

Technical News Bulletin

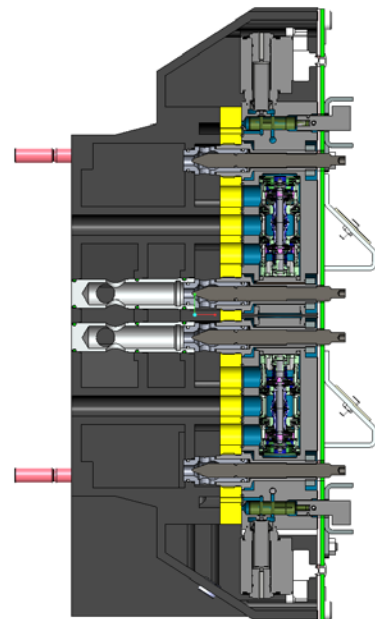
Cham, September 2017

Advanced Speed Control Needles for 26-Line Electro Pneumatic Valve Block

Introduction

The 26-Line Electro Pneumatic Valve Block (EPVB) is the standard for all IS and AIS machines since 1997, when it was designed to maximize the air flow to all pneumatic mechanisms.

It is now available with an improved arrangement for mechanism speed control by redesigned needle valves.



To achieve high performance, pneumatic mechanisms must run faster and faster, despite a constant increase in accessory weight. This results in reaching the limits of the pneumatic technology and in a challenging mechanism setup for the operator.

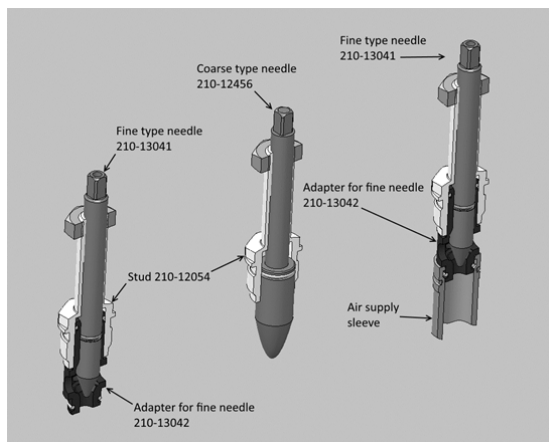
With this arrangement, a proper balance between pneumatic mechanism air inlet and outlet is achievable, providing the operator with an easier and more stable setup, and enhancing the mechanism kinematic.

All actual IS & AIS machines are delivered with the optimized speed control needle arrangement (see attached examples: Line Correlation Data 200-1999-00 and 210-1999-00).

Upgrade is available for machines already in the field.

Specification

Improved needle valve assembly kits (sleeve, stud, O-ring, nut) are listed on drawing 210-2102-00.



PART NUMBER	DESCRIPTION
210-2102-01	Fine needle OUT
210-2102-02	Coarse needle OUT
210-2102-03	Blank needle OUT
210-2102-04	Fine needle IN LP
210-2102-05	Coarse needle IN LP
210-2102-06	Fine needle IN HP
210-2102-07	Coarse needle IN HP
210-2102-08	Fine needle IN IP
210-2102-09	Coarse needle IN IP
210-2102-10	Blank needle IN LP
210-2102-11	Blank needle IN HP

Availability / Application

The latest needle valve assembly, as per drawing 210-2102-00, is standard on actual IS and AIS machines.

See Line Correlation Data 200-1999-00 or 210-1999-00 for the configuration of the EPVB with these needle valve assemblies.

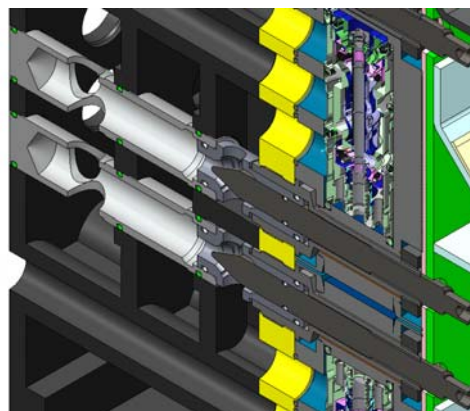
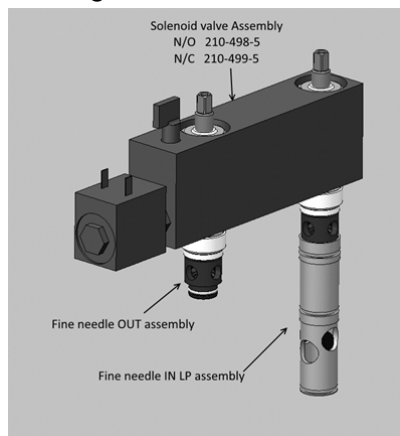
Line	Function	TYPE OF VALVE				TYPE OF SLEEVES				FINE NEEDLE		COARSE NEEDLE		SYMBOL No. See 191-22112		P/N SIZE	INDICATOR No. 210-2102-01	210-2102-01 No.	NOTES	Symbol Plate Color
		NO	NC	DN	DN	HP	LP	IP	IP	OUT	IN	OUT	IN	UPPER	LOWER					
1	Add Cooling Blow RH	-	1	-	-	1	-	-	-	-	-	-	208	-	6	10	3		BLUE	
2	Cooling Blank Side (RH)	-	1	-	-	1	-	-	-	-	-	-	104	-	6	10	3		BLUE	
3	Cooling Blank Top RH & LH	-	1	-	-	1	-	-	-	-	-	-	185	-	6	10	3		BLUE	
4	NH Cooling LH & RH	-	1	-	-	1	-	-	-	-	-	-	121	-	10	10	3		BLUE	
5	Blank Open	1	-	-	-	1	-	-	-	-	1	-	11	-	18	11	2		RED	
6	Blank Close	-	1	-	-	1	-	-	-	-	-	-	1	-	18	11	2		RED	
7	Funnel Down	-	1	-	-	1	-	-	-	1	1	-	122	-	12	4	1		RED	
8	Funnel Up	1	-	-	-	1	-	-	-	-	-	-	123	-	12	4	1		RED	
9	Plunger Down Inner (TG)	1	-	-	-	1	-	-	-	1	1	-	57	-	5/2"	4	1		RED	
10	Blaffe Down	-	1	-	-	1	-	-	-	-	-	-	152	-	16	11	2		RED	
11	Plunger Down 2 (TG)	1	-	-	-	1	-	-	-	1	1	-	58	-	5/2"	4	1		RED	
12	Blaffe Up	1	-	-	-	1	-	-	-	-	-	-	151	-	16	11	2		RED	
13	Plunger Down 3 (TG)	1	-	-	-	1	-	-	-	1	1	-	59	-	5/2"	4	1		RED	
14	Nickling Open	1	-	-	-	1	-	-	-	-	-	-	14	-	10	4	1		RED	
15	Revert	1	-	-	-	1	-	-	-	-	-	-	15	-	16	11	1		RED	
16	Invert	-	1	-	-	1	-	-	-	-	-	-	13	-	16	11	2		RED / YELLOW	
17	Blow Mold Open	1	-	-	-	1	-	-	-	-	-	-	39	-	18	11	2	SEE NOTE 2	YELLOW	
18	Blow Mold Close	-	1	-	-	1	-	-	-	-	-	-	40	-	18	11	2	SEE NOTE 2	YELLOW	
19	Blow Head Up	1	-	-	-	1	-	-	-	-	-	-	125	-	16	10	1		YELLOW	
20	Blow Head Down	-	1	-	-	1	-	-	-	-	-	-	124	-	16	10	1		YELLOW	
21	Take-out Out	-	1	-	-	1	-	-	-	-	-	-	21	-	10	10	1		YELLOW	
22	Take-out In	-	1	-	-	1	-	-	-	-	-	-	20	-	10	10	1		YELLOW	
23	Tong Close	-	1	-	-	1	-	-	-	-	-	-	109	-	10	6	3		YELLOW	
24	Vacuum Blowside	-	1	-	-	1	-	-	-	-	-	-	19	-	6	10	3		YELLOW	
25	Add Cooling Blow LH	-	1	-	-	1	-	-	-	-	-	-	209	-	6	10	3		BLUE	
26	Cooling Blank Side (LH)	-	1	-	-	1	-	-	-	-	-	-	105	-	6	10	3		BLUE	

1	210-1999-161	SEE NOTE 1	20	SYMBOL PLATE SET
				19
				18
				17
				16
26	59-39115		15	LED
8	210-2102-11		14	BLANK STUD HP
11	210-2102-10		13	BLANK STUD LP
0	210-2102-09		12	COARSE NEEDLE IN IP
0	210-2102-08		11	FINE NEEDLE IN IP
0	210-2102-07		10	COARSE NEEDLE IN HP
1	210-2102-06		9	FINE NEEDLE IN HP
0	210-2102-05		8	COARSE NEEDLE IN LP
6	210-2102-04		7	FINE NEEDLE IN LP
8	210-2102-03		6	BLANK STUD OUT
7	210-2102-02		5	COARSE NEEDLE OUT
11	210-2102-01		4	FINE NEEDLE OUT
0	210-397		3	SOLENOID VALVE DUMMY
17	210-499		2	SOLENOID VALVE NC
9	210-498		1	SOLENOID VALVE NO
A	CTGY	PART NO	SHEET	NOTES
A	INDEX	NAME		

DATE	DESCRIPTION OF CHANGE	BY	DATE	REVISIONS	SCALE	ASSEMBLY NUMBER
			2017-05-02	TWIC		EPVB 26-LINE DG
			2013-04-23	SBER		STANDARD-AIS (BLOW MOC & BH INTERLOCK)
			2013-01-28	SBER		ASSEMBLY NUMBER
			2012-09-21	SBER		210-1999-61
				APP	ASTE	

Recommendation

- Funnel mechanism (two-air operated): two fine needle valves (on air inlet and outlet) for both funnel up/funnel down motions.
- Blowhead mechanism: one fine needle for speed control on the outlet (exhaust) for both blowhead up/blowhead down motions.
- Plunger down motion (with FPS plunger up valve in the blankside platform): one fine needle valve on the outlet (exhaust) and one fine needle valve on the inlet (Low Pressure), resulting in improved plunger motion setup and extended QC cartridges lifetime.



Installation Requirement

The upgrade of existing EPVB only requires the replacement of the needle valve assemblies with kits selected from drawing 210-2102-00.

Features / Benefits

FEATURES	BENEFITS
Fine needle adjustment	Improved mechanism dynamic Higher performance Higher machine speed => potential for increased production
Easier and optimized mechanism setup	Longer mechanism lifetime
New standard Line Correlation Data	Improved performance of 26-line EPVB => potential for increased production