

# HSF-170 T5

**HS | STATIONARY RANGE** Powered by FPT IVECO



| SERVICE                  |         | PRP                 | ESP               |
|--------------------------|---------|---------------------|-------------------|
| POWER                    | kVA     | 154                 | 170               |
| POWER                    | kW      | 123                 | 136               |
| RATED SPEED              | r.p.m.  | 1.5                 | 500               |
| MAIN VOLTAGE             | V       | 400,                | /230              |
| AVAILABLE VOLTAGES       | V       | 230 V (t) ·<br>415, | 380/220 ·<br>/240 |
| RATED AT POWER<br>FACTOR | Cos Phi | 0,                  | ,8                |



## HS | STATIONARY RANGE

HIMOINSA Company with quality certification ISO 9001

HIMOINSA gensets are compliant with EC mark which includes the following

- 2006/42/CE Machinery safety.
   2014/30/UE Electromagnetic compatibility.
   2014/30/UE electrical equipment designed for use within certain voltage limits
   2000/14/EC Sound Power level. Noise emissions outdoor equipment. (amended by
- 2005/88/EC)

   97/68/EC Emissions of gaseous and particulate pollutants.

   EN 12100, EN 13857, EN 60204

Ambient conditions of reference according to ISO 8528-1:2020 normative: 1000 mbar, 25°C, 30% relative humidity.

Prime Power (PRP):
According to ISO 8528-1:2020, Prime power is the maximum power which a generating set is capable of delivering continuously whilst supplying a variable electrical load when operated for an unlimited number of hours per year under the agreed operating conditions with the maintenance intervals and procedures being carried out as prescribed by the manufacturer. The permissible average power output (Ppp) over 24 h of operation shall not exceed 70 % of the PRP.

Emergency Standby Power (ESP):
According to ISO 8528-1:2020, Emergency standby power is the maximum power available during a variable electrical power sequence, under the stated operating conditions, for which a generating set is capable of delivering in the event of a utility power outage or under test conditions for up to 200 h of operation per year with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. The permissible average power output over 24 h of operation shall not exceed 70 % of the ESP

Continuous Power (COP): According to Standard ISO 8528-1:2020, this is the maximum power available for continuous loads for unlimited running hours a year between the maintenance times recommended by the manufacturer under the environmental conditions established by the same.

"Class G2" performance according to the load impact test according to ISO 8528-5:2020

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Subsidiaries:
PORTUGAL | POLAND | GERMANY | UK | SINGAPORE | UAE | PANAMA |
DOMINICAN REPUBLIC | ARGENTINA | ANGOLA | SOUTH AFRICA | MOROCOO



## STANDARD SOUNDPROOFING



WATER-COOLED



THREE PHASE



50 HZ



STAGE 3A



DIESEL

Himoinsa has the right to modify any feature without prior notice.

Weights and dimensions based on standard products. Illustrations may include optional equipment.

Technical data described in this catalogue correspond to the available information at the moment of printing.

The illustrations and images are indicative and may not coincide in their entirety with the product.

Industrial design under patent.









## Engine Specifications | 1.500 r.p.m.

| Rated Engine Output (COP)           | kW | 105,6                         |
|-------------------------------------|----|-------------------------------|
| Rated Engine Output (PRP)           | kW | 132,6                         |
| Rated Engine Output (ESP)           | kW | 146,6                         |
| Manufacturer                        |    | FPT_IVECO                     |
| Model                               |    | N67.TE1PV                     |
| Engine Type                         |    | 4-stroke diesel               |
| Injection Type                      |    | Direct, common rail           |
| Aspiration Type                     |    | Turbocharged and after-cooled |
| Number of cylinders and arrangement |    | 6-L                           |
| Bore and Stroke                     | mm | 104 x 132                     |
| Displacement                        | L  | 6,7                           |
| Cooling System                      |    | Coolant                       |
| Lube Oil Specifications             |    | S10 W40                       |
| Compression Ratio                   |    | 16,5:1                        |
|                                     |    |                               |

| Lube oil consumption with full load         |      | 0,3 % of fuel consumption |
|---|------|---------------------------|
| Total oil capacity including tubes, filters | L    | 17                        |
| Total coolant capacity                      | L    | 36,2                      |
| Governor                                    | Туре | Electrical                |
| Air Filter                                  | Type | Dry                       |
|   |      |                           |



- Diesel engine
- 4-stroke cycle
- Water-cooled
- 12V electrical system
- Dry air filter
- Radiator with pusher fan
- Electronic governor
- Hot parts protection
- Moving parts protection
- 24V electrical system (Optional).



## Generator Specifications | MECC ALTE

| Manufacturer               |       | MECC ALTE   |
|----------------------------|-------|-------------|
| Model                      |       | ECP34.2L4C  |
| Poles                      | No.   | 4           |
| Connection type (standard) |       | Star-series |
| Mounting type              |       | S-3 11"1/2  |
| Insulation                 | Class | H class     |
|                            |       |             |

| Enclosure (according IEC-34-5) | IP23                           |
|--------------------------------|--------------------------------|
| Exciter system                 | Self-excited,<br>brushless     |
| Voltage regulator              | A.V.R. (Electronic)            |
| Bracket type                   | Single bearing                 |
| Coupling system                | Flexible disc                  |
| Coating type                   | Standard (Vacuum impregnation) |
|                                |                                |



- Self-excited and self-regulated
- IP23 protection
- H class insulation

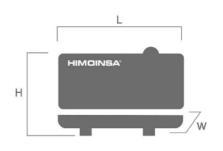






## **WEIGHT AND DIMENSIONS**

|  |       | Standard Version | Optional version |
|--|-------|------------------|------------------|
| Length (L)                               | mm    | 3550             | 3550             |
| Height (H)                               | mm    | 1870             | 1870             |
| Width (W)                                | mm    | 1150             | 1150             |
| Maximum shipping volume                  | m³    | 7,63             | 7,63             |
| Weight with liquids in radiator and sump | Kg    | 1797             | 1772             |
| Fuel tank capacity                       | L     | 240              | -                |
| Autonomy (70% PRP)                       | Hours | 9                | -                |
| Autonomy (100% PRP)                      | Hours | 7                | -                |
|  |       | Plastic tank     | No deposit       |



## **SOUND PRESSURE**

| Sound pressure level  | dB(A)@7m   | $68 \pm 2.4$ |  |
|-----------------------|------------|--------------|--|
| Souria pressure level | ub(A)@/III | 00 ± 2,4     |  |

## **APPLICATION DATA**

### **EXHAUST SYSTEM**

| Maximum allowed back pressure           | kPa | 0,02 |
|---|-----|------|
| Exhaust Flange Size (external diameter) | mm  | 90   |

#### **NECESSARY AMOUNT OF AIR**

|  | Alternator fan air flow | m³/s | 0,487 |  |
|--|-------------------------|------|-------|--|
|--|-------------------------|------|-------|--|

#### **FUEL CONSUMPTION**

| Fuel Consumption ESP      | l/h | 37    |
|---------------------------|-----|-------|
| Fuel Consumption 100% PRP | l/h | 33,6  |
| Fuel Consumption 70 % PRP | l/h | 26,57 |
| Fuel Consumption 50 % PRP | l/h | 24,1  |

#### **FUEL SYSTEM**

| Fuel Oil Specifications    |   | Diesel |
|----------------------------|---|--------|
| Fuel Tank                  | L | 240    |
| Other fuel tank capacities | L | 0      |

## STARTING SYSTEM

| Auxiliary Voltage | Vdc | 12 |  |
|-------------------|-----|----|--|
|-------------------|-----|----|--|



- Steel chassis
- Side auxiliary cable outlet with aluminum cover
- Modular tank and retention tray system. Allows easy removal and / or maintenance of the equipment
- Fuel tank in retention tray
- Soundproofing with foam and polyurethane film
- 4 side lifting points

- Anti-vibration shock absorbers
- Fuel tank
- Fuel level gauge
- Bodywork made from high quality steel plate
- High mechanical strength
- Epoxy polyester powder coating

## Soundproofed version

- Full access for maintenance (water, oil and filters, no need to remove the canopy)
- IP Protection according to ISO 8528-13:2016
- Manual oil extraction pump (Optional).
- Noise reduction kit (Optional).
- Fuel transfer pump (Optional).









# FEATURES OF THE CONTROL UNITS

| Voltage between phases   |         |                                    | M7X | CEM 7 | CEA 7 | CEC 7 | M7X+CEC7 |
|--|---------|------------------------------------|-----|-------|-------|-------|----------|
| Current intensities  |         | Voltage between phases             | •   | •     | •     | •     | •        |
| Prequency  |         | Voltage between neutral and phase  | •   | •     | •     | •     | •        |
| Apparent power (Kwa)  Reactive power (kwa)   | ø       | Current intensities                | •   | •     | •     | •     | •        |
| Apparent power (Kwa)  Reactive power (kwa)   | e<br>E  | Frequency                          | •   | •     | •     | •     | •        |
| Reactive power (kVAr)  | e<br>e  | Apparent power (Kva)               | •   | •     | •     | •     | •        |
| Power factor  Voltage between phases  Voltage between phases  Voltage between phases  Voltage between phases on neutral  Current intensities  Frequency  Apparent power  Active power  Reactive power  Power factor  Coolant temperature  Oil pressure  Fuel voltage  R.P.M.  Battery voltage  R.P.M.  Battery charge alternator voltage  High water temperature by sensor  Low water temperature by sensor  Low oil pressure  Low oil pressure  Voltage between phases  Power factor  Oil pressure  Voltage between phases  Voltage between phases  Oil pressure  O | ţo      | Active power (Kw)                  | •   | •     | •     | •     | •        |
| Voltage between phases   | nere    | Reactive power (kVAr)              | •   | •     | •     | •     | •        |
| Voltage between phases and neutral  Current intensities  Frequency  Apparent power  Active power  Reactive power  Power factor  Coolant temperature  Oil pressure  Fuel level (%)  Battery voltage  R,P,M.  Battery charge alternator voltage  High water temperature by sensor  Low water temperature by sensor  Low water level  Underspeed  Fuel level storage  Fuel storage  Fuel storage  Fuel storage  Fuel storage  Fuel storage  Fuel storage  Voltage shernator failure  Overspeed  Underspeed  Underspeed  Voltage shernator failure  Start failure  Overspeed  Underspeed  Voltage shernator failure  Start failure  Overspeed  Overspee | 9       | Power factor                       | •   | •     | •     | •     | •        |
| Current intensities  Frequency Apparent power Apparent power Active power  Reactive power  Coolant temperature Oil pressure Battery voltage R.P.M. Battery charge alternator voltage  High water temperature by sensor Low water temperature by sensor Low water temperature by sensor Low water level Unexpected shutdown Fuel storage Fu |         | Voltage between phases             |     |       | •     | •     | •        |
| Frequency Apparent power Active power Reactive power Reactive power  Coolant temperature Oil pressure Fuel level (%) Battery voltage R.P.M. Battery charge alternator voltage High water temperature  Low water temperature by sensor Low oil pressure • • • • • • • • • • • • • • • • • • •   |         | Voltage between phases and neutral |     |       | •     | •     | •        |
| Apparent power Active power Reactive power Reactive power Reactive power Reactive power Power factor  Coolant temperature Oil pressure Fuel level (%) Battery voltage R.P.M. Battery charge alternator voltage High water temperature Low water temperature by sensor Low water temperature by sensor Low oil pressure  Low oil pressure  Low oil pressure  Unexpected shutdown Fuel storage failure  Battery voltage failure  Overspeed Underspeed Fuel storage Fuel storag |         | Current intensities                |     |       | •     | •     | •        |
| Reactive power   | m       | Frequency                          |     |       | •     | •     | •        |
| Reactive power   | ë       | Apparent power                     |     |       | •     |       |          |
| Power factor   | E e e   | Active power                       |     |       | •     |       |          |
| Coolant temperature  | Ë       | Reactive power                     |     |       | •     |       |          |
| Oil pressure   | Σ       | Power factor                       |     |       | •     |       |          |
| Fuel level (%)   |         | Coolant temperature                | •   | •     | •     |       | •        |
| Battery voltage R.P.M. Battery charge alternator voltage High water temperature High water temperature by sensor Low water temperature by sensor Low oil pressure Low oil pressure Low oil pressure Unexpected shutdown Fuel storage Fuel storage Fuel storage by sensor Stop failure Battery voltage failure Battery voltage failure Overspeed Underspeed Start failure  Start failure  Battery voltage Start failure   | s<br>S  | Oil pressure                       | •   | •     | •     |       | •        |
| R.P.M.   | ğ       | Fuel level (%)                     | •   | •     | •     |       | •        |
| Battery charge alternator voltage  High water temperature  High water temperature by sensor  Low water temperature by sensor  Low oil pressure  Low oil pressure  Low oil pressure by sensor  Low water level  Unexpected shutdown  Fuel storage  Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure  Start failure   | ä       | Battery voltage                    | •   | •     | •     |       | •        |
| High water temperature    High water temperature by sensor    Low water temperature by sensor    Low oil pressure    Low oil pressure    Low water level    Unexpected shutdown    Fuel storage    Fuel storage    Stop failure    Battery voltage failure    Battery charge alternator failure    Overspeed    Underspeed    Start failure    Start failu | gine    | R.P.M.                             | •   | •     | •     |       | •        |
| High water temperature by sensor  Low water temperature by sensor  Low oil pressure  Low oil pressure   Low oil pressure   Low oil pressure by sensor  Low water level  Unexpected shutdown  Fuel storage  Fuel storage   Fuel storage by sensor  Stop failure  Battery voltage failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  • • • • • • • • • • • • • • • • • • •   | ᇤ       | Battery charge alternator voltage  | •   | •     | •     |       | •        |
| Low water temperature by sensor  Low oil pressure  Low oil pressure by sensor  Low water level  Unexpected shutdown  Fuel storage  Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  • • • • • • • • • • • • • • • • • •   |         | High water temperature             | •   | •     | •     |       | •        |
| Low oil pressure  Low oil pressure by sensor  Low water level  Unexpected shutdown  Fuel storage  Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  • • • • • • • • • • • • • • • • • •  |         | High water temperature by sensor   | •   | •     | •     |       | •        |
| Low oil pressure by sensor  Low water level  Unexpected shutdown  Fuel storage  Fuel storage   Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure  Start failure  Overspeed   |         | Low water temperature by sensor    | •   | •     | •     |       | •        |
| Low water level Unexpected shutdown Fuel storage Fuel storage Fuel storage by sensor Stop failure Battery voltage failure Battery charge alternator failure Overspeed Underspeed Start failure  Start failure  Start failure   |         | Low oil pressure                   | •   | •     | •     |       | •        |
| Unexpected shutdown  Fuel storage  Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure   |         | Low oil pressure by sensor         | •   | •     | •     |       | •        |
| Fuel storage  Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure  |         | Low water level                    | •   | •     | •     |       | •        |
| Fuel storage by sensor  Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure  |         | Unexpected shutdown                | •   | •     | •     |       | •        |
| Stop failure  Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Stort failure  Stop failure  S |         | Fuel storage                       | •   | •     | •     |       | •        |
| Battery voltage failure  Battery charge alternator failure  Overspeed  Underspeed  Start failure  Start failure  Outline of the property of th |         | Fuel storage by sensor             | •   | •     | •     |       | •        |
| Battery charge alternator failure  Overspeed  Underspeed  Start failure  Battery charge alternator failure  Start failure  Start failure   |         | Stop failure                       | •   | •     | •     |       | •        |
| Start failure • • • •  | m       | Battery voltage failure            | •   | •     | •     |       | •        |
| Start failure • • • •  | ţi      | Battery charge alternator failure  | •   | •     | •     |       | •        |
| Start failure • • • •  | tec     | Overspeed                          | •   | •     | •     |       | •        |
| Start failure • • • •  |         | Underspeed                         | •   | •     | •     |       | •        |
| 5 - ·  | gine    | Start failure                      | •   | •     | •     |       | •        |
| Emergency stop   | <u></u> | Emergency stop                     | •   | •     | •     | •     | •        |

Standard

Optional







|                            |  | M7X    | CEM 7     | CEA 7     | CEC 7   | M7X+CEC7 |
|----------------------------|--|--------|-----------|-----------|---------|----------|
|                            | High frequency   | •      | •         | •         | •       | •        |
|                            | Low frequency  | •      | •         | •         | •       | •        |
|                            | High voltage   | •      | •         | •         | •       | •        |
|                            | Low voltage  |        |           |           |         |          |
| 8                          |  | •      | •         | •         | •       | •        |
| ctio                       | Short-circuit  | •      | •         | •         |         | •        |
| g                          | Asymmetry between phases   | •      | •         | •         | •       | •        |
| בַ                         | Incorrect phase sequence   | •      | •         | •         | •       | •        |
| Jato                       | Inverse power  | •      | •         | •         |         | •        |
| ter                        | Overload   | •      | •         | •         |         | •        |
| ₹                          | Genset signal drop   | •      | •         | •         | •       | •        |
|                            | Total hour counter   | •      | •         | •         | •       | •        |
|                            | Partial hour counter   | •      | •         | •         | •       | •        |
|                            | Kilowatt meter   | •      | •         | •         | •       | •        |
| 5                          | Starts valid counters  | •      | •         | •         | •       | •        |
| Ę                          | Starts failure counters  | •      | •         | •         | •       | •        |
| ប៉                         | Maintenance  | •      | •         | •         | •       | •        |
|                            | RS232  |        | 0         | 0         | 0       | 0        |
|                            | RS485  |        | 0         | 0         | 0       | 0        |
|                            | Modbus IP  |        | 0         | 0         | 0       | 0        |
|                            | Modbus   |        | 0         | 0         | 0       | 0        |
|                            | CCLAN  |        | 0         | 0         |         |          |
|                            | Software for PC  |        | 0         | 0         | 0       | 0        |
| Ø                          | Analogue modem   |        | 0         | 0         | 0       | 0        |
| ţ                          | GSM/GPRS modem   |        | 0         | 0         | 0       | 0        |
| nica<br>ica                | Remote screen  |        | <b>o</b>  | 0         |         |          |
| Ē                          | Tele signal  |        | ① (8 + 4) | ① (8 + 4) |         |          |
| Ö                          | J1939  | ⊕ M7XJ | 0         | <b>o</b>  |         | ◎ M7XJ   |
|                            | Alarm history  | (100)  | (100)     | • (100)   | • (100) | (100)    |
|                            | External start   | •      | •         | •         | •       | •        |
|                            | Start inhibition   | •      | •         | •         | •       | •        |
|                            | Mains failure start  |        |           |           |         |          |
|                            |  |        |           |           | •       | •        |
|                            | Start under normative EID  | •      |           | •         | •       | •        |
|                            | Start under normative EJP  Pre-heating engine control  | •      | •         | •         | •       | •        |
|                            | Pre-heating engine control   | •      | •         | •         |         | •        |
|                            | Pre-heating engine control  Genset contactor activation  |        |           | •         | •       |          |
|                            | Pre-heating engine control  Genset contactor activation  Mains & Genset contactor activation   | •      | •         | •         |         | •        |
|                            | Pre-heating engine control  Genset contactor activation  Mains & Genset contactor activation  Fuel transfer control  | •      | •         | •         |         | •        |
|                            | Pre-heating engine control  Genset contactor activation  Mains & Genset contactor activation  Fuel transfer control  Engine temperature control  | •      | •         | •         |         | •        |
|                            | Pre-heating engine control  Genset contactor activation  Mains & Genset contactor activation  Fuel transfer control  Engine temperature control  Manual override   | •      | •         | •         |         | •        |
|                            | Pre-heating engine control  Genset contactor activation  Mains & Genset contactor activation  Fuel transfer control  Engine temperature control  Manual override  Programmable alarms  | •      | •         | •         | •       | •        |
| ıres                       | Pre-heating engine control Genset contactor activation Mains & Genset contactor activation Fuel transfer control Engine temperature control Manual override Programmable alarms Genset start function in test mode   | •      | •         | •         |         | •        |
| eatures                    | Pre-heating engine control Genset contactor activation Mains & Genset contactor activation Fuel transfer control Engine temperature control Manual override Programmable alarms Genset start function in test mode Programmable outputs  | •      | •         | •         | •       | •        |
| Features                   | Pre-heating engine control  Genset contactor activation  Mains & Genset contactor activation  Fuel transfer control  Engine temperature control  Manual override  Programmable alarms  Genset start function in test mode  Programmable outputs  Multilingual  | •      | •         | •         | •       | •        |
| Features                   | Pre-heating engine control Genset contactor activation Mains & Genset contactor activation Fuel transfer control Engine temperature control Manual override Programmable alarms Genset start function in test mode Programmable outputs Multilingual GPS Positioning                                       | •      | •         | •         | •       | •        |
| ions Features              | Pre-heating engine control Genset contactor activation Mains & Genset contactor activation Fuel transfer control Engine temperature control Manual override Programmable alarms Genset start function in test mode Programmable outputs Multilingual GPS Positioning Synchronisation                       | •      | •         | •         | •       | •        |
| inctions Features          | Pre-heating engine control Genset contactor activation Mains & Genset contactor activation Fuel transfer control Engine temperature control Manual override Programmable alarms Genset start function in test mode Programmable outputs Multilingual GPS Positioning                                       | •      | •         | •         | •       | •        |
| Functions   Features       | Pre-heating engine control Genset contactor activation Mains & Genset contactor activation Fuel transfer control Engine temperature control Manual override Programmable alarms Genset start function in test mode Programmable outputs Multilingual GPS Positioning Synchronisation                       | •      | •         | •         | •       | •        |
| Special Functions Features | Pre-heating engine control Genset contactor activation Mains & Genset contactor activation Fuel transfer control Engine temperature control Manual override Programmable alarms Genset start function in test mode Programmable outputs Multilingual GPS Positioning Synchronisation Mains synchronization | •      | •         | •         | •       | •        |

Standard

Optional



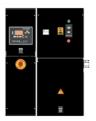
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## CONTROL **PANELS**



#### AS5

Automatic panel WITHOUT transfer switch and WITHOUT mains control with CEM7 unit. (\*) AS5 as optional with CEA7 unit. Automatic panel without transfer switch and WITH mains control.



#### AS7

Automatic control panel WITHOUT
Transfer Switch and
WITHOUT mains
control with M7X

Digital control unit M7X





## CC2

Himoinsa Switching cabinet WITH display.

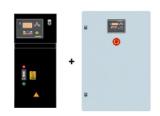
Digital control unit CEC7



## AS5 + CC2

Automatic panel WITH transfer switch and with mains control. The display will be on the genset and on the cabinet.

Digital control unit CEM7+CEC7



## AS7 + CC2

Automatic control panel WITH transfer switch and WITH mains control. The display will be on the genset and on the cabinet.

Digital control unit M7X+CEC7



## AC5

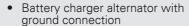
Automatic mains failure control panel. Wall-mounted cabinet WITH transfer switch and thermal magnetic protection (depending on current and voltage).

Digital control unit CEA7



#### Electric control and power panel with measurements devices and control unit (according to necessity and configuration)

- · Adjustable earth leakage protection
- Battery charger (standard on gensets with automatic control
- Heating resistor (standard on sets with automatic control panels)



- Starter battery/ies installed (cables and bracket included)
- Ground connection electrical installation with connection ready for ground spike (not supplied)

## Electrical system

- Battery Switch (Optional).
- Leakage detector (Optional).

7770

Optional Battery (Optima) (Optional).

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