



FLEXIBOWL[®]

**Large Challenges
Need Simple Solutions**



Flexible

Entire families of parts can be fed with the same system without mechanical retooling

Efficient

Superior and constant performances, no failures, even with burrs and dimensional variations

Convenient

A suitable answer to the current manufacturing needs, with frequent product changeovers and reduced volumes



Video: [YouTube](#) ARS FlexiBowl - www.arsautomation.com - <http://www.flexibowl.it>

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FLEXIBOWL®

FlexiBowl®: A Flexible Part Feeding System

FlexiBowl® is an innovative device to feed bulk components. It can be easily integrated with any robot and vision system. It benefits of simple and reliable construction, and low noisy.

FlexiBowl®: An Efficient and Reliable Solution

FlexiBowl® is highly versatile and suitable for feeding a wide variety of parts, regardless of:

- Geometry (cylindrical, complex 3D shape)
- Surface (smooth, sticky, tangled, etc.)
- Material (delicate, fragile, rubber and silicone)
- Weight and Dimensions (metal moulded and sheared parts)

Several comparison studies have proven FlexiBowl® to be suitable for feeding parts in a more uniform, continuous and efficient way. Parts can also be fed in continuous movement, i.e. circular tracking, to provide higher productivity.



FlexiBowl®: The Ideal Solution For The Current Manufacturing Needs

Integrators who manufacture assembly automation and OEM's who need equipment to manufacture assemblies are faced with a very large challenge of how to get the parts into the assembly machines, minimize workcell requirements, and keep costs down. Whether there is a need to increase productivity, reduce costs or add product variants, flexible part feeding systems are well suited to improve applications with complex parts and to sustain frequent part changes .

MEDICAL



Medical disposables for dentistry, bloodline components, needles, syringes.

COSMETIC



Mascara, lipsticks, powder compacts, brushes, perfumes, etc. ..

ELECTRICAL COMPONENTS



Switches, connectors, fuse blocks, electromagnetic components, coils, etc. Electrical Components

AUTOMOBILE

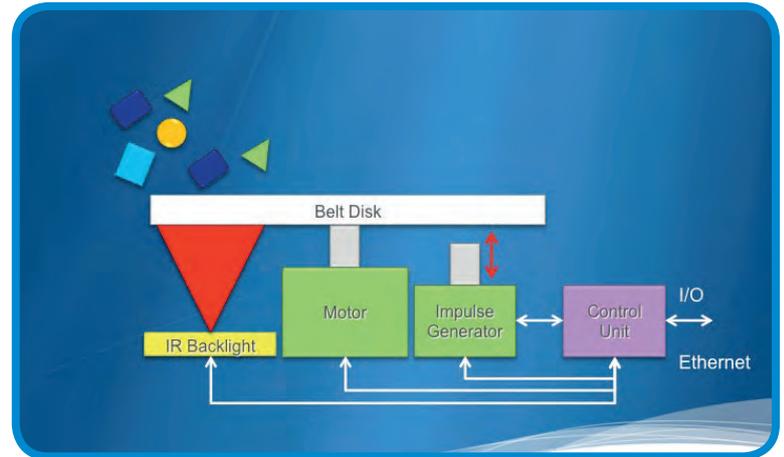


Switches, electrical actuators, connectors, electrical and electromechanical components, engine and suspension parts, etc.

How it works

FlexiBowl® includes a rotating disk that is directly actuated by a servomotor, and an impulse generator underneath the surface. The servomotor can move the disk in both directions. An intelligent drive unit and optional backlight are directly installed inside the system.

The working principle is very simple and straightforward: parts that are released by the hopper and fall on the surface, are separated through the combined actuation of servomotor and impulse generator. The lying position is changed and allows the vision to locate parts and drive the robot for pick up with the proper orientation.



The set of instructions allows to change acceleration and deceleration parameters, impulse frequency according to part geometry and to achieve an optimal result.

The communication with robot controller and vision system is done by sending simple commands through the available communications ports: ethernet, ethercat, digital i/o signals.

FlexiBowl®: Available Models and Main Options

FlexiBowl® is currently available with different bowl sizes: 350, 500, 650, 800 inner diameter.

The rotating disk is made of standard conveyor belt material and can be easily found and replaced everywhere. The change of the surface takes few minutes. The disk can be directly supplied in different colours and materials (silicon, textured surfaces, etc.). According to the parts that need to be fed, our technical office can provide useful indications to select the proper disk material. An optional internal backlight is available (red, white, infrared led).



To provide the necessary running capacity we offer a range of hoppers with standard 5, 10, 20 litre capacity. Bigger capacity (40 -80 litre) or elevating trays, can be supplied upon request.

FASHION ACCESSORIES AND METAL PARTS



Eyeglass components, buckles, zip fasteners, buttons, etc.

CONSUMER ELECTRONICS



Components for appliance, computers, phones, remote controls,

HOUSE AND PERSONAL CARE



Perfume dispensers, dental brushes, etc.

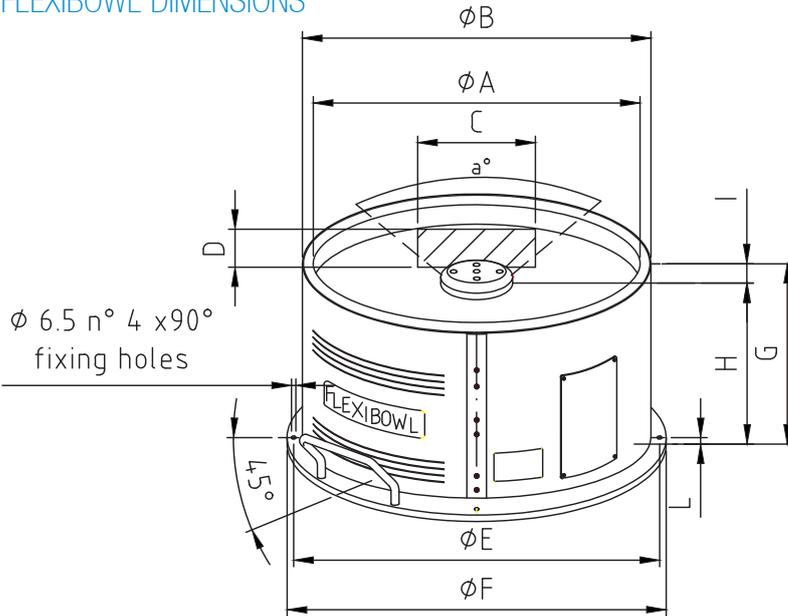
TOYS AND GADGETS



Assembly, Kitting, Pad Printing, etc.

TECHNICAL SPECIFICATIONS

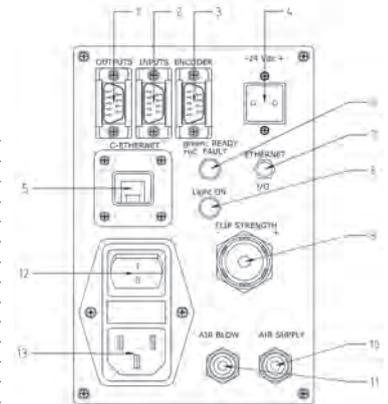
FLEXIBOWL DIMENSIONS



DIM (mm)	FLEXIBOWL 350	FLEXIBOWL 500	FLEXIBOWL 650	FLEXIBOWL 800
A	325	500	660	810
B	360	533	690	840
C	-	-	391	391
D	80	160	247	312
E	384	560	384	858.5
F	404	580	404	890
G	268.5	267	296	296
H	242	239	258	258
I	26.5	28	28	28
L	15	10	10	10
a°	58°	88°	-	-

CONNECTIONS

N°	DESCRIPTION
1	Outputs
2	Inputs
3	Encoder latch
4	24Vdc Power supply
5	Ethernet connection
6	Status LED
7	Ethernet - I/O switch
8	Backlight LED
9	Air pressure regulator
10	Air supply
11	Blow
12	Main switch
13	220V power supply



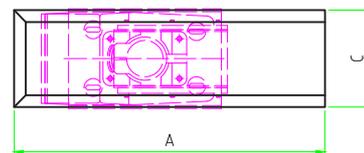
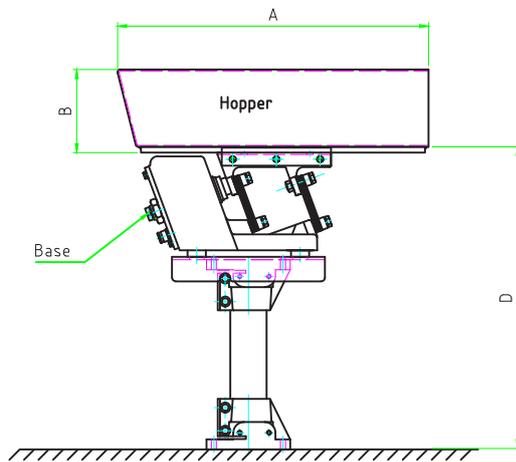
Technical Specifications:

Weight:	
FB 350	35 kg
FB 500	40 kg
FB 650	50 kg
FB 800	60 kg

Technical data valid for all models:

Power supply	220 V - 24Vdc
Pneumatic Connections:	1
Ethernet (UDP protocol)	1
Ethercat	1
Digital Inputs	6
Digital Outputs	5
Encoder latch	1
Power Consumption 220V	6A
Power Consumption 24 Vdc	3A
Air Pressure	6 bar (non lubricated)
Ambient Temperature	5 - 40 °C
Humidity	5 - 90% (non condensing)

HOPPER



DIM (mm)	Hopper 5Lt	Hopper 10Lt	Hopper 20Lt
A	430	630	778
B	115	115	167
C	135	135	256
D	360	360	360

PRODUCED AND DISTRIBUTED BY:

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