

## GEARBOX - MOTORSPORT







## REAR DIFFERENTIAL MOTORSPORT & MILITARY



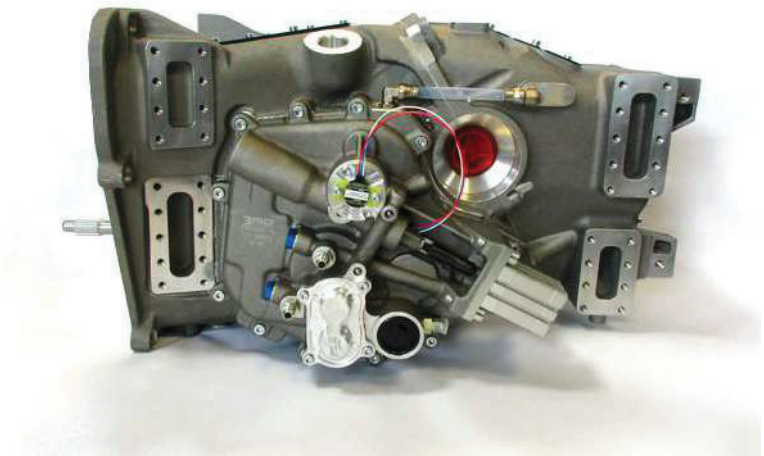
**3MO Performance** " NTV " 2WD transmission has been designed by our R&D department to fit Sportscar (LMP) or GT car using central or rear longitudinal engine mounting. The gearbox has a LMP3 architecture with transversal cluster (like a P2).

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 500 N.m (365 lbs/ft)
- 20mm teeth width ( $1^\circ$  to  $3^\circ$ ) & 17mm ( $4^\circ$  to  $6^\circ$ )
- 89 mm on center
- Gear ratios, wide range
- Step-up conical drive (input) : transverse cluster layout
- Drop gear quick access (overall reduction)
- Oil pump and internal lubrication system + steel filter
- Self-locking differential : 3+3 discs, several ramp angles
- Clutch shaft : 1" x 23 splines or 1" x 26 splines
- Gearbox selection + pneumatical jack supplied
- "Contacless" barrel position sensor

### Endurance 650 N.m option :

- Material
- 3MO CeraFinish : superfinishing option
- Specific input shaft
- TFJ self-locking differential : 4+4 discs, many ramp angles
  - Planet gear support cross
  - Bevel gear guided
  - Cluster removable
  - Preload adjustment without disassembly

Sportscar  
GT





**3MO Performance** " NTX " 2WD transmission has been designed by our R&D department to fit CN architecture car using central longitudinal engine mounting.

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 450 N.m (330 lbs/ft)
- 14mm teeth width
- 89 mm on center
- Gear ratios, wide range
- Hypoid final drive
- Oil pump and internal lubrication system + steel filter
- Dog ring inspection ports
- TFJ self-locking differential : 4+4 discs, many ramp angles
  - Planet gear support cross
  - Bevel gear guided
  - Cluster removable
  - Preload adjustment without disassembly
- Clutch shaft : 1" x 23 splines
- "Contactless" barrel position sensor

### Options :

- 3MO CeraFinish : superfinishing option
- Engine starter

CN  
Prototype



**3MO Performance** 'RX489' gearbox get used to saloon or prototype cars with forward transverse engine. The gearbox specification meets supercar RX applications.

### Rallycross Supercars

- 5 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 800 Nm (590 lbs/ft)
- 20mm teeth width ( $1^\circ$  to  $3^\circ$ ) & 17mm ( $4^\circ$  &  $5^\circ$ )
- 89 mm on center
- Final drive
- Optimized gear ratios for RX
- Oil pump & internal lubrication system + steel filter
- TFJ self-locking differential : 3+3 discs, several ramp angles
  - Planet gear support cross
  - Bevel gear guided
  - Cluster removable
  - Preload adjustment without disassembly
- Specific clutch shaft
- Hydraulic release clutch
- Barrel position sensor
- Cable to ban reverse gear
- Weight : 57kg



**3MO Performance** « TXL » 2WD transmission has been designed by our R&D department to fit saloon or prototype car using front longitudinal engine mounting, and rear differential. The gearbox specification meets a huge range of applications even for front or rear engine layout.

**R**acing, circuit, hill climbing

**D**rift

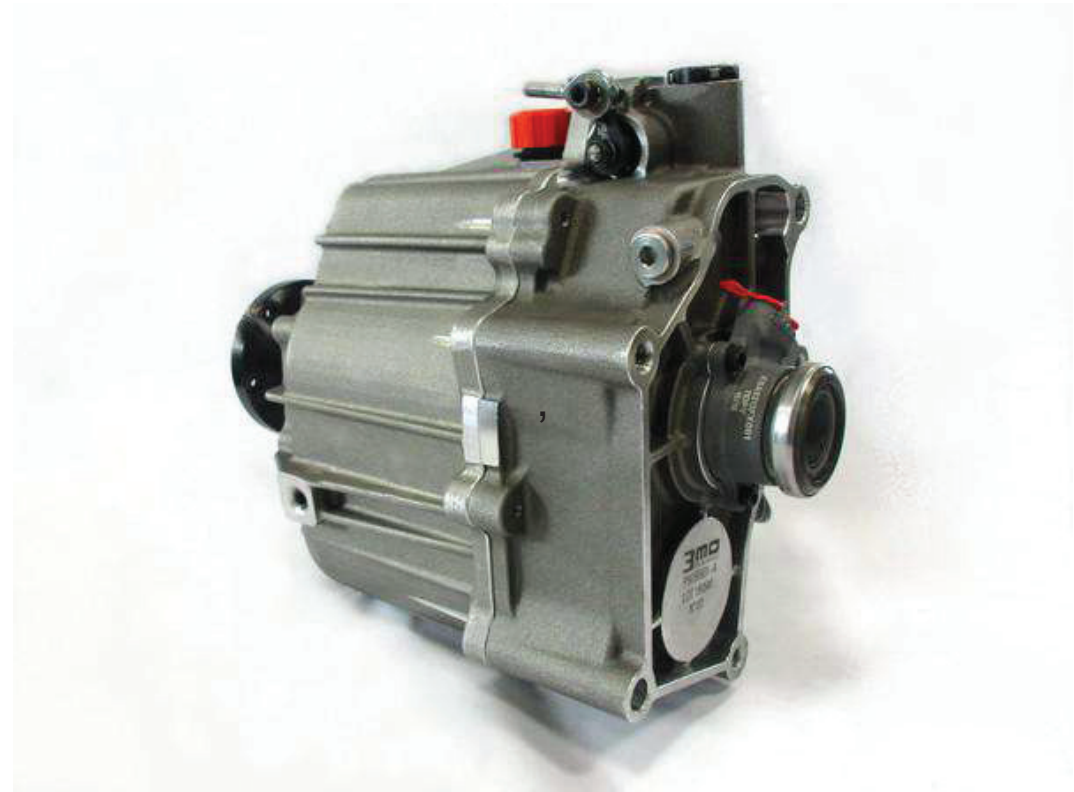
**R**allycross

**R**ally

- 6 (or 5) speed dog ring gearbox, with sequential gearing
- Torque capacities : → Input : according to constant ratios  
→ 500 N.m (365 lbs/ft) on primary line
- 20mm teeth width (1° to 3°) & 17mm (4° to 6°)
- 89 mm on center
- Input constant ratio, several options
- Gear ratios, wide range
- Output on primary shaft : 6<sup>th</sup> ratio = 1
- Splash lubrication
- Specific clutch shaft
- Barrel position sensor
- Cable to ban reverse gear

### Option :

- Driven shaft, several options
- ALCON hydraulic release clutch + feeder tubes
- Cut-off sensor kit



**3MO Performance** « ETLC » 2WD transmission has been designed by our R&D department to fit saloon or prototype car using transverse engine mounting. ETLC gearbox is currently certified for Alpine A110 Cup & Alpine A110 GT4.

**Circuit** : TCR/WTCC/CTCC

**Hillclimbing**

**Rally** : FIA R3 specifications

**Rallycross**

- 6 speed dog ring gearbox, with sequential gearing
- 20mm teeth width ( $1^{\circ}$  to  $3^{\circ}$ ) & 17mm ( $4^{\circ}$  to  $6^{\circ}$ )
- 89 mm on center
- Final drives, several options
- Gear ratios, wide range
- Oil pump and internal lubrication system + steel filter
- Self-locking differential : 3+3 discs, several ramp angles
- 1" x 23 splines clutch shaft
- Hydraulic release clutch + feeder tubes
- Contacless barrel position sensor





**3MO Performance** « ETCW » 2WD transmission has been designed by our R&D department to fit saloon or prototype car using transverse engine mounting. The gearbox specification meets a huge range of applications even for front or rear engine layout.

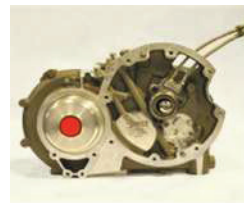
**Circuit** : TCR/WTCC/CTCC

**Hillclimbing**

**Rally** : FIA R3 specifications

**Rallycross**

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 350 to 500 Nm (365 lbs/ft)
- 20mm teeth width ( $1^{\circ}$  to  $3^{\circ}$ ) & 17mm ( $4^{\circ}$  to  $6^{\circ}$ )
- 89 mm on center
- Final drives, several options
- Gear ratios, wide range
- 5<sup>th</sup> and 6<sup>th</sup> ratio change on car quickly
- Dog ring inspection ports (without gearbox disassembly)
- Oil pump and internal lubrication system + steel filter
- TFJ self-locking differential : 3+3 discs, several ramp angles
  - Cluster removable
  - External preload adjustment
- Specific clutch shaft
- ALCON hydraulic release clutch + feeder tubes
- Cut-off sensor kit
- Barrel position sensor
- Cable to ban reverse gear
- Weight : 39 Kg





**3MO Performance** " FTX " 2 or 4 WD transmission has been designed by our R&D department to fit saloon or prototype car using rear or front longitudinal engine mounting. The gearbox specification meets a huge range of applications even for front or rear engine layout.

- 6 speed dog ring gearbox, with sequential gearing
- Torque capacities : → Input : according to chosen ratios  
→ 8.000 N.m on differential line
- 20mm teeth width (1° to 3°) & 17mm (4° to 6°)
- 89 mm on center
- Gear ratios, wide range
- Conical final drive : Ø230 mm crown wheel
- TFJ self-locking differential : 4+4 discs, many ramp angles
  - Planet gear support cross
  - Bevel gear guided
  - Cluster removable
  - Preload adjustment without disassembly
- Dog ring inspection ports
- Pressure gearbox lubrication – External oil pump (customer supply)
- Carrier housing / Non-carrier housing
- Ø108 output flange for lobro
- Specific clutch shaft
- Barrel position sensor
- Cable to ban reverse gear
- Weight : 64 Kg

## Versions :

- 4WD version with transfer casing for central engine (180mm on center line)
- 4WD version overhang engine

**Off-road**

**Racing, circuit, hill climbing** : Prototype, CN, GT4, GT3

**Ice-racing**

**Rally** : RGT, GT+, prototype

**Rallycross**



**3MO Performance** 'TV4-5' gearbox get used to saloon or prototype cars with forward transverse engine. According to the FIA R5 regulation, the TV 4-5 gearbox is currently certified for Peugeot 208 T16 and Citroën DS3 R5 (available on Peugeot Sport and Citroen Racing shop).

### Rally : FIA R5 specifications

- 5 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 500 Nm (365 lbs/ft)
- 20mm teeth width ( $1^{\circ}$  to  $3^{\circ}$ ) & 17mm ( $4^{\circ}$  &  $5^{\circ}$ )
- 89 mm on center
- Final drive
- Gear ratios, wide range
- Oil pump & internal lubrication system + steel filter
- Self locking differential : 4+4 discs, several ramp angles  
Cluster removable
- Specific clutch shaft
- Hydraulic release clutch
- Barrel position sensor
- Cable to ban reverse gear
- Weight : 57kg



**3MO Performance** « TV89-A55 » 2WD transmission has been designed by our R&D department to fit exclusively Citroën Racing for R3-FIA application. The gearbox specification meets exclusively the Citroën Racing DS3-R3 layout (+ Peugeot 208 VLN).

**Rally :** Citroën DS3 R3

**Circuit :** Peugeot 208 VLN

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 500 Nm (365 lbs/ft)
- 20mm teeth width (1° to 3°) & 17mm (4° to 6°)
- 89 mm on center
- 5<sup>th</sup> and 6<sup>th</sup> ratio change on car quickly
- Oil pump and internal lubrication system + steel filter
- Self-locking differential : 4+4 discs, several ramp angles
  - Cluster removable
- Cast aluminium AS7G06 main housings
- Selector shaft machined from the billet
- Specific clutch shaft
- Barrel position sensor
- Cable to ban reverse gear
- Top mounting points
- Weight : 41 Kg





**3MO Performance** « ETV » 2WD transmission has been designed by our R&D department to fit saloon or prototype car using transverse engine mounting. The gearbox specification meets a huge range of applications even for front or rear engine layout.

**Rally** : FIA R3 specifications

**Rallycross**

**Circuit** : TCR/WTCC/CTCC

**Hillclimbing**

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 350 to 500 Nm (365 lbs/ft)
- 20mm teeth width ( $1^{\circ}$  to  $3^{\circ}$ ) & 17mm ( $4^{\circ}$  to  $6^{\circ}$ )
- 89 mm on center
- Final drives, several options
- Gear ratios, wide range
- Self-locking differential : 3+3 discs,  $40^{\circ}/60^{\circ}$  ramp angles
- Splash lubrication
- Clutch shaft : 1" x 23 splines
- ALCON hydraulic release clutch + feeder tubes
- Barrel position sensor
- Cable to ban reverse gear
- Weight : 41 Kg

### Options :

- Oil pump and internal lubrication system + steel filter
- Self-locking differential : 4+4 discs, several ramp angles
- Cut-off sensor kit



**3MO Performance** « ETV-R » sequential gearbox gets used to front wheel drive, saloon or prototype cars with transverse engine. ETV-R front wheel drive differential outputs offers the possibility to optimize engine position : better weight-distribution. ETV-R sequential gearbox also gets used with a specific package to Honda B-Series engine : gearbox on right side of engine.

**Rally**

**Rallycross**

**Circuit**

**Hillclimbing**

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 350 to 500 Nm (365 lbs/ft)
- 20mm teeth width ( $1^{\circ}$  to  $3^{\circ}$ ) & 17mm ( $4^{\circ}$  to  $6^{\circ}$ )
- 89 mm on center
- Final drives, several options
- Gear ratios, wide range
- Self-locking differential : 3+3 discs,  $40^{\circ}/60^{\circ}$  ramp angles
- Oil pump and internal lubrication system + steel filter
- Clutch shaft : 1" x 23 splines
- Hydraulic release clutch + feeder tubes
- "Contactless" barrel position sensor
- Cable to ban reverse gear

### Options :

- Self-locking differential : 4+4 discs, several ramp angles
- Cut-off sensor kit



**3MO Performance** « LC776 EVO » 2WD transmission has been designed by our R&D department to fit saloon or prototype car using transverse engine mounting. The gearbox specification meets a huge range of applications even for front or rear engine layout.

**Rally** ( + FIA R2 version)

**Circuit**

**Hillclimbing**

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 235 Nm to 280 N.m (200lbs/ft)
- 14mm teeth width & 77 mm on center
- Final drives, several options
- EVO Self-locking differential : 2+2 discs  
45°/60° ramp angles
- Splash lubrication
- Clutch shaft : 1" x 23 splines
- Hydraulic release clutch
- Cut-off sensor kit
- 0-5V magnetic barrel position sensor
- Cable to ban reverse gear
- Weight : 37 Kg





**3MO Performance** «TXB89» 4WD-GR transmission has been designed by our R&D department to fit saloon or prototype car with front or rear central engine mounting, using front and rear drive diff. The gearbox specification meets a huge range of high-powered or endurance applications even for front or rear engine layout.

**R**allycross

**O**ff-road

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 550 Nm (400 lbs/ft)
- 20mm teeth width (1° to 3°) & 17mm (4° to 6°)
- 89 mm on center
- Drop gear, several options
- Gear ratios, wide range
- 7075 aluminium machined from the billet
- Splash lubrication
- Selector inversion lever
- 3 positions for primary shaft, output and selector shaft
- Drop gear rotating housings to facilitate the transmission layout
- Specific clutch shaft
- ALCON hydraulic release clutch + feeder tubes
- Cable to ban reverse gear
- Weight : 46 Kg

### Options :

- Central self-locking differential : 4+4 discs
- Various output flanges



Portugal 24 hours winner - France 24 hours winner (x3)

**3MO Performance** «TXB» 4WD-2L transmission has been designed by our R&D department to fit saloon or prototype car with front or rear central engine mounting, offset from the gearbox, using front and rear drive diff. The gearbox specification meets a huge range of high-powered or endurance applications even for front or rear engine layout, but mainly :

### Off-road

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 550 Nm (400 lbs/ft)
- 20mm teeth width (1° to 3°) & 17mm (4° to 6°)
- 89 mm on center
- Gear ratios, wide range
- 4WD output : Twice in-line output
- 7075 aluminium machined from the billet
- Oil pump integrated & external lubrication system
- Selector inversion lever
- 2 positions for primary shaft, output and selector shaft
- Specific clutch shaft
- ALCON hydraulic release clutch + feeder tubes
- Cable to ban reverse gear
- Weight : 36 Kg

### Options :

- Various output flanges
- Barrel position sensor



**3MO Performance** «TXB89-2WD» 2WD transmission has been designed by our R&D department to fit saloon or prototype car using front longitudinal engine mounting, and rear differential. The gearbox specification meets a huge range of applications even for front or rear engine layout.

**R**ally

**R**allycross

**C**ircuit

**H**illclimbing

- 6 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 550 Nm (400 lbs/ft)
- 20mm teeth width ( $1^{\circ}$  to  $3^{\circ}$ ) & 17mm ( $4^{\circ}$  to  $6^{\circ}$ )
- 89 mm on center
- Drop gear, several options
- Gear ratios, wide range
- 7075 aluminium machined from the billet
- Splash lubrication
- Selector inversion lever
- 3 positions for primary shaft, output and selector shaft
- Specific clutch shaft
- ALCON hydraulic release clutch + feeder tubes
- Cable to ban reverse gear
- Weight : 36 Kg

**Option :**

- Barrel position sensor





**3MO Performance** «TXB89-LT230» transmission has been designed by our R&D department to fit Land Rover (and Bowler) vehicle with LT230 transfer.

### Off-road

- 5 speed dog ring gearbox, with sequential gearing
- Maxi engine torque : 600 Nm (442 lbs/ft) – Option 750 N.m
- 20mm teeth width (1° to 3°) & 17mm (4° & 5°)
- 89 mm on center
- Gear ratios, wide range
- Reinforced reverse gear : 20mm teeth width
- 7075 aluminium machined from the billet
- LT230 transfer box : customer supply
- LT230 oil pump : customer supply
- Selector inversion lever
- Specific clutch shaft
- ALCON hydraulic release clutch + feeder tubes
- Barrel position sensor
- Cable to ban reverse gear
- Weight : 35,5 Kg



**3MO Performance** «RD150 EVO» rear differential has been designed by our R&D department to fit saloon or prototype car using rear longitudinal engine mounting.

**R**ally : FIA R5 specifications

**R**allycross Supercars

- Input max torque : 7.500 N.m (5.475 lbs/ft)
- Hypoid spiro-conical torque
- Oil pump and internal lubrication circuit + steel filter
- TFJ self-locking differential : 3+3 discs, several ramp angles
  - Planet gear support cross
  - Bevel gear guided
- Wet clutch : adjustable clutch slippage setting skating until 6500 N.m
- Specific input shaft
- Overpressure degassing 0.3 bars
- Identical left & right transmissions
- Weight : 35 Kg



**3MO Performance** «RD444» rear differential has been designed by our R&D department to fit saloon or prototype car using rear longitudinal engine mounting.

**R**ally  
**C**ircuit  
**R**allycross  
**I**ce-racing

- Input max torque : 2.300 N.m (1.696 lbs/ft)
- Hypoid spiro-conical torque Ø216
- Final drives, several options
- Oil pump and internal lubrication circuit + steel filter
- TFJ self-locking differential : 3+3 discs, several ramp angles
  - Cluster removable
  - Preload adjustment
- Overpressure degassing 0.3 bars
- Identical left & right transmissions
- Weight : 36 Kg

Options :

- Reinforced tripod
- Various female flanges

