Consolidated Financial Statements

Consolidated Statement of Comprehensive Income

Consolidated Statement of Income

in thousand euros	Note No.	1/1–31/12/2022	1/1–31/12/2021
Continuing operations			
Revenue	4.1	980,684	750,717
Cost of sales	4.2	634,982	493,814
Gross profit		**345,702**	**256,903**
Research and development expenses	4.3	54,610	38,886
Selling expenses		107,559	89,693
General administrative expenses		65,477	53,462
Other operating income	4.5	21,508	52,950
Other operating expenses	4.6	37,655	19,663
EBIT		**101,909**	**108,148**
Financial income	4.7	11,648	5,564
Financial expenses	4.7	17,604	11,164
Financial result		**−5,956**	**−5,600**
Earnings before tax from continuing operations		**95,954**	**102,548**
Income taxes	4.8	−32,103	−9,689
Earnings after tax from continuing operations		**63,851**	**92,859**
Discontinued operation			
Earnings after tax from discontinued operation	4.9	**−6,817**	**−8,520**
Group			
Earnings after tax		**57,034**	**84,339**
Results from non-controlling interests		1,933	2,341
Earnings attributable to shareholders	4.10	55,100	81,998
Earnings per share in euros (undiluted = diluted)	4.10	**0.96**	**1.43**
Earnings per share from continuing operations in euros (undiluted = diluted)		**1.08**	**1.58**

Consolidated Comprehensive Income

in thousand euros	Note No.	1/1–31/12/2022	1/1–31/12/2021
Earnings after tax		**57,034**	**84,339**
Items that will never be reclassified to profit or loss		**10,159**	**4,974**
Actuarial gains/losses from the valuation of pensions and similar obligations	5.12	10,152	4,977
thereof: income taxes		−2,951	−2,009
Equity instruments measured at fair value through other comprehensive income		7	−3
thereof: income taxes		0	−20
Items that are or may be reclassified to profit or loss		13,084	17,998
Cash flow hedges	8.2	1,229	−1,592
thereof: income taxes		−520	661
Foreign currency exchange differences	2.3	11,854	19,590
thereof: income taxes		−746	−1,424
Total other comprehensive income		**23,243**	**22,972**
Total comprehensive income		**80,276**	**107,311**
Thereof attributable to:			
Non-controlling interests		1,828	2,965
Shareholders		78,448	104,346

Consolidated Statement of Financial Position

Assets in thousand euros	Note no.	31/12/2022	31/12/2021
Non-current assets		**1,128,455**	**1,110,770**
Intangible assets	5.1	730,642	753,247
Property, plant and equipment	5.2/5.3	324,606	266,656
Investment property		3,592	3,638
Investments accounted for using the equity method	5.4	14,310	14,328
Financial investments		2,754	2,987
Other non-current assets	5.5	13,729	6,555
Deferred tax assets	4.8	38,822	63,360
Current assets		**543,309**	**646,271**
Inventories	5.6	255,950	200,213
Current trade receivables	5.7	138,769	120,475
Contract assets	5.8	58,096	81,414
Other current financial assets	5.9	13,423	19,582
Other current non-financial assets	5.10	19,265	11,439
Current financial investments		1,048	1,555
Cash and cash equivalents		56,758	54,817
Assets held for sale	4.9	0	156,777
Total assets		**1,671,765**	**1,757,041**

Equity and liabilities in thousand euros	Note no.	31/12/2022	31/12/2021
Equity	5.11	**843,307**	**780,659**
Share capital		148,819	148,819
Capital reserve		194,286	194,286
Other reserves		488,846	424,705
Non-controlling interests		11,356	12,849
Non-current liabilities		**518,959**	**503,102**
Pension provisions	5.12	4.262	9,379
Other non-current provisions	5.13	17,043	17,886
Non-current financial debt	8.1/8.2	477,729	448,746
Other non-current liabilities		3,863	2,350
Deferred tax liabilities	4.8	16,062	24,741
Current liabilities		**309,499**	**473,279**
Tax provisions		10,921	6,949
Other current provisions	5.13	43,887	39,907
Current financial debt	8.1/8.2	59,052	148,993
Current trade payables		100,600	94,221
Contract liabilities	5.8	64,856	47,323
Other current financial liabilities	5.15	10,306	22,023
Other current non-financial liabilities	5.16	19,876	20,249
Liabilities related to assets held for sale	4.9	0	93,613
Total equity and liabilities		**1,671,765**	**1,757,041**

Consolidated Statement of Cash Flows

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Earnings before tax from continuing operations	95,954	102,548
Earnings before tax from discontinued operation	−5,342	−8,230
Earnings before tax	**90,612**	**94,318**
Financial income and expenses	6,371	6,370
Depreciation and amortization	68,265	54,179
Impairment losses and reversals of impairment losses from non-current assets [1]	13,894	22,357
Profit/loss from disposals of non-current assets, subsidiaries and other business units	4,893	−3,858
Profit/loss from fair value adjustment of conditional purchase price components attributable to business combinations	1,100	−30,509
Other non-cash income/expenses	−613	−2,158
Dividend received from investments accounted for using the equity method	720	0
Change in provisions	−511	1,638
Change in working capital	−20,809	−35,786
Change in other assets and liabilities	−6,453	1,720
Cash flows from operating activities before income tax payments	**157,469**	**108,271**
Income tax payments	−14,761	−10,237
Cash flows from operating activities	**142,707**	**98,034**
Capital expenditure for intangible assets	−14,784	−15,934
Proceeds from sale of property, plant and equipment	1,380	686
Capital expenditure for property, plant and equipment	−64,466	−30,229
Sale of subsidiaries and other business units less cash sold	63,166	7,586
Acquisition of consolidated entities less acquired cash	713	−379,963
Proceeds from sale of financial assets within the framework of short-term disposition	1,547	197
Capital expenditure for financial assets within the framework of short-term disposition	−1,107	−1,564
Proceeds from other financial investments	36	6,036
Capital expenditure for other financial investments and investment properties	−132	−619
Interest received and other income	233	184
Cash flows from investing activities	**−13,415**	**−413,621**
Dividend to shareholders of the parent company	−14,310	−14,310
Dividend to non-controlling interests	−3,298	−1,749
Proceeds from additions of financial liabilities	126,197	548,559
Repayments of loans	−206,783	−208,088
Payments for leases	−14,639	−13,732
Change in group financing	−3,949	945
Interest paid and other expenses	−10,544	−7,420
Cash flows from financing activities	**−127,325**	**304,205**
Cash-effective change in cash and cash equivalents	**1,967**	**−11,383**
Less cash and cash equivalents from discontinued operation	46	−46
Change in cash and cash equivalents from foreign currency effects	36	2,871
Changes in cash and cash equivalents from first-time consolidation and valuation	−108	−30
Cash and cash equivalents at the beginning of the period	54,817	63,405
Cash and cash equivalents at the end of the period	**56,758**	**54,817**

[1] Including impairment loss from remeasurement at fair value less costs to sell in accordance with IFRS 5

Statement of Changes in Equity

in thousand euros	Note no.	Share capital	Capital reserve	Retained earnings	Equity instruments measured through other comprehensive income
Balance at 1/1/2021		**148,819**	**194,286**	**359,196**	**−83**
Net profit for the period	4.10			81,998	
Other comprehensive income after tax	2.3/5.11/5.12/8.2				−3
Total comprehensive income				**81,998**	**−3**
Transactions with owners (dividend)				−14,310	
Transfer of actuarial effects to retained earnings				−257	
Balance at 31/12/2021		**148,819**	**194,286**	**426,627**	**−86**
Balance at 1/1/2022		**148,819**	**194,286**	**426,627**	**−86**
Net profit for the period	4.10			55,100	
Other comprehensive income after tax	2.3/5.11/5.12/8.2				7
Total comprehensive income				**55,100**	**7**
Transactions with owners (dividend)				−14,310	
Transfer of actuarial effects and revaluation surplus for equity instruments to retained earnings				−11,560	79
Balance at 31/12/2022		**148,819**	**194,286**	**455,858**	**0**

Cash flow hedges	Cumulative exchange differences	Actuarial effects	Equity attributable to shareholders of JENOPTIK AG	Non-controlling interests	Total	
897	**−1,918**	**−23,423**	**677,774**	**11,617**	**689,391**	**Balance at 1/1/2021**
			81,998	2,341	84,339	Net profit for the period
−1,557	18,562	5,346	22,348	624	22,972	Other comprehensive income after tax
−1,557	**18,562**	**5,346**	**104,346**	**2,965**	**107,311**	**Total comprehensive income**
			−14,310	−1,733	−16,043	Transactions with owners (dividend)
		257	0		0	Transfer of actuarial effects to retained earnings
−659	**16,644**	**−17,820**	**767,811**	**12,849**	**780,659**	**Balance at 31/12/2021**
−659	**16,644**	**−17,820**	**767,811**	**12,849**	**780,659**	**Balance at 1/1/2022**
			55,100	1,933	57,034	Net profit for the period
1,229	11,961	10,152	23,349	−106	23,243	Other comprehensive income after tax
1,229	**11,961**	**10,152**	**78,449**	**1,828**	**80,277**	**Total comprehensive income**
			−14,310	−3,320	−17,630	Transactions with owners (dividend)
		11,482	0		0	Transfer of actuarial effects and revaluation surplus for equity instruments to retained earnings
570	**28,605**	**3,813**	**831,951**	**11,356**	**843,307**	**Balance at 31/12/2022**

153 – 218 Consolidated Financial Statements

Notes

1 Presentation of the Group Structure

1.1 Parent company

The parent company is JENOPTIK AG, Jena, Germany, and is registered in the Commercial Register of Jena in Department B under the number 200146. JENOPTIK AG is listed on the German Stock Exchange in Frankfurt and traded on the TecDax and since 20th of March 2023 on the MDAX (before: SDax), amongst others.

The list of shareholdings is published in the Federal Gazette in accordance with § 313 (2) Nos. 1 to 4 of the German Commercial Code (Handelsgesetzbuch [HGB]) and is disclosed in the Notes under the heading "List of Shareholdings of the Jenoptik Group". The entities to which the simplification relief regulations were applied as specified in § 264 (3) or § 264b of the HGB, are disclosed in the section "Other Required and Supplementary Disclosures under HGB".

1.2 Accounting principles

Jenoptik is an international technology group. The consolidated financial statements of JENOPTIK AG were prepared for the fiscal year 2022 in accordance with the International Financial Reporting Standards (IFRS) and the binding interpretations of the International Financial Reporting Interpretations Committee (IFRIC) in force at the reporting date for use in the European Union as well as the regulations under commercial law in accordance with § 315e (1) of the HGB which apply on a supplementary basis.

The consolidated financial statements were presented in euros. Unless otherwise specified, all amounts are presented in thousand euros. Please note that there may be rounding differences compared to the mathematically exact amounts (monetary units, percentages, etc.). The consolidated income statement was prepared in accordance with the cost of sales method.

The fiscal year of JENOPTIK AG and of its subsidiaries included in the consolidated financial statements corresponds with the calendar year.

To improve the clarity of the presentation, individual items were aggregated in the consolidated statement of comprehensive income and the statement of financial position. The classifications used for these items are listed in the Notes.

Change in accounting principles

The following IFRS were applied for the first time in the consolidated financial statements in the fiscal year 2022:

Standard/Interpretation		Published by the IASB	Application mandatory	Adopted by the EU	Effects
IFRS 1	Changes in respect of subsidiaries as first-time adopters	14/05/2020	01/01/2022	Yes	No effects
IFRS 3	Updating of references to the conceptual framework	02/07/2021	01/01/2022	Yes	No effects
IFRS 9	Fees in the '10 percent' test for derecognition of financial liabilities	14/05/2020	01/01/2022	Yes	No effects
IAS 16	Proceeds before intended use	14/05/2020	01/01/2022	Yes	No effects
IAS 37	Costs of fulfilling a contract	02/07/2021	01/01/2022	Yes	No effects as clarification already complies with Jenoptik's accounting practice
IAS 41	Taxation in fair value measurements	14/05/2020	01/01/2022	Yes	No effects as not applicable to the Group

Standards which have been published but not yet adopted as mandatory

The application of the following amendments to standards published by the IASB is not yet mandatory and these were not taken into account by Jenoptik in the consolidated financial statements as of December 31, 2022. The Group has no plans to make use of the early adoption of these standards.

Standard/Interpretation		Published by the IASB	Application mandatory	Adopted by the EU	Anticipated effects
IAS 1	Disclosure of accounting methods	12/02/2021	01/01/2023	Yes	Amendment to corresponding disclosures in the notes, in particular dispensing with the replication of statutory provisions
IAS 1	Classification of liabilities as current or non-current with constraints	23/01/2020 / 31/10/2022	01/01/2024	No	Amendment to the classification of liabilities and reclassification
IAS 8	Definition of accounting-related estimates	12/02/2021	01/01/2023	Yes	No significant effects
IAS 12	Deferred taxes relating to assets and liabilities resulting from one single business transaction (leases and decommissioning obligations)	07/05/2021	01/01/2023	Yes	No effects
IFRS 16	Change in lease liabilities in a sale-and-leaseback transaction	22/09/2022	01/01/2024	No	No significant effects
IFRS 17	Insurance contracts including changes to IFRS 17	18/05/2017	01/01/2023	Yes	No effects as not applicable to the Group

1.3 Assumptions and estimates

The preparation of the consolidated financial statements in accordance with IFRS, as are to be applied in the EU, requires that assumptions are made for certain items, affecting their recognition in the consolidated statement of financial position or in the consolidated statement of comprehensive income, as well as the disclosure of contingent receivables and liabilities. All assumptions and estimates are made to the best of the Group's knowledge and belief and aim to provide a true and fair picture of the asset, financial and earnings situation of the Group.

The underlying assumptions and estimates are continually reviewed. This gives the author of the consolidated financial statements a certain amount of discretionary leeway. Against the background of the macroeconomic and geopolitical environment, such as the ongoing Russian war against Ukraine, there are currently increased uncertainties with regard to estimates and forecasts (e.g. concerning the supply and movement of prices of energy and raw materials) and consequently risks in terms of significant adjustments to carrying amounts.

There are no significant climate-related risks to the Group's business activities. The underlying assumptions and estimates take into account the potential effects of climate change where necessary, for example in the forecast of future cash flows in the Non-Photonic Portfolio Companies and for sustainable investments in other divisions.

The assumptions and estimates made for the preparation of these consolidated financial statements relate mainly to:

- the assumptions and parameters for the valuation of intangible assets identified in the context of purchase price allocations (see section "Acquisitions and sales of entities")
- the valuation of contingent purchase price components arising from business combinations and disposals (see sections "Discontinued operation" and "Financial instruments"),
- the realizability of future tax breaks – in particular arising from losses carried forward – in the valuation of deferred tax assets (see section "Income taxes"),
- the assessment of impairment of goodwill, also taking into account the current uncertainties regarding forecasts (see section "Intangible assets"),
- the assessment of impairment of non-current assets in accordance with IAS 36, in particular with regard to the forecast cash flows in (see section "Impairment of property, plant, and equipment and intangible assets"),
- the actuarial parameters used to measure provisions for pensions and similar obligations (see section "Pension provisions"), and
- the determination of the fair value for the measurement of non-current assets or disposal groups and discontinued operations held for sale in the prior year, as well as the measurement of economically retained risks after closing (see section "Discontinued operation").

2 Consolidation Principles

2.1 The Group of consolidated entities

Along with JENOPTIK AG, all significant subsidiaries have been included fully in the consolidated financial statements. The list of shareholdings is shown in the Notes in the section "List of shareholdings in the Jenoptik Group".

The consolidated financial statements of JENOPTIK AG includes 39 (prior year: 47) fully consolidated subsidiaries. Of which 7 (prior year: 12) have their legal seat in Germany and 32 (prior year: 35) have theirs abroad. In addition to the changes presented in the "Acquisitions and sales of entities" section, the decline results from intra-group mergers and the liquidation or deconsolidation of companies that are no longer operational. 3 entities (prior year: 3) will continue to be included in the consolidated financial statements based on the equity method.

The subsidiaries in the table below have material investments held by non-controlling shareholders: Additional entities have insignificant investments held by non-controlling shareholders. The corresponding minority investments can be seen in the List of shareholdings.

Name	Registered office	Non-controlling Interests
Trioptics Optical Test Instruments (China) Ltd.	China	49.00
Trioptics Hong Kong Limited (via Trioptics China)	Hong Kong	49.00

The following table summarizes the financial information of subsidiaries with significant investments based on their individual financial statements including IFRS adjustments and impacts arising from the purchase price allocation. Impacts of the consolidation were not taken into account.

in thousand euros	Trioptics China	Trioptics Hong Kong
Revenue	15,069 (22,034)	17,617 (15,106)
Earnings after tax	6,074 (4,171)	328 (2,072)
Other comprehensive income	−429 (649)	547 (450)
Total comprehensive income	5.644 (4.821)	874 (2,522)
Non-current assets	1,465 (1,824)	2,252 (2,840)
Current assets	16,819 (11,886)	8,374 (9,225)
Non-current liabilities	632 (813)	372 (470)
Current liabilities	9,699 (5,669)	6,356 (4,544)
Net assets	7,953 (7,228)	3,899 (7,051)
Cash flows from operating activities	8,339 (6,872)	1,477 (3,981)
Cash flows from investing activities	−402 (42)	−39 (0)
Cash flows from financing activities	−2,616 (−2,425)	−4,027 (−1,987)

The figures in brackets relate to the prior year

2.2 Consolidation procedures

The assets and liabilities of the domestic and foreign entities included fully in the consolidated financial statements are recognized in accordance with the uniform accounting policies and valuation methods applicable for the Jenoptik Group.

At the acquisition date, the capital consolidation is based on the acquisition method. In this context, the assets and liabilities of the subsidiaries are recognized at fair values. Furthermore, identifiable intangible assets are capitalized, and specific contingent liabilities classified as liabilities. The remaining difference between the consideration transferred, including the fair value of contingent considerations and the net assets acquired, corresponds to the goodwill. This is subject to an annual impairment test in the subsequent periods in accordance with IAS 36.

Intra-group assets and liabilities, income, and expenses, as well as cash flows from transactions between consolidated companies, are eliminated. Intra-group goods and services are delivered and rendered both based on market prices as well as transfer prices which are determined based on the “dealing-at-arm’s-length” principle. Assets from intra-group deliveries included in the inventories and property, plant, and equipment, are adjusted by interim results. Consolidation procedures recognized as profit or loss are subject to the delimitation of deferred taxes, with deferred tax assets and deferred tax liabilities being netted if there is a legally enforceable right to offset current tax refund claims against current tax liabilities and only if they concern income taxes levied by the same tax authority.

In the event of loss of control of a subsidiary, the assets and liabilities of the subsidiary are derecognized (deconsolidation) and any resulting gain or loss is taken into account in the income statement.

There was no change in the consolidation methods compared to the prior year.

2.3 Foreign currency conversion

Annual financial statements of the consolidated entities prepared in foreign currencies are converted on the basis of the functional currency concept as defined in IAS 21 “The Effects of Changes in Foreign Exchange Rates” by using the modified reporting date exchange rate method. Since the subsidiaries conduct their business activities independently from the financial, economic and organizational aspects, the functional currency of the entities is generally identical to that of their respective national currency.

Assets and liabilities are consequently converted at the exchange rate on the reporting date, whereas income and expenses are converted at the annual average exchange rate which is determined on a monthly basis. The resulting difference arising from the currency conversion is offset outside of profit or loss and shown separately in equity under foreign currency exchange differences.

If a consolidated entity leaves the group of consolidated entities, the corresponding difference arising from the foreign currency conversion is reversed through profit or loss.

Receivables and payables in the individual financial statements of consolidated entities prepared in a local currency which is not the functional currency of the subsidiary, are converted at the exchange rate on the qualifying date in accordance with IAS 21. Differences arising from the foreign currency conversion are shown under other operating income or other operating expenses affecting the results and, if these are derived from financial transactions, are recognized under financial income or financial expenses (see details on the Income Statement). This excludes currency exchange differences arising from loans which constitute a part of the net investment in a foreign operation. These differences from foreign currency conversions are recorded in other comprehensive income outside of profit or loss until the sale of the net investment; it is only at the time of their disposal that the cumulative amount is reclassified into the income statement.

The exchange rates used for the conversion are shown in the table below:

		Annual average exchange rate		Exchange rate on the reporting date	
	1 euro =	1/1-31/12/2022	1/1-31/12/2021	31/12/2022	31/12/2021
Australia	AUD	1.5174	1.5747	1.5693	1.5615
Canada	CAD	1.3703	1.4835	1.4440	1.4393
Swiss	CHF	1.0052	1.0814	0.9847	1.0331
China	CNY	7.0801	7.6340	7.3582	7.1947
Great Britain	GBP	0.8526	0.8600	0.8869	0.8403
Hong Kong	HKD	8.2512	9.1988	8.3163	8.8333
India	INR	82.7145	87.4861	88.1710	84.2292
Japan	JPY	138.0051	129.8575	140.6600	130.3800
Korea	KRW	1,358.0712	1,353.9456	1,344.0900	1,346.3800
Malaysia	MYR	4.6292	4.9026	4.6984	4.7184
Singapore	SGD	1.4520	1.5896	1.4300	1.5279
Taiwan	TWD	31.3227	33.0346	32.7235	31.5030
USA	USD	1.0539	1.1835	1.0666	1.1326

2.4 Acquisitions and sales of entities

Corporate acquisitions in the prior year

Acquisition of BG Medical Applications GmbH and the SwissOptic Group

With the closing on November 30, 2021, JENOPTIK AG, via JENOPTIK Optical Systems GmbH and JENOPTIK Asia-Pacific Pte. Ltd., acquired 100 percent of the shares in the following entities respectively:

- BG Medical Applications GmbH, Berlin, Germany
- SwissOptic AG, Heerbrugg, Switzerland
- SwissOptic (Wuhan) Co., Ltd., Wuhan, China

With the acquisition of SwissOptic (Wuhan) Co., Ltd., Jenoptik also acquired control of its subsidiary Berliner Glas Wuhan Trading Co., Ltd., Wuhan, China.

With this acquisition, Jenoptik is strengthening its global and fast-growing photonics business and, in addition to the semiconductor equipment business, is significantly expanding its medical technology business in particular.

The inclusion in the consolidated financial statements as of December 31, 2021 was based on preliminary amounts, as the determination of the final purchase price, the valuation of the net assets of the companies and the assets identified as part of the purchase price allocation, had not yet been completed at the time the consolidated financial statements were prepared. The first-time consolidation was finalized as of November 30, 2022.

The payment of the provisional purchase price in the sum of 326,454 thousand euros was made in November 2021. As of December 31, 2021, a purchase price of 322,636 thousand euros was determined on the basis of preliminary closing accounts and a receivable of 3,818 thousand euros was capitalized. With finalizing the closing accounts, agreement was reached in the 1st half-year 2022 on the final purchase price of 324,454 thousand euros, which comprises exclusively a fixed cash component. The resultant refund claim in the sum of 2,000 thousand euros was settled in the 2nd half-year 2022. The determination of the final purchase price as well as the final purchase price allocation resulted in a reduction in goodwill of 2,183 thousand euros. Taking into account the acquired cash and cash equivalents, this resulted in a cash outflow of 310,552 thousand euros.

With regard to the acquisition date, the finalization of the first-time consolidation led to the following overall adjustments:

in thousand euros	provisional	adjustment	final
Non-current assets	**133,286**	**3,497**	**136,784**
Intangible assets	98,520	4,737	103,256
Property, plant, and equipment	34,176	−1,239	32,936
Deferred tax assets	591	0	591
Current assets	**70,037**	**1,542**	**71,579**
Inventories	34,042	−2,947	31,095
Trade receivables	20,662	0	20,662
Contract assets	0	4,488	4,488
Other current assets	1,431	0	1,431
Cash and cash equivalents	13,902	0	13,902
Assets	**203,324**	**5,039**	**208,362**
Non-current liabilities	**26,972**	**1,038**	**28,009**
Pension provisions	4,019	0	4,019
Financial liabilities	4,396	0	4,396
Deferred tax liabilities	17,866	1,038	18,903
Other non-current liabilities	692	0	692
Current liabilities	**31,921**	**0**	**31,921**
Other current provisions	7,039	0	7,039
Financial liabilities	5,463	0	5,463
Trade accounts payable	11,182	0	11,182
Contract liabilities	3,358	0	3,358
Other current liabilities	4,879	0	4,879
Liabilities	**58,893**	**1,038**	**59,930**
Total identifiable net assets as of the acquisition date	**144,431**	**4,001**	**148,432**
Goodwill	178,205	−2,183	176,022
Purchase price	**322,636**	**1,818**	**324,454**

For materiality reasons, no adjustment or revision of the comparative period as of December 31, 2021 was made.

In connection with the acquisition of shares in BG Medical and the SwissOptic Group, in addition to the revaluation of inventories, in particular customer relationships, the order backlog and a brand were identified as intangible assets as part of the purchase price allocation. The intangible assets are amortized over periods of between one month and 15 years. In addition, goodwill in the sum of 176,022 thousand euros was reported in intangible assets reflecting the acquisition of trained personnel and the synergy effects primarily in the areas of purchasing, research & development, and capacity optimization via the Wuhan site. The goodwill is allocated to the group of cash-generating units "Advanced Photonic Solutions" and is partially tax-deductible.

Costs in connection with the acquisition of BG Medical and the SwissOptic Group totaled 6,369 thousand euros in 2021 and were reported under other operating expenses.

The consolidated financial statements 2021 included revenues of 9,619 thousand euros and earnings after tax of minus 1,126 thousand euros from the inclusion of BG Medical and the SwissOptic Group. Earnings after tax included costs from the scheduled amortization on the intangible assets identified within the framework of the allocation of the purchase price. Impacts on profit or loss arising from finalization of the first-time consolidation for the period from the acquisition date to December 31, 2021 were not material, so that no adjustment of the comparative period was made.

Under the assumption that the corporate acquisition would have already taken place as of January 1, 2021, the continuing operations would have shown revenue of 864,848 thousand euros and earnings after tax of 94,554 thousand euros. In order to determine this information, it was assumed that the fair values and useful lives of the intangible assets identified in the context of the allocation of the purchase price as of January 1, 2021, are identical to those as at the first-time consolidation date. These proforma figures were determined solely for comparison purposes. They do not provide either a reliable indication either of the operating results that would have been achieved if the acquisition had been made at the beginning of the period, or of future results.

Disinvestments

On November 25, 2021 Jenoptik signed a contract to sell VINCORION, consisting of the wholly-owned subsidiaries JENOPTIK Advanced Systems GmbH (Germany; now operating as VINCORION Advanced Systems GmbH), JENOPTIK Power Systems GmbH (Germany; now operating as VINCORION Power Systems GmbH), and JENOPTIK Advanced Systems, LLC (USA, now operating as VINCORION LLC).

With the conclusion of the binding purchase agreement, the VINCORION business division was classified as discontinued operation and the assets and liabilities as of December 31, 2021 reported as held for sale.

On the transaction closing date of June 30, 2022, Jenoptik lost control over these subsidiaries and deconsolidated them.

Detailed information on the discontinued operation is provided in the section "Discontinued operation".

Disinvestments in the prior year

At the beginning of July 2021 Jenoptik concluded an agreement for the sale of the crystal growth business to Hellma Materials GmbH. The closing date was August 31, 2021.

In July 2021, Jenoptik reported the sale of its non-optical process metrology business for grinding machines to Marposs. The closing date was July 30, 2021. As part of the sale, all shares in JENOPTIK Industrial Metrology Switzerland SA, Peseux, Switzerland, were also sold.

3 Accounting Policies and Valuation Methods

3.1 Effects on accounting and valuations associated with Covid-19 and the Ukraine war

In view of the ongoing impact of the Covid-19 pandemic and the sanctions associated with the war in Ukraine on the operating activities of the Jenoptik companies, an ongoing analysis was conducted of the potential effects on the statement of financial position and the consequences for the group asset, financial and earnings position.

The Covid-19 pandemic and the war in Ukraine have had an operational impact on Jenoptik's earnings situation, in particular due to restrictions in mobility and global supply chains as well as noticeable effects on purchase prices, in particular energy prices. This is particularly evident in the build-up of inventories to secure business operations, pandemic-related delays in the supply of components and the resulting time shifts in revenue recognition respectively project postponements.

Further explanations of accounting and valuation effects are contained in the respective disclosures in the income statement and statement of financial position.

3.2 Goodwill

Goodwill as stated in IFRS 3 corresponds to the positive difference between the consideration for a corporate merger and the newly acquired, revalued assets and liabilities, including certain contingent liabilities remaining after a purchase price has been allocated. Within the framework of this purchase price allocation, the identifiable assets and liabilities are not recognized at their previous carrying amounts but at their fair values.
As part of the gaining of control over the acquired entity, non-controlling interests are valued according to the share of identifiable net assets.

Goodwill is recognized as an asset and subject to an impairment test at least once a year on a defined date or whenever there is an indication that the cash-generating unit could be impaired. An impairment loss to goodwill is recognized immediately through profit or loss and not reversed in later reporting periods.

3.3 Intangible assets

Intangible assets acquired in return for payment, primarily patents, trademarks, software and customer relationships, are capitalized at their acquisition costs. Intangible assets with finite useful lives are subject to scheduled amortization on a straight-line basis over their economic useful lives. This is generally a period of between three and fifteen years. The Group reviews whether its intangible assets with a limited useful life have suffered an impairment loss (see section "Impairment losses on property, plant, and equipment and intangible assets").

Internally generated intangible assets are capitalized if the recognition criteria specified in IAS 38 "Intangible assets" have been fulfilled.

Development costs are capitalized if a newly developed product or process can be clearly identified, is technically realizable and if there are plans for production, own use, or marketing. Furthermore, it is assumed that, if capitalized, there is sufficient probability that the development costs will be covered by future financial cash inflows and can be reliably determined. Finally, there must be adequate resources available to conclude the development and enable the asset to be used or sold.

Internally generated patents are subject to scheduled amortization on a straight-line basis over their anticipated useful lives. This is generally a period of between five and ten years.

Intangible assets not ready for use are subject to impairment tests at least on an annual basis (see section "Impairments of property, plant and equipment and intangible assets"). Capitalized development expenses are subject to scheduled amortization over the anticipated sales period of the products – in principle however no longer than five years. In this context, the acquisition and production costs cover all the costs directly attributable to the development process as well as appropriate portions of the overheads relating to the development. If the requirements for capitalization have not been fulfilled, the expenditures are recognized through profit or loss in the year they occurred.

Amortization of intangible assets is apportioned based on the causer principle to the corresponding function areas in the income statement.

Research expenses are recorded as current expenses in research and development expenses in accordance with IAS 38.

3.4 Property, plant, and equipment

Property, plant, and equipment are valued at acquisition and production cost, less scheduled, straight-line depreciation. The depreciation method reflects the anticipated pattern of consumption of the future economic benefits. If the acquisition cost of individual components of an asset is material (particularly in the case of buildings), the depreciation is applied separately for each part of the property, plant, and equipment. Where necessary, impairment losses reduce the amortized acquisition and production cost. In principle, government grants for non-current assets are deducted from the acquisition and production costs in accordance with IAS 20 "Accounting for and Presentation of government grants" (see section entitled "Government grants"). Production costs are calculated based on directly attributable specific costs as well as proportionate, directly attributable cost of materials and production overheads including depreciation. In accordance with IAS 23 "Borrowing Costs", borrowing costs directly attributable to acquisition or production costs of a qualifying asset are capitalized as a portion of the acquisition or production costs.

Costs incurred for repairing property, plant, and equipment are generally treated as an expense. Subsequent acquisition costs for any components of property, plant, and equipment replaced at regular intervals, can be capitalized insofar as future economic benefits can be reasonably expected and the respective costs can be reliably measured.

Scheduled depreciation, unchanged from the prior year, is essentially based on the following useful lives:

	Useful life
Buildings	12–80 years
Machinery and technical systems	5–15 years
Other equipment, operating, and office equipment	3–15 years

If any items of property, plant, and equipment are decommissioned, sold, or relinquished, the gain or loss arising from the difference between the proceeds of the sale and the residual carrying amount are recorded under other operating income or other operating expenses.

3.5 Impairment of property, plant, and equipment and intangible assets

Property, plant, and equipment and intangible assets with finite useful lives are assessed at each reporting date to see if there are any indications of possible impairment losses for the corresponding assets in accordance with IAS 36 "Impairment of Assets". If any such indications for specific assets or a cash-generating unit are identified, these will be subject to an impairment test.

The cash-generating unit for the impairment test of property, plant, and equipment and intangible assets is generally the reporting unit. Goodwill is tested for impairment at the level of a group of cash-generating units represented by the respective segment.

As part of the impairment test, the recoverable amount of an asset or cash-generating unit is first determined and then compared with the corresponding carrying amount in order to identify whether there is any need for an impairment to be applied.

The recoverable amount is the higher of an asset's fair value less costs to sell and value in use of an asset or a cash-generating unit.

The amount designated as at fair value less costs to sell is that which could be achieved through the sale of an asset in a transaction at arm's length between knowledgeable and willing parties.

Value in use is determined based on discounted anticipated future cash inflows. This is based on a fair market interest rate before tax that reflects the risks of using the assets that are not yet considered in the estimated future cash inflows.

If the recoverable amount of an asset is estimated to be less than the carrying amount, it is then depreciated to the recoverable amount. The impairment losses are immediately shown in other operating expenses, affecting profit or loss.

If an impairment loss is reversed in a subsequent accounting period, the carrying amount of the asset must then be adjusted to the recoverable amount determined. The maximum limit for the reversal of an impairment loss is determined by the amount of the amortized acquisition or production costs that would have been recorded if an impairment loss had not been recognized in prior periods. The impairment loss reversal is immediately shown in other operating income, affecting profit or loss.

3.6 Government grants

IAS 20 distinguishes between grants related to acquiring non-current assets and grants related to income.

In general, IAS 20 states that grants are to be accounted for through profit or loss in the same period as the relevant expenses.

In the Jenoptik Group grants for non-current assets are deducted from the acquisition and production costs. Correspondingly, the amounts to be written off are determined based on the reduced acquisition and production costs.

3.7 Leases

On commencement of contract, the Group assesses whether a contract constitutes or contains a lease. This is the case if the contract provides the entitlement to control the use of an identified asset in return for payment of a remuneration for a specific period. As a lessee, Jenoptik basically accounts for the rights of use of the lease items and the corresponding lease liabilities in accordance with IFRS 16.

Rights of use are valued at acquisition costs less all accumulated depreciation. The acquisition costs include the recognized lease liabilities, the initial direct costs incurred as well as the lease payments made at or before provision. Rights of use are subject to planned, straight-line depreciation over the shorter of the two periods of duration and anticipated useful life and for real estate class assets amount to one to 25 years and for machinery, technical equipment as well as other equipment, operating and office equipment class assets, one to five years. The rights of use are recognized in the statement of financial position item under which the underlying asset would be recognized if it were the property of the Group.

Lease liabilities are recognized at current value. These entail fixed payments, variable lease payments linked to an index or interest rate, payments arising from a contractually guaranteed residual value, payments from the exercising of renewal or purchase options deemed to be sufficiently secure and contractual penalties for the exercising of sufficiently secure termination options.

When calculating the current value of the lease payments, the Group applies its incremental borrowing rate on the date of provision if the interest rate underlying the lease cannot be readily determined. The Group's lease liabilities are shown in the items "Non-current financial debt" and "Current financial debt".

The Group makes use of the practical expedients offered by IFRS 16 and recognizes the lease payments for short-term leases (excluding property) as well as low-value leased assets as expenses on a straight-line basis over the term of the lease.

3.8 Investment property

Investment property comprises plots of land and buildings held for gaining rental income or for the purpose of their value increasing. These properties are not held for the Group's own production, for supplying goods or rendering services, for administration purposes or for any sales in the ordinary course of business activities.

In accordance with the right of choice under IAS 40 "Investment property", such assets are to be accounted for at the amortized acquisition or production costs. The fair values to be stated are determined using the discounted cash flow method.

The straight-line depreciation method is based on a useful life of between 20 to 80 years.

In accordance with IAS 36, depreciation resulting from impairment losses on investment property is applied if the value in use or fair value less costs to sell of the respective asset is less than the carrying amount. If the reasons for an impairment loss resulting from depreciation from a prior period cease to exist, corresponding write ups are recorded. The maximum limit for the reversal of an impairment loss is determined by the amount of the amortized acquisition or production costs that would have been recorded if an impairment loss had not been recognized in prior periods.

3.9 Financial instruments

Financial instruments are contracts giving rise to a financial asset of one entity and to a financial liability or an equity instrument of another entity. As defined in IAS 32, such instruments include on the one side primary financial instruments such as trade receivables and trade payables or financial receivables and financial payables. On the other side, they also include derivative financial instruments which are used for hedging risks arising from fluctuations in interest and foreign currency exchange rates.

Financial assets and financial liabilities are recognized in the consolidated statement of financial position from the date on which the Group becomes a contractual party in a financial instrument.

Depending upon the Group's business model for managing assets and the question as to whether the contractual cash flows of the financial instruments exclusively constitute repayments and interest payments on the outstanding nominal amount, the existing financial instruments are categorized in accordance with IFRS 9 either as "at amortized acquisition costs", "at fair value outside profit or loss in other comprehensive income", or "at fair value recorded through profit or loss" and valued accordingly.

The amortized acquisition costs of a financial asset or a financial liability are defined as the amount at which a financial asset or financial liability was valued when recognized for the first time

- minus any repayments
- minus any impairment losses or potential inability to be recovered, as well as
- plus/minus the cumulative distribution of any difference between the original amount and the amount repayable on maturity (e.g. premium and transaction costs). Under the effective interest method, this difference is spread over the full contractual term of the financial asset or financial liability.

The amortized acquisition costs for current receivables and payables generally reflect the amortized cost or the repayment value.

Fair value generally corresponds to the market or stock market value. If there is no active market, the fair value is determined by using financial mathematical methods such as by discounting estimated future cash flows at market interest rates or by applying standard option price models and by checking confirmations issued by the banks that sold the instruments.

a) Primary financial instruments

Shares in entities

Initial recognition in the statement of financial position is based on the fair value.

In the Jenoptik Group, all long-term shareholdings in companies are classified as "outside profit or loss at fair value in other comprehensive income" based on the exercising of the voting right granted in accordance with IFRS 9 and valued at fair value. In the absence of any identifiable market prices, the fair values of these financial instruments are determined based on discounted cash flows. Changes in value are recorded in other comprehensive income outside of profit or loss.

Investments valued in accordance with the at-equity method

Shares in entities over which Jenoptik exerts key influence, as well as shares in joint ventures, are valued in accordance with the at-equity method under IAS 28. For this purpose, the original investment carrying amount is updated with the shares in the company's consolidated statement of changes in equity to which the shareholders are entitled. The share in the profit or loss of the entities is reported under other operating income or expenses. By contrast, shares in other comprehensive income are recorded outside of profit or loss. The shares in the total comprehensive income recognized in the current year are based on the preliminary annual financial statements of the companies. Deviations between the preliminary and final annual financial statements are taken into account in the following year.

Loans

Loans involve credit granted by the Jenoptik Group and are to be valued at the amortized acquisition costs in accordance with IAS 9.

Non-current, non-interest-bearing loans and low interest-bearing loans are accounted for at current value. If any objective, substantial evidence of impairment can be identified, then unscheduled depreciation is applied.

Trade receivables

Trade receivables are non-interest bearing due to their short-term nature and are recognized at nominal value less impairment losses on the basis of anticipated bad debts (amortized acquisition costs). The anticipated bad debts are determined in accordance with IFRS 9 via the simplified method. In this context, consideration is given to both the individual default risk as well as an anticipated default risk derived from past events for a group of receivables with comparable default risks (portfolio-based impairment) through the recognition of a provision for risk in the amount of the bad debts anticipated over the entire period. When the loss of a trade receivable is finally realized, the receivable is written of by using any impairment previously recognized. Similarly, the receivable is derecognized when the contractual rights relating to the cash flows arising from the receivable expire, or the rights to receive the cash flows are transferred in a transaction in which all the risks and opportunities associated with the ownership of the receivable are transferred. As part of the factoring, the receivables are held for collection or in some cases for resale.

Other financial assets

Other financial assets are recognized at amortized acquisition costs. All identifiable default risks are accounted for by a corresponding impairment.

Non-current, non-interest-bearing or low interest-bearing receivables are discounted.

Current financial investments

Current cash deposits and current financial receivables are classified “at amortized acquisition costs” in accordance with IFRS 9 and valued accordingly.

Cash and cash equivalents

Cash and cash equivalents comprise cash on hand, checks and bank credit balances available on demand with an original maturity of up to three months. These are recognized at the nominal amount less a provision for the risk of anticipated loan defaults.

Equity instruments

An equity instrument is any contractual agreement containing a residual interest in the assets of the Group after all liabilities have been deducted. Shares which have been issued are classified as equity, whereby the costs (less related income tax benefits) directly attributable to the issue of treasury shares, have been deducted from equity.

Liabilities to banks

Interest-bearing bank loans and overdraft lines of credit are accounted for at the amounts received less any directly attributable disbursement expenses. Financing costs, including premiums payable on repayment or redemption, are recognized in accordance with the accrual’s principle, using the effective interest method. Amortization via the effective interest method is included in the income statement as part of the financial expenses.

Other financial liabilities

In principle, financial liabilities are valued at amortized acquisition costs by applying the effective interest method. This does not apply to financial liabilities which are accounted for at fair value through profit or loss.

b) Derivative financial instruments

The Jenoptik Group uses derivative financial instruments for hedging risks arising from fluctuations in interest and foreign currency exchange rates. They serve to reduce earnings volatility resulting from interest and foreign currency exchange rate risks. Fair value is determined by considering the market conditions – interest rates, foreign currency exchange rates – at the balance sheet date and using generally accepted valuation methods.

Derivative financial instruments are not used for speculation purposes. The use of derivative financial instruments is subject to a group guideline which governs the use of derivative financial instruments. The Group uses cash flow hedges in order to hedge risks from fluctuations in foreign currency exchange and interest rates.

Changes in the fair value of derivative financial instruments which serve to hedge cash flow risks, are documented. If the hedge accounting has been classified as effective, the changes in fair value are recognized outside of profit or loss in other comprehensive income. Reclassifications from equity to profit or loss are carried out in the period during which the hedged underlying transaction affects profit or loss. Fluctuations in value arising from financial instruments which are classified as not effective are recorded directly in profit or loss.

3.10 Inventories

Inventories are recognized at the lower of acquisition or production costs and their net realizable value.

The net realizable value is the estimated proceeds from sale less the estimated production costs and any further costs incurred up to sale. For determining the net realizable value, devaluation routines are applied in addition to case-by-case assessment. The range, market price (based on existing orders) as well as marketability, serve as indicators of lower net sales proceeds. In this context, the specific discount rates are regularly reviewed and, if necessary, adapted.

Acquisition costs also include any other costs incurred to restore the inventories to their current condition. These take into account any reductions such as rebates, bonuses or trade discounts.

Production costs include the full costs relating to production that have been determined based on normal production capacity utilization. In addition to direct costs, these also include the appropriate portion of the necessary material and production overheads as well as production related depreciation which can be directly attributable to the production process. In this context, particular account is taken of the costs that are allocated to specific production cost centers. Administrative costs are also considered insofar as they can be allocated to production. If fair values at the reporting date have decreased owing to lower prices on the sales market, then these are recognized. In principle, the valuation of similar inventory assets is based on the average cost method. If the reasons that led to a write-down of inventories cease to exist and the net realizable value has consequently increased, the reversals of write-downs are recognized as a reduction in material costs in the corresponding periods in which the reversal of the write-downs occurs.

3.11 Contract assets and contract liabilities

A contract asset is the not yet unconditional claim to the receipt of a consideration in return for goods or services transferred to a customer. If the Group meets its contractual obligations by transferring goods or services to a customer before the customer pays the consideration or before the payment is due, a contract asset will be recognized for the conditional claim to consideration in return. This gives rise to contract assets as the difference between the realized revenue from the respective order, less payments received and customer billings. Receivables due from customers arising from invoices issued, are shown under trade receivables.

If the requested payments received and due, as well as the customer billings issued, exceed the realized revenue, a contract liability will be shown. A contract liability therefore constitutes the obligation of the Group to transfer goods or services to a customer for which it, the Group, has received a consideration from the customer or for which a requested payment is due. Contract liabilities are recognized as proceeds as soon as the Group fulfills its contractual obligations.

The contractual liabilities additionally include obligations arising from contractual penalties which have to be taken into account as a variable consideration, reducing turnover.

Contract assets reported in accordance with IFRS 15 are valued at the nominal value, taking into account impairment losses in the default amounts anticipated over the entire useful life.

3.12 Non-current assets or disposal groups held for sale and discontinued operation

Non-current assets or disposal groups held for sale

Non-current assets or disposal groups are classified as held for sale under IFRS 5 if their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is highly probable.

A transaction is considered highly probable if, on the reporting date, there are no significant risks to its completion, normally requiring the conclusion of binding contracts or at least agreement on all material terms of the contract.

Assets and liabilities classified as held for sale are reported separately as current items in the statement of financial position and valued at the lower of carrying amount and fair value, less costs to sell.

Any impairment loss of a disposal group is first allocated to goodwill and then to the remaining assets.

Intangible assets and property, plant and equipment classified as held for sale are no longer subject to scheduled depreciation/amortization.

Discontinued operation

A discontinued operation is a part of the entity that has been sold or is classified as held for sale and represents a separate, material line of business or geographic business unit.

The results of the discontinued operation are shown separately in the income statement.

3.13 Deferred taxes

The accounting for and valuation of deferred taxes is made in accordance with IAS 12 “Income taxes”. Deferred tax assets and deferred tax liabilities are shown as separate items in the statement of financial position in order to take into account future tax effects resulting from timing differences between the statement of financial position valuations of assets and liabilities and tax losses carried forward.

Deferred tax assets and deferred tax liabilities are calculated in the amount of the anticipated tax burden or tax relief in subsequent fiscal years based on the tax rate applicable on the date of realization. The effects of changes in tax rates on deferred taxes are recognized in the reporting period during which the legislative procedure has been completed on which the change in the tax rate is based.

Deferred tax assets on differences in the statement of financial position and on tax losses carried forward are only recognized if it is probable that these tax advantages can be realized in the foreseeable future.

Deferred tax assets and deferred tax liabilities are offset against each other insofar as taxes are levied by the same authority and relate to the same tax period. In accordance with the regulations of IAS 12, there is no discounting of deferred tax assets and liabilities.

3.14 Pension provisions

Pensions and similar obligations comprise the pension obligations of the Jenoptik Group arising from both defined benefit as well as defined contribution retirement schemes.

Defined contribution plans

In defined benefit retirement schemes, pension obligations are valued in accordance with IAS 19 according to the projected unit credit method. In this context, the future obligations are valued based on benefit claims acquired pro rata as of the statement of financial position date, considering trend assumptions for the valuation parameters which affect the level of benefits. An actuarial expert opinion for this procedure is obtained at least once a year.

Assets that meet the requirements for plan assets under IAS 19.8 are recognized at their fair value and offset against the pension obligations.

Service costs of the pension obligations are reported as personnel costs in the corresponding functional costs. The net interest expense is reported in the financial result and determined by multiplying the net liability at the beginning of the period by the interest rate underlying the discounting of the pension obligation at the beginning of the period. Actuarial gains and losses due to adjustments and changes in assumptions in connection with the valuation of pension obligations and plan assets (including the difference between the actual return on plan assets realized and the return typically assumed at the beginning of the period) are recognized in other comprehensive income outside of profit or loss.

Defined contribution plans

For defined contribution schemes, the contributions payable are recognized immediately as an expense.

3.15 Tax provisions

Tax provisions contain obligations arising from current income taxes, including uncertain tax items. Claims for tax refunds are recognized under other current non-financial assets. Deferred taxes are disclosed in separate items in the statement of financial position.

Tax provisions for corporation tax and trade tax or similar income tax expenses are determined based on the taxable income of the consolidated entities and recognized less any prepayments made.

3.16 Other provisions

In accordance with IAS 37 “Provisions, contingent liabilities and contingent assets”, provisions are set aside insofar as there is any current liability to a third party resulting from a past event that is likely to lead to an outflow of resources in the future and the amount of which can be reliably estimated. Other provisions are only set aside for legal or de facto liabilities to third parties that are more likely than not at the reporting date.

Provisions are recognized at their settlement value discounted at the reporting date, provided that the interest effect is significant.

The settlement value also includes the anticipated price or cost increases. The discounting is based on non-negative interest rates before taxes that reflect current market expectations regarding the interest effect, and which are dependent upon the corresponding term of the liability. The interest portion arising from the compounding of the provision, as well as any effects of changes in interest rates, are recognized in the financial result.

Provisions are valued based on empirical values, taking the circumstances at the statement of financial position date into consideration.

Provisions for onerous contracts are recognized in the amount of the liability overhang from the difference between the unavoidable costs of fulfilling the contract and the anticipated economic benefits.

Provisions for guarantees and warranties are set aside for individual cases and on a lump-sum basis. The amount of the provision is based on the historical development of guarantees and warranties as well as on a consideration of all future potential guarantee or warranty claims, weighted by the probability of their occurrence.

Claims to the right of recourse are only considered if these claims are virtually certain.

3.17 Share-based remuneration

The members of the Executive Board and some senior management personnel of JENOPTIK AG receive multi-year variable remuneration in the form of long-term incentives (LTI) or performance shares. Both types of virtual shares are accounted for in accordance with IFRS 2 as share-based remuneration with settlement in cash. At the statement of financial position date and depending upon the contractual provisions, a provision is set aside in the amount of the earned fair value of the payment obligation, through profit or loss.

3.18 Contingent liabilities

Contingent liabilities are potential obligations that are based on past events and whose existence is only clarified by the occurrence of one or more uncertain future events, which are, however, outside the control of the Jenoptik Group. Moreover, current obligations can constitute contingent liabilities if there is insufficient certainty regarding the likelihood of outflows of resources to set aside a provision and/or the amount of the obligation cannot be estimated to sufficiently reliable extent.

The valuations of the contingent liabilities correspond to the existing scope of liability at the statement of financial position date. In principle, they are not accounted for in the statement of financial position but are explained in the Notes.

3.19 Revenue

Proceeds from contracts with customers are realized in in accordance with IFRS 15 if the control of the goods or services is transferred to the customer. These are valued in the amount of the consideration in return that the Group is expected to receive in exchange for these goods or services. For sales transactions with multiple performance obligations, revenues are apportioned based on the estimated relative individual selling prices.

Proceeds from the sale of goods are generally realized at the time when control of the asset passes to the customer. The determination of this timing considers, among other things, the transfer of the legal ownership, the physical transfer of possession and any potentially agreed acceptance of the products by the customer.

In certain cases, the goods produced by Jenoptik as part of a specific order process represent assets with no alternative benefit to the Group. Subject to a claim for payment for the service rendered to date, the revenue is recognized over time, whereby the degree of completion is determined according to the input-oriented cost-to-cost method. This applies both to the production of individual assets as well as to development projects with subsequent volume production (customer-specific volume production).

Revenue from the rendering of services which represent separate performance obligations within the meaning of IFRS 15 and from which the customer can benefit at the same time as the service is rendered, are recognized over time according to the degree of completion as at the statement of financial position date, whereby the degree of completion is generally determined according to the input-oriented cost-to-cost method.

The Group is usually subject to statutory warranties for the repair of defects that were present at the time of sale. These so-called assurance-type warranties are recognized under provisions for warranties in accordance with IAS 37. If agreed guarantees and warranty claims significantly exceed the usual framework (so-called service-type warranties), these are assessed and accounted for as a separate service obligation. In this case, the revenue for the applicable portion is realized on a straight-line basis over the agreed period of the service-type warranty.

Rental income received from investment property is realized on a straight-line basis over the term of the corresponding rental contracts and disclosed under revenue.

If a contract contains a number of delimitable components (multi-component contracts), these will be separately recognized in accordance with the above principles.

In determining the consideration in return that Jenoptik receives for fulfilling a customer order, agreed variable components are estimated at the beginning of the contract and then included in the transaction price when it is highly likely that the elimination of the uncertainty associated with the variable components of the consideration in return will not lead to a cancellation of revenue which has already been recognized. At Jenoptik, this applies to both agreed discounts and bonuses as well as to possible contractual penalties.

Since advances received from the customer are generally short-term, the Group takes advantage of the simplification relief offered by IFRS 15 and refrains from taking a financing component into account when determining the consideration in return.

3.20 Cost of sales

Cost of sales show the costs incurred to generate revenue. This item also includes the costs for setting aside provisions for warranties and guarantees. The scheduled depreciation/amortization on intangible assets and property, plant, and equipment is shown in the respective functional costs and in accordance with the principle of cause and included in cost of sales insofar as they are attributed to the production process.

3.21 Research and development expenses

Research and development expenses include non-capitalizable research and development expenses, except for research and development expenses for customer orders which are disclosed under cost of sales.

3.22 Selling expenses and general administrative expenses

Along with personnel expenses and cost of materials, selling expenses include the costs incurred for distribution, advertising, sales promotion, market research, and customer service. In addition, selling expenses also include the costs for contract initiation which are immediately recognized as an expense as a result of the application of the practical remedy under IFRS 15, since the period of depreciation/amortization for the asset that the Group would otherwise have recognized is not more than one year. Amortization of customer relationships and order backlogs acquired as part of corporate mergers are also recorded in the selling expenses.

General administrative expenses include personnel expenses and the cost of materials as well as administration-related depreciation.

3.23 Other operating income and expenses

Impairment losses and gains arising from the reversal of impairment losses on trade receivables and contract assets in accordance with IFRS 9 are included in other operating income and expenses. Income from the reversal of provisions is recognized in the functional costs, insofar as the provision was also set aside via the corresponding functional costs. If the provision was set aside in other operating expenses, the provision reversal will also be shown in other operating expenses. Furthermore, these items include currency exchange gains and losses arising from operational receivables and liabilities as well as net gains and losses arising from hedging instruments for these items. The items also include effects arising from the hedging of net positions. In addition to restructuring expenses, expenses for group projects are also allocated to other operating expenses. Income and expenses from the measurement of the fair value of contingent considerations arising from corporate acquisitions are shown in these items if the contingent considerations are dependent upon financial parameters within the EBIT. Similarly, gains and losses from the sale of consolidated entities (insofar as this does not involve a discontinued operation) as well as the contributions to earnings by investments, accounted for using the at-equity method and other taxes, are recognized in these items.

3.24 Financial income and financial expenses

The financial income and financial expenses of the Group mainly comprise interest income and interest expenses as well as the investment income and investment expenses arising from financial investments. In addition, the financial result includes currency exchange gains and losses arising from financial assets and liabilities as well as net gains and losses arising from hedging instruments for these financial assets and liabilities.

4 Disclosures on the Statement of Income

4.1 Revenue

Detailed disclosures on revenue by division and region are presented in the section "Disclosure on the Segment Report".

A breakdown of revenue, recognized over time and at a point in time, is shown in the table below.

The total revenue recognized over time included revenue from customer-specific volume production in the sum of 216,218 thousand euros (prior year: 127,516 thousand euros). In addition, sales for customer-specific individual production, services provided and arising from the Traffic Service Provision contracts were recorded over time.

Revenue in the Smart Mobility Solutions division also included other revenue from embedded operating lease contracts in the sum of 11,071 thousand euros (prior year: 10,048 thousand euros).

As in the prior year, no significant revenue was recognized for performance obligations that had already been fulfilled in prior years.

4.2 Cost of sales

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Cost of materials and services purchased	356,975	283,294
Personnel expenses	201,453	150,846
Depreciation and amortization	33,150	25,748
Other cost of sales	43,403	33,926
Total	**634,982**	**493,814**

4.3 Research and development expenses

Research and development expenses cover all expenses attributable to research and development activities. This income statement item did not include expenses paid by customers in connection with research and development services in the sum of 27,952 thousand euros (prior year: 20,330 thousand euros). These were allocated to cost of sales.

In the fiscal year just past, expenses in the sum of 4,207 thousand euros (prior year 4,198 thousand euros) were capitalized in intangible assets for internal development projects.

4.4 Expenses according to types of expense

The following main types of expenses are included in revenue, selling and administrative expenses as well as in the research and development expenses:

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Cost of materials and services purchased	382,842	300,597
Personnel expenses	355,829	281,805
Depreciation and amortization	68,254	47,584
Other expenses	55,703	45,870
Total	**862,628**	**675,855**

The increase in all types of expenses is due in particular to the increased revenue volume and the expenses for the corporate acquisitions of the prior year included for the full year 2022. The increase in depreciation and amortization was mainly due to the intangible assets identified as part of the purchase price allocation for acquisitions.

in thousand euros	Advanced Photonic Solutions	Smart Mobility Solutions	Non-Photonic Portfolio Companies	Other	Total
External revenue	**729,617**	**114,307**	**132,265**	**4,493**	**980,684**
	(495,574)	**(110,101)**	**(141,329)**	**(3,714)**	**(750,717)**
of which, recognized over time	267,128	36,760	68,990	4,493	377,372
	(170,473)	(40,283)	(84,937)	(3,714)	(299,407)
of which, recognized at a point in time	462,490	77,547	63,275	0	603,312
	(325,101)	(69,818)	(56,391)	(0)	(451,310)

The figures in brackets relate to the prior year

4.5 Other operating income

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Income from currency gains	12,004	8,554
Reversal of impairments for trade receivables and contract assets	3,128	2,203
Income from benefits in kind	1,874	1,781
Income from services, clearing and rental	1,314	1,143
Income from equity accounting	690	995
Income from compensation/insurance payments	600	859
Income from government grants	545	1,069
Income from the sale of intangible assets, property, plant, and equipment and financial investments	208	219
Income from sales of materials	43	181
Income from fair values adjustments of conditional purchase price components	0	30,509
Income from the disposal of subsidiaries and other business units	0	3,874
Income from reversal of an impairment loss of intangible assets and property, plant, and equipment	0	451
Others	1,102	1,111
Total	**21,508**	**52,950**

Income from services, clearing and rentals which is not derived from the normal business activity of the entities, is shown under other operating income.

The income from the fair value adjustment reported in the prior year related to variable purchase price components arising from the acquisition of TRIOPTICS and INTEROB.

4.6 Other operating expenses

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Currency losses	13,970	8,583
Impairment losses of intangible assets, property, plant, and equipment and investment property	13,894	460
Impairment losses on trade receivables and contract assets	3,533	3,354
Transaction costs	1,796	7,383
Expenses for group projects	1,656	1,744
Expenses from fair values adjustment of conditional purchase price components	1,100	0
Losses from the sale of intangible assets and property, plant, and equipment	716	259
Other taxes	606	658
Expenses from services and rentals	225	360
Others	729	900
Additions/reversals of provisions	−569	−4,038
Total	**37,655**	**19,663**

In 2022, the balance of foreign currency gains and losses in led to a net loss of 1,966 thousand euros (prior year: 29 thousand euros).

Transaction costs include, in particular, consulting costs in connection with acquisitions and the examination of potential further corporate acquisitions.

Impairment losses and reversals of impairment losses for trade accounts receivable and contract assets led to a net loss in the sum of 405 thousand euros (prior year: 1,151 thousand euros).

Information on impairment losses to intangible assets, property, plant and equipment and investment property can be found on the section “Intangible assets”.

4.7 Financial income and financial expenses

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Income from foreign currency valuation of financial transactions	9,584	4,746
Other interest and similar income	875	226
Income from the compounding and discounting of other provisions and liabilities	1,081	0
Investment income	108	592
Total financial income	**11,648**	**5,564**
Expenses from foreign currency valuation of financial transactions	8,001	3,296
Financing costs for syndicated loans and debenture bonds	7,042	4,419
Expenses from compounding/discounting of other provisions and liabilities	0	1,664
Interest expenses for leases	976	785
Custody fee on financial assets (negative interest)	2	244
Net interest expenses for pension provisions	84	68
Other interest and other financial expenses	1,498	688
Total financial expenses	**17,604**	**11,164**
Total	**−5,956**	**– 5,600**

Income from foreign currency valuation of financial transactions in the sum of 9,584 thousand euros (prior year: 4,746 thousand euros) and countervailing expenses in the sum of 8,001 thousand euros (prior year: 3,296 thousand euros) led to a net profit of 1,583 thousand euros in fiscal year 2022 (prior year: 1,450 thousand euros). This result is attributable to foreign currency gains and losses from group financing.

4.8 Income taxes

Current income tax expenses (paid or owing), as well as deferred tax assets and deferred tax liabilities in the individual countries, are shown as income taxes. The current income taxes of the Jenoptik Group were calculated by applying the tax rates applicable at the statement of financial position date.

The calculation of the deferred taxes for the domestic entities was based on a tax rate of 30.36 percent (prior year: 30.28 percent). In addition to the corporation tax of 15.0 percent (prior year: 15.0 percent) and the solidarity surcharge of 5.5 percent of the corporation tax charge (prior year 5.5 percent), an effective trade tax rate of 14.54 percent (prior year: 14.46 percent) was considered. The calculation of deferred taxes for foreign entities is based on the tax rates which are currently or imminently applicable in the respective country.

Deferred taxes are recognized as either tax expenses or tax income in the income statement, unless these directly relate to items recognized outside of profit or loss in other comprehensive income. In this event, deferred taxes are also recognized outside of profit or loss in other comprehensive income.

Uncertainties regarding the treatment of income for tax purposes are subject to continuous analysis. Where there is a probability of the tax authorities not accepting uncertainty over income tax treatment, a reasonable sum will be set aside for risk provisioning. The amount of the risk provision shall be equal to the amount which hypothetically represents the most likely value or expected value, considering any tax uncertainties. In this context, uncertain tax issues are not considered separately but together.

Tax expenses were classified according to their origin as follows:

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Current income taxes		
Germany	10,299	8,607
Abroad	9,697	5,354
Total	**19,996**	**13,961**
Deferred taxes		
Germany	18,652	−109
Abroad	−6,546	−4,163
Total	**12,106**	**−4,272**
Total income taxes	**32,103**	**9,689**

The current income taxes included for 2022 a tax income in the amount of 710 thousand euros (prior year: expense of 915 thousand euros) for current taxes from earlier business periods. Deferred tax expense includes an out-of-period expense in the sum of 700 thousand euros (prior year: income 840 thousand euros).

Deferred taxes include a tax expense resulting from the development of temporary differences in the sum of 3,438. thousand euros (prior year: income 6,315 thousand euros).

As at the statement of financial position date, the Jenoptik Group had the following tax losses carried forward at its disposal for offsetting against future profits:

in thousand euros	31/12/2022	31/12/2021
Corporation tax	98,341	139,532
Trade tax	241,773	292,898

The reduction in tax losses carried forward is mainly due to their use in the fiscal year. Considering all currently known positive and negative factors influencing the future tax results of the Jenoptik Group, a utilization of the corporation tax loss carried forward of 70,763 thousand euros (prior year: 114,004 thousand euros) and the use of trade tax losses carried forward of 240,586 thousand euros (prior year: 281,093 thousand euros) is probable. A deferred tax claim of 46,907 thousand euros (prior year: 59,407 thousand euros) was recognized for these utilizable tax losses carried forward. Of which 34,982 thousand euros (prior year: 40,632 thousand euros) was attributable to trade tax losses carried forward.

For the remaining, non-utilizable losses carried forward, no deferred tax assets were recognized for corporation tax purposes in the sum of 27,578 thousand euros (prior year: 25,528 thousand euros) and for trade tax purposes in the sum of 1,187 thousand euros (prior year: 11,805 thousand euros).

A portion of the tax losses with carried forward is subject to a time limit for carry forward purposes:

in thousand euros	31/12/2022	31/12/2021
Up to 1 year	184	0
2 to 5 years	362	770
6 to 9 years	308	4,977
More than 9 years	2,879	1,395
Total losses with carried forward option subject to a time limit	**3,733**	**7,142**

No deferred tax assets were shown for allowable time differences in the sum of 2,978 thousand euros (prior year: 2,033 thousand euros) as these will probably not be realized in the underlying reporting period.

The following recognized deferred tax assets and deferred tax liabilities were attributed to recognition and valuation differences in the individual statement of financial position items and to tax losses carried forward:

	Deferred tax assets		Deferred tax liabilities	
in thousand euros	31/12/2022	31/12/2021	31/12/2022	31/12/2021
Intangible assets	11,126	1,875	35,274	33,488
Property, plant, and equipment	1,493	829	14,740	15,905
Financial investments	233	743	2,593	1,880
Inventories	9,357	8,987	1,225	1,302
Receivables and other assets	1,319	2,240	11,544	6,329
Provisions	6,955	15,430	1,738	1,027
Liabilities	13,469	13,987	1,333	345
Tax losses carried forward, and tax credits	47,255	62,629	0	0
Gross figure	**91,207**	**106,720**	**68,447**	**60,276**
Netting out	−52,385	−35,535	−52,385	−35,535
Recognition in the statement of financial position	**38,822**	**71,185**	**16,062**	**24,741**
Shown in the statement of financial position as follows:				
Continuing operations	38,822	63,360	16,062	24,741
Discontinued operation	0	7,825	0	0

The net inventory of the asset surplus in deferred taxes reduced by 15,859 thousand euros. Taking into consideration deferred taxes recognized outside of profit or loss (minus 2,616 thousand euros), adjustment of first-time consolidations (minus 1.038 thousand euros) as well as the foreign currency exchange conversions (minus 99 thousand euros) in the reporting year, this resulted in a deferred tax expense of 12,106 thousand euros included in the income statement.

Temporary differences in the sum of 226,735 thousand euros (prior year: 219,761 thousand euros) related to shares in subsidiaries for which no deferred tax liabilities had been set aside due to IAS 12.39. Deferred tax liabilities in the sum of 268 thousand euros (prior year: 249 thousand euros) were set aside on outside basis differences in accordance with IAS 12.40.

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Earnings before tax from continuing operations	95,954	102,548
Earnings before tax from discontinued operation	−5,342	−8,230
Earnings before tax	**90,612**	**94,318**
Tax rate on earnings for the Jenoptik Group in %	30.36	30.28
Anticipated tax expense	**27,510**	**28,560**
The tax implications of the following facts led to a deviation in the actual anticipated tax expense:		
Non-deductible expenses, tax-exempt earnings, and permanent deviations	5,405	−8,784
Change in the realizability of deferred tax assets and tax credits	801	−7,953
Effects from differences in tax rates	−400	−573
Implications of changes in tax rates	−54	−1,497
Taxes in prior years	82	75
Other tax effects	235	152
Total adjustments	**6,069**	**−18,580**
Actual income tax expense	**33,579**	**9,979**
The breakdown of the actual income taxes is as follows:		
Income taxes attributable to the continuing operations	32,103	9,689
Income taxes attributable to the discontinued operation	1,476	290

The table above shows the tax reconciliation between the tax expense expected in the respective fiscal year and the actual tax expense recognized. To determine the anticipated tax expense, in the fiscal year 2022 the applicable group tax rate of 30.36 percent (prior year: 30.28 percent) was multiplied by the earnings before tax.

4.9 Discontinued operation

With the signing of the binding agreement for the sale of the VINCORION division on November 25, 2021, the business division was classified as a discontinued operation and both the assets and liabilities were shown as held for sale as of December 31, 2021. The corresponding sale of the shares in the wholly owned subsidiaries JENOPTIK Advanced Systems GmbH, JENOPTIK Power Systems GmbH, and JENOPTIK Advanced Systems, LLC was completed on the closing date of June 30, 2022.

Earnings from discontinued operation

The VINCORION result up to the time of sale is as follows:

in thousand euros	1/1 – 30/6/2022	1/1 -31/12/2021
Revenue	47,855	145,030
Expenses	48,425	130,155
EBIT	**−570**	**14,875**
Financial expenses	−415	−805
Result of current business activities before income taxes	**−985**	**14,070**
Income taxes	−1,007	−3,090
Earnings from operating activities after income taxes	**−1,992**	**10,980**
Loss from the sale of the discontinued operation	−4,826	0
Impairment loss from the revaluation at fair value less selling costs	0	−19,500
Earnings after tax of discontinued operation	**−6,817**	**−8,520**

Intra-group transactions were completely eliminated from the financial results, with intra-group earnings from the performing business unit and the elimination of the related expenses of the receiving business unit being consolidated.

The result from the sale of the discontinued operation is determined as follows:

in thousand euros	
Consideration received or still outstanding	
Cash and cash equivalents	63,241
Fair value of the contingent consideration [1]	0
Other receivables / provisions from indemnity agreements	1,726
Total purchase price	**64,966**
Disposed net assets	−68,774
Loss from the sale of the discontinued operation (before reclassification of the foreign currency reserve)	**−3,808**
Reclassification of the foreign currency reserve	−549
Income taxes	−469
Loss from the sale of the discontinued operation (after taxes)	**−4,827**

[1] after revaluation in the 2nd half-year 2022

The contractually agreed purchase price is based on audited closing accounts, considering net financial debt and a working capital balancing mechanism as of June 30, 2022. Contingent consideration was also agreed and depends on the attainment of certain EBITDA success criteria for VINCORION in the years 2022 and 2023, potentially resulting in additional consideration of up to 5,000 thousand euros. Based on VINCORION's corporate planning, the fair value of the contingent consideration at the time of the sale was estimated at 3,430 thousand euros and recognized as a financial asset valued at fair value through profit or loss. As a result of the development of VINCORION in the 2nd half-year 2022 and the updated corporate planning for 2023, the contingent consideration was released in full during the further course of the past fiscal year. The revaluation of the contingent consideration is included in the loss arising from the sale of the discontinued operation reported above. In addition, there are claims relating to individual assets as well as obligations with limited monetary amounts arising from indemnity agreements vis-à-vis VINCORION, consequently these remain with Jenoptik from the financial aspect and are recognized as an additional purchase price claim in the amount of 4,846 thousand euros or as a provision in the amount of 3,120 thousand euros as of December 31, 2022.

Earnings per share from discontinued operation (undiluted = diluted) amounts to minus 0.12 euros (prior year: minus 0.15 euros).

Effects of the sale on the Group's statement of financial position items

The net assets disposed of at the time of closing on June 30, 2022 are composed as follows:

in thousand euros	30/06/2022
Assets	
Intangible assets	14,448
Property, plant, and equipment	32,973
Deferred taxes	5,670
Inventories	66,304
Trade receivables	26,231
Contract assets	6,834
Other assets	2,882
Cash and cash equivalents	75
Liabilities	
Pension provisions	14,152
Other provisions	19,924
Financial debt	20,058
Deferred tax liabilities	3,291
Trade accounts payable	13,815
Contract liabilities	9,912
Other liabilities	5,490
Net assets disposed	**−68,774**

Net cash flows from discontinued operation

The net cash flows of VINCORION are as follows:

in thousand euros	1/1–30/06/2022	1/1–31/12/2021
Operating activities	1,752	29,753
Investing activities [1]	58,558	−9,995
Financing activities	−2,076	−4,055
Net cash flows	**58,234**	**15,703**

[1] Including receipts from the sale of the discontinued operation

Assets and liabilities of the disposal group classified as held for sale

As of December 31, 2021, the following assets and liabilities of VINCORION were shown in the category "held for sale":

in thousand euros	31/12/2021
Assets	
Intangible assets	10,773
Property, plant, and equipment	32,128
Deferred taxes	7,824
Inventories	54,421
Trade receivables	39,306
Contract assets	11,395
Other assets	883
Cash and cash equivalents	46
Assets held for sale	**156,777**
Liabilities	
Pension provisions	21,189
Other provisions	21,541
Financial debt	21,745
Trade accounts payable	17,282
Contract liabilities	8,240
Other liabilities	3,616
Liabilities related to assets held for sale	**93,613**
Net assets directly associated with the disposal group	**63,164**

In the prior year, as a result of the classification as "held for sale", an impairment loss after tax of 19,500 thousand euros (impairment loss before tax of 22,300 thousand euros, income taxes 2,800 thousand euros) was recognized in the result of discontinued operation and the carrying amount of VINCORION was therefore reduced to the fair value less selling costs.

The determination of the fair value was based on valuation parameters that are not based on observed market data (level 3). In addition to the contractually agreed purchase price, the net financial debt and an agreed working capital compensation mechanism as of the valuation date, the valuation also considered the anticipated contingent consideration.

4.10 Earnings of shareholders and earnings per share

Earnings of shareholders include the earnings after tax of continuing operations and earnings after tax of the discontinued operation. Earnings per share equate to the earnings attributable to the shareholders, divided by the weighted average number of shares in circulation during the year.

	1/1–31/12/2022	1/1–31/12/2021
Earnings attributable to shareholders – continuing operations in thousand euros	61,918	90,518
Earnings attributable to shareholders – discontinued operation in thousand euros	−6,817	−8,520
Total earnings after tax attributable to shareholders after tax in thousand euros	**55,100**	**81,998**
Weighted average number of outstanding shares	57,238,115	57,238,115
Earnings per share in euros (undiluted = diluted)	**0.96**	**1.43**

The earnings after tax of the discontinued operation are to be allocated to the shareholders of the parent company in full. From the earnings after tax arising from the continuing operations in the sum of 63,851 thousand euros (prior year: 92,859 thousand euros) a sum of 61,918 thousand euros (prior year: 90,518 thousand euros) is to be allocated to the shareholders of the parent company.

The diluted and undiluted earnings per share for the discontinued operation are disclosed in the section "Discontinued operation".

5 Disclosures on the Statement of Financial Position

5.1 Intangible assets

in thousand euros	Development costs from internal development projects	Acquired patents, trademarks, software, customer relationships	Internally generated patents	Goodwill	Other intangible assets	Total
Acquisition/production costs Balance as of 1/1	**22,522**	**239,825**	**2,194**	**577,989**	**10,529**	**853,059**
	(27,971)	**(147,241)**	**(2,176)**	**(400,057)**	**(7,569)**	**(585,013)**
Foreign currency exchange effects	−5	3,863	0	5,324	−8	9,175
	(7)	(4,147)	(0)	(12,587)	(0)	(16,742)
Additions resulting from business combinations[1]	0	4,737	0	−2,183	0	2,554
	(0)	(98,520)	(0)	(178,205)	(0)	(276,725)
Additions	4,207	5,001	291	0	971	10,469
	(9,488)	(1,732)	(201)	(0)	(4,187)	(15,608)
Disposals	211	14,325	121	0	0	14,658
	(1,742)	(7,836)	(183)	(6,737)	(3)	(16,501)
Transfers (+/-)	0	7,963	0	0	−7,777	187
	(0)	(594)	(0)	(0)	(−565)	(29)
Reclassification in accordance with IFRS 5	0	0	0	0	0	0
	(−13.202)	(−4,572)	(0)	(−6,124)	(−659)	(−24,558)
Acquisition/production costs Balance as of 31/12	**26.512**	**247,064**	**2,364**	**581,130**	**3,714**	**860,785**
	(22.522)	**(239,825)**	**(2,194)**	**(577,989)**	**(10,529)**	**(853,059)**
Amortization Balance as of 1/1	**12.569**	**81,272**	**1,005**	**4,966**	**0**	**99,812**
	(13,972)	**(73,132)**	**(940)**	**(9,895)**	**(0)**	**(97,938)**
Foreign currency exchange effects	−5	457	0	0	0	451
	(7)	(1,683)	(0)	(0)	(0)	(1,691)
Additions	696	30,028	184	0	0	30,909
	(420)	(18,328)	(173)	(0)	(0)	(18,920)
Impairment losses	0	4,125	0	9,160	0	13,285
	(0)	(0)	(0)	(0)	(0)	(0)
Disposals	0	14,307	6	0	0	14,313
	(1,742)	(7,776)	(108)	(4,929)	(0)	(14,555)
Reclassification in accordance with IFRS 5	0	0	0	0	0	0
	(−88)	(−4,096)	(0)	(0)	(0)	(−4,183)
Amortization Balance as of 31/12	**13,260**	**101,574**	**1,182**	**14,126**	**0**	**130,143**
	(12,569)	**(81,272)**	**(1,005)**	**(4,966)**	**(0)**	**(99,812)**
Net carrying amount as of 31/12	**13,252**	**145,490**	**1,182**	**567,004**	**3,714**	**730,642**
	(9,953)	**(158,554)**	**(1,190)**	**(573,022)**	**(10,529)**	**(753,247)**

[1] Finalization of first-time consolidation of BG Medical and SwissOptic Group
The figures in brackets relate to the prior year

Development costs from internal development projects in the sum of 10,242 thousand euros (prior year: 8,877 thousand euros) related to development projects that are not yet completed.

Disposals of acquired patents, trademarks, software, and customer relationships primarily relate to intangible assets that were recorded in prior years within the context of acquisitions and are written off in full at the end of their useful life.

Assets acquired in return for payment and still in development are shown as other intangible assets. With the successful go-live of the new SAP S/4HANA system which was launched as part of a program to harmonize processes and data, transfers were reflected in the acquired software item.

The order commitments for intangible assets totaled 299 thousand euros (prior year: 241 thousand euros).

Goodwill and intangible assets with indefinite useful lives

Other than goodwill, there were no intangible assets with an indefinite useful life.

Goodwill was allocated to the cash-generating units Advanced Photonic Solutions, Smart Mobility Solutions and the Non-Photonic Portfolio Companies, which also represent the reportable segments. In connection with the adjustment to the new segment structure (see section "Information on segment reporting"), a partial reallocation of goodwill was carried out between the previous divisions Light & Production and Light & Optics after an impairment test.

in thousand euros	31/12/2022	31/12/2021
Advanced Photonic Solutions (prior year: Light & Optics)	462,123	443,472
Smart Mobility Solutions (prior year: Light & Safety)	40,742	42,819
Non-Photonic Portfolio Companies (prior year: Light & Production)	64,139	86,730
Total	**567,004**	**573,022**

The impairment test for goodwill was made at the level of these cash-generating units. If the carrying amounts of these cash-generating units exceeded their recoverable amounts, the goodwill allocated was correspondingly reduced. The determining factor for the impairment test was the recoverable amount, i.e. the higher of the two amounts derived from the fair value less costs to sell or value in use.

Jenoptik calculated the recoverable amount in the form of the value in use, based on a discounted cash flow method. The basis for this is the five-year corporate plan approved by the management. This took into consideration past experience as well as current operational results and was based on the management's best estimate of future development. The cash flows in the detailed planning phase were planned based on differentiated growth rates. These took account of the development and dynamics of the relevant sectors and target markets.

This was based on the following planning assumptions for the divisions:

Advanced Photonic Solutions

The division benefited from increasing demand in the fiscal year 2022 and was able to increase revenue significantly compared to the prior year. The increasing demand from the semiconductor equipment industry in the semiconductor & advanced manufacturing segment had a positive impact on the development of sales. EBITDA improved as a result of increased revenues. For further revenue growth, the division is focusing primarily on the areas of semiconductor & advanced manufacturing, biophotonics as well as optical testing and measurement. Despite the increasing challenges in the procurement market for both our own and our customers' production, Jenoptik anticipates further growth across all areas of the Advanced Photonic Solutions division. With the takeover of BG Medical and the SwissOptic Group at the end of 2021, Jenoptik intends to use the opportunities and synergies in the medium term to make a significant contribution to the growth of the division.

Smart Mobility Solutions

The division posted an increase in revenue of approx. 3.8 percent in the fiscal year 2022. The focus of development over the coming years will be on the increasing demand for public safety, especially in the regions of the Americas, the Middle East/North Africa, and other European countries. As competition increases, structural and process optimizations that have been introduced will be continued and, with the increase in the generation of local and international value added, are expected to bring about a sustained increase in revenue and profitability over the medium term, primarily due to recurring revenues from the TSP business.

Non-Photonic Portfolio Companies

The Non-Photonic Portfolio Companies recorded a decline in revenue in 2022 and, as a consequence, from the loss in project business as well as positive one-off effects in the prior year, reduced profitability. In addition, the review of the business prospects, in particular of INTEROB, resulted in a reduction in expected future cash flows. In connection with the increase in the cost of capital, the Non-Photonic Portfolio Companies incurred an impairment loss on goodwill of 9,160 thousand euros. As a result of the planned concentration of the Automation & Integration business at the site in Canada, Jenoptik also assessed individual assets to determine impairment requirements and recognized an additional impairment loss of 4,125 thousand euros on customer relationships and of 609 thousand euros on property, plant and equipment. Despite structural changes towards e-mobility, Jenoptik expects significant growth through the expansion of the customer and product portfolio as well as the overall good order situation. An increase in profitability is expected in the medium term as a result of the completed restructuring measures, economies of scale and ongoing optimization of structures and processes.

The earnings of the respective planning year for determining the free cash flow are adjusted for non-cash expenses and income such as depreciation and amortization.

This assumes a perpetuity, the amount of which is individually determined for each cash-generating unit by the management from the fifth year of the planning time frame. The perpetual annuity includes a growth component in the form of a deduction on the capitalization interest rate of 1.0 percentage points (prior year between 0.9 and 1.0 percentage points). Non-recurring effects in the last year of the plan are eliminated prior to calculating the perpetual annuity.

The weighted cost of capital after tax required for impairment tests represents current market estimates with regard to the specific risks attributable to the cash-generating units. These are determined by applying the Capital Asset Pricing Model for the calculation of the cost of equity. The components for calculating the cost of equity are a risk-free interest rate, the market risk premium, a beta factor customary in our industry determined from division-specific peer groups as well as the average country risk of each cash-generating unit. Borrowing costs were determined by including a risk-free interest rate, the spread customary in our industry and the standard average tax rate. The weighted costs of equity and borrowing costs resulted from applying the capital structure customary in our industry.

Impairment testing was conducted assuming a weighted average cost of capital after taxes at a rate between 7.79 and 9.45 percent (prior year 6.42 to 9.21 percent). This corresponded to the weighted average cost of capital before tax of between 9.87 and 12.06 percent (prior year 7.96 to 12.21 percent).

The assumptions used to determine the values in use of the cash-generating unit are shown in the following table:

	Growth components in the perpetual annuity	Weighted cost of capital after tax	Weighted cost of capital before tax
Advanced Photonic Solutions (prior year: Light & Optics)	1.00 (0.90)	8.36 (9.21)	10.82 (12.21)
Smart Mobility Solutions (prior year: Light & Safety)	1.00 (0.90)	7.79 (6.42)	9.87 (7.96)
Non-Photonic Portfolio Companies (prior year: Light & Production)	1.00 (1.00)	9.45 (8.36)	12.06 (10.72)

The figures in brackets relate to the prior year

Sensitivity analyses were made for all cash-generating units to which goodwill was allocated as of December 31, 2022. In the Advanced Photonics Solutions and Smart Mobility Solutions divisions, a reduction in the cash flows or an increase in the weighted cost of capital within the range considered by the management as possible would not result in the recoverable amount being less than the carrying amount of the cash-generating units. An increase in the cost of capital or a decrease of the cash flows of the Non-Photonic Portfolio Companies would lead to a decrease of the recoverable amount (value in use) determined as of December 31, 2022 of 162,773 thousand euros and thus the following additional need for impairment:

	Impairment of thousand euros
Increase of 1.00 percent in weighted cost of capital (after tax)	19,491
Reduction of 10 percent in cash flows	16,277

5.2 Property, plant, and equipment

in thousand euros	Land, buildings	Technical equipment and machinery	Other equipment, operating and business equipment	Equipment under construction	Total
Acquisition/production costs Balance as of 1/1	**238,469**	**187,949**	**95,304**	**18,424**	**540,146**
	(261,175)	**(207,274)**	**(118,150)**	**(10,336)**	**(596,934)**
Foreign currency exchange effects	2,499	5,291	349	371	8,509
	(3,586)	(4,045)	(922)	(189)	(8,741)
Additions through business combinations [1]	−753	−486	0	0	−1,239
	(17,926)	(13,539)	(2,443)	(268)	(34,176)
Additions	27,921	28,160	10,230	29,204	95,514
	(6,041)	(14,753)	(9,067)	(14,160)	(44,020)
Disposals	2,847	18,004	8,854	98	29,802
	(2,997)	(19,134)	(15,765)	(4)	(37,899)
Transfers (+/-)	6,828	4,869	577	−12,044	230
	(767)	(3,953)	(597)	(−5,413)	(−97)
Reclassification according to IFRS 5	0	0	0	0	0
	(−48,028)	(−36,480)	(− 20,109)	(−1,112)	(−105,729)
Acquisition/production costs Balance as of 31/12	**272,116**	**207,779**	**97,606**	**35,857**	**613,358**
	(238,469)	**(187,949)**	**(95,304)**	**(18,424)**	**(540,146)**
Depreciation Balance as of 1/1	**82,136**	**122,123**	**69,232**	**0**	**273,491**
	(91,531)	**(152,490)**	**(89,415)**	**(0)**	**(333,436)**
Foreign currency exchange effects	848	4,074	317	0	5,239
	(1,032)	(2,807)	(564)	(0)	(4,403)
Additions	12,500	15,771	8,954	0	37,225
	(13,450)	(12,290)	(9,432)	(0)	(35,172)
Impairment losses	160	156	293	0	609
	(0)	(3)	(6)	(0)	(10)
Impairment reversal	0	0	0	0	0
	(−451)	(0)	(0)	(0)	(−451)
Disposals	2,636	16,939	8,493	0	28,068
	(2,347)	(19,009)	(15,121)	(0)	(36,477)
Transfers (+/-)	−1,832	1,511	64	0	−257
	(−70)	(2)	(0)	(0)	(−68)
Reclassification according to IFRS 5	0	0	0	0	0
	(−21,008)	(−26,460)	(−15,065)	(0)	(−62,533)
Depreciation Balance as of 31/12	**94,839**	**123,675**	**70,238**	**0**	**288,752**
	(82,136)	**(122,123)**	**(69,232)**	**(0)**	**(273,491)**
Net carrying amount as of 31/12	**177,277**	**84,104**	**27,368**	**35,857**	**324,606**
	(156,334)	**(65,826)**	**(26,073)**	**(18,424)**	**(266,656)**

[1] Finalization of first-time consolidation of BG Medical and SwissOptic Group
The figures in brackets relate to the prior year

Land and buildings of the Group with a net carrying amount of 177,277 thousand euros (prior year: 156,334 thousand euros) mainly comprised the Group's own production and administrative buildings in Jena, Wedel, Bayeux (France), Heerbrugg (Switzerland), Huntsville (USA), Shanghai (China) and Rochester Hills (USA) as well as the leased production and administrative buildings in Berlin, Monheim and Camberley (UK).

Order commitments for property, plant, and equipment in the sum of 26,859 thousand euros have reduced slightly compared with the prior year (prior year: 30,049 thousand euros) and, primarily resulted from replacement and new investment in technical equipment and machinery.

As of the balance sheet date, the same as of December 31, 2022, no property, plant and equipment was pledged.

5.3 Leasing

The Group has concluded lease contracts for real estate, technical equipment and machinery and other equipment, motor vehicles and for operating and business equipment.

The rights of use are shown in the statement of financial position within the statement of financial position item property, plant and equipment, in which the underlying assets would be reported as though they were owned by the Group. A separate presentation of the rights of use as of January 1, 2022 and December 31, 2022, as well as additions and depreciation in the fiscal year 2022, can be found in the following table.

in thousand euros	Rights of use to land, buildings,	Rights of use to technical equipment and machinery	Rights of use to other equipment, operating and business equipment	Total rights of use
Acquisition/production costs, balance as of 1/1	**34,304**	**20,529**	**7,066**	**61,900**
	(58,041)	**(10,277)**	**(8,132)**	**(76,450)**
Foreign currency exchange effects	−82	395	−8	304
	(1,395)	(102)	(94)	(1,590)
Additions through business combinations	0	0	0	0
	(293)	(5,508)	(0)	(5,802)
Additions	13,534	12,927	1,892	28,353
	(4,365)	(4,686)	(1,904)	(10,956)
Disposals	1,566	605	2,354	4,525
	(2,330)	(0)	(2,465)	(4,795)
Transfers (+/-)	0	−6,210	0	−6,210
	(0)	(0)	(−20)	(−20)
Reclassification according to IFRS 5	0	0	0	0
	(−27,461)	(−44)	(−579)	(−28,084)
Acquisition/production costs, balance as of 31/12	**46,190**	**27,037**	**6,596**	**79,822**
	(34,304)	**(20,529)**	**(7,066)**	**(61,900)**
Depreciation balance as of 1/1	**13,724**	**3,683**	**3,852**	**21,258**
	(15,271)	**(2,024)**	**(3,828)**	**(21,124)**
Foreign currency exchange effects	−34	206	−16	156
	(460)	(52)	(58)	(570)
Additions	6,025	3,012	1,993	11,031
	(8,255)	(1,625)	(2,476)	(12,355)
Impairment losses	0	18	99	117
	(0)	(0)	(0)	(0)
Disposals	1,459	605	2,177	4,241
	(1,688)	0	(2,198)	(3,886)
Transfers (+/-)	0	−3,704	3	−3,702
	(0)	(0)	(− 17)	(−17)
Reclassification according to IFRS 5	0	0	0	0
	(−8,573)	(−19)	(− 296)	(−8,887)
Depreciation and amortization, balance as of 31/12	**18,256**	**2,609**	**3,755**	**24,619**
	(13,724)	**(3,683)**	**(3,852)**	**(21,258)**
Net carrying amount as of 31/12	**27,934**	**24,428**	**2,841**	**55,203**
	(20,581)	**(16,847)**	**(3,214)**	**(40,642)**

The figures in brackets relate to the prior year

Lease liabilities are shown in the statement of financial position under "Non-current financial debt" or "Current financial debt":

in thousand euros	31/12/2022	31/12/2021
Non-current lease liabilities	42,360	27,528
Current lease liabilities	11,916	11,418

Interest expenses for leases in fiscal year 2022 totaled 976 thousand euros (prior year: 785 thousand euros).

In addition to depreciation and interest expenses, the following expenses were recognized through profit or loss:

Expenses for lease contracts (in thousand euros)	1/1–31/12/2022	1/1–31/12/2021
From short-term lease contracts	1,944	972
From low-value lease contracts	1,597	1,605
From variable lease payments	802	1,033
Total lease expenses	**4,342**	**3,609**

The variable lease payments mainly include payments for non-leasing components of lease contracts that have been accounted for in accordance with IFRS 16.

Payment obligations arising from fixed lease payments are listed according to their maturity in the table below:

Payment obligations for fixed lease payments (in thousand euros)	31/12/2022	31/12/2021
Up to 1 year	12,962	12,373
1 to 5 years	31,498	23,929
More than 5 years	13,013	5,119
Total	**57,474**	**41,421**

Renewal and termination options included in the leases are negotiated by management. The assessment as to whether there is sufficient certainty regarding the exercise of these extension and termination options has been assessed and evaluated accordingly by the management.

The non-discounted, potential future lease payments for periods after the exercise date for renewal and termination options, not included in the term of the lease, are shown in the table below:

Additional details (in thousand euros)	31/12/2022	31/12/2021
Payment obligations for short-term lease contracts	989	394
Potential cash outflows from extension and termination options which were not shown in the statement of financial position	7.204	6,191

In fiscal year 2022, the total cash outflow arising from lease contracts of the continuing operations (including current and low-value lease contracts as well as variable lease payments) with interest portion totaled 18,182 thousand euros (prior year: 14,731 thousand euros).

Income from subletting of legal assets for the use of fixed assets amounted to 182 thousand euros in the fiscal year 2022 (prior year: 181 thousand euros).

5.4 Investments accounted for in accordance with the at-equity method

The following entities were included in the consolidated financial statements as associate companies or as joint ventures, in accordance with the equity method:

- TELSTAR-HOMMEL CORPORATION, Ltd., Pyeongtaek, Korea
- HILLOS GmbH, Jena, Germany
- Trioptics France S.A.R.L., Villeurbanne, France

The following table contains summarized financial information on the entities which are not deemed of material importance on an individual basis.

	Joint Ventures		Associated company	
in thousand euros	2022	2021 [1]	2022	2021 [1]
Total of investments accounted for in accordance with the equity method	**8,504**	**8,544**	**5,806**	**5,784**
Total of the Group share in:				
Profit/loss from continued activities	682	819	–105	–140
Other comprehensive income	0	0	12	–77
Total comprehensive income	**682**	**819**	**–93**	**–217**

[1] Financial information aligned to Financial Statements of the company

5.5 Other non-current assets

Other non-current assets include both financial as well as non-financial assets.

in thousand euros	31/12/2022	31/12/2021
Derivatives	10,428	2,978
Other non-current financial assets	2,242	1,970
Other non-current non-financial assets	1,058	1,519
Non-current trade receivables	2	2
Reinsurance cover	0	85
Total	**13,729**	**6,555**

As in the prior year, there were no restrictions on disposals of other non-current assets.

The aggregated item derivatives are explained in the section “Financial instruments”.

5.6 Inventories

in thousand euros	31/12/2022	31/12/2021
Raw materials, consumables, and supplies	105,796	80,655
Unfinished products, unfinished services	112,626	86,840
Finished products and goods	35,689	30,285
Deposits paid for inventories	1,838	2,433
Total	**255,950**	**200,213**

At the end of the fiscal year 2022, accumulated impairment losses in the sum of 38,922 thousand euros (prior year: 38,552 thousand euros) were considered in the carrying amount. The net sale value of these inventories was 73,147 thousand euros (prior year: 63,126 thousand euros).

The impairments recognized as an expense in cost of sales amounted to 8,334 thousand euros (prior year: 5,495 thousand euros).

The consumption of inventories affected expenses in the sum of 299,057 thousand euros (prior year: 234,338 thousand euros), with the table below showing the distribution:

in thousand euros	31/12/2022	31/12/2021
Cost of Sales	296,102	231,992
Research and development expenses	2,251	1,783
Selling expenses	299	175
Administrative expenses	406	388
Total	**299,057**	**234,338**

As in the prior year, there were no restrictions on the disposal of inventories at the reporting dates.

5.7 Current trade receivables

Trade receivables

in thousand euros	31/12/2022	31/12/2021
Trade receivables from third parties	134,844	110,766
Receivables from requested advance payments	3,343	9,398
Trade receivables from non-consolidated associates and investments	582	310
Total	**138,769**	**120,475**

The fair values of trade receivables correspond to their carrying amounts as of the reporting date. These are not interest-bearing and generally have a due date of 30 to 60 days.

The table below shows the composition of the trade receivables:

in thousand euros	31/12/2022	31/12/2021
Gross value of trade receivables from third parties	142,038	117,516
Receivables from due requested advance payments	3,343	9,398
Gross value of trade receivables due from non-consolidated associates and investments	582	310
Total gross value of trade receivables	**145,963**	**127,225**
Accumulated impairments	−7,194	−6,750
Carrying amount of trade receivables	**138,769**	**120,475**

Default risks were determined through the assessment of clients' creditworthiness by means of a scorecard, taking into account specific regional and individual company characteristics. In addition to internal company data, this includes credit assessments through external credit agencies. Based on the rating of customers' creditworthiness, lines of credit are granted to ensure the active management of business transactions. This means, amongst other things, that certain payment terms can be agreed with customers according to their creditworthiness. In addition, outstanding claims against customers are regularly monitored and measures taken, the aim of which is to reduce overdue claims.

The default risk is taken into account through individual impairments and generalized individual impairments. The following table shows the changes in impairments to outstanding trade receivables:

in thousand euros	2022	2021
Impairments as of 1/1	**6,750**	**6,031**
Additions	3,503	3,400
Reversal/derecognition	3,089	2,407
Consumption	19	581
Changes in the group of consolidated entities	0	369
Foreign currency exchange effects	49	210
Reclassification according to IFRS 5	0	−272
Impairments as of 31/12	**7,194**	**6,750**

The need for impairment is analyzed at each closing date to determine the anticipated loan losses. If there are any objective indications of impairment losses, an individual impairments is applied. In addition, generalized individual impairments for receivables grouped into categories are recognized in days, based on the overdue period. Finally, a generalized individual impairment is created to take into account the existing default risk for receivables not yet due and for which no impairment has been created.

In addition to system-side valuation routines for determining the anticipated default risk, additional individualized valuation adjustments are made. The valuation considers in particular geographic location, industry, support measures from public institutions as well as individual agreements with the respective customers.

As in the prior year, as of December 31, 2022 there were no sureties for not impaired receivables in the form of bank guarantees.

The table below shows the default risk position for trade receivables due from third parties using an impairment matrix:

in thousand euros	Expected credit loss rate	Expected total gross carrying amount at default	Expected credit loss
not due	0.58 %	106,995	616
	(0.58 %)	(88,325)	(510)
overdue < 30 days	0.97 %	15,912	154
	(1.84 %)	(12,989)	(239)
overdue 30-60 days	6.56%	5,823	382
	(6.95%)	(5,741)	(399)
overdue 61-120 days	19.69 %	6,147	1,210
	(29.15 %)	(4,281)	(1,248)
overdue 121-240 days	46.27 %	3,059	1,415
	(26.96 %)	(1,954)	(527)
overdue 241-360 days	65.25 %	1,275	832
	(76.36 %)	(1,039)	(793)
overdue > 360 days	91.42 %	2,826	2,584
	(95.21 %)	(3,187)	(3,035)
Total	**5.06 %**	**142,038**	**7,194**
	(5.74 %)	**(117,516)**	**(6,750)**

The figures in brackets relate to the prior year

In the fiscal year 2022 the factual individual impairments to receivables totaled 2,028 thousand euros (prior year: 1,480 thousand euros). These primarily related to receivables with an overdue date of more than 360 days.

Factoring

As a result of extended payment deadlines for customers, inputs for customer-specific projects and changes in billing modalities, Jenoptik utilizes factoring. Within the framework of a genuine and confidential factoring program, existing receivables are sold to a factoring company (hereafter referred to as the "Factor") – together with the transfer of the default or del credere risk – in return for a consideration. The payments from the original customer to the Group (due to their confidential nature) are classified as "other current financial liabilities" and then forwarded to the Factor.

In the statement of financial position, trade receivables which have been sold are derecognized on transfer of the economic ownership to the Factor in accordance with IFRS 9 and, until receipt of payment, are recognized as receivables due from the Factor under "Other current financial assets". The asset is finally derecognized on payment by the Factor.

Factoring charges are shown in the consolidated income statement, under administrative expenses.

In the cash flow statement, the Factor's payments to the Group are shown under cash flows from operating activities. The payment received from the original customer and the subsequent payment as a result of the transfer to the Factor, are recognized net under cash flows from financing activities.

AS of December 31, 2022, receivables of 25,000 thousand euros (prior year: 20,796 thousand euros) were sold within the framework of the confidential factoring. After allowing for a surety retention by the Factor of 5 percent, payment receipts totaled to 23,750 thousand euros (prior year: 19,756 thousand euros). The surety retention is shown under other current financial assets.

5.8 Contract assets and contract liabilities

The statement of financial position item "Contract assets" includes conditional claims of the Group against customers for the receipt of a consideration in return, in exchange for goods or services that have already been transferred. These are grouped as follows:

in thousand euros	31/12/2022	31/12/2021
Contract assets	**58,096**	**81,414**
Realization within one year	57,310	78,398
Realization within more than one year	786	3,016

The default risk of contract assets is basically taken into account through corresponding impairments. As of December 31, 2022, there were no indicators for an individual impairment identified. The general default risk was accounted for through an impairment loss in the amount of the anticipated loss. The impairment loss was of 85 thousand euros (prior year: 123 thousand euros).

Under IFRS 15, the item “Contract liabilities” in the statement of financial position shows the Group’s obligations to transfer goods or services to a customer for which it, the Group, has received a consideration in return from the customer or for which a requested payment in advance is due.

The status of the contract liabilities as of the statement of financial position date of December 31, 2022, is shown in the table below:

in thousand euros	31/12/2022	31/12/2021
Contract liabilities	**64,856**	**47,323**
Realization within one year	62,223	44,684
Realization within more than one year	2,633	2,639

Of the contract liabilities recognized at the beginning of the year, 36,915 thousand euros were realized as revenue in the year under review.

The transaction price for all customer orders that have not yet been completed in full is shown as the order backlog. This shows the following due dates:

in thousand euros	31/12/2022	31/12/2021
Transaction price of performance obligations not yet completely fulfilled	**733,656**	**543,491**
Realization within the next fiscal year	611,980	467,020
Realization within the next but one fiscal year	88,145	28,105
Realization in subsequent fiscal years	33,531	48,365

5.9 Other current financial assets

in thousand euros	31/12/2022	31/12/2021
Receivables from contingent considerations	3,652	13,347
Receivables from acquisitions	0	3,818
Receivables from disposals of companies	4,846	0
Receivable from surety retention for factoring	1,248	1,032
Other receivables due from non-consolidated associates and investments	1,006	115
Derivatives	1,385	68
Other current financial assets	1,287	1,201
Total	**13,423**	**19,582**

Receivables from contingent considerations are derived from a revenue-related malus scheme agreed in connection with the acquisition of TRIOPTICS which was valued at fair value (see section “Financial instruments”).

Receivables from disposals of companies are derived from the sale of VINCORION (see section “Discontinued operation”).

Default risks are taken into account through impairments. The composition of the carrying amount of other current financial assets is as follows:

in thousand euros	31/12/2022	31/12/2021
Gross value of other financial assets	14,712	20,335
Accumulated impairment loss	−1,290	−753
Carrying amount of other financial assets as of 31/12	**13,423**	**19,582**

5.10 Other current financial assets

in thousand euros	31/12/2022	31/12/2021
Accruals	8,730	5,711
Receivables due from other taxes	8,506	4,313
Receivables due from income taxes	1,393	605
Other current financial assets	636	810
Total	**19,265**	**11,439**

5.11 Equity

The development of the equity of Jenoptik is shown in the consolidated statement of changes in equity.

Share capital

Share capital amounts to 148,819 thousand euros and is divided into 57,238,115 no-par value registered shares.

Voting right notifications in accordance with § 160 (1) (No. 8) AktG are contained in chapter "Equity" of the financial statements of JENOPTIK AG. All voting right notifications of the last five years are also published on our website under www.jenoptik.com in the section Investors/Shares/Voting Rights Notifications.

Authorized capital

An "Authorized Capital 2019" was created with the resolution passed by the Annual General Meeting on June 12, 2019 as follows: The Executive Board is authorized through June 11, 2024, with the consent of the Supervisory Board, to increase the nominal capital of the company by up to 44,000 thousand euros through one or multiple issues of new, no-par value registered shares against cash and/or contribution in kind ("Authorized Capital 2019"). The new shares can be taken up by one or more banks with the obligation to offer these to shareholders (indirect subscription rights). With the consent of the Supervisory Board, the Executive Board is authorized to exclude the subscription rights of shareholders:

a) for fractional amounts;
b) for capital increases in return for contributions in kind, in particular also within the framework of business combinations or the acquisition of companies, parts of companies or investments in companies (including increasing existing shareholdings) or other contributable assets in conjunction with such an intended acquisition, as well as claims against the entity;
c) for capital increases in return for cash contributions, under the condition that the percentage of any new shares of the share capital does not in total exceed 10 percent of the share capital at the time the authorized capital is registered or in total 10 percent of the share capital at the time the new shares are issued, taking into consideration resolutions of the AGM or the use of other authorizations to preclude subscription rights in a direct or corresponding application of Section 186 (3) (4) AktG since the effective date of this authorization and the issue price of the new shares is not substantially lower than the stock market price;
d) for the issue of new shares to employees of the entity and to associates in which the entity holds a majority interest.

All aforementioned authorizations to exclude subscription rights are limited to a total of 10 percent of the share capital available at the time this authorization became effective – or, if this value is lower – to 10 percent of the share capital at the time this authorization is exercised. This limit of 10 percent includes shares that (i) could be issued for the purpose of servicing warrants and/or convertibles that were or could still be issued during the period of validity of authorized capital to the exclusion of subscription rights or (ii) are sold by the entity as treasury shares during the period of validity of authorized capital to the exclusion of subscription rights.

Decisions on the details of the issuance of new shares, in particular their conditions and the content of rights of the new shares, are taken by the Executive Board, with the consent of the Supervisory Board. The Authorized Capital 2019 has not yet been utilized.

Conditional capital

The shareholder resolution passed by the Annual General Meeting held on June 9, 2021, to contingently raise the share capital of the entity by up to 14,950 thousand euros through the issue of up to 5,750,000 new no-par value shares ("Conditional Capital 2021"). The conditional capital increase will be implemented only to the extent that

- creditors or holders of option and/or conversion rights arising from option and/or convertible bonds issued by the entity, or by a domestic and/or foreign corporation in which the entity either directly or indirectly holds a majority interest, make use of their option or conversion rights by June 8, 2026, as resolved by the shareholders in their Annual General Meeting resolution dated June 9, 2021, and/or
- the creditors of the issued convertible bonds obliged to exercise their conversion rights issued by the company or a domestic or foreign company in which the company has a

direct or indirect majority stake, on the basis of the resolution of the Annual General Meeting on June 9, 2021, fulfill their conversion rights by June 8, 2026, and / or the shares are repatriated

and neither treasury shares are used nor payment made in cash. The new shares participate in profits from the start of the fiscal year for which, on the date of their issue, no resolution has yet been passed by the Annual General Meeting in respect of the appropriation of the accumulated profit. To the extent legally permissible, the Executive Board may, with the consent of the Supervisory Board, determine the profit participation in deviation from this and also from Section 60 (2) AktG, including for a fiscal year that has already passed.

The Executive Board is authorized, with the consent of the Supervisory Board, to exclude the subscription rights of shareholders to the bonds under certain circumstances. Authorization to exclude subscription rights is limited in the sense that the pro rata amount of share capital corresponding to those shares that must be issued after exercising warrant and / or conversion rights / obligations may not account for more than 10 percent of the share capital existing at the time this authorization takes effect or – if the figure is lower – at the time use is made of the authorization. This 10 percent limit also applies to the sale of treasury shares that are excluded from subscription rights during the period of this authorization, and to shares issued during the period of this authorization under authorized capital and for which subscription rights are excluded.

The Executive Board is authorized to set out the further details relating to the increase in conditional capital (e.g. terms of the bonds, interest rate, form of interest, specific period, denomination, issue price, option / conversion price, option / conversion period) in the bond terms and conditions. The Conditional Capital 2021 has not yet been utilized.

Reserves

Capital reserve. The capital reserve contains the adjustments recognized within the framework of the first-time adoption of IFRS as well as the differences resulting from the capital consolidation being offset against reserves up to December 31, 2002.

Other reserves. A component of other reserves is retained earnings realized in the past by companies included in the consolidated financial statements less dividends paid.

Other reserves also contain value adjustments to be accounted for outside of profit or loss for

- equity instruments that are designated outside profit or loss at fair value in other comprehensive income,
- cash flow hedges,
- accumulated foreign currency exchange differences, and
- actuarial gains/losses arising from the valuation of pensions and similar obligations.

In addition to the effective portion of gains and losses arising from hedging cash flows, the reserve for cash flow hedges also includes changes in the fair value of the interest rate cap and elements of the USD interest rate and currency swap, insofar as this has been excluded from the designation as a hedging instrument (see section „Financial instruments“).

In particular, as a result of the sale of VINCORION, losses arising from currency conversion previously so far recognized in equity, in the sum of 593 thousand euros (prior year: gains in the sum of 16 thousand euros) were reclassified to the income statement.

Treasury shares

On the basis of a resolution passed by the Annual General Meeting on June 5, 2018, the Executive Board is authorized up to June 4, 2023 to purchase own no-par value shares not exceeding a proportion of ten percent of the nominal capital existing at the time the resolution is adopted or – if this amount is lower – of the nominal capital existing at the time of exercising the resolution for purposes other than trading in treasury shares. The purchased treasury shares together with treasury shares that the entity had already purchased and still holds (including the attributable shares in accordance with §§ 71a ff. AktG) may not exceed 10 percent of the share capital of the entity. The authorization may be exercised in whole or in part, on a one-off or repeat basis and for one or more authorized purposes. The purchase and sales of treasury shares may be exercised by the entity or, for specific authorized purposes, also by dependent companies, by companies in which the entity holds a majority interest, or by third parties for its or their account. At the decision of the Executive Board, acquisition is by purchase, subject to compliance with the principle of equal treatment (§ 53a of the Stock Corporation Act), on the stock exchange or by means of a public offering or a public invitation to the shareholders to submit an offer for sale.

For the purpose of protecting shareholders against a dilution of their shares, the proposed resolution expressly provides for a restriction of the use of acquired treasury shares in such a way that the total of the acquired shares together with shares issued or sold by the Company during the term of this authorization under another authorization to the exclusion of shareholders' subscription rights or which enable or oblige the subscription of shares is limited to a notional interest in the nominal capital of no more than a total of 20 percent of the nominal capital at the time the authorization becomes effective or – if the following value is lower – at the time this authorization is exercised.

Further details regarding the buyback of treasury shares are described in agenda item 9 in the invitation to the 2018 Annual General Meeting, accessible to the general pubic on our website at www.jenoptik.com under the heading Investors/Annual General Meeting. As of December 31, 2022, the company had no treasury shares.

5.12 Pension provisions

Provisions for pension obligations are set aside based on pension plans for retirement, disability and survivor benefit commitments and exist in Germany and Switzerland. There are additional commitments in France to make one-off payments upon retirement.

As a result of the acquisition of SwissOptic AG, additional obligations under the Swiss pension system were assumed in 2021, these are classified as a defined benefit plan due to a potential obligation to make additional contributions in the event of a shortfall. The plan is financed in accordance with the statutory requirements and provides for a risk sharing by beneficiaries up to retirement. In this context, the pension plan is financed by contributions from both the employer and the employee. The corresponding assets are offset as plan assets against the assumed obligation.

As a result of the classification of the VINCORION division as a discontinued operation in accordance with IFRS 5, the provisions for pensions and similar obligations were reclassified in the prior year under "Liabilities in connection with assets held for sale" and eliminated at the closing on June 30, 2022.

The benefits provided by the Group vary according to the legal, tax, and economic circumstances of the respective country and, as a rule, depend on the duration of employment and on the remuneration of the employees on commencement of retirement.

Within the Group, the occupational pension provision is provided both on the basis of defined contribution as well as defined benefit plans. In the case of defined contribution plans, the company pays contributions in accordance with statutory or contractual provisions, or voluntarily makes contributions to public or private pension insurers. Upon payment of the contributions, the company has no further benefit obligations.

Defined benefit plans

The company is exposed to various risks in conjunction with defined benefit plans. Along with general actuarial risks such as longevity risks and the risk of changes in interest rates, the company is exposed to foreign currency exchange as well as investment risks.

Pension plans in the form of a reinsured group provident fund have been categorized and accounted for accordingly as defined benefit plans since the low interest rate phase due the associated claim risk arising from the subsidiary liability.

The existing pension plans in Germany are closed, with the exception of the reinsured group provident fund.

The benefit obligations cover 904 entitled beneficiaries, including 583 active employees, 108 former employees as well as 213 retirees and survivors.

In particular, the obligations via the group provident fund, plans under the Swiss pension scheme as well as the obligations of the discontinued operation up to the deconsolidation, are partially covered by plan assets and netted in accordance with IAS 19. These plan assets are primarily managed by the Leica Pensionskasse [pension fund] (Switzerland) and AXA Lebensversicherung AG.

153 – 218 Consolidated Financial Statements

The change in the defined benefit obligations (DBO) is shown as follows:

in thousand euros	2022	2021
DBO on 1/1	**111,567**	**83,209**
Foreign currency exchange effects	4,066	637
Current service expenses	3,648	719
Contributions to the pension plans	2,862	490
Thereof by employees	2,862	490
Interest expenses	510	481
Actuarial gains (-) and losses (+)	−21,799	−6,419
Empirical actuarial gains and losses	−223	−145
Changes in demographic assumptions	−41	−566
Changes in financial assumptions	−21,535	−5,707
Changes in the scope of consolidation	0	83,129
Pension payments	−694	−2,336
Reclassification according to IFRS 5	0	−48,342
DBO on 31/12	**100,160**	**111,567**
of which Switzerland	85,827	90,890
of which Germany	13,711	20,050
of which other countries	622	627

The changes in the plan assets are shown as follows:

in thousand euros	2022	2021
Plan assets as of 1/1	**102,188**	**48,031**
Foreign currency exchange effects	4,266	628
Interest income from plan assets	426	266
Return on plan assets less interest income (revaluations)	−9,468	568
Contribution	5,737	744
Employer	2,875	254
Employee	2,862	490
Changes in the group of consolidated entities	0	81,156
Administrative expenses	−115	−14
Pension payments	−405	−2,036
Reclassification according to IFRS 5	0	−27,154
Plan assets as of 31/12	**102,629**	**102,188**
of which Switzerland	92,557	88,136
of which Germany	10,071	14,053

The effects of the expense of the continuing operations, recognized in the income statement, are summarized as follows:

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Current service expenses	3,648	358
Net interest expenses	84	68
Total expenses	**3,732**	**426**

The current service expenses are included in the personnel expenses of the functional areas. The interest charged on the obligation as well as the interest received on plan assets are recorded in the interest result.

The net pension obligation as of the statement of financial position date is as follows:

in thousand euros	31/12/2022	31/12/2021
Present value of the obligation covered by the plans	96,425	105,741
Plan assets	−102,629	−102,188
Net liability/asset value of the obligation covered by plan assets	−6,203	3,552
Net liability of the obligation not covered by plan assets	3,735	5,827
Net liability/asset from defined benefit plan assets	**−2,468**	**9,379**
Adjustment as a result of asset cap	6,730	0
Total	**4,262**	**9,379**
of which Switzerland	0	2,754
of which Germany	3,639	5,998
of which other countries	622	627

The effects of the asset caps as of December 31, 2022 relate to obligations under the Swiss pension system.

The portfolio structure of the plan assets is as follows:

in thousand euros	31/12/2022	31/12/2021
Insurance contracts	9,697	13,636
Stocks, bonds and other securities	37,720	42,425
Real estate	37,076	31,205
Cash and cash equivalents	5,930	3,385
Investments	0	135
Other assets and liabilities	12,204	11,403
Total	**102,628**	**102,188**

The insurance contracts in the sum of 9,544 thousand euros relate to pension insurance policies with AXA Lebensversicherung AG. The insurance company's investments were mainly in equities and investment assets, bearer bonds and fixed interest-bearing securities, as well as other loan receivables.

The key weighted average actuarial assumptions are shown in the following table. Where applicable, anticipated inflation is taken into account in the above-mentioned assumptions.

in percent	2022	2021
Discount rate		
Germany	3.76	1.05
Switzerland	2.15	0.30
France	3.72	1.04
Future increases in salary [1]		
Switzerland	2.00	1.50
France	3.50	2.00
Future increases in pension		
Germany	2.00	1.75
Germany (Group provident fund)	1.00	1.00
Switzerland	0.25	0

[1] Not relevant in Germany

In Germany, the mortality rates are determined in accordance with the Klaus Heubeck guideline mortality tables 2018 G. The LPP 2020 mortality tables apply in Switzerland, whilst in France it's the current tables of the INSEE.

Actuarial gains or losses are the result of changes in pension beneficiaries and deviations from actual trends (e.g. increases in income or pensions) vis-á-vis calculation assumptions. In accordance with the regulations stated in IAS 19, this amount is offset against other comprehensive income in equity.

A change in the key actuarial assumptions as of the statement of financial position date would affect the DBO as follows:

	Change in the DBO	
in thousand euros	Increase	Reduction
Discounting rate – change of 1.0 percentage points	−8,626 (−14,864)	9,280 (15,254)
Future increases in salary – change of 1.0 percentage points	1,485 (1,625)	−1,333 (−1,579)
Future increases in pension – change of 1.0 percentage points	7,111 (9,557)	−1,584 (-558)
Mortality rates – change by 1 year	2,284 (3,730)	−2,336 (−3,734)

The figures in brackets relate to the prior year

The sensitivity analysis shows the change in a DBO in the event of a change in an assumption. Since the changes do not have a straight-line effect on the calculation of DBO due to actuarial effects, the cumulative change in the DBO resulting from changes in a number of assumptions cannot be directly determined.

The reduction in the pension increase was limited to a maximum of 0 percent and was applied in particular to the pension obligation of SwissOptic AG.

As of December 31, 2022, the weighted average remaining service period was 9 years and the weighted average remaining maturity of the obligation was 13 years.

The anticipated pension payments arising from the pension plans as of December 31, 2022, are in the sum of 5,090 thousand euros for the following fiscal year (prior year: 4,386 thousand euros) and for the subsequent four fiscal years a total of 22,239 thousand euros (prior year: 19,219 thousand euros).

Defined contribution plans

Within the framework of the defined contribution plans, expenses of the continuing operations totaled 19,351 thousand euros in 2022 (prior year: 17,929 thousand euros), this figure including contributions to statutory pension insurance providers in the sum of 14,455 thousand euros (prior year: 13,562 thousand euros).

5.13 Other provisions

The development of other provisions is shown in the table below.

Key items in the personnel provisions relate to performance bonuses, profit sharing, and similar obligations, as well as to the share-based payments for the Executive Board and some senior management personnel. Personnel provisions also include anniversary of service payments in the sum of 4,500 thousand euros (prior year: 5,217 thousand euros) and partial retirement obligations in the sum of 2,035 thousand euros (prior year: 1,628 thousand euros). Actuarial expert opinions were obtained for the anniversary and partial retirement obligations with the assumption of income increasing in Germany at 2.71 percent (prior year: 2.44 percent).

The provision for guarantee and warranty obligations included expenses for individual guaranty cases as well as for flat-rate warranty risks. The calculation of the provision for flat-rate warranty risks is based on empirical values which were determined as a guarantee cost ratio of revenue on a company or product group-specific basis and applied to revenues which are liable to guarantees. The amounts that were reversed in the fiscal year 2022 chiefly comprise guarantee and warranty provisions for specific individual cases for which the underlying obligations no longer existed as a result of agreements with customers for remedial action.

The provisions for pending losses were set aside for individual customer orders and relate in particular to a larger customer order in the Advanced Photonic Solutions division.

Other provisions include, amongst others, decommissioning obligations. Other provisions also included numerous identifiable specific risks as well as contingent liabilities which were accounted for in the amount of the best possible estimate of the settlement sum. Additions in the fiscal year 2022 relate in particular to provisions for exemption agreements with limited amounts, arising from the sale of VINCORION in the sum of 3,120 thousand euros (see section "Discontinued operation").

The anticipated claims are shown below by maturity:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	2022
Human resources	26,573	5,634	1,882	34,089
Guarantee and warranty obligations	6,392	1,999	0	8,391
Impending losses	4,631	3,959	0	8,590
Others	6,292	2,230	1,339	9,860
Total	**43,887**	**13,822**	**3,221**	**60,930**

5.14 Share-based payments

As of December 31, 2022, the Jenoptik Group had at its disposal share-based remuneration instruments in the form of virtual shares for both Executive Board members and some senior management personnel. In this context, a distinction must be made between Long Term Incentives of the Executive Board remuneration system that was applicable for Hans-Dieter Schumacher up to the end of 2017 (payment of the last tranche 2022) and the remuneration system for some senior management personnel ("LTI") as well as the Performance Shares in accordance with the currently applicable Executive Board remuneration system.

in thousand euros	Balance as of 1/1/2022	Foreign currency exchange effects	Additions	Compounding and discounting	Utilization	Reversals	Balance as of 31/12/2022
Personnel	30,687	122	25,168	−622	−19,884	−1,383	34,089
Guarantee and warranty obligations	10,322	10	4,073	−81	−2,108	−3,826	8,391
Impending losses	8,800	48	3,011	−362	−1,875	−1,032	8,590
Others	7,984	−12	5,502	−225	−1,652	−1,737	9,860
Total	**57,794**	**168**	**37,754**	**−1,290**	**−25,519**	**−7,978**	**60,930**

The effects associated with the share-based payment with settlement in cash for the continuing operations were as follows:

	Income statement		Statement of financial position	
in thousand euros	2022	2021	2022	2021
Virtual shares for the current year	−461	−730	461	730
Virtual shares for prior years	222	−717	1.872	2,176
Total	**−240**	**−1,447**	**2,333**	**2,906**

The valuation basis used for determining the fair value of the LTI is the daily and volume-weighted, average share price of JENOPTIK AG over the last twelve months. The fair value of the performance shares is determined based on an arbitrage-free valuation according to the Black/Scholes option pricing model.

Payment for the virtual shares granted to the Executive Board is generally made at the end of their four-year, contractually defined term. However, this only applies to the performance shares if multi-annual targets have been achieved on completion of the term. In the event of a departure, performance shares will also only be valued, finally allocated and then paid out at the end of the respective performance period, depending on whether the targets have been achieved. The virtual shares provisionally allocated on behalf of the members of the Executive Board for fiscal years 2019 to 2022 were valued at the fair value as of the 2022 statement of financial position date and shown in other provisions.

The development of the Executive Board members' virtual shares is shown in the following table:

in units	Number for 2022	Number for 2021
Executive Board		
1/1	125,026	124,701
Granted for the period	21,530	30,273
Granted for protection of existing shares in case of dividend payment[1]	n. a.	161
Expired[2]	−18,218	−8,102
Paid out	−22,018	−22,007
31/12	106,319	125,026

[1] LTI in accordance with the Executive Board remuneration system in force up to 2017
[2] Adjustment of provisional allocation to target achievement during the performance period

Virtual shares have also been granted to some members of top management. The number of virtual shares to be allocated is determined based on target achievement as well as on the volume-weighted average closing price of the Jenoptik share over the last twelve months of the reference year. Payment is made at the end of the fourth subsequent year after allocation, based on the volume-weighted average closing price of the Jenoptik share in the full fourth subsequent year. In the event of an exit before the end of the term, the virtual shares may be forfeit, depending on the reasons for the departure.

The development of these virtual shares is shown in the following table:

in units	Number for 2022	Number for 2021
Members of the top management		
1/1	28,491	25,496
Granted for the period	8,249	8,526
Granted in adjustment to level of target attainment prior year	683	− 2,242
Paid out	−5,629	−3,289
31/12	31,794	28,491

The virtual shares granted to the top management are valued at the pro rata fair value already earned and shown under other provisions.

5.15 Other current financial liabilities

in thousand euros	31/12/2022	31/12/2021
Liabilities from acquisitions	320	10,692
Other liabilities to investments	0	3,022
Liabilities from interest payments	3,762	2,897
Derivatives	1,963	1,818
Liabilities from remuneration for the Supervisory Board	796	791
Other current financial liabilities	3,465	2,803
Total	**10,306**	**22,023**

Liabilities arising from corporate acquisitions and derivatives are described in more detail in the Notes under "Financial instruments".

Other liabilities to investments in the prior year include the cash pool liabilities to HILLOS GmbH accounted for in the consolidated financial statements using the equity method

5.16 Other current non-financial liabilities

in thousand euros	31/12/2022	31/12/2021
Liabilities to personnel	9,056	9,392
Liabilities from other taxes	7,560	7,171
Liabilities from social security payments	1,969	1,708
Liabilities to trade association	1,081	998
Other current non-financial liabilities	210	980
Total	**19,876**	**20,249**

Liabilities to employees included, amongst others, vacation entitlements and flextime credits.

Liabilities from other taxes essentially comprise liabilities arising from sales tax.

6 Disclosures on Cash Flows

Liquid funds are defined as the sum of cash on hand and demand deposits at banks with an initial maturity of less than three months.

The statement of cash flows explains the flow of payments, divided between the inflows and outflows of cash from operating, investing and financing activities. There was no adjustment to the cash flow statement due to the discontinued operation; the net cash flows are presented in the section “Discontinued operation”. Changes in the statement of financial position items used for preparing the statement of cash flows cannot be directly derived from the statement of financial position because the effects arising from the foreign currency conversion and changes in the scope of consolidation are non-cash transactions and are therefore eliminated. Cash flows from operating activities are indirectly derived from earnings before tax of the continuing as well as the discontinued operations. Earnings before tax are adjusted for non-cash expenses and income. In the prior year, these related in particular to income from fair value adjustments to conditional purchase price components arising from the acquisitions of TRIOPTICS and INTEROB. The cash flows from operating activities are determined by taking into account the changes in working capital, provisions and other operating items in the statement of financial position.

Despite a significant increase in investments in property, plant and equipment, cash flow from investing activities improved from minus 413,621 thousand euros to minus 13,415 thousand euros, as the prior year included payments for the acquisition of BG Medical and the SwissOptic Group, which are offset by proceeds from the disposal of VINCORION in the current year (see sections „Acquisitions and sales of entities“ and „Discontinued operation“).

Cash outflows for dividends paid to shareholders of the parent company within the cash flows from financing activities, at 14,310 thousand euros (prior year: 14,310 thousand euros) and 0.25 euros per shares (prior year: 0.25 euros per share), were at the same level as the prior year. In addition, dividends were paid to minority shareholders in the sum of 3,298 thousand euros (prior year: 1,749 thousand euros). Information on receipts and payments derived from loans is provided in the chapter „Financial instruments“.

The changes in financial debt that will lead to cash flows from financing activities in the future, are shown in the following table:

			Non cash-effective change						
in thousand euros	Balance as of 1/1/2022	Cash-effective change	Foreign currency exchange effects	Changes in the group of consolidated entities	Addition/ disposal	Change in the fair value	Change in maturity	Reclassification in accordance with IFRS 5 [1]	Balance as of 12/31/2022
Non-current financial debts	448,746 (138,410)	15,000 (399,906)	3,355 (3,131)	0 (4,353)	24,828 (8,504)	119 (−641)	−14,319 (−86,699)	0 (−18,220)	477,729 (448,746)
Non-current debt to banks	421,218 (90,685)	15,000 (399,906)	3,388 (2,220)	0 (2,882)	0 (0)	120 (−641)	−4,356 (−73,834)	0 (0)	435,369 (421,218)
Non-current debt from leases	27,528 (47,726)	0 (0)	−33 (911)	0 (1,470)	24,828 (8,504)	0 (0)	−9,963 (−12,864)	0 (−18,220)	42,360 (27,528)
Current financial debts	148,993 (130,871)	−107,838 (−72,496)	192 (283)	0 (5,061)	3,318 (2,070)	67 (32)	14,319 (86,699)	0 (−3,525)	59,052 (148,993)
Current debt to banks	137,575 (118,565)	−94,974 (−58,764)	112 (65)	0 (3,843)	0 (0)	67 (32)	4,356 (73,834)	0 (0)	47,135 (137,575)
Current debt from leases	11,418 (12,306)	−12,864 (−13,731)	81 (217)	0 (1,218)	3,318 (2,070)	0 (0)	9,963 (12,864)	0 (−3,525)	11,916 (11,418)
Total	**597,739** **(269,281)**	**−92,838** **(327,410)**	**3,547** **(3,414)**	**0** **(9,414)**	**28,146** **(10,574)**	**186** **(−609)**	**0** **(0)**	**0** **(−21,745)**	**536,781** **(597,739)**

The values in brackets refer to the prior year
[1] Financial liabilities of the discontinued VINCORION division as of December 31, 2021

The reconciliation shown above exclusively takes into account financial debt, so payments collected from the original customer and forwarded to the Factor in the context of the factoring (see section "Current trade receivables") are not taken into account. In the statement of cash flows these are included in the item Proceeds from or repayments for the redemption of loans in the sum of 611 thousand euros (prior year: 670 thousand euros).

For information regarding the allocation of the free cash flow to the segments, we refer to the Segment Report

In the prior year the sale of the crystal growth business and the non-optical process metrology business for grinding machines took place. In this context, net assets in the amount of 4,628 thousand euros were disposed of. Taking into account the payment received of 8,485 thousand euros and the cash sold of 900 thousand euros, the net inflow was 7,585 thousand euros.

7 Disclosure on the Segment Report

"Business segments" in accordance with IFRS 8 form the basis for the segment reporting. IFRS 8 follows the management approach. Accordingly, the external reporting is carried out for the attention of the chief operating decision makers on the basis of the internal group organizational and management structures as well as the internal reporting structure. The Executive Board analyzes the financial information using the key performance indicators which serve as a basis for decisions on allocating resources and assessing performance. The accounting policies and principles for the segments are the same as those described for the Group in the basic accounting principles.

Jenoptik has the following reportable segments: the Advanced Photonics Solutions and Smart Mobility Solutions divisions and the Non-Photonic Portfolio Companies.

As part of the restructuring of the Jenoptik Group, the former Light & Optics division and parts of the Light & Production division were combined within the new Advanced Photonic Solutions division during the course of Q1 2022. The Advanced Photonic Solutions division serves industrial customers and is a global provider of solutions and systems based on photonic technologies. In this respect, Jenoptik has a wide range of such technologies at its disposal, especially in the fields of optics, micro-optics, sensor technology and optical test and measurement systems.

The former Light & Safety division became the Smart Mobility Solutions division which focuses primarily on traffic monitoring, public safety, road user charging, emissions control and traffic management areas of business. In this division, Jenoptik develops, produces and sells photonics-based components, systems and services for public sector customers.

The Advanced Photonic Solutions and Smart Mobility Solutions divisions together form the core business of photonics.

Non-photonic activities, in particular for the automotive market, have been managed under the Non-Photonic Portfolio Companies since 2022. In the field of industrial metrology, optical inspection and highly flexible robot-based automation, the Non-Photonic Portfolio Companies develop manufacturing solutions for customers in the automotive and aerospace sectors as well as other manufacturing industries.

The Corporate Center (Holding, Shared Services, Real Estate) is reported under Other.

The “Consolidation” column comprises the business relationships to be consolidated between the segments and Other, as well as the necessary reconciliations.

The business relationships between the entities of the Jenoptik Group segments are fundamentally based on prices that are agreed with third parties.

Revenue more than 10 percent of the total revenue of the Jenoptik Group was generated with one customer of the Advanced Photonic Solutions division (166,126 thousand euros; prior year: 118,130 thousand euros). There were no other customer relationships with individual customers who accounted for a significant share of total revenue.

The analysis of revenue by region is conducted according to the country in which the customer has its registered office.

Prior-year information by segment was adjusted to take account of the new structure of the Jenoptik Group.

7.1 Segment report

in thousand euros	Advanced Photonic Solutions	Smart Mobility Solutions	Non-Photonic Portfolio Companies	Other	Consolidation	Total
Revenue	731,013	114,307	133,010	56,199	−53,846	980,684
	(501,432)	(110,101)	(142,229)	(44,763)	(−47,807)	(750,717)
of which intra-group revenue	1,395	0	745	51,706	−53,846	0
	(5,858)	(0)	(900)	(41,049)	(−47,807)	(0)
of which external revenue	729,617	114,307	132,265	4,493	0	980,684
	(495,574)	(110,101)	(141,329)	(3,714)	(0)	(750,717)
Europe	396,839	68,104	35,287	4,493	0	504,722
	(227,376)	(62,164)	(54,554)	(3,714)	(0)	(347,807)
of which Germany	166,139	37,346	21,002	4,492	0	228,979
	(71,193)	(30,856)	(33,624)	(3,712)	(0)	(139,384)
of which the Netherlands	141,824	3,452	18	0	0	145,293
	(111,083)	(3,760)	(98)	(0)	(0)	(114,941)
Americas	137,272	27,375	79,431	0	0	244,077
	(104,873)	(31,620)	(69,160)	(0)	(0)	(205,653)
of which the USA	131,458	17,085	56,148	0	0	204,690
	(100,418)	(22,213)	(44,838)	(0)	(0)	(167,469)
Middle East and Africa	29,739	5,528	385	0	0	35,652
	(21,724)	(2,490)	(129)	(0)	(0)	(24,343)
Asia/Pacific	165,768	13,301	17,163	0	0	196,232
	(141,601)	(13,827)	(17,486)	(0)	(0)	(172,914)
EBITDA	170,019	19,346	2,696	−6,976	−1,017	184,068
	(143,373)	(19,191)	(5,369)	(−13,221)	(1,023)	(155,735)
Impairment losses	0	0	−13,894	0	0	−13,894
	(0)	(0)	(0)	(−460)	(0)	(−460)
Free cash flow (before income taxes)	100,079	4,249	14,042	−35,729	37	82,678
	(79,013)	(−4,383)	(−13,496)	(−16,531)	(−1,411)	(43,192)
Working capital	204,158	34,141	58,689	−9,725	97	287,359
	(179,061)	(25,585)	(68,969)	(−13,476)	(418)	(260,556)
Order intake (external)	891,776	125,761	163,409	4,493	0	1,185,440
	(674,870)	(116,504)	(141,584)	(3,714)	(0)	(936,672)
Capital expenditure in intangible assets, property, plant and equipment and investment property	79,555	7,831	3,801	14,810	0	105,998
	(30,650)	(8,108)	(1,653)	(9,530)	(0)	(49,941)
Number of employees on average excluding trainees (head count)	2,782	476	654	286	0	4,196
	(2,154)	(484)	(714)	(280)	(0)	(3,631)

The free cash flow (before income taxes) = cash flows from operating activities before payment of income taxes, less the inflows and outflows of funds for intangible assets and property, plant, and equipment
The figures in brackets relate to the prior year

Reconciliation of segment result

EBITDA means earnings before interest, taxes, depreciation, and amortization (including impairment losses and reversals on impairment losses). The reconciliation of the EBITDA with the EBIT reported in the consolidated income statement is as follows:

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
EBITDA	184,068	155,735
Scheduled depreciation and amortization	−68,265	−47,578
Impairment losses	−13,894	−460
Reversals on impairment losses	0	451
EBIT	**101,909**	**108,148**

7.2 Non-current assets by regions

in thousand euros	31/12/2022	31/12/2021
Europe	919,734	876,548
Americas	120,168	125,699
Asia / Pacific	19,996	22,812
Group	**1,059,898**	**1,025,060**
of which Germany	584,796	538,282
of which outside Germany	475,102	486,778
including Switzerland	269,275	260,343

The non-current assets recognized here include comprise intangible assets, property, plant, and equipment, investment property, as well as non-current non-financial assets. The assets are allocated to the individual regions according to the countries in which the consolidated companies have their registered office.

8 Other Disclosures

8.1 Capital management

The aim of Jenoptik's capital management is to maintain a strong capital base to retain the trust of the shareholders, creditors and capital markets, as well as to ensure the sustained, successful development of the company. The Executive Board monitors in particular the equity ratio, the development of cash flows as well as the net debt as part of the regular management reporting. In the event of significant deteriorations in the key parameters, alternative courses of action are worked out and the corresponding measures implemented.

As of the statement of financial position date December 31, 2022, the key financing of the Jenoptik Group is a syndicated credit line in the sum of 400,000 thousand euros, utilized with 51,478 thousand euros, as well ten debenture bonds in the total sum of 350,000 thousand euros and one debenture bond in the sum of 59,000 thousand US dollars. Further details on these are shown in the section "Liquidity risk". No agreements have been concluded on compliance with certain key financial figures for the existing debenture bonds or for the syndicated credit line.

In addition to the syndicated credit line and debenture bonds, the Jenoptik Group utilizes to a lesser extent other sources of financing, consisting of bilateral credit lines, development loans, lease and rental financing as well as factoring. These instruments are used to actively manage the development of the cash flows. Detailed information on the factoring is shown in the Notes in the section "Current trade receivables ". The financial debt as of December 31, 2022, is as follows:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Liabilities to banks	47,135 (137,575)	203,116 (201,899)	232,253 (219,319)	482,505 (558,793)
Liabilities from leases	11,916 (11,418)	27,783 (25,365)	14,577 (2,163)	54,276 (38,946)
Total	**59,052** **(148,993)**	**230,899** **(227,264)**	**246,830** **(221,482)**	**536,781** **(597,739)**

The figures in brackets relate to the prior year

8.2 Financial instruments

General

Within the framework of its operating activities, the Jenoptik Group is exposed to credit, default, liquidity, and market risks. The market risks include in particular risks of fluctuations in interest rates and foreign currency exchange rates.

The risks described above impact on the financial assets and liabilities which are shown below.

Financial assets

in thousand euros	Valuation category in accordance with IFRS 9[1]	Carrying amounts 31/12/2022	Valuation in the statement of financial position in accordance with IFRS 9: Amortized acquisition costs	Fair value – outside of profit or loss	Fair value – through profit or loss
Financial investments					
Current financial investments (cash deposits)	AC	1,048 (1,555)	1,048 (1,555)		
Shares in non-consolidated, associates and investments	FVTOCI	807 (1,001)		807 (1,001)	
Loans and other financial investments	AC	1,947 (1,985)	1,947 (1,985)		
Trade receivables	AC	138,771 (120,477)	138,771 (120,477)		
Other financial assets					
Receivables from contingent considerations	FVTPL	3,652 (13,347)			3,652 (13,347)
Derivatives with hedge relationships					
Interest and currency swap	–	6,242 (2,957)		6,242 (2,957)	
Foreign exchange forward transactions/ foreign exchange swaps	–	826 (20)		826 (20)	
Interest cap	–	4,088 (0)		4,088 (0)	
Derivatives without hedge relationships					
Interest and currency swap	FVTPL	28 (0)			28 (0)
Foreign exchange forward transactions/ foreign exchange swaps	FVTPL	630 (69)			630 (69)
Other financial assets	AC	10,628 (8,223)	10,628 (8,223)		
Cash and cash equivalents	AC	56,758 (54,817)	56,758 (54,817)		
Total		**225,424** **(204,451)**	**209,152** **(187,057)**	**11,963** **(3,978)**	**4,309** **(13,416)**

The figures in brackets relate to the prior year
[1] AC = Amortized costs
FVTPL = Fair value through Profit & Loss
FVTOCI = Fair value through other comprehensive income

Financial liabilities

in thousand euros	Valuation category in accordance with IFRS 9[1]	Carrying amounts 31/12/2022	Valuation in the statement of financial position in accordance with IFRS 9: Amortized acquisition costs	Fair value – outside of profit or loss	Fair value – through profit or loss	Balance sheet valuation in accordance with IFRS 16
Financial debts						
Liabilities to banks	AC	482,505 (558,793)	482,505 (558,793)			
Liabilities from leases	–[2]	54,276 (38,946)				54,276 (38,946)
Trade payables	AC	100,860 (94,764)	100,860 (94,764)			
Other financial liabilities						
Liabilities from contingent considerations	FVTPL	320 (0)			320 (0)	
Derivatives with hedge relationships						
Foreign exchange forward transactions/ foreign exchange swaps	–	1,782 (1,661)		1,782 (1,661)		
Derivatives without hedge relationships						
Interest and currency swap	FVTPL	0 (66)			0 (66)	
Foreign exchange forward transactions/ foreign exchange swaps	FVTPL	596 (805)			596 (805)	
Other financial liabilities	AC	11,211 (21,300)	11,211 (21,300)			
Total		**651,550 (716,335)**	**594,576 (674,857)**	**1,782 (1,661)**	**916 (870)**	**54,276 (38,946)**

The figures in brackets relate to the prior year
[1] AC = Amortised costs
FVTPL = Fair value through Profit & Loss
FVTOCI = Fair value through other comprehensive income
[2] Valuation in accordance with IFRS 16

The classification of the fair values for the financial assets and liabilities is taken from the following overview:

in thousand euros	Carrying amounts 31/12/2022	Level 1	Level 2	Level 3
Shares in non-consolidated, associates and investments	807 (1,001)	0 (0)	0 (0)	807 (1,001)
Receivables from contingent considerations	3,652 (13,347)	0 (0)	0 (0)	3,652 (13,347)
Derivatives with hedge relationships (assets)	11,155 (2,977)	0 (0)	11,155 (2,977)	0 (0)
Derivatives without hedge relationships (assets)	657 (69)	0 (0)	657 (69)	0 (0)
Liabilities from contingent considerations	320 (0)	0 (0)	0 (0)	320 (0)
Derivatives with hedge relationships (liabilities)	1,782 (1,661)	0 (0)	1,782 (1,661)	0 (0)
Derivatives without hedge relationships (liabilities)	596 (870)	0 (0)	596 (870)	0 (0)

The figures in brackets relate to the prior year

Fair values available as quoted market prices at all times are allocated to level 1. Fair values determined on the basis of direct or indirect observable parameters are allocated to level 2. Level 3 is based on measurement parameters that are not based upon observable market data.

The fair values of all derivatives are determined using the generally recognized cash value method. In this context, the future cash flows determined via the agreed forward rate or interest rate are discounted using current market data. The market data used in this context is taken from leading financial information systems, such as for example Refinitiv. If an interpolation of market data is applied, this is done on a straight-line basis.

The fair values of contingent liabilities are valued at the anticipated payment outflows, taking into consideration the period and risk-dependent interest rate discounted as at the reporting date.

The development of the financial assets and liabilities which are valued at fair value and assigned to Level 3, can be found in the table below:

in thousand euros	Shares in non-consolidated associates and investments	Receivables from contingent considerations	Liabilities from contingent considerations
Balance as of 1/1/2022	**1,001**	**13,347**	**0**
Additions	0	3,430	0
Disposals	−14	−9,450	0
Profits (+)/losses (-) recorded in the operating result	0	−781	−320
Profits (+)/losses (-) recorded in the financial result	0	535	0
Gains (+) / losses (-) recognized in earnings from discontinued operation	0	−3,430	0
Valuation outside profit/loss	7	0	0
Transfers	−187	0	0
Balance as of 31/12/2022	**807**	**3,652**	**−320**

Contingent considerations

Receivables and liabilities from contingent considerations as of December 31, 2022 resulted from the acquisition of TRIOPTICS in 2020.

These include a revenue-based bonus/malus scheme linked to the revenue of the Trioptics Group under commercial law, resulting in a bonus or malus of up to 15 million euros in the event of deviations from the original business plan by up to 15 percent. In addition, an earn-out component was agreed which would have led to a further contingent, additional purchase price payment by Jenoptik of up to 15 million euros if the defined EBITDA target had been exceeded.

The relevant parameters for the valuation of the purchase price liabilities – consisting of revenue and earnings figures in accordance with the German Commercial Code (HGB) – were recognized in the prior year based on the preliminary revenue and earnings figures expected under commercial law as of December 31, 2021. In fiscal year 2022, a final adjustment was made to the audited and unqualified audit opinion under commercial law of the consolidated financial statements of the Trioptics Group as of December 31, 2021.

On this basis, a malus of approx. 13 percent is calculated, leading to a corresponding malus claim. Due to the lower revenues under commercial law in the fiscal year 2021, the anticipated EBITDA under commercial law was not achieved, consequently no earn-out payment was incurred.

With regard to the amount of the malus, Jenoptik is currently engaged in arbitration proceedings as the sellers are only accepting a malus of approx. 1 percent in deviation from the fully audited, consolidated financial statements under commercial law. Jenoptik assumes that the accounting under commercial law in the consolidated financial statements of Trioptics GmbH is correct and consequently so is the Jenoptik Group's malus claim.

In accordance with the contractual provisions, the capitalized receivable was partially offset in 2022 with a retention on the purchase price for the remaining 25 percent of TRIOPTICS acquired in 2021. The remaining claim is to be paid out from an escrow account once the definitive malus claim has been finally determined.

Fair value adjustments to contingent receivables and liabilities recorded through profit or loss are recognized in other operating income or other operating expenses. Accumulated interest is recognized in the financial result.

Additions to receivables from contingent considerations, as well as the expenses recognized in the earnings of the discontinued operation arose from the sale of VINCORION (see section "Discontinued operation").

Credit and default risks

The credit or default risk is the risk of a customer or a contract partner of the Jenoptik Group failing to fulfill his contractual obligations. This results in both the risk of creditworthiness-related impairment losses to financial instruments as well as the risk of a partial or a complete default on contractually agreed payments.

Credit and default risks primarily exist for trade receivables. These risks are countered by active receivables management and, if required, accounted for by recognizing impairments. In addition, the Jenoptik Group is exposed to credit and default risks for cash and cash equivalents as well as current cash deposits. These risks are taken into account through constant monitoring of the creditworthiness of our business partners. To this end, business partner credit ratings and Credit Default Swaps (CDS) are subject to regular evaluation. For risk management purposes, liquid funds, amongst other things, are distributed between a number of banks within fixed limits. In accordance with IFRS 9, impairments were also applied to cash and cash equivalents as well as to current cash deposits.

The maximum default risk corresponds to the carrying amount of the financial assets and as at the reporting date totaled 225,424 thousand euros (prior year: 204,451 thousand euros).

The following impairments were recorded for financial assets in the fiscal year:

in thousand euros	2022	2021
Trade accounts receivable and contract assets	3,533	3,354
Financial investments	5	107
Cash and cash equivalents	97	92
Total	**3,635**	**3,553**

These impairments are offset against the following reversals of impairment losses for financial assets:

in thousand euros	2022	2021
Trade accounts receivable and contract assets	3,128	2,203
Cash and cash equivalents	16	62
Total	**3,144**	**2,265**

The impairments to or reversals of impairment losses on financial investments as well as cash or cash equivalents, are included in the financial result; for trade receivables and contract assets, in other operating income or expenses.

Liquidity risk

The liquidity risk entails the possibility of the Group being unable to meet its financial obligations. In order to ensure our ability to pay and financial flexibility at all times, the net cash and cash equivalents, as well as the credit lines and the level of their utilization, are planned yearly by means of a five-year financial plan as well as via a quarterly forecast of the statement of financial position, earnings and cash flow. The liquidity risk is also limited by effective cash and working capital management.

As of the statement of financial position date the liquidity reserves were divided into cash and cash equivalents in the sum of 56,758 thousand euros (prior year: 54,817 thousand euros) and current financial investments in the sum of 1,048 thousand euros (prior year: 1.555 thousand euros).

In addition, the Group has a secured and unused credit line available in the sum of 381,594 thousand euros (prior year: 324,978 thousand euros). This is primarily the result of the syndicated loan of 400,000 thousand euros concluded in December 2021. As at the statement of financial position date of December 31, 2022, the syndicated loan was utilized in the form of money market loans in the sum 15,000 thousand euros as well as in the form of guarantees in the sum of 5,850 thousand euros and in the form of overdraft facilities in the sum of 30,628 thousand euros. On conclusion, the term of the syndicated loan agreement was set for a fixed period up to December 2026. As a result of the utilization of the first of two extension options in fiscal year 2022, the term of the agreement was extended by one further year up to December 2027.

In April 2022 the outstanding tranche of the debenture bond from the year 2015 was repaid in the sum of 55,000 thousand euros.

The eleven tranches of the debenture bond issued in March or September 2021 in the total sum of 350,000 thousand euros and 59,000 thousand US dollars respectively, have original maturities of between four and a half and nine and a half years.

Financial covenants were not agreed for either the syndicated loan or the debenture bonds. However, the terms of the financing are geared towards the Group's ESG targets of increasing diversity, reducing CO_2 emissions and increasing transparency in the supply chain. Since Jenoptik has achieved all the targets agreed for 2022, it will benefit from a small advantage in interest rates in the future.

Thanks to the syndicated loan and the debenture bonds, the Jenoptik Group has a very sound, long-term financing base and the financial foundation for continued organic and non-organic growth. This can also be seen from the structure of the maturity dates shown below.

Cash outflows up to one year primarily comprise the repayment of overdraft facilities and money market loans in the sum of 15,000 thousand euros plus interest, drawn under the syndicated loan, as well as interest payments on the debenture bonds. This item also includes interest and redemption payments for real estate financing in Germany, as well as liabilities from leases.

The cash outflows in the time frame of between one to five years mainly comprise the repayments of the debenture bonds with original terms of four-and-a-half and five years. In addition, the item includes interest and principal payments for real estate financing in Germany with an original ten-year term, as well as liabilities from leases.

Cash outflows over five years mainly comprise repayments for debenture bond tranches with original maturities of six-and-a-half, seven and nine-and-a-half years, as well as interest and principal payments for real estate financing in Germany and leases.

153 — 218 Consolidated Financial Statements

	Interest rates	Carrying amounts	Cash outflows			
in thousand euros	(Bandwidth in %)	31/12/2022	Total	Up to 1 year	1 to 5 years	More than 5 years
Variable, interest-bearing liabilities to banks	2.80 – 3.20	287,675	304,970	48,297	97,315	159,358
	(0.90 – 1.30)	(244,577)	(261,928)	(2,628)	(98,117)	(161,183)
Fixed interest bearing liabilities to banks	0.60 – 2.95	194,830	201,181	10,127	133,975	57,079
	(0.60 – 2.02)	(314,216)	(333,966)	(140,006)	(130,183)	(63,777)
Liabilities from leases	0.75 – 6.77	54,276	57,474	12,962	31,498	13,013
	(0.75 – 5.73)	(38,946)	(41,421)	(12,373)	(23,929)	(5,119)
		536,781	**563,624**	**71,386**	**262,787**	**229,451**
Total		**(597,739)**	**(637,315)**	**(155,007)**	**(252,228)**	**(230,080)**

The figures in brackets relate to the prior year

Risk of changes in interest rates

The Jenoptik Group is fundamentally exposed to the risks of fluctuations in market interest rates for all interest-bearing for all interest-bearing financial assets and liabilities. In the fiscal year 2022, this mainly affected the debenture bonds raised in the sum of 350,000 thousand euros (prior year: 405,000 thousand euros) and 59,000 thousand US dollars (prior year: 59,000 thousand US dollars) as well as the utilization of the syndicated loan contract through money market loans in the sum of 15,000 thousand euros (prior year: 75,000 thousand euros) at the respective statement of financial position date.

	Carrying amounts	
in thousand euros	31/12/2022	31/12/2021
Interest bearing financial assets	39,419	21,456
Variable interest rates	8,078	9,226
Fixed-interest	31,341	12,230
Interest bearing financial liabilities	540,229	599,377
Variable interest rates	294,227	245,670
Fixed-interest	246,002	353,707

The calculated gains and losses arising from a change in the market interest rate as of December 31, 2022, within a bandwidth of 100 basis points, are shown in the following table:

in thousand euros	31/12/2022	31/12/2021
Increase by 100 base points		
Interest-bearing financial assets	81	92
Interest-bearing financial liabilities	−2,942	−2,457
Impact on earnings before tax	**−2,861**	**−2,364**
Reduction by 100 base points		
Interest-bearing financial assets	−81	−92
Interest-bearing financial liabilities	2,942	2,457
Impact on earnings before tax	**2,861**	**2,364**

As part of the management of interest rate risks, Jenoptik relies on a mix of fixed and variable interest-bearing assets and liabilities, as well as on various interest rate hedging transactions. These include, for example, interest swaps, interest caps and floors, as well as combined interest and currency swaps. As of the statement of financial position date of December 31, 2022, there were two combined interest rate and currency swap and one interest cap instruments in place, with the following structure:

Interest and currency swap CNY	
Nominal volume	17,980 thousand CNY
Term	March 12, 2015 to March 12, 2025
Fixed interest rate to be paid in CNY	5.10 percent p.a.
Variable interest rate to be received in EUR	6-month Euribor plus 0.2 percent p.a.
Interest and currency swap USD	
Nominal volume	59,000 thousand US dollars
Term	March 31, 2021, to March 31, 2026
Fixed interest rate to be received in USD	2.024 percent p.a.
Fixed interest rate to be paid in EUR	0.645 percent p.a.
Interest cap euro	
Nominal volume	107,000 thousand euros
Term	September 30, 2022, to March 31, 2028
Interest rate cap	3.00 percent p.a.
Reference interest rate	6-month Euribor

The interest and currency swap in CNY is used as a hedge for an intra-group loan for real estate financing in Shanghai (China). The increase of 93 thousand euros in its market value was recorded through profit or loss in the statement of income.

The interest and currency swap in US dollars is used as a hedge for the risk of foreign currency exchange differences for the debenture bond tranche issued in 2021, in the sum of 59,000 thousand US dollars. The future cash flows to be expected were fixed for the entire term upon conclusion of the contract. The market value is sub-divided into an interest rate and a currency component. As of December 31, 2022, the interest component had a positive market value of 374 thousand euros which was recognized in equity outside profit or loss. Explanations of the foreign currency component follow in the next section “Foreign currency exchange risk”.

The interest cap serves as a hedge against the risk of a change in the interest rate of a variable, interest-bearing tranche of a debenture bond issued in 2021 in the sum of 107,000 thousand euros. It is linked to the variable 6-month Euribor money market rate. The hedging effect of the cap comes into force as soon as the 6-month Euribor exceeds the 3.0 percent p.a. mark. In this event, the counterparty pays JENOPTIK AG the difference between the applicable money market rate at that time and 3.0 percent. As of December 31, 2022, the 6-month Euribor was below the strike of 3.0 percent, consequently no offsetting payments have been made to date. The original fair value of the interest rate cap when the contract was signed is amortized over the 7-year term. Changes in fair value are recognized in other equity outside profit or loss. The option premium due for concluding the interest cap is recognized in equity and amortized over the 7-year term. In addition, the intrinsic value of this financial instrument is determined based on recognized valuation methods and is also reported directly in equity until the beginning of the respective interest period. As at the reporting date of December 31, 2022 the intrinsic value was 975 thousand euros.

The aforementioned hedging instruments are expected to give rise to the following deposits and payments:

in thousand euros	Up to 1 year	1 to 5 years	More than 5 years	Total
Interest and currency swap CNY				
Anticipated payments to bank	128 (138)	215 (350)	0 (0)	343 (488)
Interest and currency swap USD				
Anticipated payments to bank	322 (322)	966 (1,288)	0 (0)	1,288 (1,610)
Anticipated payments Received from bank	1,010 (1,010)	3,030 (4,040)	0 (0)	4,040 (5,051)
Interest cap euro				
Anticipated payments received from bank	224 (0)	728 (0)	23 (0)	975 (0)

The figures in brackets relate to the prior year

Foreign currency exchange risk

Foreign currency exchange risks include two types: conversion risk and transaction risk.

The conversion risk arises from fluctuations in value caused by changes in exchange rates arising from the conversion of financial assets and liabilities in foreign currencies into the currency of the statement of financial position. Since this is not normally associated with any cash flows, in most cases hedging is not required.

The transaction risk arises from the fluctuation in value of cash flows in foreign currencies caused by changes in currency exchange rates. Derivative financial instruments are used to hedge this risk. These are mainly currency forward transactions and currency swaps and, to a lesser extent, currency options.

Hedging is provided for significant cash flows in foreign currencies arising from the operational business (revenue). Contractually agreed cash flows are hedged 1:1 via so-called micro-hedges. Planned cash flows are hedged on a pro rata basis in the context of anticipatory hedging, securing both groups of similar transactions (revenues) as well as net positions of individual entities.

JENOPTIK AG also hedges the anticipated cash flows from intra-group loans in foreign currencies which have not been declared as a “Net investment in a foreign operation”, using derivative financial instruments. As of December 31, 2022, intra-group loans in foreign currencies were hedged as follows:

Borrowers of intra-group loans	Outstanding amount of intra-group loans (excluding “Net investment in a foreign operation” portion)	Hedging volume
JENOPTIK Automotive North America, LLC, USA	47,200 TUSD	14,000 TUSD
Prodomax Automation Ltd., Canada	7,641 TCAD	11,500 TCAD
JENOPTIK JAPAN Co. Ltd., Japan	100,000 TJPY	100,000 TJPY

Foreign exchange forward transactions, foreign exchange swaps and foreign currency options existed as at the statement of financial position date. A so-called cash flow hedge relationship with the respective underlying transaction was documented for the vast majority of these transactions. Where this is proven effective, its changes in value do not have to be recorded through profit or loss but in equity outside profit or loss. In order to measure the effectiveness, a prospective, quality-related effectiveness test was conducted, on the designation date as well as on a continuous basis, normally as of the statement of financial position dates, on the basis of the IFRS 9 “Financial instruments” accounting standard.

The interest rate and currency swap in USD, already mentioned in the previous section “Risk of changes in interest rates”, serves to hedge the foreign exchange currency risk for the tranche of a debenture bond in the sum of 59,000 thousand US dollars. The positive market value of its currency components totaled 5,409 thousand euros as of the qualifying date December 31, 2022. The change in the market value of the currency component is reflected in the income statement through profit or loss. This creates the targeted balancing effect with the countervailing change in the value of the underlying transaction (valuation of the foreign currency liability in euro).

The breakdown of foreign exchange forward transactions, foreign exchange swaps and foreign exchange options, as well as the USD interest rate and currency swap according to currency sales and purchases, is as follows:

in thousand euros	31/12/2022	31/12/2021
USD – sale for EUR	61,914	40,698
USD – purchase for EUR	53,097	49,907
GBP – sale for EUR	0	2,717
USD – sale for CHF	3,002	4,435
USD – sale for CAD	1,897	1,348
USD – purchase for CAD	4,121	924
CNY – sale for EUR	7,108	1,021
CNY – purchase for EUR	687	2,188
JPY – sale for EUR	786	0
CAD – sale for EUR	8,277	0
Total foreign currency sales	**82,984**	**53,331**
Total foreign currency purchases	**57,905**	**49,907**

The foreign exchange forward transactions, foreign exchange swaps and foreign exchange options, as well as the interest and currency swaps in USD, gave rise to the following market values:

in thousand euros	31/12/2022	31/12/2021
Positive market values		
Derivatives with hedging relationship		
Non-current	10,384	2,957
Current	771	20
Derivatives without hedging relationship		
Non-current	44	21
Current	614	48
Total positive market values	**11,813**	**3,046**
Negative market values		
Derivatives with hedging relationship		
Non-current	415	492
Current	1,367	1,169
Derivatives without hedging relationship		
Non-current	0	155
Current	596	649
Total negative market values	**2,378**	**2,465**
Balance	**9,436**	**581**

The market values for hedging transactions for intra-group loans are included in the derivatives without hedging relationships as the underlying transaction comprising intra-group receivables and liabilities is eliminated. The positive market values of these derivatives as of the statement of financial position date totaled 582 thousand euros (prior year: 27 thousand euros), whist the negative market values totaled 577 thousand euros (prior year: 281 thousand euros). The change led to an overall gain in the sum of 259 thousand euros (prior year: loss of 281 thousand euros) which was recognized in the financial result through profit or loss.

Cumulative gains in hedged derivatives in the sum of 793 thousand euros (prior year: cumulative losses of 957 thousand euros) were recognized in equity outside profit or loss as at December 31, 2022. Of the losses recognized directly in equity outside profit or loss as of December 31, 2021, 465 thousand euros (prior year: gains of 769 thousand euros) were reclassified from equity to profit or loss in 2022. This type of reclassification is normally associated with the recognition of the underlying transaction (for example, recognition of revenue and booking of the corresponding receivable on billing) through profit or loss so the targeted balancing effect of concluding the hedge transaction is reflected in the income statement.

The foreign currency hedging transactions hedge against foreign exchange currency risks in the sum of 61,559 thousand euros with a time frame up to the end of 2023. Foreign currency risks with a time frame up to the end of 2026 were hedged in the sum of 21,385 thousand euros.

The main foreign currency risks of the Jenoptik Group involve the US dollar. The table below shows a list of the financial assets and liabilities in US dollars and the resultant net risk item for the statement of financial position:

in thousand euros	31/12/2022	31/12/2021
Financial assets	32,915	50,646
Financial debts	59,426	55,497
Net risk item for the statement of financial position:	**−26,511**	**−4,851**

As of the statement of financial position date there was a US dollar-based net risk item in the statement of financial position in the sum of minus 26,511 thousand euros (prior year: minus 4,851 thousand euros). A change in the US dollar exchange rate would have the following consequences:

	EUR/USD rate	Change in the net risk item (in thousand euros)
Reporting date 31/12/2022	1.0666	
	(1.1326)	
Increase by 5 percent	1.1199	−1,262
	(1.1892)	(−231)
Reduction by 5 percent	1.0133	1,395
	(1.0760)	(255)
Increase by 10 percent	1.1733	−2,410
	(1.2459)	(−441)
Reduction by 10 percent	0.9599	2,946
	(1.0193)	(539)

The figures in brackets relate to the prior year

In addition to the risks to the statement of financial position, the US dollar entails other risks arising from anticipated cash flows. These are estimated and hedged on a proportional basis as part of the annual medium-term planning. As of December 31, 2022 cash flows in US dollars, hedged through derivatives, totaled the equivalent of 59,502 thousand euros (prior year: 46,481 thousand euros).

8.3 Contingent liabilities and contingent payables

Up to June 30, 2022, VINCORION was part of the Jenoptik Group's scope of consolidation. Consequently, intra-group guarantees, letters of comfort and warranties (referred to in summary below as guarantees) of JENOPTIK AG were not shown as external guarantee relationships. With the completed sale of VINCORION, the existing guarantees as of December 31, 2022 totaling 19,519 thousand euros will be classified as non-group.

The external contract performance guarantees to VINCORION customers remaining with JENOPTIK AG for a certain period totaled 10,000 thousand euros as at December 31, 2022. Counter-guarantees from banks for other existing guarantees amounting to 9,519 thousand euros were issued for the period until an exempting assumption of debt by VINCORION. The risk of a future claim is currently considered to be low.

In addition, a financing commitment was given to a non-consolidated company in liquidation with a view to an orderly process of liquidation.

8.4 Legal disputes

JENOPTIK AG and its group entities are involved in few court or arbitration proceedings. Provisions for litigation risks, respectively litigation expenses, were set aside in the appropriate amount in order to meet any potential financial burdens resulting from current court or arbitration proceedings (see Section "Other provisions").

8.5 Related party disclosures in accordance with IAS 24

Related parties are defined in IAS 24 "Related party disclosures" as being entities or persons that have control over or are controlled by the Jenoptik Group to the extent that they have not already been included in the consolidated financial statements as consolidated entities as well as entities or persons that, on the basis of the Articles of Association or by contractual agreements, are able to significantly influence the financial and corporate policies of the management of JENOPTIK AG or participate in the joint management of JENOPTIK AG. Control applies if a shareholder holds more than half of the voting rights in JENOPTIK AG. The largest single shareholder in JENOPTIK AG is Thüringer Industriebeteiligungs GmbH & Co. KG, Erfurt, which directly holds a total of 11 percent of the voting rights.

The following table shows the composition of the business relationships with non-consolidated entities, associate entities and joint ventures.

		of which	
in thousand euros	Total	Non-consolidated associates	Associated entities and investments
Revenue	819 (1,024)	0 (12)	819 (1,012)
Purchased services	1,570 (1,959)	48 (361)	1,522 (1,598)
Receivables from operating activities	582 (310)	42 (36)	539 (274)
Liabilities from operating activities	162 (0)	0 (0)	162 (0)
Financial liabilities	0 (3,022)	0 (0)	0 (3,022)
Financial assets, loans granted	1,016 (125)	0 (0)	1,016 (125)

The figures in brackets relate to the prior year

Remuneration of the Executive Board and Supervisory Board

Members of the Executive Board and of the Supervisory Board of JENOPTIK AG also qualify as related parties.

The breakdown of the total remuneration of the members of the management in key positions (Executive Board and Supervisory Board), recorded in 2022 through profit or loss, is shown in the following table.

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Executive Board remuneration		
Current due payments[1]	1,849	1,865
Payments after termination of the employment relationship	360	360
Share-based payment	−3	1,121
Executive Board remuneration	**2,207**	**3,346**
Supervisory Board remuneration[2]	**885**	**782**
Total	**3,092**	**4,128**

[1] Fixed remuneration, one-year variable remuneration and fringe benefits (contributions to accident insurance and the provision of company cars)
[2] Fixed remuneration and committee remuneration including attendance fees, net

Individualized details on the remuneration of the Executive Board and Supervisory Board of JENOPTIK AG are shown in the Remuneration Report.

The expenses shown in the table for the share-based remuneration of the Executive Board are derived from the continuous valuation of all performance shares provisionally granted as at the statement of financial position date, each at the respective fair value at the statement of financial position date.

The fair value of the 21,530 performance shares provisionally allocated in the fiscal year (prior year: 30,273 plus 161 dividend protection of old shares) on the date of granting is 435 thousand euros (prior year: 556 thousand euros). The total remuneration paid to the members of the Executive Board in accordance with Section 314 (6) of the German Commercial Code (HGB) therefore totaled 2,645 thousand euros in the fiscal year 2022 (prior year: 2,781 thousand euros).

As at the statement of financial position date, there were outstanding commitments to members of management in key positions in the total sum of 3.375 thousand euros (prior year: 4,047 thousand euros) consisting of one and multi-year variable remuneration components of the Executive Board and the remuneration of the Supervisory Board.

Retirement benefits paid to former Executive Board members, or their survivors amounted to 139 thousand euros (prior year: 185 thousand euros). As of the statement of financial position date, the pension provisions for former Executive Board members totaled 1,552 thousand euros (prior year: 3,108 thousand euros). The expenses recorded for these existing provisions in the fiscal year 2022 totaled 31 thousand euros (prior year: 20 thousand euros).

As in the prior year, in fiscal year 2022 there was no exchange of goods or services between the entity and members of these two bodies.

In the fiscal year 2022 – as in the preceding years – no loans or advances were granted to the members of either the Executive Board or the Supervisory Board. Consequently, there were no loan redemption payments.

9 Events after the Balance Sheet Date

The JENOPTIK AG Executive Board approved the submission of the present Consolidated Financial Statements to the Supervisory Board on March 20, 2023. The Supervisory Board is responsible for reviewing and approving the Consolidated Financial Statements at its, March 27, 2022, meeting.

Dividend. According to the Stock Corporation Act, the amount available for a dividend payment to the shareholders is based on the accumulated profit of the parent company JENOPTIK AG, as determined by the regulations of the HGB. For the fiscal year 2022, JENOPTIK AG's accumulated profit totaled 75,383,014.03 euros, comprising the net profit for the fiscal year 2022 in the amount of 55,383,014.03 euros plus retained profits of 20,000,000.00 euros.

The Executive Board recommends to the Supervisory Board that for the fiscal year 2022 past a dividend of 0.30. euros per qualifying no-par value share be proposed at the 2023 Annual General Meeting, representing an increase over the level for the prior year (prior year: 0.25 euros). This would mean that a sum of 17,171,434.50 euros from JENOPTIK AG's accumulated profits in the fiscal year 2022 is to be distributed. Of the remaining accumulated profits of JENOPTIK AG, an amount of 38,211,579.53 euros allocated to other profit reserves and an amount of 20,000,000.00 euros will be carried forward to the new account.

No further events of significance occurred after December 31, 2022.

10 Other Required Disclosures and Supplementary Information under HGB

10.1 Required disclosures in accordance with § 315e and § 264 (3) or § 264b of the HGB

The consolidated financial statements of JENOPTIK AG were prepared in accordance with § 315e of the HGB, exempting an entity from preparing consolidated financial statements under HGB in accordance with the guidelines of the IASB. At the same time, the consolidated financial statements and Combined Management Report are in conformity with the European Union Consolidated Accounts Directive (2013/34/EU). In order to achieve comparability with consolidated financial statements prepared in accordance with the commercial regulations of the HGB, all of the required disclosures and explanations under the HGB as well as any required disclosures above and beyond those needed to be in compliance with IFRS are to be published.

Through having been included in the consolidated financial statements of JENOPTIK AG, the following fully consolidated German associates have made use of the simplification relief measures defined in § 264 (3) or § 264b of the HGB:

- JENOPTIK Automatisierungstechnik GmbH, Jena
- JENOPTIK Industrial Metrology Germany GmbH, Villingen-Schwenningen
- JENOPTIK Optical Systems GmbH, Jena
- JENOPTIK Robot GmbH, Monheim am Rhein
- Trioptics GmbH, Wedel

10.2 Number of employees and personnel expenses

The breakdown of the average number of employees is as follows:

Employees	2022	2021
Advanced Photonic Solutions	2,782	2,154
Smart Mobility Solutions	476	484
Non-Photonic Portfolio Companies	654	714
Other[1]	613	971
Total	**4,524**	**4,322**
of which continuing operations	4,196	3,631

[1] Including discontinued operation: VINCORION

In addition, in the fiscal year 2022 an average of 178 trainees (prior year: 167) were employed.

The average was determined in accordance with the requirements of § 267 (5) HGB [German Commercial Code] for the description of the size categories.

The breakdown of the continuing and discontinued operations is as follows:

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Wages and salaries	322,071	282,951
Social security contributions and costs for assistance	49,842	47,813
Expenses for pensions	5,294	2,644
Total	**377,208**	**333,408**
of which continuing operations	347,217	274,448

10.3 Financial statement auditor fees

The fees for the services received rendered by our auditor, as well as by its affiliates and network companies, amounted to:

in thousand euros	1/1–31/12/2022	1/1–31/12/2021
Financial statement audit services	1,770	1,565
Other services	108	21
Tax consulting services	4	23
Total	**1,881**	**1,609**

The fees for the financial statement audit services relate to expenses for the audit of the annual and consolidated financial statements of JENOPTIK AG as well as the statutory and voluntary audits of the financial statements of the subsidiaries included in the consolidated financial statements.

Other attestation services of the auditor were rendered as part of the certifications issued under the Renewable Energies Act and the European Market Infrastructure Regulation (EMIR). It also includes attestation services in connection with the sale of VINCORION and the audit of the Remuneration Report in accordance with Section 162 AktG [German Stock Corporation Act]. Advice on taxation relates to support services in connection with the tax return of a foreign subsidiary.

Of the total expenses, financial statement audit services of 1,095 thousand euros (prior year: 1,040 thousand euros), other attestation services of 108 thousand euros (prior year: 21 thousand euros), and tax consulting services of 0 thousand euros (prior year: 18 thousand euros) were rendered by the auditors of the consolidate financial statements Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Germany.

10.4 German Corporate Governance Code

In December 2022, the Executive Board and Supervisory Board of JENOPTIK AG submitted a declaration of conformity in accordance with § 161 of the German Stock Corporation Act as required by the recommendations of the Government Commission’s German Corporate Governance Code in the version dated April 28, 2022. The declaration of conformity was made permanently available to shareholders on the JENOPTIK AG website at www.jenoptik.com in the section Investors/Corporate Governance. The declaration can also be viewed in the offices of JENOPTIK AG (Carl-Zeiss-Strasse 1, 07743 Jena, Germany).

11 List of Shareholdings in the Jenoptik Group as at December 31, 2022 in accordance with § 313 2 HGB

No.	Name and registered office of the entity	Share of Jenoptik or the direct shareholder as %	Equity 31/12/2022 thousand euros [1]	Result 2022 thousand euros [1]
	1.1 Consolidated associates – indirect investments			
1	JENOPTIK Asia-Pacific Pte. Ltd., Singapore, Singapore	100		
2	JENOPTIK Automatisierungstechnik GmbH, Jena, Germany	100		
3	JENOPTIK Industrial Metrology Germany GmbH, Villingen-Schwenningen, Germany	100		
4	JENOPTIK North America, Inc., Jupiter (FL), USA	100		
5	JENOPTIK Optical Systems GmbH, Jena, Germany	100		
6	JENOPTIK Robot GmbH, Monheim am Rhein, Germany	100		
	– direct investments			
7	Asam Grundstücksverwaltungsgesellschaft mbH & Co. Vermietungs KG, Mainz, Germany	94		
8	Berliner Glas Wuhan Trading Co., Ltd., Wuhan, China	100		
9	BROXBURN, S.L., Madrid, Spain	100		
10	INTEROB RESEARCH & SUPPLY, S.L., Valladolid, Spain	100		
11	INTEROB, S.L., Valladolid, Spain	100		
12	JENOPTIK (Shanghai) International Trading Co., Ltd., Shanghai, China	100		
13	JENOPTIK (Shanghai) Precision Instrument and Equipment Co., Ltd., Shanghai, China	100		
14	JENOPTIK Australia Pty Ltd, Sydney, Australia	100		
15	JENOPTIK Automotive North America, LLC, Rochester Hills (MI), USA	100		
16	JENOPTIK Benelux B.V., Drunen, The Netherlands	100		
17	JENOPTIK India Private Limited, Bangalore, India	100		
18	JENOPTIK INDUSTRIAL METROLOGY DE MEXICO, S. DE R.L. DE C.V., Saltillo, Mexico	98		
19	JENOPTIK Industrial Metrology France SAS, Bayeux Cedex, France	100		
20	JENOPTIK JAPAN Co. Ltd., Yokohama, Japan	100		
21	JENOPTIK Korea Corporation, Ltd., Pyeongtaek, Korea	66.66		
22	JENOPTIK Optical Systems, LLC, Jupiter (FL), USA	100		
23	JENOPTIK Traffic Solutions Switzerland AG, Uster, Switzerland	100		
24	JENOPTIK Traffic Solutions UK Ltd., Camberley, Great Britain	100		
25	JENOPTIK UK Ltd., Milton Keynes, Great Britain	100		
26	Prodomax Automation Ltd., Barrie, Canada	100		
27	SwissOptic (Wuhan) Co., Ltd., Wuhan, China	100		
28	SwissOptic AG, Heerbrugg, Switzerland	100		
29	Traffipax, LLC, Jupiter (FL), USA	100		
30	TRIOPTICS Berlin GmbH, Berlin, Germany	100		
31	Trioptics GmbH, Wedel, Germany	100		
32	Trioptics Hong Kong Limited, Hong Kong	100 [10]		
33	Trioptics Japan Co., Ltd., Shizuoka, Japan	61.25		
34	Trioptics Korea Co., Ltd, Suwon, Korea	60		
35	Trioptics Optical Test Instruments (China) Ltd., Beijing, China	51		
36	TRIOPTICS Scandinavia OY, Tampere; Finland	100		
37	TRIOPTICS SINGAPORE PTE. LTD., Singapore	100		
38	TRIOPTICS TAIWAN LTD., Taoyuan, Taiwan	51		
39	Trioptics, Inc., Rancho Cucamonga, California, USA	100		

No.	Name and registered office of the entity	Share of Jenoptik or the direct shareholder as %	Equity 31/12/2022 thousand euros [1]	Result 2022 thousand euros [1]
	1.2. Non-consolidated associates			
	– indirect investments			
40	FIRMICUS Verwaltungsgesellschaft mbH, Jena, Germany, in liq. [2]	100 [8]	35	−2
41	SAALEAUE Immobilien Verwaltungsgesellschaft mbH, Jena, Germany, in liq. [2]	100 [9]	36	2
42	KORBEN Verwaltungsgesellschaft mbH, Grünwald, Germany, in liq. [2]	100	32 [4]	1 [4]
	– direct investments			
43	JENOPTIK do Brasil Instrumentos de Precisão e Equipamentos Ltda., Sao Paulo, Brazil	100	−813 [4]	−9 [4]
44	JENOPTIK Saudi Arabia, LLC, Jeddah, Saudi-Arabia, in liq. [2]	100	9 [5]	−37 [5]
45	Hörsel GmbH (ehemals PHOTONIC SENSE GmbH), Eisenach, Germany, in liq. [2]	100	−541	330
	Investments valued at equity			
46	HILLOS GmbH, Jena, Germany	50	15,944	1,156
47	TELSTAR-HOMMEL CORPORATION, Ltd., Pyeongtaek, Korea	33.33	17,697 [4]	−417 [4]
48	Trioptics France S.A.R.L., Villeurbanne, France	50	256 [4]	34 [4]
	3. investments			
	– indirect investments			
49	JENAER BILDUNGSZENTRUM gGmbH SCHOTT CARL ZEISS JENOPTIK, Jena, Germany	33.33	1,538 [4]	−33 [4]
	– direct investments			
50	HOMMEL CS s.r.o., Teplice, Czech Republic	40	1,161 [4]	106 [4]
51	JENOPTIK Robot Algérie SARL, Algier, Algeria	49	184 [4]	0 [4]
52	JT Optical Engine GmbH + Co. KG, Jena, Germany, in liq. [2]	50 [7]	506	−1
53	JT Optical Engine Verwaltungs GmbH, Jena, v, in liq. [2]	50 [7]	23	0
54	ZENTERIS GMBH, JENA, GERMANY, in liq. [3]	24.9 [7]	[6]	[6]

[1] Details from annual financial statements in foreign currency converted at the rate on the qualifying date or at the average rate of the respective year
[2] in. liq. = in liquidation
[3] i.I. = in insolvency
[4] Details for 2021 financial statements
[5] Details as at March 31, 2018
[6] Details not available
[7] Deviating fiscal year as of June 30
[8] Deviating fiscal year as of September 30
[9] Short fiscal year from January 1 to September 30, 2021
[10] indirect investment through Trioptics Optical Test Instruments (China) Ltd.

Jena, March 20, 2023
JENOPTIK AG

Dr. Stefan Traeger
President & CEO

Hans-Dieter Schumacher
Chief Financial Officer

Dr. Prisca Havranek-Kosicek
Member of the Executive Board

Dr. Ralf Kuschnereit
Member of the Executive Board