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Powerpacks & Drive Systems

SNT Dynamics Defense Products



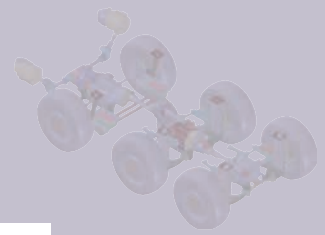
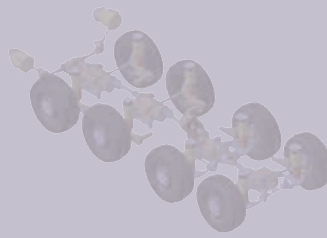
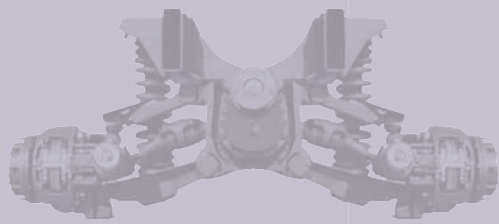
 **SNT Dynamics**



A company beneficial to world through management

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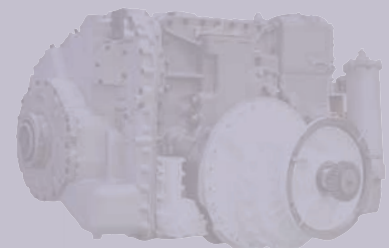
Defense

**Powerpacks &
Drive Systems**

**Guns & Artillery
Systems**

**Protection
Weapons**

**We are committed to realize customer satisfaction
by making products with the highest quality.**



Facilities

Headquarter

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Products	Defense Products, Auto Parts, Machine Tools

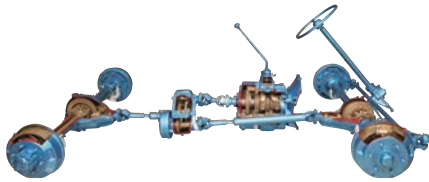
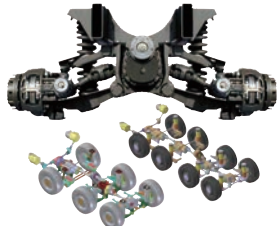
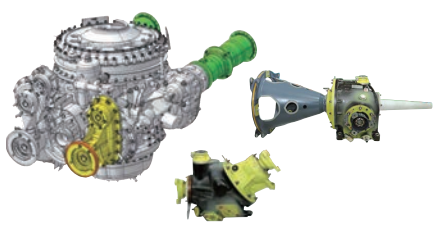

Seoul Office

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Function	Marketing

Powerpacks & Drive Systems

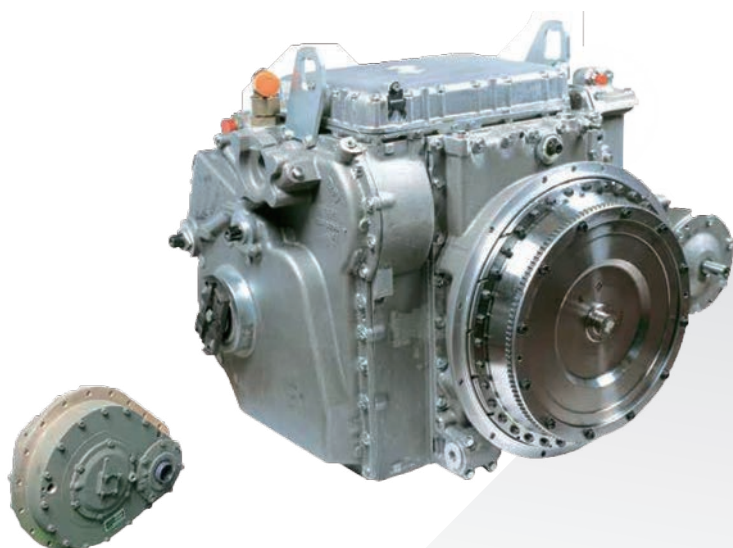
X200-5K	 <p>Automatic Transmission</p>	Gross Engine Power	350 hp
		Input Speed	2,300 rpm
		Gross Vehicle Weight	up to 18 tons
		Stall Torque Ratio	2.70 : 1
HMPT500-3EK	 <p>Automatic Transmission</p>	Gross Engine Power	600 hp
		Max. Input Speed Range	2,200 to 3,000 rpm
		Vehicle Weight	up to 33 tons
		Maximum Torque, N.M (lb-ft)	15,150 (11,170)
HMPT500-4EK	 <p>Automatic Transmission</p>	Gross Engine Power	800 hp
		Max. Input Speed Range	2,200 to 2,900 rpm
		Vehicle Weight	up to 40 tons
		Maximum Torque, N.M (lb-ft)	17,760 (13,170)
XTG411-2A/2A-1	 <p>Automatic Transmission</p>	Gross Engine Power	405 hp(XTG411-2A) 440 hp(XTG411-2A-1)
		Max. Input Speed Range	2,300 rpm
		Vehicle Weight	up to 23 ton(XTG411-2A) up to 28 ton(XTG411-2A-1)
		Stall Torque Ratio	3.3 : 1
XTG411-4/4A	 <p>Automatic Transmission</p>	Gross Engine Power	650 hp
		Max. Input Speed Range	2,500 rpm (XTG411-4), 2,300 rpm (XTG411-4A)
		Vehicle Weight	up to 47 tons
		Stall Torque Ratio	3.0 : 1 (XTG 411-4), 3.3 : 1 (XTG411-4A)
X1100-5A3	 <p>Automatic Transmission</p>	Gross Engine Power	1,500 hp
		Max. Input Speed Range	2,000 to 3,000 rpm
		Vehicle Weight	45 to 60 ton
		Type	Single Stage, 3-Elements, Multiphase
		Stall Torque Ratio	2.98 : 1
EST15K	 <p>Automatic Transmission</p>	Gross Engine Power	1,500 hp ~ 1,650 hp
		Max. Input Speed Range	1,800 to 3,200 rpm
		Vehicle Weight	up to 65 tons
		Type	Single Stage, 3-Elements, Multiphase
		Stall Torque Ratio	2.3 : 1

Best Technology & Best Quality

Transmission T3S5-M	 <p>Drive Line for Military Vehicle</p>	Approx. Weight	106 kg	
		Torque Capacity	38 kgf.m	
Transfer Case T3S5-M		Approx. Weight	82 kg	
		Torque Capacity	235 kgf.m	
Front Axle O5HS		Approx. Weight	230 kg	
		Type of Housing	Build Up	
Rear Axle O4HS		Approx. Weight	80 kg	
		Type of Housing	Build Up	
Independent Suspension	 <p>Drive Line</p>	Application Vehicle	Military Wheeled Vehicle	
		Max. Input Torque	10,000 Nm	
		Max. Input RPM	4,000	
		Steer/Suspension(Bound)	18°	
		Steer/Suspension(Forward)	27°	
Gear Box for Helicopter	 <p>MGB IGB TGB TRDS</p>	Specification of KUH	Capacity	2 Pilots + 2 Crews + 9 Troops
			Range	450 km
			Hover Ceiling OGE	6,000 ft
			Service Ceiling	13,000 ft
			Maximum Rated Power	1,382 kw
			Intermediate Rated Power	1,325 kw
Drive System for UAV / UAM		Center Pinion Speed(rpm)	4,800 ~ 6,000 rpm	
		Rotor Pinion Speed(rpm)	1,284 ~ 1,605 rpm	
		Gear Ratio	3.73832	
		Design Life (hour)	4,000	

X200-5K

Automatic Transmission



General Rating

- Gross Engine Power 350 hp
- Input Speed 2,300 rpm

Feature

- Input Drive : Torque Converter with Automatic Lockup Clutch
- Drive Range : Four Forward and One Reverse Range
- Steering Type : Infinitely Variable Hydrostatically Controlled Differential Steer
- Shifting Control : Fully Automatic Shifting
- Brake Type : Integral Hydraulic Brakes

Specification

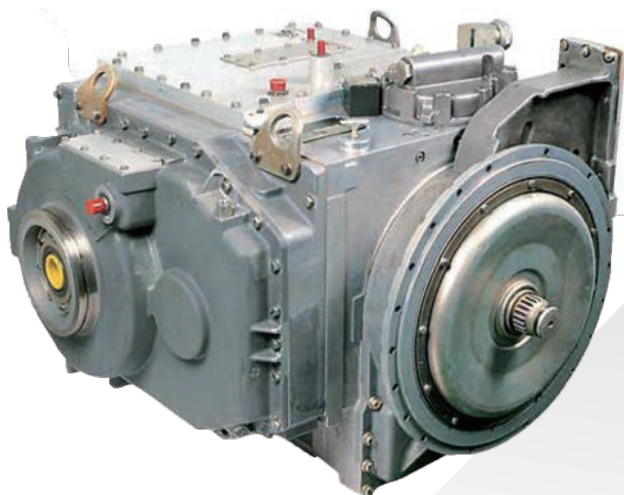
Item	X200-5K
General Rating	
Gross Engine Power	350 hp
Input Speed	2,300 rpm
Gross Vehicle Weight	up to 18 tons
Torque Converter	
Type	Single Stage, 3-Elements, Multiphase, Automatic Lockup Clutch
Stall Torque Ratio	2.70 : 1
Range	4-Forward, 1-Reverse
Range Control	Automatic : D(1-4), N, R, PV
Steering	Infinitely Variable, Hydrostatically Controlled Differential : Housed Inside Transmission
Braking	Poly Phase
Type	Wet Multi Plate, Oil Cooled, Inside Transmission
Service	Hydraulic with Mechanical Actuation
Emergency & Parking	Mechanical Apply
Power Takeoff Provisions	
Type	Engine Driven
Rating	Ratio 1.407 : 1, 80hp
Oil System	
Oil Type	MIL-PRF-2104 15W40, MIL-PRF-46167 Arctic Oil
Capacity	60 Liters
Filter	Integral, Replaceable Dual Elements
Weight (Dry)	522 kg
Application	
Vehicle	K200A1, K242A1, K281A1, K263A1, K277, K216, K288A1, M113 Family
Engine	D2848T

Application



HMPT500-3EK | 4EK

Automatic Transmission



HMPT500-3EK

- Gross Engine Power 600 hp
- Max. Input Speed Range 2,200 to 3,000 rpm

HMPT500-4EK

- Gross Engine Power 800 hp
- Max. Input Speed Range 2,200 to 2,900 rpm

Feature

- Input Drive : Input Disconnect Clutch and Hydro-Mechanical Unit
- Drive Range : 3-Forward and 1-Reverse Range
- Steering Type : Infinitely Variable Hydro-Mechanical Steering
- Shifting Control : Fully Automatic Continuous Variable Transmission Ratio Control
- Brake Type : Mechanically Actuated, Oil Cooled, Multiple

Specification

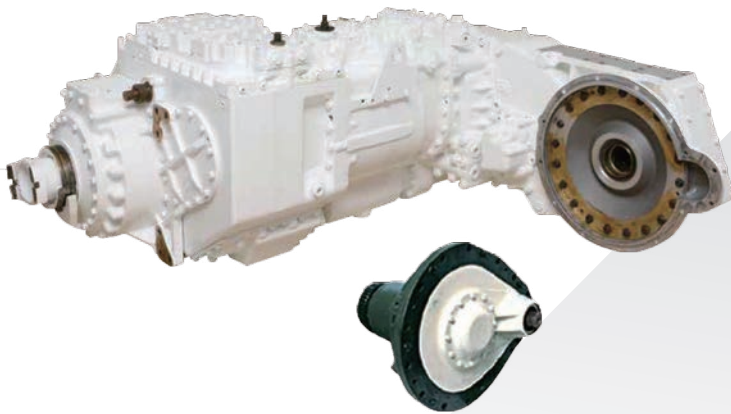
Item	HMPT500-3EK	HMPT500-4EK
General Rating		
Gross Engine Power	600 hp	800 hp
Max. Input Speed Range	2,200 to 3,000 rpm	2,200 to 2,900 rpm
Vehicle Weight	up to 33 tons	up to 40 tons
Output Rating		
Maximum Torque, N.m(lb-ft)	15,150 (11,170)	17,760 (13,170)
Maximum Forward Speed, rpm	3,300	3,570
Maximum Reverse Speed, rpm	544	560
Steering Torque per Side, N.m(lb-ft)	9,200 (6,800)	10,800 (8,000)
Input Disconnect	Hydraulically Actuated Clutch To Disconnect Power Train for Reduced Cold Weather Cranking Torque and Improved Fuel Economy at Idle	
Range	3-Forward, 1-Reverse	
Control : TEC Transmission Electronic Controller	The Tec Automatically Adjusts the Transmission Ratio to Operate at Most Efficient Engine Speed based on Throttle Position and Vehicle Load	
Steering	True Pivot, Infinitely Variable Ratio Hydro-Mechanical, Fully Regenerative, without Use of Brake or Clutches	
Braking		
Service and Parking Brakes	Mechanically Actuated, Oil Cooled, Multiple Disk	
Dynamic Braking	Full Engine Retarding Torque plus Limited Hydrostatic Retarding	
Oil System		
Oil Type	MIL-PRF-2104 15W40, MIL-L-46167 Arctic Oil	
Capacity	51 Liters	47 Liters
Filtration	40 micron	
Weight (Dry)	875 kg	942 kg
Application		
Vehicle	Pegasus, Flying Tiger	K21
Engine	D-2480L	D-2480LXE(750HP)

Application



XTG411-2A | 2A-1 | 4 | 4A

Automatic Transmission



XTG411-2A/2A-1

- Gross Engine Power 405 hp (XTG411-2A)
440 hp (XTG411-2A-1)
- Max. Input Speed Range 2,300 rpm

XTG411-4/4A

- Gross Engine Power 650 hp
- Max. Input Speed Range 2,500 rpm (XTG411-4),
2,300 rpm (XTG411-4A)

Feature

- Input Drive : Torque Converter with Automatic Lockup Clutch
- Drive Range : 4-Forward and 2-Reverse Range
- Steering Type : Clutch Brake and Geared Steer
- Shifting Control : Power Shifting
- Brake Type : Multi Plate, Oil Cooled, Mechanical Apply

Specification

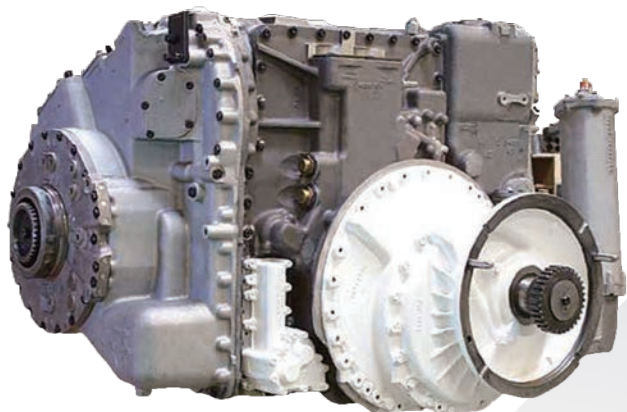
Item	XTG411-2A/2A-1	XTG411-4/4A
General Rating		
Gross Engine Power	405 hp(XTG411-2A) 440 hp(XTG411-2A-1)	650 hp
Max. Input Speed Range	2,300 rpm	2,500 rpm(XTG411-4), 2,300 rpm(XTG411-4A)
Vehicle Weight	up to 23 ton(XTG411-2A) up to 28 ton(XTG411-2A-1)	up to 47 tons
Torque Converter		
Type	Single Stage, 3-Elements, Multiphase, Automatic Lockup Clutch	
Stall Torque Ratio	3.3 : 1	3.0 : 1 (XTG 411-4), 3.3 : 1 (XTG411-4A)
Range	4-Forward, 2-Reverse	
Range Control	Power Shift	
Steering		
Clutch Brake (1st, 2nd, R1)	Infinite	
Geared Steer (3rd, 4th, R2)	1.48 : 1	
Braking		
Type	Multi Plate, Oil Cooled	
Service/Parking	Mechanical Apply	
Capacity	Up to 3.7m/sec ² Deceleration Rate	
Power Takeoff Provision		
Centerline of Engine	1.0 × Input Speed, Full Engine hp	
Front of Input Transfer Housing	1.0 × Input Speed, Full Engine hp	
Centerline of Torque Converter(Opt)	1.64 × Input Speed, Full Engine hp	
Oil System		
Oil Type	MIL-PRF-2104 15W40, MIL-L-46167 Arctic Oil	
Capacity(excluding External Circuit)	83 Liters	
Filter	Integral, Full Flow, Replaceable Element	
Weight (Dry)	1,084 kg	1,111 kg
Application		
Vehicle	K55, K77, M109, M107	MX992, Stingray M578
Engine	8V71T	8V92TA

Application



X1100-5A3

Automatic Transmission



General Rating

- Gross Engine Power 1,500 hp
- Max. Input Speed Range 2,000 to 3,000 rpm

Feature

- Input Drive : Torque Converter with Automatic Lockup Clutch
- Drive Range : 4-Forward and 2-Reverse Range
- Steering Type : Infinitely Variable Hydrostatically Controlled Differential Steer
- Shifting Control : Fully Automatic Shifting
- Brake Type : Integral Hydraulic Brakes

Specification

Item	X1100-5A3
General Rating	
Gross Engine Power	1,500 hp
Max. Input Speed Range	2,000 to 3,000 rpm
Vehicle Weight	45 to 60 ton
Torque Converter	
Type	Single Stage, 3-Elements, Multiphase
Stall Torque Ratio	2.98 : 1
Range	4-Forward and 2-Reverse
Range Control	Automatic : L(1-4), D(2-4), N, R(1-2), PV
Steering	Infinitely Variable, Hydrostatically Control, Pivot Steer in Neutral
Braking	
Type	Wet Multi Plate, Oil Cooled
Service	Hydraulic with Mechanical Actuation
Emergency & Parking	Mechanical apply
Oil System	
Oil Type	MIL-PRF-2104 15W40, MIL-L-46167 Arctic Oil
Capacity	110 Liters
Filter	Integral, Replaceable Dual Elements
Weight (Dry)	2,050 kg
Application	
Vehicle	K9, K10
Engine	MT881Ka-500

Application



EST15K

Automatic Transmission



General Rating

- Gross Engine Power 1,500 hp~
1,650hp
- Max. Input Speed Range 1,800 to
3,200 rpm

Feature

- Input Drive : Hydraulic Torque Converter with Automatic Lockup Clutch
- Drive Range : 6-Forward and 3-Reverse Range
- Steering Type : Infinitely Variable Hydrostatic / Hydrodynamic Superimposed Steering System
- Shifting Control : Fully Automatic Shifting
- Brake Type : Hybrid
(Retarder Combined With Mechanical Disk Brake)

Specification

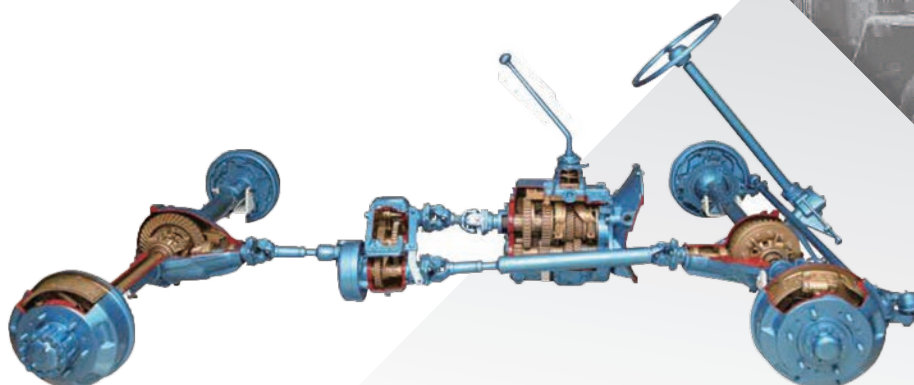
Item	EST15K
General Rating	
Gross Engine Power	1,500 hp ~ 1,650 hp
Max. Input Speed Range	1,800 to 3,200 rpm
Vehicle Weight	up to 65 tons
Torque Converter	
Type	Single Stage, 3-Element, Multiphase
Stall Torque Ratio	2.3 : 1
Automatic Lockup Clutch	
Range	6-Forward and 3-Reverse, Proportional Valve
Range Control	Auto(2-6), Manual Forward & Reverse(1-3), PV
Steering	Infinitely-Variable, Hydrostatic / Hydrodynamic Superimposed Steering System
Braking	
Type	Hybrid (Retarder Combined with Mechanical Disc Brake, Dry)
Service	Hydraulic Or Mechanical Power Apply
Parking	Mechanical Apply
Capacity	Up to 5m/sec ² Deceleration Rate
Oil system	
Oil type	MIL-PRF-2104 15W40, MIL-L-46167 Arctic Oil
Capacity	140 Liters
Filter	Integral, Full Flow, Replaceable Dual Elements
Weight (Dry)	2,500 kg
Application	
Vehicle	MBT
Engine	DV27K / MT883 Ka-501

Application



Drive Line for Military Vehicle

Transmission | Transfer Case | Axle



Transmission-T355-M

- Approx. Weight 106 kg
- Torque Capacity 38 kgf.m

Transfer Case-T355-M

- Approx. Weight 82 kg
- Torque Capacity 235 kgf.m

Front Axle-O5HS

- Approx. Weight 230 kg
- Type of Housing Build Up

Rear Axle-O4HS

- Approx. Weight 80 kg
- Type of Housing Build Up

Feature

- SNT Dynamics develops and produces a wide range of drive train components, all meeting ISO 9001, IATF 16949 standards, including transmission and drive axles which are used in military vehicle as well as special purpose vehicle. By specializing in military vehicle, SNT Dynamics powertrain has been proven to stand up to any severe punishment and to strenuous military duty.
- SNT Dynamics is committed to providing the outstanding military transmission and axle to global customers.

Specification

Transmission

Model	Approx. Weight	Torque Capacity	Gear Ratio						Applied Vehicle
			1st	2nd	3rd	4th	5th	Rev.	
T3S5-M	106 kg	38 kgf.m	5.380	3.028	1.700	1.000	0.782	5.380	Military 5/4 ton Truck
T4S5-M	115 kg	48 kgf.m	5.979	3.500	1.857	1.000	0.799	5.040	Military 2½ ton Truck
T5S5-M	198 kg	98 kgf.m	6.071	3.402	1.785	1.000	0.779	6.086	Military 5 ton Truck

Transfer Case

Model	Approx. Weight	Torque Capacity	Gear Ratio		Applied Vehicle
			High	Low	
T3S5-M	82 kg	235 kgf.m	1.000	1.940	Military 5/4 ton Truck
T4S5-M	197 kg	380 kgf.m	1.000	1.980	Military 2½ ton Truck
T5S5-M	285 kg	600 kgf.m	1.068 / 1.000	2.163 / 2.024	Military 5 ton Truck

Front Axle

Model	Approx. Weight	Type of Housing	Max. Load Capacity	Available Gear Ratio	Type of Axle	Applied Vehicle
O5HS	230 kg	Build Up	1,802 kg	5.125	Full-Floating	Military 5/4 ton
FC 240	380 kg	Ban Jo	3,120 kg	6.722	Full-Floating	Military 2½ ton
FM 240	700 kg	Ban Jo	4,668 kg	6.443	Full-Floating	Military 5 ton

Rear Axle

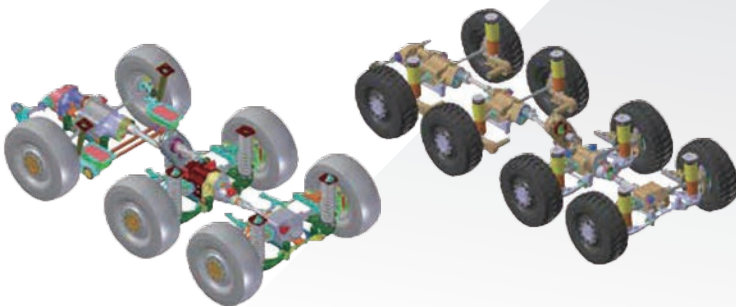
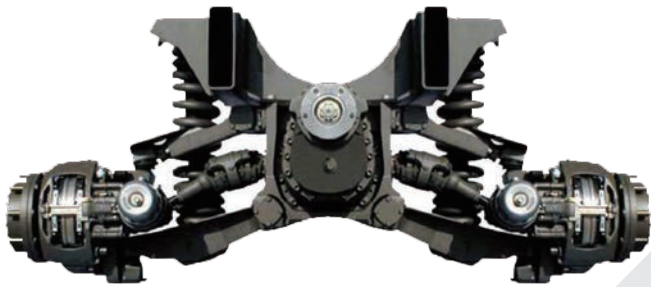
Model	Approx. Weight	Type of Housing	Max. Load Capacity	Available Gear Ratio	Type of Axle	Applied Vehicle
O4HS	80 kg	Build Up	1,360 kg	5.375	Semi-Floating	Military 1/4 ton
10HA	210 kg	Build Up	2,958 kg	5.125	Full-Floating	Military 5/4 ton
C240	360 kg	Ban Jo	6,830 kg	6.722	Full-Floating	Military 2½ ton
M240	660 kg	Ban Jo	9,240 kg	6.443	Full-Floating	Military 5 ton

Application



Independent Suspension

Drive Line



Item

- Application Vehicle Military Wheeled Vehicle
- Max. Input Torque 10,000 Nm

Feature

- Disengagement of Wheels for Swimming
- ADM with Dog Clutches
- CTIS (Central Tire Inflation System)
- Direct-Coupled Transfer Case
- Parking Brake at Transfer Case
- High Tractive Effort
- More Comfortable Performance
- More Durability

Specification

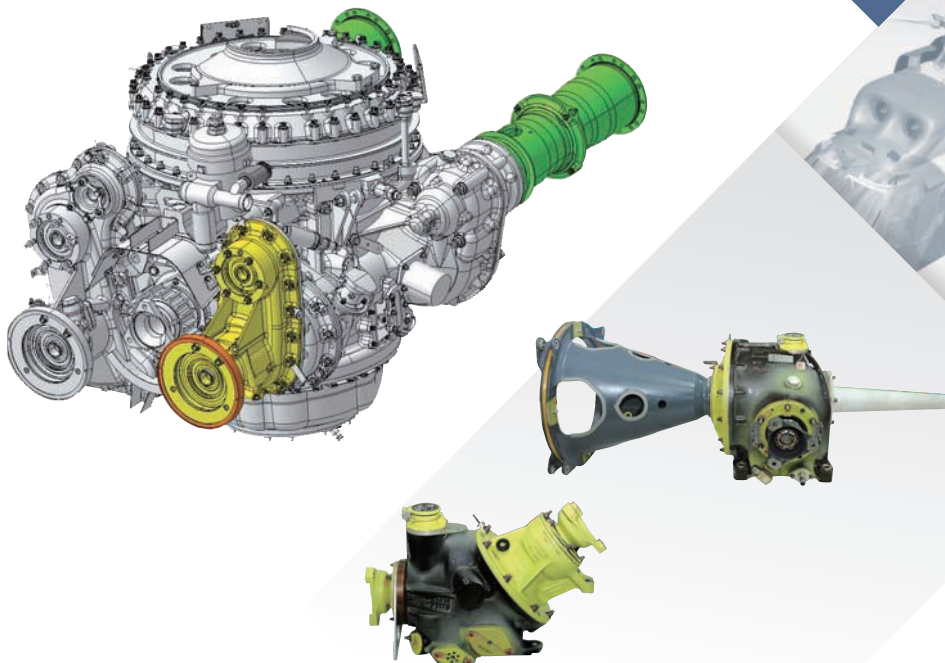
Item		Independent Suspension
Application Vehicle		Military Wheeled Vehicle
Max. Input Torque		10,000 Nm
Max. Input RPM		4,000
Steer/ Suspension	Bound	18°
	Forward	27°
Chassis Type		4×4, 6×6, 8×8
Brake	System	ABS
	Type	Disc Brake
Suspension Type		Double Wishbone (Coil & Damper)
Tire Radius		580 mm
Rebound		16°
Backward		34°
Final Gear Ratio		7.05

Application



Gear Box for Helicopter

MGB | IGB | TGB | TRDS



Item

- Maximum Rated Power 1,382 kw
- Intermediate Rated Power 1,325 kw

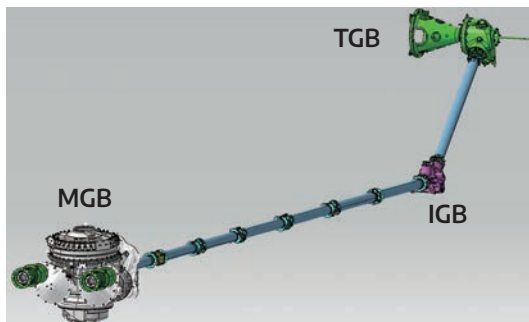
Feature

- It Transfers Power of Engine to Tail Rotor Blade
- Possible to Continue Flight longer than 30 minutes under Non-Lubrication State
- High Performance, High Efficiency, Light Weight, High Reliability, and Low Noise
- Designed for Retaining Bulletproof Performance of 12.7mm

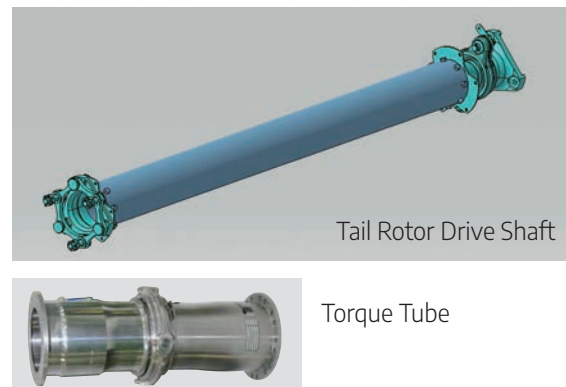
Specification of KUH

Item	Korea Utility Helicopter
Capacity	2 pilots + 2 Crews + 9 Troops
Range	450km
Ceiling	
Hover Ceiling OGE	6,000 ft
Service Ceiling	13,000 ft
Power Plant	
Maximum Rated Power	1,382 kw
Intermediate Rated Power	1,325 kw

Structure



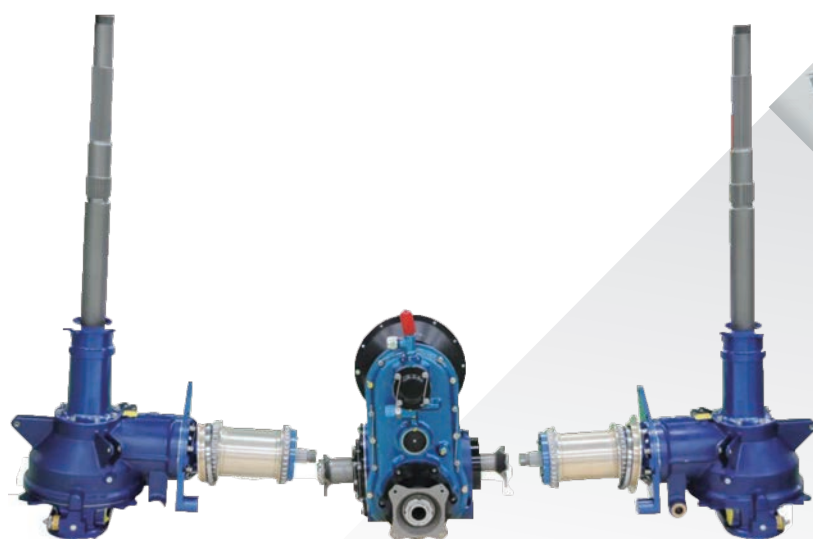
Shaft



Application



Drive System for UAV / UAM



Item

- Center Pinion Speed(rpm)
4,800 ~ 6,000 rpm
- Rotor Pinion Speed(rpm)
1,284 ~ 1,605 rpm

Feature

- Drive System for VTOL & e-VTOL
- Technology development project for smart unmanned aircraft is the development project of intelligent unmanned aircraft of the next generation including unmanned aircraft, which has core smart functions such as automatic flight, collision perception and aversion etc. for obtaining remote image information in real time, day and night, and communication and ground control system.
- Drive System consist of 1 Center Gear Box, 2 Pylon Gear Box (port & stbd) and 2 Pylon Gear Box Convert System.

Specification

Item		Drive System for UAV / UAM	
		Center	Rotor
Gear Box			
Helicopter Mode	Pinion Speed(rpm)	6,000	1,605
	Gear Ratio	3.73832	
Air Plane Mode	Pinion Speed(rpm)	4,800	1,284
	Gear Ratio	3.73832	
Design Life (hour)		4,000	

Application





**Best Technology
& Best Quality**

**Powerpack &
Drive Systems**

 **SNT Dynamics**

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