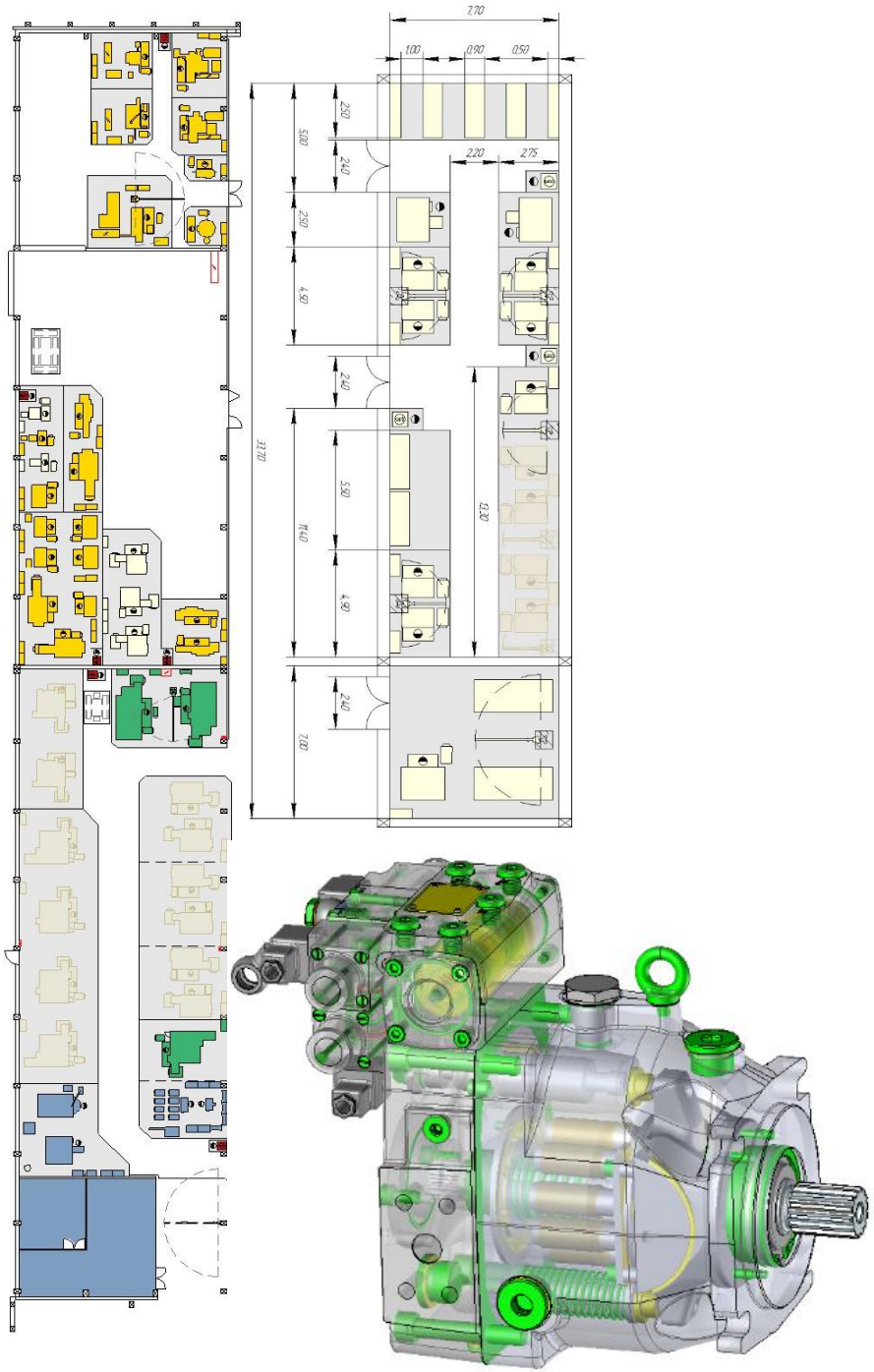


by
INSTITUTE FOR SYSTEMIC ECONOMIC ENGINEERING
stefan.stefanov@isee.bg

BUSINESS PLAN

AXIAL FLOW DYNAMICS

Manufacturing of

AXIAL PISTON HYDRAULIC MOTORS AND PUMPS

CONTENTS:

To facilitate an 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 three appendices:

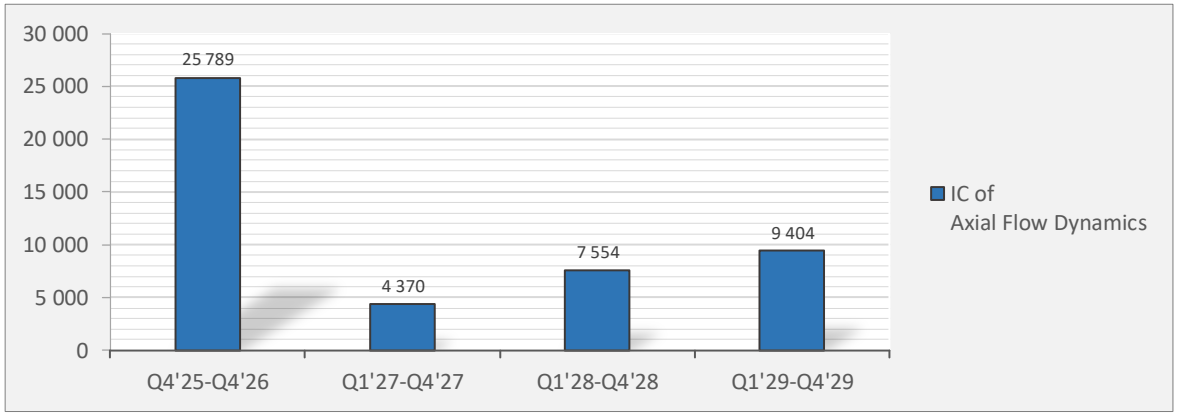
- **Appendix 1**: Financial Overview of the Program for Axial M&P Manufacturing,
- **Appendix 2**: Product Structure and manufacturing costs of Axial M&P and
- **Appendix 3**: Development of Technological Environment of Axial Flow Dynamics Complex in phases.

Overview of the Program for Axial Piston Hydraulic Motors and Pumps Manufacturing

Investments Costs (IC) of the Program for Axial Piston Hydraulic Motors and Pumps (Axial Flow Dynamics)

Program for new Enterprise Development

Investment Costs (IC) thousands USD	
Time Int.	IC of Axial Flow Dynamics
Q4'25-Q4'26	25 789
Q1'27-Q4'27	4 370
Q1'28-Q4'28	7 554
Q1'29-Q4'29	9 404

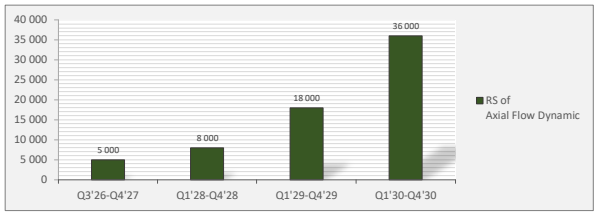


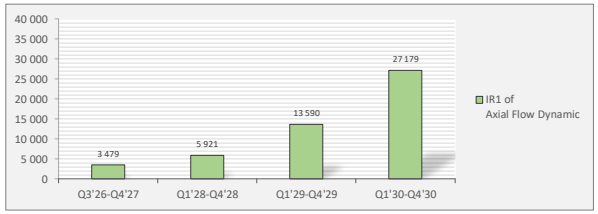
Financial Parameters of the Program for Axial Piston Hydraulic Motors and Pumps (Axial Flow Dynamics)

Program for new Enterprise Development

Revenue from Sales (RS) of APHMP in thousand USD	
Time Int.	RS of Axial Flow Dynamic
Q3'26-Q4'27	5 000
Q1'28-Q4'28	8 000
Q1'29-Q4'29	18 000
Q1'30-Q4'30	36 000

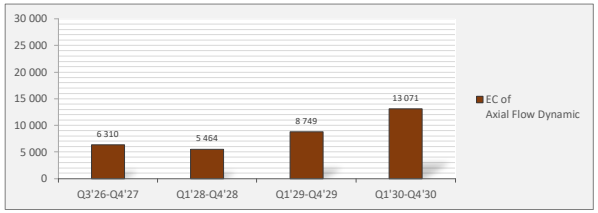
Industrial Result 1 (IR1) of APHMP in thousand USD	
Time Int.	IR1 of Axial Flow Dynamic
Q3'26-Q4'27	3 479
Q1'28-Q4'28	5 921
Q1'29-Q4'29	13 590
Q1'30-Q4'30	27 179

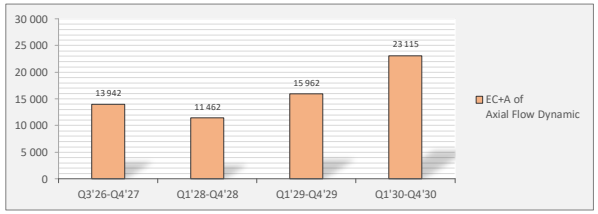




Exploatational Costs (EC) in thousands USD	
Time Int.	EC of Axial Flow Dynamic
Q3'26-Q4'27	6 310
Q1'28-Q4'28	5 464
Q1'29-Q4'29	8 749
Q1'30-Q4'30	13 071

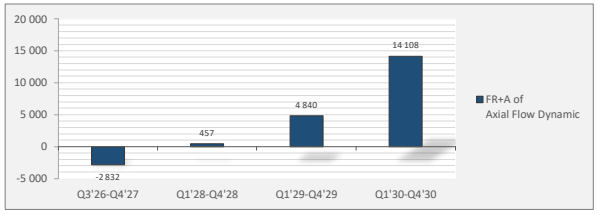
Exploatational Costs + Amortization (EC+A) in thousands USD	
Time Int.	EC+A of Axial Flow Dynamic
Q3'26-Q4'27	13 942
Q1'28-Q4'28	11 462
Q1'29-Q4'29	15 962
Q1'30-Q4'30	23 115

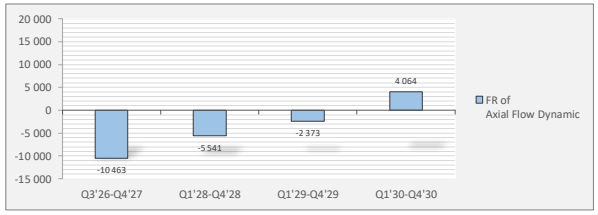




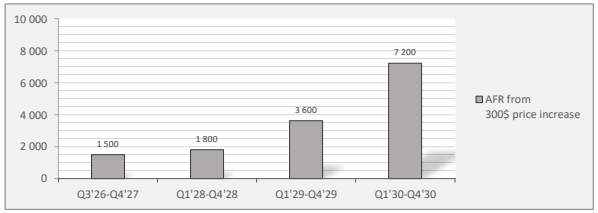
Final Result + Amortization (FR+A) in thousands USD	
Time Int.	FR+A of Axial Flow Dynamic
Q3'26-Q4'27	-2 832
Q1'28-Q4'28	457
Q1'29-Q4'29	4 840
Q1'30-Q4'30	14 108

Final Result (FR) in thousands USD	
Time Int.	FR of Axial Flow Dynamic
Q3'26-Q4'27	-10 463
Q1'28-Q4'28	-5 541
Q1'29-Q4'29	-2 373
Q1'30-Q4'30	4 064





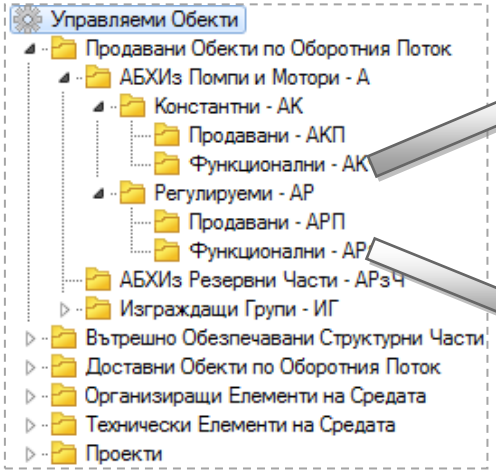
Additional Financial Results (AFR) in thousands USD	
Time Int.	AFR from 300$ price increase
Q3'26-Q4'27	1 500
Q1'28-Q4'28	1 800
Q1'29-Q4'29	3 600
Q1'30-Q4'30	7 200



**AFR represents the result increase when selling at a higher price with $300; Axial M&P: Constant – $1300, Variable - $2300*

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

Structure of the Working Capital Flow of Axial M&P



Constant *Axial M&P*

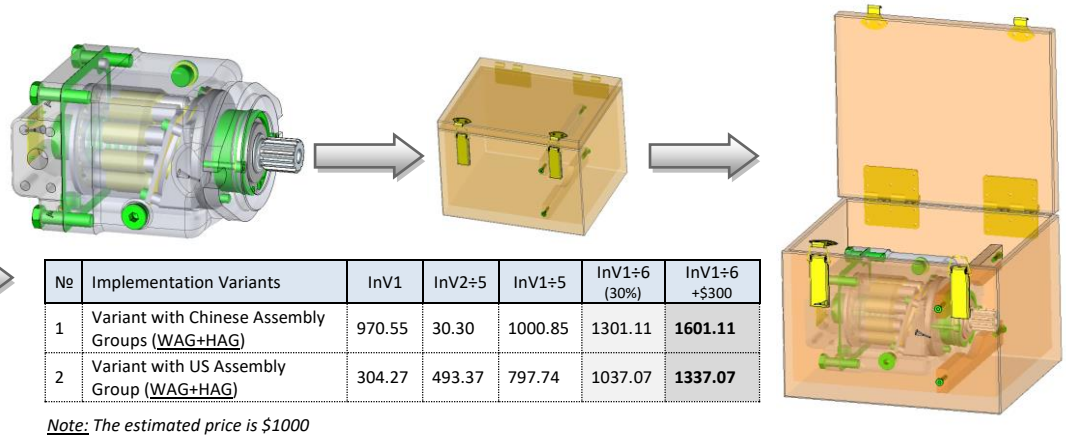
1st Functional type

id логически	id цифров
АКП1М35.01/О/Шл (DIN)	111010001
АКП1М40.01/О/Шл (DIN)	111010002
АКП1М46.01/О/Шл (DIN)	111010003
АКП1П46.01/П/Шл (SAE)	111010004

Подтипове **Константни АБХИз-и**

АКП | 16 cm3
АКП | 20 cm3
АКП | 23 cm3
АКП | 32 cm3
АКП | 35 cm3
АКП | 40 cm3
АКП | 46 cm3
АКП | 56 cm3
АКП | 63 cm3
АКП | 71 cm3
АКП | 80 cm3
АКП | 92 cm3
АКП | 140 cm3
АКП | 180 cm3
АКП | 270 cm3

Constant Axial M&P ***Functional + Packaging =*** *Constant Axial M&P* ***for Sale***



№	Implementation Variants	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)	InV1÷6 +$300
1	Variant with Chinese Assembly Groups (WAG+HAG)	970.55	30.30	1000.85	1301.11	**1601.11**
2	Variant with US Assembly Group (WAG+HAG)	304.27	493.37	797.74	1037.07	**1337.07**

Note: The estimated price is $1000

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

a) Parker Hannifin ≈ $1702 .

b) Bosch Rexroth ≈ $1656.

The difference compared to the $1000 estimate is ≈ 1.7 times.

Variable *Axial M&P*

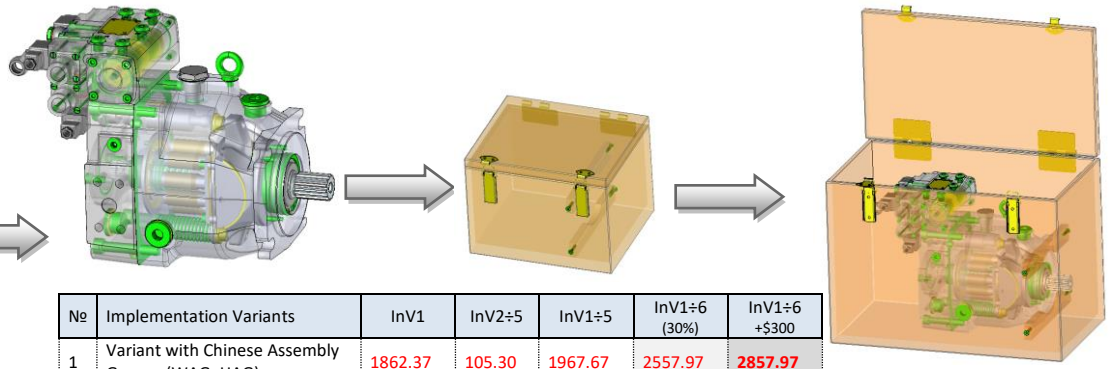
2nd Functional type

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

Подтипове **Регулируеми АБХИз-и**

АРП | 16 cm3
АРП | 20 cm3
АРП | 23 cm3
АРП | 32 cm3
АРП | 35 cm3
АРП | 40 cm3
АРП | 46 cm3
АРП | 56 cm3
АРП | 63 cm3
АРП | 71 cm3
АРП | 80 cm3
АРП | 92 cm3
АРП | 140 cm3
АРП | 180 cm3
АРП | 270 cm3

Variable Axial M&P ***Functional + Packaging =*** *Variable Axial M&P* ***for Sale***



№	Implementation Variants	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)	InV1÷6 +$300
1	Variant with Chinese Assembly Groups (WAG+HAG)	1862.37	105.30	1967.67	2557.97	**2857.97**
2	Variant with US Assembly Group (WAG+HAG)	430.80	1137.77	1541.07	2039.14	**2339.14**

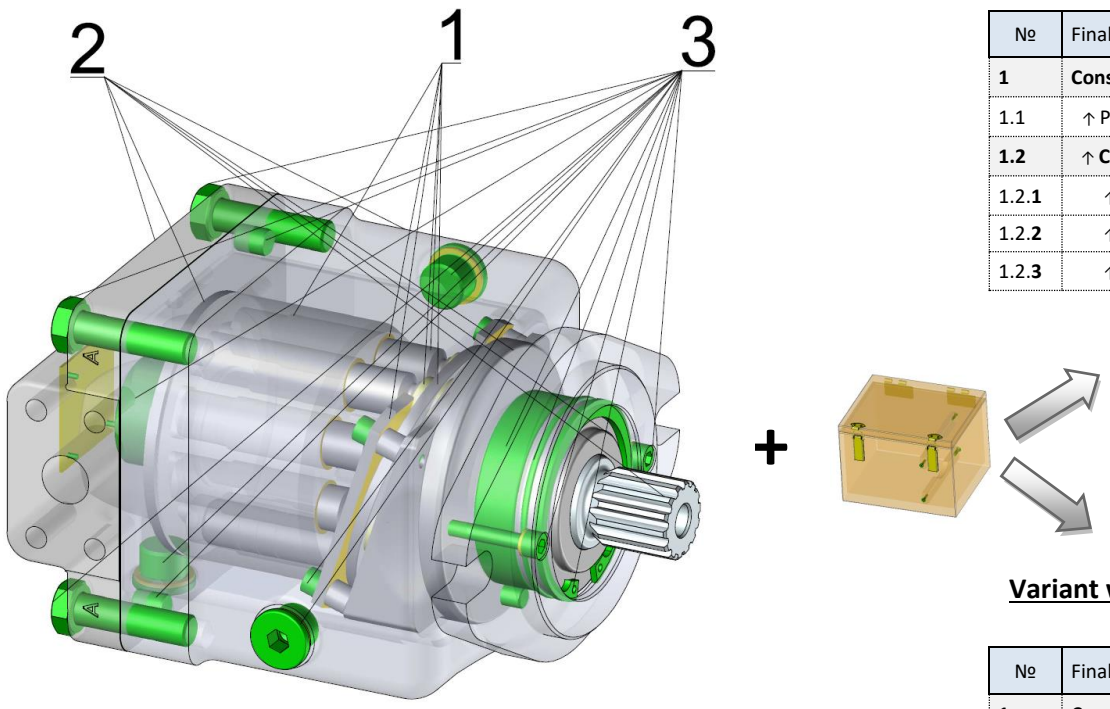
Note: Calculated values exclude Variator (V)!

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

a) Parker Hannifin ≈ $2414.

b) Chinese manufacturers≈ $1400 ÷ $5430.

1. **CONSTANT** Axial M&P **for SALE**



Variant with Chinese Assembly Groups

№	Final Assembly Structure (FAS)	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)	InV1÷6 +$300
1	**Constant Axial M&P For Sale**	**600.26**	**213.45**	**813.71**	**1057.82**	**1357.82**
1.1	↑ Packaging	7.30	2.80	10.10	12.12	
1.2	↑ **Constant Axial M&P Functional**	-	27.50	27.50	35.75	
1.2.**1**	↑ Working Assembly Group (WAG)	401.06	-	401.06	521.37	
1.2.**2**	↑ Housing Assembly Group (HAG)	108.50	183.15	291.65	379.15	
1.2.**3**	↑ Connecting Element Group (CEG)	83.40	-	83.40	100.08	

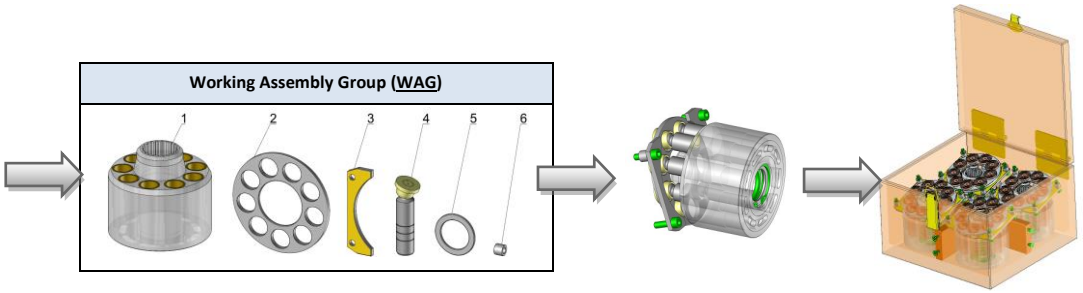
Variant with US Assembly Groups

№	Final Assembly Structure (FAS)	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)	InV1÷6 (+$300)
1	**Constant Axial M&P For Sale**	**304.27**	**493.37**	**797.74**	**1037.07**	**1337.07**
1.1	↑ Packaging	7.30	2.80	10.10	12.12	
1.2	↑ **Constant Axial M&P Functional**	-	27.50	27.50	35.75	
1.2.**1**	↑ Working Assembly Group (WAG)	105.07	280.02	385.09	500.70	
1.2.**2**	↑ Housing Assembly Group (HAG)	108.5	183.15	291.65	379.15	
1.2.**3**	↑ Connecting Element Group (CEG)	83.40	-	83.40	100.08	

1.2. Assembly Groups:

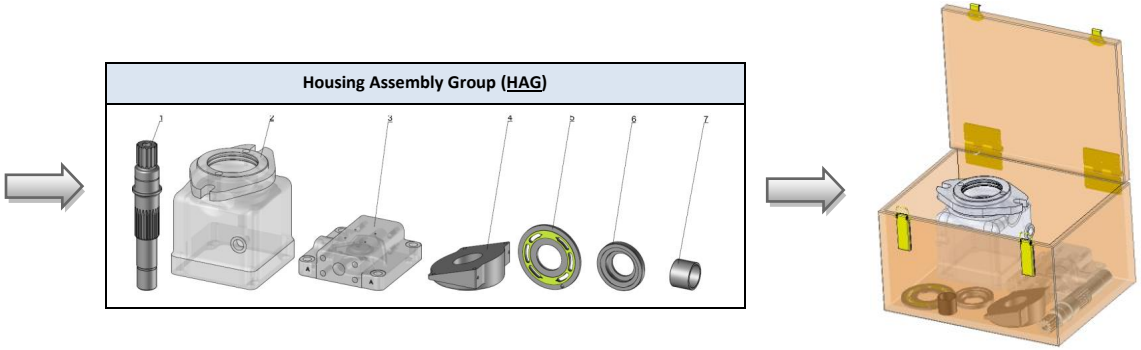
1.2.1. Working Assembly Group (WAG)

№	Assembly Group 1	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)
1.2.1	**Working Assembly Group (WAG)**	**105.07**	**280.02**	**385.09**	**500.70**
1.2.1.1	1pc / Composite Cylinder Block	**48.80**	**71.25**	**120.05**	**156.07**
1.2.1.2	1pc / Pressure Plate	**1.62**	**12.75**	**14.37**	**18.68**
1.2.1.3	2pc / Bearing Bar	**22.64/**11.32	**15.24/**7.62	**37.88/**18.94	**49.26/**24.63
1.2.1.4	9pc / Composite Piston	**31.41/**3.49	**161.1/**17.9	**192.51/**21.39	**250.29/**27.81
1.2.1.5	2pc / Washer	**0.44/**0.22	**10.36/**5.18	**10.8/**5.4	**14.04/**7.02
1.2.1.6	4pc / Spacer Bushing	**0.16/**0.04	**9.32/**2.33	**9.48/**2.37	**12.36/**3.09



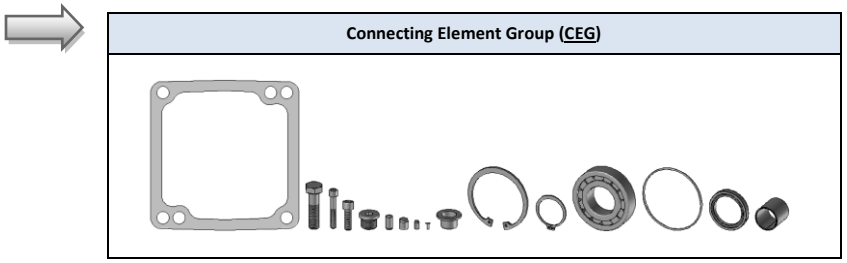
1.2.2. Housing Assembly Group (HAG)

№	Assembly Group 2	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)
1.2.2	**Housing Assembly Group (HAG)**	**108.5**	**183.15**	**291.65**	**379.15**
1.2.2.1	Drive Shaft	6.40	33.75	40.15	52.20
1.2.2.2	Body	36.60	38.25	74.85	97.31
1.2.2.3	Rear Cover	25.0	42.00	67.00	87.10
1.2.2.4	Support Block	15.0	30.30	45.30	58.89
1.2.2.5	Distribution Plate	22.70	23.25	45.95	59.74
1.2.2.6	Front Cover	1.80	6.30	8.10	10.53
1.2.2.7	Bearing Bushing	1.0	9.30	10.30	13.39



1.2.3. Connecting Element Group (CEG)

№	Assembly Group 3	InV1	InV2÷5	InV1÷5	InV1÷6
1.2.3	**Connecting Element Group (CEG)**	**83.40**	**-**	**-**	**-**



1.2.1. Working Assembly Group (WAG)

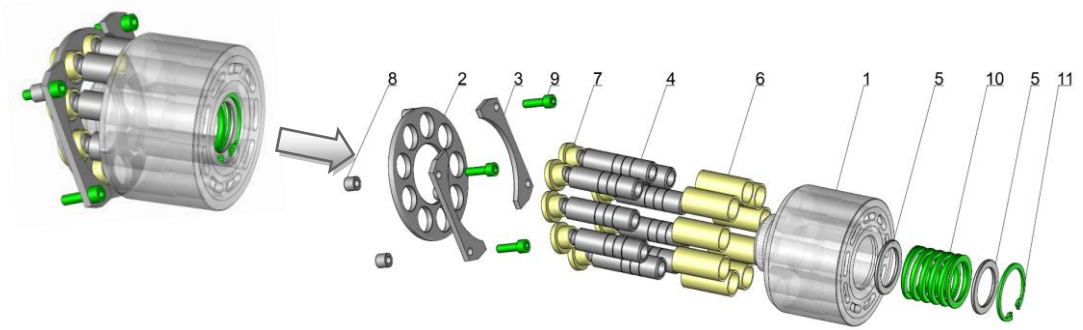
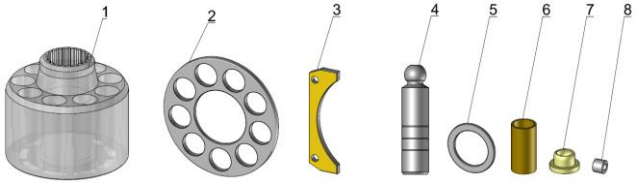
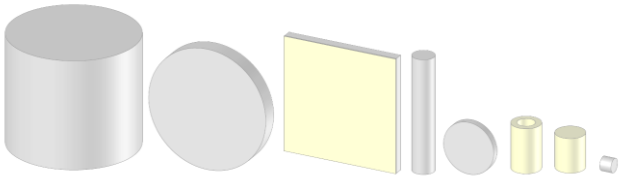
Working Assembly Group (WAG)	
	
FINAL PARTS OF WAG	
INITIAL MATERIALS OF WAG	
Positions:	**1**-Cylinder Block, **2**-Pressure Plate, **3**-Bearing Bar, **4**-Piston, **5**-Washer, **6**-Piston Bushing, **7**-Support, **8**-Spacer Bushing, **9**-Screw, **10**-Spring, **11**-Circlip

Table 1. *Working Assembly Group (WAG)*

1.2.2. Housing Assembly Group (HAG):

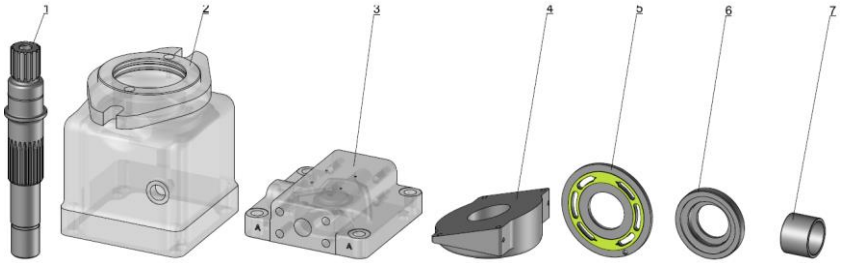
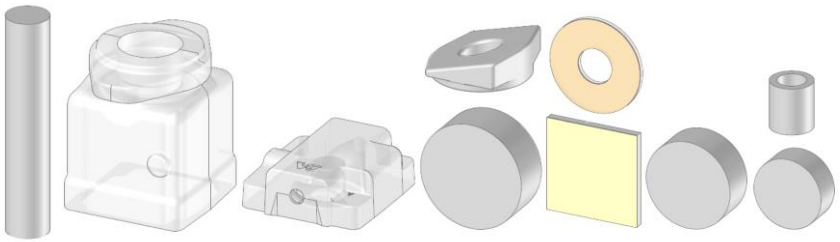
Housing Assembly Group (HAG)	
FINAL PARTS OF HAG	
INITIAL MATERIALS OF HAG	
Positions:	**1**-Drive Shaft, **2**-Body, **3**-Rear Cover, **4**-Support Block, **5**-Distribution Plate, **6**-Front Cover, **7**-Bearing Bushing.

Table 2. *Housing Assembly Group (HAG)*

1.2.3. Connecting Element Group (CEG)

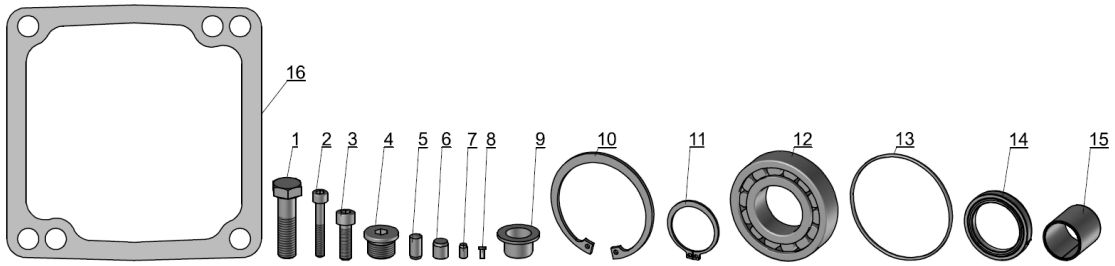
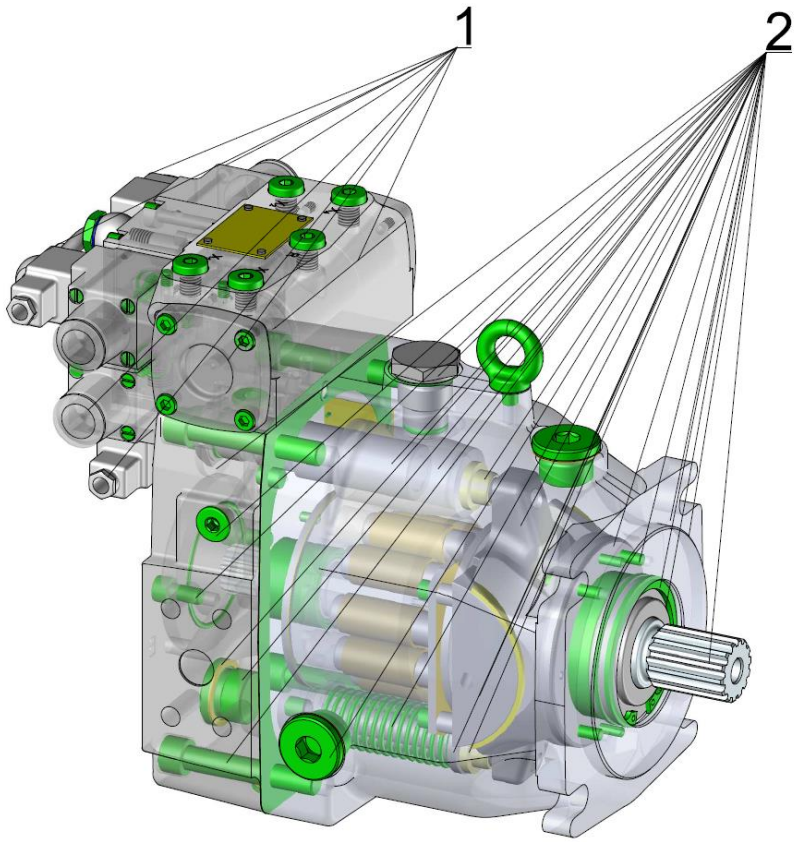
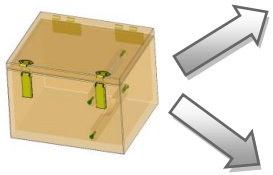
Connecting Element Group (CEG)	
FINAL PARTS OF CEG	
Positions:	**1**-Bolt, **2**-Screw1, **3**-Screw2, **4**-Plug, **5**-Pin, **6**-Pin1, **7**-Pin2, **8**-Rivet, **9**-Transport Plug, **10**-Front Circlip, **11**-Shaft Circlip, **12**-Front Roller Bearing, **13**-O-Ring, **14**-Front Seal, **15**-Rear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

Table 3. *Connecting Element Group (CEG)*

2. **Variable** Axial M&P **For Sale**



+



Variant with Chinese WAG+HAG

№	Final Assembly Structure (FAS)	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)	InV1÷6 +$300
2	**Variable Axial M&P For Sale**	**729.79**	**857.75**	**1584.54**	**2061.20**	**2361.20**
2.1	↑ Packaging	7.30	2.80	10.10	12.12	
2.2	↑ **Variable Axial M&P Functional**	**-**	**75.00**	**75.00**	**90.00**	
2.2.**1**	↑ Variator (V)	1.00	-	1.00	1.20	
2.2.**2**	↑ Base Assembly Structure (BAS)	719.49	779.95	1499.44	1947.27	

Variant with US WAG+HAG

№	Final Assembly Structure (FAS)	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)	InV1÷6 +$300
2	**Variable Axial M&P For Sale**	**430.80**	**1137.77**	**1541.07**	**2039.14**	**2339.14**
2.1	↑ Packaging	7.30	2.80	10.10	12.12	
2.2	↑ **Variable Axial M&P Functional**	**-**	**75**	**75**	**97.5**	
2.2.**1**	↑ Variator (V)	1.00	-	1.00	1.20	
2.2.**2**	↑ Base Assembly Structure (BAS)	423.50	1 059.97	1 483.47	1928.59	

2.2.1. Variator (V)

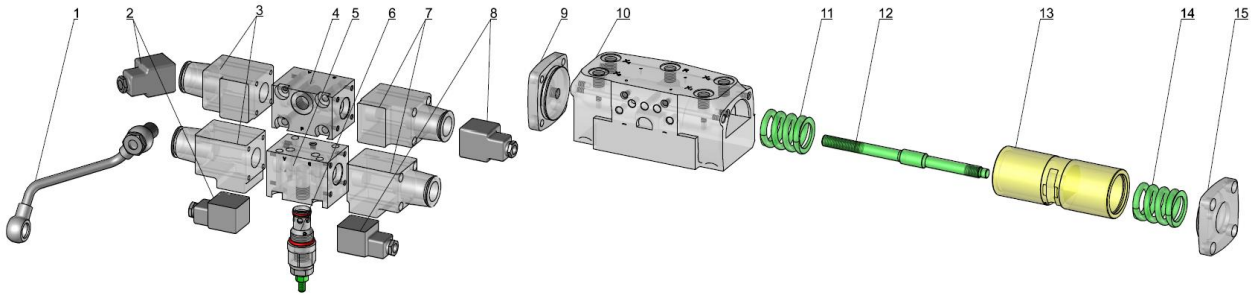
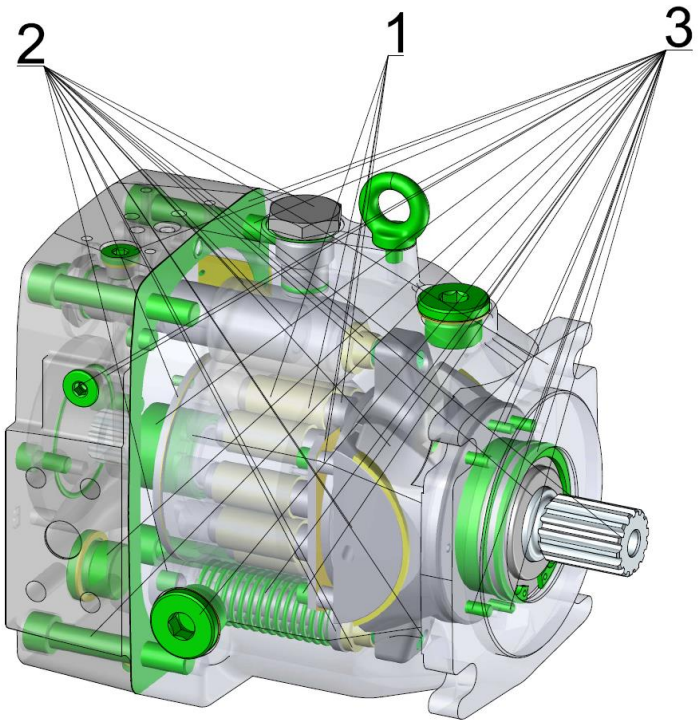
Variator (V)	
FINAL PARTS OF V	
Note:	The schematic of the Variator is illustrative!

Table 4. *Variator (V)*

2.2.2. Base Assembly Structure (BAS)



Variant with Chinese WAG+HAG

№	Final Assembly Structure (FAS)	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)
2.2.2	**Base Assembly Structure (BAS)**	-	27.50	27.50	35.75
2.2.2.**1**	↑ Working Assembly Group (WAG)	401.06	-	401.06	650.91
2.2.2.**2**	↑ Housing Assembly Group (HAG)	189.20	752.45	941.65	1 224.14
2.2.2.**3**	↑ Connecting Element Group (CEG)	129.23	-	129.23	168.00
	Total:	**719.49**	**779.95**	**1499.44**	**1947.27**

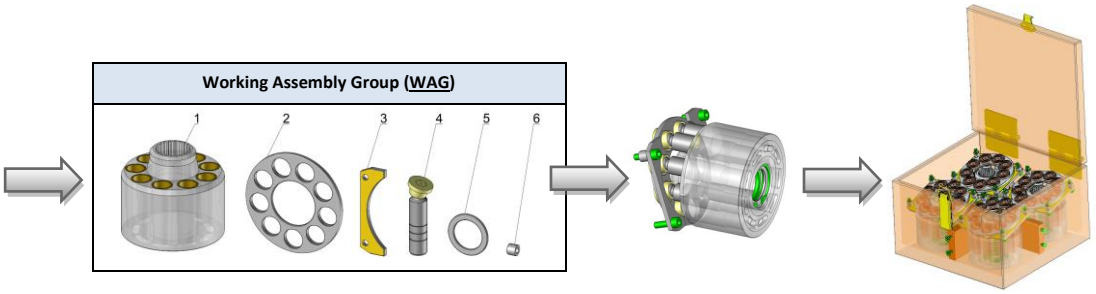
Variant with US WAG+HAG

№	Final Assembly Structure (FAS)	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)
2.2.2	**Base Assembly Structure (BAS)**	-	27.50	27.50	35.75
2.2.2.**1**	↑ Working Assembly Group (WAG)	105.07	280.02	385.09	500.70
2.2.2.**2**	↑ Housing Assembly Group (HAG)	189.20	752.45	941.65	1 224.14
2.2.2.**3**	↑ Connecting Element Group (CEG)	129.23	-	129.23	168.00
	Total:	**423.50**	**1 059.97**	**1 483.47**	**1 928.59**

Assembly Groups:

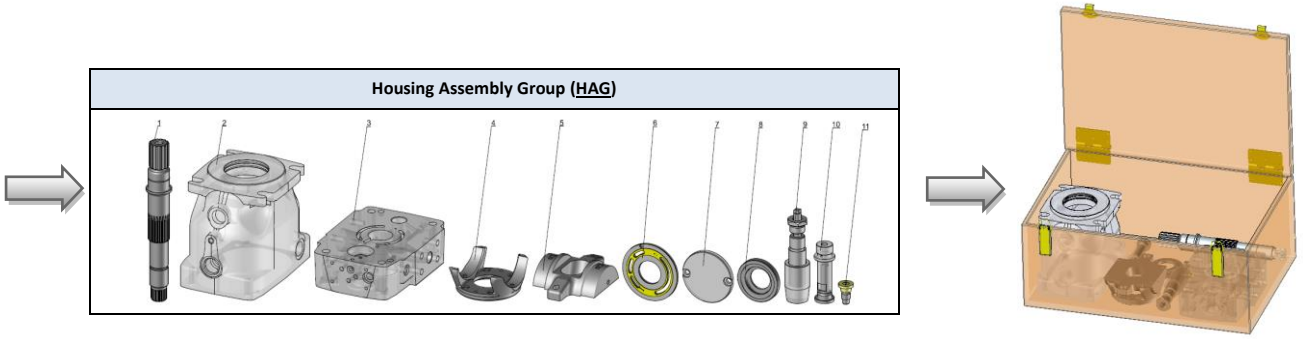
2.2.2.1. Working Assembly Group (WAG)

№	Assembly Group 1	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)
1	**Working Assembly Group (WAG)**	**105.07**	**280.02**	**385.09**	**500.70**
1.1	1pc / Composite Cylinder Block	**48.80**	**71.25**	**120.05**	**156.07**
1.2	1pc / Pressure Plate	**1.62**	**12.75**	**14.37**	**18.68**
1.3	2pc / Bearing Bar	**22.64/**11.32	**15.24/**7.62	**37.88/**18.94	**49.26/**24.63
1.4	9pc / Composite Piston	**31.41/**3.49	**161.1/**17.9	**192.51/**21.39	**250.29/**27.81
1.5	2pc / Washer	**0.44/**0.22	**10.36/**5.18	**10.8/**5.4	**14.04/**7.02
1.6	4pc / Spacer Bushing	**0.16/**0.04	**9.32/**2.33	**9.48/**2.37	**12.36/**3.09



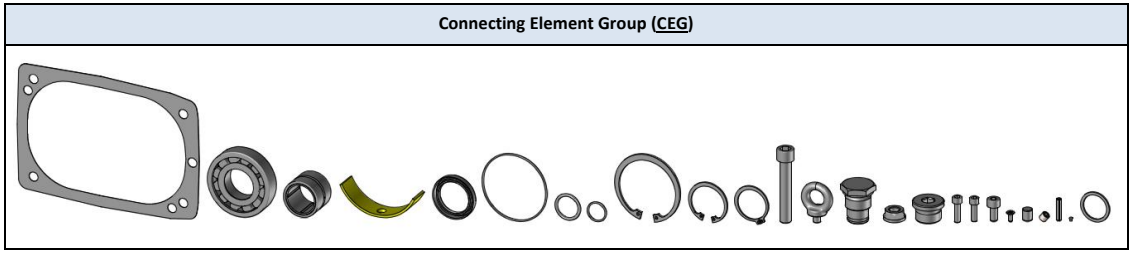
2.2.2.2. Housing Assembly Group (HAG)

№	Assembly Group 2	InV1	InV2÷5	InV1÷5	InV1÷6 (30%)
2	**Housing Assembly Group (HAG)**	**189.20**	**752.45**	**941.65**	**1 224.14**
2.1	Drive Shaft	7.47	86.19	93.66	121.76
2.2	Body	71.25	94.95	166.20	216.06
2.3	Rear Cover	62.55	101.03	163.58	212.66
2.4	Flange Bearing	8.15	47.46	55.61	72.30
2.5	Yoke	10.68	102.71	113.39	147.41
2.6	Distribution Plate	22.70	49.73	72.43	94.16
2.7	Rear Cap	0.57	29.70	30.27	39.35
2.8	Front Cover	1.80	35.49	37.29	48.48
2.9	Servo-Mechanism	6.34	81.41	87.75	114.08
2.10	Hydro-Mechanism	4.96	89.17	94.13	122.38
2.11	Composite Piston	2.73	34.61	37.34	48.55



2.2.2.3. Connecting Element Group (CEG)

№	Assembly Group 3	InV1	InV2÷5	InV1÷5	InV1÷6
3	**Connecting Element Group (CEG)**	**129.23**	-	-	-



2.2.2.1. Working Assembly Group (WAG)

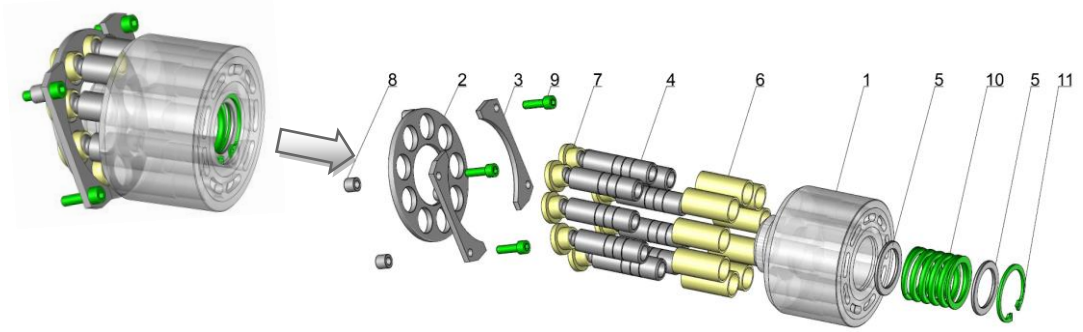
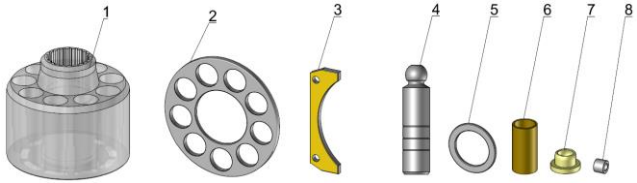
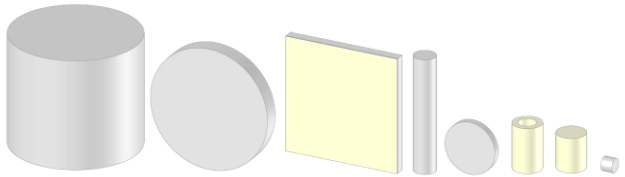
Working Assembly Group (WAG)	
	
FINAL PARTS OF WAG	
INITIAL MATERIALS OF WAG	
Position:	**1**-Cylinder Block, **2**-Pressure Plate, **3**-Bearing Bar, **4**-Piston, **5**-Washer, **6**-Piston Bushing, **7**-Support, **8**-Spacer Bushing, **9**-Screw, **10**-Spring, **11**-Circlip

Table 5. *Working Assembly Group (WAG)*

2.2.2.2. Housing Assembly Group (HAG)

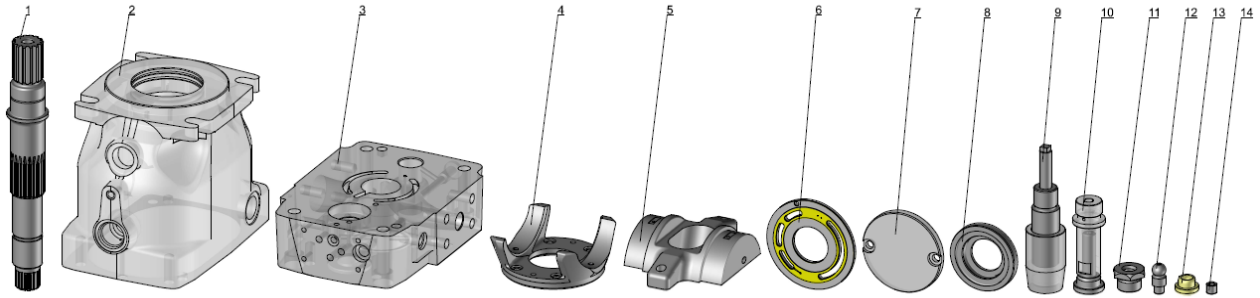
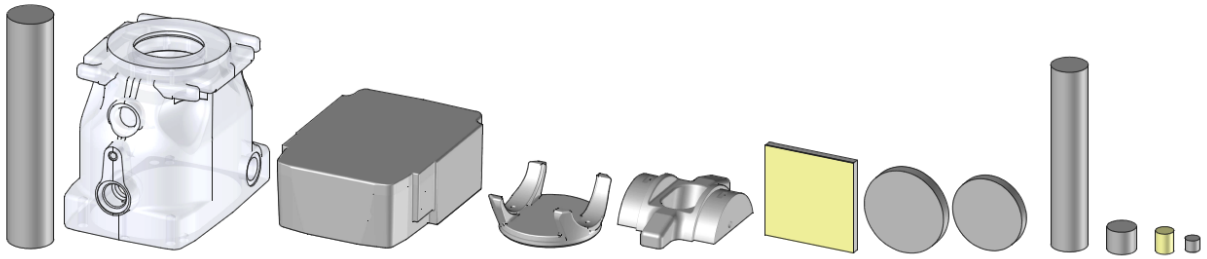
Housing Assembly Group (HAG)	
FINAL PARTS OF HAG	
INITIAL MATERIALS OF HAG	
Position:	**1**-Drive Shaft, **2**-Body, **3**-Rear Cover, **4**-Flange Bearing, **5**-Yoke, **6**-Distribution Plate, **7**-Rear Cap, **8**-Front Cover, **9**-Servo-Mechanism, **10**-Hydro-Mechanism, **11-**Composite Piston.

Table 6. *Housing Assembly Group (HAG)*

2.2.2.3. Connecting Element Group (CEG)

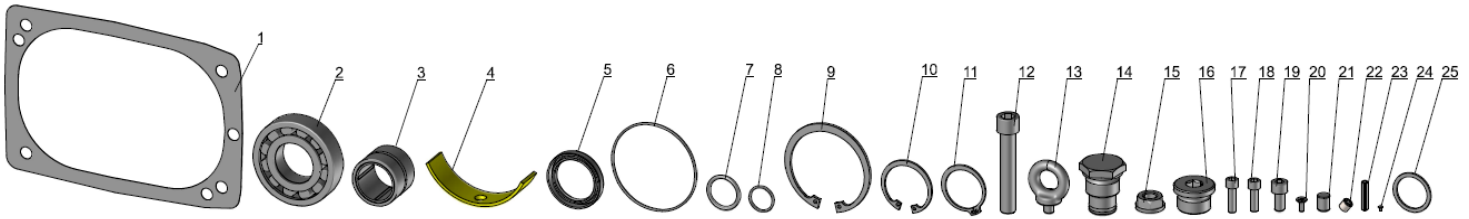
Connecting Element Group (CEG)	
FINAL PARTS OF CEG	
Position:	**1**-Gasket, **2**-Front Roller Bearing, **3**-Rear Roller Bearing, **4**-Sliding Bearing, **5**-Front Seal, **6**-O-Ring, **7**-Ring, **8**-Washer, **9**-Front Circlip, **10**-Cylinder Block Circlip, **11**-Shaft Circlip, **12**-Screw, **13**-Ear, **14**-Plug, **15**-Nut, **16-**Plug, **17-20**-Screws, **21**-Pin1, **22**-Screw, **23**-Pin2, **24**-Rivet, **25**-Ring.

Table 7. *Connecting Element Group (CEG)*

3. During testing Axial M&P are subjected to Functional and Resource Examination:

3.1. Functional Examination – covers two main types of testing:

3.1.1. Engineering Testing – an operation designed to establish statistical and computational metrics for the prescribed technical parameters. It is performed under load in order to derive the complete performance profile of the unit under actual operating conditions.

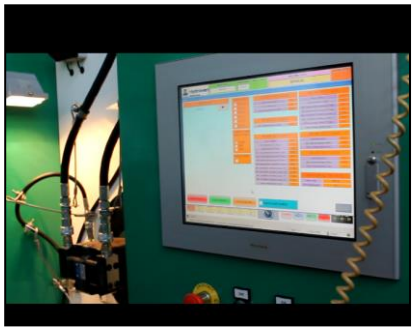


Figure 1. *Example test bench for Engineering testing of Axial M&P*

3.1.2. Production Testing – intended for routine testing of the Axial M&P in the production workflow, yielding part of the parameters defined in the technical documentation.

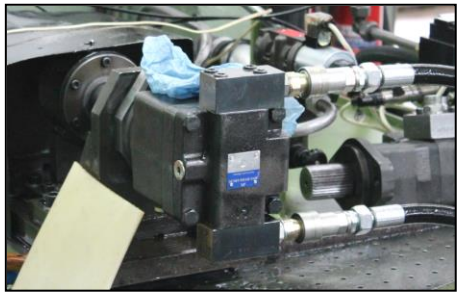


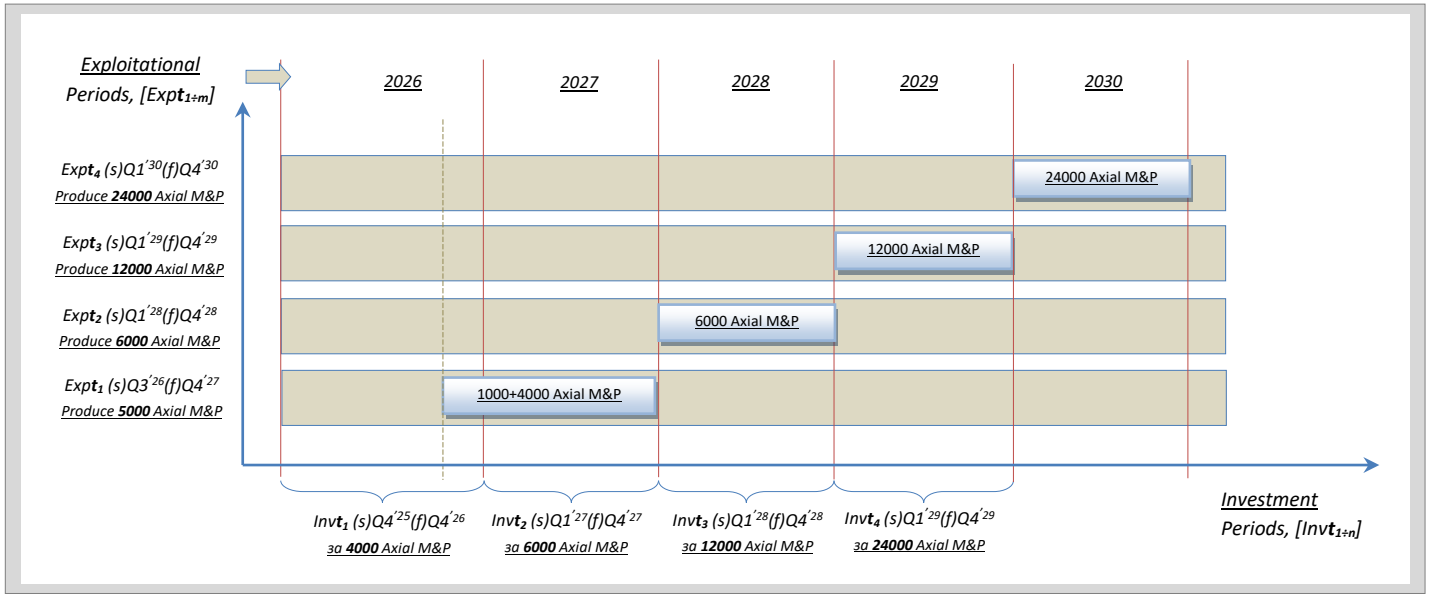
Figure 2. *Example test bench for Production testing of Axial M&P*

3.2. Resource Examination – an operation designed to establish statistical and computational metrics for the prescribed resource parameters.

Figure 3. *Example test bench for Resource testing of Axial M&P*

Development of Technological Environment of Axial Flow Dynamics Complex

Investment and Exploitational Period of Axial Flow Dynamics

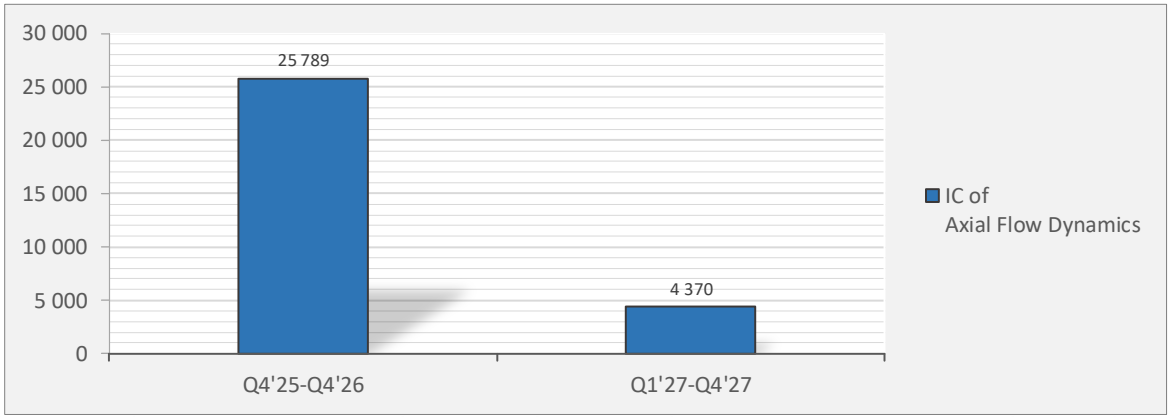


Investment Period	Time Interval	Produced Axial M&P	Exploitational Period	Time Interval	Produced Axial M&P
1st Invest. Period	Q4'25÷Q4'26	1000 + 4000 (constant)	1st Exploit. Period	Q3'26÷Q4'27	1000 + 4000 (constant)
2nd Invest. Period	Q1'27÷Q4'27	6000 (4000const+2000var)	2nd Exploit. Period	Q1'28÷Q4'28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

Investment Costs (IC) of Axial Flow Dynamics Program

Development of a new Enterprise

Investment Costs (IC) thousands USD	
Time Int.	IC of Axial Flow Dynamics
Q4'25-Q4'26	25 789
Q1'27-Q4'27	4 370

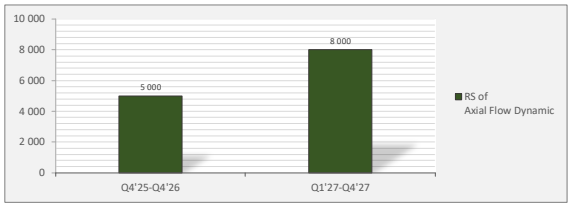


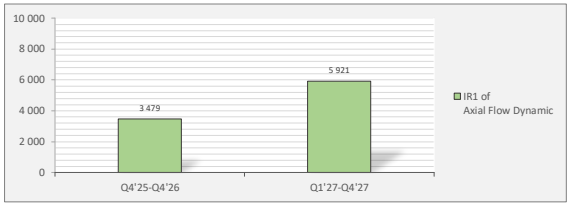
Financial Overview of Axial Flow Dynamics Program

Development of a new Enterprise

Revenue from Sales (RS) of APHMP in thousand USD	
Time Int.	RS of Axial Flow Dynamic
Q4'25-Q4'26	5 000
Q1'27-Q4'27	8 000

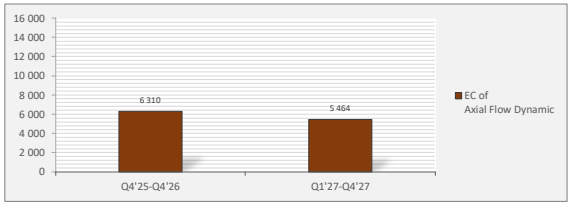
Industrial Result 1 (IR1) of APHMP in thousand USD	
Time Int.	IR1 of Axial Flow Dynamic
Q4'25-Q4'26	3 479
Q1'27-Q4'27	5 921

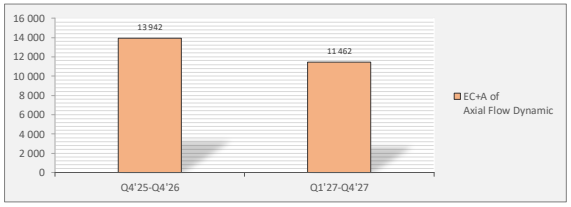




Exploatational Costs (EC) in thousands USD	
Time Int.	EC of Axial Flow Dynamic
Q4'25-Q4'26	6 310
Q1'27-Q4'27	5 464

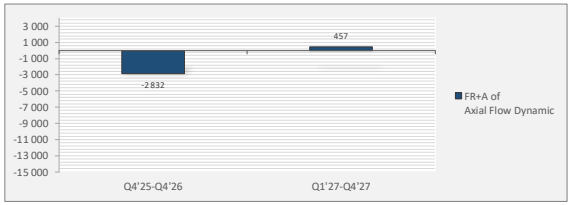
Exploatational Costs + Amortization (EC+A) in thousands USD	
Time Int.	EC+A of Axial Flow Dynamic
Q4'25-Q4'26	13 942
Q1'27-Q4'27	11 462

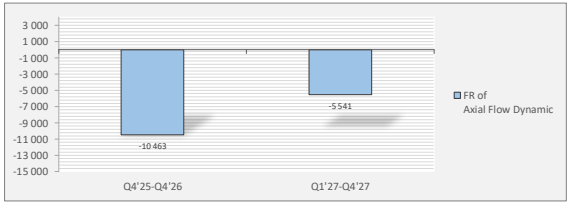




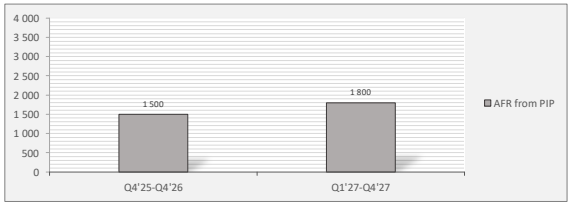
Final Result + Amortization (FR+A) in thousands USD	
Time Int.	FR+A of Axial Flow Dynamic
Q4'25-Q4'26	-2 832
Q1'27-Q4'27	457

Final Result (FR) in thousands USD	
Time Int.	FR of Axial Flow Dynamic
Q4'25-Q4'26	-10 463
Q1'27-Q4'27	-5 541





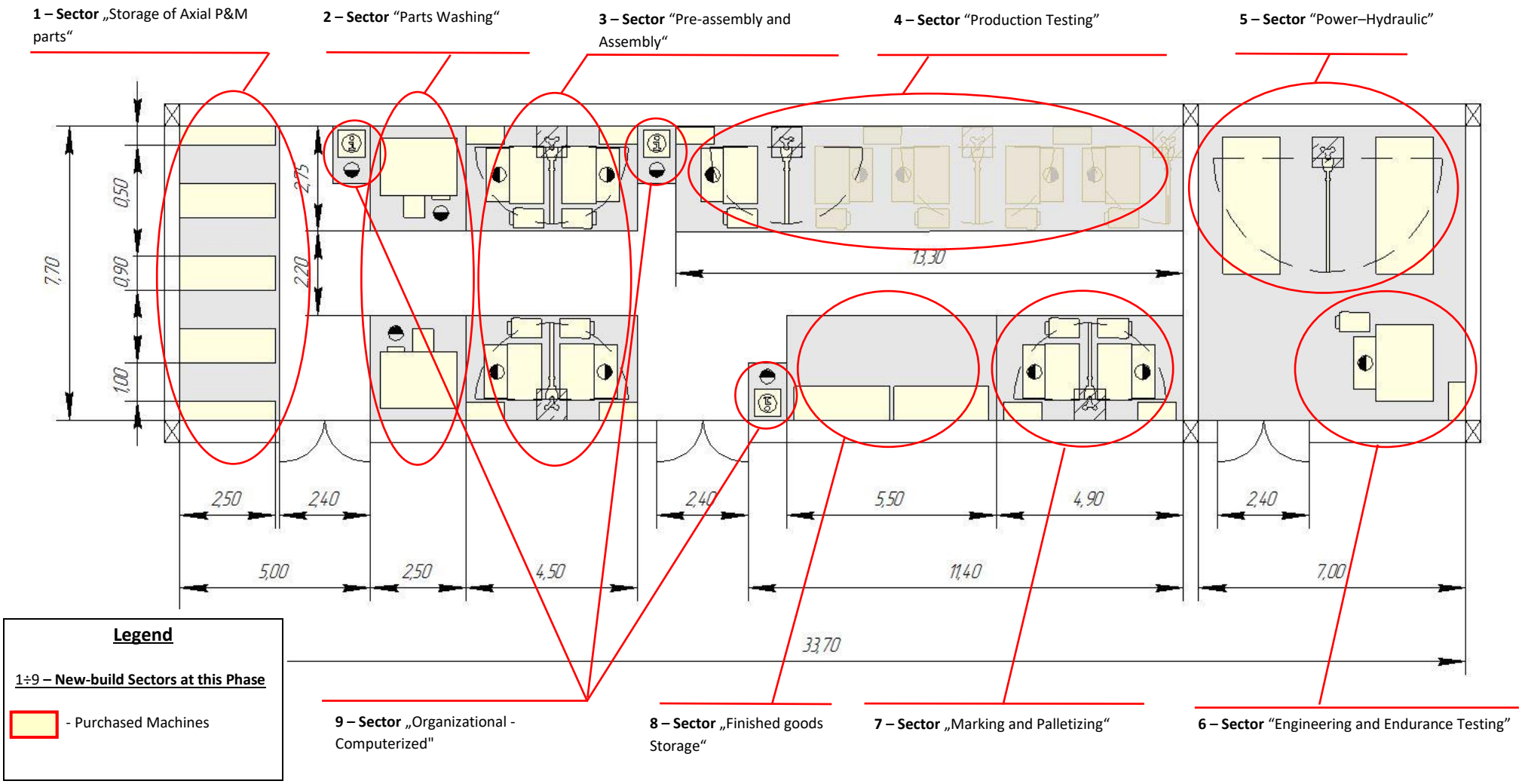
Additional Financial Results (AFR) in thousands USD	
Time Int.	AFR from PIP
Q4'25-Q4'26	1 500
Q1'27-Q4'27	1 800



**AFR represents the result increase when selling at a higher price with $300; Axial M&P: Constant – $1300, Variable - $2300*

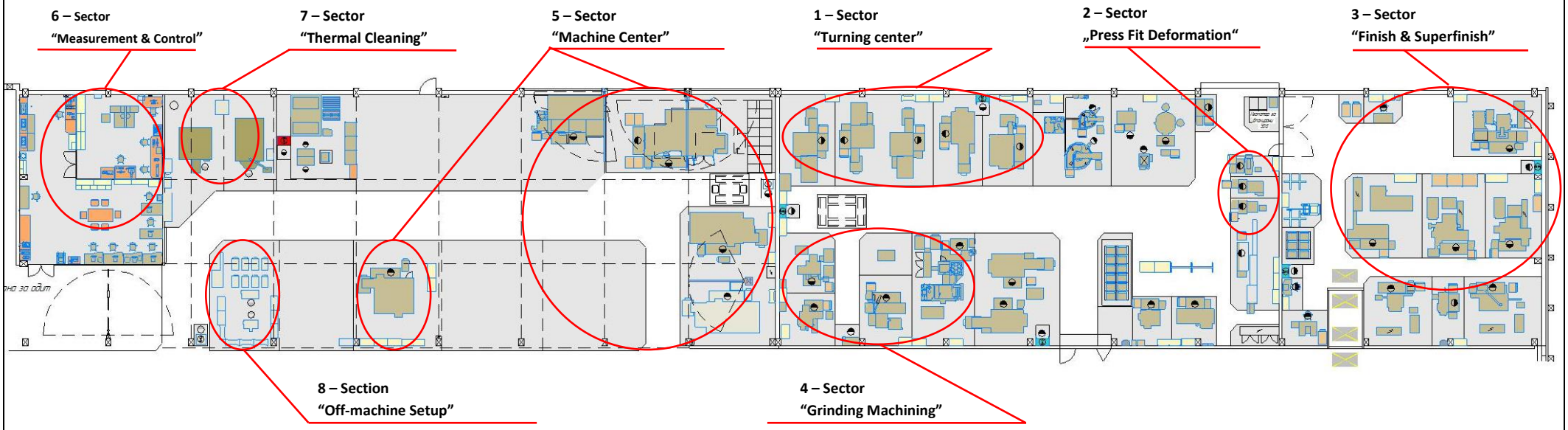
1st Investment Period (for **5000** constant Axial M&P)

1.1. Drawing of the Technical Environment - **Investment** at "Workshop 1" For **Q4'25 ÷ Q4'26**



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 **Q4'25 ÷ Q4'26**



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 **Q4'25 ÷ Q4'26** (for **5000** constant Axial M&P)

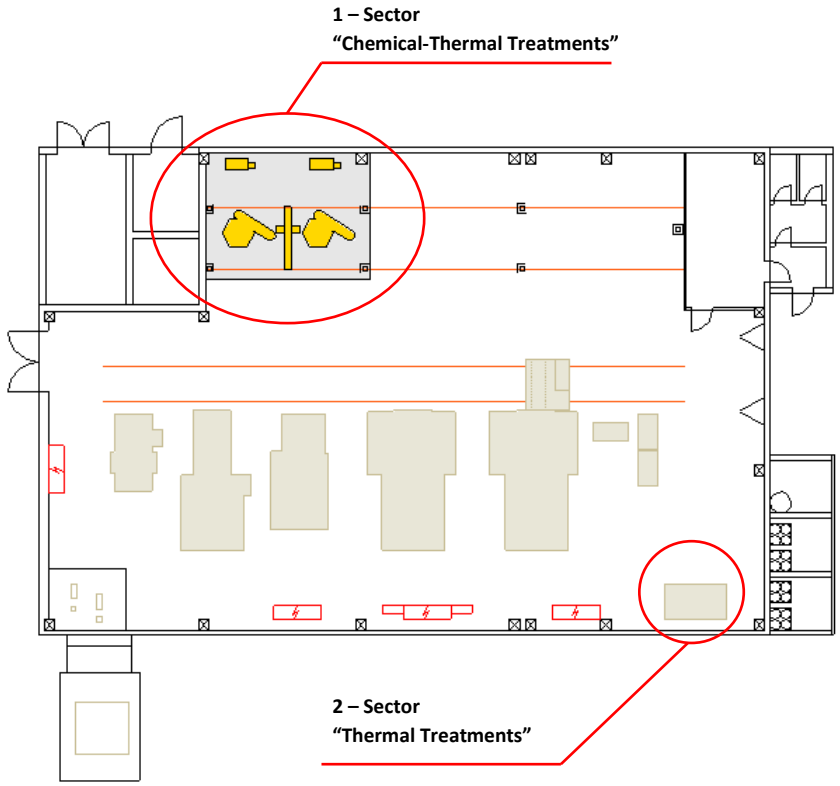
Legend

1,2 - **Developed Sectors**

- Newly purchased machines

2- **Developed Sectors**

- Purchased in previous phase



1.3. **Investment Expenditures** for Project for High-tech Product during **Q4'25· ÷ Q4'26·** (for **5000** constant Axial M&P)

Time Interval: **Q4'25-Q4'26**

			Q4'25	Q1'26	Q2'26	Q3'26	Q4'26
Investment Costs (IC), USD			**17 821 125**	**5 681 713**	**974 350**	**653 400**	**658 400**
Description	code		IC (USD)	IC (USD)	IC (USD)	IC (USD)	IC (USD)
Management Costs	1111		81 000	81 000	81 000	81 000	81 000
Labor Costs (Wages)	1112		462 000	462 000	703 500	462 000	462 000
Additional Labor Costs	1113		92 400	92 400	140 700	92 400	92 400
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		127 725	37 313	150	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		17 030 000	4 975 000	20 000	0	0

1.3.1. Details about Investment Expenditures for Project for High-tech Product during **Q4'25 ÷ Q4'26** (for **5000** constant Axial M&P)

Article: Technical Elements for Environment* 142

Time Step						Total:
Q4'25	**Q1'26**	**Q2'26**	**Q3'26**	**Q4'26**		
$17 030 000	*$4 975 000*	*$20 000*	*$0*	*$0*	*$0*	***$22 025 000***

№	Description							
1	Provision of premises – 1000 m² × $ 1 500	1 500 000						***$1 500 000***
2	Provision of premises – 5000 m² × $ 1 500	7 500 000						***$7 500 000***
3	Provision of premises – 2000 m² × $ 800	1 600 000						***$1 600 000***
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	Packaging Equipment			10 000				***$10 000***
8	Marking Equipment			10 000				***$10 000***
9	Washing & Cleaning Equipment		100 000					***$100 000***
10	Elevator Storage "Shuttle"		150 000					***$150 000***
11	Vacuum Nitriding Furnaces - 2pcs		1 000 000					***$1 000 000***
12	Integrex	500 000						***$500 000***
13	IPASA110	500 000						***$500 000***
14	Universal Measuring Instruments	20 000						***$20 000***
15	Column Drilling Machine (CDM)	10 000						***$10 000***
16	Hydraulic Press for Press-Fitting Bearing and Piston		60 000					***$60 000***
17	CNC-Controlled Lathe – QTN100PP, 3 pcs.		300 000					***$300 000***
18	Herminghausen		20 000					***$20 000***
19	Fencing and air-conditioning of the "Finish Machining" section	100 000						***$100 000***
20	General exchange ventilation for the Thermal section		40 000					***$40 000***
21	Modernization of the gas supply system		30 000					***$30 000***
22	3 pcs CNC lathes – Okuma	300 000						***$300 000***
23	1 pc surface grinder Okuma	300 000						***$300 000***
24	1 pc centerless grinder Okuma	200 000						***$200 000***
25	2 pcs Okuma for gearing	1 000 000						***$1 000 000***
26	1pc Double disc grinder	1 000 000						***$1 000 000***
27	Furnace for nitrocarburizing		1 000 000					***$1 000 000***
28	Shot blasting machine with washer	1 000 000						***$1 000 000***

29	Milling and countersinking machine type PRD		150 000					***$150 000***
30	Supfina for superfinishing of spherical surfaces	500 000						***$500 000***
31	Supfina for superfinishing of cylindrical surfaces		500 000					***$500 000***
32	5-axis CNC milling machine Okuma		400 000					***$400 000***
33	2-pallet horizontal milling machine		750 000					***$750 000***
34	Laboratory - Coordinate Measuring Machine (CMM)		100 000					***$100 000***
35	Microscope		75 000					***$75 000***
36	Equipment		100 000					***$100 000***
37	Gear hobbing machine		100 000					***$100 000***

Article: Labor Costs (Wages) 1112

Time Step						Total:
Q4'25	**Q1'26**	**Q2'26**	**Q3'26**	**Q4'26**		
$462 000	*$462 000*	*$703 500*	*$462 000*	*$462 000*	*$0*	***$2 551 500***

№	Description							
1	Permanent team of employees – average 22 persons per month × $ 7 000	462 000	462 000		462 000	462 000		***$1 848 000***
2	Permanent team of employees – average 32 persons per month × $ 7 000			672 000				***$672 000***
3	Part-time team of employees – average 3 persons per month × $ 3 500			31 500				***$31 500***

Article: Maintenance, Restoration & Modernization of Technical Environment 1123

Time Step						Total:
Q4'25	**Q1'26**	**Q2'26**	**Q3'26**	**Q4'26**		
$127 725	*$37 313*	*$150*	*$0*	*$0*	*$0*	***$165 188***

№	Description							
1	Maintenance	127 725	37 313	150				***$165 188***

1.4. **Exploatational Costs** for Project for High-tech Product during **Q3'26-Q4'27**. (for **5000** constant Axial M&P)

Time Interval: Q3'26-Q4'27						
			Q3'26	**Q4'26**	**Q1-Q4'27**	
Exploatational Costs + Amortization (EC+A), USD.			**2 058 972**	**2 073 272**	**9 809 364**	**0**
Amortization (131), USD.			*1 249 928*	*1 249 928*	*5 131 392*	*0*
Exploatational Costs (EC), USD.			**809 044**	**823 344**	**4 677 972**	**0**
Description	code		EC (USD)	EC (USD)	EC (USD)	EC (USD)
Management costs	1111		81 000	81 000	324 000	
Labor costs (wages)	1112		522 000	522 000	3 264 000	
Additional labor costs	1113		104 400	104 400	652 800	
Maintenance, restoration & modernization of the technical environment	1123		14 802	14 802	59 207	
Courier services & vehicle rental	1125		10 000	10 000	40 000	
Electricity supply	1131		32 595	32 595	130 378	
Fuel for transportation	1135		8 400	8 400	33 600	
Representation expenses & advertising	1141			10000	20000	
Penalties & claims	1161			4 300	10 600	
Technical elements of the environment	122		35 847	35 847	143 387	

1.4.1.Details about 1.4. Exploatational Costs for Project for High-tech Product during **Q3'26· ÷ Q4'27·** (for **5000** constant Axial M&P)

Article: Amortizations 131

Time Steps						Total:
Q3'26	**Q4'26**	**Q1-Q4'27**				
$1 249 928	*$1 249 928*	*$5 131 392*				***$7 631 247***

№	Description											
	Investment Flow											
	Period of Investment	**Total**	**33%**	**20%**	**4%**							
1	Q4'26-Q3'27	25 130 588	0	24 965 550	165 038	1 249 928	1 249 928	4 999 712				***$7 499 567***
2	Q4'27	658 400	0	658 400	0			114 480				***$131 680***

Article: Labor costs (wages) 1112

Time Steps						Total:
Q3'26	**Q4'26**	**Q1-Q4'27**				
$522 000	*$522 000*	*$3 264 000*				***$4 308 000***

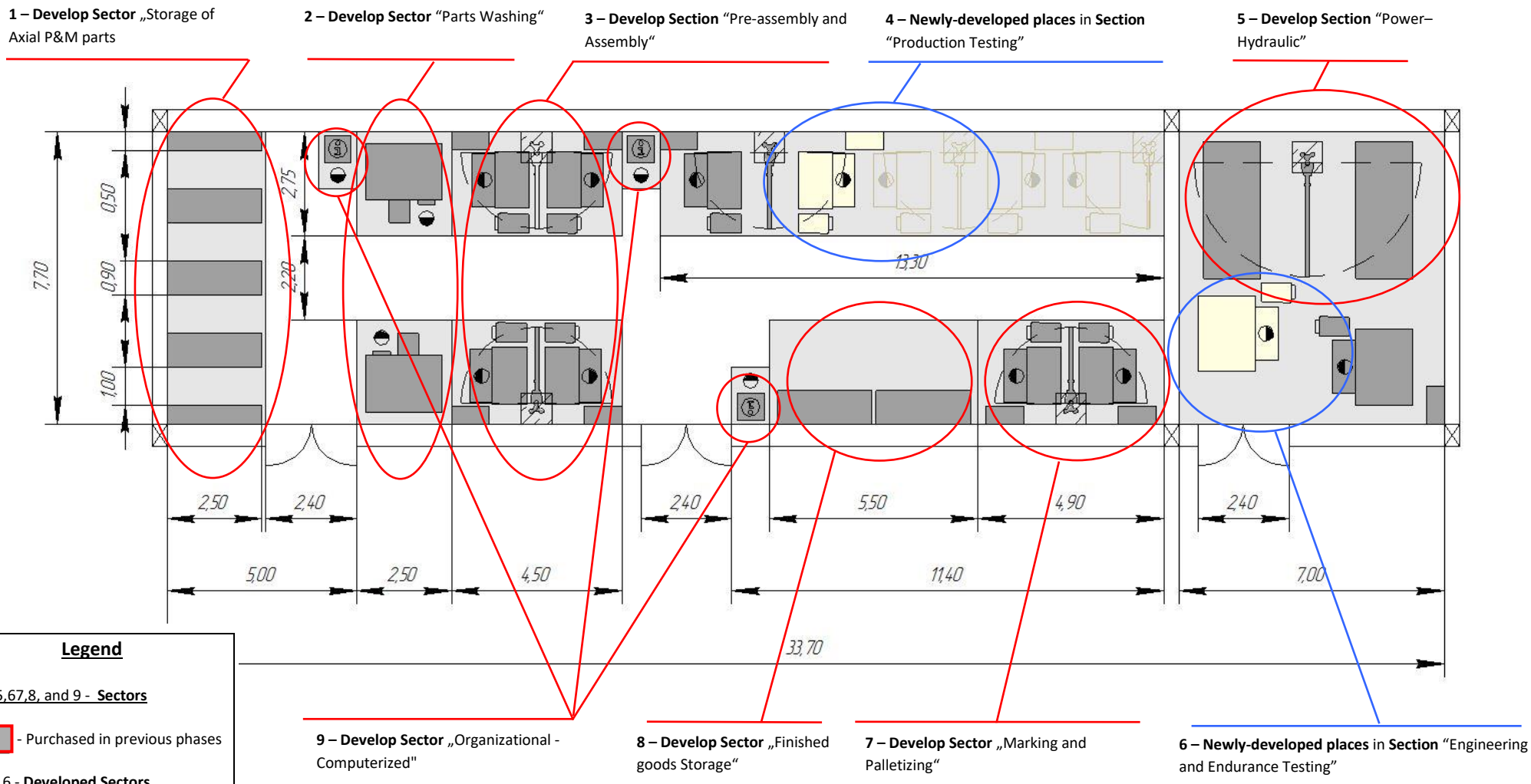
№	Description							
1	WS1 Permanent team of employees – average 3 persons per month × $ 7 000	63 000	63 000	252 000				***$378 000***
2	WS1 Part-time team of employees – average 8 persons per month × $ 3 500	84 000	84 000	336 000				***$504 000***
3	WS2 Permanent team of employees – average 14 persons per month × $ 7 000	294 000	294 000	1 176 000				***$1 764 000***
4	WS2 Part-time team of employees – average 28 persons per month × $ 3 500			1 176 000				***$1 176 000***
5	Environemnt Modeling Enigneering team – average 3 persons per month × $ 9 000	81 000	81 000	324 000				***$486 000***

2nd Investment Period (for **6000** constant Axial M&P)

Warehouse: **Assembly, Testing and Packing**

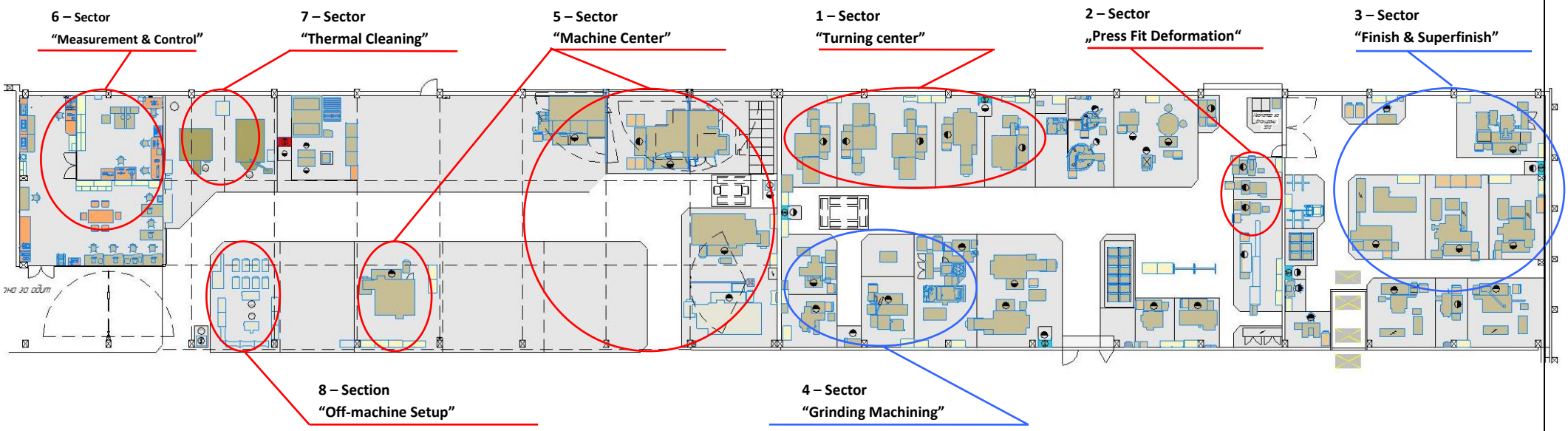
(for **6000** constant Axial M&P)

2.1. Drawing of the Technical Environment - **Investment** at "Workshop 1" For **Q1'27 ÷ Q4'27**



2.6. Drawing of the Technical Environment - **Investment** at "Workshop 1" during **Q1'27 ÷ Q4'27** (за **6000** Константни АБХИз-а)

2.6.1. Metalworking in Workshop 1 during **Q1'27 ÷ Q4'27**



Legend

1,2,5,6,7, and 8 - **Sectors**

- Purchased in previous phases

3 and 4 - **Developed Sectors**

- Newly-added machines

2.2. **Investment Expenditures** for Project for High-tech Product during **Q1'27 ÷ Q4'27**. (for **6000** constant Axial M&P)

Времеви Интервал: **Q1'27-Q4'27**

			Q1'27-Q4'27				
Investment Costs (IC), USD			**4 369 500**	**0**	**0**	**0**	**0**
Description	code		IC(USD)	IC(USD)	IC(USD)	IC(USD)	IC(USD)
Management Costs	1111		324 000				
Labor Costs (Wages)	1112		1 848 000				
Additional Labor Costs	1113		369 600				
Business Travel Expenses – Transportation & Daily Allowances	1114		4 000				
Consulting	1121		220 000				
Maintenance, Restoration & Modernization of Technical Environment	1123		45 900				
Courier Services & Transportation Rental	1125		4 000				
Representation Expenses & Advertising	1141		20 000				
Organizational Elements of the Environment (excl. Wages)*	141		4 000				
Technical Elements of the Environment*	142		1 530 000				

2.2.1. Details about Investment Expenditures for Project for High-tech Product during **Q1'27 ÷ Q4'27**. (for **6000** constant Axial M&P)

Article: Technical Elements for Environment* 142

Time Step						Total:
Q1'27-Q4'27						
$1 530 000	*$0*	*$0*	*$0*	*$0*	*$0*	***$1 530 000***

№	Description							
1	2 pcs. Test benches for functional and endurance testing of variable Axial M&P	1 000 000						***$1 000 000***
2	Measurement, processing, and equipping kits for variable Axial M&P	30 000						***$30 000***
3	1 pc surface grinder Okuma	300 000						***$300 000***
4	1 pc centerless grinder Okuma	200 000						***$200 000***

Article: Labor Costs (Wages) 1112

Time Step Total:

Time Step						Total:
Q1'27-Q4'27						
$1 848 000	*$0*	*$0*	*$0*	*$0*	*$0*	***$1 848 000***

№	Description							
1	WS 1 Permanent team of employees – average 11 persons per month × $ 7 000	924 000						***$739 200***
2	WS 2 Permanent team of employees – average 11 persons per month × $ 7 000	924 000						***$739 200***

Article: Maintenance, Restoration & Modernization of Technical Environment 1123

Time Step Total:

Time Step						Total:
Q1'27-Q4'27						
$45 900	*$0*	*$0*	*$0*	*$0*	*$0*	***$45 900***

№	Description							
1	Maintenance	45 900						***$45 900***

2.3. **Exploatational Costs** for Project for High-tech Product during **Q1'28 ÷ Q4'28** (for **6000** constant Axial M&P)

Time Interval: **Q1'28-Q4'28**

			Q1'28-Q4'28			
Exploatational Costs + Amortization (EC+A), USD.			**11 461 959**	**0**	**0**	**0**
Amortization (131), USD.			*5 997 948*	*0*	*0*	*0*
Exploitational Costs (EC), USD.			**5 464 011**	**0**	**0**	**0**
Definition	code		EC (USD)	EC (USD)	EC (USD)	EC (USD)
Management costs	1111		324 000			
Labor costs (wages)	1112		3 816 000			
Additional labor costs	1113		763 200			
Maintenance, restoration & modernization of the technical environment	1123		71 963			
Courier services & vehicle rental	1125		40 000			
Electricity supply	1131		209 821			
Fuel for transportation	1135		33 600			
Representation expenses & advertising	1141		20 000			
Penalties & claims	1161		11 874			
Technical elements of the environment	122		173 553			

2.3.1. Details about Investment Expenditures for Project for High-tech Product during **Q1'28 ÷ Q4'28** (for **6000** constant Axial M&P)

Article: Amortizations 131

Time Steps						Total:
Q1'28-Q4'28						
$5 997 948	*$0*	*$0*	*$0*	*$0*	*$0*	***$5 997 948***

№	Description											
	Investment Flow											
	Period of Investment	Total	33%	20%	4%							
1	Q4'25-Q3'26	25 130 588	0	24 965 550	165 038	4 999 712						***$4 999 712***
2	Q4'26	658 400	0	658 400	0	131 680						***$131 680***
3	Q1'27-Q4-27	4 369 500	0	4 323 600	45 900	866 556						***$866 556***

Article: Labor Costs (Wages) 1112

Time Steps						Total:
Q1'28-Q4'28						
$3 816 000	*$0*	*$0*	*$0*	*$0*	*$0*	***$3 816 000***

№	Description							
1	WS1 Permanent team of employees – average 4 persons per month × $ 7 000	336 000						***$336 000***
2	WS1 Part-time team of employees – average 8 persons per month × $ 3 500	336 000						***$336 000***
3	WS2 Permanent team of employees – average 17 persons per month × $ 7 000	1 428 000						***$1 428 000***
4	WS2 Part-time team of employees – average 28 persons per month × $ 3 500	1 176 000						***$1 176 000***
5	Environemnt Modeling Enigneering team – average 5 persons per month × $ 9 000	540 000						***$540 000***