



FIELD OF APPLICATION

Lockstitch, chainstitch and overlock machines of various manufacturers.

ALSO AS A REPLACEMENT FOR:

- AB62AV** - BROTHER lockstitch machine cl. 737-113, cl. 737-913
- AISIN high-speed seamer AD3xx, AD158, 3310 and overlock EK1
- JU62AV/JU82AV-** JUKI high-speed seamer with index -6 and index -7
- AC62AV** - KANSAI chainstitch machine cl. RX 9803
- PEGASUS W500/UT, W600/UT/MS with/without stitch condensing
- BROTHER chainstitch machine FD3 B257
- UNION SPECIAL chainstitch machine 34700 with stitch lock
- YAMATO chainstitch machine
- SN62AV** - SINGER lockstitch machine 211, 212, 591
- US80A** - UNION SPECIAL chainstitch machine 34000, 36200
- UNION SPECIAL lockstitch machine 63900AMZ
- PF62AV** - PFAFF lockstitch machine 563, 953, 1050, 1180
- DA62AV** - DÜRKOPP ADLER lockstitch machine 210, 270
- AB62C** - PEGASUS backlatch machine
- YAMATO backlatch machine ABT3

Adapter cords see Special Accessories!

OUTPUTS IN THE SELECTABLE MODES

13 outputs are available. Find some of the outputs in the following table!

Mode	Designation	Outputs							
		FL (6.5A)	VR (6.5A)	M1 (3.0A)	M2 (3.0A)	M3 (3.0A)	M4 (3.0A)	M5 (0.5A)	M6 (0.5A)
	Power transistors →								
0	Lockstitch; e. g. Aisin, Brother Dürkopp Adler, Pfaff	FL	VR	FA1	FA2	FW	FA1+2	ML	MST
2	Lockstitch; e. g. Singer (212UTT)	FL	VR	---	FA	FSPL	FL1	ML	MST
3	Lockstitch; e. g. Dürkopp Adler (467)	FL	VR	FA	FSPL	FW	---	ML	MST
4	Chainstitch; e. g. Union Special (replacing US80A)	FL	FA-R	M1	FA-V	FW	STV	ML	---
5	Chainstitch; parallel sequence; e. g. Brother, Global Kansai, Pegasus; Rimoldi, Union Special, Yamato	FL	STV	M1	M2	M3	M4	ML	MST
6	Chainstitch; tape cutter / fast scissors	FL	STV	M1	M2	AH1	AH2	ML	MST
7	Overlock	FL	KS	M1	M2	AH	FSPL	ML	MST
8	Backlatch; Pegasus	FL	---	PD _≤ -1	PD _≥ 1	PD _≥ 1*	---	ML	MST
9	Backlatch; Yamato	FL	---	PD _≤ -1	PD _≥ 1	PD _≥ 1*	---	ML	MST
10	Lockstitch; e.g. Union Special (63900AMZ)/Refrey-FA	FL	FA-R	FSPL	FA-V	FW	VR	ML	MST
14	Lockstitch; e.g. Juki (5550-6 / 5550-7)	FL	VR	FA1+2	FA2	FW	FA1	ML	MST
15	Backlatch; Pegasus (SSC100)	FL	KS/KB	KB	KS	FSPL	AH	ML	HP
16	Overlock; feed-off-the-arm machine e.g. Yamato (FD62)	FL	KS	RB	M2	AH	FSPL	ML	MST

Attention! The total power of the outputs is to be limited to 96VA!

Abbreviations:

- | | | | | | |
|-------|----------------------------|-------|--|--------------------|---------------------------------------|
| AH | - Tape cutter | FL1 | - Sewing foot lift without pulsing | PD _≤ -1 | - Pedal steps -1 / -2 |
| AH1/2 | - Fast scissors | FL | - Sewing foot lift | PD _≥ 1 | - Pedal steps 1...12 |
| FA1 | - Thread trimmer pos. 1-1A | FSPL | - Thread tension release | PD _≥ 1* | - Pedal steps 1...12 inverted |
| FA2 | - Thread trimmer pos. 1A-2 | VR | - Backtacking | RB | - Chain blowing in opposite direction |
| FA1+2 | - Thread trimmer pos. 1-2 | STV | - Stitch condensing | ML | - Machine running |
| FA-V | - Thread trimmer forward | KB | - Chain blowing | MST | - Machine at standstill |
| FA-R | - Thread trimmer backward | KS | - Chain suction | L-STL | - Indicator lamp for stitch length |
| FW | - Thread wiper | HP/FF | - High lift for walking foot/flip-flop | | |

- Additional features:**
- Power supply 24V=, max. 0.5A for further additional devices
 - Power supply 15V=, max. 100mA
 - Power supply 5V=, max. 100mA
 - Signals position 1, position 2 and generator impulses are always available, independently of the set mode. (transistor output with open collector, max. 40 VDC, 10mA)

■ CHARACTERISTICS

The control has a digital touch panel for programming all parameters (functions, times, speeds, etc.). When a Variocontrol V820 control panel is connected, more functions are possible, e. g. 8 seam patterns with a total of 40 seams (order nos. of the V810/V820 control panels see Special Accessories).

The control is operated by means of the detachable external actuator. 12 controlled speed stages are available. Stage 1 (positioning speed) and stage 12 (maximum speed) can be set. The maximum speed of the set value can be reduced by stages. The basic setting of the maximum speed is not affected. Stages 2...11 (intermediate speeds) adapt automatically to the respective maximum speed.

■ THE FOLLOWING FUNCTIONS ARE AVAILABLE AND CAN BE ADAPTED TO THE MACHINE:

- **TYPE OF SEWING MACHINE:** Different modes for various lockstitch, chainstitch and overlock sewing operations can be selected.
- **SOFTSTART:** On / off; number of stitches and speed at the start of the seam can be selected (2 stitches / factory setting: 500 RPM).
- **BASIC POSITION:** Needle position at stop in the seam up/down.
- **BRAKING POWER AT MACHINE STANDSTILL:** Braking effect can be set.
- **SEWING FOOT LIFT:** At stop in the seam automatic / by pedal, after thread trimming automatic / by pedal, start delay from lifted sewing foot can be set.
- **START AND END BACKTACK:** Can be set separately, single / double / off, possibility of compensation between forward and backward section, length of each backtacking section and speed selectable.
- **START AND END ORNAMENTAL BACKTACK:** Stop time can be set.
- **THREAD TRIMMER:** On / off; signals for various manufacturers.
- **THREAD WIPER:** On / off.
- **STITCH COUNTING:** On / off.
- **REVERSION:** Reversing angle up to 300° and activation delay can be set.
- **DIRECTION OF ROTATION OF THE MACHINE:** Programmable ccw / cw.
- **SPEED RANGE:** 70 RPM up to 9900 RPM (depending on machine).
- **SPEED LIMITATION:** Can be varied during machine run and at intermediate stop.

■ SWITCHING FUNCTIONS DEPENDING ON THE INSERTABLE STRIP WHEN USING A VARIOCONTROL V810/V820:

V810

- Start backtack single / double / off
- End backtack single / double / off
- Automatic sewing foot lift at stop in the seam / after thread trimming.
- Basic position of the needle at stop in the seam up / down.
- 2 pushbuttons which can be set with different input functions.

V820

- Start backtack single / double / off
- End backtack single / double / off
- Automatic sewing foot lift at stop in the seam / after thread trimming.
- Basic position of the needle at stop in the seam up / down.
- Stitch counting seam forward / backward / off.
- Light barrier function uncovered-covered / covered-uncovered / off.
- Thread trimmer and thread wiper.
- Bobbin thread monitor.
- Function key programmable.
- Programming seams TEACH IN; a maximum of 8 patterns with a total of 40 seams is possible, feeding direction can be inverted.
- 2 pushbuttons which can be set with different input functions.

■ DIFFERENT INPUT FUNCTIONS ARE SELECTABLE BY MEANS OF PARAMETERS:

10 switch inputs can be programmed individually with the following functions

Needle up/down	Positioning speed n1
Needle up	Speed limitation n11 (flip flop)
Single stitch (basting stitch)	Speed limitation n9
Full stitch	Needle runs from position 1 to position 2 (safety function)
Needle to position 2	Speed limitation with external potentiometer
Machine run blockage effective with open contact	External light barrier
Machine run blockage effective with closed contact	Signal "hemming foot" off
Machine run blockage effective with open contact (unpositioned)	High lift for walking foot when sewing foot is lifted
Machine run blockage effective with closed contact unpositioned)	Pedal controlled speed n9
Run at automatic speed n12	Run at automatic speed n9 (can be interrupted by pressing the pedal to pos. 0)
Run at limited speed n12	Run at automatic speed n9 (can be ceased by pressing the pedal to pos. -2)
Sewing foot lift with pedal in position 0 (neutral)	Run at automatic speed n9 (pedal blocked)
High lift for walking foot operational mode not stored	Speed n12 with break contact (pedal controlled)
High lift for walking foot operational mode stored (flip flop)	Run at automatic speed n12 with break contact (pedal is blocked)
Tape cutter and/or fast scissors	Switching to the next pattern in "TEACH IN"
Intermediate backtack / intermediate stitch condensing	Switching back to the previous pattern in "TEACH IN"
Stitch regulator suppression / recall	Tape cutting only at machine standstill
Unlocking the chain (can be activated by pressing a pushbutton)	
Set value for bobbin thread monitor	

Efka

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UNIT CONSISTING OF:

- | | |
|---|--|
| <ul style="list-style-type: none"> 1 direct current motor type DC1500 (see last page) 1 electronic control type N...-AB220A5100 with power pack type N201 1 actuator type EB301A | <ul style="list-style-type: none"> 1 set of standard accessories B156 consisting of: <ul style="list-style-type: none"> 1 documentation 1 set of accessories Z53 consisting of: <ul style="list-style-type: none"> 1 pitman rod 400...700mm long 1 37-pole SubminD plug 1 potential equalization cord 1 bracket for fastening EB3.. |
|---|--|

SPECIAL ACCESSORIES:

Special Accessories, against Extra Charge	Part No.
Set of standard accessories B159 for undertable mounting: complete support, belt guard, bracket DC1500 in plastic bag, pulley 71-L, adapter ring for belt guard, foot with grounding terminal, documentation	
Control panel Variocontrol V810	5970153
Control panel Variocontrol V820	5970154
Reflection light barrier module LSM002	6100031
Solenoid type EM1...(for e. g. sewing foot lift, backtacking)	available versions see specification "solenoids"
Fitting piece for position transmitter	0300019
Adapter cord for the connection to AISIN high-speed seamers AD3xx, AD158, 3310 and overlock machine EK1	1112815
Adapter cord for the connection to BROTHER cl. 737-113, 737-913	1112814
Adapter cord for the connection to BROTHER chainstitch machines cl. FD3 B257	1112822
Adapter cord for the connection to DÜRKOPP ADLER cl. 210 and 270	1112845
Adapter cord for the connection to GLOBAL cl. CB2803-56	1112866
Adapter cord for the connection to JUKI high-speed seamers with index -6	1112816
Adapter cord for the connection to JUKI high-speed seamers with index -7	1113132
Adapter cord for the connection to JUKI lockstitch machines with position sensor integrated in the handwheel	1113157
Adapter cord for the connection to KANSAI machines cl. RX 9803	1113130
Adapter cord for the connection to PEGASUS cl. W500/UT, W600/UT/MS with/without stitch condensing	1112821
Adapter cord for the connection to PEGASUS backlatch machines	1113171
Adapter cord for the connection to PFAFF cl. 563, 953, 1050 and 1180	1112841
Adapter cord for the connection to PFAFF cl. 1425	1113072
Adapter cord for the connection to RIMOLDI cl. F27	1113096
Adapter cord for the connection to SINGER cl. 211, 212U, 212UT and 591	1112824
Adapter cord for the connection to UNION SPECIAL cl. 63900AMZ (as a replacement for US80A)	1112823
Adapter cord for the connection to UNION SPECIAL cl. 34700 with stitch lock	1112844
Adapter cord for the connection to UNION SPECIAL cl. 34000 and 36200 (as a replacement for US80A)	1112865
Adapter cord for the connection to UNION SPECIAL cl. CS100 and FS100	1112905
Adapter cord for the connection to YAMATO VC series chainstitch machines	1112818
Adapter cord for the connection to YAMATO backlatch machines ABT3	1112826
Adapter cord for the connection to YAMATO backlatch machines ABT13, ABT17	1113205
Adapter cord for the connection to YAMATO VG series chainstitch machines	1113178
Adapter cord for the connection to interface 232-2 (EFKANET)	1113119
Mounting kit for DC 1500 on PEGASUS cl. W600	1113125
Mounting kit for DC1500 on PEGASUS EX/EXT	
Knee switch type KN3 (pushbutton) with cord of approx. 950 mm length without plug for activating the above functions	5870013
Sewing light transformer	please indicate line voltage and sewing light voltage (6.3V or 12V)
9-pole SubminD male connector	0504135
9-pole SubminD female connector	0504136
Semimonocoque casing for 9-pole SubminD	0101523
37-pole SubminD connector with semimonocoque casing	1112900
Single pin for 37-pole SubminD with strand of 5cm length	1112899

▪ AVAILABLE MOTOR

Example For Ordering dc1500 Positioning Drives

Control _____ Supply voltage
 Power pack _____ Supply frequency
 Motor _____

DC1500/N201-AB220A* 230V - 50/60Hz

* Besides the type designation, the control nameplate indicates the respective state of development (e. g. AB220A....Y1) and the program number (e. g. AB220A5100..). The state of development is only required in the case of technical inquiries or repairs.

Available Motor

Type	Rated Torque Nm	Maximum Torque Nm	Nominal speed RPM	Power W	Weight kg	Protection	Notes
DC1500	0.64	3	6000	400	2.125	IP 40	



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