



**INFINITI**  
EMPOWER THE DRIVE

## ADVANCED ENGINEERING

INFINITI's flagship VC-Turbo engine incorporates the latest engine technologies for greater power and efficiency, under all driving conditions

## CONTINUOUSLY TRANSFORMING

As the compression ratio changes, the VC-Turbo engine adapts its injection, cooling and lubrication characteristics to enhance its variable nature

# INFINITI 2.0-LITER VC-TURBO ENGINE



### INTEGRATED EXHAUST MANIFOLD

An integrated exhaust manifold in the cylinder head contributes to compact engine packaging, improves turbo response, and enables the catalytic converter to heat up quickly for lower emissions



### LOW FRICTION MIRROR BORE COATING

Mirror bore cylinder coating contributes to a 44% reduction in piston friction – an effect enhanced by the limited lateral movement of the connecting rods and multi-link layout



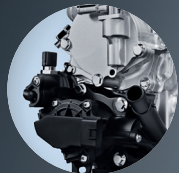
### TWO TYPES OF FUEL INJECTION

The engine uses multi-point and direct fuel injection, balancing efficiency with performance as the compression ratio changes. Direct injection prevents 'knocking' at higher ratios



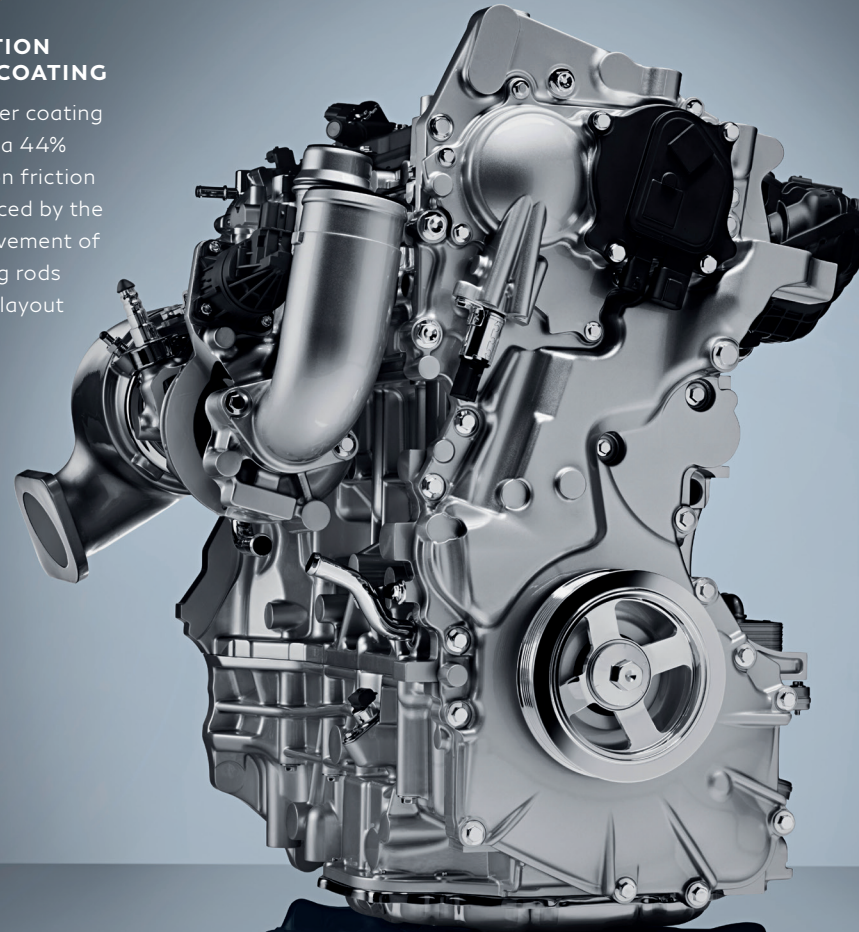
### TWO COMBUSTION CYCLES

Electronic variable valve timing allows the engine to switch between Atkinson and regular combustion cycles, for greater efficiency and optimal performance as the compression ratio transforms



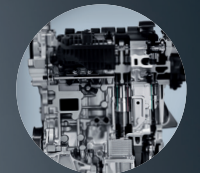
### COOLING CAPABILITIES

A multi-way control valve boosts thermal management, distributing coolant depending on driving conditions. The valve closes at start-up, reducing frictional losses as the engine warms up



### HARMONIC DRIVE

A Harmonic Drive® reduction gear rotates according to the compression ratio required, turning the multi-link mechanism to adjust the height of the pistons' stroke



### VARIABLE DISPLACEMENT OIL PUMP

A two-stage variable displacement oil pump raises the oil pressure as engine speeds rise and the compression ratio lowers. The VC-Turbo engine has greater lubrication needs due to its high specific power