PB 2/4/6/8/12 SERIES AND PC 6

UGE052/0402

⚠ **WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!**

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

METAPLAST ... The Downstream Specialists

1.0 RECEIVING AND HANDLING

1.1 Acceptance

Thoroughly inspect equipment before accepting shipment from the transport company. Damage and shortages should be noted on your freight bill by the receiving agent. If concealed loss or damage is discovered, notify your freight, or receiving agent, at once and request for an inspection.

Conair/ Metaplast will assist you in collecting claims for loss or damage in shipment; however, responsibility rests with the transport company and claims can not be deducted nor should payment be withheld on any Conair/ Metaplast invoice, as the carrier guarantees safe delivery.

1.2 Storage

If the equipment is to be stored for any period of time prior to installation, the area should be dry, and not subject to extremes in temperature, or humidity changes. Be aware that after use prior to storage, the machine should be inspected, and lubrication applied where, and as, needed. This is done in order to prevent bearings to be damaged by contaminated grease.

2.0 GENERAL DESCRIPTION

The Conair/ Metaplast PB Pullers are belt-type haul-off/pullers that accommodates two traction belts that are driven in tandem. These belts are brought together through a spindle control traction belt adjustment to grasp the extrudate and provide a consistent pulling force. In effect, the shape of the extrudate is stabilized to maintain the required dimensions.

It should be noted that while the PC-6 is a cleated puller which is based on the same principales as a belt puller. Operation and design are closer to the belt pullers design than a cleated haul off.

Located as part of the downstream production line, the puller provides the torque required to pull the extrudate at a specified speed and tension while it is cooled to maintain consistent dimensions.

2.1.0 Standard Features

- see Data sheet for contact length, traction belt material and belt opening.
- Tandem traction belt drive.
- Individual traction belt height adjustment through manual spindle controls.
- Front mounted panel with: START/STOP and 10-turn potentiometer.
- Heavy-duty, all steel welded construction.
- 4 inch swivel casters and 1 inch floor lock jack screws.
- All parts plated or painted to resist corrosion.
- 42 inch center height.
- DC SCR regen drive.
- Single stage transmission.
- Speed range: To be discussed.
- Electrical: 230V AC / 1 Ph / 60 HZ.

2.1.1 Optional Features

- Dual stage transmission.
- M-trim digital motor speed controller.
- Individual traction belt height adjustment through pneumatic cylinder controls

4.1.2 Standard / Operation

1) Apply power to the belt puller from the plant power source.

2) Turn the disconnect switch to the ON position, and pull out the EMERGENCY STOP palm button.

3) Open the traction assembly (conveyors) using the manual handle situated on top of the belt puller.

4) Set the speed potentiometer to 0.

5) Adjust the bottom belt to the extrusion line height.

6) Press the start push-button to start the conveyor belts running, and slowly increase the speed by turning the speed potentiometer.

7) Set the haul-off speed to the approximate line speed.

8) Feed the extrusion downstream, and insert the extrusion between the conveyor belts.

9) Lower the top belt by using the manual spindle control. The top traction assembly will then descend to grasp the profile.

10) Set the speed to allow the approximate finished size for the profile.

11) Once the profile size has attained some consistency, and cooling has been applied, fine tune the potentiometer to the speed required to maintain the dimensions, and then lock the potentiometer setting.

4.2 With Two Speed Transmission

The PB puller can be equipped with a two speed (high and low) transmission. A lever is mounted at the front of the haul-off to adjust the speed on either high speed in or low speed out (the center position of the lever functions as a neutral point).

To set the PB puller on low speed: Position the lever to the center position, and pull the lever outward. As the lever is at the center/outward position, direct the lever toward the right – low speed out.

To set the PB puller on high speed: Position the lever to the center and push the lever inward. While inward, direct the lever toward the left – high speed in.

Note: never change the gear to the high or low speed while the haul-off is still running. Always make sure to stop the haul-off and wait for it to come to a full halt before changing the gears – otherwise, the gears will grind and cause damage to the machine.

If difficulty is encountered when setting the gear lever to high speed in or low speed out:

The gearing inside the two-gear transmission may, at times, not engage properly until the unit is run in the neutral position for a few seconds.

Make sure that the lever is at center position and press the start push button on the haul-off.

Let the haul-off run in this neutral position for a few seconds and then stop the machine.

Direct the lever to the desired speed.

5.0 MAINTENANCE

The belt puller must be kept in good working order to assure a consistent product. Check frequently to ensure freedom from obstructions and smooth operation. The use of high quality materials and conservative machine design will result in a long and trouble-free operation; providing that basic sound service practice is followed.

Inspection at intervals, dependent upon service conditions, is the best insurance against costly maintenance and breakdown; experience is your best guide. Record inspection results, and action required or performed.

All bearings are sealed and lubricated for life.

Check the tension on all the chains and belts during the first three (3) weeks of operation for looseness, and correct if necessary. After the three (3) weeks, continue to check every three (3) months.

Reducer oil should be changed every 2500 hours (or 6 months) of running time. Replace with the manufacturer's recommended oil type.

Note: Refer to the information sheet: Grove Gear, "FLEX-A-LINE SPEED

REDUCERS: Installation, Lubrication and Maintenance Instructions", included in this manual, for the proper grade of oil.

Every six (6) months of operation: Clean and grease all the chain drive assemblies.

Check the chain drives for any wear and elasticity, and replace if necessary. Replace any damaged or worn chains, sprockets, or traction belts with new ones.

5.1 Daily (or at each start-up)

1) Clean any debris from the haul-off surfaces.

2) Remove any material from the belt surface, or any which may be caught between the V-belt and the rolls.

3) Verify that all the guards are in place.

4) Adjust the product guide rolls to the size of the extrusion.

5) Verify that all the control cabinet doors are closed tightly.

6) Check the alignment of the haul-off with the extrusion line (parallel to line and proper center-height).

5.2 Weekly

1) Check the condition of the haul-off belt surfaces.

2) Verify the tension of the haul-off belts: with a firm grip, pull up at the center of the belt; it should rise approximately 1/2 of an inch.

5.6 *Removing the cleated belt (on pc-6 only)*

1) Open the conveyor assembly.
2) Close the machine and lock the master switch at off, keep the key with you.
3) Release the tension in the belt chain assembly by unscrewing the set screws.
4) Find the master link in the belt chain assembly and remove it.
5) Separate the chain.

5.7 *Replacing the cleats*

1) Remove the cleated belt (see 5.5)
2) Place the chain side up cleats facing the work surface.
3) Unscrew the desired cleats.
4) Replace with new one (refer to section 6.2 for spare cleat number)
5) Reassemble the chain on the conveyor and reinstall the belt chain assembly master link.
6) Tension the belt chain.
7) Start the puller and verify its operation.

5.8 *Recommended Lubricator Oil*

Tellus 21, but any high quality oil in the 80/350 second (Redwood No.1) at 70° F.
range is suitable.

6.0 ORDERING SPARE PARTS

When ordering spare parts refer to the list in annex, verify that the part you are ordering is in it. If not contact Conair Metaplast service department they will be happy to procure any assistance needed.

Note: Belts in belts part listing are the most common furnished with belt pullers. It **does not** cover all material[1] or special belt section **which you may have**. If so all pertinent information will be needed to procure you with the proper replacement belt.

[1] look in belts part listing for most available belt material.

6.2 *Pc-6 standard cleats*

	Metaplast No	Description Material X thickness	PC-6
1	315-081-3201	EDPM 60~65 DURO x 1.0"	X

DATA SHEET

	18" CONTACT LENGTH	25" CONTACT LENGTH	28" CONTACT LENGTH	36" CONTACT LENGTH	48" CONTACT LENGTH	BELT OR CLEAT MATERIAL	
						PURE GUM @40~45A DURO	EDPM @60~65A DURO
PB-2	X	X				X	X
PB-4		X		X	X	X	X
PB-6		X		X	X	X	X
PC-6			X				X
PB-8		X		X	X	X	X
PB-12				X		X	

ITEM MARKED WITH "X" ARE STANDARD

OTHER AVAILABLE BELT MATERIAL

- Polyurethane.
- EDPM @ 80~85 a DURO.
- Neoprene sponge "foam".

APPENDIX B

FLEXALINE
GEAR DRIVE

GROVE GEAR
FLEX-A-LINE SPEED REDUCERS
Installation, Lubrication and Maintenance Instructions

WARNING

Read ALL instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation or operation. This reducer is not a fail-safe device or a self-locking device. **Rotating equipment is potentially dangerous and should be guarded at all times.**

INSTALLATION

1. General

Your Grove Gear Flex-A-Line Speed Reducer should be accurately aligned and bolted securely to a flat, level surface. Check output shafts to ensure proper tension and alignment of loads. Refer to factory any non-standard mounting positions. On Unit sizes 1262 and larger all applications with vertical input or output shafts should be referred to the factory. Special provisions for bearing lubrication may be required.

CAUTION

For safety, purchaser or user should provide protective guards over all shaft extension and any moving apparatus mounted thereon. The user is responsible for checking all applicable safety codes in his area and providing suitable guards.

To minimize deflection and bearing load, mount connections as close to reducer as possible. Check to make certain application does not exceed published overhung load capacities in the current Grove Gear Industrial Gear Drives Catalog, available free upon request.

CAUTION

The system of connected rotating parts must be free from critical speed, torsional or other type vibration, no matter how induced. The responsibility for this system analysis lies with the purchaser of the speed reducer.

2. Initial Operation

A. Make certain the highest pipe plug (installed for shipping only) is removed and the vent plug is installed prior to operating.

B. Check oil level before operating. Oil should be filled to bottom edge of oil level plug using the lubricant specified in this bulletin.

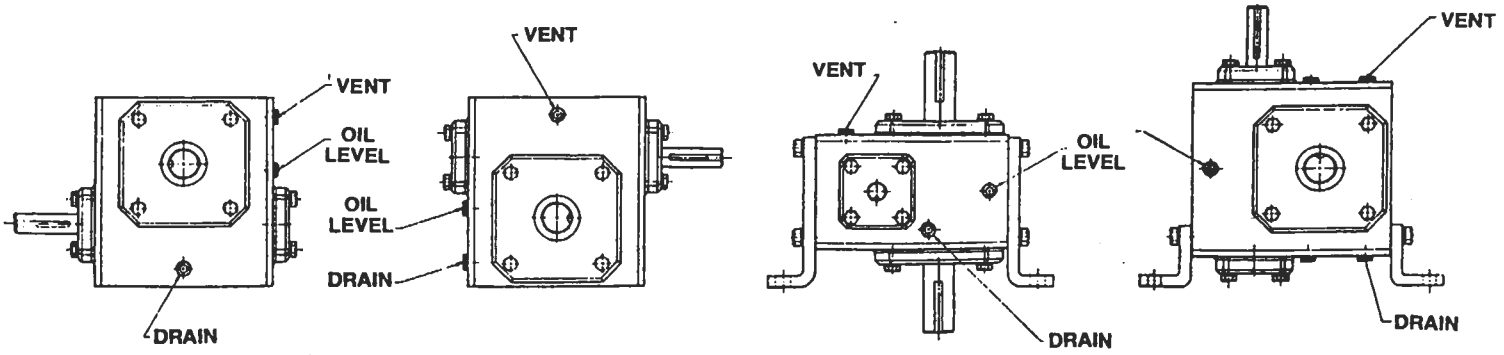
CAUTION

Do not overfill with oil, or failure could result in damage to property or personal injury.

C. Test run unit to verify operation. All Flex-A-Line units are fully reversible, and can be operated in either direction of rotation. **This reducer is not a fail-safe device or a self-locking device and all shaft extensions should be guarded at all times.**

STANDARD SPEED REDUCER MOUNTING POSITIONS AND VENT PLUG LOCATIONS

Before putting unit into operation, substitute the vent plug for the solid pipe plug at the position desired. Arrows indicate the recommended vent plug locations.



On Unit sizes 1262 and larger all applications with vertical input or output shafts should be referred to the factory. Special provisions for bearing lubrication may be required.

GROVE GEAR
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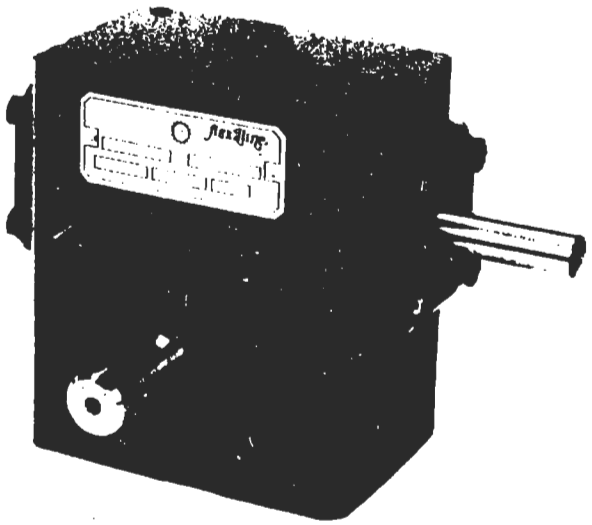
FLEXALINE® GEAR DRIVES



Flexaline® Right Angle Worm Gear Speed Reducers

"Versatility in Industrial Power Transmission Applications"

PARTS LIST—SINGLE REDUCTION

Item No.	Description	Qty.
1	Gear Housing	(1)
2	Input Cover (Seal)	(1)
3	Input Cover (Bearing)	(1)
4	Input Cover Gaskets	(as req'd)
5	Input Shaft	(1)
6	Input Bearing (Cup)	(2)
7	Input Bearing (Cone)	(2)
8	Input Oil Seal	(1)
9	Hex Head Capscrew	(8)
10	Lock Washer	(8)
11	Output Cover (Seal)	(1)
12	Output Cover (Bearing)	(1)
13	Output Cover Gaskets	(as req'd)
14	Single Output Shaft	(1)
15	Double Output Shaft	(1)
16	Worm Gear	(1)
17	Gear Key	(1)
18	Gear Spacer	(2)
19	Output Bearing (Cup)	(2)
20	Output Bearing (Cone)	(2)
22	Output Oil Seal	(1)
23	Hex Head Capscrew	(8)*
24	Lock Washer	(8)*
25	Vent Plug	(1)
26	Pipe Plug	(2)
29	Protective Plug	(4)
	Fan Unit	
40	Slotted Hex Head Capscrew	(4)
41	Plain Flat Washer	(4)
42	Fan Bracket	(4)
43	Oil Seal	(1)
44	Hex Head Capscrew	(1)
45	Lock Washer	(1)
46	Fan	(1)
47	Fan Cover	(1)
	Vertical Risers Unit	
51	High and Low Riser Bracket	(2)
52	Hex Head Capscrew	(8)
53	Lock Washer	(8)
	"J" Mount Unit	
60	"J" Mount Bracket	(2)
61	Hex Head Capscrew	(4)
62	Lock Washer	(4)
	Horizontal Base Unit	
70	Horizontal Base	(1)
71	Hex Head Capscrew	(4)
72	Lock Washer	(4)

Item No.	Description	Qty.
	Long Motor Flange Unit	
80	'C' Face Motor Flange	(1)
81	Hex Head Capscrew	(4)
82	Lock Washer	(4)
	Quill Motor Flange Unit	
90	Quill Input Shaft	(1)
91	Retaining Ring (Shaft)	(1)
92	Input Bearing (Cup)	(2)
93	Input Bearing (Cone)	(2)
94	Retaining Ring (Housing)	(1)
95	Quill Motor Flange	(1)
96	Oil Seal	(1)
97	Hex Head Capscrew	(4)
98	Lock Washer	(4)
	Output Flange Unit	
110	Output Flange (Hollow)	(1)
111	Output Flange (Solid)	(1)
112	Output Cover (Ground Face)	(1)
113	Hex Head Capscrew	(4)
114	Lock Washer	(4)
	Hollow Output Shaft Unit	
120	Hollow Output Shaft	(1)
121	Worm Gear (Hollow)	(1)
122	Worm Gear Key	(1)
123	Worm Gear Spacer	(2)
125	Output Shaft Bearing (Cup)	(2)
126	Output Shaft Bearing (Cone)	(2)
127	Output Gaskets	(as req'd)
128	Output Cover	(2)
129	Output Oil Seal	(2)
130	Hex Head Capscrew	(8)
131	Lock Washer	(8)
132	Set Screw	(6)
133	Shaft Bushing	(1)
134	Bushing Kit	(1)
140	Torque Bracket	(1)
141	Hex Head Capscrew	(8)
142	Lock Washer	(8)
	Coupling Kits	
190	Coupling Sleeve	(1)
191	Coupling Gear	(1)
192	Coupling Gear	(1)
193	Setscrew	(1)
194	Setscrew	(1)
195	Key	(1)
196	Key	(1)

* 1425 Unit has (10) and 1525 Unit has (16)

APPENDIX D

PNEUMATIC DIAGRAM

P-454-100-4003 Pneumatic for PB series

	Metaplast No	Description	Part No	Manufacturer	Qty
1	315-167-2112	Solenoid valve	SY7120-3LOZD-N11T	SMC	1
2	315-168-1013	Holding bracket	SX700-16-1A	SMC	1
3	315-168-1014	600mm Leads	SY100-30-3A-6	SMC	1
4	315-167-2046	Regulator	NAR2000-N02	SMC	2
5	315-163-2017	Gauge 0-100PSI	KV504-823	SMC	2
6	315-044-1010	Clamp ring	019089	SMC	2
7	315-165-1017	Muffler	P2MN	Pneumatic	1
8	315-167-3006	Muffler adj.	NASN2-N02-S	SMC	2
9	315-130-3071	Bulkhead connector	KQE07-35	SMC	2
10	315-130-3061	Bulkhead union	KQE11-00	SMC	4
11	315-170-1001	Filt.-Reg.-lubr.	NAC3000-N02DG-3X	SMC	1
12	315-163-2016	Gauge, 1/8 NPT 0-160psi	K10	SMC	1
13	315-167-3007	Quick exhaust	NAQ2000-N02	SMC	2
16	315-006-1034	Enclosure 10x08x04	5412ESCH100804	Eurobec	1
Option : *Single Cylinder*					
14	315-161-2031	Cylinder	04.00 CET2MAU14AC 6.000	PARKER	1
Option : *Dual Cylinder*					
14	315-161-2031	Cylinder	04.00 CET2MAU14AC 6.000	PARKER	2
15	453-000-3003	Manifold	453-000-3003	OTO	1

APPENDIX E

ELECTRICAL DIAGRAM WITHOUT M-TRIM

P-454-100-9017 Remote control

	Metaplast No	Description	Part No	Manufacturer	Qty
1	315-015-3007	Name plate "STOP"	P9ACP2R201	G.E	1
2	315-015-5029	Push button (rouge)	P9CPNRG	G.E	1
3	315-014-2033	Contact block N.C	P9B01VN	G.E	1
4	315-003-1004	Potentiometer 10 turn 5K	7276-R5K L.25	BI technologies	1
5	315-015-1002	Dial	RB	BI technologies	1
6	315-002-5031	Adapteur	DE9RA1412	Telemecanique	1
7	315-002-3043	Insert male (10 pins)	4110100	Weidmüller	1
8	315-002-3016	Angled hood (10 pins)	41321005	Weidmüller	1
9	315-006-1031	Enclosure	1500 SDC050302	Eurobex	1
Option: Speed Indicator					
10	315-005-1006	Speed Indicateur	APLR0600	Red-Lion	1
9	315-006-1071	Enclosure	5500-SC-080606	Eurobex	1

P-454-100-9018 *Operator station (without M-TRIM)*

Standard : *With Remote Control*

	Metaplast No	Description	Part No	Manufacturer	Qty
3	315-015-3009	Name plate "EMERGENCY-STOP"	P9ACP2R229	G.E	1
4	315-015-5002	Push button E-Stop	P9CET4RNI	G.E	1
5	315-014-2033	Contact block N.C	P9B01VN	G.E	2
6	315-015-3011	Name plate "POWER ON"	P9ACP2N240	G.E	1
7	315-011-1005	Pilot light green	P9CLVD	G.E	1
8	315-015-5044	Power supply 120V for lamp	P9PDNVO	G.E	3
9	315-011-1000	Light bulb for pushbutton (120V)	BA9S130	G.E	3
10	315-015-3007	Name plate "STOP"	P9ACP2R201	G.E	1
11	315-015-5042	Push button red illum.	P9CPLRGD	G.E	1
12	315-014-2035	Contact block N.O	P9B10VN	G.E	1
13	315-015-3006	Name plate "START"	P9ACP2R202	G.E	1
14	315-015-5043	Push button green illum.	P9CPLVGD	G.E	1
20	315-006-1119	Enclosure / NEMA-12	5412 ESCH100806	Eurobex	1

Standard : *Without Remote Control*

	Metaplast No	Description	Part No	Manufacturer	Qty
1	315-015-1002	Dial	RB	BI technologies	1
2	315-003-1004	Potentiometer 10 turn 5K	7276-R5K L.25	BI technologies	1

Option : *Pneumatic*

	Metaplast No	Description	Part No	Manufacturer	Qty
15	315-015-3003	Name plate "OPEN"	P9ACP2R206	G.E	1
16	315-015-5040	Push button yellow illum.	P9CPLGGD	G.E	1
5	315-014-2033	Contact block N.C	P9B01VN	G.E	1
17	315-015-3001	Name plate "CLOSE"	P9ACP2R205	G.E	1
18	315-015-5041	Push button blue illum.	P9CPLLGD	G.E	1
12	315-014-2035	Contact block N.O	P9B10VN	G.E	1
8	315-015-5044	Power supply 120V for lamp	P9PDNVO	G.E	2
9	315-011-1000	Light bulb for pushbutton (120V)	BA9S130	G.E	2

Option : *Speed Indicator*

	Metaplast No	Description	Part No	Manufacturer	Qty
19	315-005-1006	Speed Indicateur	APLR0600	Red-Lion	1

P-454-100-9019 Main box

	Metaplast No	Description	Part No	Manufacturer	Qty
1	315-010-2022	Fuse covers for L10 (30Amp)	L10-FCA2	Sprecher+Schuh	1
2	315-030-1029	Switch handle for L10 "Yellow/Red"	L10-HS4E	Sprecher+Schuh	1
3	315-002-7016	Terminals shields for L10 (30 Amp)	L10-LNC1	Sprecher+Schuh	1
4	315-002-7016	Disconnect switch fusible 30A (J type)	L10-NJ030P3	Sprecher+Schuh	1
5	315-030-1030	Rod 256mm for L10 disconnect	L10-R1	Sprecher+Schuh	1
7	315-010-2020	Fuse holder 2 Pole (ATM style)	30312	Gould Shawmut	1
8	315-010-1038	Fuse 1 Amp ATM style	ATM-1	Gould Shawmut	2
9	315-017-1254	Transformer 100VA 240v / 120v	DO 0100GE20	Transfab	1
10	315-001-1011	Breaker (1 Amp)	MG24425	Merlin Gerin	1
11	315-002-1001	Hold down clip for relay (pairs)	PYC-A1	Omron	1
14	315-015-9016	Relay 4 pole 120V	MY4 (120V)	Omron	1
15	315-015-9000	Base for 4 pole relay	PYF 14A-E	Omron	1
16	315-014-2045	Contactors (three phase)	CA3-16-10-120-NO	Sprecher+Schuh	1
20	315-019-2007	Limit switch (gear door)	D4C1603	Omron	1
21	315-017-6006	Safety Switch (plastics)	D4DS-35FS	Omron	1
22	315-017-6008	Operation Key for D4DS-35FS	D4DS-K5	Omron	1
28	315-006-1091	Enclosure / NEMA-12	5412 ES241608	Eurobex	1

Option : *Motor 2HP*

	Metaplast No	Description	Part No	Manufacturer	Qty
6	315-010-1014	Fuse 20 Amp AJT style	AJT-20	Gould Shawmut	2
17	315-012-7001	Drive regen 2HP DC control	KBRG240D	KB Electronics	1
26	315-012-3011	Motor D.C. 2H.P. 180v	CDP 3585	Baldor	1

Option : *Motor 3HP*

	Metaplast No	Description	Part No	Manufacturer	Qty
6	315-010-1016	Fuse 25 Amp AJT style	AJT-25	Gould Shawmut	2
17	315-012-7002	Drive regen 3HP DC control	KBRG225D	KB Electronics	1
26	315-012-3012	Motor D.C.3H.P. 180v	CDP 3604	Baldor	1

Option : *Safety Cage*

	Metaplast No	Description	Part No	Manufacturer	Qty
21	315-017-6006	Safety Switch (plastics)	D4DS-35FS	Omron	1
22	315-017-6008	Operation Key for D4DS-35FS	D4DS-K5	Omron	1
23	315-002-5036	Molded connectors 3pole male 6ft	40905	Brad Harrison	1
24	315-002-5037	Receptacle female 3 pole with 12" lead	40910	Brad Harrison	1

Option : *Pneumatic*

	Metaplast No	Description	Part No	Manufacturer	Qty
11	315-002-1001	Hold down clip for relay (pairs)	PYC-A1	Omron	1
12	315-015-9018	Relay 2 pole 120V	MY2 (120V)	Omron	1
13	315-015-9001	Base for 2 pole relay	PYF 08A-E	Omron	1

Option : *Remote Control*

	Metaplast No	Description	Part No	Manufacturer	Qty
18	315-002-3024	Base housing (10 pins)	120620	Weidmüller	1
19	315-002-3008	Insert female (10 pins)	4120100	Weidmüller	1

Option : *Single Speed Indicator*

	Metaplast No	Description	Part No	Manufacturer	Qty
25	315-019-4016	C-Flange hall effect sensor	47007-184	Durant	1

Option : *Dual Speed Indicator*

	Metaplast No	Description	Part No	Manufacturer	Qty
28	315-003-6003	Signal Conditioner	48160-400	Durant	1
29	315-019-4004	Magnetic sensor	47004-400	Durant	1

Option : *Voltage*

	Metaplast No	Description	Part No	Manufacturer	Qty
27	315-017-1020	Transformer 3KVA 460vac/230vac	ES6P	Hammond	For motor 2HP
	315-017-1021	Transformer 3KVA 575vac/230vac	ES9P	Hammond	
	315-017-1022	Transformer 5KVA 460vac/230vac	EU6P	Hammond	For motor 3HP
	315-017-1023	Transformer 5KVA 575vac/230vac	EU9P	Hammond	

APPENDIX F

ELECTRICAL DIAGRAM WITH M-TRIM

P-454-100-9017 Remote control

	Metaplast No	Description	Part No	Manufacturer	Qty
1	315-015-3007	Name plate "STOP"	P9ACP2R201	G.E	1
2	315-015-5029	Push button (rouge)	P9CPNRG	G.E	1
3	315-014-2033	Contact block N.C	P9B01VN	G.E	1
4	315-003-1004	Potentiometer 10 turn 5K	7276-R5K L.25	BI technologies	1
5	315-015-1002	Dial	RB	BI technologies	1
6	315-002-5031	Adapteur	DE9RA1412	Telemecanique	1
7	315-002-3043	Insert male (10 pins)	4110100	Weidmüller	1
8	315-002-3016	Angled hood (10 pins)	41321005	Weidmüller	1
9	315-006-1031	Enclosure	1500 SDC050302	Eurobex	1

Option: Speed Indicator

	Metaplast No	Description	Part No	Manufacturer	Qty
10	315-005-1006	Speed Indicateur	APLR0600	Red-Lion	1
9	315-006-1071	Enclosure	5500-SC-080606	Eurobex	1

P-454-100-9020 *Operator station*

Standard : *With Remote Control*

	Metaplast No	Description	Part No	Manufacturer	Qty
1	315-015-5052	M-trim + Analog card	3200-1603	Contrex	1
2	315-015-5049	Locking trim pot. 5K-2Watts	KLU5021	Precision	1
5	315-015-3009	Name plate "EMERGENCY-STOP"	P9ACP2R229	G.E	1
6	315-015-5002	Push button E-Stop	P9CET4RNI	G.E	1
7	315-014-2033	Contact block N.C	P9B01VN	G.E	2
8	315-015-3011	Name plate "POWER ON"	P9ACP2N240	G.E	1
9	315-011-1005	Pilot light green	P9CLVD	G.E	1
10	315-015-5044	Power supply 120V for lamp	P9PDNVO	G.E	3
11	315-011-1000	Light bulb for pushbutton (120V)	BA9S130	G.E	3
12	315-015-3007	Name plate "STOP"	P9ACP2R201	G.E	1
13	315-015-5042	Push button red illum.	P9CPLRGD	G.E	1
14	315-014-2035	Contact block N.O	P9B10VN	G.E	1
15	315-015-3006	Name plate "START"	P9ACP2R202	G.E	1
16	315-015-5043	Push button green illum.	P9CPLVGD	G.E	1
22	315-015-5053	Enclosure / NEMA-12	5412 ESCH141208	Eurobex	1

Standard : *Without Remote Control*

	Metaplast No	Description	Part No	Manufacturer	Qty
3	315-015-1002	Dial	RB	BI technologies	1
4	315-003-1004	Potentiometer 10 turn 5K	7276-R5K L.25	BI technologies	1

Option : *Pneumatic*

	Metaplast No	Description	Part No	Manufacturer	Qty
17	315-015-3003	Name plate "OPEN"	P9ACP2R206	G.E	1
18	315-015-5040	Push button yellow illum.	P9CPLGGD	G.E	1
7	315-014-2033	Contact block N.C	P9B01VN	G.E	1
19	315-015-3001	Name plate "CLOSE"	P9ACP2R205	G.E	1
20	315-015-5041	Push button blue illum.	P9CPLLGD	G.E	1
14	315-014-2035	Contact block N.O	P9B10VN	G.E	1
10	315-015-5044	Power supply 120V for lamp	P9PDNVO	G.E	2
11	315-011-1000	Light bulb for pushbutton (120V)	BA9S130	G.E	2

Option : *Dual Speed*

	Metaplast No	Description	Part No	Manufacturer	Qty
21	315-005-1006	Speed Indicateur	APLR0600	Red-Lion	1

P-454-100-9021 Main box

	Metaplast No	Description	Part No	Manufacturer	Qty
1	315-010-2022	Fuse covers for L10 (30Amp)	L10-FCA2	Sprecher+Schuh	1
2	315-030-1029	Switch handle for L10 "Yellow/Red"	L10-HS4E	Sprecher+Schuh	1
3	315-002-7016	Terminals shields for L10 (30 Amp)	L10-LNC1	Sprecher+Schuh	1
4	315-002-7016	Disconnect switch fusible 30A (J type)	L10-NJ030P3	Sprecher+Schuh	1
5	315-030-1030	Rod 256mm for L10 disconnect	L10-R1	Sprecher+Schuh	1
7	315-010-2020	Fuse holder 2 Pole (ATM style)	30312	Gould Shawmut	1
8	315-010-1038	Fuse 1 Amp ATM style	ATM-1	Gould Shawmut	2
9	315-017-1254	Transformer 100VA 240v / 120v	DO 0100GE20	Transfab	1
10	315-001-1011	Breaker (1 Amp)	MG24425	Merlin Gerin	1
11	315-002-1001	Hold down clip for relay (pairs)	PYC-A1	Omron	1
14	315-015-9016	Relay 4 pole 120V	MY4 (120V)	Omron	1
15	315-015-9000	Base for 4 pole relay	PYF 14A-E	Omron	1
16	315-014-2045	Contactors (three phase)	CA3-16-10-120-NO	Sprecher+Schuh	1
20	315-019-2007	Limit switch (gear door)	D4C1603	Omron	1
21	315-017-6006	Safety Switch (plastics)	D4DS-35FS	Omron	1
22	315-017-6008	Operation Key for D4DS-35FS	D4DS-K5	Omron	1
25	315-019-4016	C-Flange hall effect sensor	47007-184	Durant	1
28	315-006-1091	Enclosure / NEMA-12	5412 ES241608	Eurobex	1

Option : *Motor 2HP*

	Metaplast No	Description	Part No	Manufacturer	Qty
6	315-010-1014	Fuse 20 Amp AJT style	AJT-20	Gould Shawmut	2
17	315-012-7001	Drive regen 2HP DC control	KBRG240D	KB Electronics	1
26	315-012-3011	Motor D.C. 2H.P. 180v	CDP 3585	Baldor	1

Option : *Motor 3HP*

	Metaplast No	Description	Part No	Manufacturer	Qty
6	315-010-1016	Fuse 25 Amp AJT style	AJT-25	Gould Shawmut	2
17	315-012-7002	Drive regen 3HP DC control	KBRG225D	KB Electronics	1
26	315-012-3012	Motor D.C.3H.P. 180v	CDP 3604	Baldor	1

Option : *Safety Cage*

	Metaplast No	Description	Part No	Manufacturer	Qty
21	315-017-6006	Safety Switch (plastics)	D4DS-35FS	Omron	1
22	315-017-6008	Operation Key for D4DS-35FS	D4DS-K5	Omron	1
23	315-002-5036	Molded connectors 3pole male 6ft	40905	Brad Harrison	1
24	315-002-5037	Receptacle female 3 pole with 12" lead	40910	Brad Harrison	1

Option : *Pneumatic*

	Metaplast No	Description	Part No	Manufacturer	Qty
11	315-002-1001	Hold down clip for relay (pairs)	PYC-A1	Omron	1
12	315-015-9018	Relay 2 pole 120V	MY2 (120V)	Omron	1
13	315-015-9001	Base for 2 pole relay	PYF 08A-E	Omron	1

Option : *Remote Control*

	Metaplast No	Description	Part No	Manufacturer	Qty
18	315-002-3024	Base housing (10 pins)	120620	Weidmüller	1
19	315-002-3008	Insert female (10 pins)	4120100	Weidmüller	1

Option : *Dual Speed*

	Metaplast No	Description	Part No	Manufacturer	Qty
28	315-003-6003	Signal Conditioner	48160-400	Durant	1
29	315-019-4004	Magnetic sensor	47004-400	Durant	1

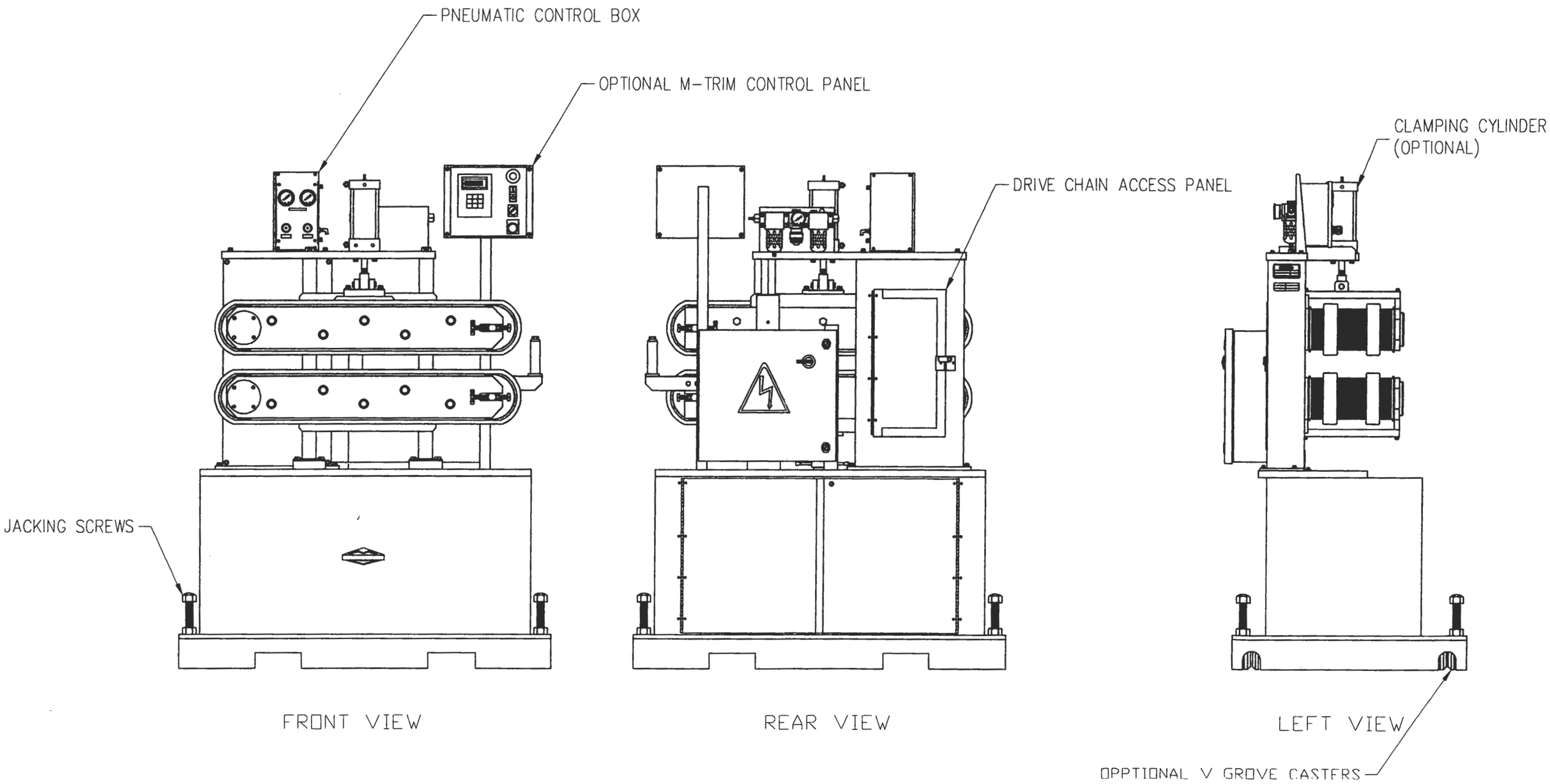
Option : *Voltage*

	Metaplast No	Description	Part No	Manufacturer	Qty
27	315-017-1020	Transformer 3KVA 460vac/230vac	ES6P	Hammond	For motor 2HP
	315-017-1021	Transformer 3KVA 575vac/230vac	ES9P	Hammond	
	315-017-1022	Transformer 5KVA 460vac/230vac	EU6P	Hammond	For motor 3HP
	315-017-1023	Transformer 5KVA 575vac/230vac	EU9P	Hammond	

APPENDIX G

BELT PULLER DRAWING

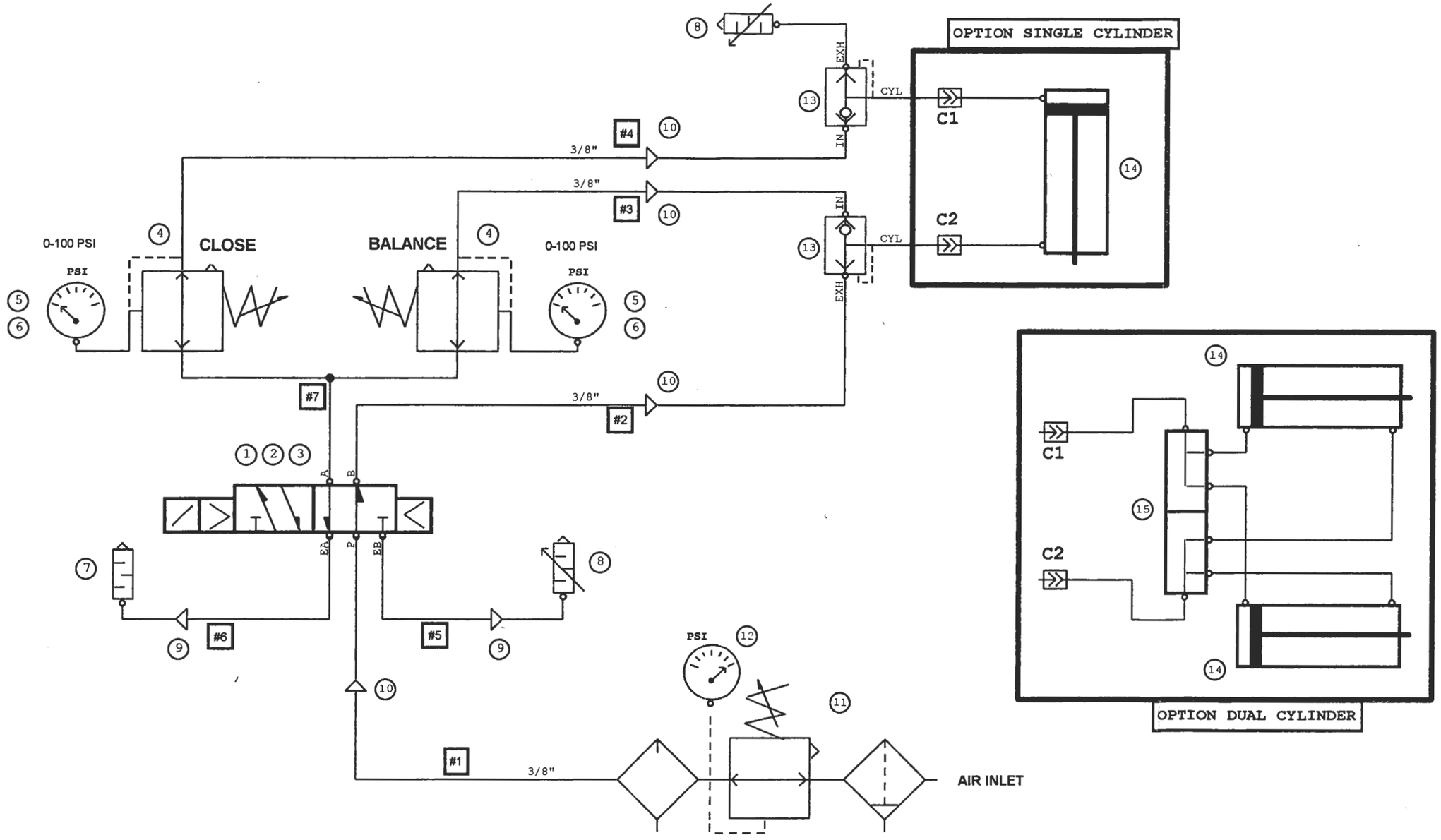
TYPICAL BELT PULLER
EQUIPPED WITH PNEUMATIC OPENING



FRONT VIEW

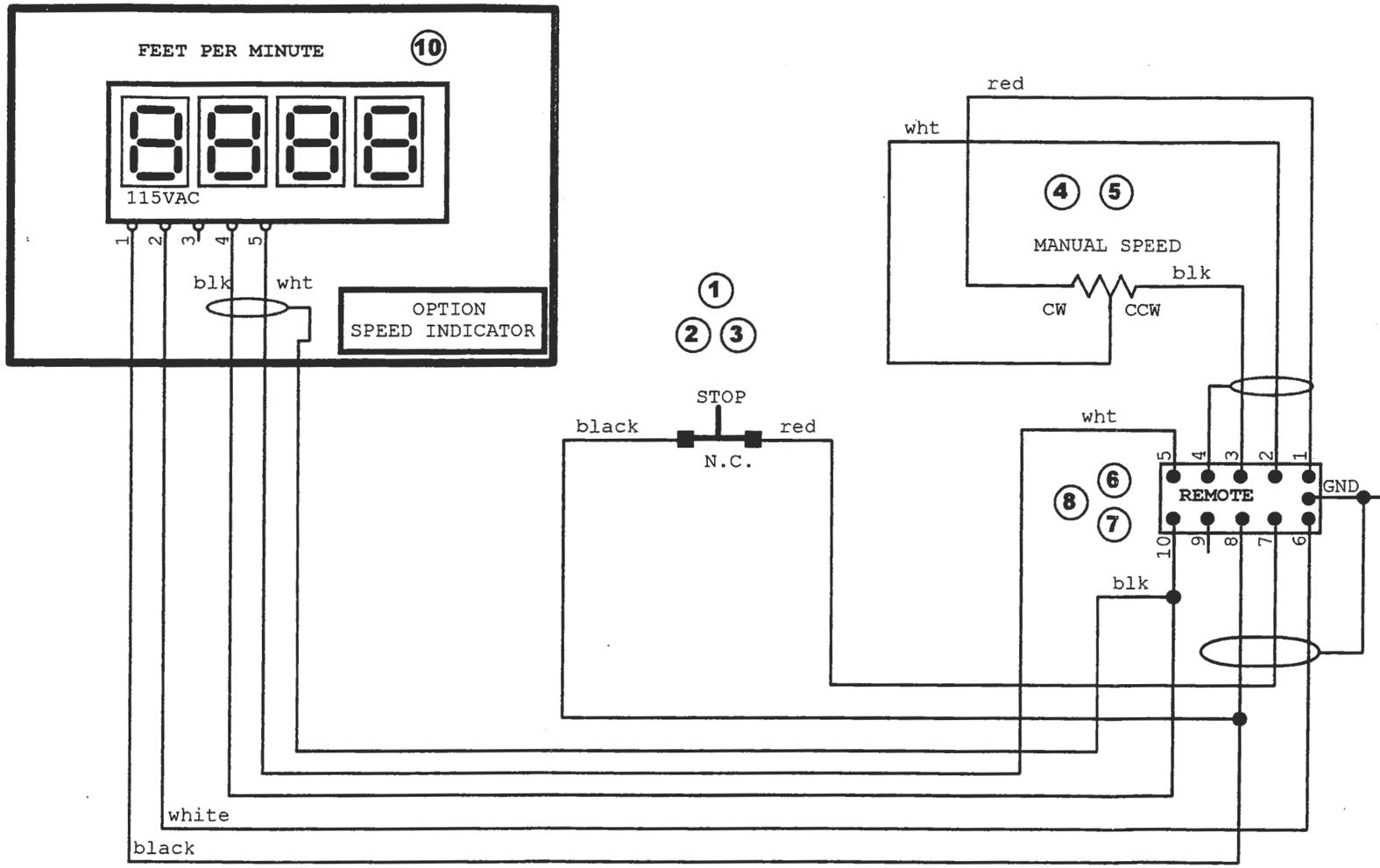
REAR VIEW

LEFT VIEW



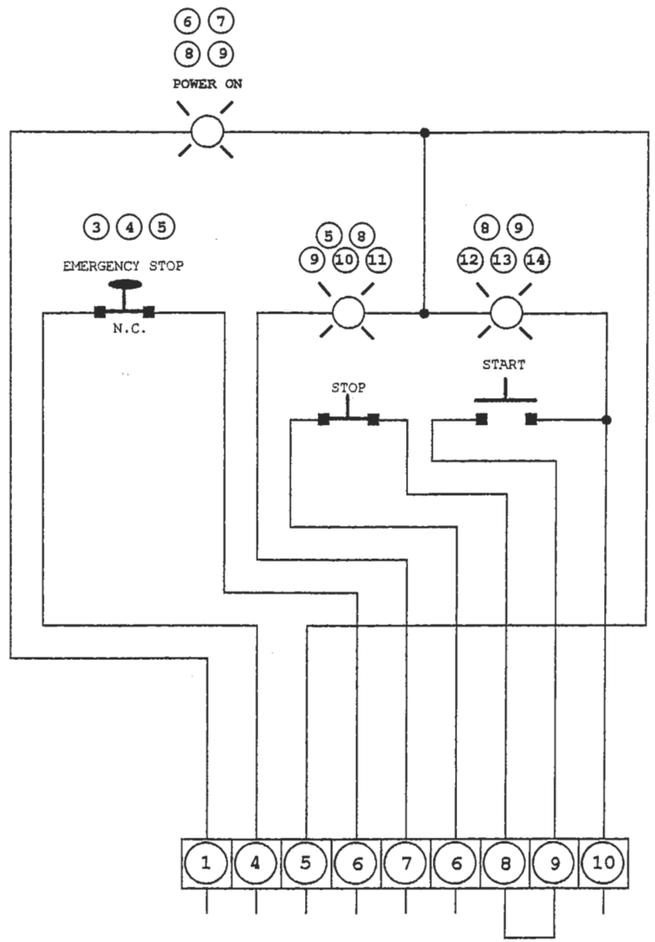
Conair-Metaplast ltd

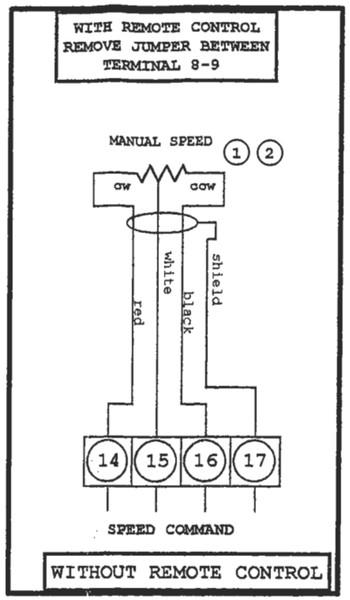
TITLE: 454-100-4003 PB all model
PNEUMATIC: Single or Dual pneumatic cylinder
with pressure regulator for closing and balance
DWG#:454-100-4003 DATE: 5 April 1999

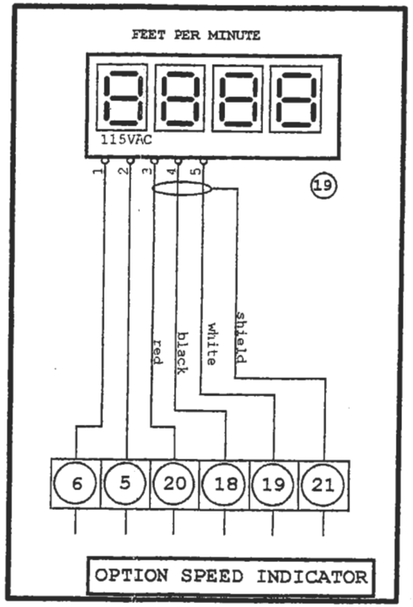


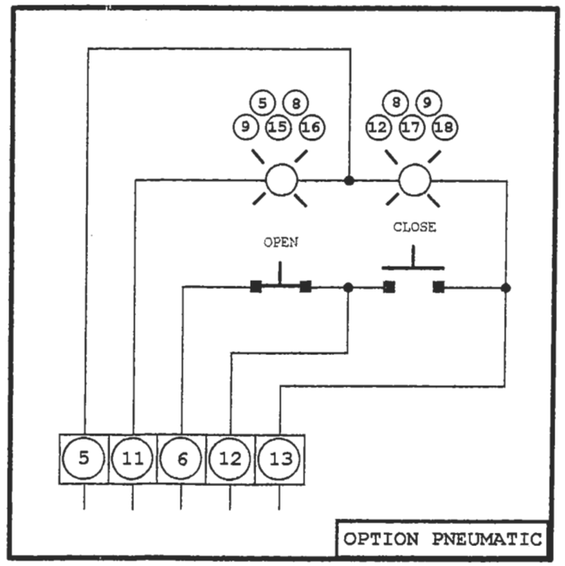
Conair-Metaplast ltd

TITLE: 454-100-9017	Remote control
ELECTRICAL:	Speed potentiometer, stop pushbutton and Speed indicator
DWG#: 454-100-9017	DATE: 1 April 1999



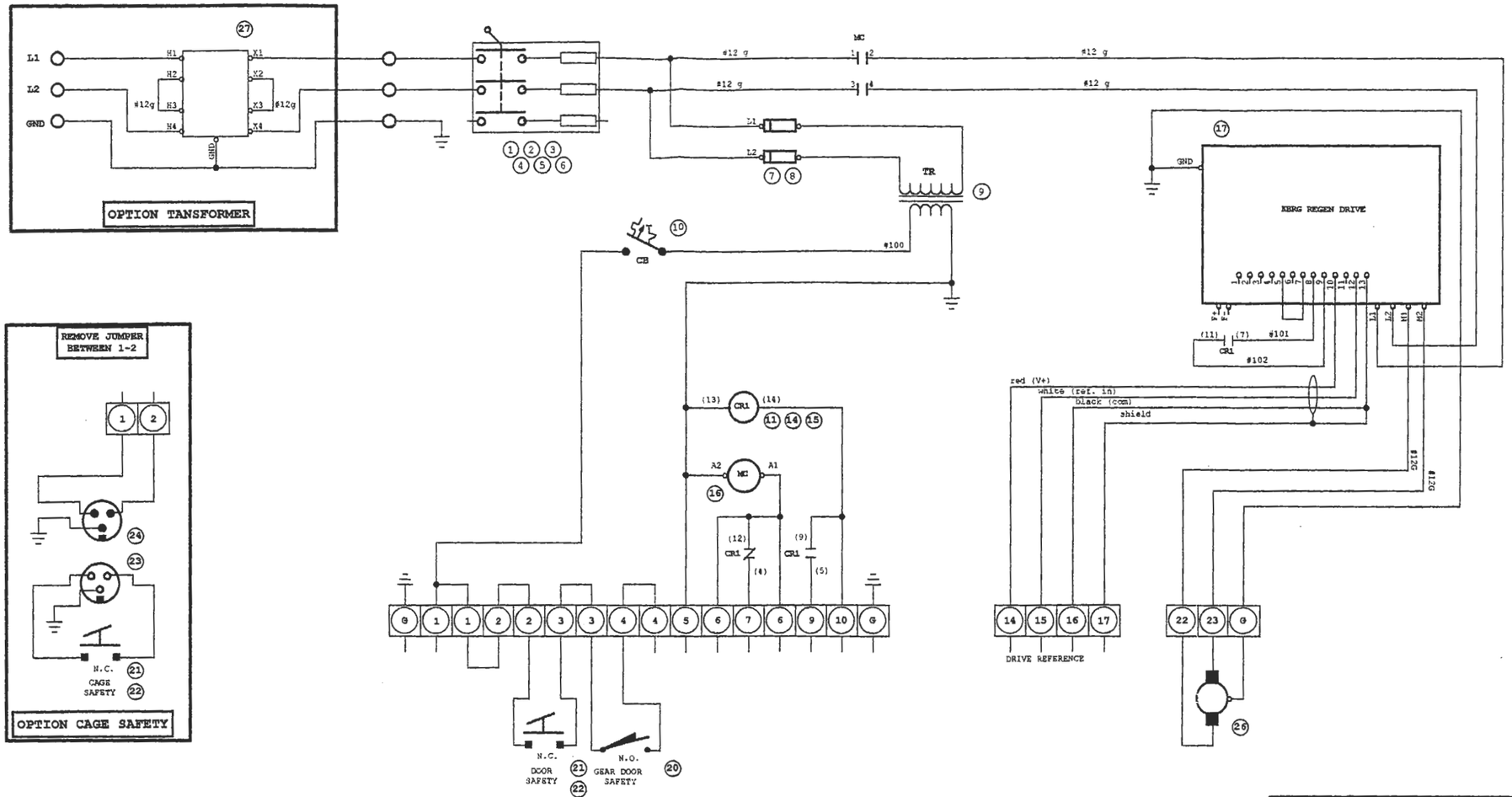






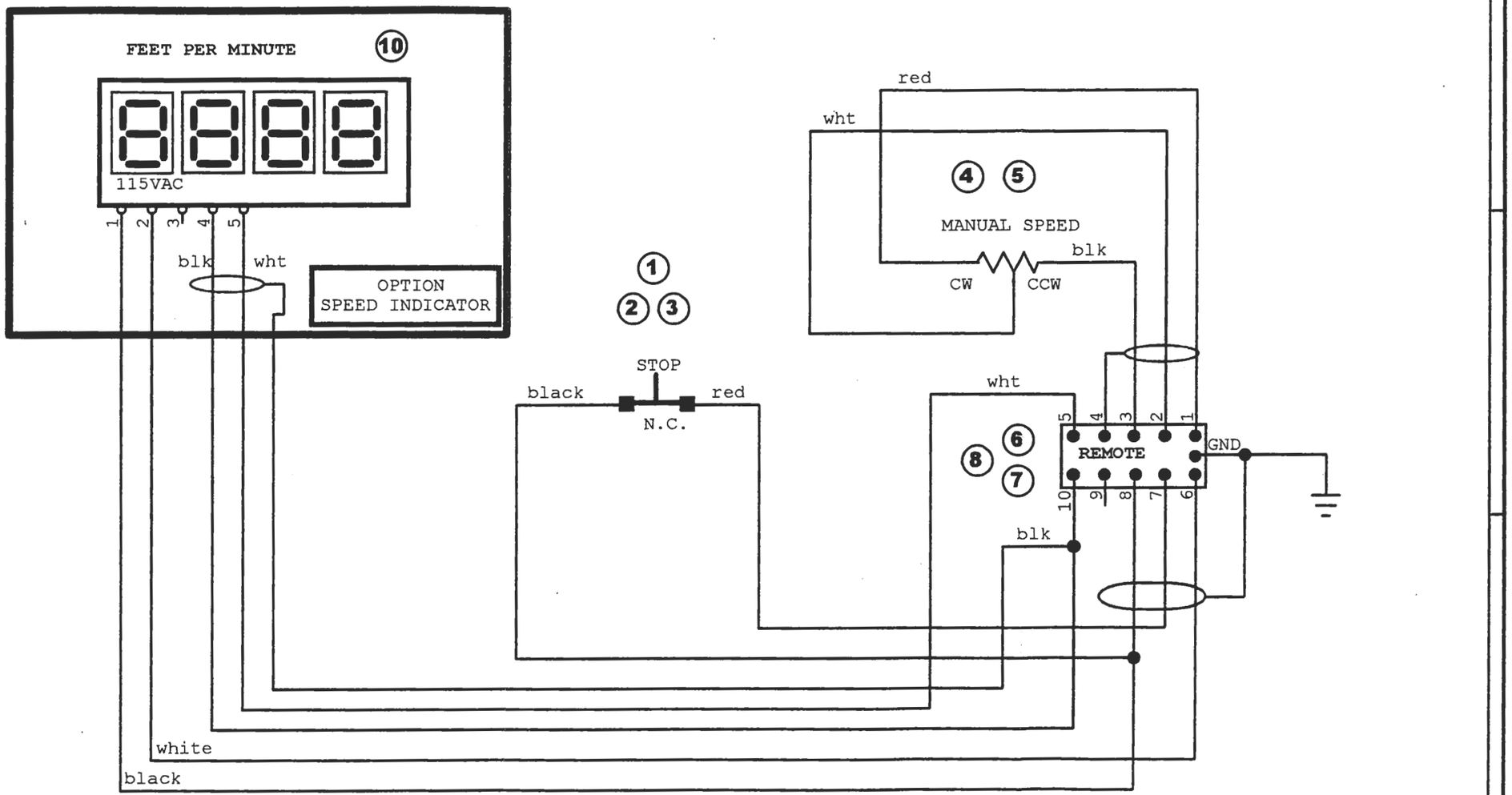
Conair-Metaplast ltd

TITLE: 454-100-9018 (Operator without M-TRIM)
ELECTRICAL: Speed pot.,start/stop,E-stop and power light
OPTION: Open/Close,Dual speed and Remote control
DWG#:454-100-9017 (Remote)
DWG#:454-100-9018 (Operator)
DWG#:454-100-9019 (Main) DATE: 01/11/98



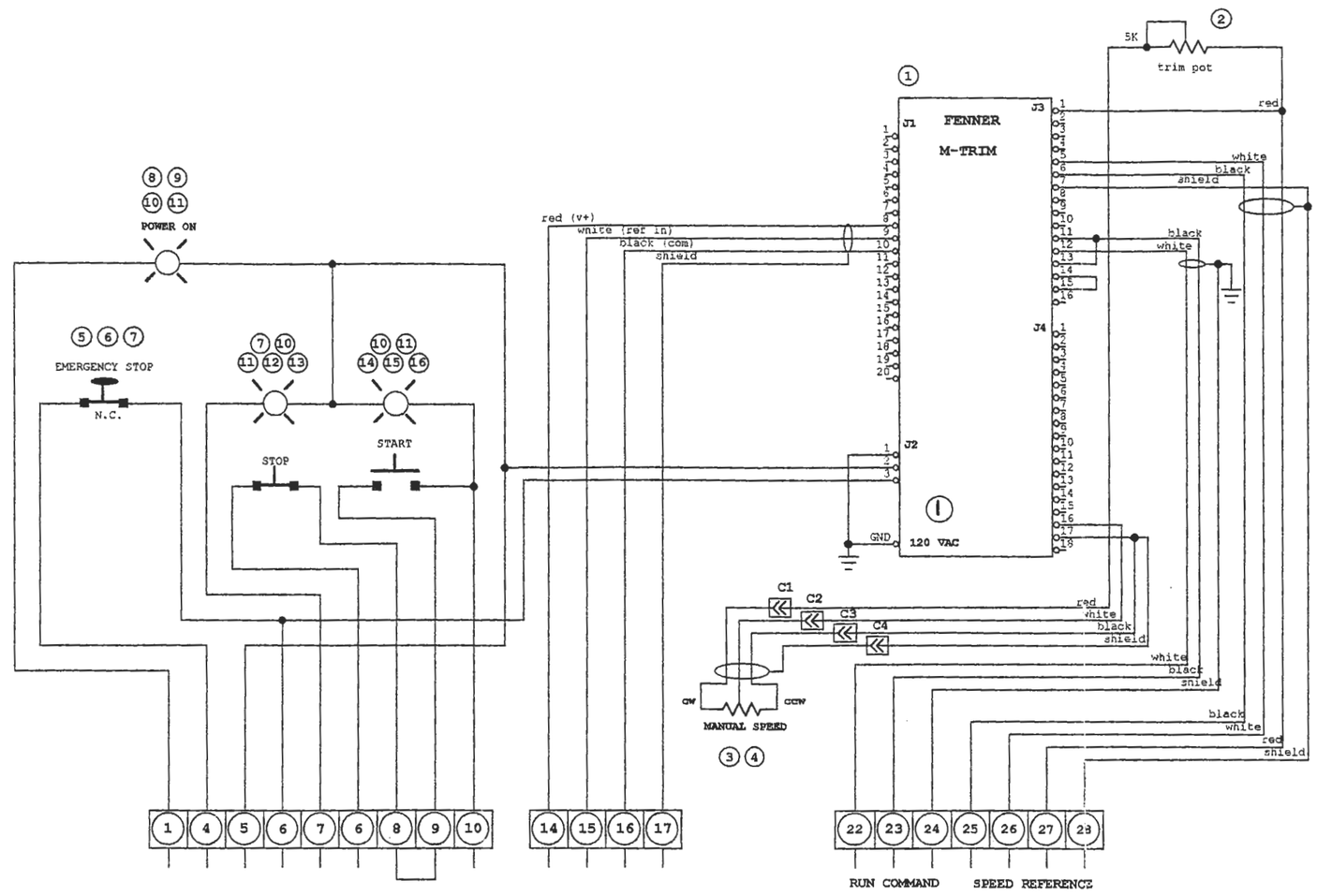
Conair-Metaplast ltd

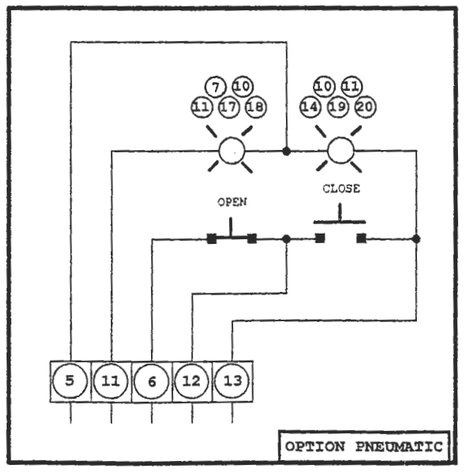
TITLE: 454-100-9019 Main box
ELECTRICAL: Regen Drive with all Option
DWG#: 454-100-9017 (Remote)
DWG#: 454-100-9018 (Operator)
DWG#: 454-100-9019 (Main) DATE: 1 April 1999

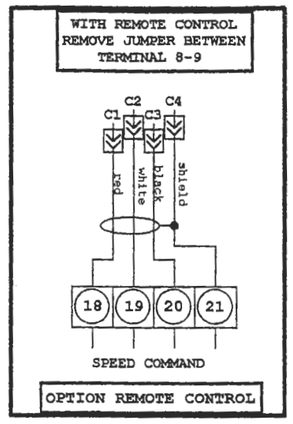


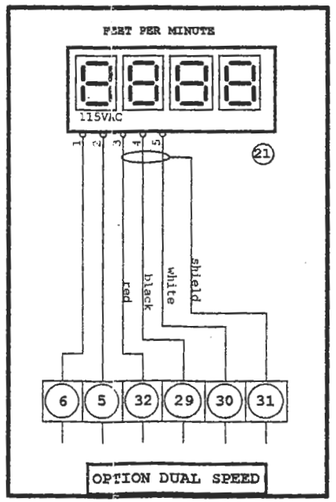
Conair-Metaplast ltd

TITLE: 454-100-9017	Remote control
ELECTRICAL:	Speed potentiometer, stop pushbutton and Speed indicator
DWG#: 454-100-9017	DATE: 1 April 1999



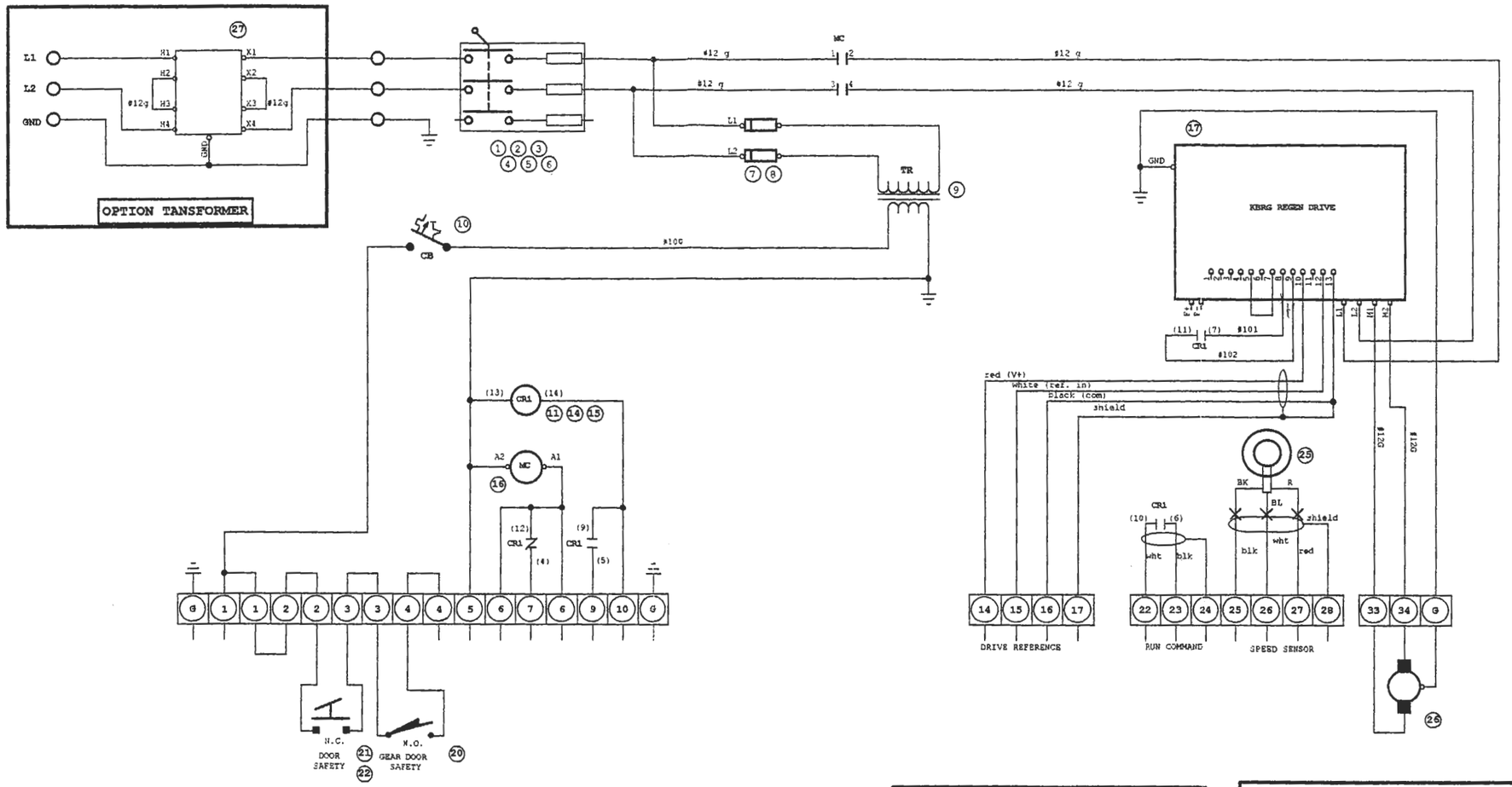


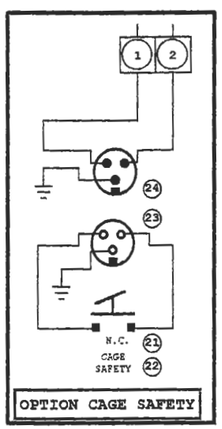


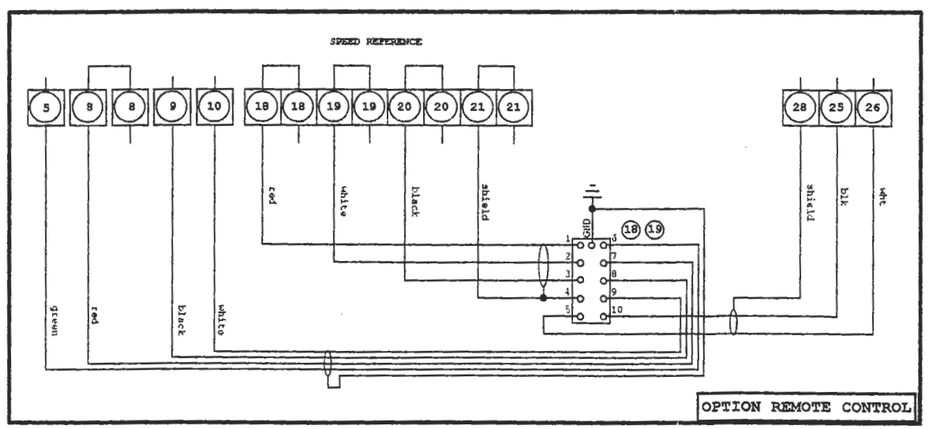


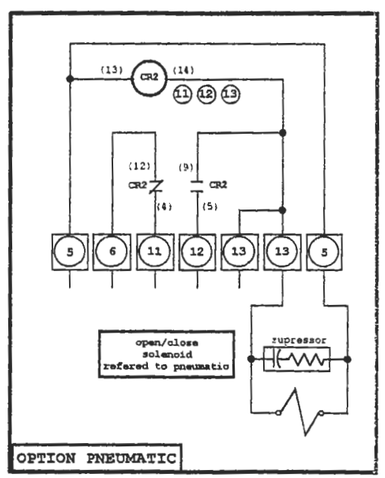
Conair-Metaplast ltd

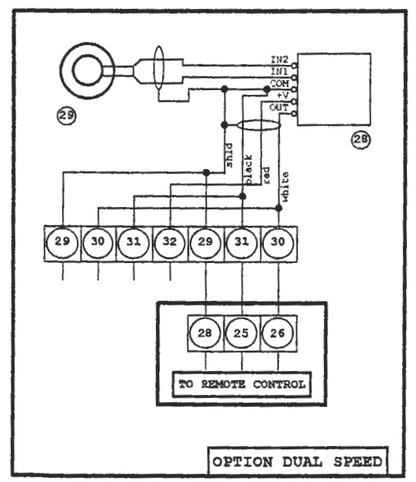
TITLE: 454-100-9020 (Operator)
ELECTRICAL: Fenner M-TRIM controller
cw Speed pot.,start/stop,E-stop and power light
OPTION: Open/Close,Dual speed and Remote control
DWG#:454-100-9017 (Remote)
DWG#:454-100-9020 (Operator)
DWG#:454-100-9021 (Main) DATE: 01/11/98











Conair-Metaplast ltd

TITLE: 454-100-9021 Main box
ELECTRICAL: Regen Drive with all Option
DWG#: 454-100-9017 (Remote)
DWG#: 454-100-9020 (Operator)
DWG#: 454-100-9021 (Main) DATE: 1 April 1999