

By  
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# BUSINESS PLAN

## ***TERVEL***

Manufacturing of

## **AXIAL PISTON HYDRAULIC MOTORS AND PUMPS**

### **CONTENTS:**

To facilitate the understanding of the conducted process analyses for the development of a manufacturing enterprise of axial piston hydraulic motors and pumps (Axial M&P), the current business plan is accompanied by these appendices:

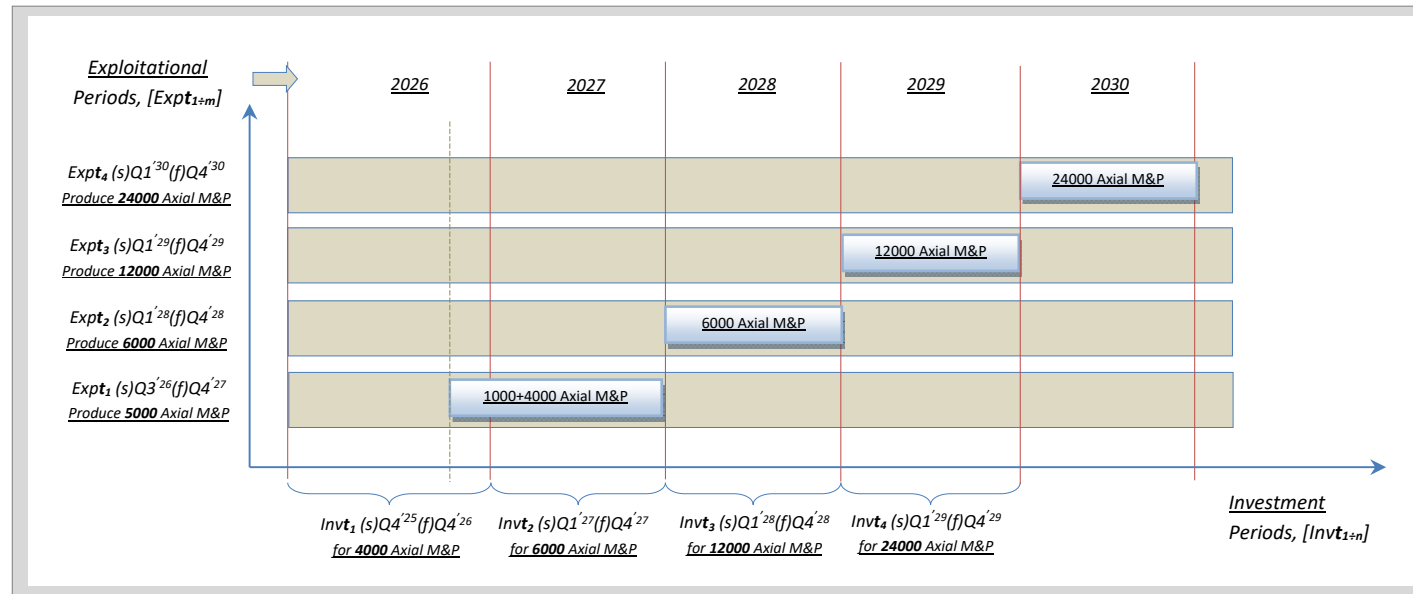
- **Appendix 1:** Financial Overview of Tervel, and Development of Technological Environment of Tervel.
- **Appendix 2:** Product structure and pricing
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## Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)

## Development of Technological Environment of Tervel

## Investment and Exploitational Period of Tervel



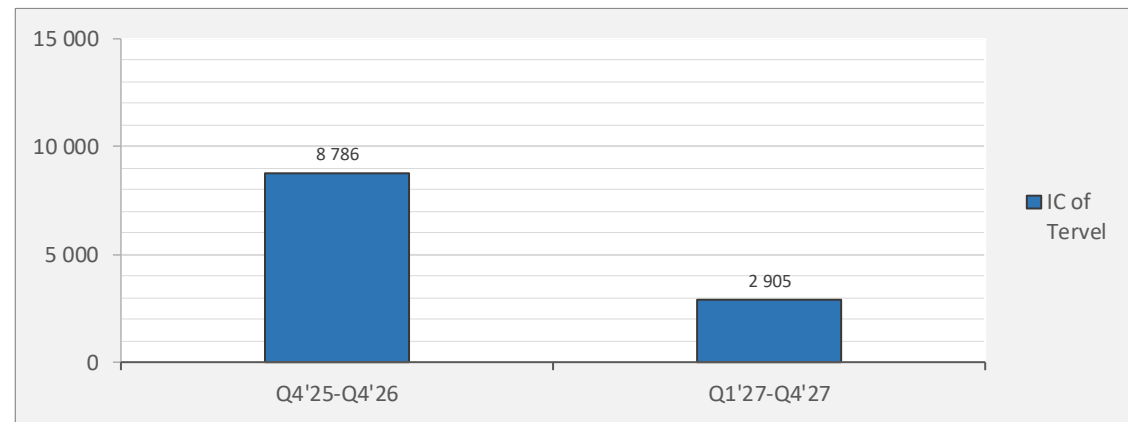
Investment Period	Time Interval	Produced Axial M&P	Exploitational Period	Time Interval	Produced Axial M&P
1 <sup>st</sup> Invest. Period	Q4 <sup>'25</sup> ÷Q4 <sup>'26</sup>	1000 + 4000 (constant)	1 <sup>st</sup> Exploit. Period	Q3 <sup>'26</sup> ÷Q4 <sup>'27</sup>	1000 + 4000 (constant)
2 <sup>nd</sup> Invest. Period	Q1 <sup>'27</sup> ÷Q4 <sup>'27</sup>	6000 (4000const+2000var)	2 <sup>nd</sup> Exploit. Period	Q1 <sup>'28</sup> ÷Q4 <sup>'28</sup>	6000 (4000const+2000var)
3 <sup>rd</sup> Invest. Period	Q1 <sup>'28</sup> ÷Q4 <sup>'28</sup>	12000 (6000const+6000var)	3 <sup>rd</sup> Exploit. Period	Q1 <sup>'29</sup> ÷Q4 <sup>'29</sup>	12000 (6000const+6000var)
4 <sup>th</sup> Invest. Period	Q1 <sup>'29</sup> ÷Q4 <sup>'29</sup>	24000 (12000const+12000var)	4 <sup>th</sup> Exploit. Period	Q1 <sup>'30</sup> ÷Q4 <sup>'30</sup>	24000 (12000const+12000var)

Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)  
**Development of Technological Environment of Tervel**

**Investment Costs (IC) of Tervel**

Development of a new Enterprise

Investment Costs (IC) thousands USD	
Time Int.	IC of Tervel
Q4'25-Q4'26	8 786
Q1'27-Q4'27	2 905



## Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)

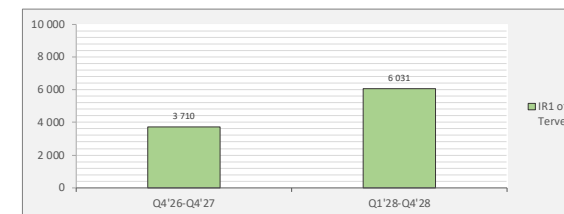
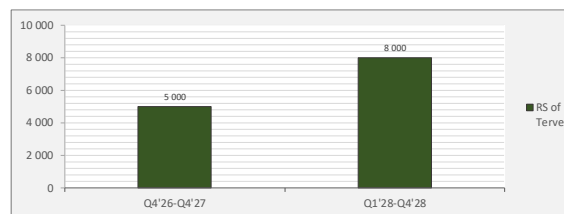
## Development of Technological Environment of Tervel

## Financial Overview of Tervel

## Development of a new Enterprise

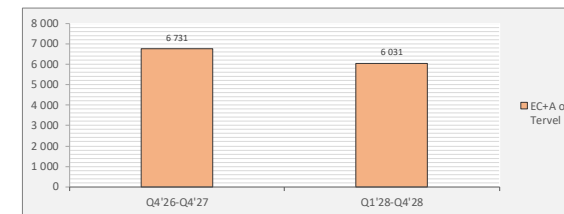
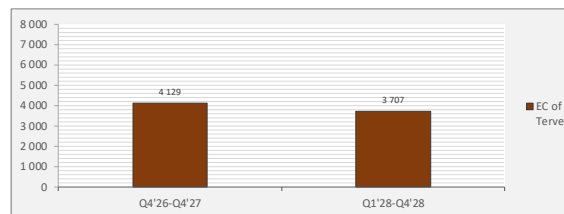
Revenue from Sales (RS) of APHMP in thousand USD	
Time Int.	RS of Tervel
Q4'26-Q4'27	5 000
Q1'28-Q4'28	8 000

Industrial Result 1 (IR1) of APHMP in thousand USD	
Time Int.	IR1 of Tervel
Q4'26-Q4'27	3 710
Q1'28-Q4'28	6 031



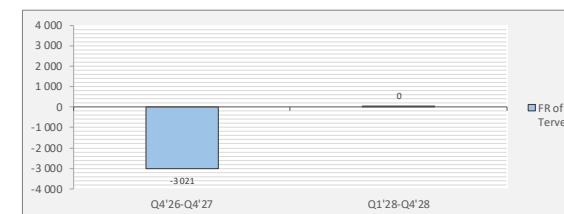
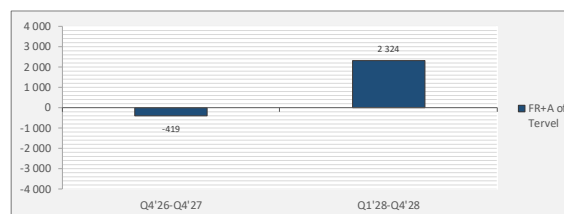
Exploational Costs (EC) in thousands USD	
Time Int.	EC of Tervel
Q4'26-Q4'27	4 129
Q1'28-Q4'28	3 707

Exploational Costs + Amortization (EC+A) in thousands USD	
Time Int.	EC+A of Tervel
Q4'26-Q4'27	6 731
Q1'28-Q4'28	6 031

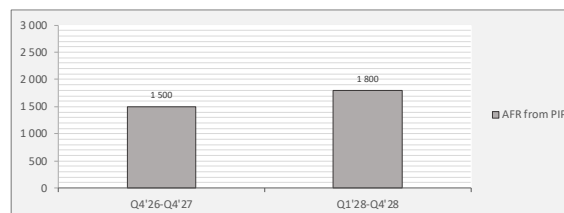


Final Result + Amortization (FR+A) in thousands USD	
Time Int.	FR+A of Tervel
Q4'26-Q4'27	-419
Q1'28-Q4'28	2 324

Final Result (FR) in thousands USD	
Time Int.	FR of Tervel
Q4'26-Q4'27	-3 021
Q1'28-Q4'28	0



Additional Financial Results (AFR) in thousands USD	
Time Int.	AFR from PIP
Q4'26-Q4'27	1 500
Q1'28-Q4'28	1 800

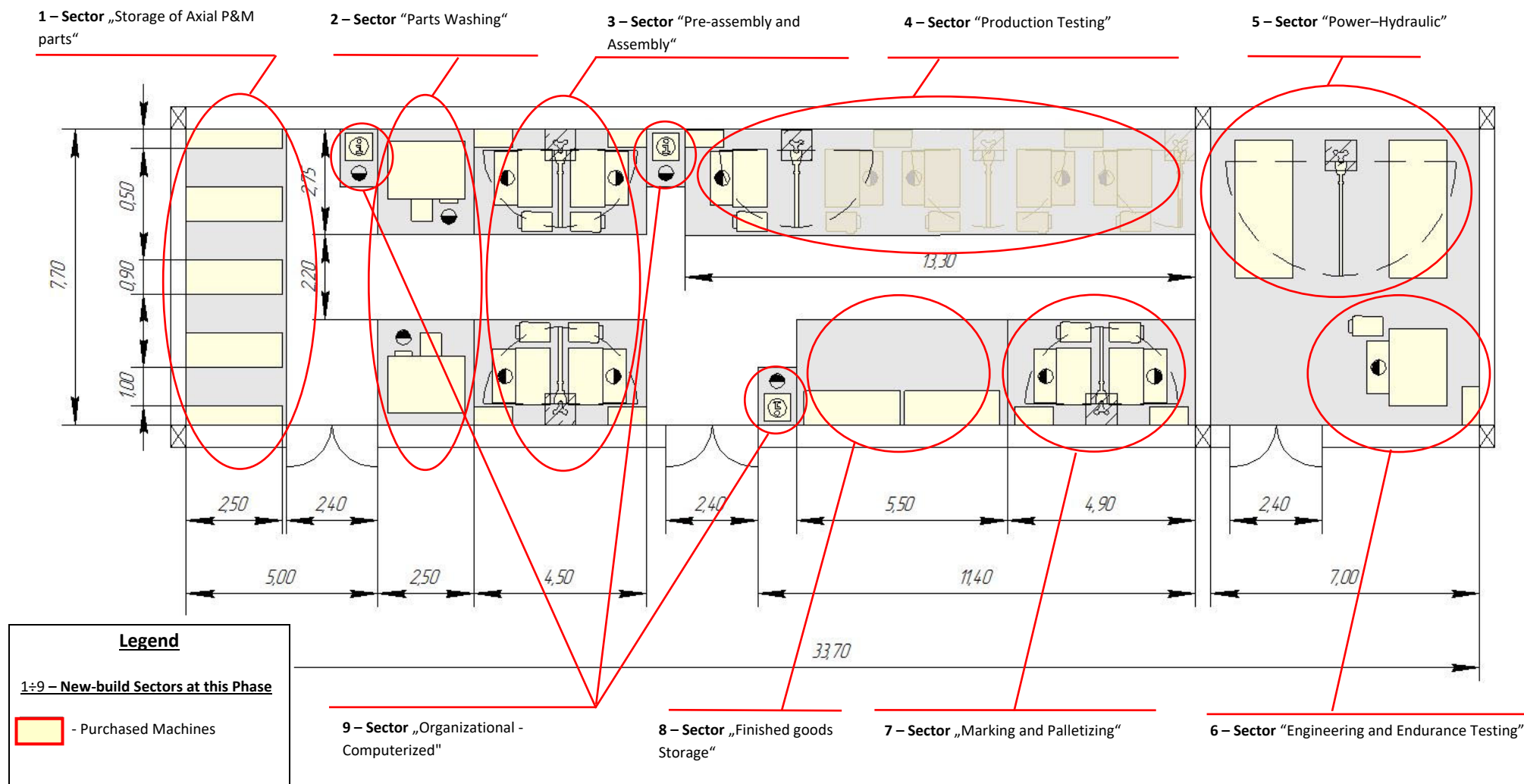


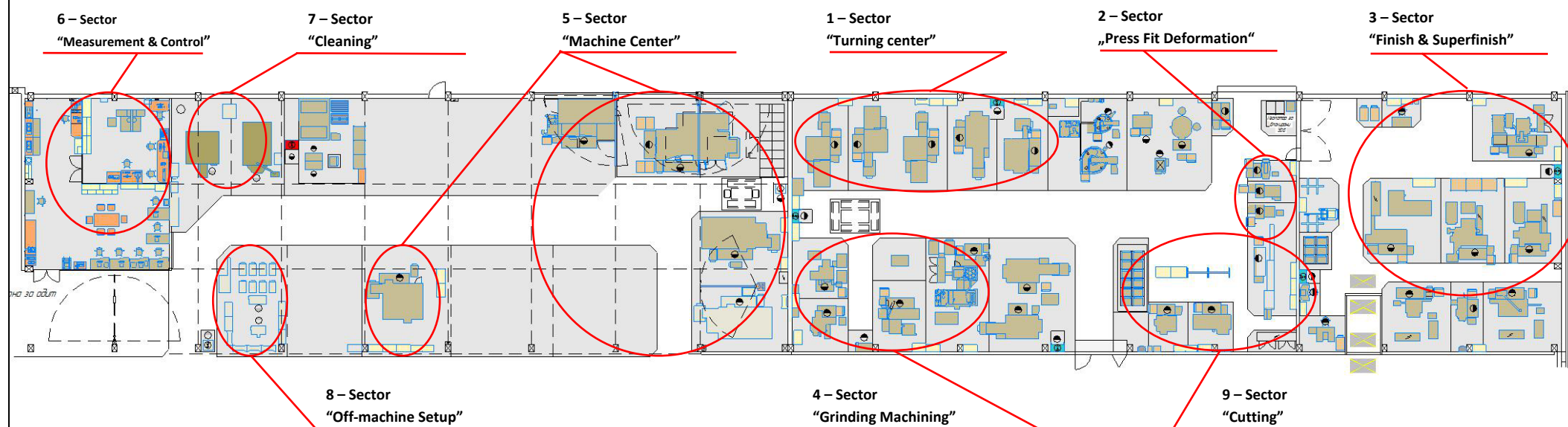
\*AFR represents the result increase when selling at a higher price with \$300; Axial M&P: Constant – \$3000, Variable - \$4600

Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)  
Development of Technological Environment of Tervel

1<sup>st</sup> Investment Period (for 5000 constant Axial M&P)

1.1. Drawing of the Technical Environment - **Investment** at "Workshop 1" For Q4'26 ÷ Q4'27

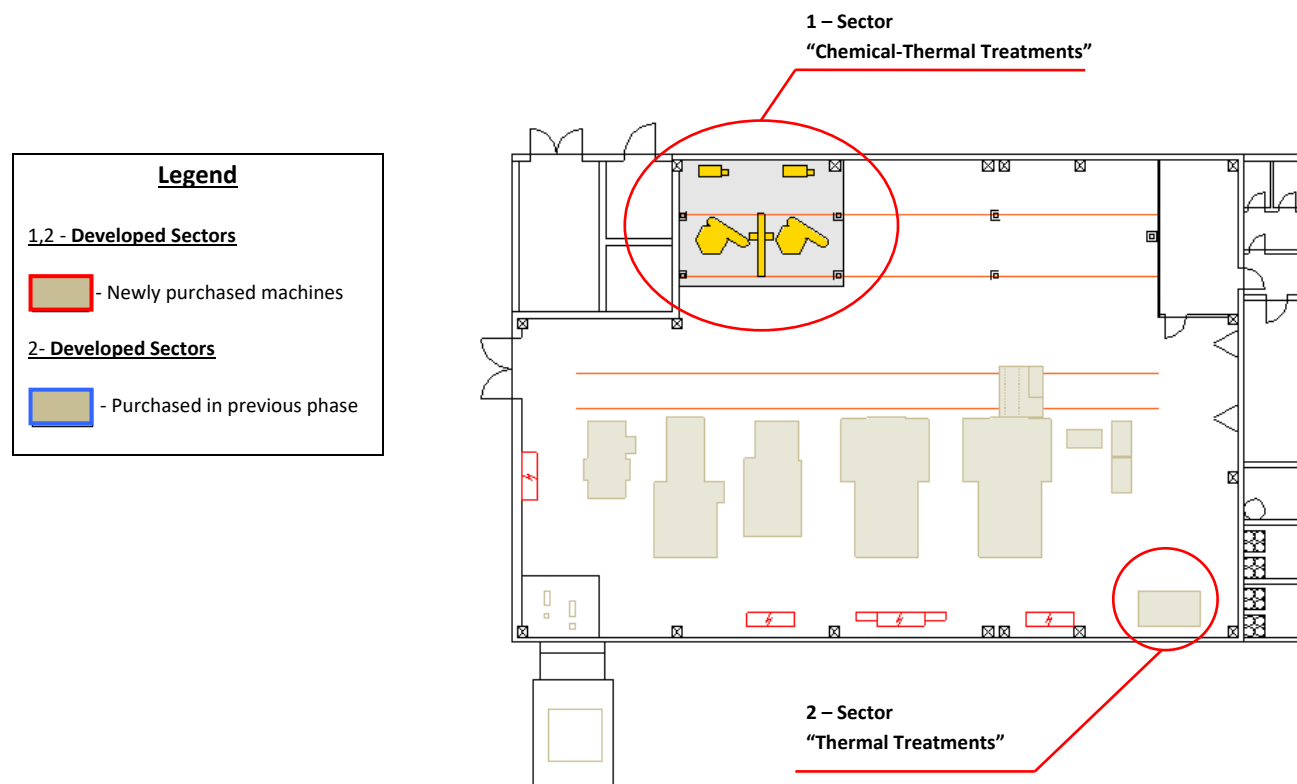


1.2. Drawing of the Technical Environment - Investment at "Workshop 2" (for 5000 constant Axial M&P)1.2.1. Drawing of Sector Metalworking at "Workshop 2" For Q4'26 ÷ Q4'27**Legend****1÷8 – Developed Sectors**

- Newly purchased machines

**Developed Sectors**

- Purchased in previous phase

1.2.2. Drawing of Sector Heat Treatment at "Workshop 2" For  $Q4'26 \div Q4'27$  (for 5000 constant Axial M&P)

## Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)

## Development of Technological Environment of Tervel

1.3. Investment Expenditures for Project for High-tech Product during Q4'26 ÷ Q4'27 (for 5000 constant Axial M&P)

Time Interval: <b>Q4'26-Q4'27</b>							
Investment Costs (IC), USD			Q4'26	Q1'27	Q2'27	Q3'27	Q4'27
Description	code		6,213,250	597,400	1,499,150	235,800	240,800
			IC (USD)	IC (USD)	IC (USD)	IC (USD)	IC (USD)
Management Costs	1111		45,000	45,000	45,000	45,000	45,000
Labor Costs (Wages)	1112		432,000	432,000	432,000	144,000	144,000
Additional Labor Costs	1113		86,400	86,400	86,400	28,800	28,800
Business Travel Expenses – Transportation & Daily Allowances	1114		2,000	2,000	2,000	2,000	2,000
Consulting	1121		20,000	25,000	20,000	10,000	15,000
Maintenance, Restoration & Modernization of Technical Environment	1123		41,850	0	6,750	0	0
Courier Services & Transportation Rental	1125			1 000	1 000		
Representation Expenses & Advertising	1141		5 000	5 000	5 000	5 000	5 000
Organizational Elements of the Environment (excl. Wages)*	141		1 000	1 000	1 000	1 000	1 000
Technical Elements of the Environment*	142		5,580,000	0	900,000	0	0



## Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)

## Development of Technological Environment of Tervel

## 1.3.1. Details about Investment Expenditures for Project for High-tech Product during Q4'26 ÷ Q4'27 (for 5000 constant Axial M&amp;P)

Article: Technical Elements for Environment\* 142

Time Step						Total:
Q4'26	Q1'27	Q2'27	Q3'27	Q4'27		
\$5,580,000	\$0	\$900,000	\$0	\$0	\$0	\$6,480,000

№	Description						
1	RENT– 20000 feet² × \$ 10	200,000					\$200,000
2	Casting molds	200,000					\$200,000
3	TopSolid CAD/CAM	40,000					\$40,000
4	Test Bench for Production Testing	500,000					\$500,000
5	Test Bench for Endurance Testing	500,000					\$500,000
6	Assembly Equipment	100,000					\$100,000
7	Vacuum Nitriding Furnaces - 2pcs	100,000					\$100,000
8	Integrex	250,000					\$250,000
9	Thielenhaus Sphero 110	455,000					\$455,000
10	Universal Measuring Instruments	20,000					\$20,000
11	BDT licenses	30,000					\$30,000
12	Hydraulic Press for Press-Fitting Bearing and Piston	60,000					\$60,000
13	CNC-Controlled Lathe – QTN100PP, 3 pcs.	210,000					\$210,000
14	Danobat Estarta 175	750,000					\$750,000
15	Fencing and air-conditioning of the "Finish Machining" section	100,000					\$100,000
16	General exchange ventilation for the Thermal section	40,000					\$40,000
17	3 pcs CNC lathes – Okuma	300,000					\$300,000
18	1 pc cylindrical grinder Okamoto	200,000					\$200,000
19	1 pcs Okuma Multus U3000			400,000			\$400,000
20	1 pcs Okuma LB3000	200,000					\$200,000
21	1pc microLine AC700-F	500,000					\$500,000
22	Mazak HCN5000			500,000			\$500,000
23	Lapping machine	50,000					\$50,000
24	5-axis CNC milling machine Okuma	300,000					\$300,000
25	Tools&carts etc	100,000					\$100,000
26	Laboratory - Coordinate Measuring Machine (CMM)	100,000					\$100,000
27	Microscope	75,000					\$75,000
28	Equipment	100,000					\$100,000
29	Gear hobbing machine	100,000					\$100,000

## Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)

## Development of Technological Environment of Tervel

Article: Labor Costs (Wages) 1112

Time Step						Total:
Q4'26	Q1'27	Q2'27	Q3'27	Q4'27		
\$432,000	\$432,000	\$432,000	\$144,000	\$144,000	\$0	\$1,584,000

№	Description						
1	Permanent team of employees – average 18 persons per month × \$ 8 000	432,000	432,000	432,000			\$1,296,000
2	Permanent team of employees – average 6 persons per month × \$ 8 000				144,000	144,000	\$288,000


Article: Maintenance, Restoration &amp; Modernization of Technical Environment 1123

Time Step						Total:
Q4'26	Q1'27	Q2'27	Q3'27	Q4'27		
\$41,850	\$0	\$6,750	\$0	\$0	\$0	\$48,600


№	Description						
1	Maintenance	41,850	0	6,750			\$48,600

**Legend**

1,2,35,67,8, and 9 - Sectors

 - Purchased in previous phases

4 and 6 - Developed Sectors

 - Purchased in previous phase

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**9 – Develop Sector** „Organizational - Computerized”

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**8 – Develop Sector** „Finished goods Storage”

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**7 – Develop Sector** „Marking and Palletizing”

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**6 – Newly-developed places in Section** “Engineering and Endurance Testing”

## Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)

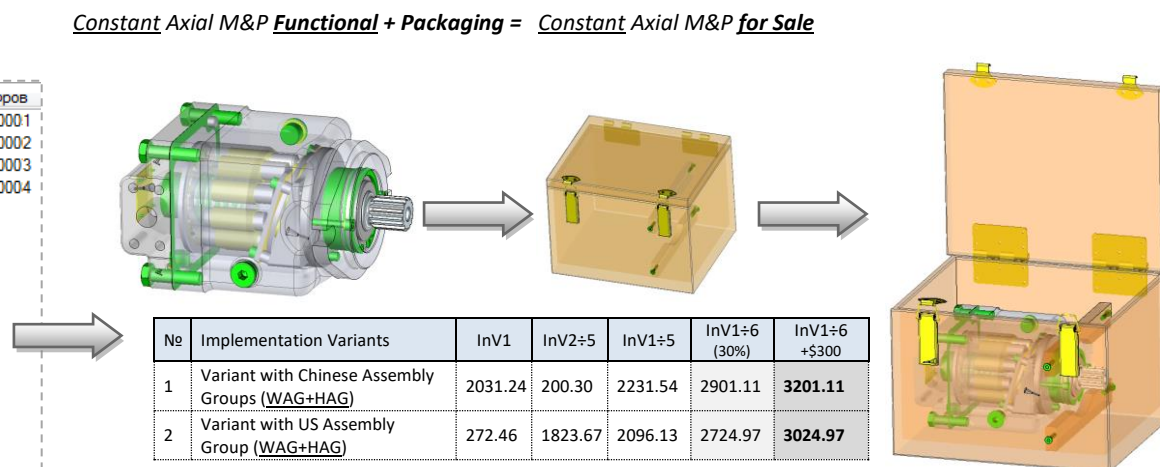
## Structure of the Working Capital Flow of Axial M&amp;P

**Constant Axial M&P****1<sup>st</sup> Functional type**

id логически	id цифров
(E) АКП1М35.01/О/Шн (DIN)	111010001
(E) АКП1М40.01/О/Шн (DIN)	111010002
(E) АКП1М46.01/О/Шн (DIN)	111010003
(E) АКП1П46.01/Л/Шн (SAE)	111010004

## Подтипове Константни АБХИз-и

АКП | 16 cm<sup>3</sup>  
 АКП | 20 cm<sup>3</sup>  
 АКП | 23 cm<sup>3</sup>  
 АКП | 32 cm<sup>3</sup>  
 АКП | 35 cm<sup>3</sup>  
 АКП | 40 cm<sup>3</sup>  
 АКП | 46 cm<sup>3</sup>  
 АКП | 56 cm<sup>3</sup>  
 АКП | 63 cm<sup>3</sup>  
 АКП | 71 cm<sup>3</sup>  
 АКП | 80 cm<sup>3</sup>  
 АКП | 92 cm<sup>3</sup>  
 АКП | 140 cm<sup>3</sup>  
 АКП | 180 cm<sup>3</sup>  
 АКП | 270 cm<sup>3</sup>



№	Implementation Variants	Inv1	Inv2÷5	Inv1÷5	Inv1÷6 (30%)	Inv1÷6 +\$300
1	Variant with Chinese Assembly Groups (WAG+HAG)	2031.24	200.30	2231.54	2901.11	<b>3201.11</b>
2	Variant with US Assembly Group (WAG+HAG)	272.46	1823.67	2096.13	2724.97	<b>3024.97</b>

**Note:**

Prices from distributors of comparable models by world-renowned manufacturers:

a) Parker Hannifin ≈ \$4702 .

b) Bosch Rexroth ≈ \$4656.

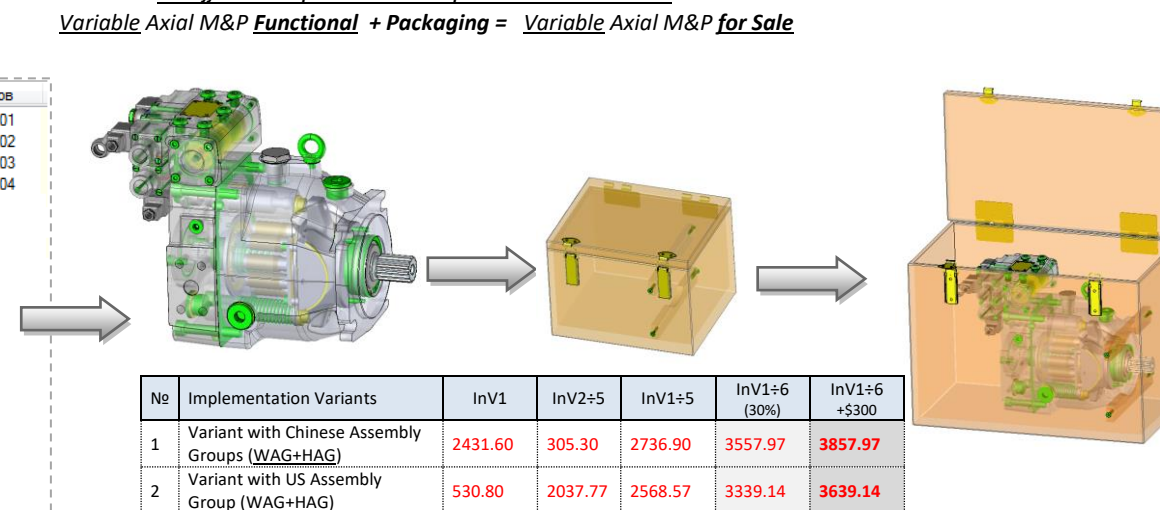
**The difference compared to the Inv1-6 price estimate is ≈ 1.7 times.**

**Variable Axial M&P****2<sup>nd</sup> Functional type**

id логически	id цифров
(E) АРП1П46.01/Д/Шн (DIN)	112010001
(E) АРП1П46.01/Д/Шн (SAE)	112010002
(E) АРП1П46.02/Д/Шн (DIN)	112010003
(E) АРП1П46.02/Д/Шн (SAE)	112010004

## Подтипове Регулируеми АБХИз-и

АРП | 16 cm<sup>3</sup>  
 АРП | 20 cm<sup>3</sup>  
 АРП | 23 cm<sup>3</sup>  
 АРП | 32 cm<sup>3</sup>  
 АРП | 35 cm<sup>3</sup>  
 АРП | 40 cm<sup>3</sup>  
 АРП | 46 cm<sup>3</sup>  
 АРП | 56 cm<sup>3</sup>  
 АРП | 63 cm<sup>3</sup>  
 АРП | 71 cm<sup>3</sup>  
 АРП | 80 cm<sup>3</sup>  
 АРП | 92 cm<sup>3</sup>  
 АРП | 140 cm<sup>3</sup>  
 АРП | 180 cm<sup>3</sup>  
 АРП | 270 cm<sup>3</sup>



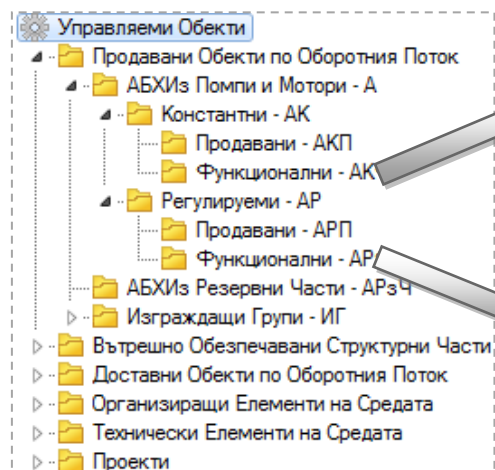
№	Implementation Variants	Inv1	Inv2÷5	Inv1÷5	Inv1÷6 (30%)	Inv1÷6 +\$300
1	Variant with Chinese Assembly Groups (WAG+HAG)	2431.60	305.30	2736.90	3557.97	<b>3857.97</b>
2	Variant with US Assembly Group (WAG+HAG)	530.80	2037.77	2568.57	3339.14	<b>3639.14</b>

**Note:** Calculated values exclude Variator (V)!

Prices from distributors of comparable models by world-renowned manufacturers with included V:

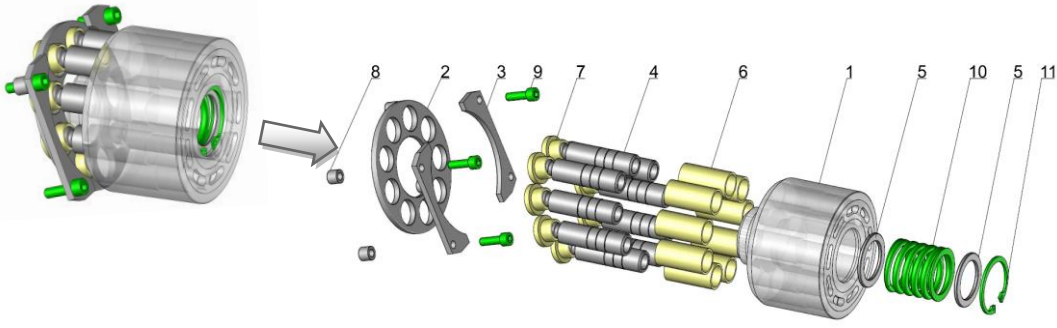
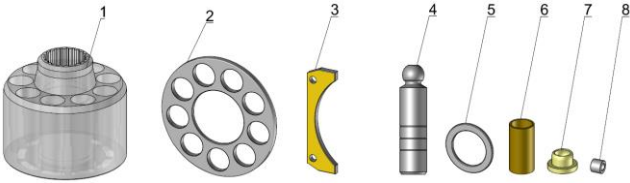
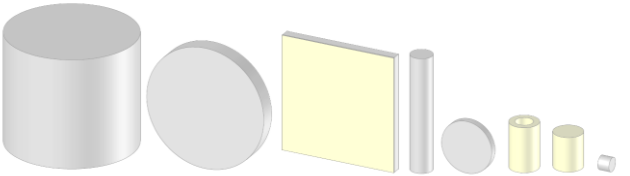
a) Bosch Rexroth ≈ \$4914.

b) Chinese manufacturers ≈ \$2400 ÷ \$5430.



Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)  
**Structure of the Working Capital Flow of Axial M&P**

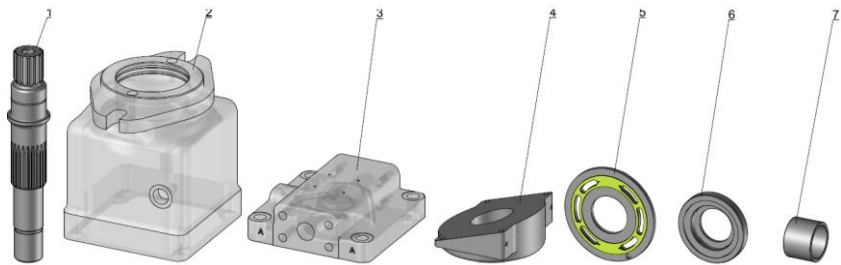
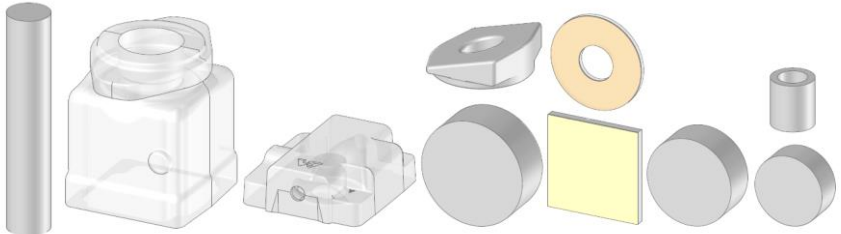
**1.2.1. Working Assembly Group (WAG)**

Working Assembly Group (WAG)	
	
FINAL PARTS OF WAG	
INITIAL MATERIALS OF WAG	
Positions:	<b>1-Cylinder Block, 2-Pressure Plate, 3-Bearing Bar, 4-Piston, 5-Washer, 6-Piston Bushing, 7-Support, 8-Spacer Bushing, 9-Screw, 10-Spring, 11-Circlip</b>

**Table 1. Working Assembly Group (WAG)**

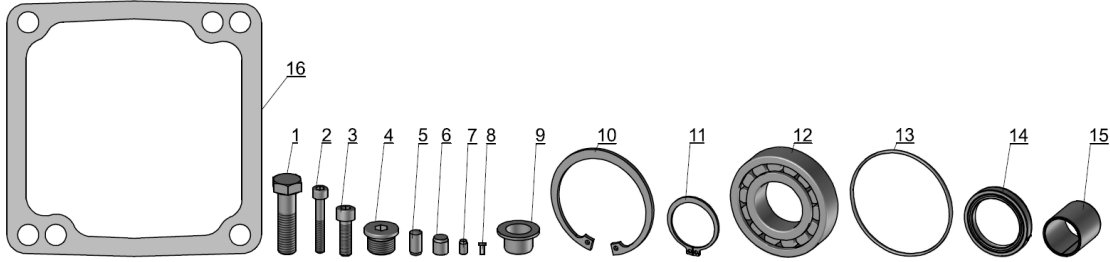
Analysis of the new Enterprise Development Program for Axial Piston Hydraulic Motors and Pumps (Tervel)  
**Structure of the Working Capital Flow of Axial M&P**

**1.2.2. Housing Assembly Group (HAG):**

Housing Assembly Group (HAG)	
FINAL PARTS OF HAG	
INITIAL MATERIALS OF HAG	
Positions:	<b>1-Drive Shaft, 2-Body, 3-Rear Cover, 4-Support Block,  5-Distribution Plate, 6-Front Cover, 7-Bearing Bushing.</b>

**Table 2. Housing Assembly Group (HAG)**

### 1.2.3. Connecting Element Group (CEG)

Connecting Element Group (CEG)	
FINAL PARTS OF CEG	
Positions:	<b>1-Bolt, 2-Screw1, 3-Screw2, 4-Plug, 5-Pin, 6-Pin1, 7-Pin2, 8-Rivet, 9-Transport Plug, 10-Front Circlip, 11-Shaft Circlip, 12-Front Roller Bearing, 13-O-Ring, 14-Front Seal, 15-Rear Sliding Bearing, 16-Gasket.</b>

**Table 3.** Connecting Element Group (CEG)