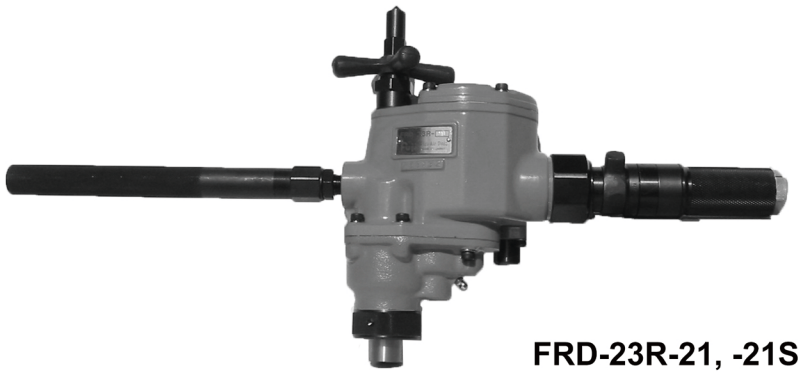
# Fuji USER MANUAL



## —— DRILLS ——

### MODELS : FRD-23R-21, -21S, -22, -22S



FRD-23R-21, -21S



FRD-23R-22, -22S

### SPECIFICATIONS

| Modle | Capacity | | | Socket | Stall Torque | Max. Output | Rotational Frequency | Max. Air Consumption | Feed Length | Overall Length | Mass | Air Inlet Thread Size | Air Hose Size |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Drilling | Reaming | Tapping | | | | | | | | | | |
| | mm | mm | mm | M.T.# | N･m | W | $min^{-1}$ | $m^3/min$ | mm | mm | kg | | mm |
| FRD-23R-21 | 22 | 19 | 19 | 2 | 78.4 | 880 | 480 | 1.2 | 67 | 282 | 7.3 | PT or NPT1/2 | 12.7 |
| FRD-23R-21S | 22 | 19 | 19 | 2 | 78.4 | 880 | 480 | 1.2 | 67 | 282 | 7.3 | PT or NPT1/2 | 12.7 |
| FRD-23R-22 | 22 | 19 | 19 | 3 | 78.4 | 880 | 480 | 1.2 | 67 | 307 | 7.4 | PT or NPT1/2 | 12.7 |
| FRD-23R-22S | 22 | 19 | 19 | 3 | 78.4 | 880 | 480 | 1.2 | 67 | 307 | 7.4 | PT or NPT1/2 | 12.7 |

The performance figures are at 0.63MPa (6.3bar).

⚠ Refer to "The Instructions and Warning for Safety Use" enclosed in each tool box.

Fuji Industrial Technique Co.,Ltd.

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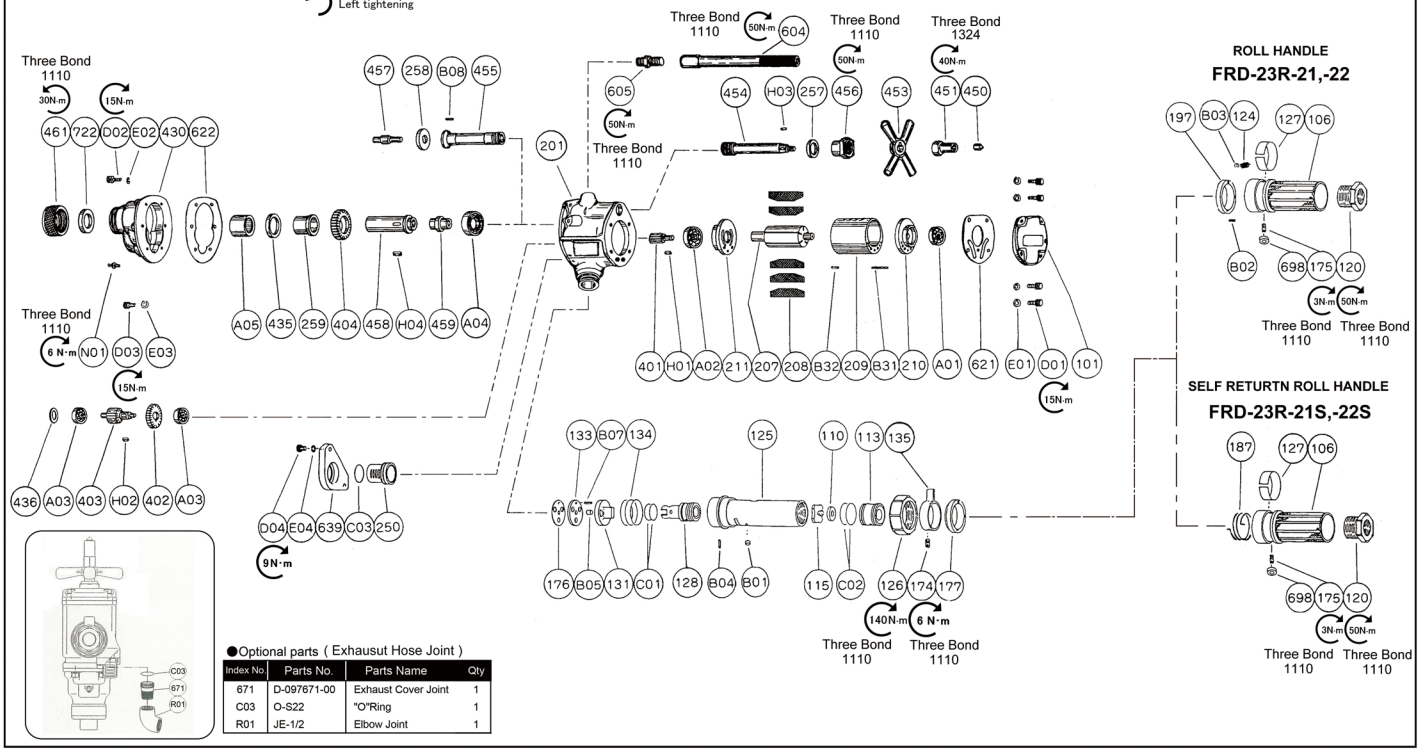
Tel : 81-6-6972-2335
Fax : 81-6-6972-2380

Specifications are subject to change without notice.

# MODELS : FRD-23R-21, -21S, -22, -22S

## EXPLODED VIEW

Right tightening
Left tightening







●Optional parts ( Exhausut Hose Joint )

| Index No. | Parts No. | Parts Name | Qty |
|---|---|---|---|
| 671 | D-097671-00 | Exhaust Cover Joint | 1 |
| C03 | O-S22 | "O"Ring | 1 |
| R01 | JE-1/2 | Elbow Joint | 1 |

## PARTS LIST

| Index No. | Parts No. | Parts Name | Qty |
|---|---|---|---|
| | FRD-23R-21,-22 Roll Handle Type | | |
| — | D-095004-03 | Throttle Valve Stem Ass'y < PT > | |
| — | D-095004-10 | Throttle Valve Stem Ass'y < NPT > | |
| 106 | M-040106-00 | Throttle Valve Handle | 1 |
| 110 | M-040110-00 | Throttle Valve | 1 |
| 113 | M-040113-00 | Throttle Valve Rod | 1 |
| 115 | M-040115-00 | Throttle Valve Sheet | 1 |
| 120 | M-040120-00 | Throttle Valve Cover < PT > | 1 |
| | M-040120-01 | Throttle Valve Cover < NPT > | 1 |
| 124 | G-005124-00 | Knock Spring | 1 |
| 125 | M-040125-00 | Throttle Valve Stem | 1 |
| 126 | D-095126-00 | Throttle Valve Stem Nut | 1 |
| 127 | M-040127-00 | Throttle Valve Handle Band | 1 |
| 128 | M-040128-00 | Reverse Valve Rod | 1 |
| 135 | D-026135-00 | Reverse Valve Lever | 1 |
| 174 | D-026174-00 | Small Screw | 1 |
| 175 | M-040175-00 | Small Screw (B) | 1 |
| 177 | M-040177-00 | Throttle Handle Step | 1 |
| 197 | D-097197-00 | Handle Bushing | 1 |
| ( B02 ) | SP-28 | Spring Pin | 1 |
| 698 | D-026698-00 | Guide Roller | 1 |
| B01 | NR-45 | Needle Roller | 1 |
| B03 | NR-35FR | Needle Roller | 1 |
| B04 | SP-38 | Spring Pin | 1 |
| C01 | O-11 | "O"Ring | 2 |
| C02 | O-S20 | "O"Ring | 2 |
| | FRD-23R-21S,-22S Self Return Roll Handle Type | | |
| — | D-095004-04 | Throttle Valve Stem Ass'y < PT > | |
| — | D-095004-08 | Throttle Valve Stem Ass'y < NPT > | |
| 106 | M-040106-00 | Throttle Valve Handle | 1 |
| 110 | M-040110-00 | Throttle Valve | 1 |
| 113 | M-040113-00 | Throttle Valve Rod | 1 |
| 115 | M-040115-00 | Throttle Valve Sheet | 1 |
| 120 | M-040120-00 | Throttle Valve Cover < PT > | 1 |
| | M-040120-01 | Throttle Valve Cover < NPT > | 1 |
| 125 | M-040125-00 | Throttle Valve Stem | 1 |
| 126 | D-095126-00 | Throttle Valve Stem Nut | 1 |
| 127 | M-040127-00 | Throttle Valve Handle Band | 1 |
| 128 | M-040128-00 | Reverse Valve Rod | 1 |
| 135 | D-026135-00 | Reverse Valve Lever | 1 |
| 174 | D-026174-00 | Small Screw | 1 |

| Index No. | Parts No. | Parts Name | Qty |
|---|---|---|---|
| 175 | M-040175-00 | Small Screw (B) | 1 |
| 177 | M-040177-00 | Throttle Handle Step | 1 |
| 187 | M-040187-00 | Throttle Valve Handle Spring | 1 |
| 698 | D-026698-00 | Guide Roller | 1 |
| B01 | NR-45 | Needle Roller | 1 |
| B04 | SP-38 | Spring Pin | 1 |
| C01 | O-11 | "O"Ring | 2 |
| C02 | O-S20 | "O"Ring | 2 |
| | FRD-23R-21,-21S | | |
| — | D-095006-54 | Housing Ass'y | |
| 133 | D-008133-02 | Reverse Valve Sheet | 1 |
| 176 | D-008176-00 | Reverse Valve Sheet Packing | 1 |
| 201 | D-095201-04 | Housing | 1 |
| B07 | SP-38 | Spring Pin | 1 |
| 101 | D-095101-00 | Housing Cover | 1 |
| 131 | D-008131-01 | Reverse Valve | 1 |
| 134 | D-008134-01 | Reverse Valve Spring | 1 |
| 207 | D-026207-00 | Rotor | 1 |
| 208 | D-026208-00 | Rotor Blade | 5 |
| 209 | D-026209-00 | Cylinder | 1 |
| [B31] | SP-320 | Spring Pin | 1 |
| [B32] | SP-310 | Spring Pin | 1 |
| 210 | D-026210-00 | Cylinder Upper Plate | 1 |
| 211 | D-008211-00 | Cylinder Lower Plate | 1 |
| 250 | D-097250-00 | Exhaust Cover | 1 |
| 257 | D-008257-00 | Washer | 1 |
| 258 | D-008258-00 | Washer (B) | 1 |
| 259 | D-008259-00 | Inner Race (FRD-23R-21,-21S) | 1 |
| 401 | D-026401-00 | No.1 Pinion | 1 |
| 402 | D-008402-00 | No.1 Gear | 1 |
| 403 | D-009403-00 | No.2 Pinion | 1 |
| 404 | D-009404-00 | No.2 Gear | 1 |
| 430 | D-008430-A | No.1 Gear Case | 1 |
| 435 | D-034435-00 | Thrust Washer | 1 |
| 436 | D-008436-00 | Bearing Holder | 1 |
| 450 | D-008450-00 | Feed Screw Center | 1 |
| 451 | D-008451-00 | Center Holder | 1 |
| 453 | D-008453-00 | Feed Screw Handle | 1 |
| 454 | D-008454-00 | Feed Screw | 1 |
| 455 | D-008455-00 | Feed Sleeve | 1 |
| 456 | D-008456-00 | Feed Sleeve Nut | 1 |
| 457 | D-008457-00 | Extractor | 1 |
| 458 | D-008458-00 | Mt. Socket | 1 |

| Index No. | Parts No. | Parts Name | Qty |
|---|---|---|---|
| 459 | D-008459-00 | Socket Arbor | 1 |
| 461 | D-008461-A | Socket Nut | 1 |
| 604 | T-004604-00 | Dead Handle | 1 |
| 605 | D-008605-00 | Dead Handle Joint | 1 |
| 621 | D-095621-00 | Packing (A) | 1 |
| 622 | D-008622-00 | Packing (B) | 1 |
| 639 | D-095639-00 | Exhaust Cover Holder | 1 |
| 722 | D-008722-00 | Leather Packing | 1 |
| A01 | BB-6202 | Ball Bearing | 1 |
| A02 | BB-6203 | Ball Bearing | 1 |
| A03 | BB-627 | Ball Bearing | 2 |
| A04 | BB-7203 | Ball Bearing | 1 |
| A05 | NB-SC2016 | Needle Bearing | 1 |
| B05 | NR-412 | Needle Roller | 1 |
| B08 | SP-38 | Spring Pin | 1 |
| C03 | O-S22 | "O"Ring | 1 |
| D01 | CS-622 | Cap Screw | 4 |
| D02 | CS-622 | Cap Screw | 4 |
| D03 | CS-616 | Cap Screw | 2 |
| D04 | CS-520 | Cap Screw | 2 |
| E01 | SW-6 | Spring Washer | 4 |
| E02 | SW-6 | Spring Washer | 4 |
| E03 | SW-6 | Spring Washer | 2 |
| E04 | SW-5 | Spring Washer | 2 |
| H01 | K-3311 | Key | 1 |
| H02 | K-338.5 | Key | 1 |
| H03 | K-3.53.511 | Key | 1 |
| H04 | K-4511.5 | Key | 1 |
| N01 | GN-6 | Grease Nipple | 1 |
| | FRD-23R-22,-22S It is common with FRD-23R-21,-21S excluding the parts below. | | |
| 430 | D-034430-00 | No.1 Gear Case | 1 |
| 457 | D-034457-00 | Extractor | 1 |
| 458 | D-034458-00 | Mt. Socket | 1 |
| 459 | D-034459-00 | Socket Arbor | 1 |
| 461 | D-034461-00 | Socket Nut | 1 |
| 722 | D-034722-00 | Leather Packing | 1 |
| H04 | K-4412 | Key | 1 |

☐ The related parts are shown in a thick frame.
☐ #197 and #209 are supplied together with parts shown in ( ).
☐ Specify parts number and quantity when ordering.