Product Strategy

CURSOR 16 target for Power Generation Application

1. increase the power range coverage (up to 600kVA)
2. be most compact G-Drive in the 600kVA power node
3. be the best in class product in the 600kVA power node in terms of TCO and Noise
4. have double digit product advantage Vs the competitors average

CURSOR 16

PRODUCT RANGE

Extension from 480 kW up to **559 kW** @1500 rpm (**+16%** of power coverage)

INSTALLABILITY

THE MOST COMPACT 600KVA (**-32%** vs competitor average)

PERFORMANCE

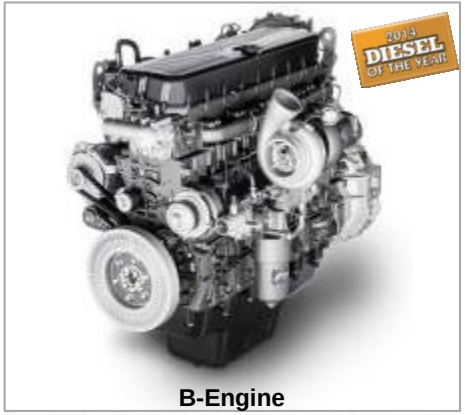
BEST IN CLASS TCO (fuel consumption -**11%** vs comp. average, maintenance interval up to 600hrs)

FPT Competitive advantage

The picture is for reference only

The new Cursor 16

Technology enabler and key features



B-Engine

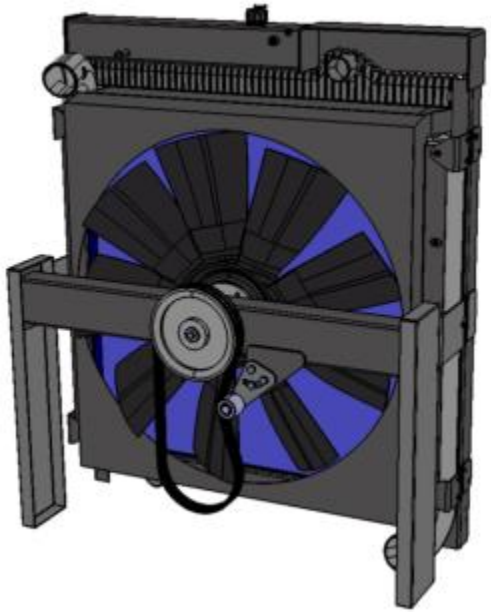
G-Drive

	PERFORMANCE	EFFICIENCY	RELIABILITY	COMPACTNESS
Is the only 16 liter engine specifically designed for the off-road applications	✓	✓	✓	✓
Brand new cooling transmission system and high performance fan (focus)	✓	✓		✓
Common rail injection system up to 2200 bar for more flexible fuel injection control	✓	✓		
New high-resistance cylinder head in CGI (compact graphite iron) instead of cast-iron for improved resistance and lower weight			✓	
Improved engine robustness, with capability up to 220 bar of in-cylinder pressure	✓		✓	
Double re-entrant Injection bowl design for optimized combustion process (focus)	✓	✓		
High-resistance steel pistons			✓	
Ball-bearing turbocharger for improved dynamic performance and overall efficiency (w/o 2stT)	✓		✓	✓

The picture is for reference only

CURSOR 16

Brand New cooling package



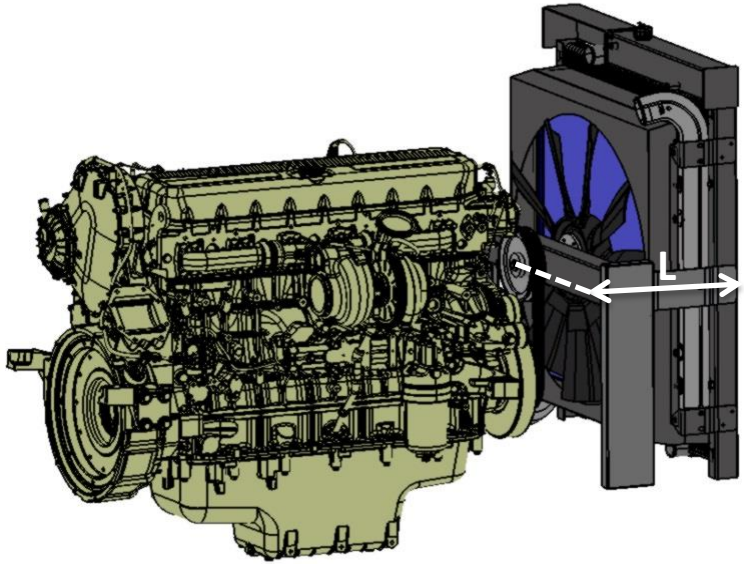
Technology Description	Customer benefits
Radiator package include the fan transmission with a **1:1 ratio Vs standard ~1,35:1**	While **Cursor 16 fan runs @ 1500rpm** the **competitor ones runs @ 2025rpm**; it results in: • Lower fan power consumption (-60% Vs Competition) • Cursor 16 release 10kVA for free; it means up to 1,7% fuel saving • **Lower noise**
Radiator design with **dimpled and flat multi channel tubes** and louvered fins technology with up to +**120% higher surface** in contact with the coolant for heat transfer **than traditional radiator** average	**Best in class cooling package length** (less than 18% than best competitor)
Long-Life Water Radiator and Charge Air Cooler **certified for 30.000 hours** operation	**For life certification**

The new cooling system is a unique FPT selling proposition within the 600kVA range

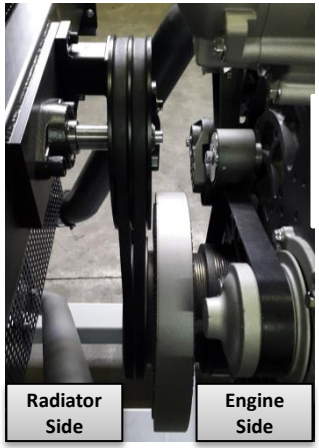
The picture is for reference only

CURSOR 16

Brand New cooling package: assembly and maintainability



New Cooling Fan Transmission System



Benefit

- **Easy and fast maintenance** for **belt** and transmission components thanks to fan pulley not hard linked to the engine
- **Best in class** handling cooling package in terms of **assembly**, **disassembly** and **transportation** thanks to **fan shaft chassis integrated with radiator**.

The picture is for reference only

Injection bowl

Double re-entrant bowl

Technology Description

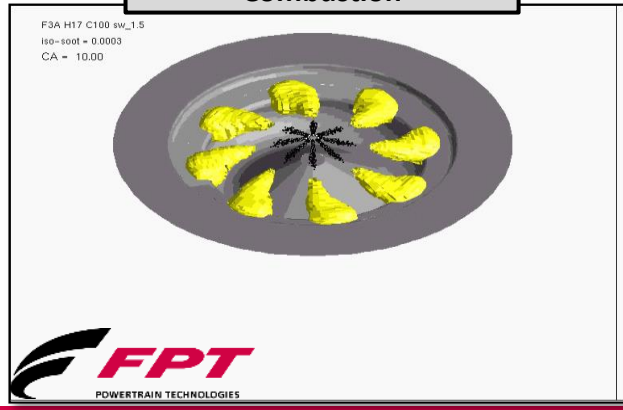
2 different turbulent vortexes allow to perfectly control the fuel-air mixing process and thus the combustion:

- maximizing performance
- no residual fuel is left on the cylinder lining

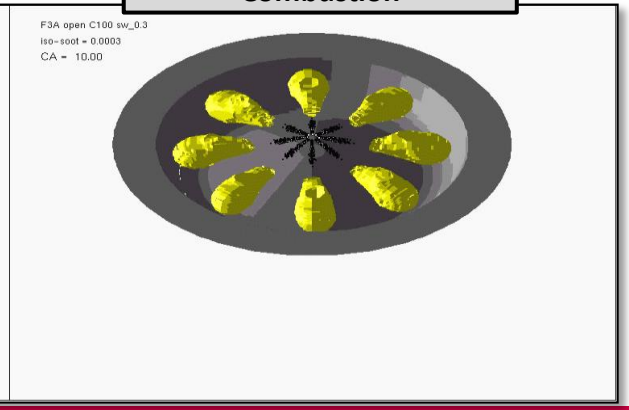
Customer Benefit

- Highest kVA with the minimum fuels consumption
- **Low noise** vibration thanks to optimized and homogeneous combustion

Double re-entrant bowl Combustion



Standard Combustion



Cursor 16 competitiveness arena

Product Assessment on 600kVA PRP@50Hz power rating

Best in class

Better than FPT
Equal to FPT
Worse than FPT

	C16	Competitor #1	Competitor #2	Competitor #3	Competitor #4	Competitor #5	Competitor #6
Stby@50Hz[kWm] Output	**559**	554	574	na	580	558	557
PRP @ 50 Hz [kVA]	**595**	591	600	600	600	600	593
Displacement [l]	**15,9**	16,1	18,13	16,4	19	21,9	16,1
Cylinders	**L6**	L6	L6	V8	L6	V12	L6
Injection system	**CR**	EUI	MEUI	XPI (HP CR)	ECR	Mechanical	EUI
Turbocharger Stage	**1St**	1St	1St (x2 parallel)	1St	1St	1St (x2 parallel)	2St
Fuel Consumption [l/h,PRP@50Hz] **	**115**	119,7 (+4%)	123 (+7%)	121,1 (+5%)	133(+16%)	134(+17%)	125 (+9%)
Service Interval [h]	**600**	600	500	500	500	500	500
Oil sump [lt]	**32**	42 (+31%)	68 (+94%)	35 (+9%)	84 (+163%)	40 (+25%)	48 (+50%)
Load Acc. [G2] **	**65%**	53%	70%	n.a.	80%	n.a.	65%
Noise Level [dBA press.]*	**103**	104 (+26%)	105,3 (+70%)	-	-	-	109 (+300%)
L [m]	**2,3**	2,3 (-)	2,54 (+11%)	2,3 (-)	2,88 (+25%)	2,7 (+17%)	2,35 (+2%)
H [m] for canopy cost	**1,6**	1,8 (+14%)	1,80 (+13%)	1,9 (+19%)	2,02 (+27%)	1,81 (+13%)	1,85 (+16%)
W [m] for transport	**1,1**	1,16 (+5%)	1,53 (+39%)	1,17 (+6%)	1,65 (+50%)	1,4 (+27%)	1,39 (26%)
G-Drive Size (Vol) [m^3]	**4,0**	4,8 (+20%)	7,0 (+74%)	5,1 (+25%)	9,7 (+138%)	6,8 (67%)	6,1 (+49%)
G-Drive Surface [m^2]	**15,9**	17,8 (+12%)	22,4 (+41%)	18,6 (+16%)	27,8 (+74%)	22,4 (+41%)	20,4 (+28)

*ISO 3744-1981 **preliminary

The new Cursor 16

#7 key selling points

Best in class

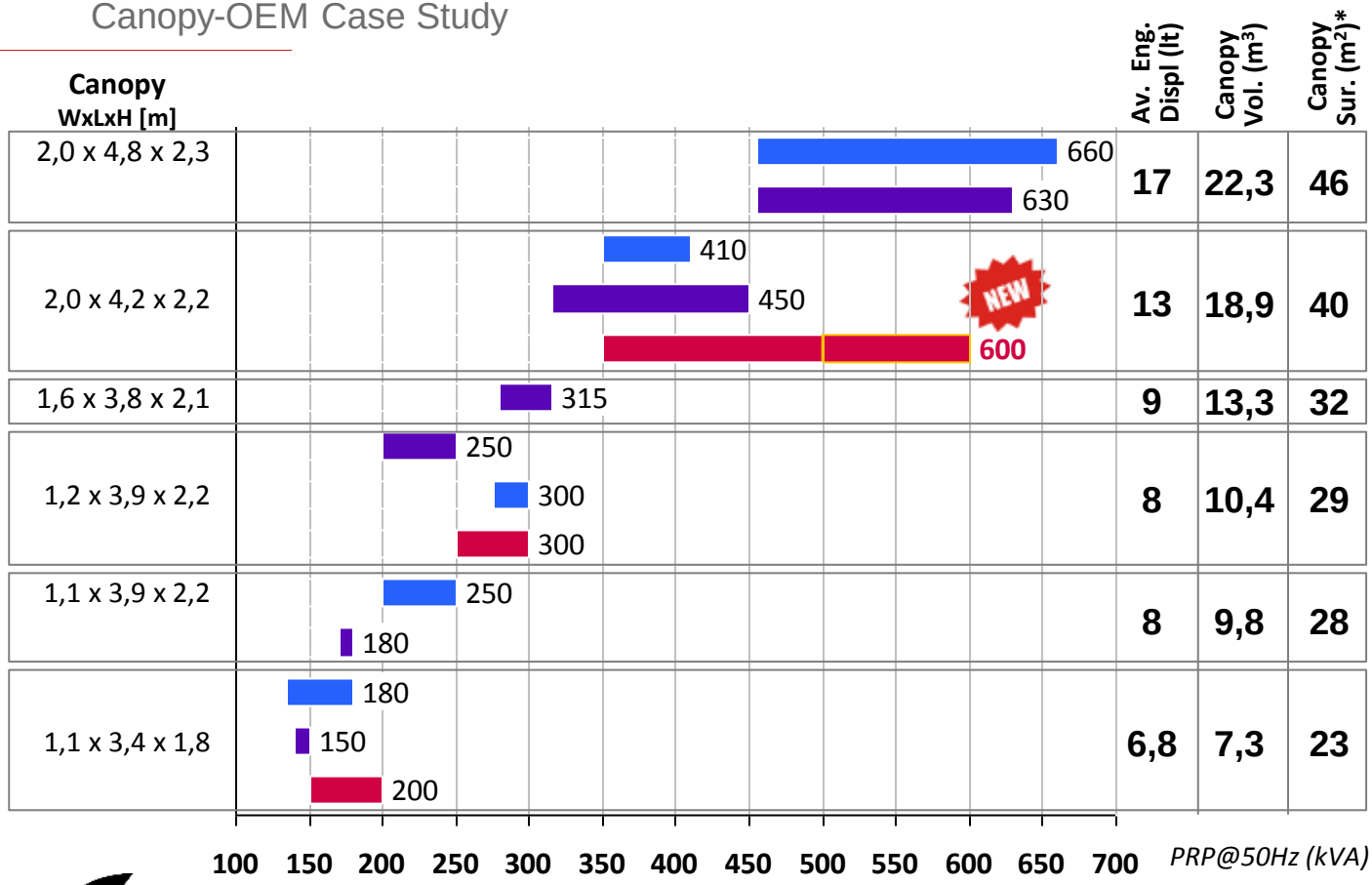
- Most compact G-Drive on the market: -32% less than the competitor average
- Best in Class fuel consumption: +11% better than competitors average
- Best in Class oil service interval (up to 600 hrs) with the smallest oil system capacity (-38% Vs competitor average)
- Best in Class running noise (-50% Vs the best competitors average)
- Excellent Load Acceptance
- No compromise on reliability: 22.000 hours of bench validation
- Switchable 1500/1800 rpm (50/60Hz)

Cursor 16: 600kVA in a 400kVA package

The picture is for reference only

CURSOR 16

Canopy-OEM Case Study



Compactness

CURSOR16 allows to adopt a **canopy surface 15%** smaller than competitor average, allows to **save** canopy **material cost** (-50 ÷ 100€ for 8/10 galvanized)

CURSOR 16 allows to use a **canopy length 12%** than competitor average; to have the maximum **optimization** of **transportation cost (1x600+6x100 Vs 1x600+4x100)**

CURSOR 16 allows a more efficient canopy stock management **reducing canopy options** (**from 6 to 5** in 200÷600kVA power range)

*: the Genset front end has not been considered

CURSOR 16

Modularity of 16 and 13 litre CURSOR Engines

	CURSOR 16	CR13TE7W	Competitor #2
PRP @ 50 Hz [kVA]	**600**	**500 - 400**	**400**
Displacement [l]	15,9 - CR	12,9 - CR	12,5 - EUI
Cilynders	6L	6L	6L
G-Drive dimensions (L*W*H)[mm]	2300*1105*1600	2300*1105*1410	2410*1120*1725
Air to Boil (PRP@50Hz) [°C]	50	51	-

Same **G-Drive size** and **ATB** for **400-500-600 kVA**

Cursor 16: 600kVA in a 400kVA package

Cursor 16 is oil maintenance BEST IN CLASS

Product Assessment on 600kVA PRP@50Hz power rating

Better than FPT
Equal to FPT
Worse than FPT

	C16	Competitor #1	Competitor #2	Competitor #3	Competitor #4	Competitor #5	Competitor #6
PRP @ 50 Hz [kVA]	595	591	600	600	600	600	593
Displacement [l]	15,9 - L6	16,1 –L6	18,1 – L6	16,4 – V8	19 – L6	21,9 – V12	16,1 – L6
Injection system	CR	EUI	MEUI	XPI (HP CR)	ECR	Mechanical	EUI
Turbocharger Stage	1St	1St	1St (x2 parallel)	1St	1St	1St (x2 parallel)	2St
Service Interval [h]	600	600	500	500	500	500	500
Oil sump [lt]	32	42 (+31%)	68 (+94%)	35 (+9%)	84 (+163%)	40 (+25%)	48 (+50%)
Oil Performance [hrs/lt.]	19	14 (-24%)	7 (-61%)	14 (-24%)	6 (-68%)	13 (-33%)	10 (-44%)
Oil Type	15W40 API CI-4 ACEA E7	15W40 API CH-4 ACEA E2	15W40 API CH-4 ACEA E2	15W40 - ACEA E3	15W40 API CH-4 ACEA E2	15W40	15W40 API CH-4 ACEA E2
Engine oil Price €/lt (w/o VAT) List Price (ref. 200lt bulk)	6,14	4,91	4,91	5,32	4,91	4,91	4,91
Engine oil change cost [€]	196	206 (+5%)	334 (+70%)	186 (-5%)	412 (+110%)	196 (-)	236 (+20%)
Engine oil hourly cost [€/hrs]	0,33	0,34 (+5%)	0,67 (+104%)	0,37 (+14%)	0,82 (+152%)	0,39 (+20%)	0,47 (+44%)

FPT is best in class on oil maintenance:

- change interval (+15% % Vs competitor average)
- engine hourly cost (+33% Vs competitor average)