

iPF Series

Flexible Part Feeder

High-performance, flexible part feeding solution providing plug-and-play integration with OMRON Industrial Robots, Vision Systems, and ACE software.

- Pick and place applications, assembly line material feeding, and primary packaging.
- Modular design with many flexible options.
- Suited for automotive, electronics, pharmaceutical, agricultural, or medical component manufacturing applications.
- Feeds parts and components from 5 mm to 150 mm in size.
- Patented 3-axis vibration technology can move parts in all directions and ensures parts do not accumulate in a corner or on an edge.
- Gently handles delicate parts through precise tuning of frequency and amplitude.
- Fully integrated and supported by the powerful & easy-to-use ACE software tool for fast deployment of pick and place solutions.



Ordering Information

Note: To order a complete part feeding system, select a Part Feeder with Backlight from the table below and then select a Hopper, Platform Frame, Platform Plate, and Cabling from *Required Additional Items* below. Refer to the *System Configuration* diagram on page 3.

Part Feeder with Backlight *

Model	Backlight Color	Ordering Code
iPF-240	Red	30240-001
	White	30240-002
	Infrared	30240-003
	None	30240-004
iPF-380	Red	30380-001
	White	30380-002
	Infrared	30380-003
	None	30380-004
iPF-530	Red	30530-001
	White	30530-002
	Infrared	30530-003
	None	30530-004

* A 5 m power cable is included with all models.

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Required Additional Items

Hopper *

Model	Components	Detail	Ordering Code
3L Hopper	Medium Base	Base for 3 liter or 7 liter Container	30240-109
	3L Container	Container for holding and adding parts to the Part Feeder	30600-001
7L Hopper	Medium Base	Base for 3 liter or 7 liter Container	30240-109
	7L Container	Container for holding and adding parts to the Part Feeder	30600-002
14L Hopper	Large Base	Base for 14 liter Container	30600-004
	14L Container	Container for holding and adding parts to the Part Feeder	30600-003

* A 5 m power cable and 2 m I/O cable are included with the hopper base.

Platform Frame and Platform Plate *

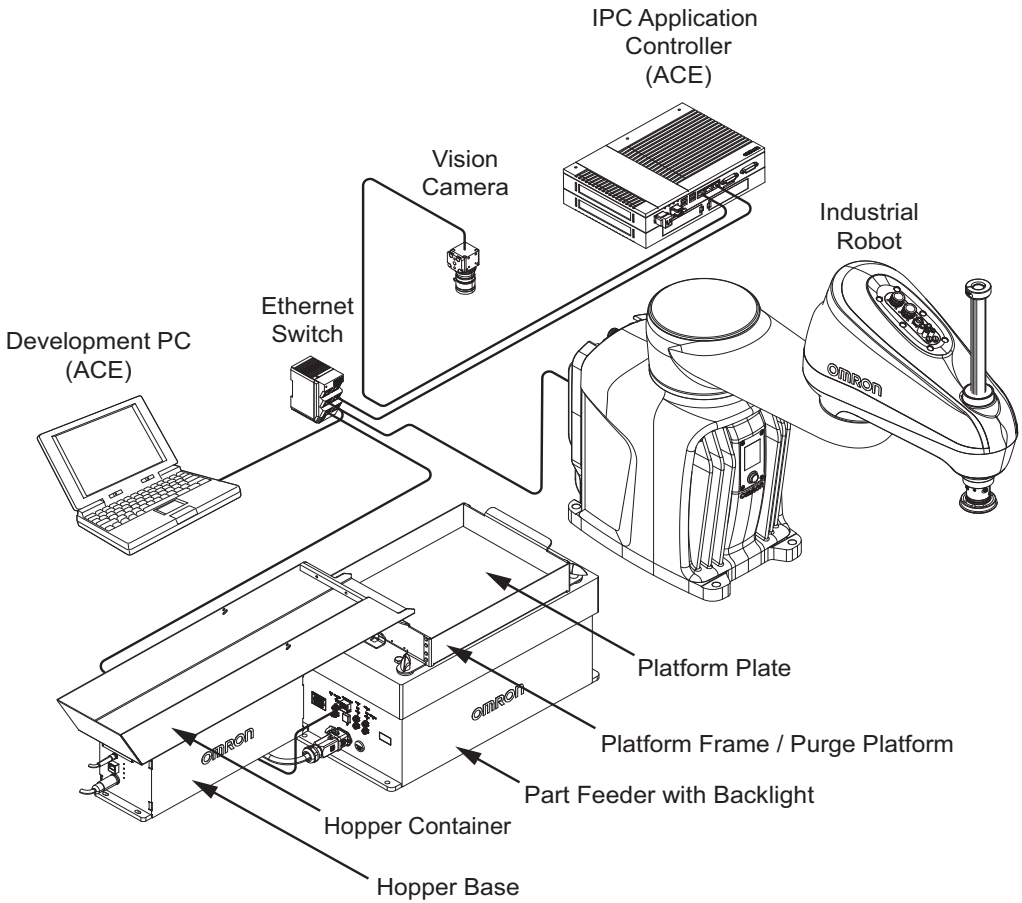
Compatible With	Type	Detail	Ordering Code
iPF-240	Integrated Frame and Plate	Standard frame with Acetal Copolymer (POM-C) flat plate	30240-103
		Left purge frame with Acetal Copolymer (POM-C) flat plate	30240-101
		Right purge frame with Acetal Copolymer (POM-C) flat plate	30240-102
		Standard frame with Electrostatic Discharge (ESD) flat plate	30240-106
		Left purge frame with Electrostatic Discharge (ESD) flat plate	30240-104
		Right purge frame with Electrostatic Discharge (ESD) flat plate	30240-105
		Acetal Copolymer (POM-C) anti-roll plate for parts with 3.5-7.0 mm dia.	30240-107
		Acetal Copolymer (POM-C) anti-roll plate for parts with 7.0-14 mm dia.	30240-108
iPF-380	Frame	Standard (85 mm frame height)	30380-103
		Left purge (60 mm frame height)	30380-101
		Right purge (60 mm frame height)	30380-102
	Plate	Acetal Copolymer (POM-C) Flat plate	30380-201
		Polymethyl methacrylate (PMMA) anti-roll plate for parts with 5-10 mm dia.	30380-202
		Polymethyl methacrylate (PMMA) anti-roll plate for parts with 10-24 mm dia.	30380-203
iPF-530	Frame	Standard (100 mm frame height)	30530-103
		Left purge (100 mm frame height)	30530-101
		Right purge (100 mm frame height)	30530-102
	Plate	Acetal Copolymer (POM-C) Flat plate	30530-201
		Polymethyl methacrylate (PMMA) anti-roll plate for parts with 6-12 mm dia.	30530-202
		Polymethyl methacrylate (PMMA) anti-roll plate for parts with 12-28 mm dia.	30530-203

* All purge frames include an actuator and connection cable.

Optional Additional Items

Item	Detail	Ordering Code
Modular Fixation Kit	Allows medium and large Hopper bases to be mounted at the ideal height for IPF-380 and IPF- 530 models. Allows tandem assembly for dual feeding. Supplied with fastening screws.	30600-005
Network Cable	Minimum Cat5 with RJ45 connectors. Refer to the OMRON <i>Industrial Ethernet Cables Catalog</i> (Cat. No. G019) for ordering information.	

System Configuration



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Specifications

Part Feeder

Item		iPF-240	iPF-380	iPF-530
Weight		7.8 kg	20 kg	31 kg
Power	Voltage	24 VDC $\pm$ 5%		
	24 VDC Current Consumption	5 A	4 A	6 A
	24 VDC S-Current Consumption	3 A	16 A	14 A
Operation	Control	Full 2D motion in XY plane and vertical vibration for flipping or dispersing parts		
	Actuators	4 voice coil motors		
	Communication	Ethernet (TCP/IP)		
	Vibration Actions	Standard vibrations: flip, forward, backward, left, right, long axis and cross axis centering		
	Suitable Part Sizes	5 - 40 mm	15 - 60 mm	30 - 150 mm
	Weight Capacity	400 g	1500 g	2000 g
	Configurable Vibration Frequency	40 - 70 Hz	20 - 30 Hz	20 - 28 Hz
Environmental	Operating Temperature	5 to 40° C		
	Storage Temperature	5 to 40° C		
	Humidity	During operation: 30 to 80% (non-condensing) During storage and transportation: 75% or less (non-condensing)		
	Ingress Protection	IP20		
Vibration Displacement	X (max.)	$\pm$ 1.5 mm	$\pm$ 8 mm	$\pm$ 8 mm
	Y (max.)	$\pm$ 2 mm	$\pm$ 10 mm	$\pm$ 10 mm
	Z (max.)	$\pm$ 1.5 mm	$\pm$ 6 mm	$\pm$ 8 mm

Hoppers

Item		3L Hopper	7L Hopper	14L Hopper
Max. Capacity (Usable volume / weight)		3 L / 12 kg	7 L / 12 kg	14 L / 19.5 kg
Weight (Base + Container)		12 kg	12 kg	20 kg
Vibration Displacement	X (max.)	Does not exceed $\pm$ 1 mm *1		
	Y (max.)			
	Z (max.)			
Power	Voltage	24 VDC $\pm$ 5%		
	RMS current at 100% amplitude and max. load	4 A		
	Peak current (10 ms) at start of vibration at 100% amplitude	9 A		
Dual/Single Feeding Compatibility	iPF-240	Single	Single *2	Not Compatible
	iPF-380	Single/Dual	Single/Dual *3	Single *2
	iPF-530	Single/Dual	Single/Dual	Single/Dual *3
Standards		EN/IEC 60204-1, EN/IEC 61000-6-2, EN/IEC 61000-6-4, EN/IEC 63000, EN ISO 14118, EN ISO 12100, ISO 14644-1		

*1. Provide a minimum space of 10 mm around the Hopper in all directions.

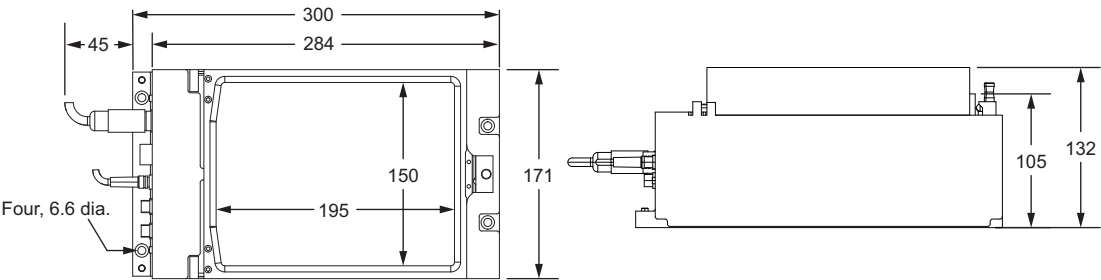
*2. The Hopper can be arranged for single feeding only on the long side of the Part Feeder.

*3. The Hoppers can be arranged for dual feeding only on opposite sides of the Part Feeder.

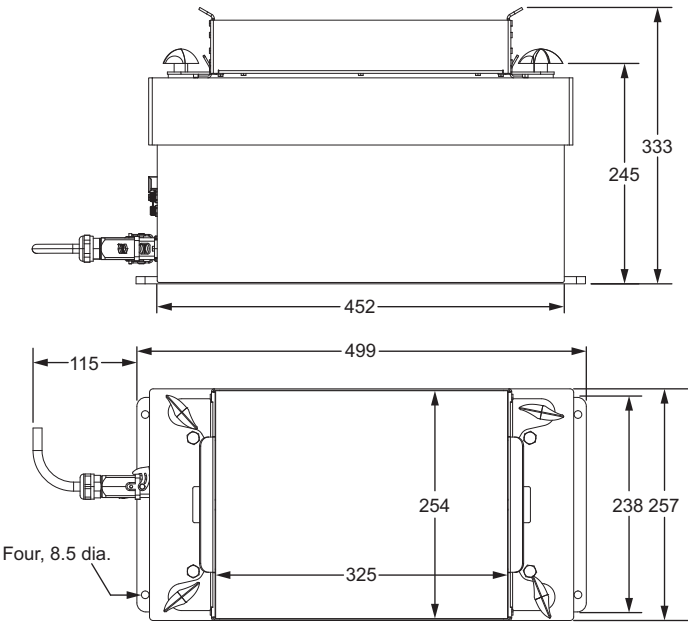
Dimensions

(Unit: mm)

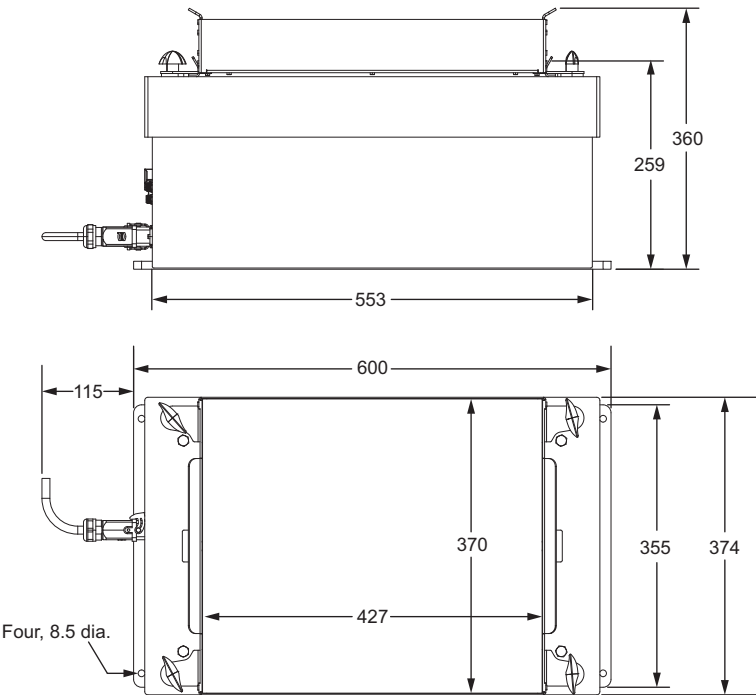
iPF-240



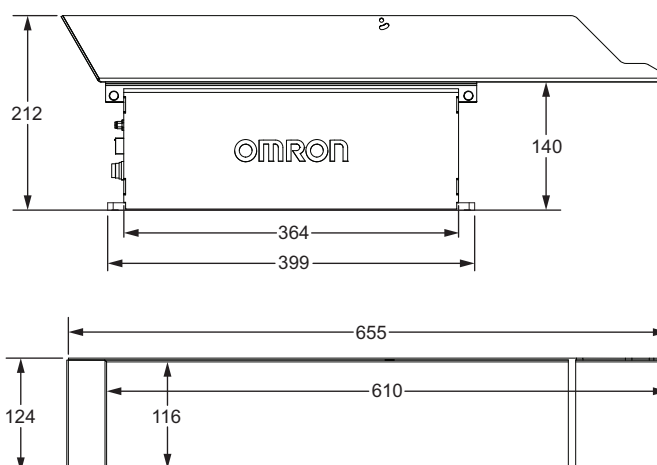
iPF-380



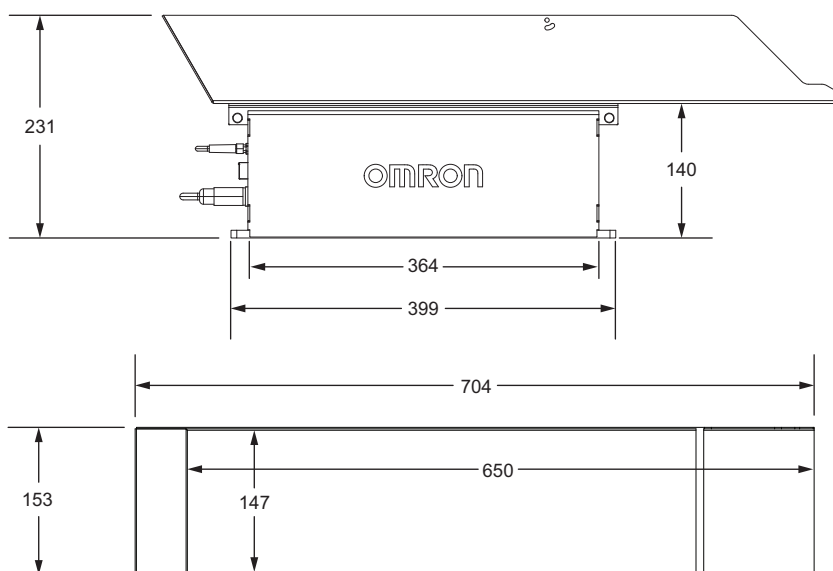
iPF-530



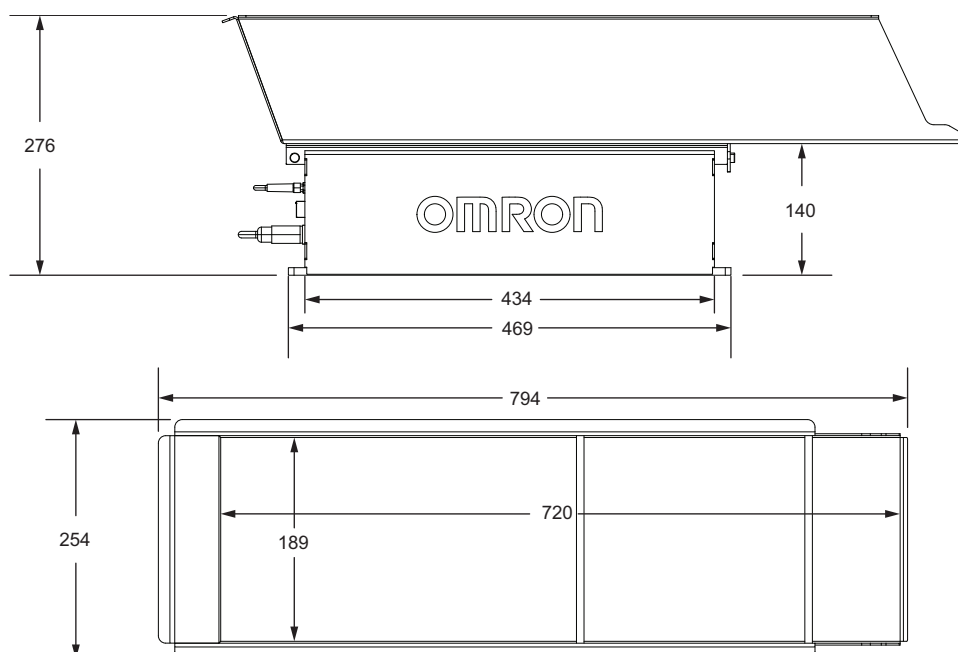
Hoppers 3L



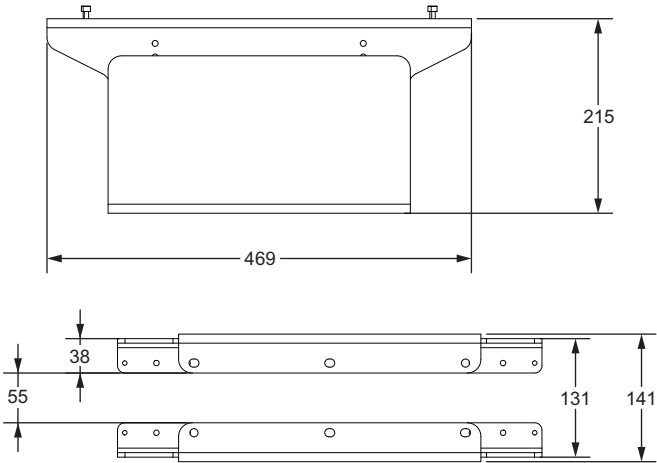
7L



14L



Fixation Kit



Related Manuals

Manual No.	English Title
I684	iPF-Series Flexible Part Feeder User's Manual
I633	Automation Control Environment (ACE) Version 4 User's Manual
G019	Industrial Ethernet Cables Catalog

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