Block: Briquette_Press_B_41
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Created: 06/25/2018 09:33:41 pm
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Symbol	Var Type	Data Type	Comment
	TEMP		
	TEMP		
	TEMP		
	TEMP		

B V4.1
Custom program for WEIMATH Standard Series briquette press.
#NVJOB Nicholas Veselov (independent developer) - https://nvjob.pro, http://nvjob.dxam

Network 1   ///
                       Power. Starting up the hydraulic station.
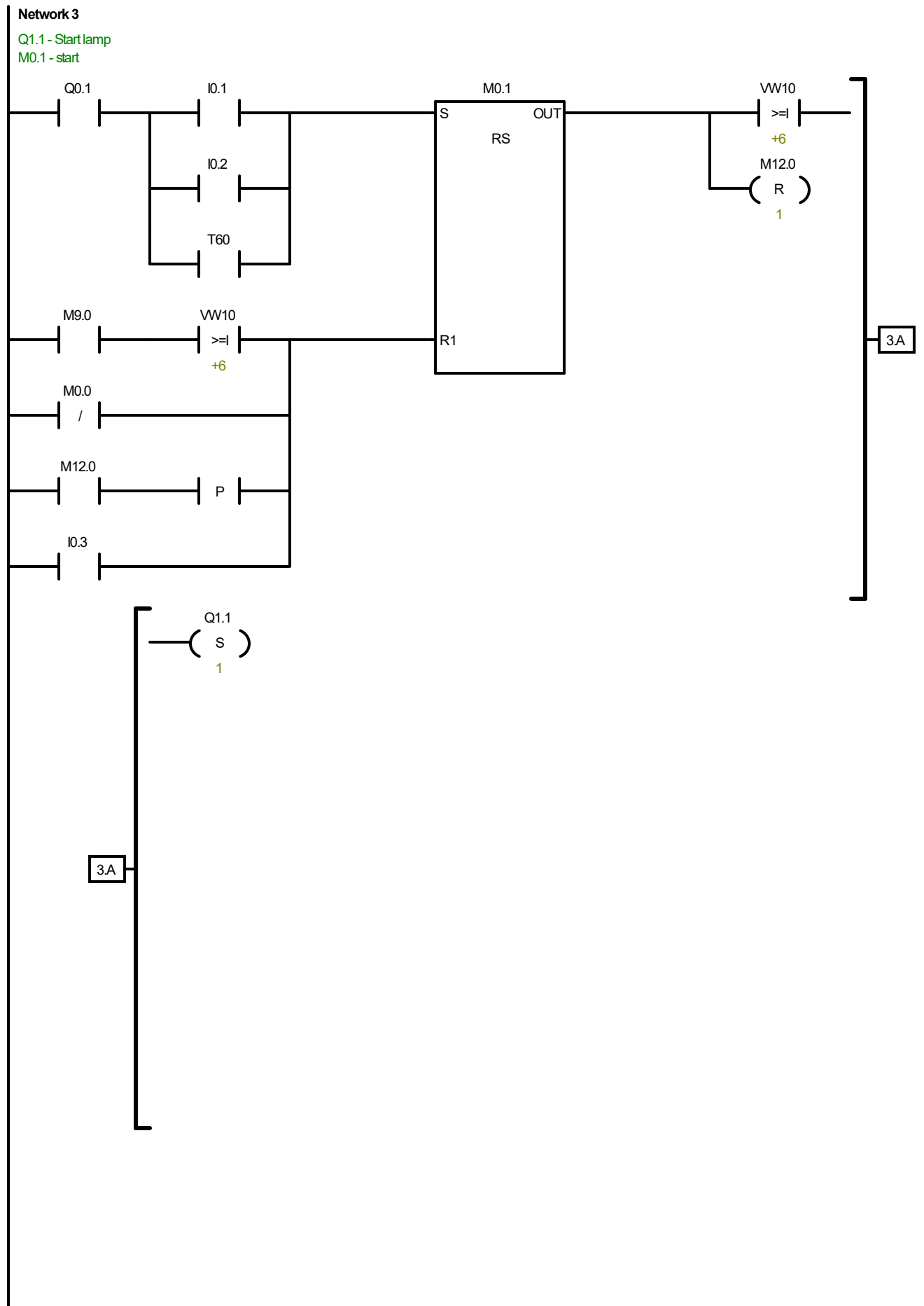   ///
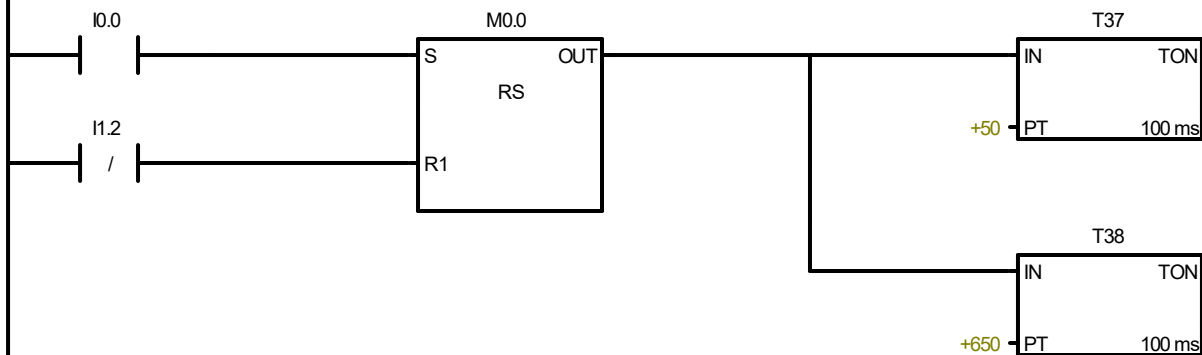
Network 2

Q0.0 and Q0.1 - Hydroelectric power station engine (star-delta).
Q0.2 - Fan.

Network 3

Q1.1 - Start lamp
M0.1 - start
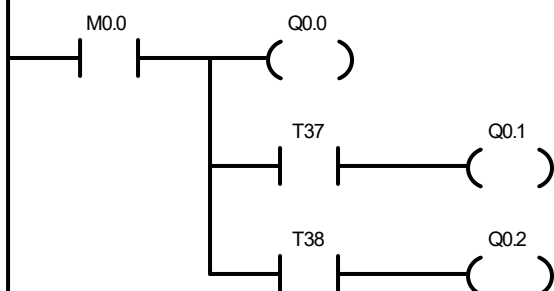
Network 4

CleaningAlarm

```
   M0.1         VW10          T51                             T50
───┤ ├──────────┤ <I ├────────┤ / ├──────┬──────────────┤IN      TON │
                   +6                     │                │           │
                                          │          +5 ──┤PT   100 ms │
                                          │
                                          │        Q1.1
                                          └────────( R )
                                                     1
                   T50                                          T51
              ─────┤ ├─────────────────────────────┤IN      TON │
                                                     │           │
                                               +5 ──┤PT   100 ms │

                                         Q1.1
                                        ( S )
                                          1
```
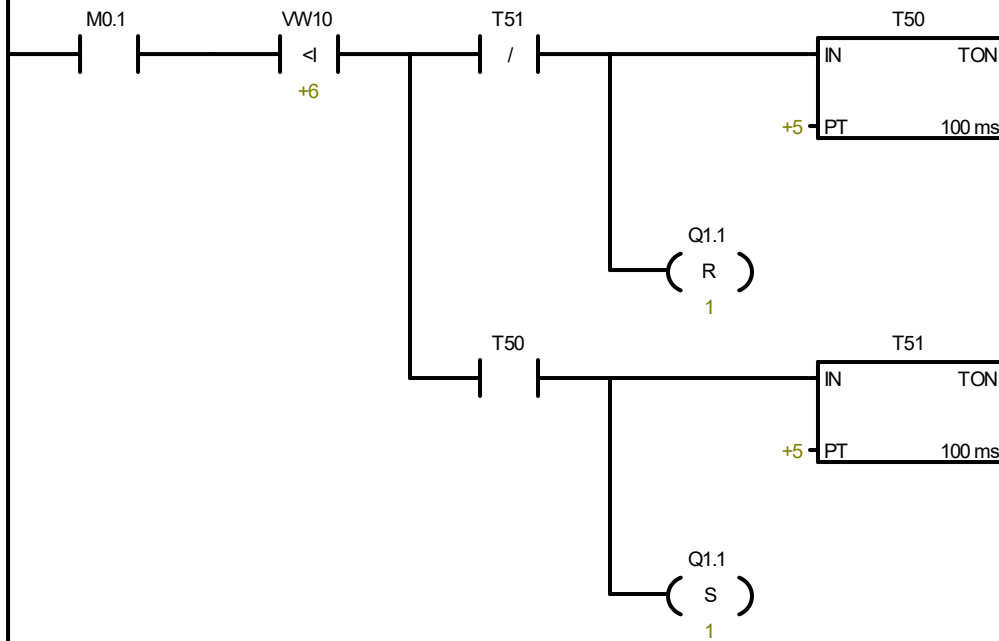
Network 5

Stop
VW10 - number of cleaning cycles

```
   I0.2         M9.0          M0.1                         M9.0
───┤ ├──────────┤ / ├─────────┤ ├────────────────────┤S      OUT ├──────────┐
                                                       │    RS     │         │
   M0.1         M9.0          VW10                     │           │         │
───┤ / ├────────┤ ├───────────┤ >=I ├──────┬──────────┤R1         │        [5.A]
                                 +6        │           │           │
   M0.0                                    │
───┤ / ├───────────────────────────────────┘


         ┌──┤ P ├──────────────────┤EN   MOV_W   ENO ├──▷
    [5.A]┤                      +0 ─┤IN         OUT ├─ VW10
         └
```

Network 6

Reset

```
   M0.1                  Q0.4
  --| / |----+---------( R )
             |            1
             |         Q0.5
             +--------( R )
             |            1
             |         Q0.6
             +--------( R )
             |            1
             |         Q0.7
             +--------( R )
             |            1
             |         Q1.0
             +--------( R )
             |            1
             |         M10.0
             +--------( R )
             |            1
             |         Q1.1
             +--------( R )
             |            1
             |      +-----------------+
             |      |      MOV_W       |
             +------| EN          ENO  |---->>
                    |                  |
               +1 --| IN          OUT  |-- VW10
                    +-----------------+
```
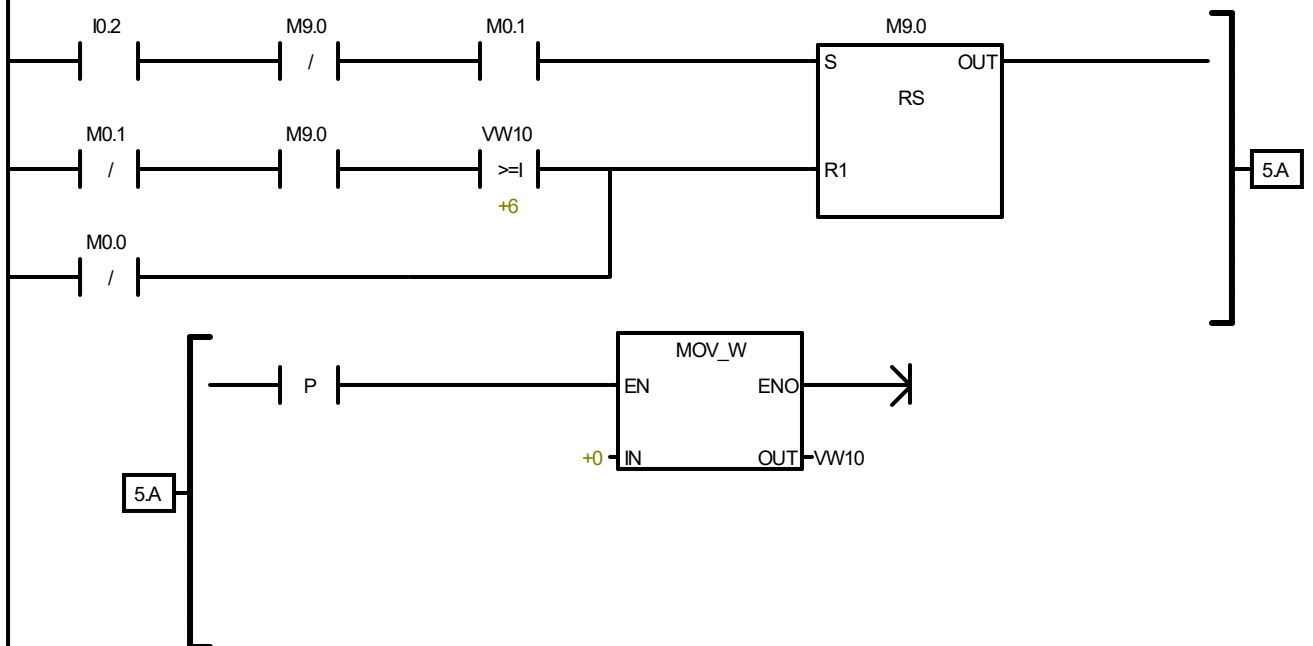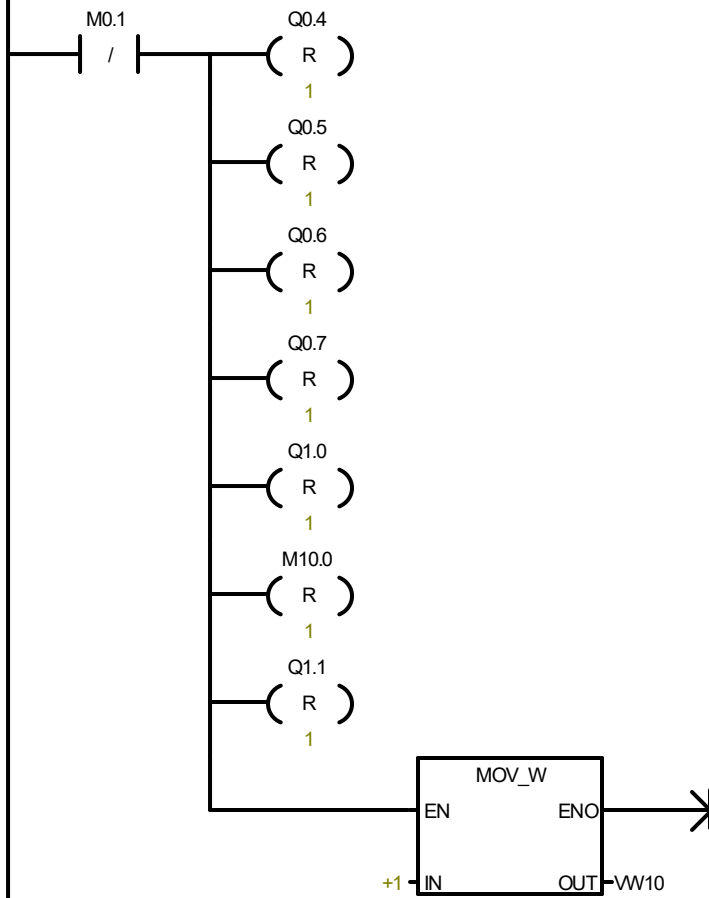
Network 7

Cleaning at work
T40 - clog test, vertical piston
T41 - clogging check, horizontal piston
T42 - Check Valve Horizontal Piston

```
   M0.1        T40            M12.0
  --| |----+--| |----+-------( S )
           |         |          1
           |   T41   |
           +--| |----+
```

Network 8

```
   M0.1        T40         T41        M12.0                           T60
  ──┤/├───────┤/├─────────┤/├────────┤ ├─────────────────────┤IN        TON├
                                                             
                                                       +20 ──┤PT    100 ms├
```

Network 9

///
Preparation for work
///

M0.3 - prepared

```
   M0.1        M0.3        I0.6        I0.7        I0.4        I0.5       ┐
  ──┤ ├────────┤/├─────────┤/├─────────┤/├─────────┤ ├─────────┤ ├──── ┤9.A│

   M0.1
  ──┤/├──────────────────────────────────────────────────────────────┘
```
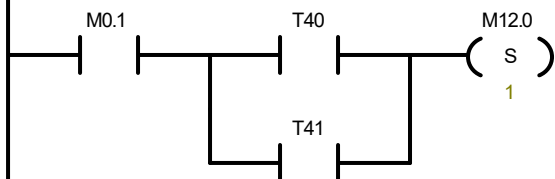
```
                        M0.3
         ┌──────────────────────┐
  ┌9.A┐──┤          S      OUT├──▷──
         │                      │
         │          RS          │
         │                      │
         └──────────┤R1          │
                    └──────────────┘
```

Network 10

```
   M0.1        M0.3                          T46
  ──┤ ├────────┤/├─────────────────────┤IN        TON├
                                        
                                  +10 ──┤PT    100 ms├
```

Network 11

```
   T46         Q0.4        Q0.5
  ──┤ ├────┬───┤/├────────( S )
           │                1
           │
           │   Q0.7        Q0.6
           └───┤/├────────( S )
                            1
```

Network 12

```
      M0.3                                    T47
     ─┤ ├──┬──────────────────────────┤IN      TON│
          │                            │            │
          │                       +10 ─┤PT   100 ms │
          │
          │                            Q0.5
          └────────┤ P ├──────────────( R )
                                         1
```

Network 13

```
      T47                              Q0.6
     ─┤ ├────────┤ P ├────────────────( R )
                                         1
```

Network 14

Cleaning

```
      M0.1          M0.3          VW10          Q1.0
     ─┤ ├──────────┤ ├───────────┤◁├───────────( S )
                                  +6             1
```

Network 15

Feeds sawdust in time, timing

```
      I1.3                   MOV_W
     ─┤ ├───────────────┤EN        ENO├──────▶
                        │              │
                    +9 ─┤IN        OUT├─VW20
```

Network 16

Feeds sawdust by time, timing

```
      I1.4                   MOV_W
     ─┤ ├───────────────┤EN        ENO├──────▶
                        │              │
                   +20 ─┤IN        OUT├─VW20
```

Network 17

```
      I1.3          I1.4                    ┌─────────────┐
  ────┤ / ├────────┤ / ├──────────────────┤EN    MOV_W  ENO├────────►│
                                           │             │
                                      +15 ─┤IN       OUT ├─VW20
                                           └─────────────┘
```

Network 18

Feeds sawdust by time

```
    M0.1       M0.3       I0.4       I0.5       I0.6       I0.7        ┐
 ───┤ ├────────┤ ├────────┤ ├────────┤ ├────────┤ / ├──────┤ / ├──    │
                                                                      │
    I0.4       I0.5                                                    │
 ───┤ / ├──────┤ / ├─────────────────────────────────────────────    ├─ 18.A
                  │                                                    │
    M0.1          │                                                   │
 ───┤ / ├─────────┘                                                   ┘
```

```
           Q0.4       Q0.5       Q0.6       Q0.7                       ┐
     ┌─────┤ / ├──────┤ / ├──────┤ / ├──────┤ / ├──────────────────   │
     │                                                                ├─ 18.B
 18.A┤──────────────────────────────────────────────────────────     ┘
```

```
 ┌──          M0.4                                   T39
 │      ┌─────────────┐                         ┌─────────────┐
 │      │S         OUT├─────────────────────────┤IN       TON │
 │      │     RS      │                          │             │
 │      │             │                   VW20 ──┤PT    100 ms │
 18.B ──┤R1           │                          └─────────────┘
 │      └─────────────┘
 └──
```
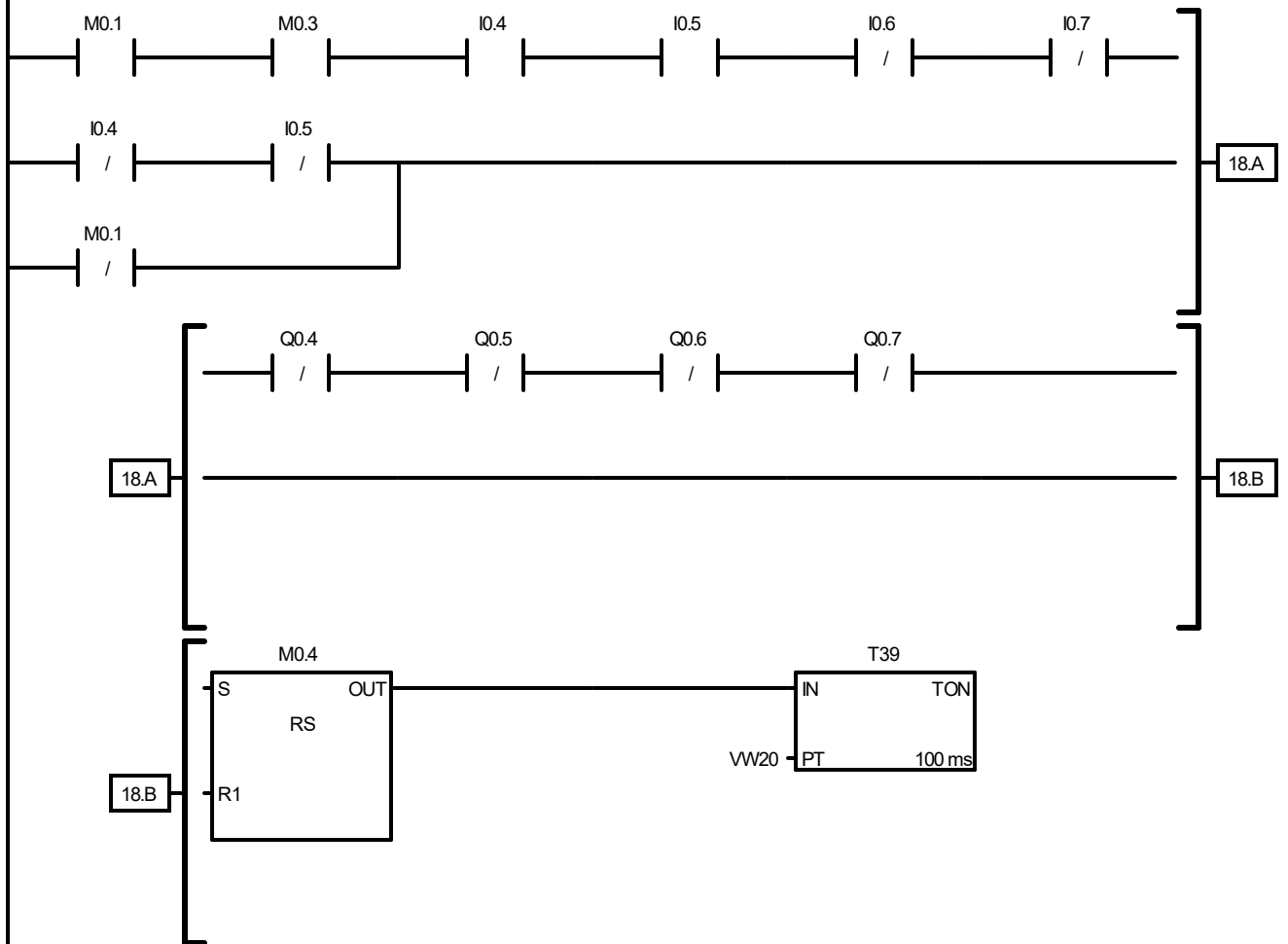
Network 19

Feeds sawdust on time (works, auger)

```
    M0.1       M0.3       M10.0      M0.4       T39       VW10        ┐
 ───┤ ├────────┤ ├────────┤ / ├──────┤ ├────────┤ / ├─────┤>=I├──    ├─ 19.A
                                                           +2         ┘

              Q0.3
 19.A ┌────────( )────────┐
      └                   ┘
```
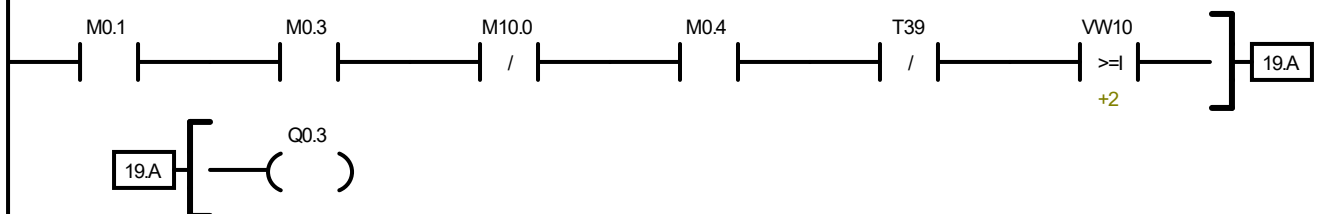
Network 20

Filed the sawdust (the auger is off), lowers the vertical piston
T40 - dog test, vertical piston

```
  M0.1        M0.3        M10.0        M0.4         T39        Q0.3
──┤ ├────────┤ ├─────────┤/├──────────┤ ├─────────┤ ├────────┤/├──────┐
                                                                      │
                                                                    ┌─┴─┐
                                                                    │20.A│
                                                                    └───┘
```

```
              Q0.5        Q0.4
           ──┤/├────────( S )
  ┌────────┤            Q0.4 1
  │20.A├──┤                        T40
  └────────┤   I0.4            ┌─────────────┐
           ──┤ ├──────────────┤IN        TON│
                              │             │
                         +80 ─┤PT    100 ms │
                              └─────────────┘

              Q0.7        Q0.6
           ──┤/├────────( S )
                              1
```

Network 21

```
  M0.1        M0.3        M10.0        I0.4         I0.5        I0.6
──┤ ├────────┤ ├─────────┤/├──────────┤/├─────────┤/├────────┤/├──────┐
                                                                    ┌─┴─┐
                                                                    │21.A│
                                                                    └───┘
```

```
           I0.7                   T48
  ┌─────────┤/├──────────────┌─────────────┐
  │21.A├──┤               ──┤IN        TON│
  └─────────┤                │             │
                         +2 ─┤PT    100 ms │
                             └─────────────┘
```
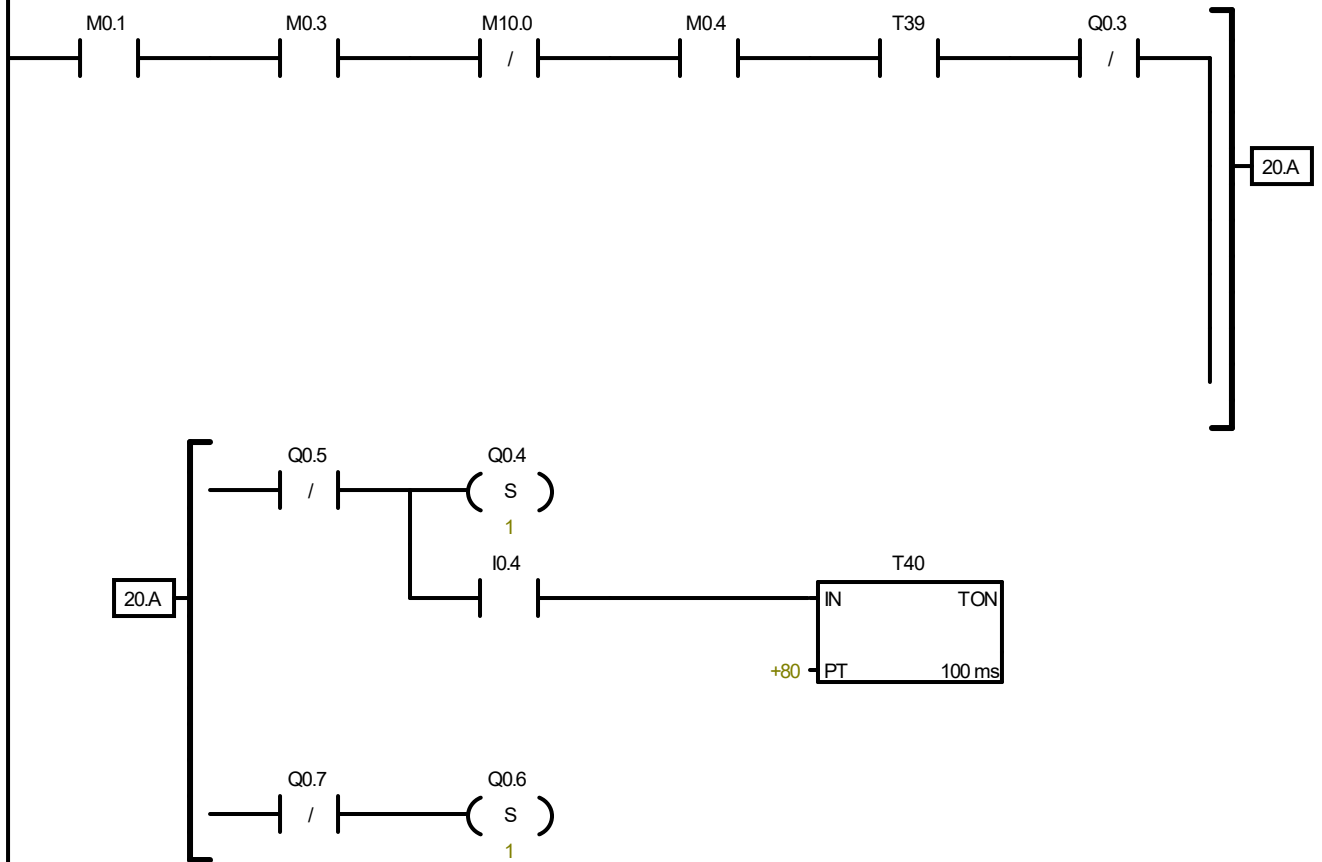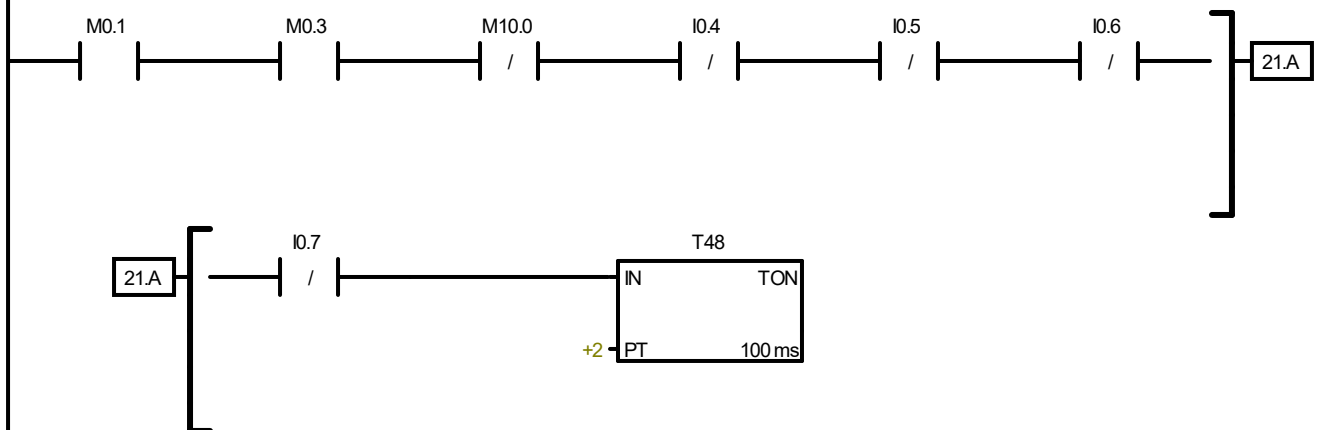
Network 22

Lowered the vertical piston, pushes the horizontal piston

```
   M0.1          M0.3          T48          Q0.6
───┤ ├──────────┤ ├──────────┤ ├─────────( R )
                                            1
                                   Q0.6                              T45
                                ───┤ / ├──────────────────┤IN      TON├
                                                          │            │
                                                       +2─┤PT   100 ms├
                                   
                                   Q0.4
                                 ─( R )
                                    1
```

Network 23

```
   M0.1          M0.3          T45          M3.3         Q0.7
───┤ ├──────────┤ ├──────────┤ ├──────────┤ / ├───────( S )
                                                         1
```
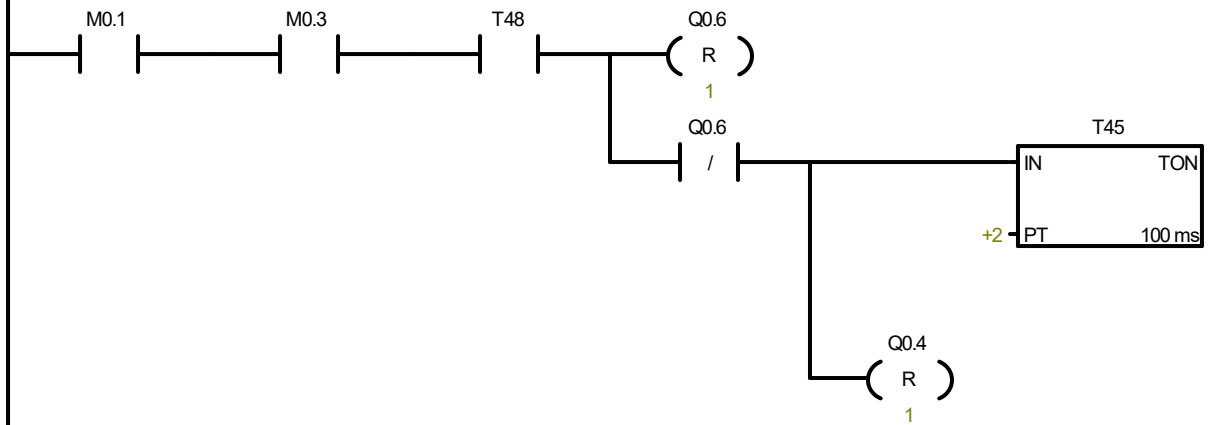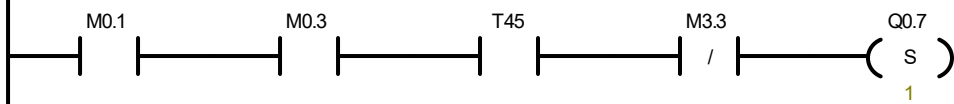
Network 24

The button has worked, the collet is opened

```
   M0.1      M0.3      M10.0     Q0.7      I0.7      I1.1
───┤ ├──────┤ ├──────┤ / ├──────┤ ├──────┤ ├──────┤ ├──┐
                                      │                 │
                                      │              24.A
                                      │   I0.7
                                      └──┤ / ├──────────┘
                                                      +20

              Q1.0
            ─( S )
               1
              M10.0
  24.A─┤   ─( S )
               1
              T42
           ┤IN      TON├
           │            │
           ┤PT   100 ms├
```
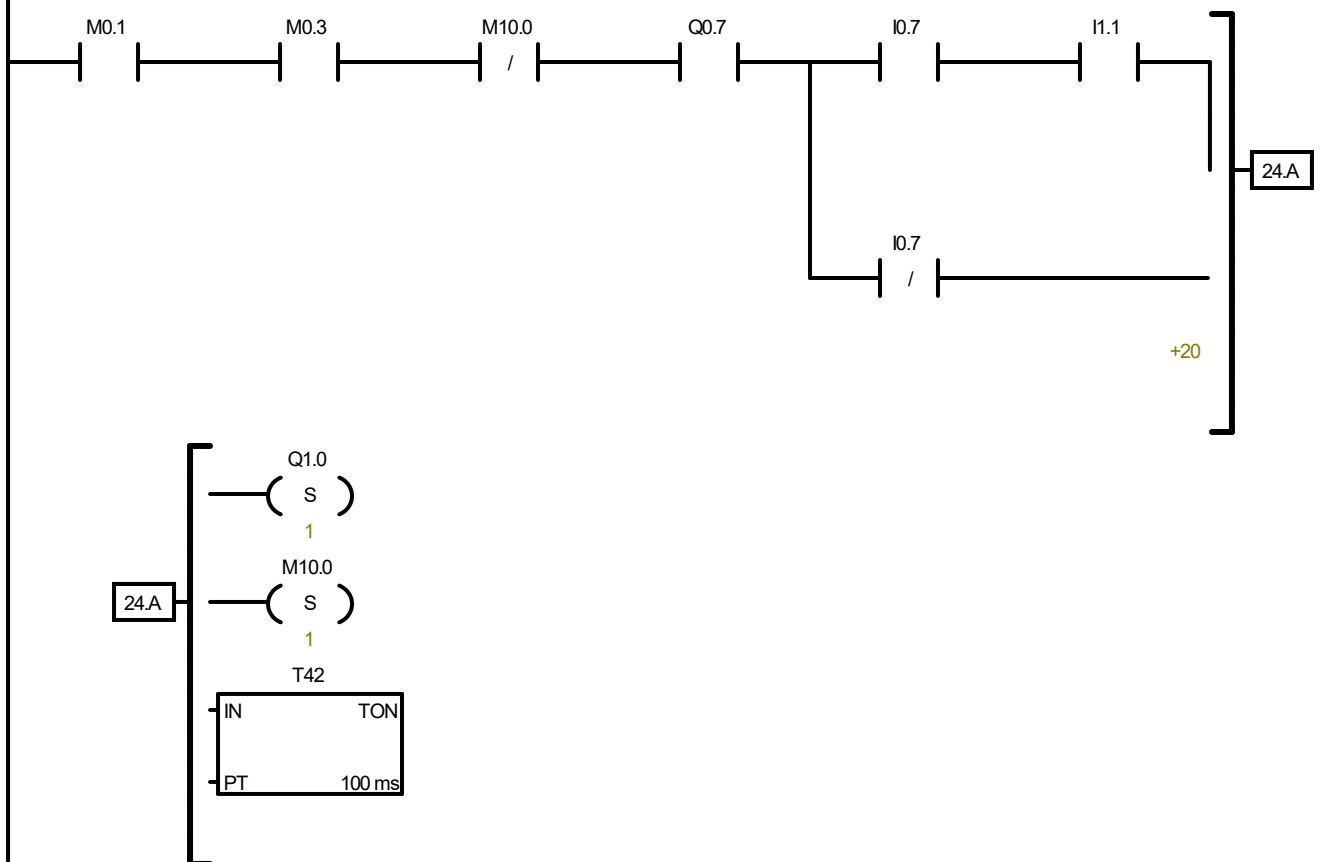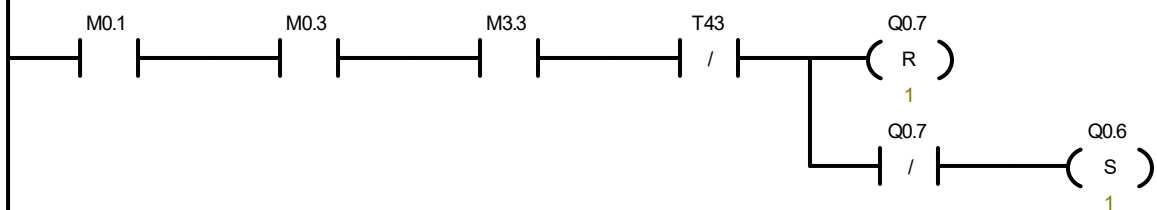
Network 25

I0.6 and I0.7 worked (horizontal piston extended all the way), horizontal piston creeps back
T41 - dogging check, horizontal piston
T42 - Check Valve Horizontal Piston

```
    M0.1        M0.3        T42                    M3.3
  ─┤ ├─────────┤ ├─────────┤ ├───────────────┤S      OUT├──────────────┐
                                               │   RS    │             │
    M0.0                                        │         │            25.A
  ─┤/├──────────────────────────────────┬──────┤R1       │
                                         │       └─────────┘
    M0.1                                 │
  ─┤/├──────────────────────────────────┤
                                         │
    T43                                  │
  ─┤ ├──────────────────────────────────┘
```

```
                        T43
              ┌────────┤IN      TON├
              │     +5 ┤PT   100 ms├
    25.A      │
  ──┤ ├───────┘
```

Network 26

```
    M0.1        M0.3        T43        Q0.6
  ─┤ ├─────────┤ ├─────────┤ ├────────( R )
                                          1
```
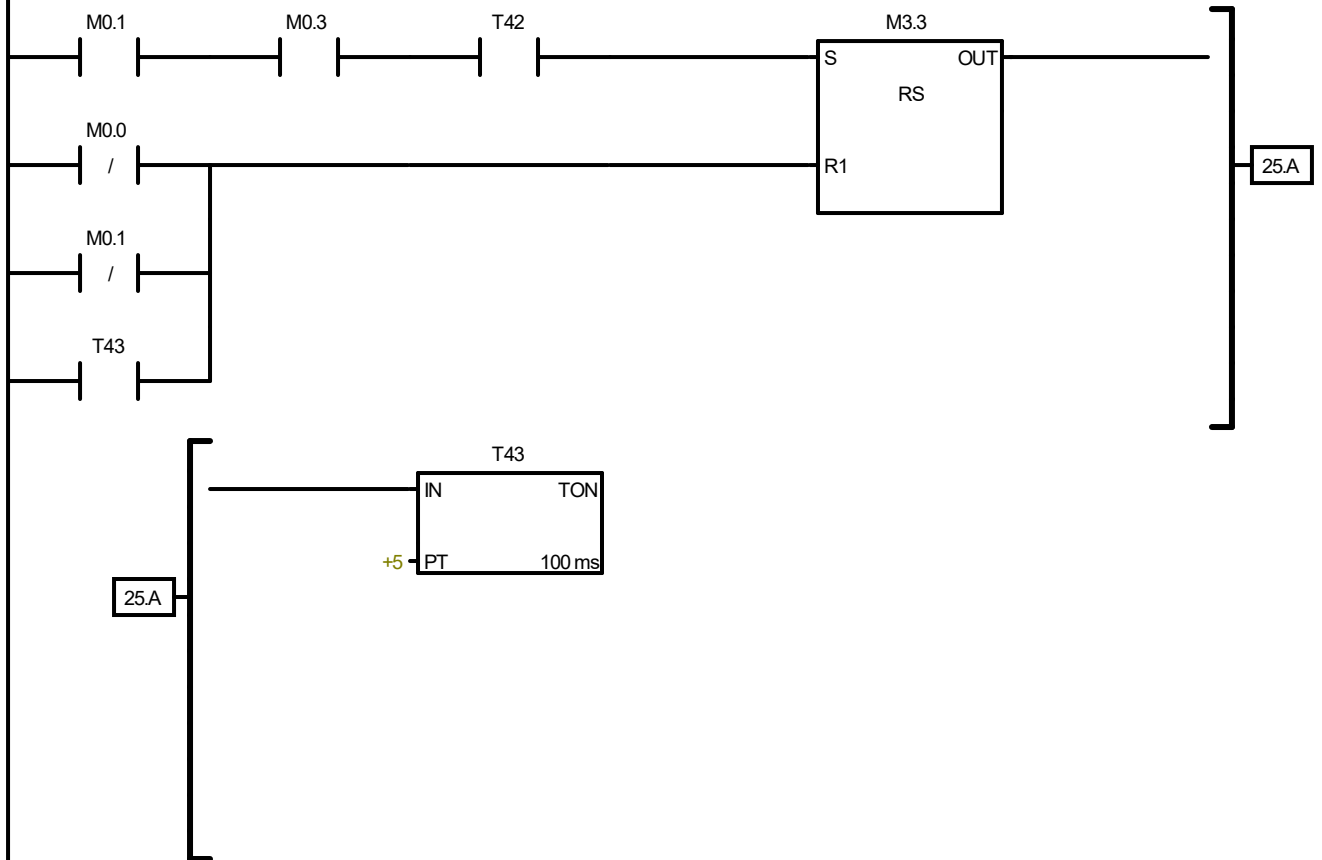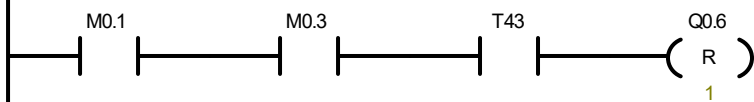
Network 27

I0.6 and I0.7 worked (horizontal piston extended all the way), horizontal piston creeps back

```
    M0.1      M0.3      M3.3      T43        Q0.7
  ─┤ ├───────┤ ├───────┤ ├───────┤/├───┬────( R )
                                        │       1
                                        │  Q0.7         Q0.6
                                        └──┤/├──────────( S )
                                                          1
```

Network 28

The horizontal piston retracted, the vertical piston rises, the collet undenches.

```
   M0.1        M0.3        M10.0        Q0.7        I0.7        I0.6                28.A
───┤ ├────────┤ ├─────────┤ ├─────────┤ ├─────────┤ ├───┬─────┤ ├──────┐
                                                        │                  │
                                                        │     I0.6         │
                                                        └─────┤/├──────────┘
```

```
            ┌───────────────────────┐
            │              T49       │
            │         ┌──────────┐   │
            │         │IN    TON │   │
            │         │          │   │
            │    +2 ──┤PT  100 ms│   │
   28.A     │         └──────────┘   │
──┤  ├──────┤                        │
            │              T41       │
            │         ┌──────────┐   │
            │         │IN    TON │   │
            │         │          │   │
            │   +80 ──┤PT  100 ms│   │
            └───────────────────────┘
```

Network 29

//
Improved deaning
//

```
   M0.1        M0.3        T49          Q0.7
───┤ ├────────┤ ├─────────┤ ├─────────( R )
                                         1
```

Network 30

```
   M0.1        M0.3        M10.0       Q0.4        Q0.7        I0.6          ┐
───┤ ├────────┤ ├─────────┤ ├─────────┤/├─────────┤/├─────────┤ ├──────┌─────┐
                                                                       │ 30.A│
                                                                       └─────┘
                                                                              ┘

              I0.7        Q0.6
          ┌───┤ ├──────┬──( S )
  ┌─────┐ │            │     1
  │ 30.A├─┤            │
  └─────┘ │            │  Q0.5
          │            └──( S )
          └                  1
```

Network 31