

Company Profile



1. Company overview
2. Business Target & Management Policy
3. Organization
4. Major customer and sales
5. Main products
6. Our competitiveness
7. Certification Status
8. Main equipment
9. KACTC Mold Plant
10. KCP (KAC Poland Corporation)



1. Company Overview

➤ Company Location

KAC 1st Plant : 85-3, Donghwagongdan-ro, Munmak-eup, Wonju-si, Gangwon-do, Korea.

KAC 2nd Plant : 86, Bansan 2-ro, Munmak-eup, Wonju-si, Gangwon-do, Korea

KACTC : 414-5 Dangjeong-dong, Gunpo-si, Gyeonggi-do, Korea



1. Company Overview

Homepage: www.kac.ne.kr

KOREA
AL CASTING

KAC
Korea A1 Casting Co., Ltd.

➤ General Information



1st KAC Co., Ltd

- ◎ Established: Aug , 1992
- ◎ President: Mr. Ha, young bong
- ◎ Annual Sales: 27M-USD 2022 (Plan)
- ◎ Main Product: Die casting, Machining, Assembly
- ◎ Employees : 165 people
- ◎ Plant size: 9,900m² (3,000Pyeong), Building : 8,600m²



2nd KAC Co., Ltd

- ◎ Established: Sep , 2016
- ◎ President: Mr. Ha, young bong
- ◎ Annual Sales: 31M-USD 2022 (Plan)
- ◎ Main Product: Die casting, Machining, Assembly
- ◎ Employees : 135 people
- ◎ Plant size: 20,738m² (6,284Pyeong), Building : 14,000m²



KACTC Co., Ltd

- ◎ Established: Aug , 1992
- ◎ President: Mr. Ha, young bong
- ◎ Annual Sales: 3 M-USD 2022(Plan)
- ◎ Main Product: Design and Manufacturing for die casting molds
- ◎ Employees : 20 people
- ◎ Plant size: 728 m² (220Pyeong), Building: 925 m²

- Company History

- Aug. 1992 Dai Han Precision company was established for the production of Mold business
- Jun. 1997 Started AI die casting business.
- Dec.1999 Started the business With BOSCH for wiper motor gear housing.
- Apr. 2001 Changed company name from Dai Han Precision to KAC Co., Ltd
- Feb.2001 Started the business With MANDO
- Dec.2002 Certificate SQ MARK from HYUNDAI & KIA .
- Aug.2003 Started the business With Autoliv(Delphi Korea) Corp for seat belt parts.
- Sep.2004 Certificate ISO/ TS 16949 :2002.
- Oct.2007 Completion of new plant and moved
- Nov. 2007 Won the " Supplier of the year" prize from BOSCH
- July.2008 Certificate ISO 14001:2004
- Aug. 2009 Won "Appriciation Medal" prize from Mando
- May.2012 Started the business With MAHLE (Japan) – EGR Valve
- Dec. 2012 Won a 10 Million dollar export tower prize
- Aug. 2016 Started the business With LGIT Korea and Poland
- Sep. 2016 Established KAC Poland plant at ZAROW
- Sep. 2016 Established 2nd Plant at Won-ju (Bangyea-ri)
- Oct. 2018 Certificate IATF 16949 : 2016
- Feb, 2019 Started the business with JTEKT (REPS(DP) Worm housing)
- Sep. 2022 Development of Subminiature Electric Vehicle Steering System

2. Mission / Vision / Core Value

Mission

Better Life of Customers, Members, Partners by Trusted Company

Vision

Global Top Tier together with Customers by Challenge and Creative

Core Value



3. Organization



President CEO
Ha, Young bong



Vice President
Shin, Soo Cheol

Die casting expert group

- Process improvement & Education : **Mr. Cheon**

Die casting Department 1
(Die casting)

Production Department 2
(Machining & Assembly)

Production Control Department

QM Department

Production Engineering

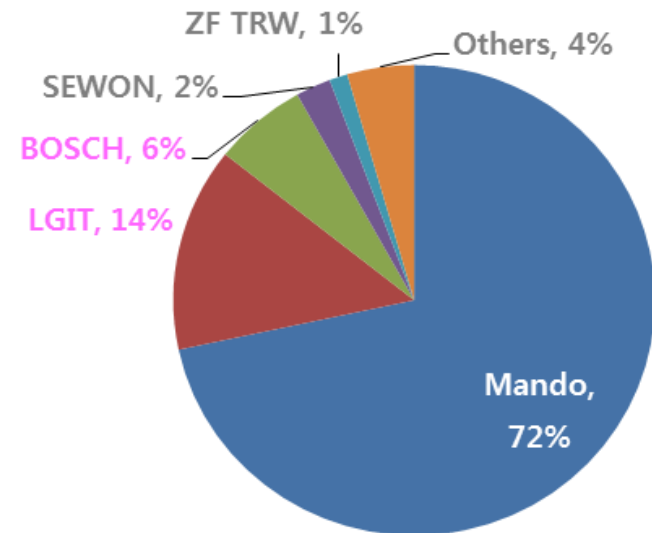
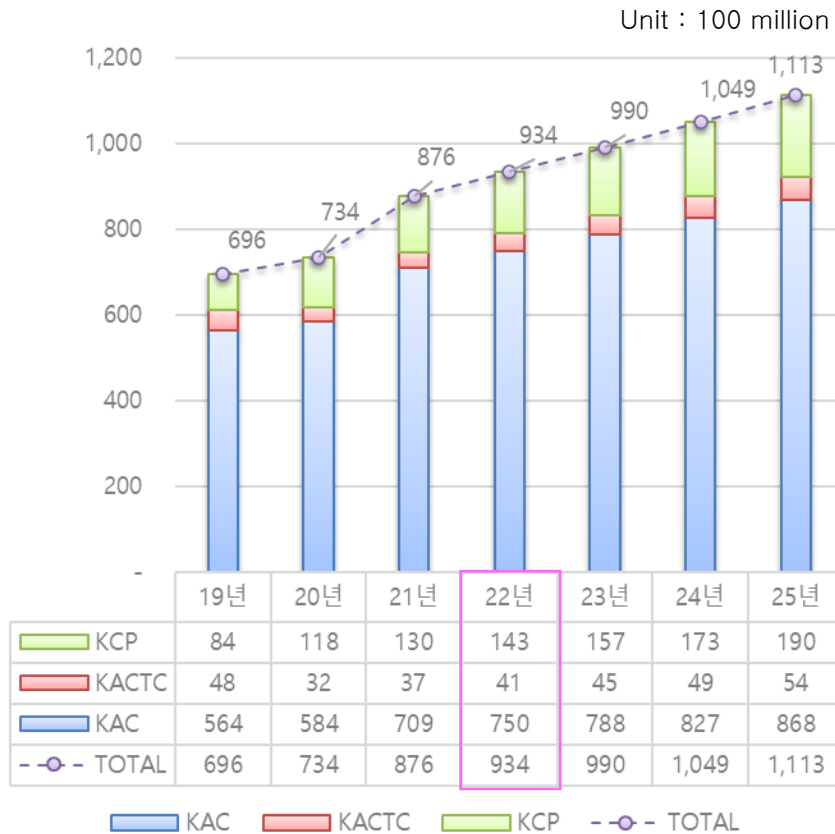
Sales & Marketing Development
Department

Management Support Team

R&D Center

4. Annual Sales & Major customer

Annual Sales



HL Mando

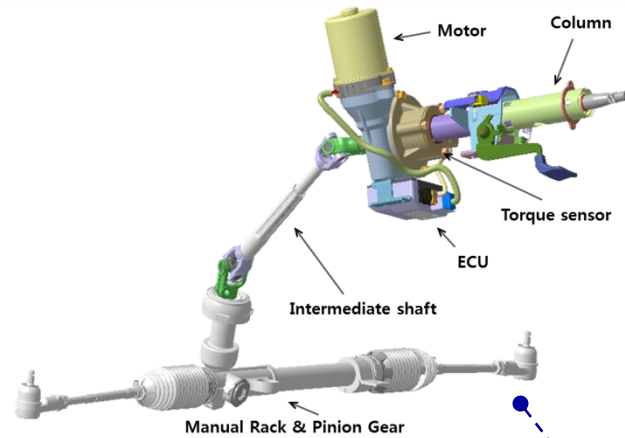
LG 이노텍

BOSCH

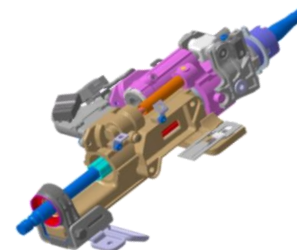
JTEKT

TESLA

5. Main Product Overview



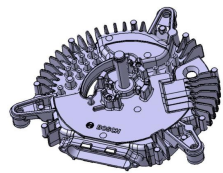
➤ Motor Driven Power Steering



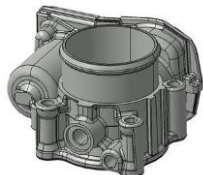
➤ Motor Driven Tilt & Telescopic Column



REPS Rack & Pinion Housing



➤ Motor Carrier



➤ ETC Housing



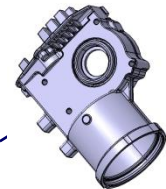
➤ Suspension



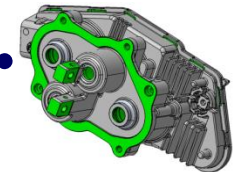
➤ Oil filter Housing



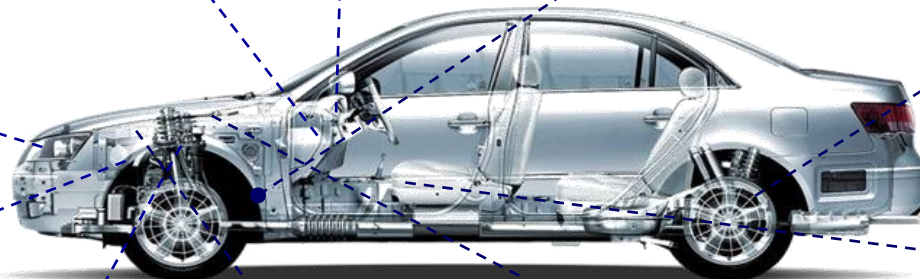
➤ DC-DC Converter Housing



➤ IDB Motor Housing

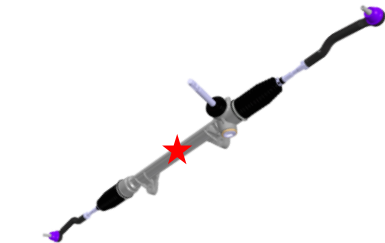
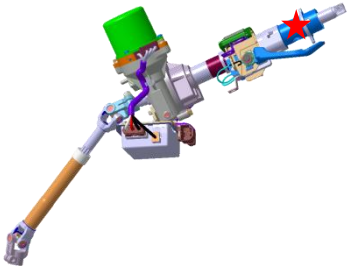
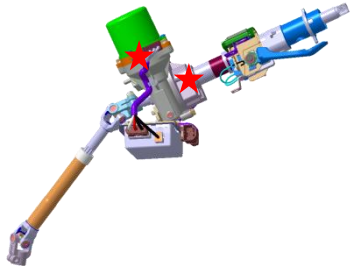


➤ 7DCT Housing



5-1. Main Product (for steering)

C-EPS & PRP



■ Customer

HL Mando

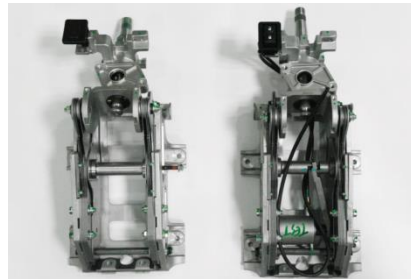
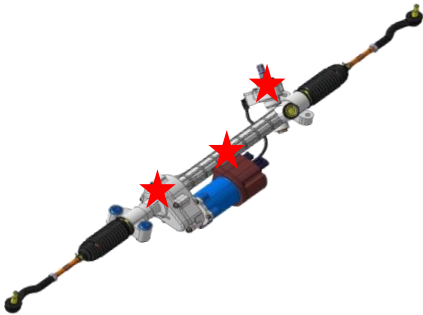
■ Process

- Die Casting (with squeeze pin)
- De-burring
- Shot blast
- Machining
- Washing
- Leak test
- Assembly & Final inspection

Part name	Annual volume
G/BOX HS'G ASS'Y	2,000K
HS'G COVER ASS'Y	2,000K
COL'M UPR	800K
RACK H'G ASS'Y	3,000K

5-2. Main Product (for steering)

R-EPS & BRK'T



■ Customer

HL Mando

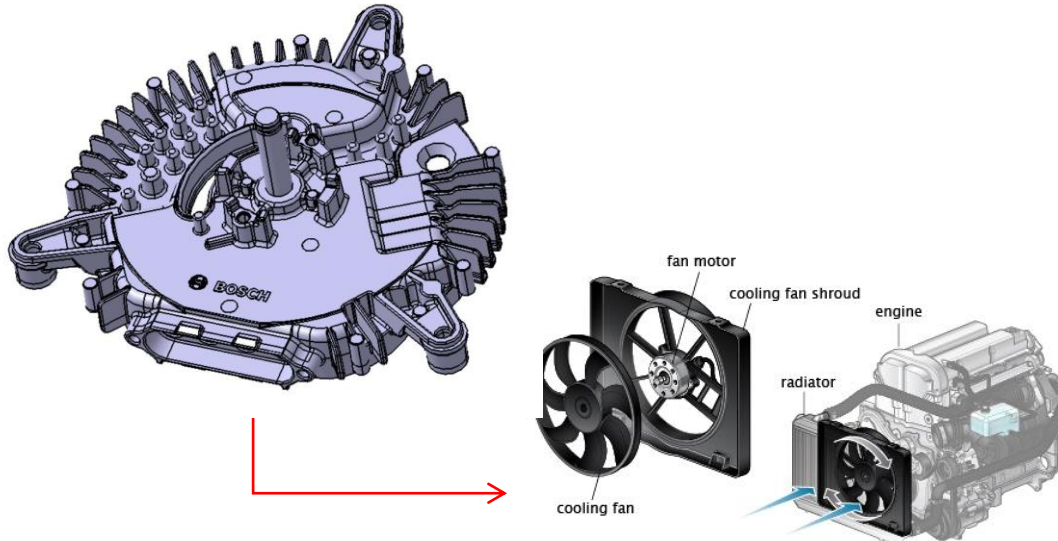
■ Process

- Die Casting (with squeeze pin)
- De-burring
- Shot blast
- Machining
- Washing
- Leak test
- Assembly & Final inspection

Part name	Annual volume
RACK HS'G CT	20K
G/BOX HS'G ASS'Y	150K
T/SENSOR COVER	150K
BRK'T ASS'Y	20K

5-3. Main Product (Casting and Machining)

FED 2.0 Motor carrier



■ Customer (Korea)



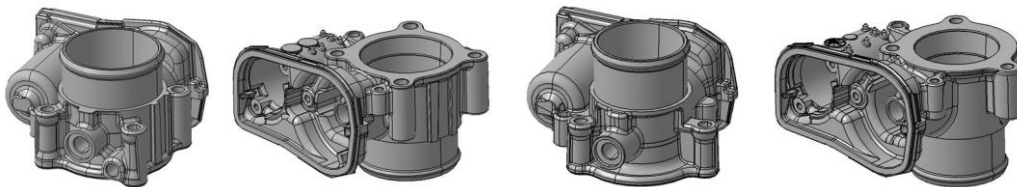
■ Process

- Casting with insert
- De-burring
- Barrel
- Washing & Dry

■ Annual volume

✓ 2,000K

ETC Housing (Throttle body)- 4Types



■ Process

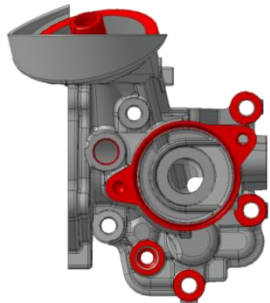
- Casting
- De-burring /Shot blast
- Machining
- Washing & Dry
- Leak test

■ Annual volume

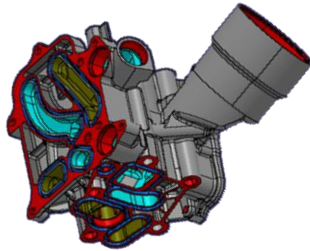
✓ 500K

5-4. Main Product (Machining)

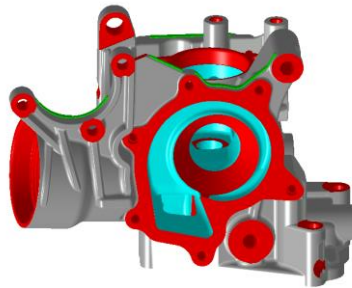
OIL FILTER HOUSING (5 types)



X100 G16



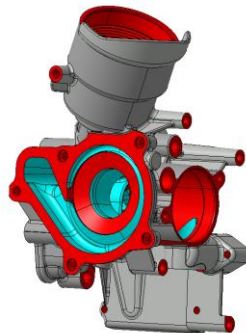
X100 D16



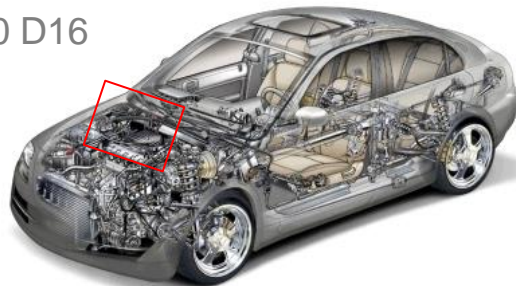
Y400 G20



C300 G15



C300 D16



■ Customer (SEWON)



■ Process

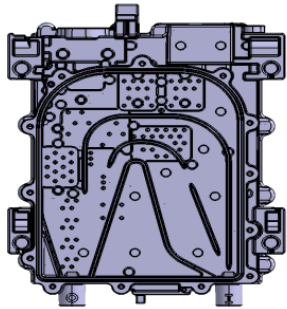
- Casting (with Squeeze)
- De-burring
- Shot blast
- Machining
- Impregnation
- Leak test

■ Annual volume

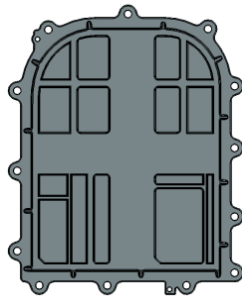
✓ 150K

5-5. Main Product (Assembly)

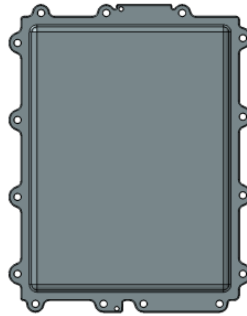
DC-DC Converter



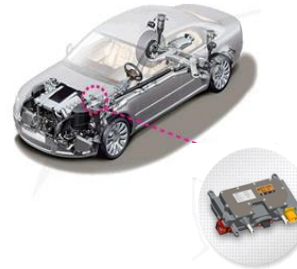
Case Bottom



Cover Bottom



Cover Top



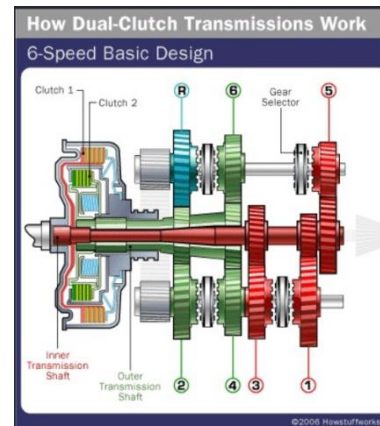
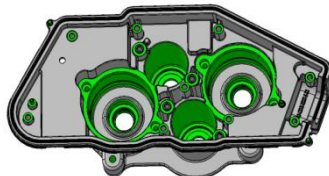
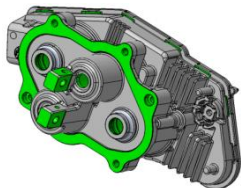
■ Customer



■ Process

- Casting
- De-burring
- Shot blast
- Machining
- Leak test
- Impregnation
- Assembly

7DCT Inverter housing



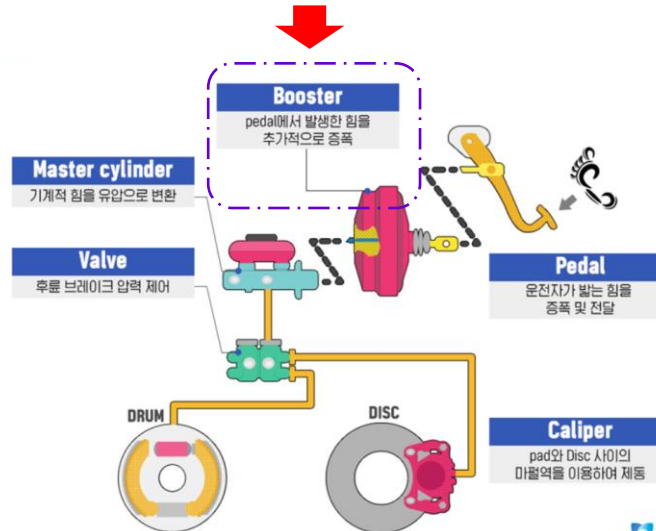
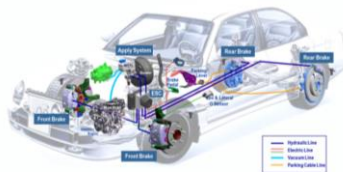
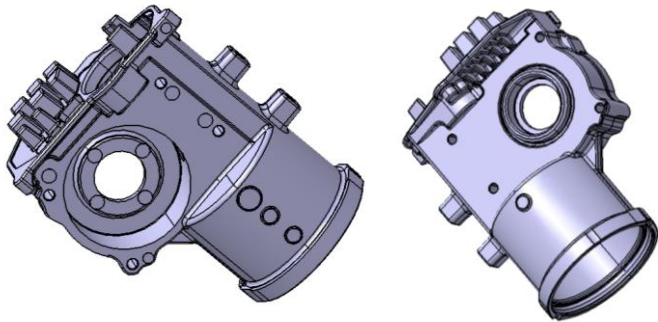
■ Annual volume

✓ 50K

✓ 1,500k

5-6. Main Product (Assembly)

IDB Motor Housing (Intergraded Dynamic Brake)



Halla

Customer



Process

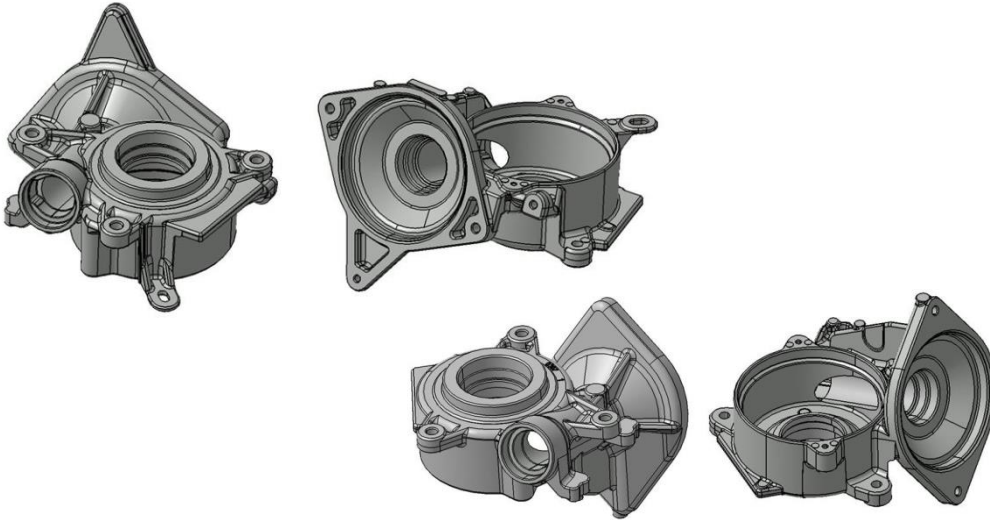
- Casting
- De-burring
- Shot blast
- Machining
- Leak test
- Assembly

Annual volume

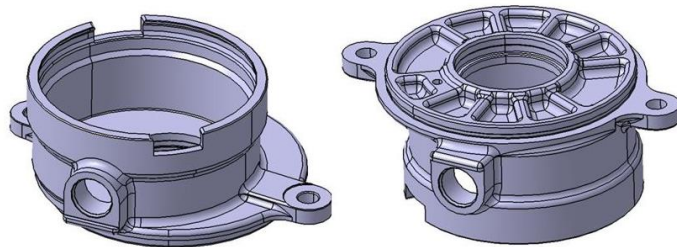
✓ 300K

5-7. Main Product – Export Parts

Steering Parts (REPS)



Worm Housing



Torque Sensor Housing

■ Customer

JTEKT

■ Process

- Casting
- De-burring
- Shot blast
- Machining & washing
- Leak test

■ Annual volume

✓ 200K

■ Process

- Casting
- De-burring /Shot blast
- Machining
- Washing & Dry
- Leak test

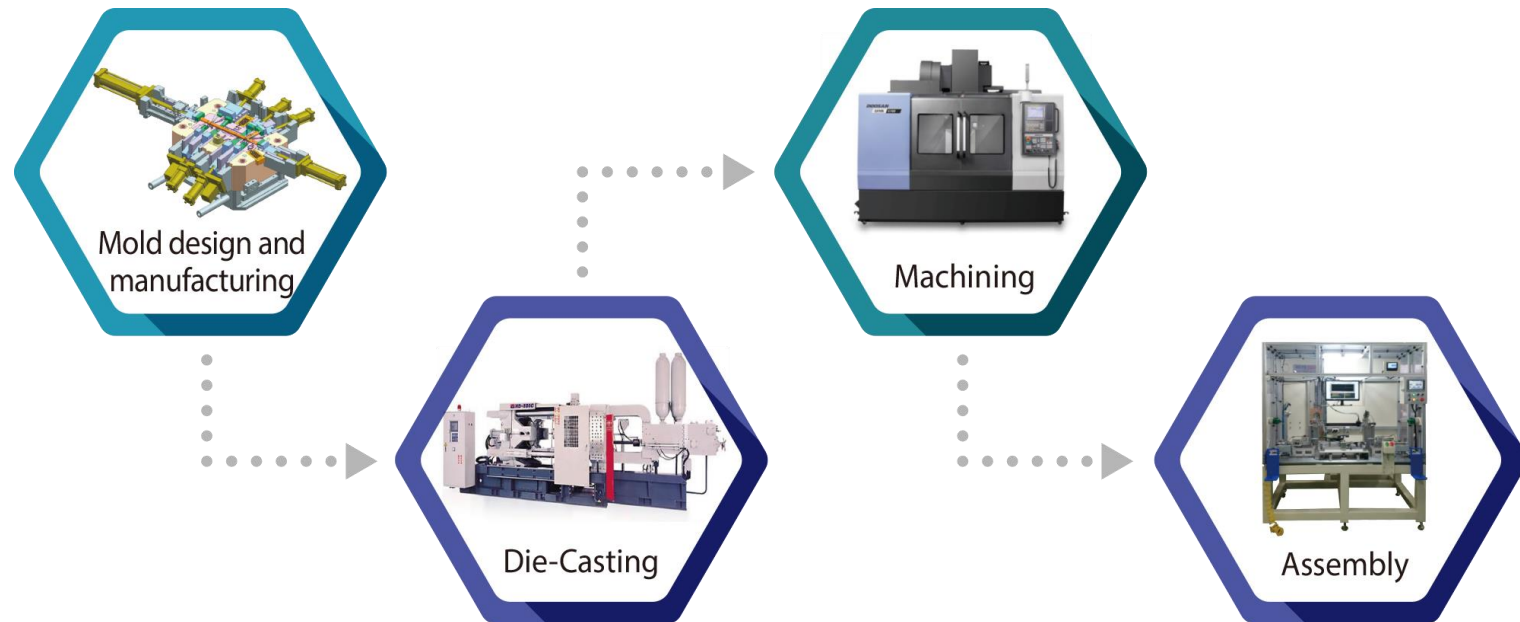
■ Annual volume

✓ 50K

6. KAC's Competitiveness

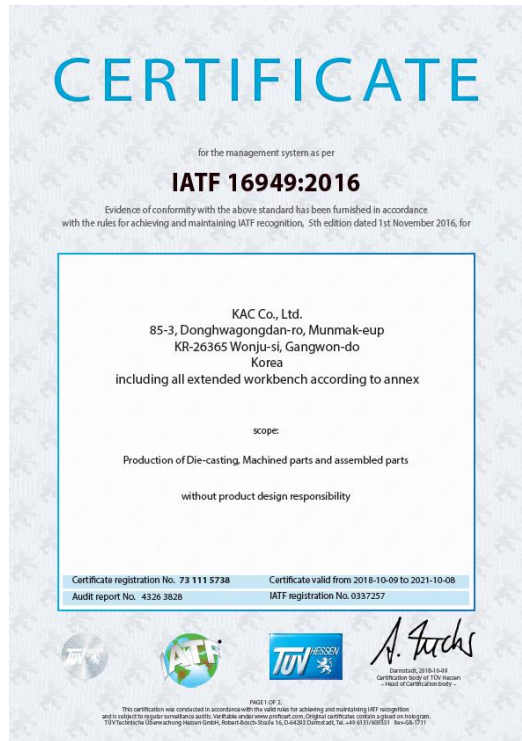
- **Configure an optimization line to meet customer needs**
- ✓ **KAC has building all processes from mold design to manufacturing, die casting, machining and assembly and has an optimized system that meets the speed, cost and quality required by customers.**

6. Our competitiveness

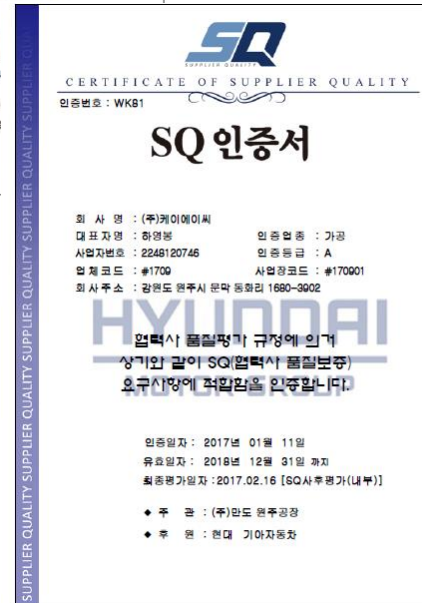


7. Certification

✓ IATF16949 : 2016



✓ SQ(Supplier Quality) Mark



✓ ISO 14001:2004

CERTIFICATE OF REGISTRATION

KAC CO., LTD.
Head Office : 85-3, Donghwagongdan-ro, Munmak-eup, Wonju-si, Gangwon-do, Korea.
Bangye Factory : 86, Bamsan 2-ro, Munmak-eup, Wonju-si, Gangwon-do, Korea.

SBC Registrar certifies that the Environmental Management System of the above organization has been assessed and found to be in accordance with the requirements of the standards and scope of certification detailed below.

Standards
KS ISO 14001 : 2009 / ISO 14001 : 2004
Scope of Supply
The Design/Development, Manufacture and Servicing of Automobile Discasting Parts (Wiper Motor Parts, Seat Belt Parts, Suspension Parts, Steering Column Parts)



8-1. Main Equipment – Die casting

1) 1st Plant

Descriptions	Type / Spec	Q'ty	Remarks
Die-casting machine	350 Tons	9	
Die-casting machine	400 Tons	3	
Die-casting machine	500 Tons	1	
Die-casting machine	650 Tons	2	
Total		15	

2) 2nd Plant

Descriptions	Type / Spec	Q'ty	Remarks
Die-casting machine	400 Tons	4	
Die-casting machine	800 Tons	2	
Die-casting machine	900 Tons	10	
Total		16	
Die sporting machine	200tons	1	
Central furnace	10tons	1	

8-2. Main Equipment – Machining / Assembly

1) 1st Plant

Descriptions	Type / Spec	Q'ty	Remarks
Tapping center	MAG-32T2B/32T2C MAG-30T2DN/30T2X1	46	
Tapping center	MAG-32FT	3	
Tapping center	GMT- 420II A	4	
Tapping center	T4000	2	
Tapping center total		55	
MCT	DNM-500II	1	
MCT	VC630/5AX	1	
MCT total		2	
CNC Lathe	8"	8	
CNC Lathe total		8	
Washing machine	5steps with ultra sonic	1	
G/BOX HS'G W/C MECHANISM ASS'Y LINE	CEPS	4	
HS'G COVER BEARING ASS'Y LINE	CEPS	4	
SPACE COVER BEARING ASS'Y LINE	CEPS	2	

8-3. Main Equipment – Machining / Assembly

2) 2nd Plant

Descriptions	Type / Spec	Q'ty	Remarks
Tapping center	MAG-32T2B/32T2C	36	Automatic Machining line for 7DCT G2GA
Tapping center	ROBODRILL α-D14MiA	8	Automatic Machining line for ETC
Tapping center total		44	
MCT	NISHIDA/5AX	10	Automatic Machining line for MRP (2line) - Gantry type
MCT	VC630/5AX, WIA	8	Automatic Machining line for MRP(2line) – Robot type
MCT total		18	
CNC Lathe	8"	4	Automatic Machining line for CEPS Housing cover(2line)
Washing machine	Ultra sonic	5	
Washing machine	High pressure	1	
G/BOX HS'G Assembly line	CEPS	2	
HS'G COVER Assembly line	CEPS	1	
RACK HS'G ASS'Y Assembly line	MRP	5	
IDB MOTOR HS'G Assembly line	BRAKE	1	
7DCT G2GA HS'G Assembly line	Transmission	1	

8-4. Automatic Machining Line

● Ground floor

A – MRP Rack housing machining 2 line (Automatic by Gantry)

- 10 MCT + 1 Tapping center + Washing machine

B – MRP Rack housing machining 2 line (Automatic by Robot) and 2 Manual line

- 7 MCT + 4 Tapping center + Washing machine

C – CEPS Housing cover machining line (Automatic by Robot)

- 2 CNC Lathe + 4 Tapping center

D – CEPS Gear Box housing machining line (Automatic by Robot)

- 8 Tapping center + Washing machine + Washing machine

E – Oil filter housing machining line (Manual)

- 1 MCT + 1 Tapping center + Leak tester



● 1st Floor

A – IDB Motor housing machining line (Automatic by Robot)

- 7 Tapping center + Washing machine

B – Worm housing machining line (Automatic by Robot)

- 3 Tapping center + Washing machine + Leak test

C – 7DCT G2GA housing line (Automatic by Robot)

- 10 Tapping center + Washing machine + Assembly

D – ETC housing Machine 2 line (Automatic by Robot)

- 6 Tapping center + 2 Washing machine + Leak tester



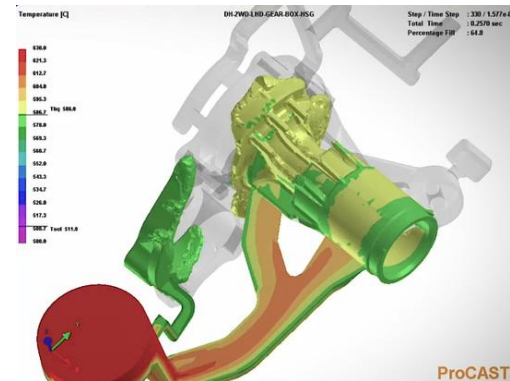
8-5. Main Equipment – Measuring Instrument

1ST and 2nd Plant

Descriptions	Maker	Type / Spec	Q'ty		Remarks
			1st	2nd	
X-RAY	YXLON XAVIS	MU1200/160Kv XSCAN8160C/160Kv	1	1	GERMANY
Spectrometer	SHIMADZU	PDA-7000	1		JAPAN
3D (CMM)	DUKIN ZEISS	900×900×700	3	5	KOREA
Tensile tester		5 Tons	1	1	KOREA
Balance Scale	Mitutoyo	0~500g,0~50Kg	1	1	JAPAN
Thermo-graphic camera	Center Tech		1	1	KOREA
Roughness & Profile Tester		S. 1800GH-14	1	1	JAPAN
Cleanness Tester	F.TECH CORP		1	1	KOREA
Reduced Pressure Test	BLC Wedron Flux	11.5 kg (710mmHg)	1	1	USA

9. KACTC Mold Plant

Korea AI Casting Technology Center



Major Customer & Annual Sales

Customer	ITEMS	Manufacturing /Annual (Sets)	Annual sales (K USD)	Remarks
KAC	RACK HS'G G/BOX HS'G etc	75	4,400	
INDIA (SONA)	RACK HS'G	15	500	Export
VALEO	Compressor Housing etc.	20	600	
TOTAL		110 sets	5,500	

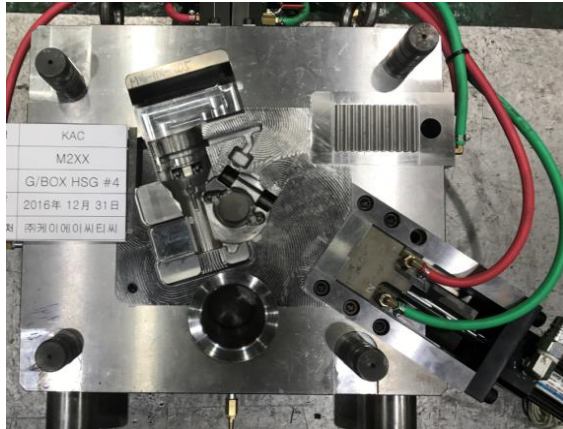
※ Capability / year : 120sets

Main products

KOREA
AL CASTING

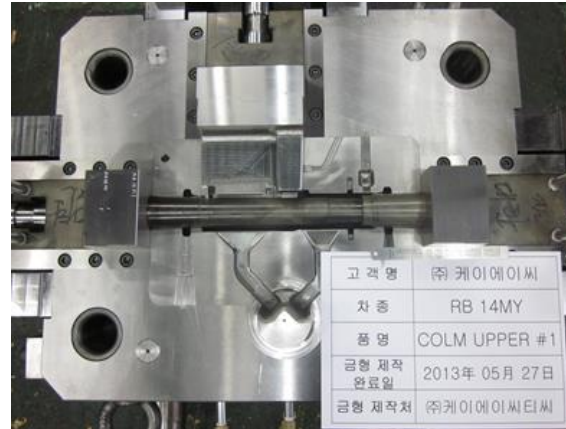
KAC
Korea A1 Casting Co., Ltd.

Steering parts: CEPS



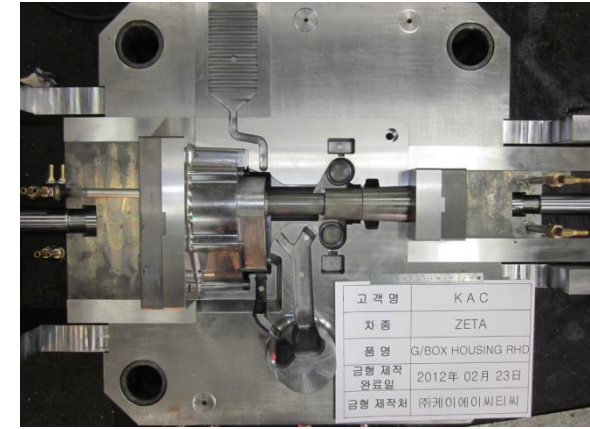
•GEAR BOX HOUSING

Steering parts: CEPS



•COLUM UPPER

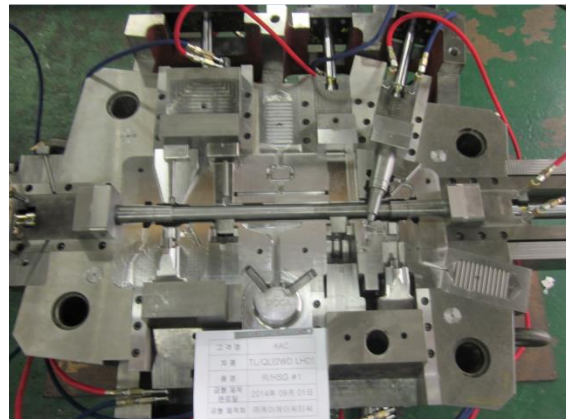
Steering parts: REPS



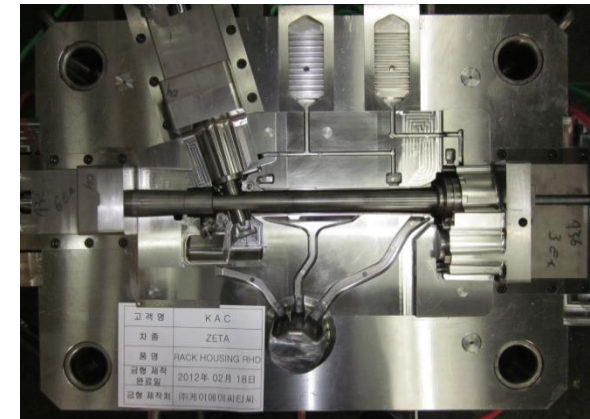
•GEAR BOX HOUSING



•HOUSING COVER



•RACK HOUSING

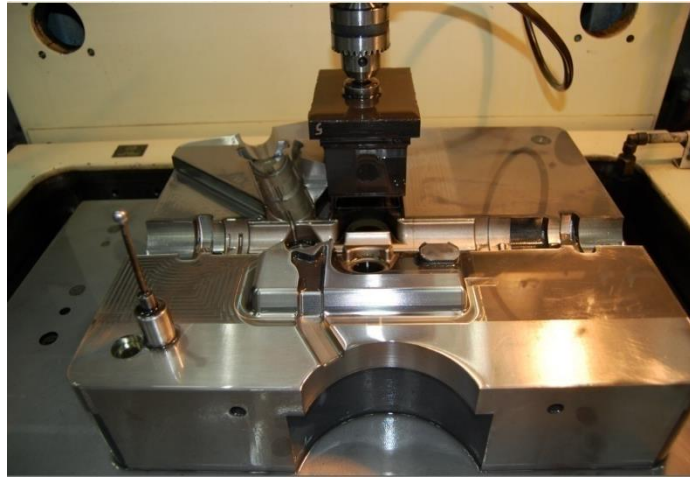


•RACK HOUSING

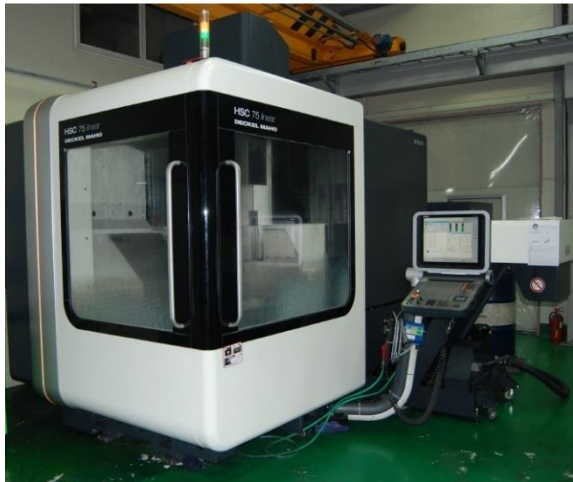




Electric discharge machine



CNC milling machine



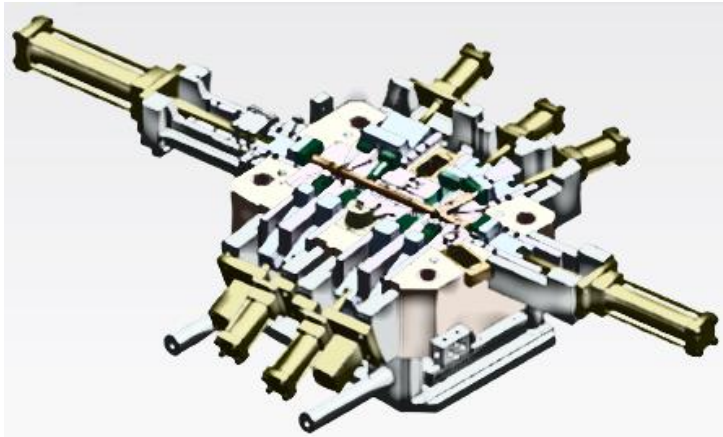
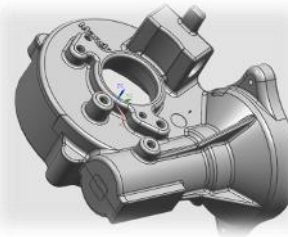
CNC High speed milling machine



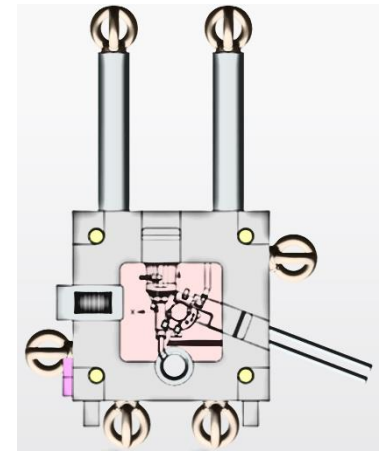
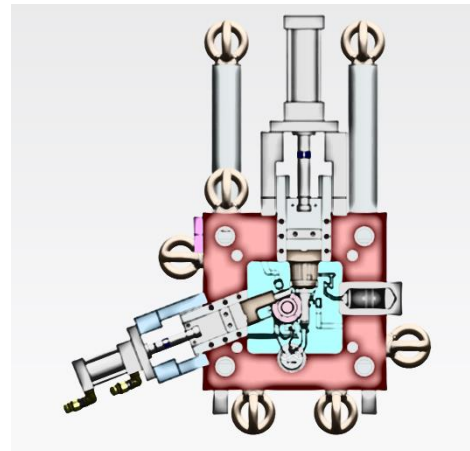
Die sporting machine

Die Casting Mold Design by 3D

2D,3D PROGRAM SYSTEM	AUTODESK	AUTOCAD 2008	5	U.S.A
	CADKEY CORP.	CADKEY19	1	U.S.A
	SIEMENS	NX 4.0, 5.0, 7.5, 8.5	4	GERMANY
	DELCAM	POWERSHAPE	3	U.K



Rack Housing

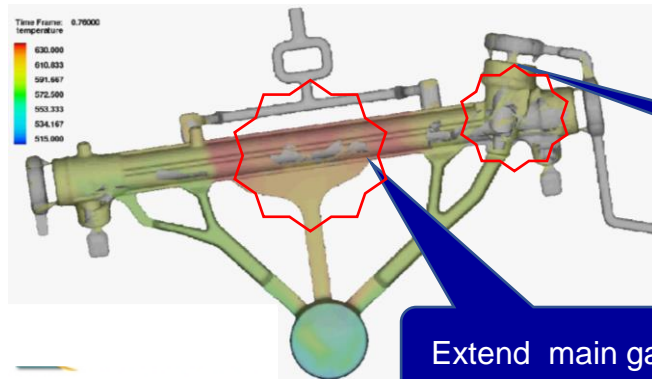


Gear Box Housing (Worm Housing)

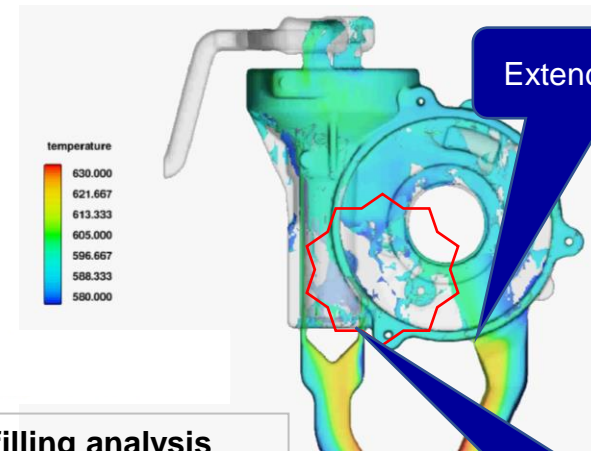
Melt Filling Analysis

Casting Simulation: Melt filling & Molten solidification analysis

MOLD FLOW ANALYSIS PROGRAM	anycast	10.1	1	U.S.A
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Melt filling analysis

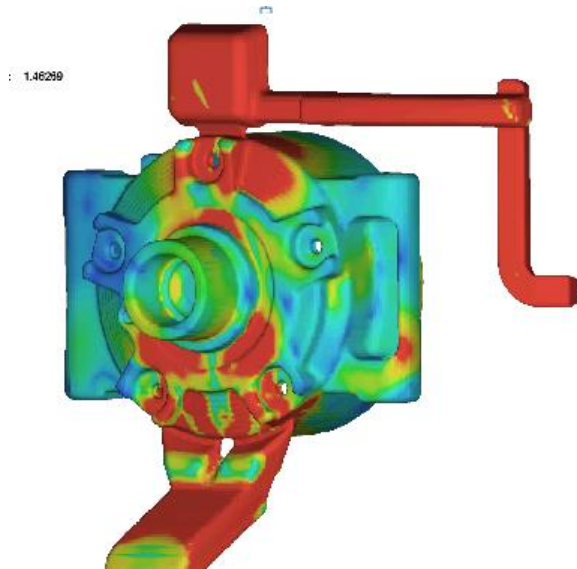


Melt filling analysis

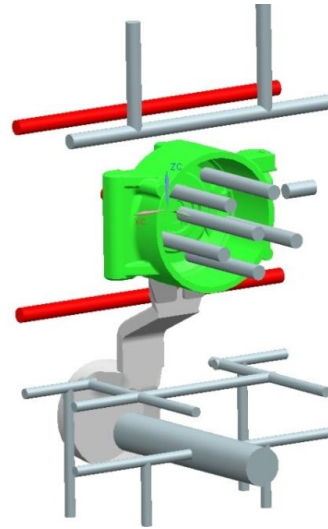
- Reduce Mold development time for new project.
- Optimization of Mold design.(Runner, Gate, Overflow)
- Removing the root failure causes by casting defect prediction in the Mold design stage.
- Reduce quality problems

Mold Temperature Analysis

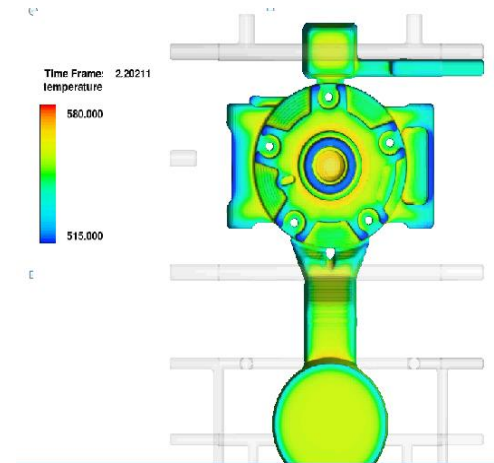
Casting Simulation : Mold temperature analysis



Mold Temperature analysis



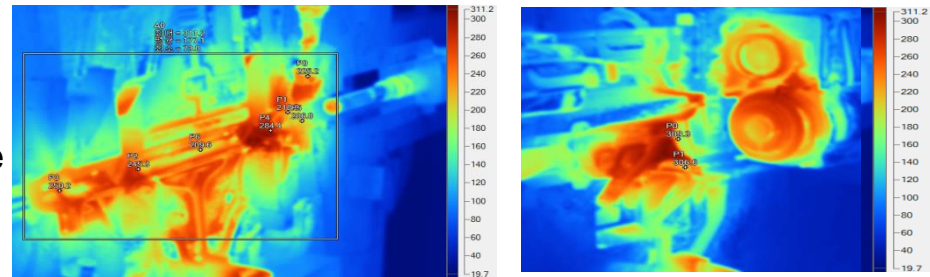
Design of cooling channel



Temperature distribution of metal

Cooling line design and control in the mold

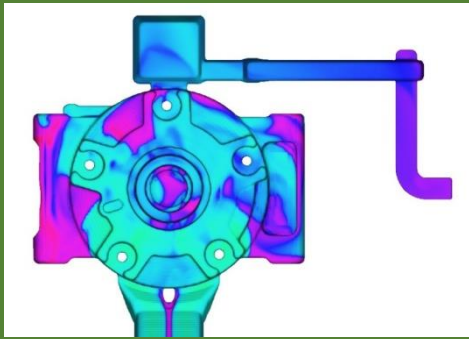
- Optimized tool design through the mold temperature distribution analysis
- Improve shrinkage and sticking in the parts.
- Mold temperature regularly control by IR camera
- To stable Mold temperature control by Mold temperature regulation systems.



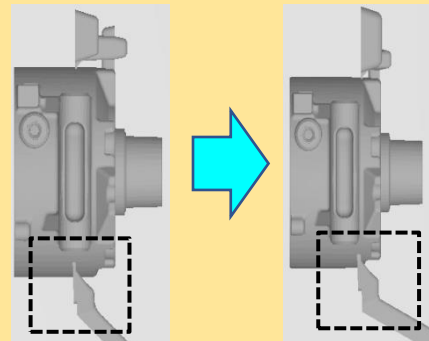
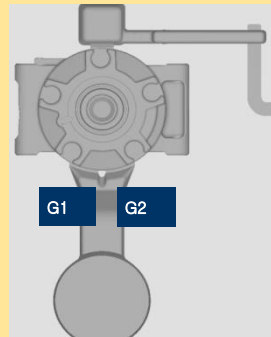
Actual Mold temperature check by IR camera

Improved porosity & leakage (VALEO- FRONT HEAD)

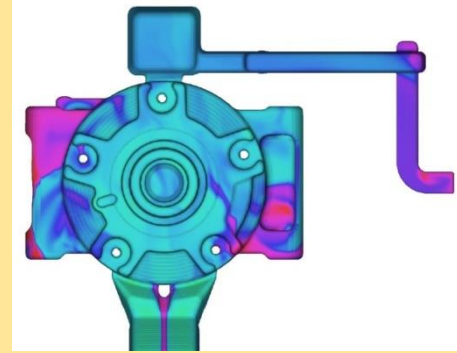
Mission : Improving porosity & leakage



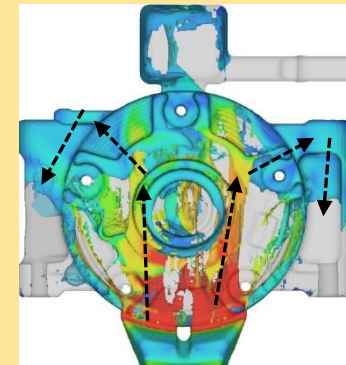
Metal has a collision with tool



Change of gate position



Improved metal flow in the cavity



Improving flow

Change of the gate position in order to improve metal flow in the Mold

Main Equipment – Machining / Assembly

Descriptions	Manufacture	Type / Spec.	Qt'y	Remarks
Mold flow analysis systems	FLOW Science	FLOW 3D	2	
CATIA V5 - 6R2016	Dassault Aviation	Part design	1	
UG-NX10	Siemens Industry Software	Mold design	5	
CNC MILLING M/C	DOOSAN	VM56,VM560,VM70	4	KOREA
CNC High speed milling M/C	DMG	HSC75	1	GERMANY
Electric Discharge M/C	MAKINO	64F MGF , 65S MGS	2	JAPAN
	CREATOR	CNC-430	1	TAIWAN
DIE SPOTTING M/C	ABESEIKI	CDS-2000TS	1	JAPAN
MILLING M/C	KASUGA	FX-2	1	KOREA
LATHE	NAMSUN	NSL 450X1100G	1	KOREA
RADIAL DRILLING M/C	OOYA	RE2-1300A	1	JAPAN
GRINDING M/C	KUMHO	53R	1	KOREA



ul. Tarnawska 3, 58-130 Zarow, Poland KCP Sp. z o.o.

Location of KCP

ul. Tarnawska 3, 58-130 Zarow

KOREA
AL CASTING

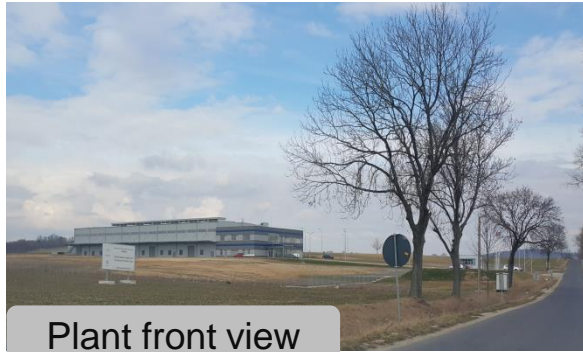
KAC
Korea A1 Casting Co., Ltd.



KCP Plant Currently Picture

KOREA
AL CASTING

KAC
Korea A1 Casting Co., Ltd.



Plant front view



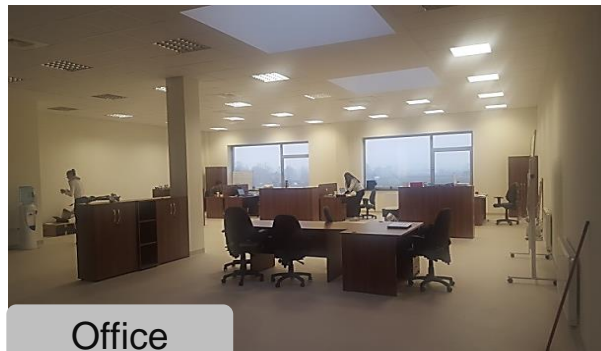
Die casting



Machining line



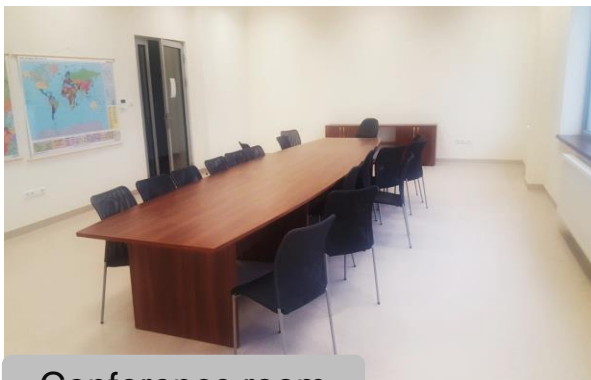
Assembly line



Office



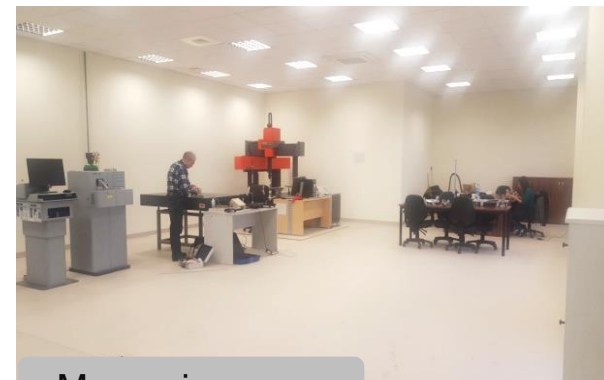
Canteen



Conference room



Lobby



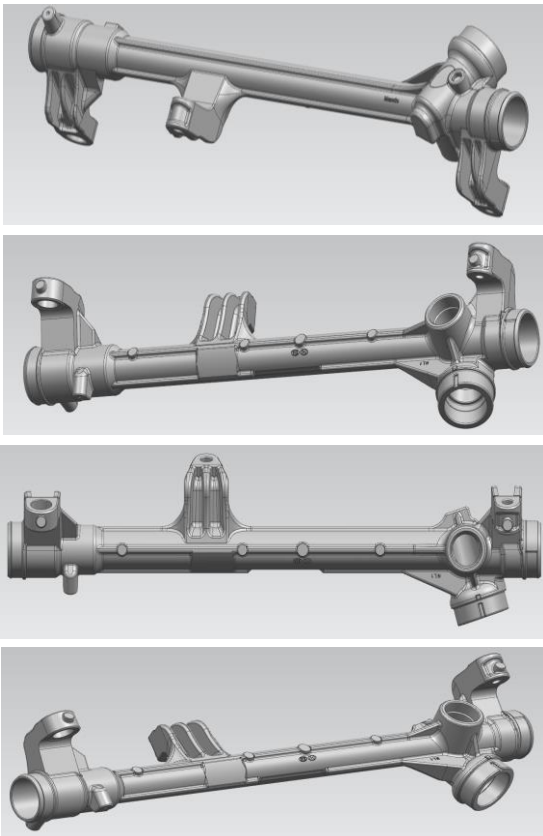
Measuring room

Main products

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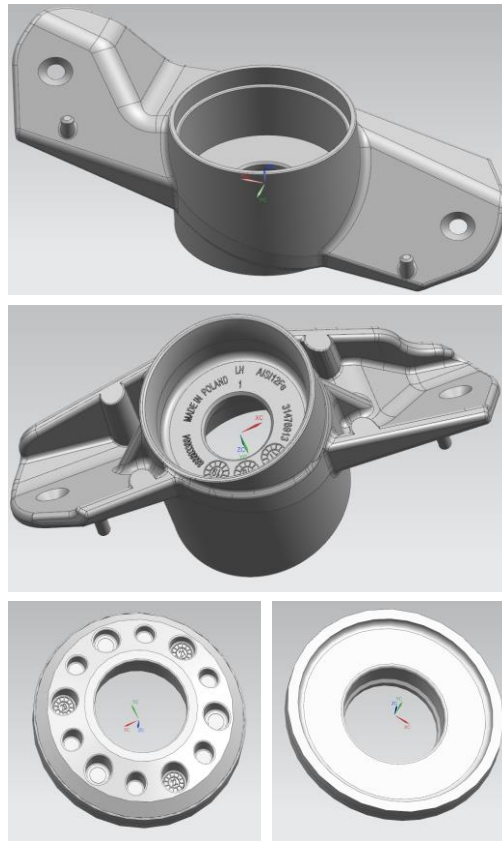
KAC
Korea A1 Casting Co., Ltd.

HL Mando



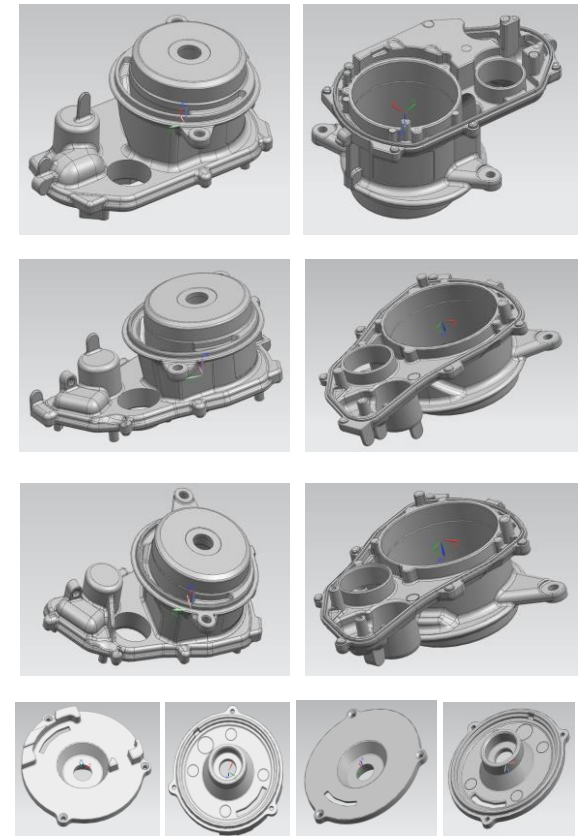
Rack Housing
:700K/Year

HUTCHINSON



Insulator Bracket
300K/Year

LG 이노텍



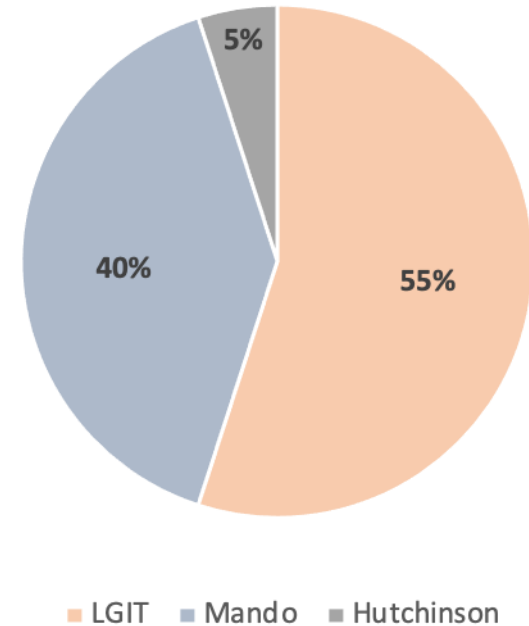
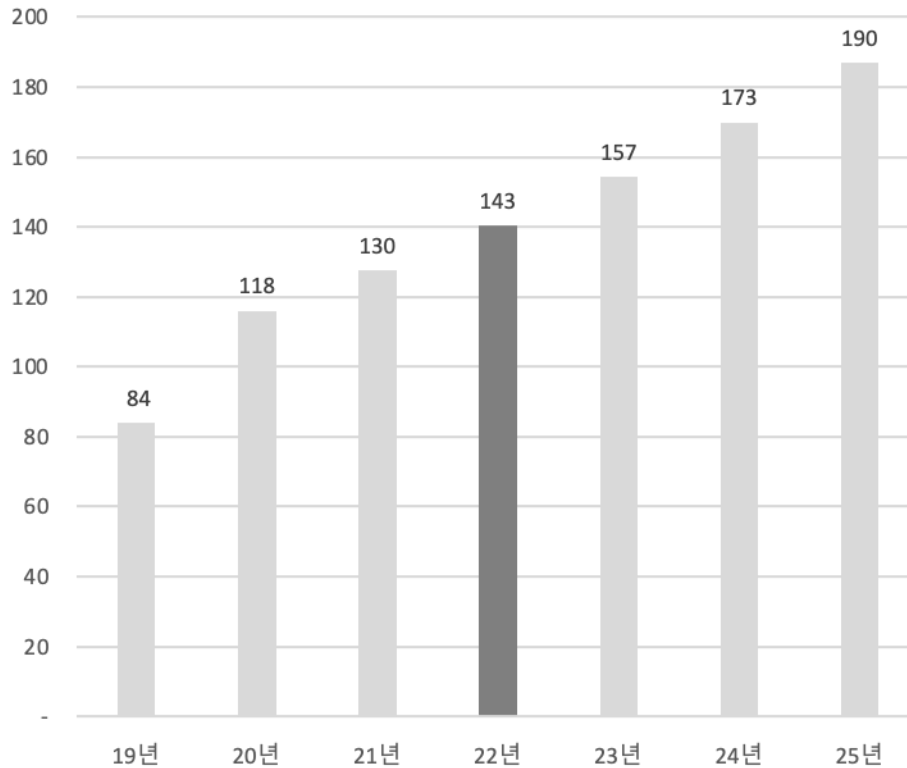
Motor Housing
: 800K/Year

Sales Plan & Major Customer

KOREA
AL CASTING

KAC
Korea A1 Casting Co., Ltd.

Unit: M-USD



HL Mando

LG 이노텍

HUTCHINSON®

Main Equipment

Descriptions	Type / Spec	Q'ty	Remarks
Die-casting machine	900 Tons	4	
Die-casting machine	400 Tons	5	
Tapping center	MAG32T2B	2	
CNC Lathe	8"	1	
Assembly Machine (Housing)	Groove pin	2	
Assembly Machine (B/Plate)	Bearing & Magnet shield	2	
Leak tester (Housing)	2bar	2	
X-RAY	160 KV	1	
Spectrometer		1	
3D (CMM)	900×900×700	1	
Tensile tester	5 Tons	1	
Special gage	Concentricity / Length	2	
Cleanness Tester	F.TECH CORP	1	

Thank you very much