

6

5

4

3

2

1

REV	ZONE	ECN	REVISION DESCRIPTION	DATE	ENG
A	...	...	Released	3/22	NA

11

As piston comes back  
air escapes through filter on quick  
exhaust valve and 4 way valve

7

PILOT  
Sends 80-100 psi of air to 4 way control  
valve which moves its piston back up

Socket and valve  
connection for  
all hoses to thread  
rolling attachment

IN

After 4 way piston is in down position (4)  
80-100 psi can flow and is applied  
to piston surface(s) in cylinder  
Cylinder and shaft assembly moves forwards  
until adjusting screw nut hits retainer nut  
Internal components break seal allowing air to flow through pilot

6

2

During cycle 80-100 psi of  
pressurized air flows through

3

Air comes from open 3-way valve  
that closes shortly after being  
pressurized and remains  
closed for duration of cycle

Air pressure pushes down  
piston in 4 way valve to move  
cylinder to forwards positon

4

1

3 Way Control Valve  
slide comes to full forward position  
and trips 3 way during the entire cycle

5

8

black

clear

80-100 psi

5

clear

black

Adjustable Flow

8

Filter Regulator and  
Pressure Gage

80-100 psi of compressed  
air flows in through quick  
disconnect valve

4 way control valve

Adjustable Flow to Purge

Piston

Roll arms open  
piston fully down

Roll arms closed  
piston fully up

Thread Roll Attachments shown without cylinders

Attachment Range  
134, 141, 142, 151, 152,  
160 Series, 170 Series

PURGE

Used to keep a  
steady flow of air in  
gear train to keep  
chips from entering.

OUT

As cylinder, shaft, and piston move forwards  
air is pushed out while being restricted by flow control valve.  
Adjusting the flow control valve will change the penetration rate.

9

10

Once air from pilot shifts 4 way control valve up air flows into front of cylinder  
through OUT. 80-100 psi of air is applied to bottom of piston surface(s) which closes  
poppet seal on end plate.

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C. J. WINTER ENGINEERING  
STANDARD E1058 & ASME  
Y14.5M 1994. UNTOLERANCED  
DIMENSIONS ARE BASIC

.020 A B C SW

DRAWN BY: N. Alborno  
DWG DATE: 3/3/22  
ENG. APPR: P. Allart  
APPR DATE: 3/3/22  
MATERIAL:  
HEAT TRT:



**C. J. WINTER**  
MACHINE TECHNOLOGIES, INC.

Control Valve Assembly

DWG SIZE  
B  
SCALE: 1:5  
Sheet1  
DRAWING NO.  
141600