

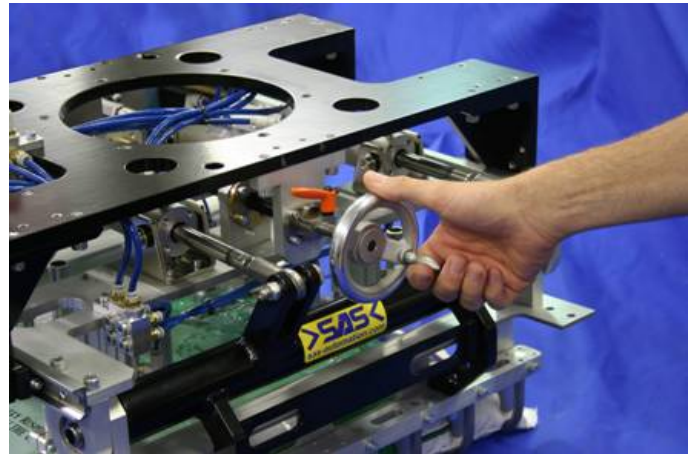
get a grip!

Palletizing Bag Gripper Datasheet

ABG-25/50 and FBG-25/50

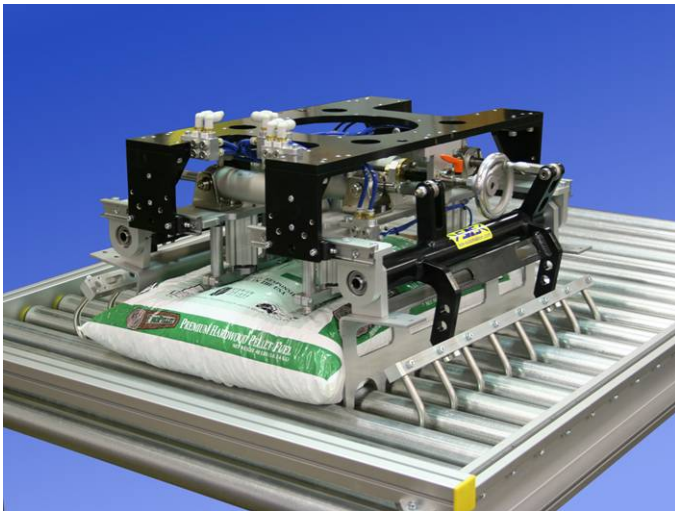
>SAS< Automation introduces a family of adjustable width bag grippers in 25 and 50kg payloads for palletizing plastic, woven cloth or paper bags. The ABG eliminates custom tooling with its width adjustment system. In less than 30 seconds, the ABG-25 bag width can be changed from 185-450 mm (7.3 to 17.7 inches), and the ABG-50 bag width can be changed from 170-500 mm (6.7 to 19.6 inches). The FBG fixed width models are adjustable in less than 4 minutes.

Independent Decking Plates square-up and align the bag for precise placement on the pallet while the top mounted Bag Clamps maintain bag position on the tool during robot travel to the pallet. Slip Sheet and Pallet Hook options are available.



Bag Dimensions	Min. Width	Max. Width	Min. Thickness	Max. Thickness
ABG/FBG-25	185	450	N/A	145
ABG/FBG-50	170	500	65	165

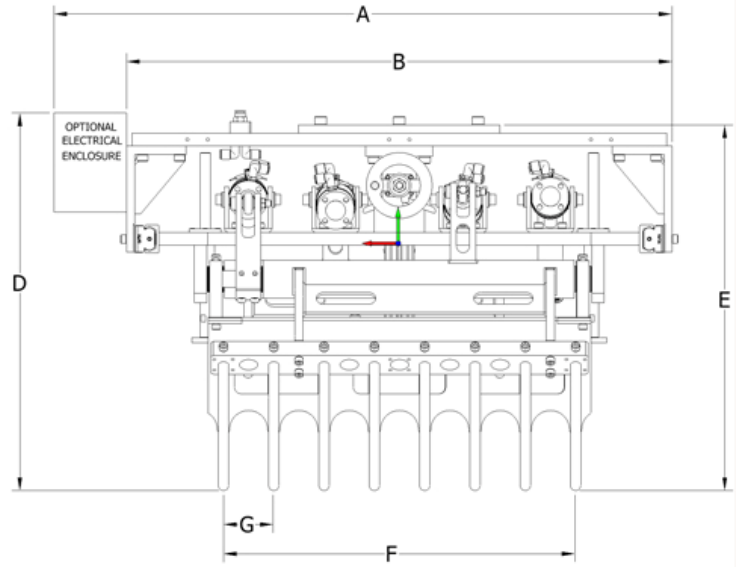
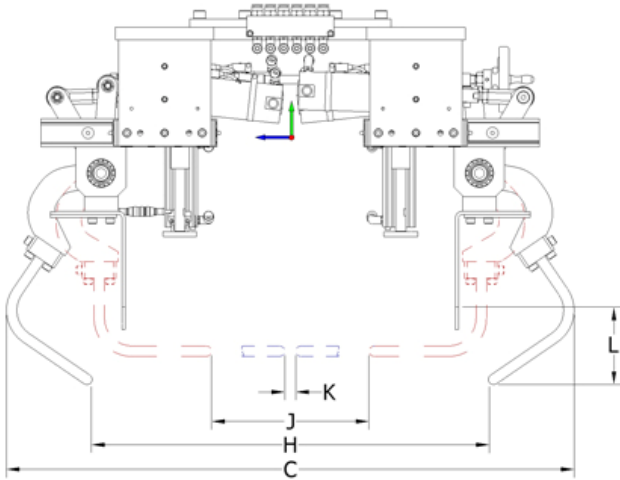
ABG-25



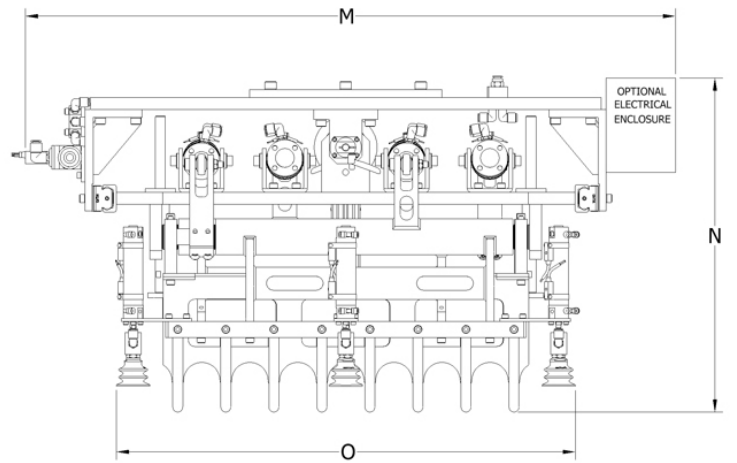
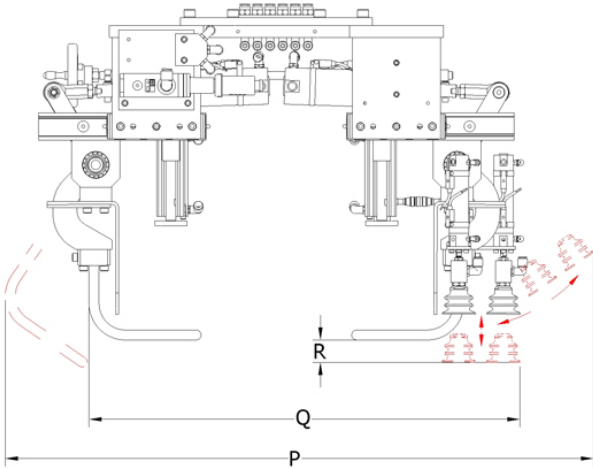
ABG-50



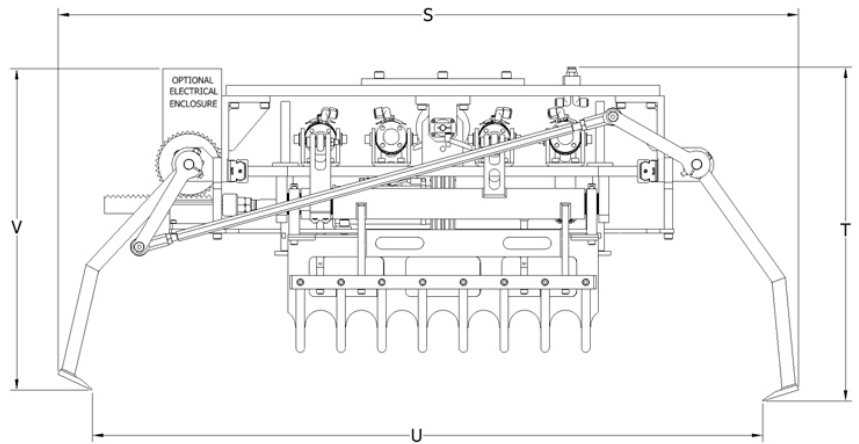
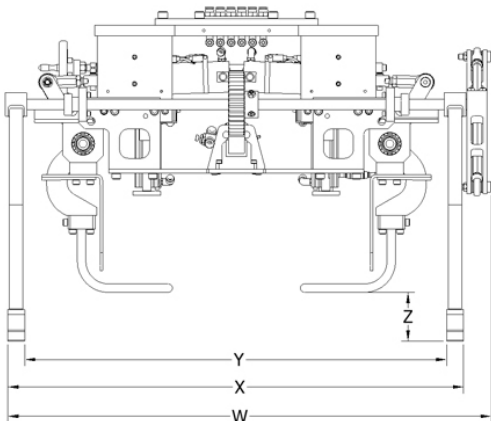
Standard Model



Slip Sheet Model



Pallet Hook Model





Technical Data (ABG/FBG)

ABG / FBG DIMENSIONAL CHART																									
	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
ABG/FBG 25	738	628	795	478	438	533	76	621	212	82	113	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ABG/FBG 25 SS	738	628	795	478	438	533	76	621	212	82	113	821	463	765	891	657	39	-	-	-	-	-	-	-	-
ABG/FBG 50	937	827	860	572	554	533	76	603	239	17	118	-	-	-	-	-	-	-	-	-	-	-	-	-	
ABG/FBG 50 SS	937	827	860	572	554	533	76	603	239	17	118	1032	530	728	933	684	35	-	-	-	-	-	-	-	
ABG/FBG 50 PH	937	827	860	572	554	533	76	603	239	17	118	-	-	-	-	-	-	1383	624	1252	600	904	852	788	91

Bag Gripper type	Weight (kg)	Payload (kg)	Bag width (mm)		Bag height (mm)		Maximum air consumption		Principal Moments of Inertia ***		
			Min	Max	Min	Max	Compressed air *	Vacuum **	I1	I2	I3
ABG-25	38	25	185	450	-	145	.06 cubic feet	N/A	1985993.5 kg mm ²	2863512.6 kg mm ²	1577966.0 kg mm ²
ABG-25-SS	40	25	185	450	-	145	.07 cubic feet	3.71	1800340.1 kg mm ²	2818692.8 kg mm ²	1859436.5 kg mm ²
FBG-25	36	25	185	450	-	145	.06 cubic feet	N/A	1985993.5 kg mm ²	2863512.6 kg mm ²	1577966.0 kg mm ²
FBG-25-SS	38	25	185	450	-	145	.07 cubic feet	3.71	1800340.1 kg mm ²	2818692.8 kg mm ²	1859436.5 kg mm ²
ABG-50	78	50	170	500	65	165	.06 cubic feet	N/A	5989509.7 kg mm ²	8988337.8 kg mm ²	5691750.8 kg mm ²
ABG-50-SS	80	50	170	500	65	165	.07 cubic feet	3.71	6174208.0 kg mm ²	9449323.4 kg mm ²	6057798.5 kg mm ²
ABG-50-PH	100	50	170	500	65	165	.11 cubic feet	N/A	7299296.4 kg mm ²	13810492.0 kg mm ²	9344271.9 kg mm ²
FBG-50	73	50	170	500	65	165	.06 cubic feet	N/A	5989509.7 kg mm ²	8988337.8 kg mm ²	5691750.8 kg mm ²
FBG-50-SS	75	50	170	500	65	165	.07 cubic feet	3.71	6174208.0 kg mm ²	9449323.4 kg mm ²	6057798.5 kg mm ²
FBG-50-PH	95	50	170	500	65	165	.11 cubic feet	N/A	7299296.4 kg mm ²	13810492.0 kg mm ²	9344271.9 kg mm ²

* - at 90 psi
 ** - scfm @ 87 psi
 *** - With respect to Center of Gravity

Bag Gripper type	Center of gravity in mm*			Mass Moments of Inertia **			Gripper cycle times	
	"X"	"Y"	"Z"	Ixx	Iyy Iyz	Izx Izy Izz	Open	Close
ABG-25	-2.0	-139.5	-0.6	1982552.9 kg mm ²	6839.1 kg mm ² / 2863416.7 kg mm ²	-37536.0 kg mm ² / 7694.0 kg mm ² / 1581502.4 kg mm ²	.3 sec	.3 sec
ABG-25-SS	5.6	-145.1	9.4	1808732.1 kg mm ²	-18333.0 kg mm ² / 2816214.0 kg mm ²	-21125.8 kg mm ² / 45117.7 kg mm ² / 1853523.4 kg mm ²	.3 sec	.3 sec
FBG-25	-2.0	-139.5	-0.6	1982552.9 kg mm ²	6839.1 kg mm ² / 2863416.7 kg mm ²	-37536.0 kg mm ² / 7694.0 kg mm ² / 1581502.4 kg mm ²	.3 sec	.3 sec
FBG-25-SS	5.6	-145.1	9.4	1808732.1 kg mm ²	-18333.0 kg mm ² / 2816214.0 kg mm ²	-21125.8 kg mm ² / 45117.7 kg mm ² / 1853523.4 kg mm ²	.3 sec	.3 sec
ABG-50	-1.8	-179.2	-1.5	5945624.6 kg mm ²	22410.7 kg mm ² / 8988134.4 kg mm ²	-105631.7 kg mm ² / 11938.8 kg mm ² / 5735839.3 kg mm ²	.3 sec	.3 sec
ABG-50-SS	3.5	-184.5	2.2	6164479.4 kg mm ²	-13738.6 kg mm ² / 9446600.0 kg mm ²	-32712.2 kg mm ² / 94776.2 kg mm ² / 6070250.8 kg mm ²	.3 sec	.3 sec
ABG-50-PH	20.6	-183.4	8.3	7301851.7 kg mm ²	128528.4 kg mm ² / 13807612.5 kg mm ²	-6682.2 kg mm ² / -38911.6 kg mm ² / 9344596.0 kg mm ²	.3 sec	.3 sec
FBG-50	-1.8	-179.2	-1.5	5945624.6 kg mm ²	22410.7 kg mm ² / 8988134.4 kg mm ²	-105631.7 kg mm ² / 11938.8 kg mm ² / 5735839.3 kg mm ²	.3 sec	.3 sec
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* - Measured from the center of the robot mounting bolt circle pattern
 ** - With respect to Center of Gravity

ABG-25 and FBG-25

Standard components

- Rugged 12.7 mm (1/2 inch) thick aluminum main mounting plate
- Heavy-duty rails and bearings with double seals and grease ports (ABG only)
- Hand wheel, opposing thread lead screw, bearing blocks and shaft locks (ABG only)
- Solid stainless steel Gripper Fingers, radiused ends, 11.1mm (7/16 inch) diameter
- Adjustable Decking Plates are independent of Gripper Fingers
- Top-mounted Bag Clamps
- High-flow pneumatic solenoid valves
- Ultrasonic bag presence sensor
- Custom adaptor plate to accommodate any robot

Compressed Air requirements

ABG/FBG-25 1.7 liters (.06 cubic feet) @ 90 psi
 Slip Sheet option 0.103 liters (.004 cubic feet) @ 90 psi
 Vacuum 3.71 scfm @ 87 psi

Slip Sheet option includes:

- 3 or 4 stroking pneumatic cylinders
- 3 or 4 corrugated rated vacuum cups
- 2 additional pneumatic solenoid valves
- 1 PIAB COAX vacuum generator with vacuum confirmation switch

Valve Package options:

- Discrete I/O - standard
- DeviceNet - optional
- Ethernet - optional
- Custom - optional

ABG-50 and FBG-50

Standard components

- Rugged 19 mm (3/4 inch) thick aluminum main mounting plate
- Heavy-duty rails and bearings with double seals and grease ports (ABG only)
- Hand wheel, opposing thread lead screw, bearing blocks and shaft locks (ABG only)
- Solid stainless steel Gripper Fingers, radiused ends, 15.9 mm (5/8 inch diameter)
- Adjustable Decking Plates are independent of Gripper Fingers
- Top-mounted Bag Clamps
- High-flow pneumatic solenoid valves
- Ultrasonic bag presence sensor
- Custom adaptor plate to accommodate any robot

Compressed Air requirements

ABG/FBG-50 1.7 liters (.06 cubic feet) @ 90 psi
 Slip Sheet option 0.103 liters (.004 cubic feet) @ 90 psi
 Vacuum 3.71 scfm @ 87 psi
 Pallet Hook option 1.16 liters (.041 cubic feet) @ 90 psi

Slip Sheet option includes:

- 3 or 4 stroking pneumatic cylinders
- 3 or 4 corrugated rated vacuum cups
- 2 additional pneumatic solenoid valves
- 1 PIAB COAX vacuum generator with vacuum confirmation switch

Pallet Hook option includes:

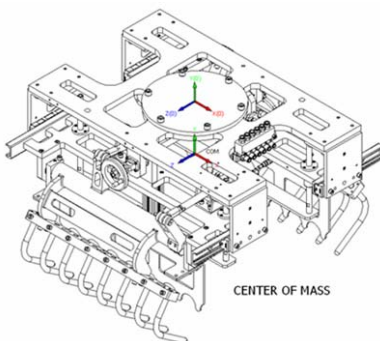
- 4 rotating pallet hooks
- 2 rotating shafts with 4 bearings
- 1 connection / timing linkage
- 1 stroking pneumatic cylinder
- 1 additional pneumatic solenoid valve
- 1 ultra-sonic pallet presence sensor

Valve Package options:

- Discrete I/O - standard
- DeviceNet - optional
- Ethernet - optional
- Custom - optional

Inputs / Outputs							
ABG / FBG-50				ABG / FBG-25			
		IN	OUT		IN	OUT	
Discrete I/O	STD	6	5	Discrete I/O	STD	6	5
	SS	+3	+3		SS	+3	+3
	PH	+3	+2				
DeviceNet Ethernet	STD	11	5	DeviceNet Ethernet	STD	11	5
	SS	+3	+3		SS	+3	+3
	PH	+3	+2				

STD: Standard
 SS: Slip Sheet
 PH: Pallet Hook



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