



**Intermediate Report** 

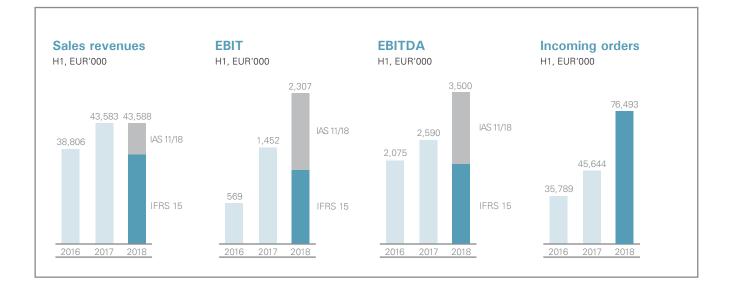
Intermediate Report January 1 – June 30, 2018

## IMPORTANT CONSOLIDATED FIGURES AT A GLANCE

EUR'000	H1 / 2018	As at IAS 11 and IAS 18	H1 / 2017	H1 / 2016
Sales revenues	38,176	43,588	43,583	38,806
Industrial Systems	18,773	20,067	16,642	18,260
Semiconductor Systems	19,403	23,521	26,941	20,546
Gross profit	9,559	11,058	10,052	9,265
in % sales revenues	25.0	25.4	23.1	23.9
R&D expenses	1,247	1,247	747	1,480
EBITDA	2,001	3,500	2,590	2,075
in % sales revenues	5.2	8.0	5.9	5.3
EBIT	808	2,307	1,452	569
in % sales revenues	2.1	5.3	3.3	1.5
Consolidated net result	375	1,439	508	386
in % sales revenues	1.0	3.3	1.2	1.0
Total assets	126,059	119,840	119,096 <sup>1)</sup>	<b>94,736</b> <sup>1)</sup>
Shareholders' equity	45,097	46,655	<b>45,129</b> <sup>10</sup>	<b>40,305</b> <sup>1)</sup>
Equity ratio in %	35.8	38.9	37.92)	42.52)
Employees as of June 30	404	404	376	372
Incoming orders	76,493	76,493	45,644	35,789
Order backlog	171,125	165,713	51,683	64,911
Book-to-bill-ratio	2.00	1.75	1.05	0.92
Cash Flow from operating activities	-12,595 <sup>2)</sup>	-12,595	10,202	-6,567
Net financial position	15,930	15,930	<b>29,133</b> 2)	- <b>8,902</b> <sup>2)</sup>

<sup>1)</sup> As of December, 31

<sup>2)</sup> Affected in the amount of 6.0 Mio. EUR by reclassification of cash into financial investments that can not be qualified as cash or cash equivalents



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# Foreword by the Management Board

### DEAR SHAREHOLDERS AND BUSINESS PARTNERS,

In the first half of 2018, the PVA TePla Group generated sales revenue of EUR 38.2 million and operating EBITDA of EUR 2.0 million, corresponding to a margin of 5.2%. The gross margin increased from 23.1% in the same period of the previous year to 25%.

The first six months were characterized by intensive measures to expand capacity and the preparations for the start of production of crystal growing systems that will be delivered for the semiconductor industry from the fourth quarter of 2018.

Owing to the new requirements of IFRS 15, recognition of the revenue and earnings from many of contracts will be until a significantly later date. On the basis of the previous year's accounting in accordance with IAS 11 and IAS 18 around EUR 5 million more in sales revenue as of June 30, 2018 would have been more achieved, and thus would have matched the previous year's level. EBITDA would have improved significantly to EUR 3.5 million (previous year: EUR 2.6 million).

Incoming orders rose substantially by 67% in the current year. In total, the PVA TePla Group received orders of EUR 76.5 million in the first half of the year (previous year: EUR 45.6 million).

Both divisions contributed to this increase. The performance in the crystal growing systems business unit in the Semiconductor Systems division and in analytical systems was especially gratifying. In May, the subsidiary PVA Crystal Growing Systems GmbH received an order from Europe's leading manufacturer of silicon carbide wafers (SiC) to deliver a mid-two-figure number of systems for the mass production of SiC crystals. PVA TePla's system concepts for manufacturing various crystals for the semiconductor industry make it a world technology leader. Incoming orders in Industrial Systems division were also up significantly year-on-year at EUR 26.1 million (EUR 19.6 million). We are anticipating a stable development in incoming orders in both divisions moving ahead. After the end of the second guarter, we acquired the company SPA Software Entwicklungs GmbH, Coburg, Germany, which marks both a major transaction and a significant step forward in the PVA TePla Group's ongoing strategic development. Founded in 1989, the company specializes in SECS/GEM systems integration for the semiconductor industry. It has 30 employees and serves customers worldwide with specific software programs for production system automation and image capture with associated analyses. It also provides complete systems for high-precision measuring technology to renowned companies in the semiconductor industry. Using SPA Software Entwicklungs GmbH's technologies, the individual companies of the PVA TePla Group will be able to integrate their products in ongoing semiconductor production processes even more quickly and flexibly.

With rising sales revenue and earnings contributions in the second half of the year, we are still forecasting consolidated revenue in the scale of EUR 94 million and EBITDA in the scale of EUR 11.0 million for the current fiscal year.

On behalf of our managing directors, we would like to thank you, our shareholders, for your trust in and commitment to our company.

Alfred Schopf Chief Executive Officer

Oliver Höfer Chief Operating Officer



# The Shares

## SHARE PRICE PERFORMANCE

The price of PVA TePla shares rose significantly in the first six months of 2018, from EUR 12.00 at the end of 2017 to EUR 17.00 on June 29, 2018.

## ANNUAL GENERAL MEETING

The Annual General Meeting of PVA TePla AG, Wettenberg, was held at the Giessen Congress Center on June 19, 2018 under the Chairman of the Supervisory Board Alexander von Witzleben. All items on the agenda were passed with a large majority, and around 56% of shareholders were in attendance.

## Business figures – Substantial rise in incoming orders

In his presentation to the shareholders in attendance, CEO Alfred Schopf reported on the business figures for the past fiscal year. The forecasts for revenue of EUR 85.4 million and earnings of EUR 5.6 million had been met. Incoming orders and the order backlog more than doubled, offering excellent prospects for business performance in the next few years. Major crystal growing systems orders were a key factor in this, though the other product areas also contributed positively to incoming orders. The break-even point and thus the cost structure could be kept stable.

## Capacity planning and the workplace of the future

Oliver Höfer – Chief Operating Officer – explained the capacity planning that will enable the Group to handle major orders from the semiconductor industry: flexible work models, flow production and staff pooling/capacity balancing with other subsidiaries will allow such orders to be processed without significant cost increases. Oliver Höfer then gave a brief introduction to virtual reality and its significance for production at PVA TePla. This is already being used at the Jena plant and optimized as part of a pilot project to test and integrate cutting-edge technology.

## Silicon carbide – Significant semiconductor material for the future

Following on from this, Alfred Schopf explained the significance of silicon carbide as a key technological development for the future, particularly as a result of the growth in electromobility. Considerable growth in incoming orders for crystal growing systems from a variety of customers all over the world is anticipated in the coming years.

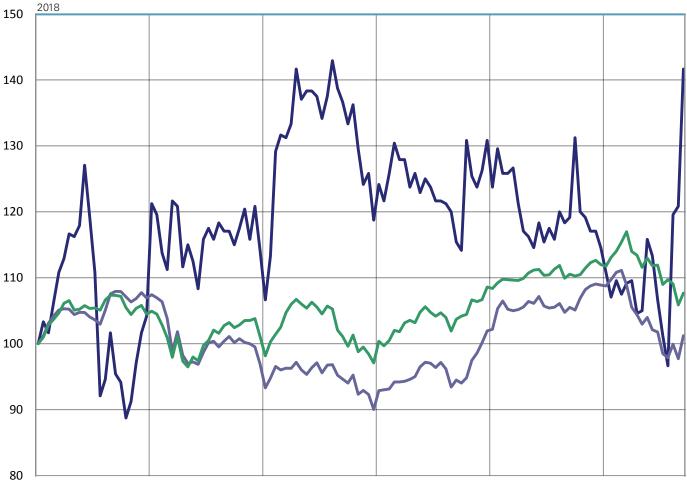
Shareholdings of Executive Body Members

#### MANAGEMENT BOARD

	Shares Jun. 30, 2018	
Alfred Schopf	54,900	54,900
Oliver Höfer	1,100	1,100

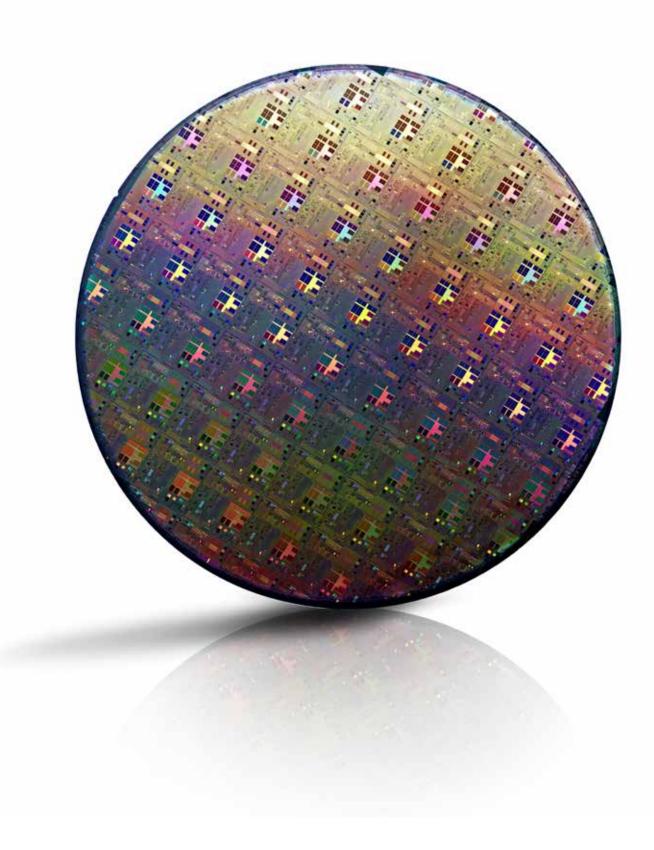
#### SUPERVISORY BOARD

	Shares Jun. 30, 2018	Shares Dec. 31, 2017
Alexander von Witzleben	39,650	99,650
Dr. Gernot Hebestreit (Marion Hebestreit)	33,545	35,545
Prof. Dr. Markus H. Thoma	0	0



Performance of PVA TePIa Shares January 1, 2018 – June 29, 2018 in % / 1-day-interval

PVA TePla AG DAXSubs. Advanced Industrial Equipment Tec All Share



# Interim Group Management Report

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# Interim Group Management Report

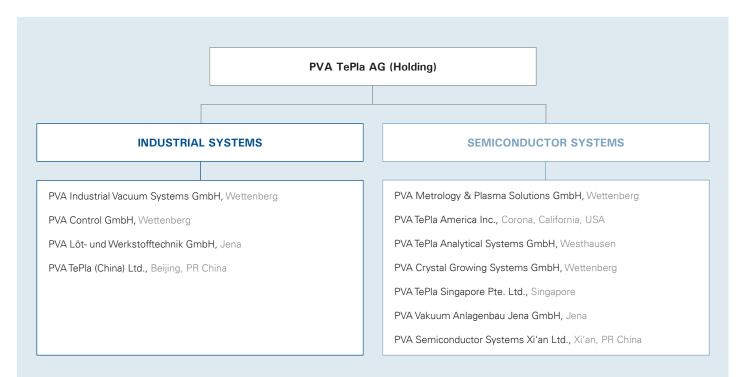
## 1. BASIC PRINCIPLES OF THE GROUP

## **Business Activities**

The PVA TePla Group, headquartered in Wettenberg, Germany, employs around 400 people as of June 30, 2018. On behalf of its customers, it essentially develops and builds systems for the production, refinement and inspection of high-quality materials, which are processed under high temperatures and in a vacuum, under high-pressure inert gas conditions and in low-pressure and atmospheric plasmas.

## **Reporting Segments**

The Group is divided into two divisions: Industrial Systems and Semiconductor Systems. The graphic below provides an overview of how the main subsidiaries are allocated to the divisions:



## CHANGES TO THE REPORTING SEGMENTS

In the first half of 2018, there were no changes in the structure of the reporting segments compared to the presentation as of December 31, 2017.

## **Research and Development**

The costs of research and development in the Group totaled EUR 1.2 million (previous year: EUR 0.7 million) in the reporting period. The PVA TePla Group usually carries out product and process development work in the context of customer contracts. The expenses incurred for such work are not reported under research and development. The following key development projects are currently being carried out:

## Semiconductor Systems division

Development activities in the plasma systems business unit at PVA Metrology & Plasma Solutions GmbH focused on the ongoing development of the control board system in the first half of 2018. The hardware of the previous control board has been completely overhauled and replaced by a more development-friendly, Windows-based environment. The graphical user interface has been optimized in terms of user-friendliness. The ergonomics of the semiconductor back-end PS80 Plus laser measuring system has been revised and given a new look with a similar goal in mind, which has given rise to a substantial improvement in handling at the loading and unloading stations.

The VPD–metrology business unit (Vapor Phase Decomposition: For measuring impurities on wafer surfaces) continued the optimization of analysis systems as regards throughput and user-friendliness. Thus, system throughput was enhanced significantly by improvements to internal automatisms.

PVA TePla Analytical Systems GmbH developed a new product line for the inline inspection of electronic components. Here, ultrasonic scanning systems are loaded with six-axis robots, thereby achieving a higher throughput of the components to be inspected while maintaining the positioning accuracy. The automation communication uses the semiconductor industry's standard SECS/GEM protocols. Options of up to 1 GHz ultrasound frequencies are available for error analysis. This guarantees a factor 10 improvement in resolution for error and structural analysis. Standard certification procedures for the semiconductor industry were also successfully completed.

In addition to continuous process optimization, a growing priority in system and process development for silicon carbide crystals (SiC) is lowering system and operating costs, and thereby increasing productivity. PVA Crystal Growing Systems GmbH's development work is focused on the further development of the process zone and enhancing energy efficiency. A substantial reduction of costs is achieved by enlarging the diameter of the crystal and thus the wafer's surface area later in the process. Work to improve and stabilize the 6" growing process (for crystals with a diameter of 15.24 cm) is ongoing. The results of experiments are verified with the help of extensive computer simulations and the process is optimized further. In cooperation with customers and research partners, efforts are already underway to create a concept and design for an 8" SiC crystallization system. Industry observers assume that the manufacture of 8" crystals of sufficient quality for industrial use will be possible in around five years. This would mean a vast cost reduction in the manufacture of high-power transistors, e.g. for electromobility, of a magnitude similar to the cost reduction in memory chips by larger wafers.

Various research projects for silicon-based photovoltaics that are being funded by the German Federal Ministry for Economic Affairs and Energy are carried out. The aim of one of these funding projects is the ongoing development and cost reduction of crystal growing technology using the Czochralski process to manufacture solar cells. The use of a specially developed cooling unit enabled a significant boost in the productivity of the manufacturing process by increasing drawing speed (crystal manufacturing speed). Using a specially developed multipulling technology, whereby multiple crystals are drawn from a melting pot, allows an additional substantial cost saving. The results of this long-term funding project are presented each year at the European Photovoltaic Solar Energy Conference and Exhibition (EUPVSEC).

### Industrial Systems division

Against the backdrop of Industry 4.0, PVA Industrial Vacuum Systems GmbH is developing for various types of systems control units for the integration of the respective furnace into the general production control system. Systems were integrated in accordance with the SECS standard for the semiconductor industry. Several systems with this feature have already been deliverd in the first half of 2018. Work to broaden the "COV" vacuum and high-temperature system model range continued in the first half of the year. A horizontal model is being developed that combines effective, internal fan cooling with two-sided charging capability. This concept is mainly intended for customers that require very long COV process furnaces. As part of a customer project, work on an unprecedented 200-bar vacuum pressure sintering furnace for hard metals also continued at an accelerated rate.

## 2. ECONOMIC REPORT

## Macroeconomic and Sector Environment

### MACROECONOMIC ENVIRONMENT

Economic research institutes are assuming slightly higher year-on-year economic growth worldwide of around 3.9% for the current fiscal year. Sentiment and economic data show that the world economy has continued its stable development in the first half of 2018. However, there are already signs of a worldwide downturn in economic growth: 2018 was likely the cyclical highpoint of economic development for the time being and a deceleration is forecast for 2019.

- » According to economic analysis, Germany's GDP is expected to grow by 2.0% over 2017 in 2018.
- » In the euro area, GDP growth of 2.1% as against 2017 is anticipated in 2018.
- » Forecasts indicate GDP growth of 6.6% in China in 2018.
- » GDP growth in the US for 2018 is estimated at 2.9% on the previous year: Tax relief for companies and increased government spending have led to the highest growth rate since 2005.

### SECTOR ENVIRONMENT

The PVA TePla Group is essentially anticipating a stable development on its relevant markets in 2018.

- » According to the market research institute ICInsight, capital expenditure in the semiconductor industry is expected to rise by 14% year-on-year in 2018.
- » The German Mechanical Engineering and Plant Manufacturing Association (VDMA) is standing by its forecast for the year of growth of 5% in real machinery production in Germany (as of June 2018).

## **Business Development**

## SALES REVENUES

The PVA TePla Group performed in line with planning in the first six months of 2018, with revenue of EUR 38.2 million after EUR 43.6 million in the same period of the previous year. This revenue is divided evenly between the two divisions. It should be noted as regards revenue recognition in the first half of 2018 that IFRS 15 no longer allows the recognition of some revenue from ongoing contracts to the original extent. Had the accounting requirements of IAS 11 and IAS 18 been applied as of June 30, a further EUR 5.4 million in revenue would have been recognized.

Sales Revenues by Division EUR'000	H1 / 2018	H1 / 2017
Semiconductor Systems	19,403	26,941
Industrial Systems	18,773	16,642
Total	38,176	43,583
As at IAS 11 and IAS 18	43,588	-

The Semiconductor Systems division generated revenue of EUR 19.4 million (previous year: EUR 26.9 million). In the first quarter of the previous year, the division processed a major order for the delivery of crystal growing systems for photovoltaic production, whereas there was no such order in the first six months of 2018. The ultrasound measuring systems business unit was the Semiconductor Systems division's strongest source of revenue. The Industrial Systems division ended the period with revenue of EUR 18.8 million after EUR 16.6 million in the same period of the previous year. In particular, this revenue was generated from the processing of vacuum system orders for the hard metal market and brazing systems for various markets.

## **INCOMING ORDERS**

In the first six months of 2018, incoming orders for the PVA TePla Group were up significantly on the previous year by 67% at EUR 76.5 million (EUR 45.6 million). The book-to-bill ratio is 2.00 (previous year: 1.05). Both divisions increased their orders equally in the first half of 2018.

The Semiconductor Systems division generated significantly higher incoming orders at EUR 50.4 million (previous year: EUR 26.1 million). In particular, the crystal growing business unit performed very well and accounted for 50% of total order intake.

The Industrial Systems division also clearly outperformed the previous year's level for incoming orders in the first six months of 2018 at EUR 26.1 million (previous year: EUR 19.6 million). Orders for processing systems for the manufacture of hard metal and a major order for systems for high-quality calcium fluoride crystals for optical applications contributed significantly to order intake.

## ORDER BACKLOG

The order backlog, consolidated and after deduction of revenue generated over a period of time, more than tripled year-on-year to EUR 171.1 million as of June 30, 2018 (EUR 51.7 million).

At EUR 126.7 million (previous year: EUR 22.5 million), Semiconductor Systems division contributed significantly to this order backlog on account of the high volume of orders for crystal growing systems for the semiconductor industry.

The Industrial Systems division has an order backlog of EUR 44.5 million as of June 30, 2018 (previous year: EUR 29.2 million).

## PRODUCTION

In the first half of 2018, systems production and contract processing was carried out, at the German locations in Wettenberg, Jena and Westhausen. The production location outside Germany is Corona in the United States.

Vertical integration remained low across all areas. Parts are manufactured in-house only to a minor extent. This means material costs are relatively high in percentage terms, but allows for rapid and flexible adjustment of production capacity as necessary in the event of fluctuations in incoming orders to meet potential changes in demand.

## Position

## **RESULTS OF OPERATIONS**

Based on consolidated revenue of EUR 38.2 million (previous year: EUR 43.6 million), gross profit amounted to EUR 9.6 million (previous year: EUR 10.1 million). The gross margin increased to 25.0% (previous year: 23.1%). Had the accounting requirements of IAS 11 and IAS 18 been applied as of June 30, 2018, a further EUR 1.5 million in earnings would have been recognized.

Distribution costs were roughly stable year-on-year in the first half of 2018 at EUR 5.1 million (previous year: EUR 5.2 million). It should be noted that distribution costs can always fluctuate given the product and sales mix in incoming orders. Administrative costs were on par with the previous year at EUR 2.9 million (previous year: EUR 2.9 million).

R&D expenses were up as against the previous year at EUR 1.2 million (previous year: EUR 0.7 million). These expenses relate to the developments above described that are increasingly taking place outside the context of customer contracts in the current fiscal year. Other operating expenses amount to EUR 0.4 million (previous year: EUR 0.7 million). They essentially include expenses due to exchange rate differences of EUR 0.3 million. Other operating income of EUR 0.9 million (previous year: EUR 0.8 million) predominantly included income from grants in the context of R&D projects (EUR 0.2 million) and income from exchange rate differences of EUR 0.2 million.

In the first six months of 2018, the Group therefore generated EBITDA of EUR 2.0 million (June 30, 2017 [previous year]: EUR 2.6 million), EBIT of EUR 0.8 million (previous year: EUR 1.5 million) and consolidated net income of EUR 0.4 million (previous year: EUR 0.5 million). The EBITDA margin was 5.2% (previous year: 5.9%); the EBIT margin 2.1% (previous year: 3.3%). The return on sales was 1.0% (previous year: 1.2%). Had the accounting requirements of IAS 11 and IAS 18 been applied at EBITDA and EBIT level, both figures would have been EUR 1.5 million higher.

Operating Result (EBITDA) EUR'000	H1 / 2018	H1 / 2017
Total	2,001	2,590
As at IAS 11 and IAS 18	3,500	-

In accordance with IFRS 15, Industrial Systems division generated EBIT of EUR 1.6 million (previous year: EUR 0.0 million), and Semiconductor Systems division achieved EBIT of EUR 0.8 million (previous year: EUR 2.4 million).

The net total of interest income and interest expenses improved by EUR 0.1 million as against the previous year to EUR -0.2 million thanks to reduced borrowing on loans (previous year: EUR -0.3 million). Earnings before taxes amounted to EUR 0.6 million (previous year: EUR 1.1 million) and the consolidated net income amounted to EUR 0.4 million (previous year: EUR 0.5 million). Income taxes of EUR 0.2 million (previous year: EUR 0.6 million) essentially include the effects of deferred taxes.

## FINANCIAL POSITION

#### Investments

The total value of investments was EUR 0.9 million in the first half of 2018 (previous year: EUR 0.3 million). These investments essentially relate to technical equipment, operating and office equipment.

#### Liquidity

The operating cash flow amounted to EUR -12.6 million in the first six months of 2018 (H1 2017 [previous year]: EUR 10.2 million). This includes EUR 6 million in cash and cash equivalents that were invested in short-term investments and are not reported as cash equivalents. In addition, the PVA TePla Group received significant advance payments for major orders in fiscal 2017. These payments are now gradually being used for the production of these systems.

Cash flow from investing activities amounted to EUR -0.6 million (previous year: EUR -0.3 million). Cash flow from financing activities amounted to EUR -0.6 million (previous year: EUR -6.4 million). The free cash flow was EUR -13.2 million (previous year: EUR 9.9 million). The net financial position (cash and cash equivalents less current and non-current financial liabilities) was EUR 15.9 million (previous year: EUR 0.8 million).

## ASSET POSITION

Total assets amounted to EUR 126.1 million as of June 30, 2018, up on the figure as of December 31, 2017 [previous year: EUR 119.1 million].

The value of property, plant and equipment remained stable year-on-year at EUR 29.0 million (previous year: EUR 29.4 million). The value of intangible assets is virtually unchanged at EUR 8.5 million (previous year: EUR 8.6 million). Financial assets amount to EUR 1.5 million. Deferred tax assets declined slightly to EUR 7.8 million (previous year: EUR 7.9 million). In total, the value of non-current assets was EUR 46.8 million as against EUR 47.6 million in the previous year.

Current assets rose to EUR 79.2 million (previous year: EUR 71.5 million). As part of the ramp-up for the production of crystal growing equipment, inventories increased to EUR 28.2 million (previous year: EUR 16.3 million). Coming receivables from construction contracts amount to EUR 5.2 million (previous year: EUR 6.1 million) and trade receivables to EUR 10.8 million (previous year: EUR 11.3 million). Other current receivables increased to EUR 9.7 million (previous year: EUR 0.8 million). This includes deposits of EUR 6.0 million that no longer qualify as cash equivalents under IFRS. Cash funds amount to EUR 19.3 million (previous year: EUR 33.0 million).

On the equity and liabilities side of the statement of financial position, non-current liabilities (including non-current provisions) declined slightly to EUR 19.2 million (previous year: EUR 19.7 million). The figure reported for pension provisions is virtually unchanged at EUR 14.8 million (previous year: EUR 14.9 million). Non-current financial liabilities decreased to EUR 2.7 million (previous year: EUR 3.0 million) as a result of scheduled repayments. Current liabilities amount to EUR 61.7 million (previous year: EUR 54.3 million). Current financial liabilities were reduced to EUR 0.7 million (previous year: EUR 0.9 million). Trade payables amounted to EUR 5.5 million (previous year: EUR 3.7 million). Advance payments received on orders climbed to EUR 45.6 million (previous year: EUR 37.1 million). The value of other current provisions remained constant at EUR 2.4 million (previous year: EUR 2.4 million). The value of accruals is EUR 5.5 million (previous year: EUR 5.1 million). The increase is essentially due to the level of provisions for holiday and Christmas bonuses as of the end of the reporting period and will reduce again in the second half of the year.

Equity amounts to EUR 45.1 million (December 31, 2017: EUR 45.1 million) with an equity ratio of 35.8% (previous year: 37.9%).

## **Non-Financial Performance Indicators**

## EMPLOYEES

The Group employed 404 people as of June 30, 2018 (December 31, 2017: 385). Headcount was up slightly as against the same period of the previous year in order to process the higher order level.

## 3. RISK, OPPORTUNITIES AND FORECAST REPORT

There were no significant changes in the risks and opportunities presented in the 2017 annual report in the first two quarters of fiscal 2018.

## **Forecast Report**

The Management Board of PVA TePla is still forecasting consolidated revenue in the scale of EUR 94 million and EBITDA in the scale of EUR 11.0 million for the current fiscal year.

Wettenberg, August 9, 2018



# Group Financial Statements

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# **Group Financial Statements**

## CONSOLIDATED BALANCE SHEET

as at June 30, 2018

ASSETS EUR'000	Jun. 30, 2018	Dec. 31, 2017
Non-current assets		
Intangible assets	8,489	8,585
Goodwill	7,808	7,808
Other intangible assets	681	777
Property, plant and equipment	29,019	29,427
Land, property rights and buildings, including buildings on third party land	22,445	22,902
Plant and machinery	3,145	3,310
Other plant and equipment, fixtures and fittings	2,692	2,944
Advance payments and assets under construction	738	271
Non-current investments	1,495	1,739
Deferred tax assets	7,813	7,886
Total non-current assets	46,817	47,637
Current assets		
Inventories	28,151	16,334
Raw materials and operating supplies	10,947	7,335
Work in progress	16,675	8,459
Finished products and goods	529	540
Coming receivables on construction contracts	5,200	6,137
Trade and other receivables	26,516	15,903
Trade receivables	10,827	11,280
Payments in advance	6,031	3,865
Other receivables	9,657	758
Tax repayments	75	68
Cash and cash equivalents	19,300	33,017
Total current assets	79,242	71,459
Total	126,059	119,096
10101	120,055	113,030

The following notes are an integral part of the Group Financial Statements.

LIABILITIES AND SHAREHOLDERS' EQUITY EUR'000	Jun. 30, 2018	Dec. 31, 2017
Shareholders' equity		
Share capital	21,750	21,750
Revenue reserves	27,755	27,876
Other reserves	-4,324	-4,413
Minority interest	-84	-84
Total shareholders' equity	45,097	45,129
Non-current liabilities		
Non-current financial liabilities	2,667	3,001
Other non-current liabilities	252	306
Retirement pension provisions	14,833	14,887
Deferred tax liabilities	1,260	1,376
Other non-current provisions	206	143
Total non-current liabilities	19,217	19,714
Current liabilities		
Short-term financial liabilities	703	883
Trade payables	5,521	3,717
Obligations on construction contracts	167	979
Advance payments received on orders	45,633	37,050
Accruals	5,473	5,073
Other short-time liabilities	1,190	3,487
Provisions for taxes	630	616
Other short-term provisions	2,429	2,448
Total current liabilities	61,746	54,253
Total	126,059	119,096

The following notes are an integral part of the Group Financial Statements.

## CONSOLIDATED INCOME STATEMENT

EUR'000	Apr. 1 - Jun. 30, 2018	Apr. 1 - Jun. 30, 2017	Jan. 1 - Jun. 30, 2018	Jan. 1 - Jun. 30, 2017
Sales revenues	19,079	20,243	38,176	43,583
Cost of sales	-14,333	-15,362	-28,617	-33,531
Gross profit	4,747	4,881	9,559	10,052
Selling and distributing expenses	-2,703	-2,622	-5,135	-5,155
General administrative expenses	-1,380	-1,258	-2,856	-2,880
Research and development expenses	-857	-347	-1,247	-747
Other operating income	624	480	935	835
Other operating expenses	-254	-262	-447	-653
Operating result (EBIT)	177	871	808	1,452
Finance revenues	16	2	115	106
Finance costs	-142	-142	-342	-450
Financial result	-126	-140	-227	-344
Net result before tax	51	731	581	1,108
Income taxes	-72	-1,009	-206	-600
Consolidated net result for the period	-21	-278	375	508
of which attributable to				
Shareholders of PVA TePla AG	-21	-278	375	508
Minority interest	0	0	0	0
Consolidated net result for the period	-21	-278	375	508
Earnings per share				
Earnings per share (basic) in EUR	0.00	-0.01	0.02	0.02
Earnings per share (diluted) in EUR	0.00	-0.01	0.02	0.02
Average number of share in circulation (basic)	21,749,988	21,749,988	21,749,988	21,749,988
Average number of share in circulation (diluted)	21,749,988	21,749,988	21,749,988	21,749,988

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

EUR'000	Jan. 1 - Jun. 30, 2018	Jan. 1 - Jun. 30, 2017
Consolidated net result for the period	375	508
of which attributable to shareholders of PVA TePla AG	375	508
of which attributable to minority interest	0	0
Other comprehensive income		
Items that may be reclassified to profit or loss		
Currency changes	-89	-207
Income taxes	0	0
Changes recognized outside profit or loss (currency changes)	-89	-207
Changes in fair values of derivative financial instruments	0	0
Income taxes	0	0
Changes recognized outside profit or loss (derivative financial instruments)	0	0
Total of items that may be reclassified to profit or loss	-89	-207
Adjustment effect IFRS 15 as at January 1, 2018	-494	-
Other comprehensive income after taxes (changes recognized outside profit or loss)	-583	-207
of which attributable to shareholders of PVA TePIa AG	-583	-207
of which attributable to minority interest	0	0
Total comprehensive income	-208	301
of which attributable to shareholders of PVA TePIa AG	-208	301
of which attributable to minority interest	0	0

## CONSOLIDATED CASH FLOW STATEMENT

EUR'000	Jan. 1 - Jun. 30, 2018	Jan. 1 - Jun. 30, 2017
Consolidated net result for the period	375	508
Adjustments to the consolidated net result for the period for reconciliation to the cash flow operating activities:		
+ Income taxes	206	600
- Finance revenues	-115	-106
+ Finance costs	342	450
= Operating result	808	1,452
- Income tax payments	-15	-37
+ Amortization and depreciation	1,193	1,142
-/+ Gains/losses on disposals of non-current assets	199	14
+/- Other non-cash expenses / income	-283	-30
-/+ Increase/decrease in inventories, trade receivables and other assets	-21,334	5,811
-/+ Increase/decrease in shareholders' equity due to adjustment effects	-494	0
+/- Increase/decrease in provisions	-215	515
+/- Increase/decrease in trade payables and other liabilities	7,578	1,334
= Cash flow from operating activities	-12,564	10,202
- Payment of intangible assets and property, plant and equipment	-640	-310
+ Interest receipts	45	-310
= Cash flow from investing activities	-595	-310
- Payments from redumption of debt and loans	-334	-397
+/- Change in short-term bank liabilities	-180	-5,831
- Payment of interest	-45	-191
= Cash flow from financing activities	-559	-6,419
Net change in cash and cash equivalents	-13,718	3,473
+/- Effect of exchange rate fluctuations on cash	1	-20
+ Cash and cash equivalents at the beginning of the period	33,017	2,514
= Cash and cash equivalents at the end of the period	19,300	5,967

## CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

EUR'000	Shared is	sues	Revenue reserves	Other equity com- ponents	Pension provisions	Total	Minority interest	Total sharehol- ders' interest
	Number							
As at January 1, 2017	21,749,988	21,750	19,349	205	-3,279	38,024	-84	37,941
Total income			5,593	-366	-404	4,823	0	4,823
As at December 31, 2017	21,749,988	21,750	27,872	-48	-4,363	45,210	-84	45,129
As at January 1, 2017	21,749,988	21,750	22,279	318	-3,959	40,387	-84	40,305
Total income			508	-207	0	301	0	301
As at June 30, 2017	21,749,988	21,750	22,787	111	-3,959	40,688	-84	40,606
As at January 1, 2018	21,749,988	21,750	27,872	-48	-4,363	45,210	-84	45,129
Total income			375	87	0	462	0	462
Adjustment effect IFRS 15 as at January 1, 2018			-494	0	0	-494	0	-494
As at June 30, 2018	21,749,988	21,750	27,753	39	-4,363	45,178	-84	45,097

# Selected Notes

## A. GENERAL INFORMATION AND BASIS OF PRESENTATION

PVA TePla AG is a stock corporation in accordance with German law. The company is entered in the Commercial Register of the Giessen Local Court under HRB 6845. The registered address of the company is 35435 Wettenberg, Germany.

## GENERAL PRINCIPLES AND ACCOUNTING STANDARDS

These half-year financial statements have been prepared in accordance with IAS 34 (Interim Financial Reporting). The interim report was not reviewed by an auditor.

These notes mainly contain details of items in which there have been significant changes as against the consolidated financial statements as of December 31, 2017.

## COMPANIES INCLUDED IN CONSOLIDATION

These interim consolidated financial statements of PVA TePla include the consolidated subsidiaries in which PVA TePla holds a majority of shareholders' voting rights (control). The following companies are included in the consolidated financial statements as of June 30, 2018:

Name	Corporate domicile	Ownership interest
PVA TePla AG (parent company)	Wettenberg, Germany	
PVA Control GmbH	Wettenberg, Germany	100 %
PVA Industrial Vacuum Systems GmbH	Wettenberg, Germany	100 %
PVA Löt- und Werkstofftechnik GmbH	Jena, Germany	100 %
PVA TePla (China) Ltd.	Beijing, PR China	100 %

Name	Corporate domicile	Ownership interest
PVA Metrology & Plasma Solutions Taiwan Ltd.	Hsinchu, Taiwan	100 %
PVA Crystal Growing Systems GmbH	Wettenberg, Germany	100 %
PVA Metrology & Plasma Solutions GmbH	Wettenberg, Germany	100 %
PVA Semiconductor Systems Xi'an Ltd.	Xi'an, PR China	100 %
PVA TePla America Inc.	Corona / CA, USA	100 %
PVA TePla Analytical Systems GmbH	Westhausen, Germany	100 %
PVA TePla Singapore Pte. Ltd.	Singapore	100 %
PVA Vakuum Anlagenbau Jena GmbH	Jena, Germany	100 %
Xi'an HuaDe CGS Ltd.	Xi'an, PR China	51 %

There have been no changes compared to the 2017 consolidated financial statements.

## PRINCIPLES OF CONSOLIDATION

The principles of consolidation applied in these half-year financial statements are the same as those used in the consolidated financial statements as of December 31, 2017. The financial statements of the companies included in the half-year financial statements have been prepared in accordance with IFRS 10 (Consolidated Financial Statements) and IAS 27 (Consolidated and Separate Financial Statements) on the basis of uniform accounting policies.

## ACCOUNTING AND VALUATION PRINCIPLES

In accordance with the "modified retrospective first-time application" approach, the changes in accounting already described in the consolidated financial statements as of December 31, 2017 as a result of IFRS 15, which is effective from January 1, 2018, have resulted in a reduction of equity in the amount of EUR 0.5 million. Under the previous accounting requirements, an additional revenue volume of EUR 5.4 million and a gross profit of EUR 1.5 million would have been recognized as of June 30, 2018. Unconditional claims to payment of EUR 0.2 million were also recognized in other current receivables.

The regulations of IFRS 9 have been effective since January 1, 2018. IFRS 9 introduced a new impairment model. Under this model impairment is now measured in accordance with the expected loss model (previously: incurred loss model). Expected losses must therefore be recognized at inception. This does not give rise to any significant changes for these consolidated financial statements. Receivables are measured on a case-by-case basis on account of the customer structure. There have been no significant defaults to date.

All other accounting policies in these half-year financial statements as of June 30, 2018 are the same as those in the consolidated financial statements as of December 31, 2017.

## B. NOTES ON SELECTED BALANCE SHEET ITEMS

## FINANCIAL ASSETS

Financial assets comprise other non-current receivables of EUR 1,495 thousand as of June 30, 2018 (December 31, 2017 [previous year]: EUR 1,739 thousand). These essentially relate to a non-current receivable for systems sold in fiscal 2017.

## INVENTORIES

EUR'000	Jun. 30, 2018	Dec. 31, 2017
Raw materials and operating supplies	10,947	7,335
Work in progress	16,675	8,459
Finished products and goods	529	540
Inventories	28,151	16,333

## COMING RECEIVABLES ON CONSTRUCTION CONTRACTS

EUR'000	Jun. 30, 2018	Dec. 31, 2017
Capitalized production costs including contract profits	11,430	10,297
for which advance payments received	-6,230	-4,160
Coming receivables on construction contracts	5,200	6,137

## OTHER CURRENT RECEIVABLES

EUR'000	Jun. 30, 2018	Dec. 31, 2017
Cash deposits (not qualifying as cash equivalents)	5,978	0
Value added tax due	1,817	197
Deferred items	965	251
Unconditional payment claims	246	0
Accounts payable with debit balances	200	67
Receivables from investment incentives	106	176
Others	345	69
Other current receivables	9,657	760

## NON-CURRENT FINANCIAL LIABILITIES

EUR'000	Jun. 30, 2018	Dec. 31, 2017
Non-current financial liabilities	3,370	3,767
Portion of non-current financial liabilities due in less than one year	-703	-766
Non-current financial liabilities less current portion	2,667	3,001

## ACCRUALS

EUR'000	Jun. 30, 2018	Dec. 31, 2017
Obligations to employees	2,881	2,662
Obligations to suppliers	2,381	2,122
Other commitments	211	290
Accruals	5,473	5,073

## PENSION PROVISIONS

Pension provisions were adjusted assuming consistent parameters and remain at the same level as the previous year due to regular pension payments. A weighted average for beneficiaries and retirees of 1.85% (previous year: 2.25%) was used as the interest rate. The calculation parameters are reviewed regularly, hence subsequent adjustments can arise later in the year.

## CURRENT FINANCIAL LIABILITIES

The reported current financial liabilities relate to the current portions of the non-current financial liabilities of EUR 703 thousand (previous year: EUR 766 thousand).

## OBLIGATIONS ON CONSTRUCTION CONTRACTS

EUR'000	Jun. 30, 2018	Dec. 31, 2017
Advance payments received (progress billing)	554	4,688
less contract costs incurred (incl. share of profit)	-387	-3,709
Obligations on construction contracts	167	979

## OTHER CURRENT LIABILITIES

Jun. 30, 2018	Dec. 31, 2017
0	3,366
669	52
139	0
120	60
262	12
1,190	3,490
	2018 0 669 139 120 262

## OTHER PROVISIONS

Other provisions are broken down into non-current provisions (EUR 206 thousand, previous year: EUR 142 thousand) and current provisions (EUR 2,429 thousand, previous year: EUR 2,448 thousand).

EUR'000	Jun. 30, 2018	Dec. 31, 2017
Warranty	1,077	1,315
Order-based provisions	806	796
Bonus (long-term)	150	84
Inventor's bonus	126	119
Others	476	276
Total	2,635	2,590

## C. NOTES ON SELECTED INCOME STATEMENT ITEMS

## SALES REVENUES

EUR'000	Jan. 1 - Jun. 30, 2018	Jan. 1 - Jun. 30, 2017
Systems	26,932	33,911
After-sales	9,180	7,452
Contract processing	2,004	1,818
Others	59	402
Total	38,176	43,583

## EARNINGS PER SHARE

	Jan. 1 - Jun. 30, 2018	Jan. 1 - Jun. 30, 2017
Numerator: Consolidated net result for the period before minority interests (EUR '000)	375	508
Denominator: Weighted number of shares outstanding – basic	21,749,988	21,749,988
Earnings per share (EUR)	0.02	0.02

## **INCOME TAXES**

EUR'000	Jan. 1 - Jun. 30, 2018	Jan. 1 - Jun. 30, 2017
Current tax expenses	-36	-601
Deferred tax expenses (-) / income	-170	1
Total income taxes	-206	-600

## D. NOTES ON THE CASH FLOW STATEMENT

The statement of cash flows has been prepared in accordance with the same principles as in the 2017 consolidated financial statements and has the same structure. The cash flow from operating activities is reduced because of the reclassification of cash into financial investments that can not be qualified as cash or cash equivalents.

## E. ADDITIONAL DISCLOSURES

## SEGMENT REPORTING

The segment information for the **second quarter** of the year is as follows:

EUR'000	Exte sales re			rnal evenues	Total sales	s revenues	Operating result (EBIT)	% of sales revenues	Operating result (EBIT)	% of sales revenues
	2018	2017	2018	2017	2018	2017	2018		2017	
Industrial Systems	9,681	8,078	549	322	10,229	8,400	635	3.3	-280	-3.5
Semiconduc- tor Systems	9,398	12,165	139	96	9,537	12,261	594	3.1	1,363	11.2
Holding	-	-	860	1,330	860	1,330	-1,133	-	-381	-
Segment total	19,079	20,243	1,548	1,748	20,627	21,991	94	0.5	702	3.5
Consolida- tion	0	0	-860	-1,330	-860	-1,330	83	-	169	_
Group	19,079	20,243	688	418	19,767	20,661	177	0.9	871	4.3

EUR'000	Exte sales re	ernal evenues		rnal evenues	Total sales	revenues	Operating result (EBIT)	% of sales revenues	Operating result (EBIT)	% of sales revenues
	2018	2017	2018	2017	2018	2017	2018		2017	
Industrial Systems	18,773	16,642	1,012	1,043	19,783	17,685	1,583	4.1	44	0.0
Semiconduc- tor Systems	19,403	26,941	233	238	19,635	27,179	830	2.2	2,420	9.0
Holding	-	-	1,720	2,666	1,720	2,666	-1,621	-	-999	-
Segment total	38,176	43,583	2,965	3,947	41,138	47,530	794	2.1	1,465	3.4
Consolida- tion	0	0	-1,720	-2,666	1,720	-2,666	12	_	-13	_
Group	38,176	43,583	1,245	1,281	39,418	44,864	808	2.1	1,452	3.3

## The segment information for the **first half** of the year is as follows:

External revenue from contracts with customers for the first half of the year 2018 is assigned to the following categories:

EUR'000	Industrial Systems	Semiconductor Systems	Total
Region			
Asia	8,191	11,051	19,242
Germany	5,887	2,391	8,278
Europe	4,313	3,830	8,143
North America	67	1,955	2,022
Other	315	176	490
	18,773	19,403	38,176
Categories			
Systems	11,878	15,054	26,932
After-sales	5,035	4,144	9,179
Contract processing	1,800	205	2,005
Others	60	0	60
	18,773	19,403	38,176
Realization time			
at a point in time	7,135	19,403	26,538
Over a period of time	11,638	0	11,638
	18,773	19,403	38,176

EUR'000	Apr. 1 - Jun. 30, 2018	Apr. 1 - Jun. 30, 2017	Jan. 1 - Jun. 30, 2018	Jan. 1 - Jun. 30, 2017
Total segment results	94	702	794	1,465
Consolidation	83	169	14	-13
Consolidated operating profit (EBIT)	177	871	808	1,452
Financial result	-126	-140	-227	-344
Results before taxes	51	731	581	1,108
Income taxes	-72	-1,009	-206	-600
Consolidated net result for the period	-21	-278	375	508

The reconciliation of the segment results (EBIT) to the consolidated net income for the period is as follows:

## FINANCIAL INSTRUMENTS

Of the financial instruments reported as of the end of the reporting period, only derivative financial instruments are measured at fair value in accordance with the following fair value hierarchy:

as of June 30, 2018 in EUR'000	Total	Level 1	Level 2	Level 3
Financial liabilities measured at fair value:				
Derivative financial instruments	-531	0	-531	0

The PVA TePla Group uses derivative financial instruments exclusively to hedge risks such as exchange rate risks from sales in a foreign currency and interest risks.

Currency forwards with a total outstanding volume of EUR 3,960 thousand (previous year: EUR 1,133 thousand) were entered into to hedge claims to payment for deliveries denominated in US dollars. These currency forwards have a total fair value of EUR -138 thousand as of June 30, 2018.

Interest rate hedges with a total original volume of EUR 11,600 thousand were entered into in order to hedge the interest rate risk for the financing of properties at the Wettenberg and Jena sites. The outstanding balance of these hedges as of June 30, 2018 was EUR 3,333 thousand in total. The market value of these instruments was EUR -393 thousand as of the end of the reporting period..

## **RELATED PARTIES**

Business transactions with related parties are transactions with companies in which parties have significant influence which can also exercise significant influence on PVA TePla (basically by corresponding shareholdings). As of June 30, 2018, this relates to the business of PVA TePla AG with the major shareholder Peter Abel, in connection with an existing consulting contract. These transactions amounted to EUR 84 thousand as of June 30, 2018 (previous year: EUR 14 thousand). There were no outstanding receivables and liabilities as of the reporting date. All transactions are conducted at arm's length conditions.

## AUDITOR

At the Annual General Meeting on June 19, 2018, in line with the proposal by the Supervisory Board, the shareholders elected Ebner Stolz GmbH & Co. KG, Wirtschaftsprüfungsgesellschaft Steuerberatungsgesellschaft, Frankfurt/ Main, Germany, as the auditor of the annual and consolidated financial statements for fiscal 2018.

## SIGNIFICANT POST-BALANCE SHEET DATE EVENTS

PVA TePla AG announced the takeover of SPA Software Entwicklungs GmbH, Coburg, on July 23, 2018. The acquisition of this company will entail significant technical optimization, especially in automation.

## RESPONSIBILITY STATEMENT

To the best of our knowledge and in accordance with the applicable reporting principles for interim financial reporting, the interim consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the interim Group management report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group for the remaining months of the fiscal year.

Wettenberg, August 9, 2018

Alfred Schopf Chief Executive Officer

Oliver Höfer Chief Operating Officer

## FINANCIAL CALENDAR

### Date

November 9, 2018	Interim Report as of September 30, 2018	
November 26-28, 2018	German Equity Forum	Frankfurt

**IMPRINT** 

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