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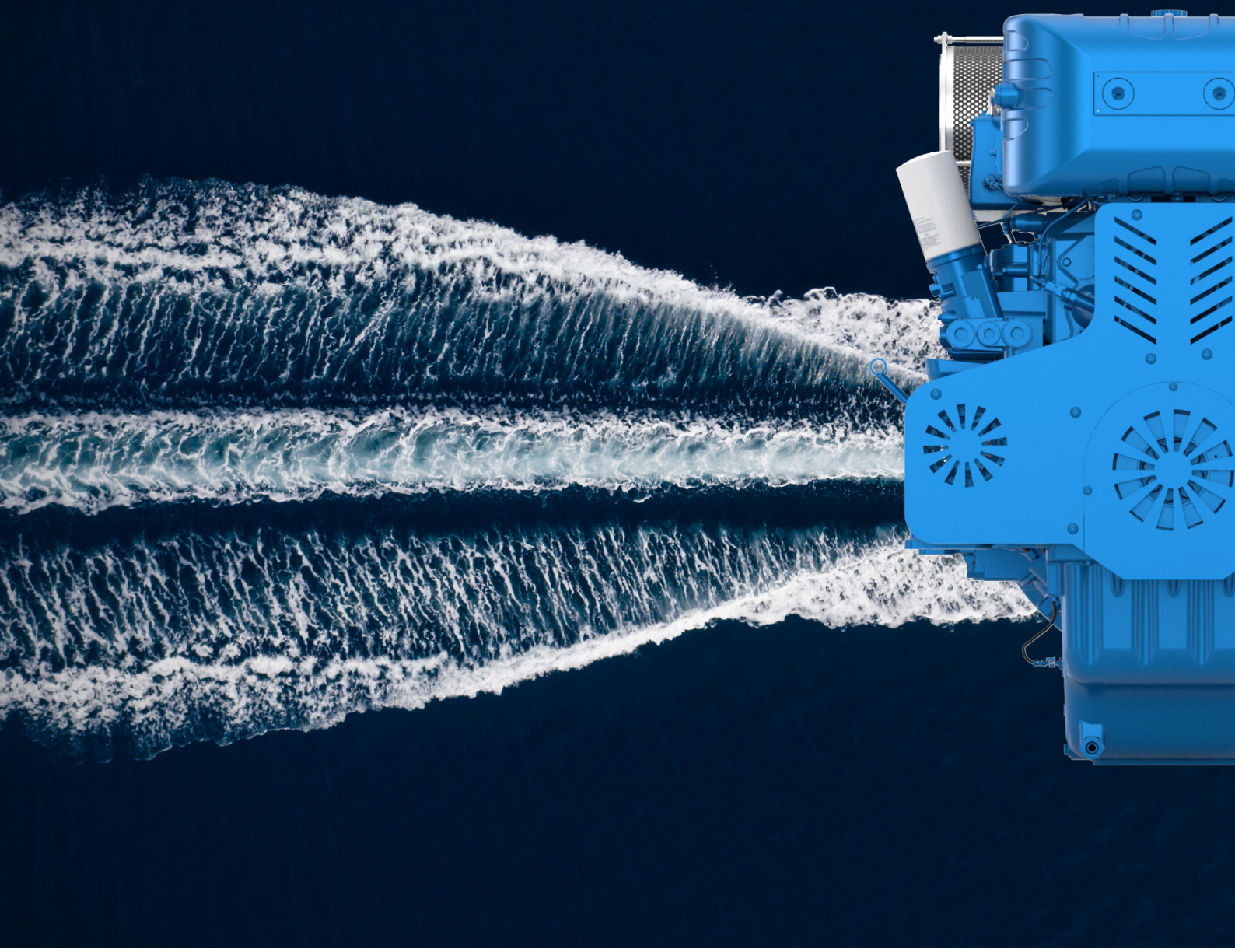
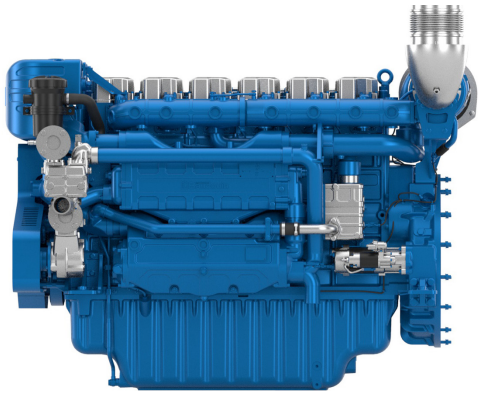


# 6M33.3

## Common rail diesel engine

# 6M33.3

Common rail diesel engine



| | |
|---|---|
| Number of cylinders | 6 |
| Bore and stroke (mm) | 150 x 185 |
| Total displacement (L) | 19.6 |
| Engine rotation | counter clockwise |
| Idle speed (rpm) | 700 |
| Flywheel housing | SAE 0 |
| Flywheel | SAE 18" |

## Customer benefits

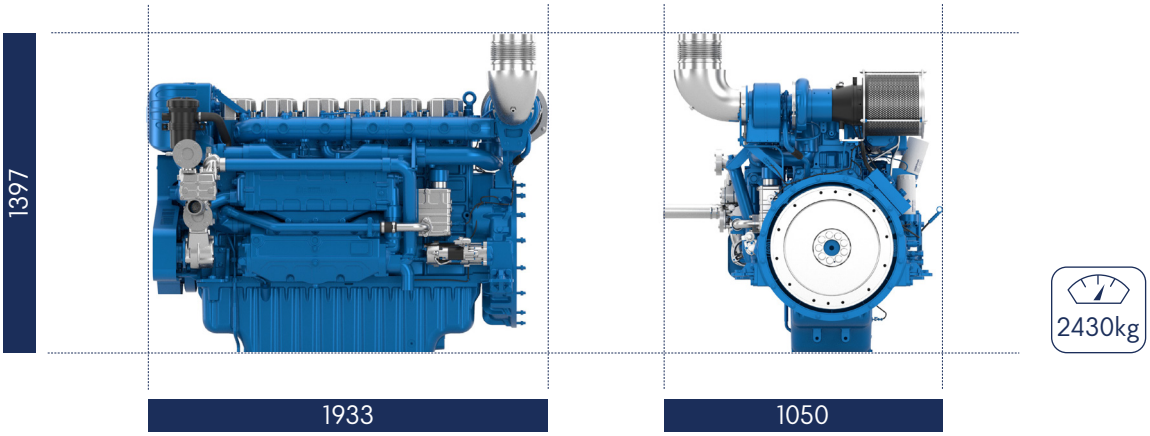
**Genuine marine design** with simple solutions and routine maintenance accessibility
**Continuous compact power** with top-tier performance in its category
**Global environmental care:** with low exhaust emission at any running cycle
**Latest safe technology integration:** electronic injection dynamic redundancy, high-efficiency ball bearing turbocharger, integrated circuits with 0 flexible hoses, and more
**Emphasis on life cycle cost efficiency** with extended MTBO and modular design reducing components and interfaces

## Rated power - Fuel consumption

| Duty | kW | HP | RPM | Fuel consumption | | | IMO |
|---|---|---|---|---|---|---|---|
| | | | | Optimum value | Rated power | | |
| | | | | g/kWh | g/kWh | l/h | |
| P1 | 552 | 750 | 1600 | 199 | 203 | 137 | II-III |
| | 552 | 750 | 1800 | 203 | 211 | 142 | II-III |
| P2 | 574 | 780 | 1600 | 200 | 202 | 142 | II-III |
| | 574 | 780 | 1800 | 205 | 210 | 147 | II-III |
| P3 | 670 | 911 | 1900 | 207 | 215 | 176 | II-III |
| P4 | 750 | 1020 | 2000 | 209 | 224 | 205 | II-III |

# Standard equipment

## Dimensions and dry weight (mm/kg)




| | P1 | P2 | P3 | P4 |
|---|---|---|---|---|
| Application | Unrestricted | Continuous (Heavy) | Intermittent | Light |
| Engine load variations | Not important | Important | Important | Very important |
| Average Engine load factor | 80-100% | 30-80% | 60% | 60% |
| Annual working time | 5000 - 7000h | 3000-5000h | 1000-3000h | Less than 1500h |
| Time at full load | 12h each 12h | 8h each 12h | 2h each 12h | 1h each 12h |

**P1 Continuous Duty**

- Deep sea trawlers
- Shrimps trawlers
- Sea going tug boats
- River tug boats
- Push boats
- Freighters
- Dredges
- LCT
- Ferries

**P2 Heavy Duty**

- Deep sea trawlers
- Shrimps trawlers
- Sea going tug boats
- River tug boats
- Push boats
- Freighters
- Dredges
- LCT
- Ferries

**P3 Intermittent Duty**

- Seasonal passenger vessels
- Fishing boats
- Pilot boats
- Commercial pleasure boats
- Pump boats
- Displacement sailboats
- Trawlers
- Bow thrusters

**P4 Light Duty**

- Private pleasure boats
- Multi-hull pleasure boats
- Survey or rescue fast vessels
- Military fast vessels.

**P5 High performance Duty**

- Private pleasure boats
- Multi-hull pleasure boats

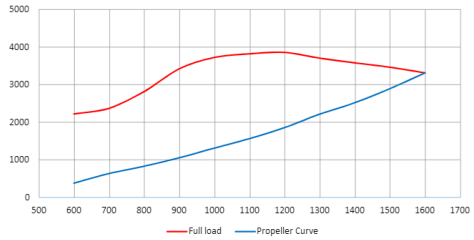
# Standard equipment

| | |
|---|---|
| **Engine & Block** | Cast iron cylinder block, with replaceable cylinder liners<br>Separate cast iron cylinder heads<br>Replaceable valves guides and seats<br>Steel forged crankshaft with 7 bearings<br>Lube oil cooled light steel piston with 3 high performance piston rings |
| **Cooling System** | Two - stage cooling circuit with built - in HT thermostatic valve<br>Integrated fresh water expansion tank<br>High efficiency tubular heat exchanger<br>Belt driven centrifugal fresh water pump<br>Self priming raw water pump with bronze impeller |
| **Lubrication System** | Full flow lube oil filters duplex type<br>Fresh water cooled lube oil heat exchanger<br>Electrical draining and pre-lub pump |
| **Fuel System** | Common-rail electronic injection<br>High pressure pump with shielded high pressure injection rail and pipes<br>Fuel oil filter duplex type |
| **Intake Air and Exhaust System** | Double flow raw water cooled intake air heat exchanger module<br>High efficiency dry turbocharger with ball bearing technology |
| **Electrical System** | Voltage: 24V DC insulated<br>Electrical starter<br>190A battery alternator |
| **Optional Equipment** | Keel Coooling configuration<br>1400N.m front PTO with elastic coupling<br>Additional pulley<br>Elastic mounting<br>Closed circuit blow by filtration<br>Air starter<br>Fresh water pre-heater<br>Cabin heating connections<br>Master BMS for full class engines<br>Additional displays |

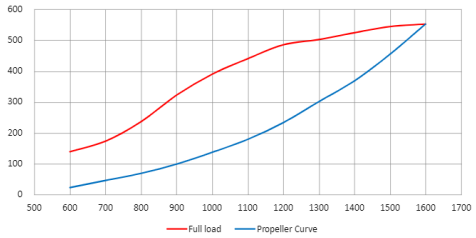
## Performance

P1 552@1600rpm

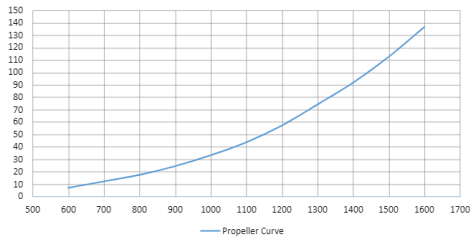
### Torque



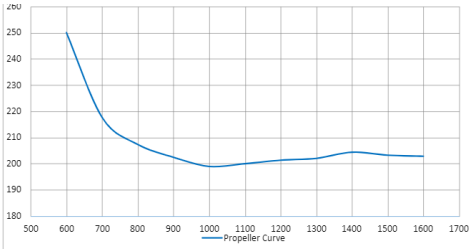

### Power




### BSFC (L/h)

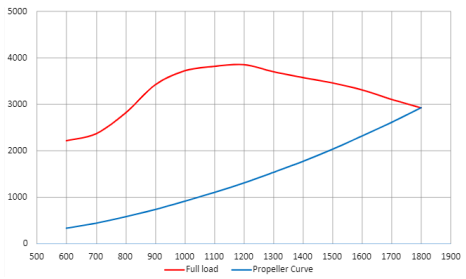



### BSFC (g/kWh)

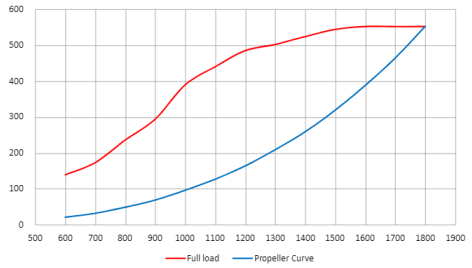



P1 552@1800rpm

### Torque




### Power

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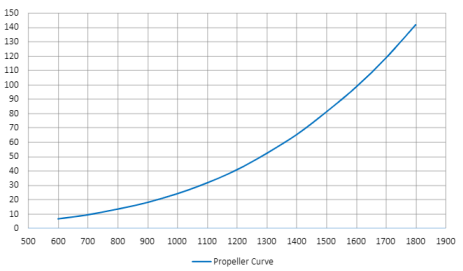
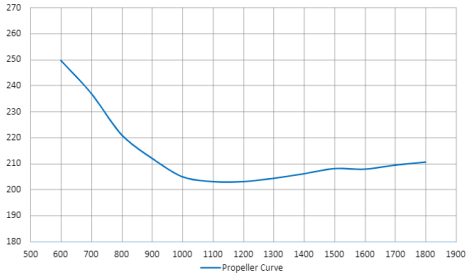


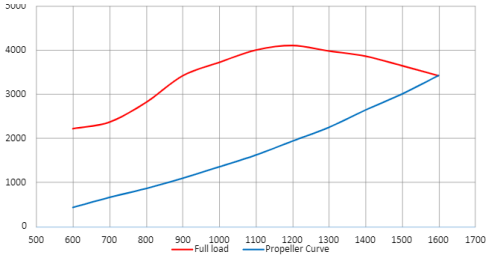

### BSFC (g/kWh)



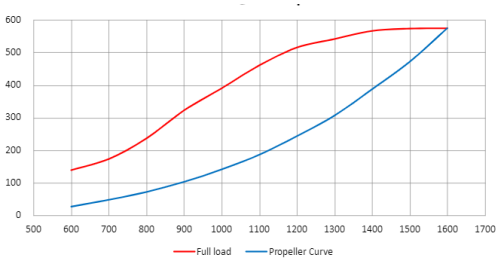
## Performance

P2 574@1600rpm

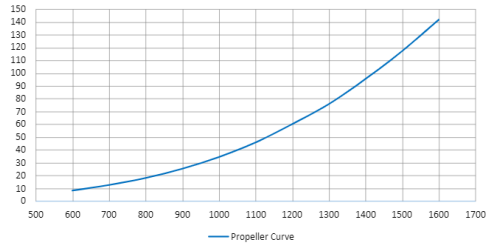
### Torque



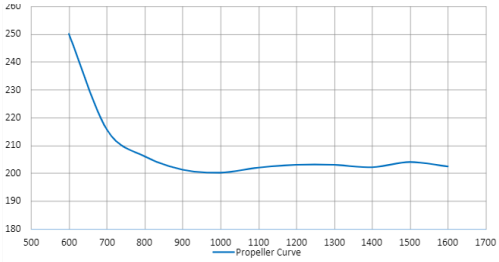

### Power




### BSFC (L/h)

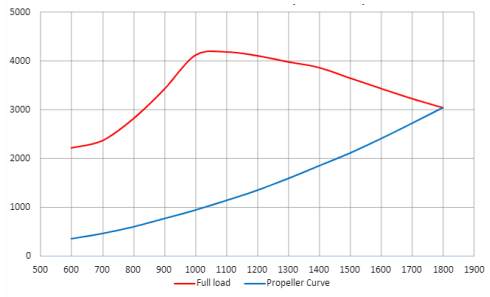



### BSFC (g/kWh)

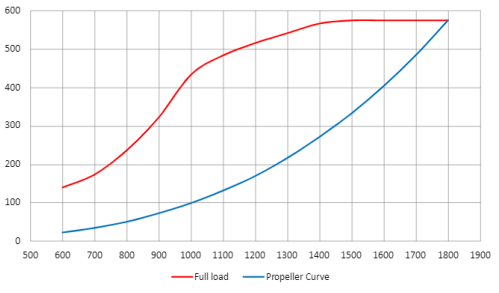



P2 574@1800rpm

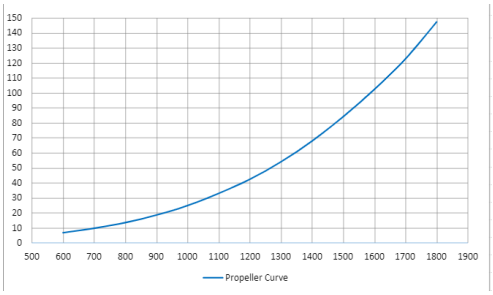
### Torque



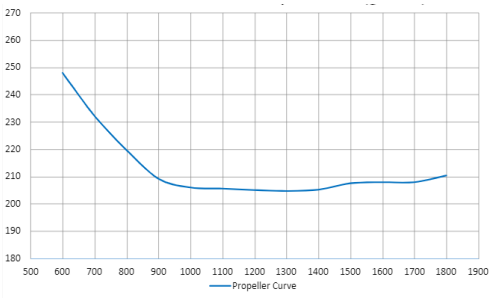

### Power




### BSFC (L/h)




### BSFC (g/kWh)



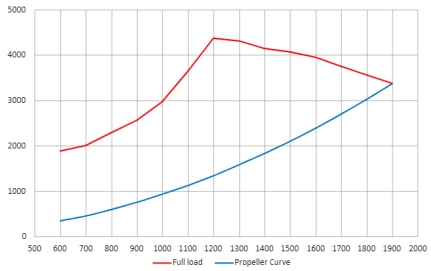
# 6M33.3

Common rail diesel engine

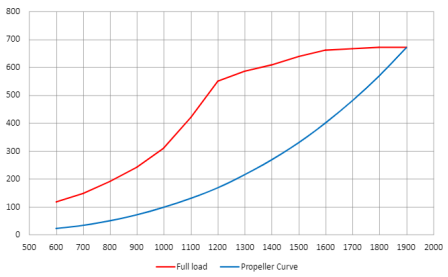
## Performance

P3 670@1900rpm

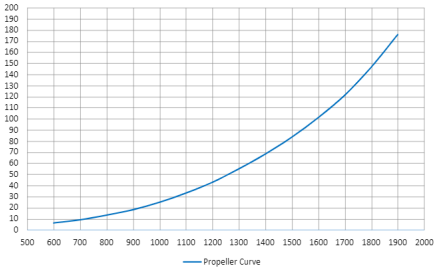
Torque



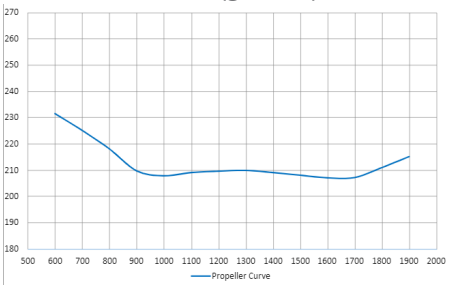

Power




BSFC (L/h)

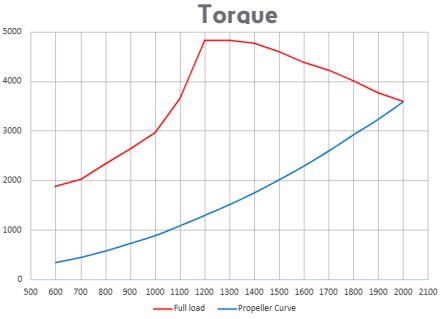



BSFC (g/kWh)

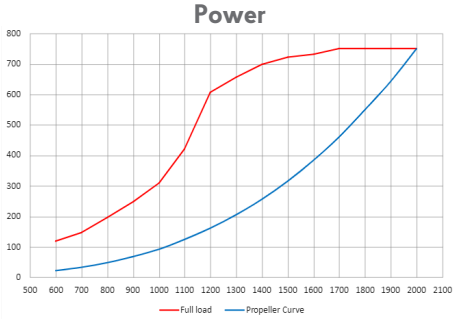



P4 750@2000rpm

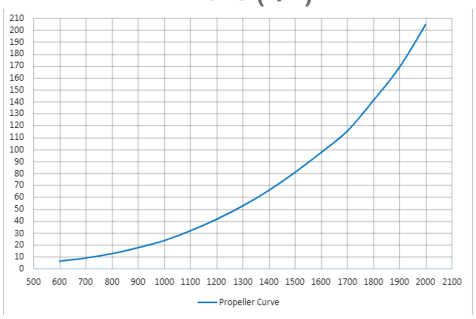
Torque



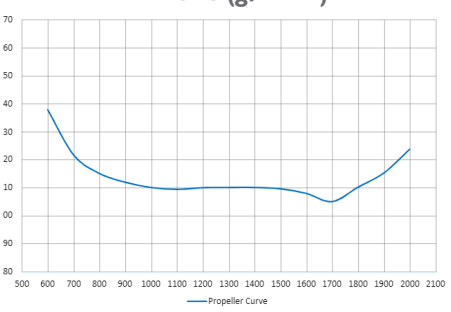

Power




BSFC (L/h)




BSFC (g/kWh)




## Power definition

(Standard ISO 3046/1 - 1995 (F))

### Reference conditions

| | |
|---|---|
| Ambient temperature | 25°C / 77°F |
| Barometric pressure | 100 kPa |
| Relative humidity | 30%R |
| Raw water temperature | 25°C / 77°F |

### Fuel oil

| | |
|---|---|
| Relative density | 0,840 ± 0,005 |
| Lower calorific power | 42 700 kJ/kg |
| Consumption tolerances | + 5% (DIN ISO 3046-1) |
| Inlet limit temperature | 35°C /95°F |

### Our ratings also comply with classification societies maximum temperature definition without power derating.

| | |
|---|---|
| Ambient temperature | 45°C / 113°F |
| Raw water temperature | 32°C / 90°F |

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