

KATEM

We will open the window of new technology world with the spirit of challenge and creation

KATEM is company established 2014 which is the best in field of automobile parts specialized in railway components and start-up based on reaserch and development(R&D) that aimed to advanced into the global markets with new technologies under the managemant policy of company that leads technology, makes employees happy and serves society.

Based on a perfect quality assurance system, customers satisfaction is our top priority.
We Will do our best to to be reborn as a small hidden champion in field of automobile parts.



KATEM

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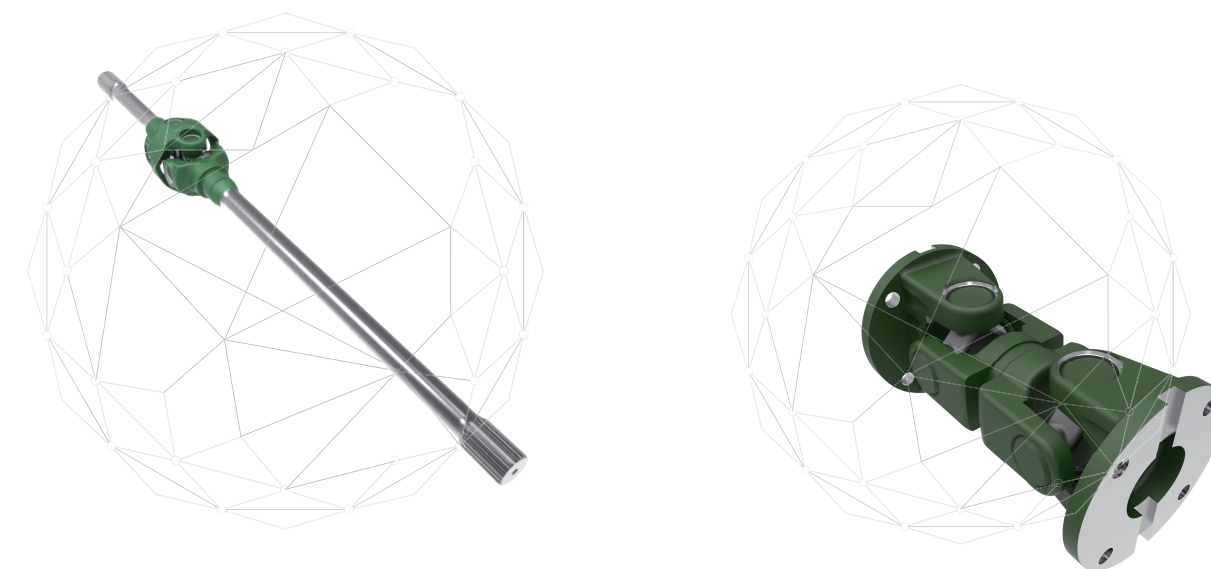
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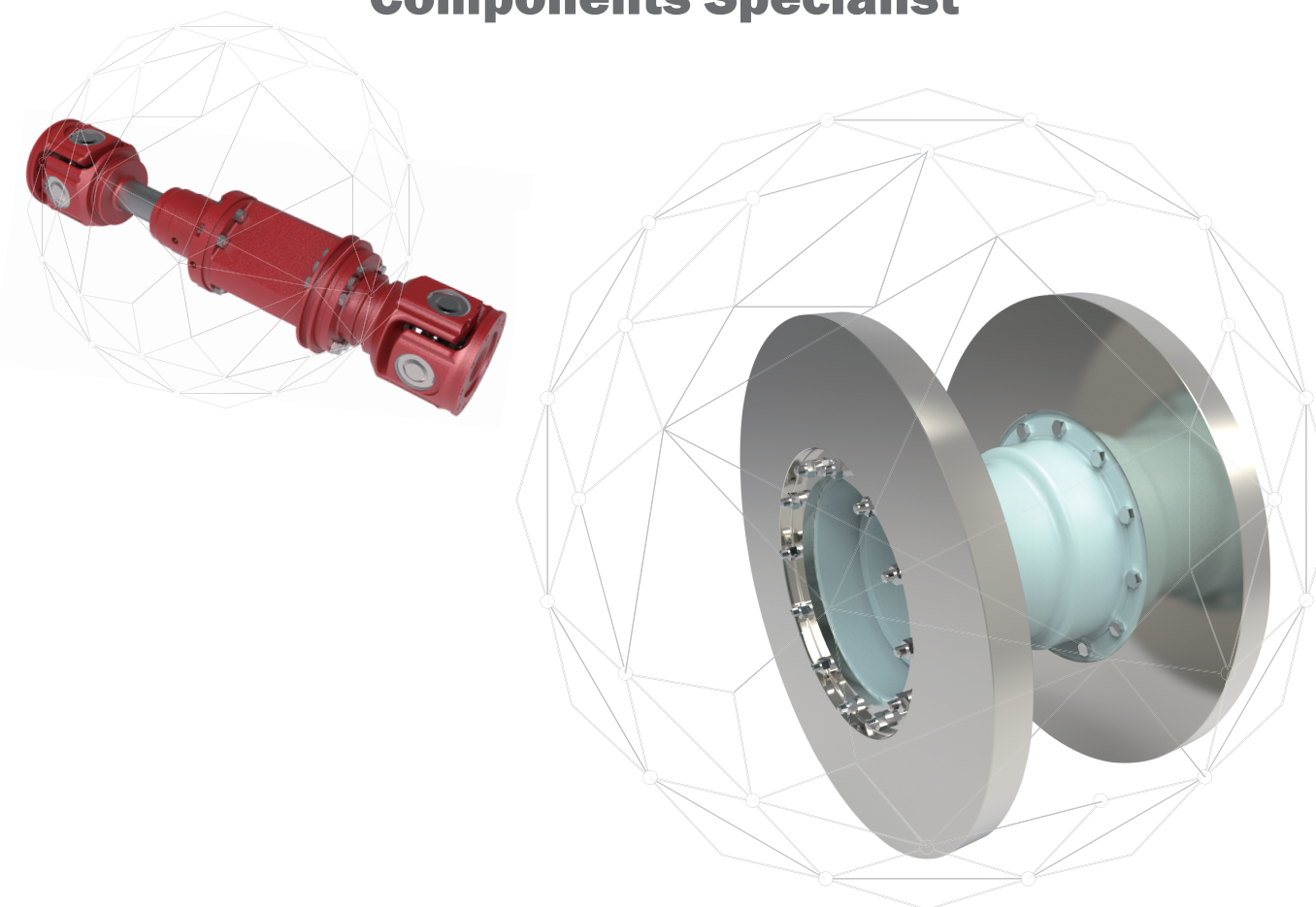


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KATEM

Automotive Drive Line Components Specialist



R&D

The KATEM Institute is constantly challenging to improve its professional competencies with creativity and enthusiasm.

Research and development field

- Power transmission parts for high-speed rails
- Braking parts for high-speed rails
- Power transmission parts for special purpose vehicles
- Power transmission parts for construction equipments
- Power and braking parts for commercial vehicles

Main products

- Water jet power transmission shaft for special purpose vehicles
- Brake disk for high speed rail (KTX)

Registration certificate and certificate, confirmation letter



Existing S / W

AUTO CAD 2016
(network ver.)



CATIA V5
(network ver.)



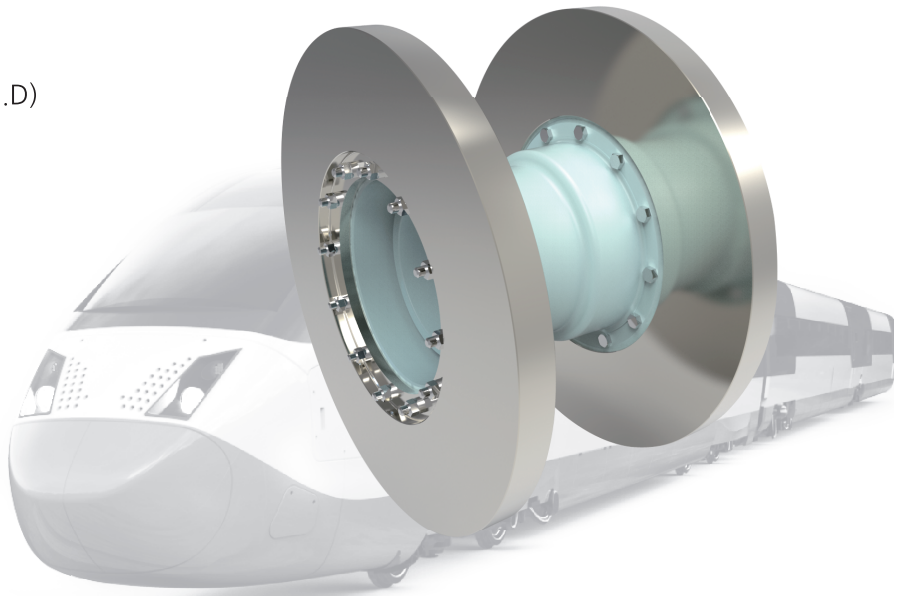
High Speed Train

KTX



Brake disk

- **Applications**
High Speed Train(KTX)
- **Product Specifications**
 - 640mm(O.D) x W375mm(Width) x 200mm(I.D)
 - T45mm(Disc Thickness)
- **Product Features**
 - Forged Solid Type
 - Crack Prevention Process
 - Local Material
- **Product Funtion**
Ability to slow down or brake high-speed trains by friction force with the relative pad
- **Customer**
Korea Rail Corporation(KORAIL)



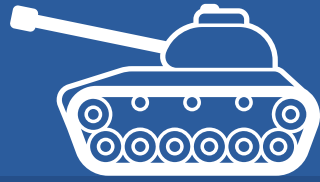
Transmission Shaft

- **Applications**
High Speed Train(KTX)
- **Product Specifications**
 - 220mm(O.D) x L 1,100mm(Length)
 - Torsional Braking Torque : 43.5kNm
 - Torsional Fatigue Life : 300,000cycle
- **Product Features**
 - Mechanical Type
 - Safety-set Inner Mounting Type
- **Product Funtion**
The ability to rotate the axle to move the vehicle forward by transmitting the high speed train motor power to it through the reducer
- **Customer**
Korea Rail Corporation(KORAIL)



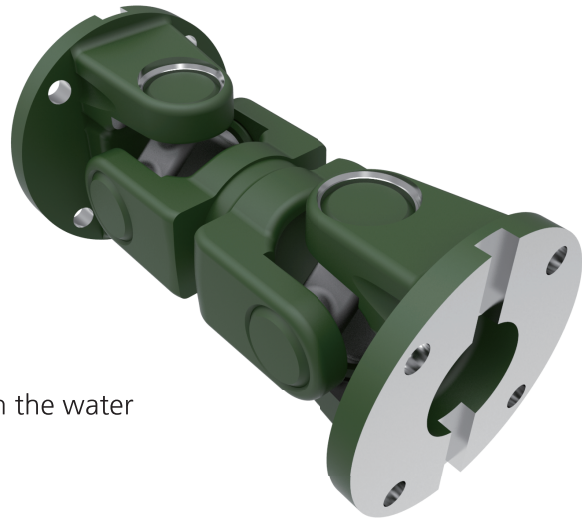
Defense Parts

Special Purpose Land Equipment



Water Jet Drive Shaft A Type

- **Applications**
Special Purpose Vehicles
- **Product Specifications**
 - 90mm(O.D) x L168~173mm(Length)
 - Torsional Max. Torque : 480Nm
 - Torsional Fatigue Life : 60,000cycle
- **Product Features**
Cardan Type
- **Use**
Ability to drive the water jet to move the vehicle forward from the water
- **End User**
Hyundai Rotem Co., Ltd.



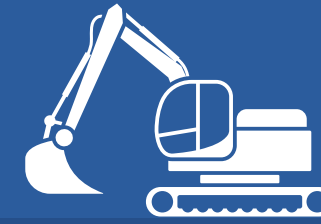
Water Jet Drive Shaft B Type

- **Applications**
Special Purpose Vehicles
- **Product Specifications**
 - 90mm(O.D) x L386~432mm(Length)
 - Torsional Max. Torque : 480Nm
 - Torsional Fatigue Life : 60,000cycle
- **Product Features**
Cardan Type
- **Use**
Ability to drive the water jet to move the vehicle forward from the water
- **End User**
Hyundai Rotem Co., Ltd.



Construction Equipment

Wheel Excavators, Wheel Loaders



Double Cardan Drive Shaft

- **Applications**
Wheel Excavators, Wheel Loaders
- **Product Specifications**
 - 107mm(O.D) x L1,172mm(Length)
 - Torsional Max. Torque : 200kgf.m
 - Torsional Fatigue Life : 30,000cycle
- **Product Features**
Double Cardan Type
- **Use**
Power transmission function to transmit vehicle engine power to wheels and steering function to change direction of vehicle
- **End User**
Hyundai heavy industries, Doosan infracore, Volvo korea



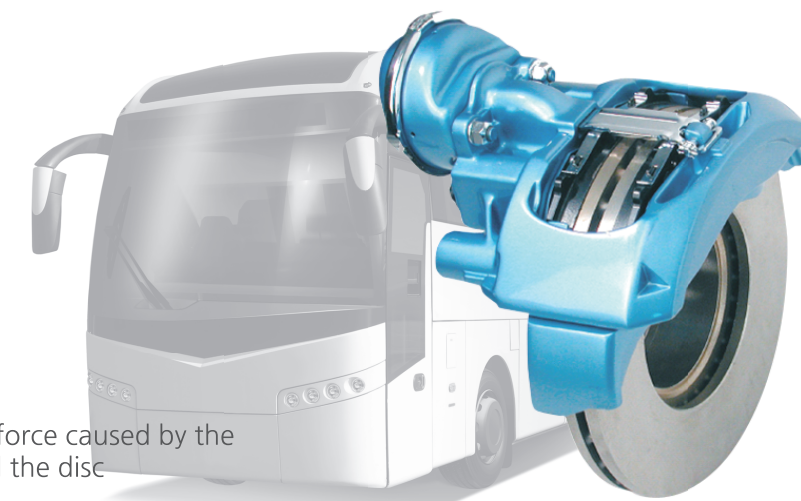
Commercial vehicles

Civil / Military Trucks, Buses, Specially Equipped Vehicles

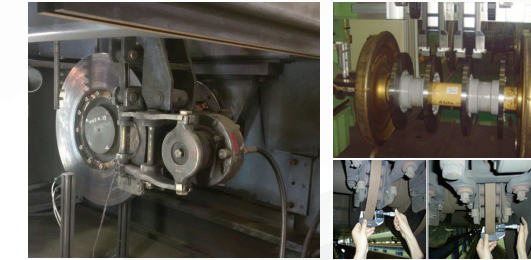


Brake Caliper Assembly

- **Applications**
Military and Civil Buses, Trucks, Special Vehicles
- **Product Specifications**
 - Wheel Size : 17.5, 19.5, 22.5 inch
 - Max. Braking Torque : 11,600~ 30,000 Nm
 - Disc diameter : 335~432mm
- **Product Features**
Air Pressure Type
- **Use**
Slowing or braking the vehicle due to the friction force caused by the relative motion between the brake pads (Pad) and the disc



Brake Disc / Braking Performance Test



➤ Performance Test

Test Condition	Test Standard	Test Results
KRCS B349	There shall be no thermal deformation or cracking of the disk friction surface after the test.	No thermal deformation or cracking of the friction surface when visually confirmed

➤ Endurance Test

Test Name	Test Standard	Test Results
Braking Endurability (500 Times)	There shall be no thermal deformation and cracking of the disk friction surface after the test.	No thermal deformation or cracking of the friction surface when visually confirmed
Wearing Loss(μm)	Max. 44.5	6

➤ Friction Coefficient Test

Test Name	Test Standard	Test Results
Continuous Braking (dry/wet)	0.37±0.07	0.332~0.430
2 stage Continuous Braking (250 km/h,300km/h))	0.34±0.07	0.314~0.336

Transmission Shaft / Torsional Performance Test

➤ Torsional Strength Test

Test Name	Test Standard	Test Results	Remark
Torsional Braking Strength Test	Max. Rotational Speed : 360°/min	44.5kNm	KOREA INSTITUTION MACHINERY & Material (KIMM)
Torsional Fatigue Life Test	Repeat Speed : 2Hz	317,510Cycle	
Max. Rotational Speed	diffraction Angle : 8°	1,016rpm	

