

Pneumatic IS machines offering total configuration flexibility

IS pneumatic machines

Type IS 4 1/4"	SG	4 1/4" DG	3" TG	
Type IS 5"	SG	5" DG	85mm TG	64mm QG
Type IS 5 1/2"	SG	5 1/2" DG		
Type IS 6 1/4"	SG	6 1/4" DG	4 1/4" TG	

IS machine specification

Servo feeder

- 570 Servo feeder plunger
- 555 Revolving tube with servo height and tube drive control
- 565 Parallel servo shear

Delivery system

- Servo gob distributor, interceptor and center reject position
- Constant cone delivery system
- Trough and deflector suspension system
- Scoops, troughs, and deflectors
- Scoop spray system
- Valve block on beam for retract cylinder, air ride and scoop spray

Machine

- Machine structure with bed, upright, beam, manifolds and piping, blank side platform with manifolds and piping
- Manifolds and piping for process air in non-corrosive material
- Plunger up with FlexPressure System FPS and quick exhaust, one valve per cavity
- Plunger cooling and counterblow with pressure regulator on the main inlet of the manifold with ISO 3 valve per cavity. Individual cavity adjustment with FlexIS timing system
- Air manifolds on upright and blank side platform
- Manifold for process and forming air of rust-proof material

Section frame

- 26 line electro-pneumatic valve block with safety flaps for blow mold open/close and blowhead
- Safety interlock switches for blowhead and mold open/close located on the blow side for easy access
- Blank mold holder supporting mechanism
- Blank side cooling LH, RH with stack
- Pantograph baffle mechanism, two-way air operated
- Funnel mechanism, two-way air operated
- Invert mechanism, pneumatic with cushioner cartridges
- Neck ring mechanism
- Blow mold holder supporting mechanism
- Constant Cushion take out mechanism
- Constant Cushion blowhead top mounted
- Blow side cooling with stack
- Blow side bottom plate mechanism with VertiFlow thru bed cooling and blow side vacuum
- One set of accessories for blow & blow or press & blow including Quick Change accessories for funnel, baffle and blowhead

Feeder options

- Feeder front plate
- Feeder casing
- Feeder refractories
- Feeder tube hoist
- Shear mechanism lube pump
- Shear spray system

Machine structure options

- Blank side vacuum including related valves
- FPS valves for final blow
- Mold and plunger lifting device integrated in overhead panel
- Auxiliary equipment

Section frame options

- Blank side cooling with VertiFlow
- FPS for counterblow and plunger cooling, one valve per cavity
- Servo Electric Take Out SETO
- Servo Electric Invert SEI
- Blow side vacuum including related manifolds and valves
- NNPB process and accessories
- VertiFlow cooling system
- Plunger positioner
- Blank side InVertiFlow
- Vacuum blow side

Control

- FlexIS TS-E expandable control system with cables – incorporates all configuration and setups

Ware handling

- FlexConveyor with FlexPusher with a silent chain transport belt with matched link belt for precise container spacing, height adjustable
- Integrated conveyor ladder to facilitate blow side maintenance
- Conveyor valve block with integrated blow mold and blowhead mechanism interlock
- Deadplate cooling high/low with dual infeed valves and height adjustable

Service

- Supervision and installation possibilities

Control options

- Control for proportional valves
- Servo Electric Invert SEI and Servo Electric Take Out SETO

Ware handling options

- Ware Reject
- Ware Transfer 478 / 178
- Cross Conveyor
- FlexStacker

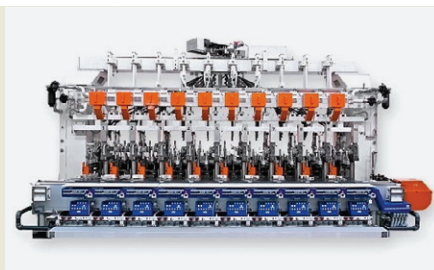
Service equipment options

- FlexLube lubrication system
- Flexhoses for air supply
- High pressure and low pressure regulators
- Filters and condensation drain
- Utility equipment, lube pump, Constant Cushion pump

Process control options

- Temperature Control System TCS
- Plunger Process Control PPC
- Closed loop TCS
- Closed loop Flex Pressure System FPS plunger
- Multi Gob Weight

Fixtures and tools



Type 4 1/4" machine

Machine for small ware

SG 4 1/4" DG

Type 5" machine

Flagship of IS family

SG 5" DG 85mm TG 64mm QG

Type 5 1/2" machine

Solid workhorse machine

SG 5 1/2" DG

Type 6 1/4" machine

Available (outperformed by AIS machine)

SG 6 1/4" DG 4 1/4" TG

IS machine ware range

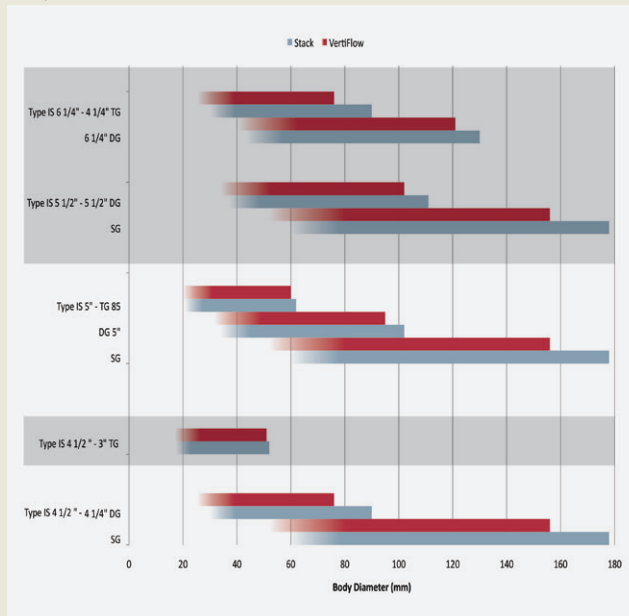
Ware range	* Type IS 4 1/4"			Type IS 5"				** Type IS 5 1/2"		Type IS 6 1/4"	
	SG	DG 4 1/4"	TG 3"	SG	DG 5"	TG 85	QG 64	SG	DG 5 1/2"	DG 6 1/4"	TG 4 1/4"
Blow and blow											
Max. height under finish	341 (358) a)	301	276	341	325	244	N.A.	380 (352) b)	343	342	287
Min. height under finish	61	58	59	74	73	55	37	121	68	115	105
Max. body diameter											
* with stack cooling	178	90	52	178	102	62	40	178	111	130	90
* with VertiFlow cooling	156	76	51	156	95	60	N.A.	156	102	121	76
Max. finish diameter	48	48	30	48	48	30	N.A.	48	48	48	48
Press and blow											
Max. height under finish	265 (282) a)	282	268	265	290	212	N.A.	326 (298) b)	302	301	268
Min. height under finish	74	40	47	74	55	50	18	121	58	105	86
Max. body diameter											
* with stack cooling	178	90	52	178	102	62	40	178	111	130	90
* with VertiFlow cooling	156	76	51	156	95	60	N.A.	156	102	121	76
Max. finish diameter	120	83 c)	38	120	90	55	N.A.	120	90	90	70
Narrow neck press and blow											
Max. height under finish	N.A.	282	268	N.A.	285	212	N.A.	N.A.	296	296	268
Min. height under finish	N.A.	40	47	N.A.	55	50	N.A.	N.A.	57	105	86
Max. body diameter											
* with stack cooling	N.A.	90	52	N.A.	102	62	N.A.	N.A.	111	130	90
* with VertiFlow cooling	N.A.	76	51	N.A.	95	60	N.A.	N.A.	102	121	76
Max. finish diameter	N.A.	38	38	N.A.	38	38	N.A.	N.A.	38	38	38

The specified ware ranges are valid when using standard mold equipment, Q.C. plunger mechanisms, through bed/through frame VertiFlow bottom plate mechanisms and blank mold stack cooling (excluding AIS and NIS which have standard InVertiFlow blank side cooling)

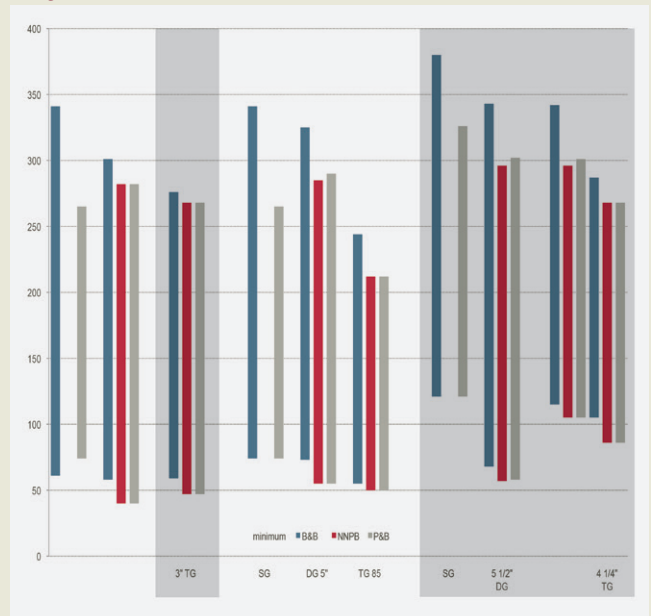
a) with blow mold stack cooling using non VertiFlow adaptor b) with blow mold stack cooling, with or without non VertiFlow adaptor c) 70mm max. finish with VertiFlow blow mold cooling

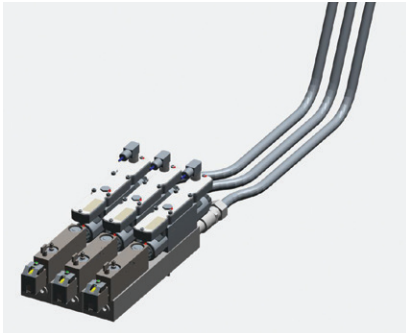
* IS 4 1/4" - TG 3" is mostly superseded by IS 5" TG 85mm ** IS 5 1/2" and IS 6 1/4" are mostly superseded in the market by the AIS machine

Body diameter



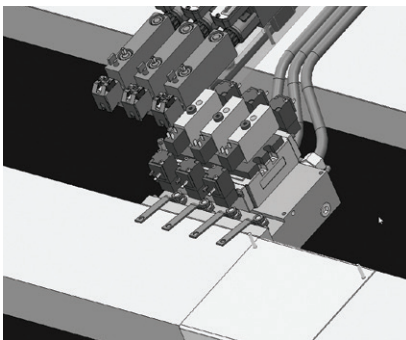
Height under finish- minimum and maximum





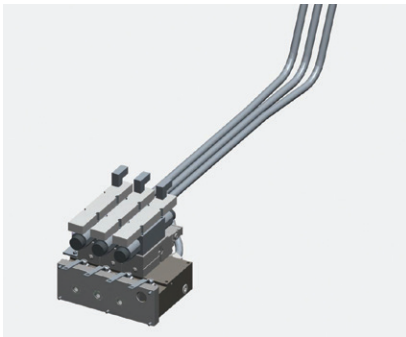
Plunger up

FlexPressure System FPS standard setting on FlexIS job file



Counter blow/plunger cooling

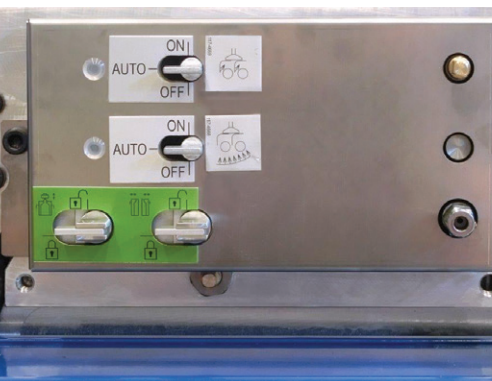
Manually regulated manifold standard with ISO 3 valve/capacity
Optional vacuum blank side with FPS only



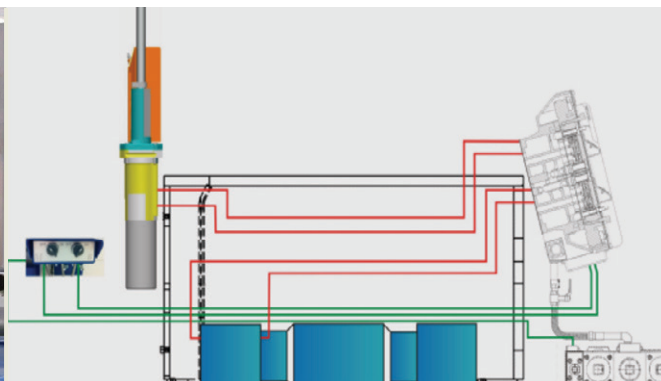
Counter blow/plunger cooling option

FPS 1 valve per cavity – FlexIS controlled - job file
(outdated pilot regulators on uprights are obsolete)

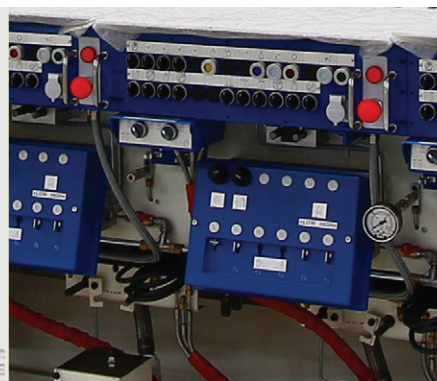
Any other setup will be handled as a special request.



Blow mold and blowhead interlock on FlexConveyor



Section frame with interlock

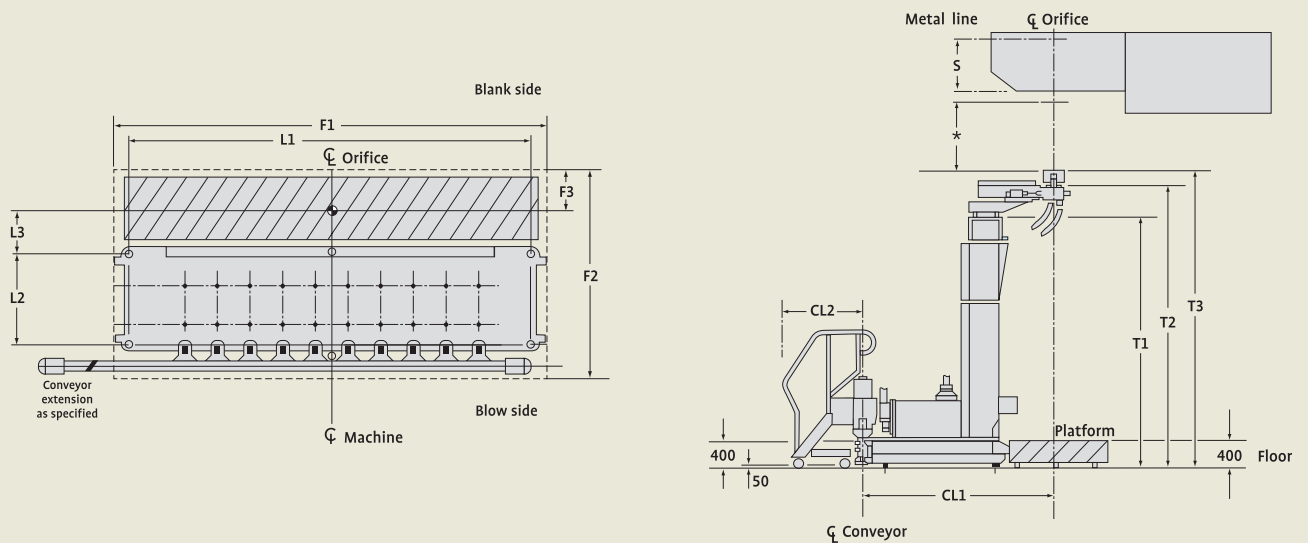


26 line valve block with override flaps

IS machine- machine height with Constant Cone delivery

	IS 4 1/4"				IS 5"			
	6	8	10	12	6	8	10	12
	200-16000-01	200-16000-02	200-16000-03	200-16000-04	200-16000-05	200-16000-06	200-16000-07	200-16000-08
F1 Required space length (floor cutout)	5000	6000	7100	8200	5000	6000	7100	8200
F2 Required space width (floor cutout)	3900	3900	3900	3900	3900	3900	3900	3900
F3 Required space to CL orifice (floor cutout)	920	910	910	660	920	910	910	660
L1 Loading points of bed length	4476	5544	6610	7678	4476	5544	6610	7678
L2 Loading points of bed width	1580	1580	1580	1580	1580	1580	1580	1580
L3 Loading points to CL orifice	651	651	652	911	651	651	652	911
T1 Top of beam	3338	3568	3803	4115	3338	3568	3803	4115
T2 Top of funnel	3708	3938	4173	4485	3708	3938	4173	4485
T3 Top of interceptor	3977	4207	4440	4754	3977	4207	4440	4754
CL1 CL orifice to CL conveyor	2398	2398	2398	2658	2417	2417	2417	2677
CL2 CL conveyor to end of ladder	884	884	884	884	884	884	884	884

Note: For machine height with non-Constant Cone delivery, please contact Bucher Emhart Glass.



* A free gob drop of 900-1200 mm is recommended

Dimension specification for feeder & spout

Feeder & spout	S Spout depth (mm)
81 std	324
81 deep	375
503	414
515	477
555 std with 503 spout	414
555 deep with 515 spout	477

	IS 5 1/2"				(A) IS 6 1/4"			
	6	8	10	12	6	8	10	12
	200-16000-09	200-16000-10	200-16000-11	200-16000-12	200-16000-13	200-16000-14	200-16000-15	200-16000-16
F1 Required space length (floor cutout)	5000	6000	7100	8200	5000	6000	7100	8200
F2 Required space width (floor cutout)	4100	4100	4100	4100	4100	4100	4100	4100
F3 Required space to CL orifice (floor cutout)	950	940	930	660	920	921	923	660
L1 Loading points of bed length	4476	5544	6610	7678	4476	5544	6610	7678
L2 Loading points of bed width	1580	1580	1580	1580	1580	1580	1580	1580
L3 Loading points to CL orifice	620	620	620	878	640	640	639	899
T1 Top of beam	3411	3642	3876	4188	3411	3642	3876	4188
T2 Top of funnel	3781	4012	4246	4558	3781	4012	4246	4558
T3 Top of interceptor	4050	4281	4513	4827	4050	4281	4513	4827
CL1 CL orifice to CL conveyor	2566	2566	2526	2826	2604	2604	2604	2684
CL2 CL conveyor to end of ladder	884	884	884	884	884	884	884	884

Note: For machine height with non-Constant Cone delivery, please contact Bucher Emhart Glass.

Utility requirements (ref no. 200-1760)

Media	Pressure bar	Consumption per section SG/DG NM3/min	Consumption per section TG NM3/min
Low pressure operating air	2.1	1.0	1.0
High pressure operating air	3.1	1.0	1.0
Forming air (B&B)	3.1	1.8	1.8
Forming air (P&B)	3.1	2.6	2.6
Vacuum	85%	0.2-0.3	0.2-0.3
Cooling air stack only	1200 mm H ₂ O	75.0	60.0
VertiFlow blow side and blank stack	1200 mm H ₂ O	50.0	40.0
VertiFlow blank and blow side	1200 mm H ₂ O	35.0	N/A
VertiFlow blow side	1200 mm H ₂ O	20.0	9.0
Conveyor	600 mm H ₂ O	10.0	10.0
Lubrication oil	80.0	1.3 liter/day	1.3 liter/day
Cooling water	2.1	15 liter/min	15 liter/min

- Cooling values show highest possible consumption
- Calculate highest-lowest expected heat load = tonnage, cooling system pressures, production, machine type, molds, etc.
- Calculated values allow energy efficient fan selection

Bucher Emhart Glass makes every effort to provide valid, helpful information to our customers so that our equipment will be best utilized. If you encounter information that is not correct or information which can be misunderstood or not understood, please advise Bucher Emhart Glass so that we can improve this information. All the above figures are typical values and subject to change. For specific project requirements, please contact Bucher Emhart Glass Technical Service.



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