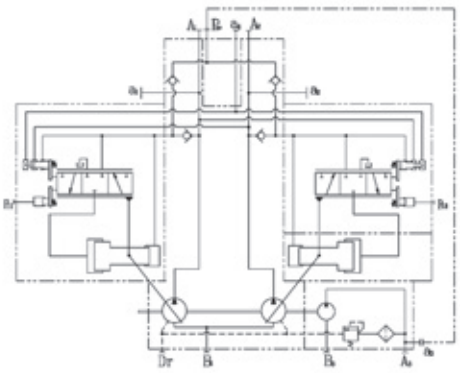
# Double Pump

## Summary

The IK3V series main pump is designed for contruction machinery and industrial machinery.
This series main pump features high power densityand high efficiency.
In addition, Good varieties of functional design is possible to high grade construction machinery and industrial machinery.

## Hydraulic diagram



## Features

IK3V series main pump is high pressure axial piston swash plate pump for construction machinery and industrial machinery based upon iNi long time and rich experience.

The adoption of high load berings and friction free material have achieved high reliability and long lifetime.
The spherical valve palte and improved hydraulic balance provide stable cylinder rotation, this achieving high efficicecy even in low-pressure and low speed operating range.

Diffent hydraulic and electrical control method are available.
The flow control, pressure control, power control are available.

Various size of optional gear pumps are attachable. No separate pump unit is neccessary as control source. Hydraulic units can thus be made more conpact.

## Model options

| I | K3V | 63 | DT | - | R | - | 2N |
|---|---|---|---|---|---|---|---|

"iNi" Company
Swash Plate Design: K3V
Displacement: 63cc/rev、112cc/rev
Double Pump: DT Single Pump: S
Clockwise: R Anticlockwise: L (View from shaft end)
Regulator code: 2N

Horsepower control code:

1——Constant horsepower control
2——Total horsepower control
4——High pressure cut-off control
5——Constant horsepower and High pressure cut-off control
6——Variable horsepower and High pressure cut-off control
7——Variable horsepower control
8——Single pump total horsepower control
9——Single pump manual control

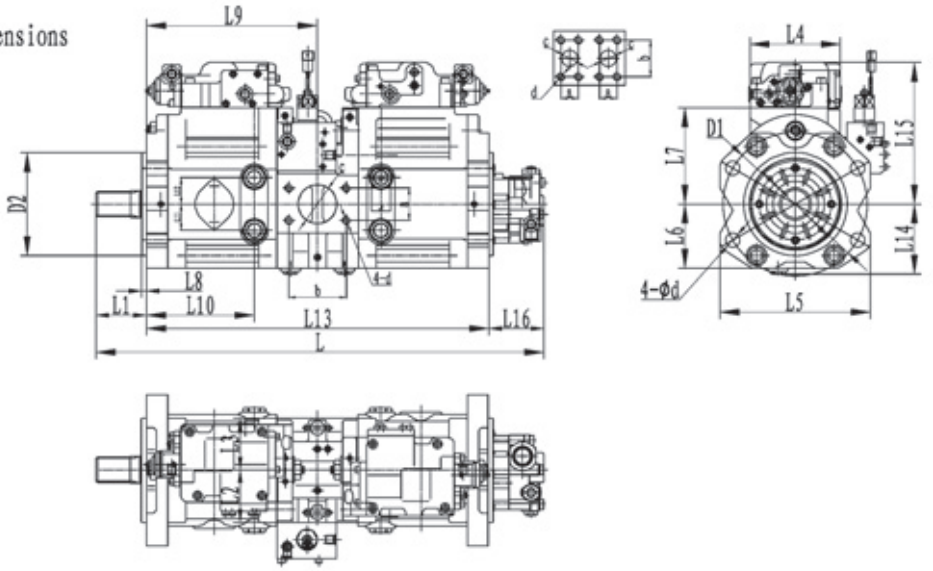
Flow control code: N——Negative flow control

# Double Pump

## Specification

| Modle | MAX. Displacement | Rated Pressure | | Max. Pressure | | MAX. Speed for self priming | Max. Input Torque | | Weight | Application |
|---|---|---|---|---|---|---|---|---|---|---|
| | cc/rev | kgf/cm² | Mpa | kgf/cm² | Mpa | rpm | kgf m | N m | kg | ton |
| IK3V63 | 63×2 | 320 | 31.4 | 350 | 34.3 | 2650 | 35 | 343 | 81 | 13~17 |
| IK3V80 | 80×2 | 320 | 31.4 | 350 | 34.3 | 2400 | 54 | 529 | 84 | 13~17 |
| IK3V112 | 112×2 | 320 | 31.4 | 350 | 34.3 | 2360 | 60 | 588 | 125 | 20~25 |
| IK3V140 | 140×2 | 320 | 31.4 | 350 | 34.3 | 2150 | 114 | 1117 | 160 | 29~37 |
| IK3V180 | 180×2 | 320 | 31.4 | 350 | 34.3 | 1950 | 112 | 1098 | 160 | 39~45 |

## Dimensions




| Modle | D1 | D2 | d | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 | L10 | L11 | L12 | L13 | L14 | L15 | L16 | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IK3V63 | 180 | 125 | 18 | 76 | 70 | 70 | 140 | 190 | 89 | 98 | 8 | 228 | 138 | 37 | 37 | 464 | 97 | 195 | 78 | 618 |
| IK3V80 | 180 | 125 | 18 | 76 | 70 | 70 | 140 | 190 | 89 | 98 | 8 | 228 | 138 | 37 | 37 | 464 | 97 | 195 | 78 | 618 |
| IK3V112 | 224 | 160 | 22 | 78 | 80 | 80 | 140 | 234 | 100 | 110 | 8 | 265 | 167 | 41 | 41 | 538 | 109 | 220 | 78 | 694 |
| IK3V140 | 250 | 180 | 22 | 93 | 92 | 92 | 140 | 256 | 112 | 123 | 8 | 305 | 190 | 53 | 53 | 618 | 121 | 245 | 80 | 791 |
| IK3V180 | 250 | 180 | 22 | 93 | 92 | 92 | 140 | 256 | 112 | 123 | 8 | 305 | 190 | 53 | 53 | 618 | 121 | 245 | 80 | 791 |

## Discharge Flange

| Modle | a | b | c | d |
|---|---|---|---|---|
| IK3V63 | 23.8 | 50.8 | 19 | M10-16 |
| IK3V80 | 23.8 | 50.8 | 19 | M10-16 |
| IK3V112 | 27.8 | 57.2 | 25 | M12-22 |
| IK3V140 | 27.8 | 57.2 | 25 | M12-22 |
| IK3V180 | 27.8 | 57.2 | 25 | M12-22 |

## Suction Flange

| Modle | a | b | c | d |
|---|---|---|---|---|
| IK3V63 | 50.8 | 88.9 | 60 | M12-18 |
| IK3V80 | 50.8 | 88.9 | 60 | M12-18 |
| IK3V112 | 50.8 | 88.9 | 60 | M12-18 |
| IK3V140 | 61.9 | 106.4 | 76 | M16-24 |
| IK3V180 | 61.9 | 106.4 | 76 | M16-24 |

## Dimensions of shaft end

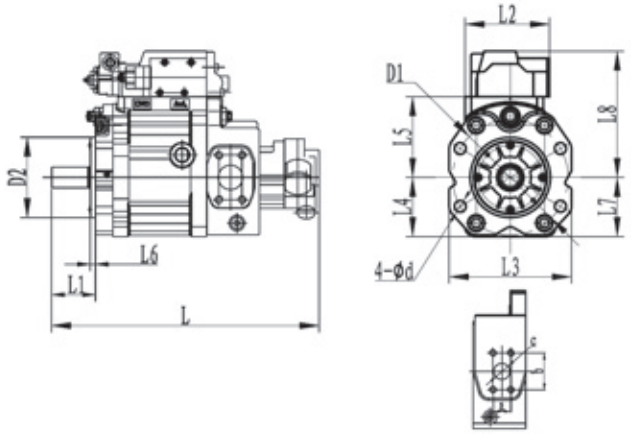
| Modle | No. of teeth | Pitch circle dia | Pressure angle | Module | Rule |
|---|---|---|---|---|---|
| IK3V63 | 14 | 29.6 | 30° | 12/24 | SAE |
| IK3V80 | 12 | 30.0 | 20° | 2.5 | JIS D2001 |
| IK3V112 | 12 | 30.0 | 20° | 2.5 | JIS D2001 |
| IK3V140 | 17 | 42.5 | 20° | 2.5 | JIS D2001 |
| IK3V180 | 17 | 42.5 | 20° | 2.5 | JIS D2001 |

# Single Pump

## Specification

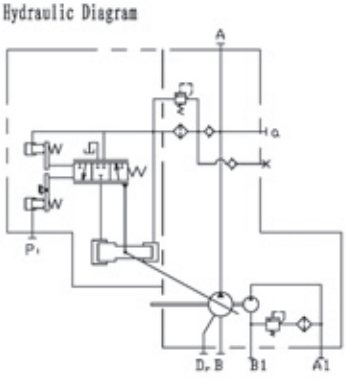
| Modle | MAX. Displacement | Rated Pressure | | Max. Pressure | | MAX. Speed for self priming | Max. Input Torque | | Weight | Application |
|---|---|---|---|---|---|---|---|---|---|---|
| | cc/rev | kgf/cm² | Mpa | kgf/cm² | Mpa | rpm | kgf m | N m | kg | ton |
| IK3V63 | 63 | 320 | 31.4 | 350 | 34.3 | 2650 | 35 | 343 | 42 | 13~17 |
| IK3V80 | 80 | 320 | 31.4 | 350 | 34.3 | 2400 | 54 | 529 | 45 | 13~17 |
| IK3V112 | 112 | 320 | 31.4 | 350 | 34.3 | 2360 | 60 | 588 | 65 | 20~25 |
| IK3V140 | 140 | 320 | 31.4 | 350 | 34.3 | 2150 | 114 | 1117 | 85 | 29~37 |
| IK3V180 | 180 | 320 | 31.4 | 350 | 34.3 | 1950 | 112 | 1098 | 85 | 39~45 |

## Dimensions




| Modle | D1 | D2 | d | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IK3V63 | 180 | 125 | 18 | 76 | 140 | 190 | 89 | 98 | 8 | 97 | 195 | 382 |
| IK3V80 | 180 | 125 | 18 | 76 | 140 | 190 | 89 | 98 | 8 | 97 | 195 | 382 |
| IK3V112 | 224 | 160 | 22 | 78 | 140 | 234 | 100 | 110 | 8 | 109 | 220 | 421 |
| IK3V140 | 250 | 180 | 22 | 93 | 140 | 256 | 112 | 123 | 8 | 121 | 245 | 478 |
| IK3V180 | 250 | 180 | 22 | 93 | 140 | 256 | 112 | 123 | 8 | 121 | 245 | 478 |

Hydraulic Diagram




## Discharge Flange

| Modle | a | b | c | d |
|---|---|---|---|---|
| IK3V63 | 23.8 | 50.8 | 19 | M10-16 |
| IK3V80 | 23.8 | 50.8 | 19 | M10-16 |
| IK3V112 | 27.8 | 57.2 | 25 | M12-22 |
| IK3V140 | 27.8 | 57.2 | 25 | M12-22 |
| IK3V180 | 27.8 | 57.2 | 25 | M12-22 |

## Dimensions of shaft end

| Modle | No. of teeth | Pitch circle dia | Pressure angle | Module | Rule |
|---|---|---|---|---|---|
| IK3V63 | 14 | 29.6 | 30° | 12/24 | SAE |
| IK3V80 | 12 | 30.0 | 20° | 2.5 | JIS D2001 |
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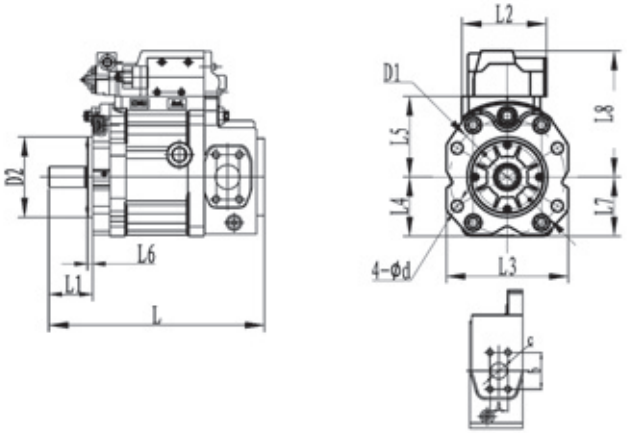
# Single Pump

## Specification

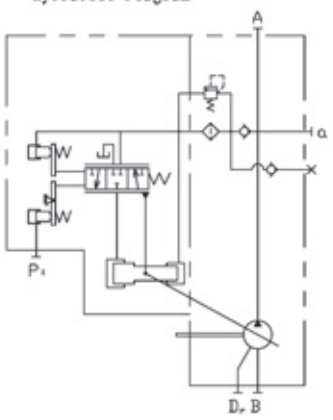
| Modle | MAX. Displacement | Rated Pressure | | Max. Pressure | | MAX. Speed for self priming | Max. Input Torque | | Weight | Application |
|---|---|---|---|---|---|---|---|---|---|---|
| | cc/rev | kgf/cm² | Mpa | kgf/cm² | Mpa | rpm | kgf m | N m | kg | ton |
| IK3V63 | 63 | 320 | 31.4 | 350 | 34.3 | 2650 | 35 | 343 | 42 | 13~17 |
| IK3V80 | 80 | 320 | 31.4 | 350 | 34.3 | 2400 | 54 | 529 | 45 | 13~17 |
| IK3V112 | 112 | 320 | 31.4 | 350 | 34.3 | 2360 | 60 | 588 | 65 | 20~25 |
| IK3V140 | 140 | 320 | 31.4 | 350 | 34.3 | 2150 | 114 | 1117 | 85 | 29~37 |
| IK3V180 | 180 | 320 | 31.4 | 350 | 34.3 | 1950 | 112 | 1098 | 85 | 39~45 |

## Dimensions




| Modle | D1 | D2 | d | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IK3V63 | 180 | 125 | 18 | 76 | 140 | 190 | 89 | 98 | 8 | 97 | 195 | 320 |
| IK3V80 | 180 | 125 | 18 | 76 | 140 | 190 | 89 | 98 | 8 | 97 | 195 | 320 |
| IK3V112 | 224 | 160 | 22 | 78 | 140 | 234 | 100 | 110 | 8 | 109 | 220 | 360 |
| IK3V140 | 250 | 180 | 22 | 93 | 140 | 256 | 112 | 123 | 8 | 121 | 245 | 415 |
| IK3V180 | 250 | 180 | 22 | 93 | 140 | 256 | 112 | 123 | 8 | 121 | 245 | 415 |

## Hydraulic Diagram




## Discharge Flange

| Modle | a | b | c | d |
|---|---|---|---|---|
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## Dimensions of shaft end

| Modle | No. of teeth | Pitch circle dia | Pressure angle | Module | Rule |
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| IK3V140 | 17 | 42.5 | 20° | 2.5 | JIS D2001 |
| IK3V180 | 17 | 42.5 | 20° | 2.5 | JIS D2001 |

# Single Pump

## Specification

| Modle | MAX. Displacement | Rated Pressure | | Max. Pressure | | MAX. Speed for self priming | Max. Input Torque | | Weight | Application |
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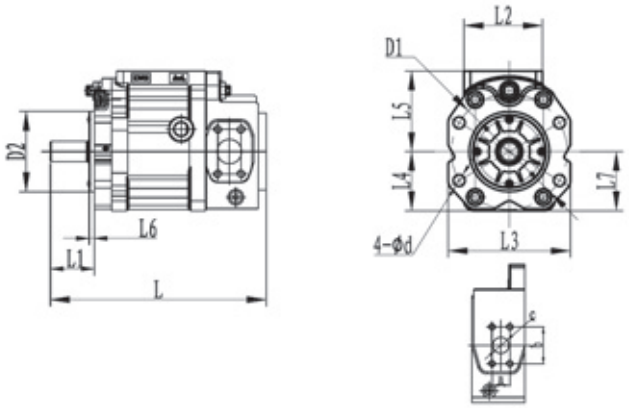
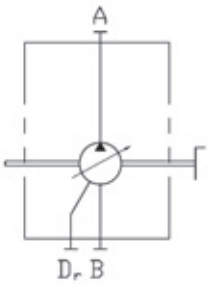
| IK3V63 | 63 | 320 | 31.4 | 350 | 34.3 | 2650 | 35 | 343 | 42 | 13~17 |
| IK3V80 | 80 | 320 | 31.4 | 350 | 34.3 | 2400 | 54 | 529 | 45 | 13~17 |
| IK3V112 | 112 | 320 | 31.4 | 350 | 34.3 | 2360 | 60 | 588 | 65 | 20~25 |
| IK3V140 | 140 | 320 | 31.4 | 350 | 34.3 | 2150 | 114 | 1117 | 85 | 29~37 |
| IK3V180 | 180 | 320 | 31.4 | 350 | 34.3 | 1950 | 112 | 1098 | 85 | 39~45 |

## Dimensions




| Modle | D1 | D2 | d | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IK3V63 | 180 | 125 | 18 | 76 | 140 | 190 | 89 | 98 | 8 | 97 | 320 |
| IK3V80 | 180 | 125 | 18 | 76 | 140 | 190 | 89 | 98 | 8 | 97 | 320 |
| IK3V112 | 224 | 160 | 22 | 78 | 140 | 234 | 100 | 110 | 8 | 109 | 360 |
| IK3V140 | 250 | 180 | 22 | 93 | 140 | 256 | 112 | 123 | 8 | 121 | 415 |
| IK3V180 | 250 | 180 | 22 | 93 | 140 | 256 | 112 | 123 | 8 | 121 | 415 |

Hydraulic Diagram




## Discharge Flange

| Modle | a | b | c | d |
|---|---|---|---|---|
| IK3V63 | 23.8 | 50.8 | 19 | M10-16 |
| IK3V80 | 23.8 | 50.8 | 19 | M10-16 |
| IK3V112 | 27.8 | 57.2 | 25 | M12-22 |
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## Dimensions of shaft end

| Modle | No. of teeth | Pitch circle dia | Pressure angle | Module | Rule |
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| IK3V140 | 17 | 42.5 | 20° | 2.5 | JIS D2001 |
| IK3V180 | 17 | 42.5 | 20° | 2.5 | JIS D2001 |