

# DIESEL ENGINE

## KDP SERIES FOR FIRE PUMP

### Model: 4KDP-90

#### Engine Specifications

|   |                    |
|---|--------------------|
| In-Line, 4 stroke, water-cooled, Turbocharger |                    |
| Combustion type                               | Direct injection   |
| Cylinders - Bore × stroke                     | 4 - 105 × 118 mm   |
| Displacement                                  | 4087 cc            |
| Firing order                                  | 1 – 3 – 4 – 2      |
| Compression ratio                             | 18 : 1             |
| Dry weight                                    | Approx. 395 kg     |
| Dimension(LxWxH)                              | 950 × 660 × 830 mm |
| Rotation                                      | Anti-clockwise     |
| Flywheel / Housing                            | SAE # 10 / # 3     |

#### Cooling System

|                 |                          |
|-----------------|--------------------------|
| Cooling method  | Fresh water forced type  |
| Water pump      | Centrifugal, Belt driven |
| Max. water Temp | 95 degree C.             |
| Cooling Fan     | Blade 7EA - Ø 500 mm     |

#### Intake & Exhaust System

|                     |                           |
|---------------------|---------------------------|
| Max air restriction | Clean 2 kPa / Dirty 5 kPa |
| Exhaust back        | Max 6 kPa                 |

#### Electric System

|                    |               |
|--------------------|---------------|
| Charging generator | 13.5 V × 65 A |
| Starting motor     | 12 V × 3.7 kW |
| Battery            | 12 Vx 120 Ah  |

**Prime power**  
**Standby Power**

**90.0KW(120HP)/3000 rpm**  
**99.0KW(132HP)/3000 rpm**

#### Fuel System

|                  |                           |
|------------------|---------------------------|
| Injection pump   | Direct Injection type     |
| Governor         | Mechanicaltype            |
| Feed pump        | Mechanicaltype            |
| Injection nozzle | Multi-hole type/ 0.255 mm |
| Opening pressure | 20+0.5MPa                 |
| Fuel filter      | Single Stage, Paper       |

#### Fuel Consumption

|                          |               |
|--------------------------|---------------|
| Prime power at 3000rpm   | 25.0 liters/h |
| Standby Power at 3000rpm | 27.5 liters/h |

#### Lubrication System

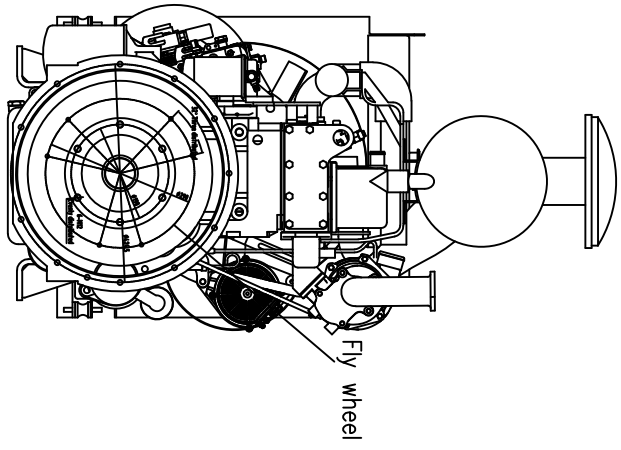
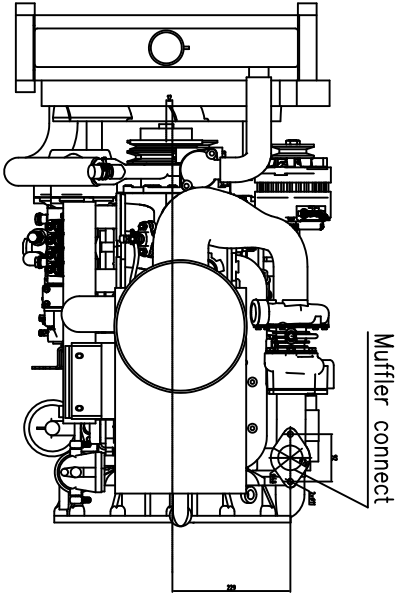
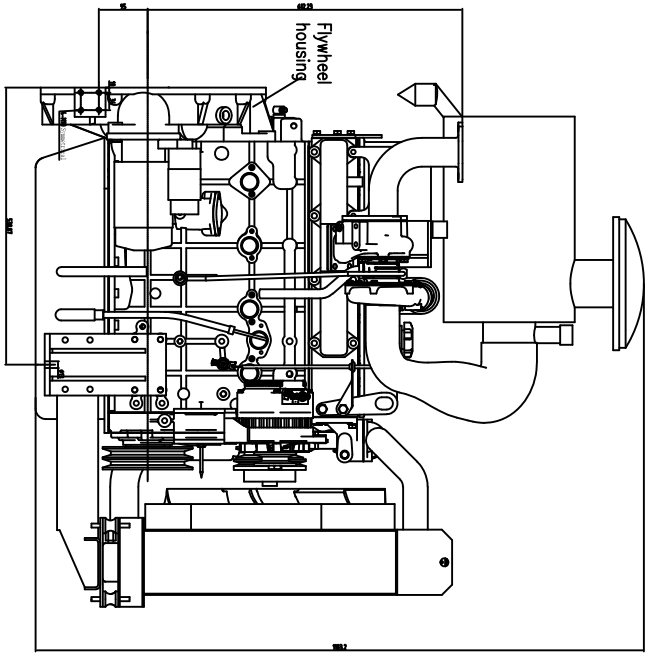
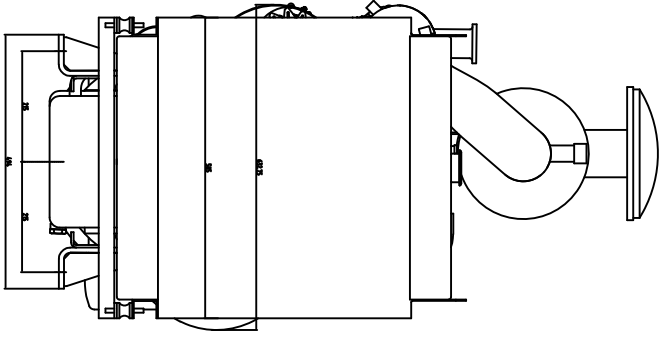
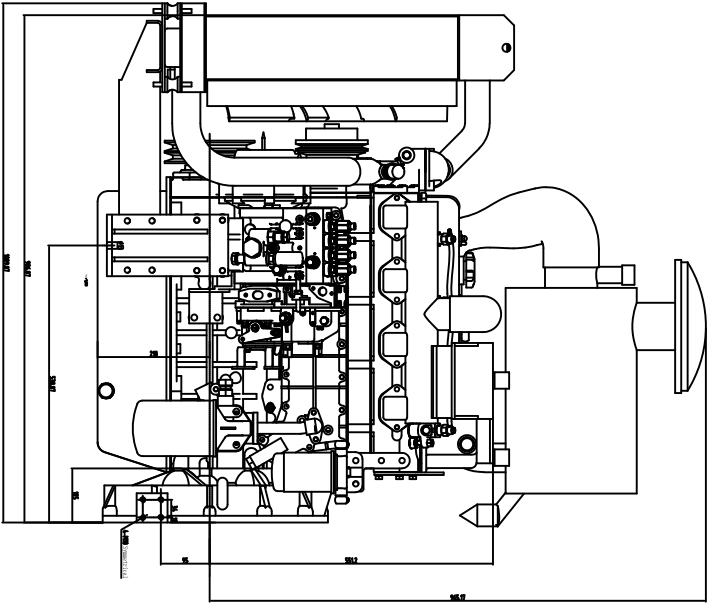
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|-------------------------|---------------|
| Lub. Oil Pan Capacity   | 8 liters      |
| Max. allowable Oil Temp | 110 degree C. |
|                         | Min. 294 kPa  |
| Oil pressure            | Max. 490 kPa  |

#### Engineering Data

|                |                         |
|----------------|-------------------------|
| Combustion Air | 3.72m <sup>3</sup> /min |
| Exhaust Gas    | 9.31m <sup>3</sup> /min |

#### Conversion Table

|                                    |                   |
|------------------------------------|-------------------|
| PS = kW × 1.3596                   | in. = mm × 0.0394 |
| psi = kg/cm <sup>2</sup> × 14.2233 |                   |
| HP= PS x 0.98635                   |                   |



|                            |            |                               |             |
|----------------------------|------------|-------------------------------|-------------|
| CUSTOMER                   |            | TITLE                         |             |
| -                          |            | <b>KODJEC ENGINE ASSEMBLY</b> |             |
| SCALE 1/1                  |            | DATE 14.09.20                 |             |
| DESIGNED BY                | CHECKED BY | DRAWN BY                      | APPROVED BY |
| -                          | -          | -                             | -           |
| DRAWING NO. 4KDP-90        |            | DWM. NO. 4KDP-90              |             |
| COMPONENT NO. 301811002-98 |            | REV. NO.                      |             |
| -                          |            | -                             |             |
| APPROVAL                   |            | REV. NO.                      |             |
| -                          |            | -                             |             |