to segments on the basis of the level of activity.

Notes (continued)

2. Segmental information (continued)

The following table shows the analysis of revenue by geographical market:

	6 months to 31st December 2017 £'000	Restated 6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Far East, including Australasia	**125,166**	109,076	248,905
Continental Europe	**71,763**	59,379	129,941
North, South and Central America	**58,791**	48,488	113,577
United Kingdom and Ireland	**14,737**	12,995	27,595
Other regions	**9,001**	8,143	16,789
Total group revenue	**279,458**	238,081	536,807

Revenue in the above table has been allocated to regions based on the geographical location of the customer. Countries with individually material revenue figures in the context of the Group were:

	6 months to 31st December 2017 £'000	Restated 6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
China	**68,144**	59,030	134,984
USA	**49,934**	41,878	95,927
Germany	**29,031**	25,889	56,403
Japan	**28,822**	24,723	52,166

There was no revenue from transactions with a single external customer amounting to 10% or more of the Group's total revenue for the period.

The following table shows the analysis of non-current assets, excluding deferred tax and derivatives, by geographical area:

	At 31st December 2017 £'000	At 31st December 2016 £'000	At 30th June 2017 £'000
United Kingdom	**182,542**	188,258	183,102
Overseas	**113,012**	109,383	109,846
	295,554	297,641	292,948

No overseas country had non-current assets amounting to 10% or more of the Group's total non-current assets.

3. Financial income and expenses

Financial income	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Bank interest receivable	**308**	368	766

Notes (continued)

3. Financial income and expenses (continued)

Financial expenses	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Interest on pension schemes' liabilities	**654**	792	1,560
Bank interest payable	**292**	320	696
	946	1,112	2,256

4. Income tax expense

The income tax expense has been estimated at a rate of 15.2% (December 2016 restated: 15.7%), the rate expected to be applicable for the full year. This includes the impact of the reduction in the US corporate income tax rate from 35% to 21%, with effect from 1 January 2018, which was substantively enacted in December 2017.

5. Discontinued operations

In October 2016, the Group announced that it had decided to discontinue operations at Renishaw Diagnostics Limited and in June 2017, to discontinue the spatial measurement business. Financial information relating to discontinued operations is set out below.

	6 months to 31st December 2017 £'000	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Revenue	**3,708**	4,055	7,217
Expenses	**(2,732)**	(6,642)	(13,914)
Goodwill impairment	**-**	(1,784)	(8,445)
Profit/(loss) before tax	**976**	(4,371)	(15,142)
Tax (expense)/credit	**(185)**	499	1,211
Profit/(loss) for the period from discontinued operations	**791**	(3,872)	(13,931)

	6 months to 31st December 2017 £'000	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Cashflow			
Profit/(loss) for the period	**791**	(3,872)	(13,931)
Adjustments for operating activities	**950**	2,421	12,155
Cash flows generated from/(used in) operating activities	**1,741**	(1,451)	(1,776)
Cash flows from investing activities	**-**	916	420
Net increase/(decrease) in cash and cash equivalents from discontinued operations	**1,741**	(535)	(1,356)

6. Earnings per share

The earnings per share on continuing operations for the six months ended 31st December 2017 is calculated on earnings of £56,064,000 (December 2016: £21,431,000) and on 72,788,543 shares, being the number of shares in issue during the period.

The earnings per share on continuing operations for the year ended 30th June 2017 is calculated on earnings of £102,886,000 and on 72,788,543 shares, being the number of shares in issue during that year.

The earnings per share on discontinued operations for the six months ended 31st December 2017 is calculated on earnings of £791,000 (December 2016: £3,872,000 loss) and on 72,788,543 shares, being the number of shares in issue during the period.

The loss per share on discontinued operations for the year ended 30th June 2017 is calculated on losses of £13,931,000 and on 72,788,543 shares, being the number of shares in issue during that year.

Notes (continued)

7. Property, plant and equipment

	Freehold land and buildings £'000	Plant and equipment £'000	Motor vehicles £'000	Assets in the course of construction £'000	Total £'000
Cost					
At 1st July 2017	165,661	201,022	9,893	8,222	384,798
Additions	2,337	7,846	514	5,353	16,050
Transfers	3,359	3,151	-	(6,510)	-
Disposals	(1,016)	(2,941)	(232)	-	(4,189)
Currency adjustment	(1,675)	(419)	(66)	-	(2,160)
At 31st December 2017	**168,666**	**208,659**	**10,109**	**7,065**	**394,499**
Depreciation					
At 1st July 2017	28,462	121,611	6,675	-	156,748
Charge for the period	1,476	10,551	731	-	12,758
Released on disposals	(563)	(2,003)	(212)	-	(2,778)
Currency adjustment	(267)	(223)	(45)	-	(535)
At 31st December 2017	**29,108**	**129,936**	**7,149**	**-**	**166,193**
Net book value					
At 31st December 2017	**139,558**	**78,723**	**2,960**	**7,065**	**228,306**
At 30th June 2017	137,199	79,411	3,218	8,222	228,050

Additions to assets in the course of construction of £5,353,000 (December 2016: £17,525,000) comprise £3,208,000 (December 2016: £13,765,000) for freehold land and buildings and £2,145,000 (December 2016: £3,760,000) for plant and equipment.

At the end of the period, assets in the course of construction, not yet transferred, of £7,065,000 (December 2016: £27,644,000) comprise £3,479,000 (December 2016: £21,484,000) for freehold land and buildings and £3,586,000 (December 2016: £6,160,000) for plant and equipment.

8. Intangible assets

	Goodwill on consolidation £'000	Other intangible assets £'000	Internally generated development costs £'000	Software licences £'000	Total £'000
Cost					
At 1st July 2017	19,919	11,647	117,349	23,066	171,981
Additions	-	-	7,160	383	7,543
Disposals	-	-	-	-	-
Currency adjustment	(300)	(24)	-	(4)	(328)
At 31st December 2017	**19,619**	**11,623**	**124,509**	**23,445**	**179,196**
Amortisation					
At 1st July 2017	6,661	11,187	81,327	18,299	117,474
Charge for the period	-	(11)	6,059	799	6,847
Released on disposal	-	-	**-**	-	-
Currency adjustment	-	-	**-**	(6)	(6)
At 31st December 2017	**6,661**	**11,176**	**87,386**	**19,092**	**124,315**
Net book value					
At 31st December 2017	**12,958**	**447**	**37,123**	**4,353**	**54,881**
At 30th June 2017	13,258	460	36,022	4,767	54,507

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Notes (continued)

8. Intangible assets (continued)

The analysis of acquired goodwill on consolidation is:	**At 31st December 2017 £'000**	At 31st December 2016 £'000	At 30th June 2017 £'000
Acquisition of:			
itp GmbH	**3,065**	2,960	3,038
Renishaw Mayfield S.A.	**1,712**	1,794	1,823
R&R Fixtures, LLC	**5,130**	5,585	5,327
Renishaw Software Limited	**1,559**	1,559	1,559
Other smaller acquisitions	**1,492**	1,529	1,511
Measurement Devices Limited	**-**	6,661	-
Balance at the end of the period	**12,958**	20,088	13,258

9. Investments in associates and joint ventures

Movements during the period were:	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Balance at the beginning of the period	**7,311**	5,658	5,658
Dividends received	**(507)**	(356)	(356)
Share of profits of associates and joint ventures	**1,584**	870	1,836
Other comprehensive income and expense	**46**	84	173
Balance at the end of the period	**8,434**	6,256	7,311

10. Capital and reserves

Share capital	**At 31st December 2017 £'000**	At 31st December 2016 £'000	At 30th June 2017 £'000
Allotted, called-up and fully paid			
72,788,543 ordinary shares of 20p each	**14,558**	14,558	14,558

The ordinary shares are the only class of share in the Company. Holders of ordinary shares are entitled to vote at general meetings of the Company and receive dividends as declared. The Articles of Association of the Company do not contain any restrictions on the transfer of shares nor on voting rights.

Currency translation reserve

The currency translation reserve comprises all foreign exchange differences arising from the translation of the financial statements of the foreign operations, offset by foreign exchange differences on bank liabilities which have been accounted for directly in equity on account of them being classified as hedging items. The policy to hedge net overseas assets was ended in December 2017. Future movements in the currency translation reserve will therefore arise only from translation of financial statements of foreign operations.

Notes (continued)

10. Capital and reserves (continued)

Cash flow hedging reserve

The cash flow hedging reserve comprises all foreign exchange differences arising from the valuation of forward exchange contracts which are effective hedges and mature after the period end. These are valued on a mark-to-market basis, are accounted for directly in equity and are recycled through the Consolidated income statement when the hedged item affects the Consolidated income statement. The forward contracts mature over the next three and a half years.

Movements during the period were:	**6 months to 31st December 2017 £'000**	Restated 6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Balance at the beginning of the period	**(31,049)**	(37,971)	(37,971)
Revaluations during the period	**27,918**	(7,736)	8,495
Deferred tax movement	**(5,186)**	1,470	(1,573)
Balance at the end of the period	**(8,317)**	(44,237)	(31,049)

The cash flow hedging reserve is analysed as:	**At 31st December 2017 £'000**	At 31st December 2016 £'000	At 30th June 2017 £'000
Derivatives in non-current assets	**11,153**	505	3,546
Derivatives in current assets	**802**	99	-
Derivatives in current liabilities	**(19,264)**	(31,180)	(25,261)
Derivatives in non-current liabilities	**(14,104)**	(57,729)	(31,471)
	(21,413)	(88,305)	(53,186)
Included in deferred tax assets	**4,229**	16,778	10,143
Derivatives not eligible for cash flow hedging (net of tax)	**8,867**	27,290	11,994
Balance at the end of the period	**(8,317)**	(44,237)	(31,049)

Dividends

Dividends paid during the period were:	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
2017 final dividend of 39.5p per share (2016: 35.5p)	**28,752**	25,840	25,840
2017 interim dividend of 12.5p	**-**	-	9,099
Total dividends paid during the period	**28,752**	25,840	34,939

An interim dividend for 2018 of £10,190,396 (14.0p net per share) will be paid on 9th April 2018 to shareholders on the register on 9th March 2018, with an ex-div date of 8th March 2018.

Other reserve

The other reserve is in relation to additional investments in subsidiary undertakings.

Non-controlling interest

Movements during the period were:	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Balance at the beginning of the period	**(590)**	(3,162)	(3,162)
Acquisition of remaining shareholding in Renishaw Mayfield A.G.	**-**	2,700	2,700
Share of profit/(loss) for the period	**18**	(130)	(128)
Balance at the end of the period	**(572)**	(592)	(590)

Notes (continued)

11. Employee benefits

The Group operates a number of pension schemes throughout the world. The major scheme, which covers the UK-based employees, was of the defined benefit type. This scheme, along with the Ireland and USA defined benefit schemes, has ceased any future accrual for current members and all these schemes are now closed to new members. UK, Ireland and USA employees are now covered by defined contribution schemes.

The latest full actuarial valuation of the UK defined benefit scheme was carried out at September 2015 and updated to 31st December 2017 by a qualified independent actuary. The major assumptions used by the actuary were:

	At 31st December 2017	At 31st December 2016	At 30th June 2017
Discount rate	**2.6%**	2.9%	2.7%
Inflation rate - RPI	**3.5%**	3.7%	3.4%
Inflation rate - CPI	**2.5%**	2.7%	2.4%
Retirement age	**64**	64	64

The assets and liabilities in the defined benefit schemes were:

	At 31st December 2017 £'000	At 31st December 2016 £'000	At 30th June 2017 £'000
Market value of assets	**176,176**	165,641	170,708
Actuarial value of liabilities under IAS 19	**(224,493)**	(226,566)	(221,295)
	(48,317)	(60,925)	(50,587)
Increase in liability under IFRIC 14	**(19,500)**	(7,800)	(16,200)
Deficit in the schemes	**(67,817)**	(68,725)	(66,787)
Deferred tax thereon	**11,238**	12,860	11,024

The movements in the schemes' assets and liabilities were:

	6 months to 31st December 2017 £'000	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Balance at the beginning of the period	**(66,787)**	(67,823)	(67,823)
Contributions paid	**2,532**	2,415	4,204
Interest on pension schemes	**(654)**	(792)	(1,560)
Remeasurement gain/(loss) under IAS 19	**392**	(10,125)	(808)
Change in remeasurement loss under IFRIC 14	**(3,300)**	7,600	(800)
Balance at the end of the period	**(67,817)**	(68,725)	(66,787)

An agreement has been entered into with the trustees of the UK defined benefit pension scheme in relation to deficit funding plans which supersede the previous arrangements.

The Company has agreed to pay all monthly pensions payments and lump sum payments, and transfer payments up to a limit of £1,000,000 in each year (Benefits in Payment).

A number of UK properties owned by the Company are subject to registered fixed charges. One or more of the properties may be released from the fixed charge if on a subsequent valuation, the value of all properties under charge exceed 120% of the deficit.

The Company has also established an escrow bank account, which is subject to a registered floating charge. The balance of this account was £12,877,000 at the end of the period (December 2016: £15,317,000). The funds are being released back to the Company from the escrow account over a period of 6 years, which commenced in June 2017.

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Notes (continued)

11. Employee benefits (continued)

The agreement continues until 30th June 2031, but may end sooner if the deficit (calculated on a self-sufficiency basis as defined in the agreement) is eliminated in the meantime. At 30th June 2031 the Company is obliged to pay any deficit at that time. All properties will be released from charge when the deficit no longer exists.

The charges may be enforced by the trustees if one of the following occurs: (a) the Company does not pay any Benefits in Payment; (b) an insolvency event occurs in relation to the Company; or (c) the Company does not pay any deficit at 30th June 2031.

Under the Ireland defined benefit pension scheme deficit funding plan, a property owned by Renishaw (Ireland) Limited is subject to a registered fixed charge to secure the Ireland defined benefit pension scheme's deficit.

No scheme assets are invested in the Group's own equity.

The Company has given a guarantee relating to recovery plans for the UK defined benefit pension scheme. The value of the guarantee is greater than the value of the pension scheme's deficit. As such, in line with IFRIC 14, the UK defined benefit pension scheme's liabilities have been increased by £19,500,000, to represent the maximum discounted liability as at 31st December 2017 (2016: £7,800,000).

12. Restatement of previous first half year

The previous first half year's results have been restated for the following:

Certain foreign currency forward contracts used as hedging instruments did not qualify for hedge accounting as they did not meet the hedge effectiveness criteria set out in the International Accounting Standard IAS39 'Financial Instruments: Recognition and Measurement. To ensure technical compliance with this standard it has been deemed necessary to restate the 2017 interim financial statements resulting in a £10.9m reduction to the profit before tax for that period and a corresponding increase in other comprehensive income.

In June 2017, after an extensive review of the spatial measurements business, the Board decided to discontinue this line of business. This business has therefore been accounted for as a discontinued activity, with comparative figures for the previous year being restated accordingly.

The R&D tax credit, previously accounted for within administration expenses has been reclassified to be part of cost of sales.

Consolidated income statement	Previously reported £'000	Discontinued activities £'000	R&D tax credit £'000	Forward contracts £'000	Restated total £'000
Revenue	240,424	(4,055)	-	1,712	238,081
Cost of sales	(125,077)	2,738	1,100	-	(121,239)
Gross profit	115,347	(1,317)	1,100	1,712	116,842
Distribution costs	(56,156)	1,597	-	-	(54,559)
Administration costs	(23,623)	165	(1,100)	-	(24,558)
Loss from the fair value of financial instruments	-	-	-	(12,577)	(12,577)
Operating profit	35,568	445	-	(10,865)	25,148
Finance income and expenses	(744)	-	-	-	(744)
Share of profits of associated and joint ventures	870	-	-	-	870
Profit before tax	35,694	445	-	(10,865)	25,274
Income tax expense	(5,961)	(76)	-	2,064	(3,973)
Profit for the year from continuing operations	29,733	369	-	(8,801)	21,301
Loss for the year from discontinued operations	(3,503)	(369)	-	-	(3,872)
Profit for the year	26,230	-	-	(8,801)	17,429
Earnings per share from continuing operations (pence)	41.0	0.5	-	(12.1)	29.4

Notes (continued)

12. Restatement of previous first half year (continued)

Balance sheet	Currency hedging reserve £'000	Retained earnings £'000
Balance at 1st July 2015 as initially reported	17,171	402,559
Restatement of opening cash flow hedging reserve (a)	(2,386)	2,386
Profit for the year as initially reported	-	69,095
Remeasurement of defined benefit pension liability as reported	-	(17,388)
Changes in fair value of financial instruments as initially reported	(73,631)	-
Adjustment to the fair value of financial instruments (b)	20,875	(20,875)
Dividends paid as initialy reported	-	(33,847)
Restated balance at 30th June 2016	(37,971)	401,930
Balance at 30th June as initially reported	(56,460)	420,419
Adjustments (a) and (b) above	18,489	(18,489)
Restated balance at 30th June 2016	(37,971)	401,930
Balance at 31st December as initially reported	(71,527)	416,442
Adjustments (a) and (b) above	18,489	(18,489)
Changes in fair value of financial instruments as reported for period 1st July-31st December 2016	(15,067)	15,067
Adjustment to the fair value of financial instruments	23,868	(23,868)
Restated balance at 31st December 2016	(44,237)	389,152

13. Alternative performance measures

Alternative performance measures are - Revenue at constant exchange rates, Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit.

Revenue at constant exchange rates is defined as Revenue recalculated using the same rates as were applicable to the previous year and excluding forward contract gains and losses.

Revenue at constant exchange rates	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000
Statutory revenue as reported	**279,458**	238,081
Adjustment for forward contract losses	**11,569**	11,444
Adjustment to restate at previous year exchange rates	**7,365**	
Revenue at constant exchange rates	**298,392**	249,525

Adjusted profit before tax, Adjusted earnings per share and Adjusted operating profit - These measures are defined as the profit before tax, earnings per share and operating profit after excluding gains and losses in fair value from the forward currency contracts which did not qualify for hedge accounting.

The gains and losses from fair value of financial instruments not effective for cash flow hedging have been excluded from statutory profit before tax, statutory earnings per share and statutory operating profit in arriving at adjusted profit before tax, adjusted earnings per share and adjusted operating profit to reflect the Board's intent that the instruments would provide effective hedges.

The Board consider these alternative performance measures to be more relevant and reliable in evaluating the Group's performance.

The amounts shown below as reported in revenue represent the amount by which revenue would change had all the derivatives qualified as eligible for hedge accounting.

Notes (continued)

13. Alternative performance measures (continued)

Adjusted profit before tax	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Statutory profit before tax	**66,158**	25,274	117,101
Fair value (gains)/losses on financial instruments not eligible for hedge accounting:			
- reported in revenue	**(349)**	(1,712)	(11,623)
- reported in losses from the fair value of financial instruments	**(3,508)**	12,577	3,601
Adjusted profit before tax	**62,301**	36,139	109,079

Adjusted earnings per share	**6 months to 31st December 2017 pence**	6 months to 31st December 2016 pence	Year ended 30th June 2017 pence
Statutory earnings per share	**77.0**	29.4	141.3
Fair value (gains)/losses on financial instruments not eligible for hedge accounting:			
- reported in revenue	**(0.4)**	(1.9)	(12.9)
- reported in losses from the fair value of financial instruments	**(3.9)**	13.9	4.0
Adjusted earnings per share	**72.7**	41.4	132.4

Adjusted operating profit	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Statutory operating profit	**65,212**	25,148	116,755
Fair value (gains)/losses on financial instruments not eligible for hedge accounting:			
- reported in revenue	**(349)**	(1,712)	(11,623)
- reported in losses from the fair value of financial instruments	**(3,508)**	12,577	3,601
Adjusted operating profit	**61,355**	36,013	108,733

Adjustments to segmental operating profit:

Metrology	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Operating profit before gain/loss from fair value of financial instruments	**63,561**	43,632	126,830
Fair value (gains)/losses on financial instruments not eligible for hedge accounting:			
- reported in revenue	**(334)**	(1,599)	(10,921)
Adjusted metrology operating profit	**63,227**	42,033	115,909

Healthcare	**6 months to 31st December 2017 £'000**	6 months to 31st December 2016 £'000	Year ended 30th June 2017 £'000
Operating loss before gain/loss from fair value of financial instruments	**(1,857)**	(5,907)	(6,474)
Fair value (gains)/losses on financial instruments not eligible for hedge accounting:			
- reported in revenue	**(15)**	(113)	(702)
Adjusted healthcare operating profit	**(1,872)**	(6,020)	(7,176)

Notes (continued)

14. Deferred tax

Reductions in the UK rate of corporation tax to 19% from 1st April 2017 and 17% from 1st April 2020 have been substantively enacted. Deferred tax assets and liabilities have been calculated based on the rate expected to be applicable when the relevant items are expected to reverse.

15. Related party transactions

The only related party transactions which have taken place during the first half year were normal business transactions between the Group, its associates and joint ventures, which have not had a material effect on the results of the Group for this period.

16. Principal risks and uncertainties

As reported in the 2017 Annual report, the business implications of Brexit remain uncertain and any risks arising will be a key focus area for the Board and it's committees for the foreseeable future. Currency fluctuations, trading arrangements, employment issues, research and development project funding and other risks that become apparent over time are under review by the Board and mitigations are being put in place where possible.

Area of risk	Description	Potential impact	Mitigation
Current trading levels and order book	Revenue growth is unpredictable and orders from customers generally involve short lead-times with the outstanding order book at any time being around one month's worth of revenue value.	Global market conditions continue to highlight risks to growth and demand which can lead to fluctuating levels of revenue. Whilst global investment in production systems and processes is expected to expand, future growth is difficult to predict, especially with such a short-term order book. This limited forward order visibility leaves the annual revenue and profit forecasts uncertain.	• The Group is expanding and diversifying its product range in order to maintain a world-leading position in its sales of metrology products. Investment in sales and marketing resources continues in order to support the breadth of the product range. •The Group is applying its measurement expertise to grow its healthcare and additive manufacturing business activities. •The Group retains a strong balance sheet and has the ability to flex manufacturing resource levels and shift patterns.

Area of risk	Description	Potential impact	Mitigation
Research and development	The development of new products and processes involves risk, such as development timescales, meeting the required technical specification and the impact of alternative technology developments.	Being at the leading edge of new technology in metrology and healthcare, there are uncertainties whether new developments will provide an economic return.	•Patent and intellectual property generation is core to new product developments. •R&D programmes are regularly reviewed against milestones and, when necessary, projects are cancelled. •Medium to long-term R&D strategies are monitored regularly by both the Board and Executive Board, including reviews of the allocation of R&D resource to key projects. •Product development processes around the Group are reviewed and aligned where possible to provide consistency and efficiency. •New products involve beta testing at customers to ensure they will meet the needs of the market. •Market developments are closely monitored and customer requirements regularly reviewed.

Notes (continued)

16. Principal risks and uncertainties (continued)

Area of risk	Description	Potential impact	Mitigation
Regulatory legislation for healthcare products	The expansion of the Group's business into the healthcare markets involves a significantly increased requirement to obtain regulatory approval prior to the sale of these products.	Regulatory approval can be very expensive and time-consuming. This area is also very complex and there is a risk that the required approvals are not obtained.	• Specialist legal and regulatory staff support the healthcare business. • Experience of healthcare regulatory matters at board level. • Healthcare operations in UK and France have ISO13485 certification for their quality management systems, with Ireland and other subsidiary healthcare operations falling under the UK quality management system.
Defined benefit pension schemes	Investment returns and actuarial valuations of the defined benefit pension fund liabilities are subject to economic and social factors which are outside the control of the Group.	Volatility in investment returns and actuarial assumptions can significantly affect the defined benefit pension fund deficit, impacting on future funding requirements.	•The investment strategy is managed by the pension fund trustees who operate in line with a statement of investment principles and take appropriate independant professional advice when necessary. •A new recovery plan was agreed in June 2016 for the 2015 actuarial valuation based on funding to self-sufficiency.
Exchange rate fluctuations	Fluctuating foreign exchange rates may affect the results of the Group.	With 95% of revenue generated outside of the UK, there is an exposure to major currency fluctuations, mainly in respect of the US Dollar, Euro and Japanese Yen. Such fluctuations could adversely impact the results of the Group, and in particular the income statement.	•The Group enters into forward contracts in order to hedge varying proportions of forecast US Dollar, Euro and Japanese Yen revenue and other currencies from time to time. •Monthly board review of currency rates and hedging position.
	Note that the balance sheet hedging policy ceased in December 2017 as the Board now consider the balance sheet impact of currency movements to be low.		
Supply chain management	Customer deliveries may be threatened by either an external or internal failure in the supply chain.	Inability to meet customer deliveries could result in loss of revenue and profit.	•Production facilities are maintained with fire and flood risk in mind. •Critical production processes are replicated at different locations where practical. •The Group is highly vertically integrated, providing increased control over many aspects of the supply chain. •Ability to flex manufacturing resource levels and shift patterns. •Regular vendor reviews are performed for critical part suppliers. •Stock policies are reviewed by the Board on a regular basis. •Product quality is closely monitored.

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Notes (continued)

16. Principal risks and uncertainties (continued)

Area of risk	Description	Potential impact	Mitigation
Cyber security threats	For the Group to operate effectively it requires continuous access to timely and reliable information at all times. We seek to ensure continuous availability, security and operation of information systems. Cyber threats continue to increase.	Reduced service to customers due to a lack of reliable management information putting the Group at a competitive disadvantage. Delay or impact on decision making through lack of availability of sound data or disruption in/denial of services. Loss of commercially sensitive and/ or personal information leading to implications including reputational damage, claims or fines. Theft of commercial or sensitive information/data or fraud causing loss or disruption.	•There is substantial resilience and back up built into group systems. •Cyber risks and security is a regular topic for board discussions. •Internal penetration testing is utilised on an appropriates basis. •The Group operates central IT policies in all aspects of information security. •Regular monitoring of all group systems takes place with regular reporting and analysis. •Operating systems are continuously updated and refreshed in line with current threats. •The Group employs a number of physical, logical and control measures to protect its information and systems. •E-learning courses covering certain cyber threats were rolled out to all employees group wide during calendar year 2017 as well as management training.

Financial calendar

Record date for 2018 interim dividend	9th March 2018
2018 interim dividend payment	9th April 2018
Announcement of 2018 full year results	26th July 2018
Mailing of 2018 Annual report	Late August 2018
Annual general meeting	18th October 2018
2018 final dividend payment	23rd October 2018

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