# FRA-3060S/D/DS

## IoT technique contributes to high-precision take-out and improved productivity
## Latest technology helps solve problems at the production site


CE
For CE supported languages, please contact our sales department.

PAT.

JSME Medal for New Technology
The JMF's Energy-Efficient Machinery Award
MACHINE DESIGN AWARD
reddot award 2019 winner

- Clamping force 300 - 600 tf
- High precision (Advanced vibration control)
- Optimized design + Power-saving
- LOW Low posture (Double speed mechanism)
- All-axis servo-driven
- Remote monitoring

### Active Vibration Control

The FRA senses its own vibrations and eliminates them automatically.
Equipped with the world's most advanced vibration control technology that enables a variety of operations with speed and accuracy such as insert molding, which demand repeatability.

### IoT system "INTU LINE"

INTU™ LINE

INTU LINE displays production counts, uptime ratio, operation status, cycle times, error counts, stoppage log, and production floor photos.
When trouble occurs, the FRA's IoT system shares your robot's error data with Yushin to help service personnel diagnose the problem.

### New controller "E-touch V"

The E-touch V is designed with ergonomics in mind and is presented in a vertical, dual screen format with main and sub screens, allowing the use of smartphone-like touch controls.

### Standard Specifications

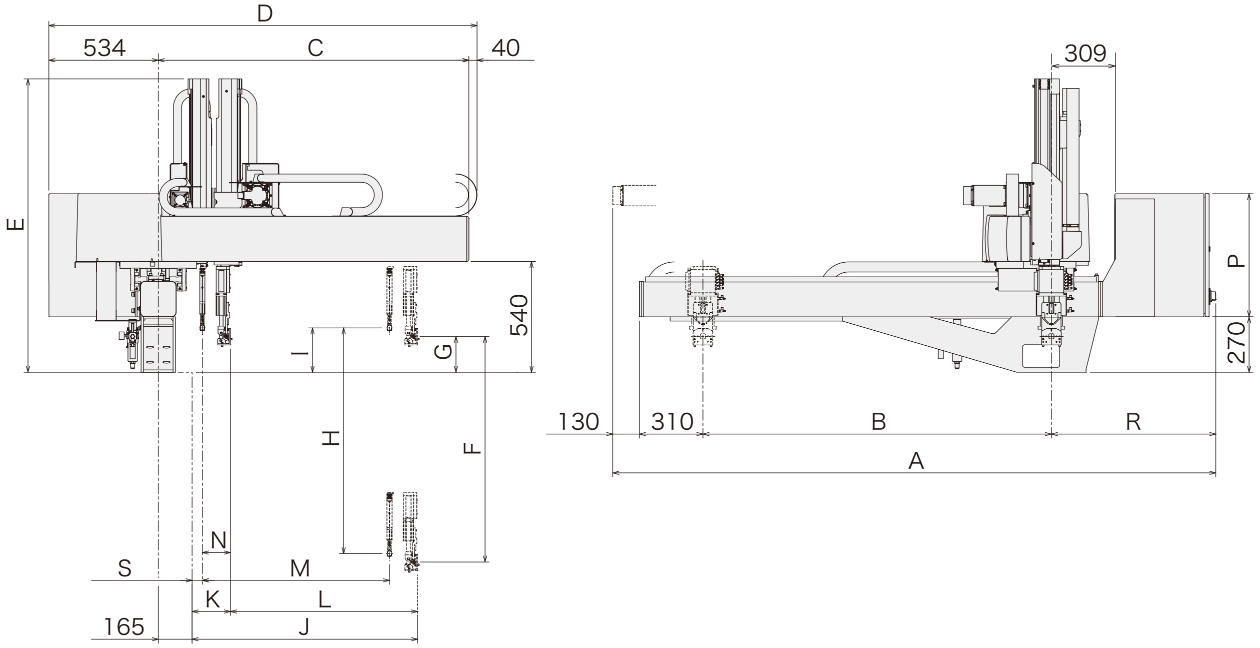
| Power supply | Drive method | Controller model | Working air pressure | Flip angle |
|---|---|---|---|---|
| 3-phase 200 VAC/220 VAC/230 VAC (50/60 Hz) | Digital servo motor 3/5-axis | E-touch V | 0.49 MPa | 90° |

| Model | Power consumption | Traverse stroke [mm] | Kick stroke [mm] | | Vertical stroke [mm] | | Air consumption [NL/cycle] | Payload [kg] | Noise [dBA] | Target IMM clamp capacity [tf] |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Main arm | Sub arm | Main arm | Sub arm | | | | |
| FRA-3060S | 2.3 kVA 200 VAC 6.5 A | 1700 (1900) (2200) (2500) | 973 | — | 1100 (1300) (1550) (1800 : Release side only) | — | 8.3 ECO Vacuum OFF 3.1 ECO Vacuum ON | 10 《13》 | 73.7 | 300-600 |
| FRA-3060D | | | 913 | 913 | | 1100 (1300) (1550) (1800 : Release side only) | | | | |
| FRA-3060DS | 3.8 kVA 200 VAC 10.8 A | | 794 | 794 | | | 16.4 ECO Vacuum OFF 6.0 ECO Vacuum ON | | | |

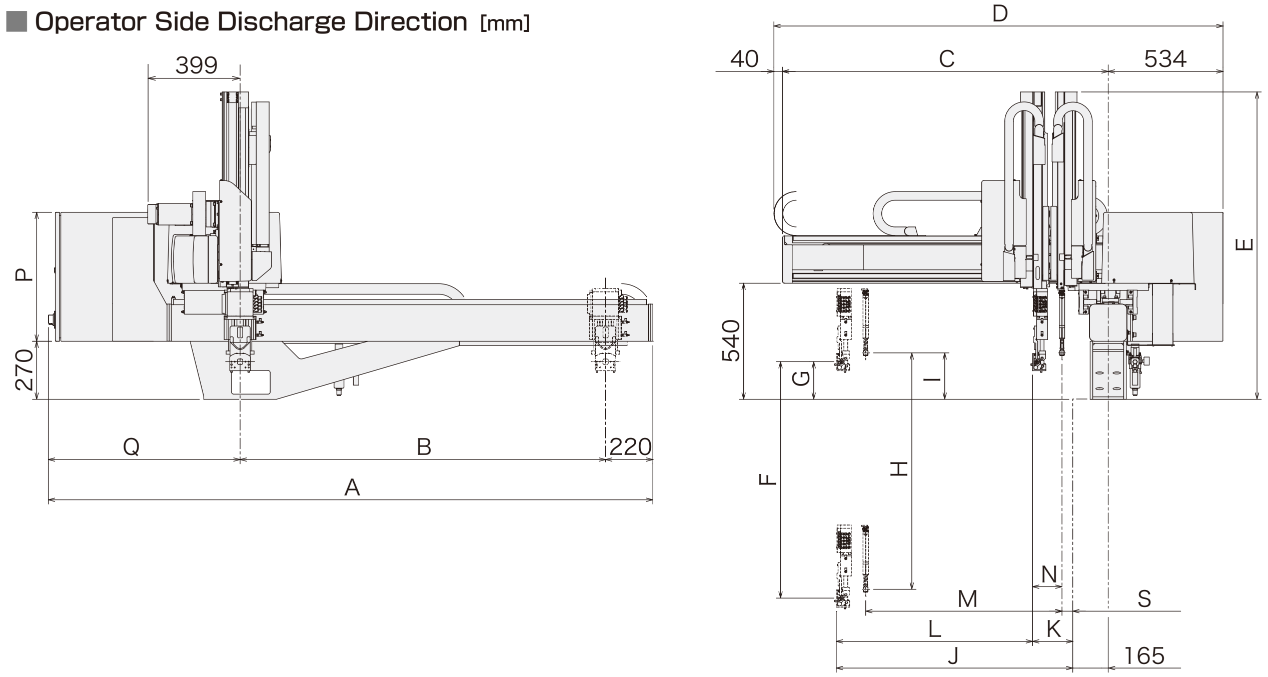
S type : Robot is equipped with main arm only. D type : Robot is equipped with main arm and sub arm. DS type : Robot is equipped with two main arms.
( ) : Modified stroke 《 》: Increased maximum payload
Payload includes the end-of-arm tool.
Traverse beam stanchion is standard equipment for traverse stroke over 1900 mm.

Separate catalog available

### Rear (Non-operator) Side Discharge Direction [mm]




### Operator Side Discharge Direction [mm]




[mm]

| Model | A[Rear Side] C2 type | A[Rear Side] C1 type | B | C | D | E | F | G | H | I | J | K | L | M | N | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FRA-3060S | 2942 (3142) (3442) (3742) | 2910 (3110) (3410) (3710) | 1700 (1900) (2200) (2500) | 1515 | 2089 | 1430 (1534) (1662) (1782) | 1100 (1300) (1550) (1800 : Release side only) | 175 | — | — | 1100 | 127 | 973 | — | — | 50 |
| FRA-3060D | | | | | | | | | 1100 (1300) (1550) (1800 : Release side only) | 216 | | 187 | 913 | 913 | 137 | |
| FRA-3060DS | | | | | | | | | | 175 | | 306 | 794 | 794 | 178 | 128 |

| | P | Q | R |
|---|---|---|---|
| C2 type | 600 | 892 | 802 |
| C1 type | 500 | 860 | 770 |

| A[Operator Side] C2 type | A[Operator Side] C1 type |
|---|---|
| 2812 (3012) (3312) (3612) | 2780 (2980) (3280) (3580) |

( ) : Modified stroke
〈 〉 : With increased wrist flip torque
{ } : With horizontal wrist rotation unit
《 》 : With centralized automatic (manual) lubrication system

| G | I |
|---|---|
| 〈169〉 {149} | 〈169〉 {149} |

| K | L | M | N |
|---|---|---|---|
| 〈127〉 {185} 《127》 | 〈973〉 {915} 《973》 | — | — |
| 〈187〉 {245} 《215》 | 〈913〉 {855} 《885》 | 〈913〉 {855} 《885》 | 〈137〉 {195} 《165》 |
| 〈306〉 {417} 《338》 | 〈794〉 {684} 《762》 | 〈794〉 {684} 《762》 | 〈178〉 {289} 《210》 |

FRA-3060S/D/DS
All-Axis Servo Driven Type Take-Out Robot