

HANHUB[®]

Carrying your car Carrying your life

WHEEL HUB & WHEEL HUB UNIT

www.hanhub.com.cn

HANGZHOU HANJI AUTO PARTS CO.,LTD.

1. Company Profile

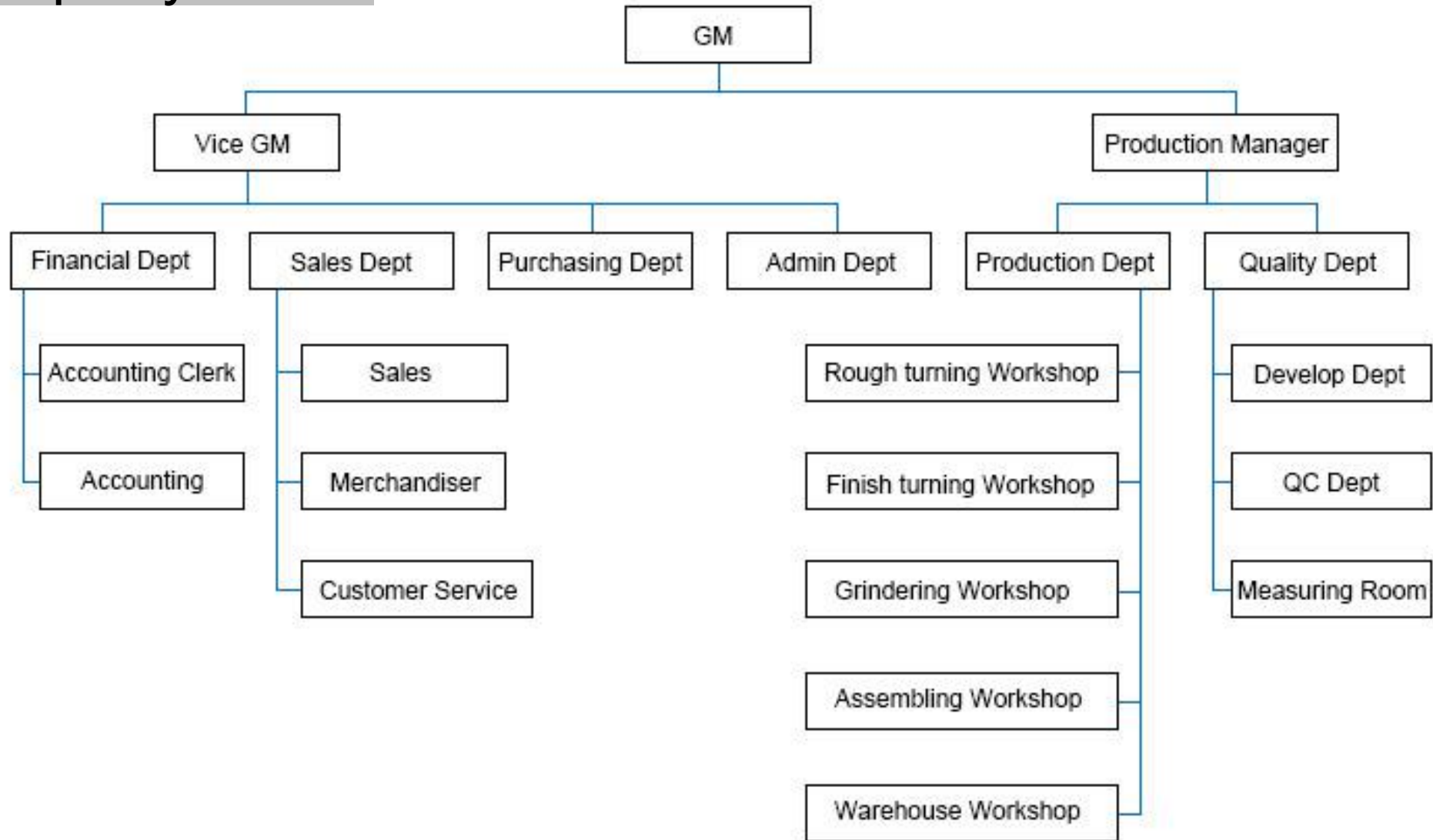


Hangzhou Hanji Auto Parts Co., Ltd was established in 2006 and located in Hangzhou. Our company covers an area of 25000 square meters and has 168 employees at present. We are professional manufacturer for auto wheel hub unit, wheel hub and hub bearing kits. We have complete production line since forgin part to the finnished goods. The annual production capacity is more than 1,200,000 sets.

Now we have over 1800 models of wheel hub assemblies and bearings for American cars, Japanese cars, European cars and Korean cars. HANHUB got certificate ISO/TS 16949:2009 in 2012.

With professional quality control system and technique support, we are dedicated to providing our clients with best quality products at reasonable competitive price. We will try our utmost to bring the greatest satisfaction to your needs.

1. 1Company Chart



1.2 Quality Assurance



Certificate of Registration

This certifies that the Quality Management System of

Hangzhou Hanji Automobile Parts Co., Ltd.

No.28, Lianxing Road, Ganluting Village, Guali Town, Xiaoshan District,
Hangzhou City, Zhejiang Province, China 311243

Has been assessed by NSF-ISR and found to be in conformance to the following standards(s):

IATF 16949:2016

Scope of Registration:
Manufacturing of Wheel Hub Unit

Exclusions: Product Design



IATF Certificate Number:	0447209
Certificate Number:	CNIATF052302
Certificate Issue Date:	30-MAR-2022
Registration Date:	28-MAR-2022
Expiration Date*:	27-MAR-2025



Jennifer Morecraft,
Global Managing Director

NSF International Strategic Registrations

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Authorized Registration and/or Accreditation Marks. This certificate is property of NSF-ISR and must be returned upon request.
*Company is audited for conformance at regular intervals. To verify registrations call (888) NSF-9000 or visit our web site at www.nsf-isr.org

1. 3 Production Flow

1.3.1 Material Preparing:

※ Mould Workshop:



※ Cutting machine:



1.3.2 Forging processing:

※ Forging the raw materials after checked in



1.3.3 Rough turning:

✧ First step rough turning

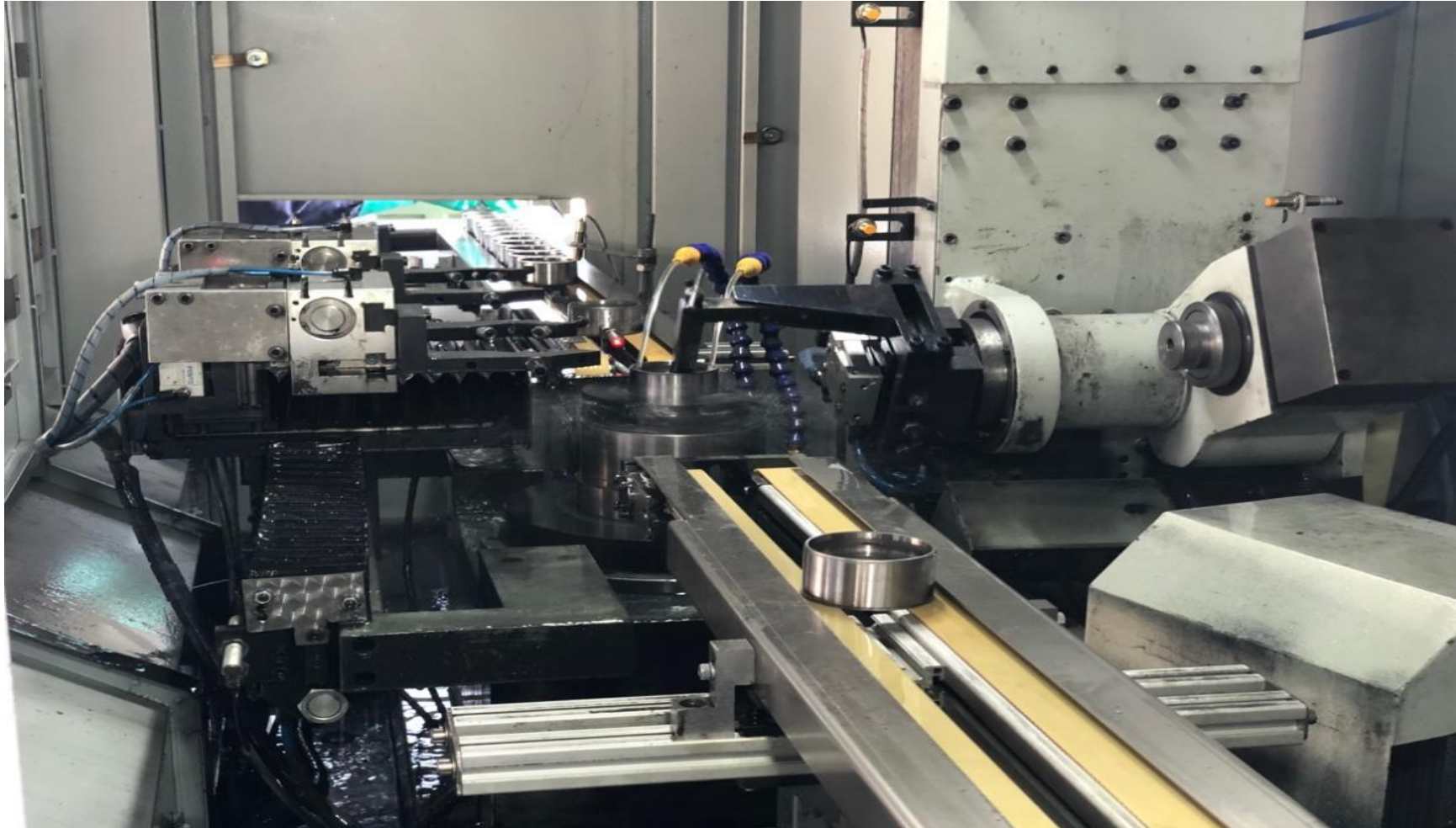


※ Hole drilling



1.3.4 Grinding process:

✧ Grinding



※ Cleaning/washing

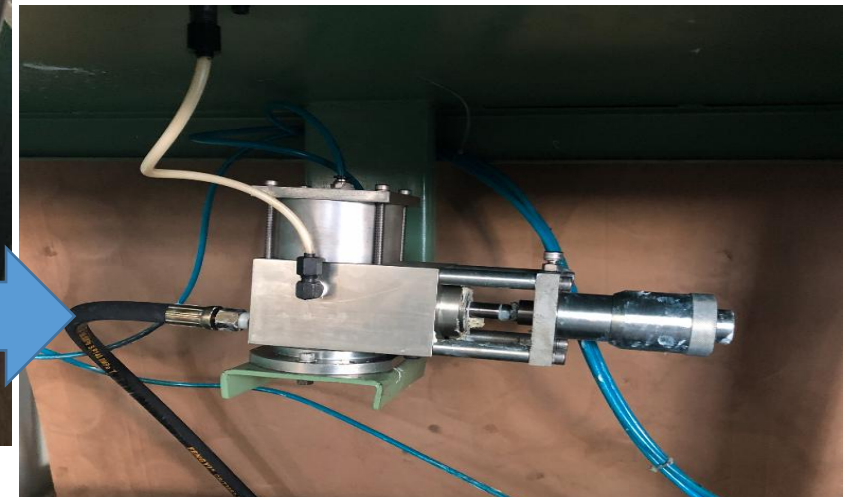
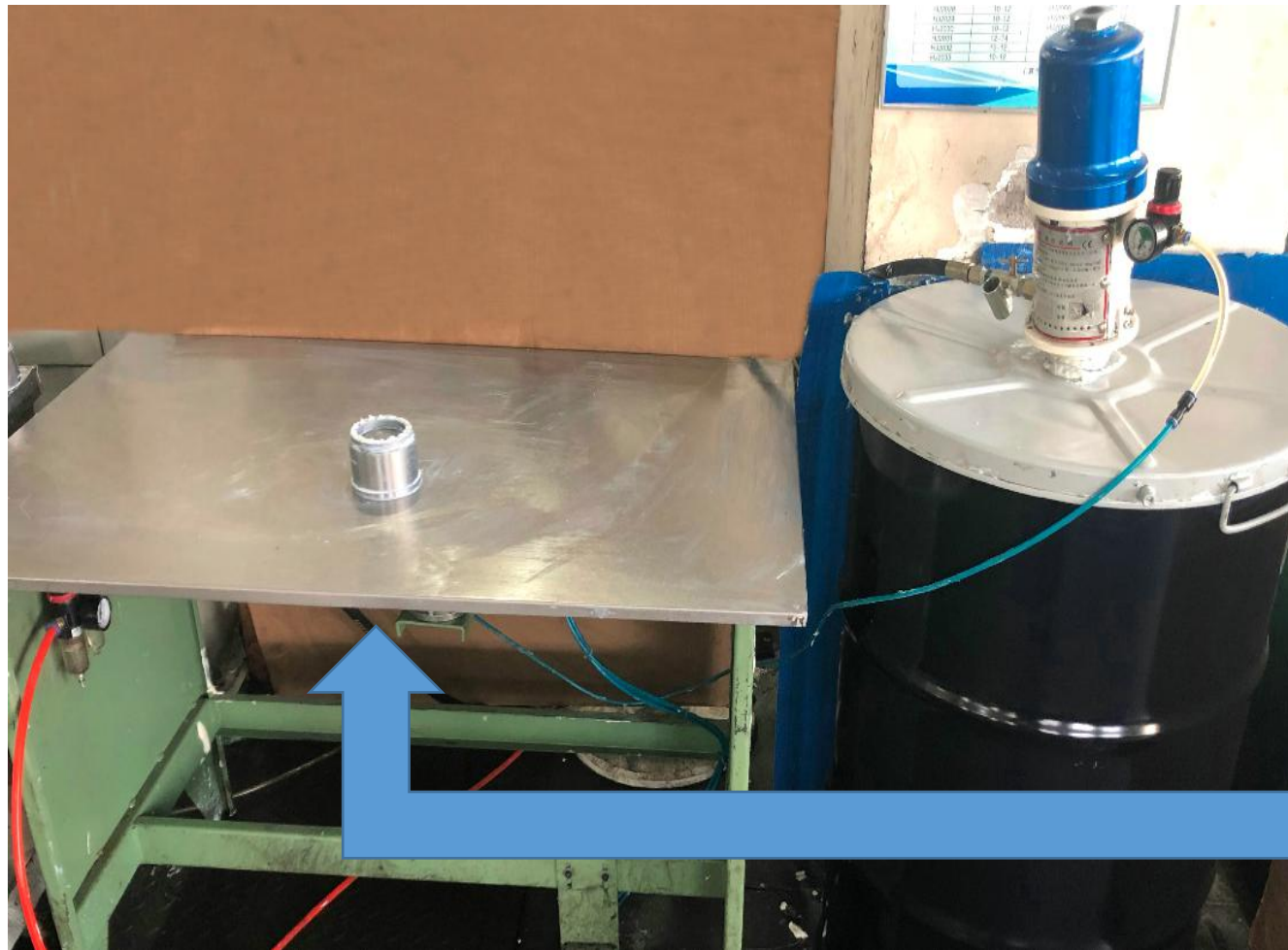


1.3.5 Assembling:

※ Match clearance



※ Grease filling



※ Crimping



※ ABS Sensor Inspection



1. 4 Testing Lab



Sine Tester



Hardness Tester



Metallographic Microscope



Roundness Measuring
Instrument

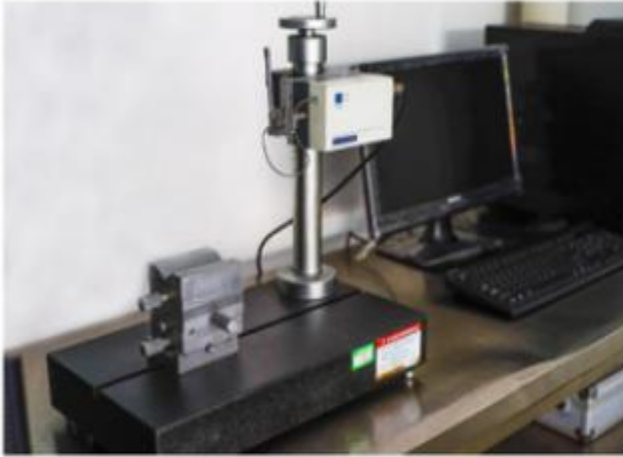


Simulation Test Machine



Pojector

1. 4 Testing Lab



Roughness Tester



Profilometer



Digital Universal Length Meter

2. Bearing Development

1st Generation



2nd Generation

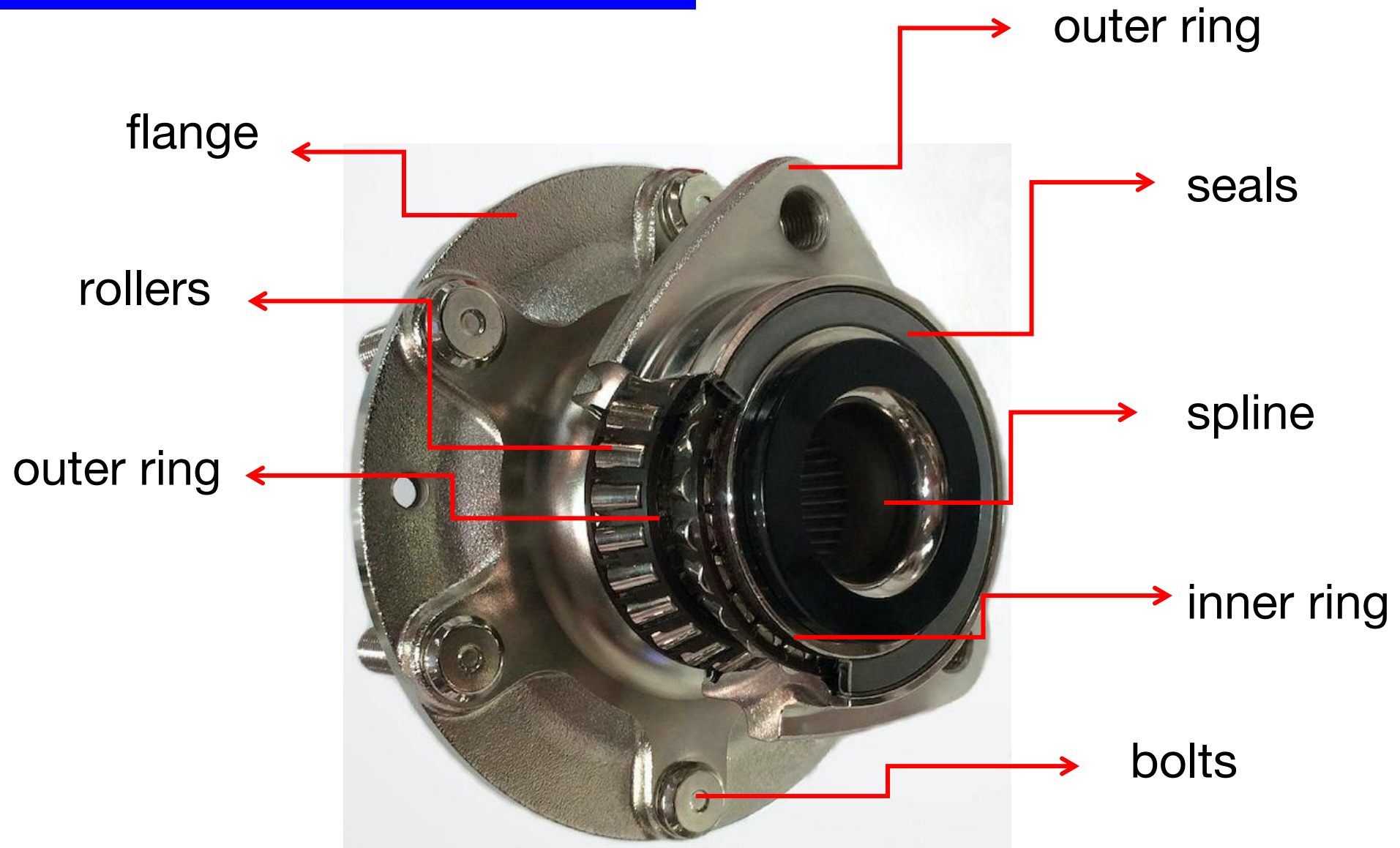


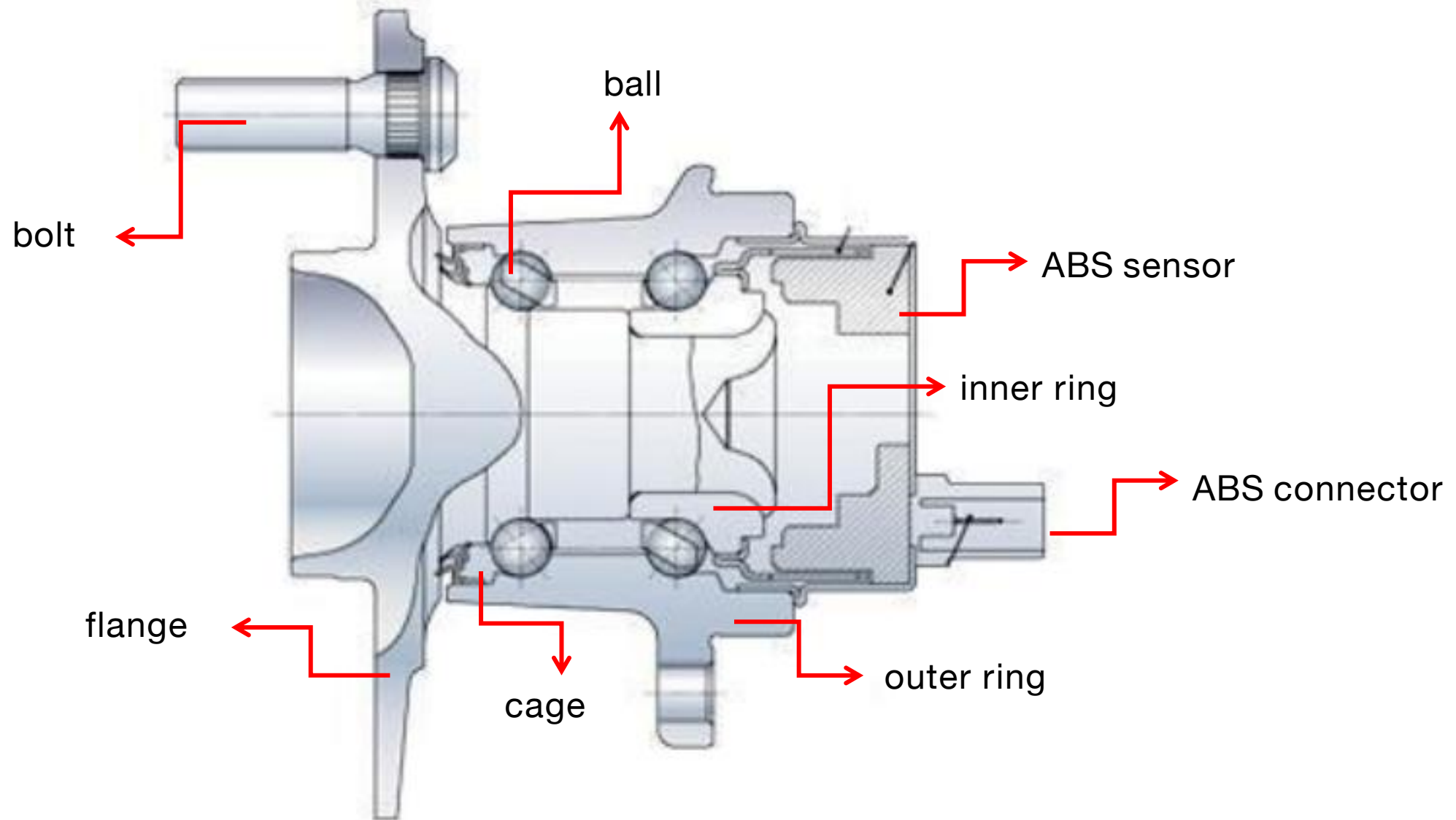
3rd Generation



3. Introduction of 3rd generation

- The third-generation wheel hub bearing unit is a unit that integrates the parts that match the bearing, the wheel hub, the ABS sensor and the bearing ring. It is a unit that has been further developed following the 1st & 2nd generation. The typical structure is a large fillet angle, a press-fit inner ring with a flange plate, two ferrules with a flange, and the outer ring is a rigid structure.
- For bearing users, it means simplified installation, reduced weight and out diemnsions, and improved reliability.
- The application of the third-generation wheel hub bearing unit is a major advance in the development of wheel hub bearings. It concentrates the functions of the car wheel hub, wheel hub bearing, and even the braking system. It is no longer just a bearing. And it is also a key component, if it was damaged, it will cause serious consequences.
- Bearing characteristics, presetting clearance, grease and sealing are the technical difficulties of the third-generation bearings. HANHUB can hold it well.





4. Material and process

※ 2nd Generation

- outer ring (55# steel): forgin→annealing→rough turning→shot blasting→finnish turning→high frequency quenching→drill the holes→grinding channel→demagnetization→super fine raceway
- inner ring (GCr15): forgin→rough turning→finnish turning→heat treatment→grinding the 2 end face→grinding channel→grinding inner and outer diameter of ring→superfine channel
- assembling:full inspection of parts→washing→matching→assembling ball & cage→match clearance→washing→add grease→press seal→press bolt→inspection on finished hub→spray anti-rust oil→package
- bolt (30CrMo)
- seal (10/08F steel plate + Nitrile rubber)
- cage (Nylon66 + 25% glass fiber)
- grease (Shell S3 V220C2/ KOYO AF-1)

※ 3rd Generation

- flange (55# steel): forgin→annealing→rough turning→shot blasting→finish turning→raceway heat treatment→drill hole→make spline/thread→grinding→deal with channel →super-precision with double groove→ unpack
- outer ring (55# steel): same as 2nd generation hub unit
- inner ring (GCr15): forgin→annealing→rough turning→heat treatment→grinding the 2 end face→grinding inner and outer diameter of ring→grinding channel→grinding inner and outer diameter of ring→superfine channel→unpack
- assembling:full inspection of parts→washing→matching→assembling ball & cage→match clearance→washing→add grease→riveting→press dust cap→press bolt→assemble ABS sensor and relate parts→inspection on finished hub→spray anti-rust oil→package
- bolt (30CrMo)
- seal (10/08F steel plate + Nitrile rubber)
- cage (Nylon66 + 25% glass fiber)
- grease (Shell S3 V220C2/ KOYO AF-1)

4. Mechanical equipment

CNC grinder machines:

- 3MZK1310

- 3MZK1320

- 3MZK1420

- Internal Grinder 208

Internal Super: 3MK316B

External Super: 3MK3220B

Inner flange super precision: 3MK3110-LG

CNC lathe machines MK250

5. Installation



Every vehicle has specific torque specifications. Always refer to vehicle manufacturer's instruction manual for a list of required tools and proper installation procedures.



Before you begin, set the emergency brake. Raise the vehicle off the ground and remove lug nuts and wheel. Use blocks on the remaining tires.



Using the axle nut socket remove the axle nut (do not use an impact wrench).



Remove the brake caliper and brake pads.



Remove the brake rotor.



Remove the hub bolts from the steering knuckle.



Separate the module from the knuckle, using extreme caution when prying between the two.



Remove any loose metal from the bearing housing, and inspect the CV shaft for any damage.



Align the new module onto the CV shaft and in to the knuckle.



Torque hub mounting bolts to the manufacturer's specifications using the correct torque wrench.



Reassemble brake, rotor and brake caliper.



Torque axle nuts to manufacturer's specifications (do not use an impact wrench).



Replace the wheel and tire back on the vehicle. Once on the ground tighten lug nuts.

Tips

1. Always refer to a repair manual for your particular vehicle before starting this service.
2. Never use air tools when removing or replacing the axle nut.
3. Always replace the axle nut with a new nut.
4. Clean all mating surfaces.
5. Protect axle boots from being damaged.



THANK YOU ~