

Stuga Machine IO Dictionary - Outputs

List of output references used on Stuga Machines

Contents

Comments

For input references see here


- All Stuga machines share similar outputs to do similar functions (eg the gripper on output is the same on any machine). To keep this modular approach, each function is given a specific reference number from 1 to 500. This reference or IORef is the same on any machine.
- This number is used as the wire labelling number on newer machines (all Autoflows and ZX5s)
- To maintain backwards compatibility with older machines (Saws, Flowlines, Ecolines, etc, there is also a cross-reference to the original cable numbering.
- More information on a particular input can be found by clicking on the code, if external link is set (blue text)

IORef	Legacy Wire Label	Code	Description
1	Y25	Ou_GRIP	Gripper on flowlines
	OY2	GRIP	
	Y001	OuA_Grip	Gripper on Autoflow
3		OuA_GripBlow	
4		OuA_LoadBlow	
5		OuA_PopUp	
6		OuA_Dog0	
7		OuA_Dog1	
8		OuA_Dog2	
9		OuA_Dog3	
10		OuA_Dog4	
11		OuA_Dog5	
12		OuA_PopV9	
13		OuA_PopUpPush	
		OuA_PopH1	
14		OuA_PopUp2	
15		OuA_PopUp3	
16		OuA_PopUp4	
17		OuA_PopUp5	
18		OuA_PopUp6	
19		OuA_PopUp7	
20		OuA_PopUp8	
21		OuA_GripTurn OuA_Turn90	Sturtz Infeed Grip Turn Cylinder Up to 90 degrees
22		OuA_StopX	
23		OuA_InfeedAdv	
24		OuA_BrakesOff	
25		OuA_CillSupport	
26		OuA_EDSpindleOn	

27		OuA_EDClamp	
28		OuA_EDPlunge	
29		OuA_EDGuardOpen	
30		OuB_ClampIT	
31		OuB_ClampITPos	
32		OuB_ClampIS	
33		OuB_ClampISPos	
34		OuB_ClampOT	
35		OuB_ClampOTPos	
36		OuB_ClampOS	
37		OuB_ClampOSPos	
38		OuB_Spin1PI	
39		OuB_Spin2PI	
40		OuB_Spin3PI	
41		OuB_Spin4PI	
42		OuB_Spin5PI	
43		OuB_Spin6PI	
44		OuB_Spin7PI	
45		OuB_Spin8PI	
46		OuB_Spin1On	
47		OuB_Spin2On	
48		OuB_Spin3On	
49		OuB_Spin4On	
50		OuB_Spin5On	
51		OuB_Spin6On	
52		OuB_Spin7On	
53		OuB_Spin8On	
54		OuB_Spin1DP	
55		OuB_Spin2DP	
56		OuB_Spin3DP	
57		OuB_Spin4DP	
58		OuB_Spin5DP	
59		OuB_Spin6DP	
60		OuB_Spin7DP	
61		OuB_Spin8DP	
62		OuB_SpinFwd	
63		OuB_Spin300	
64		OuB_Oiler	
79		OuF_LowerEj	Lower eject system on Autoflow Mk4
80		OuF_ClampIT OuF_ITHigh	If the clamp on the saw infeed top is a roller clamp, use this output to activate a high pressure 3/2 valve
81		OuF_ClampITPos	
82		OuF_ClampOT	
83		OuF_ClampOTPos	
84		OuF_ClampIS	
85		OuF_ClampOS	
86		OuF_ClampITRoll	
87		OuF_EjectPush OuF_EjPushA	Soenen Eject Push to Conveyor A
88		OuF_EjOutfeed	Autoflow Mk4 Eject Back to Back Cylinder Outfeed Side
89		OuF_ClampPad	Static Clamp Pad for Autoflow Mk4

90		OuF_Conveyor	
91		OuF_Eject	
92		OuF_TiltSaw	
93		OuF_OffcutBlow	
94		OuF_Siren	
95		OuF_Gate	
96		OuF_TiltPos	
97		OuF_SawOn	
98		OuF_ExtractOn	
99		OuF_ChuteBlow	
100		OuA_Dog6	
101		OuA_Dog7	
102		OuA_Dog8	
103		OuF_SRBlw	Blower for SR Axis
104		OuF_ConvYAFwd	Soenen Conveyor Direction Y Position A (next to M/c) FORWARD
105		OuF_ConvYARev	Soenen Conveyor Direction Y Position A (next to M/c) REVERSE
106		OuF_EjectInfeed	Autoflow Mk4 Eject Back to Back Cylinder Infeed Side
107		OuA_Crank	Module A Crank
108		OuA_DDrlMot	Datum Drill Motor
109		OuA_ConvFwd	
110		OuA_ConvRev	
111		OuA_WheFwd	
112		OuA_WheRev	
113		OuA_ConvSlow	Autoflow Mk4 Output for Infeed Conveyor Slow Speed
114		OuG_ConvSlow	Autoflow Mk4 Output for Outfeed Conveyor Slow Speed
121		OuC_GripH	Module C Grip Height Home
122		OuC_BlwRack	Module C Rack Blower
123		OuC_BlwGrip	Module C Grip Blower
124		OuC_Roller	Module C Roller Lift
125		OuC_Chan1	Module C Channel
126		OuC_BeamPosH	GX Axis Beam Position Home
127		OuC_BeamPosO	GX Axis Beam Position Out
128		OuC_CrankFwd	Module C Crank
131		OuE_GripH	Module E Grip Height
132		OuE_Grip	Module E Grip
133		OuE_BlwRail	Module E Blower for Loader linear rails
145		OuE_BlwGrip	Module E Grip Blower
146		OuE_Roller	Module E Roller Lift
150		OuE_Backfence	Module E Backfence Roller Lift - Not used
151		OuE_Crank	Module E Crank
152		OuA_Chan1	Module A Channel 1
153		OuA_Chan2	Module A Channel 2 (Datum Drill)
154		OuA_WheelH	Module A Wheel Height
155		OuA_ChanLock	Module A Channel Lock
156		OuA_DDrlPl	Datum Drill Plunge
157		OuA_Roller	Module A Roller
158		OuA_DDClamp	Datum Drill Clamp On
159		OuC_GripLock	Gripper position lock Module C
160		OuE_GripLock	Gripper position lock Module E
200		OuF_GuardOpen	
201		OuB_GuardOpen	

202		OuF_ClampS	
203		OuA_LoadClear	
204		OuF_ClampPos	
206		OuF_ClampCen	
207		OuF_SawCut	
208		OuF_Saw90	
209		OuF_Saw135	
210		OuF_ZsupportI	Z Support Cylinder (on ZX5 this is the infeed side)
211		OuF_ClampSPos	
212		OuF_ClampITHi	
213		OuF_SawBlow	
214		OuF_ZITurret	Z Turret Turn Infeed
215		OuF_ZOTurret	Z Turret Turn Outfeed
216		OuB_Red	MH Red Lamp
217		OuB_Amber	MH Amber Lamp
218		OuB_Green	MH Green Lamp
219		OuF_RedSaw	Saw Red Lamp
220		OuE_ChannelLock	
221		OuE_ChannelPush	
222		OuE_FlipZ	
223		OuF_GreenSaw	Saw Green Lamp
224		OuF_ZsupportO	Z Support Cylinder Outfeed Side on ZX5 only
226		OuE_ChanLow	Low pressure output for channel bar
227		OuE_SRSTSaw	Added by BB for Flowline with RS Auto/Beckhoff control
228		OuE_TrMotor	
229		OuE_TrDog1	
230		OuE_TrDog2	
231		OuE_TrDog3	
232		OuE_TrDog4	
233		OuE_TrDog5	
234		OuE_TrDog6	
235		OuE_TranUpDown	
236		OuE_TranAcross	
237		OuF_OffsetAH	
238		OuE_BlwLens	
239		OuE_BlwMLoad	Material load blower on Module E on ZX5
240		OuE_BlwHole	
241		OuE_BlwRack	
242		OuE_PushLift	
243		OuB_BlwUR	
244		OuC_BlwMLoad	Material Load Blower
250		OuA_NextBar	
251		OuA_VorBack	Sturtz Infeed Forward Carriage Back (Vorlaufwagen)
252		OuA_VorFwd	Sturtz Infeed Forward Carriage Fwd
253		OuA_VorUp	Sturtz Infeed Forward Carriage Clamp Up
254		OuA_VorDn	Sturtz Infeed Forward Carriage Clamp Down
255		OuA_GSGrip	Sturtz Infeed Grip Profile Short Grip (Shorter of the two cylinders)
256		OuA_GSOff	Sturtz Infeed Grip Profile Short Open
257		OuA_GLOff	Sturtz Infeed Grip Profile Long Open (longer of the two cylinders) Output Ref 001 is used for the longer one as this is equivalent to grip output)

258		OuA_TurnUp OuA_Turn0	Sturtz Infeed Grip Turn Cylinder Down (0 degrees standard)
259		OuA_LiftUp	Sturtz Infeed Roller Table Up
260		OuA_LiftUDn	Sturtz Infeed Roller Table Down
261		OuA_StopUp	Sturtz Infeed Paddle Stop Up
262		OuA_StopDn	Sturtz Infeed Paddle Stop Down
263		OuA_GRTRotate	Sturtz Infeed Guide Roller Turn Cylinder Rotate
264		OuA_GRTOpen	Sturtz Infeed Guide Roller Turn Cylinder Initial
265		OuA_GRHClamped	Sturtz Infeed Guide Roller Height Cylinder Clamp
266		OuA_GRHOpen	Sturtz Infeed Guide Roller Height Cylinder Open
267		OuA_InfeedLift	Profile lift clear of infeed belts
268		OuA_SillLift	On Ancil saw, popup cylinder to support profile
269		OuB_BlwRing	
270		OuB_CLIHold	
271		OuB_InvDP	<p>Inverter Double Plunge output Signals an inverter that double output power is needed.</p> <p> ...This needs to be separate from a simple plunge signal because the inverter needs the command and a changeover delay before the acceleration command</p> <p>Also referred as 316 on TwinCAT2 machines</p>
272		OuC_BlwRail	
273		OuC_CrankFwd	Module C Crank Motor Fwd - on reversing motor. Z067+
274		OuC_CrankRev	Module C Crank Motor Rev - on reversing motor Z067+
275		OuD_CrankFwd	Module D Crank Motor Fwd - on reversing motor Z067+
276		OuD_CrankRev	Module D Crank Motor Rev - on reversing motor Z067+
277		OuE_CrankFwd	Module E Crank Motor Fwd - on reversing motor Z067+
278		OuE_CrankRev	Module E Crank Motor Rev - on reversing motor Z067+
279		OuA_OpSiren	Operator Siren
280	Y280	OuF_ConvXA	Soenen Conveyor Direction X Position A (next to M/c)
281	Y281	OuF_ConvXB	Soenen Conveyor Direction X Position B
282	Y282	OuF_ConvYBFwd	Soenen Conveyor Direction Y Position B FORWARD
283	Y283	OuF_ConvYBRev	Soenen Conveyor Direction Y Position B REVERSE
284	Y284	OuB_VibPlate	Autoflow Mk4 Vibration Plate
285	Y285	OuB_TopSpinBlow	Working Spindle Blower on ZX5
290	Y290	OuF_CLHClose	Sturtz Outfeed Horizontal Clamp Close
291	Y291	OuF_CLHOpen	Sturtz Outfeed Horizontal Clamp Open
292	Y292	OuF_LiftUp	Sturtz Outfeed Lift Station Up
293	Y293	OuF_LiftDn	Sturtz Outfeed Lift Station Down
294	Y294	OuF_OBarBlw	Sturtz Outfeed Bar Blower
295	Y295	OuF_ConvFwd	Sturtz Outfeed Conveyor Forward
296	Y296	OuF_ConvRev	Sturtz Outfeed Conveyor Reverse
302		OuB_SP1R2	Spindle 1 Control Relay 2 Select
303		OuB_SP2R2	Spindle 2 Control Relay 2 Select
304		OuB_SP3R2	Spindle 3 Control Relay 2 Select
305		OuB_SP4R2	Spindle 4 Control Relay 2 Select
306		OuB_SP5R2	Spindle 5 Control Relay 2 Select
307		OuB_SP6R2	Spindle 6 Control Relay 2 Select
308		OuB_SP7R2	Spindle 7 Control Relay 2 Select
309		OuB_SP8R2	Spindle 8 Control Relay 2 Select
310	Y310	OuF_AABlw	Label Area Blower

311	Y311	OuF_AAVac	Vacuum Pump Valve (Label Applicator)
312	Y312	OuF_AATilt	Applicator Tilt (Label Applicator)
313	Y313	OuF_AAPlace	Applicator Place Up/Down (Label Applicator)
314	Y314	OuF_AAPick	Applicator Pick (Yaxis) (Label Applicator)
315	Y315	OuF_AAPulse	Label Applicator Profile Position Turret Pulse
316	Y316	Inv_DP	Inverter Double plunge output used on TC2 machines The standard should be Y271, but this reference has crept in on TwinCAT2 machines only
319		Ou_IPullOff	Ecoline Infeed Pull Off
320		Ou_CLVHi	Ecoline V notch top clamp High pressure
321	Y321	Ou_EJPSH2 OuF_EjPushB	Ecoline / Microline outfeed push 2 Soenen Eject Push to Conveyor B
322		Ou_VBLOW	Ecoline V Notch Blower
323		Ou_IPULLO	Ecoline Infeed Pull Valve off (3 position valve)
324		Ou_LENLOW	Length sensor blower (not Used)
325		Ou_VTURN	Ecoline V Front Turn
326		Ou_WTURN	Ecoline V Rear Turn
327		Ou_CLVO	Ecoline V Notch outfeed Side Clamp
328		Ou_CLVI	Ecoline V Notch Infeed Side Clamp
329		Ou_BcGrn	Ecoline Barcode Reader Green LED
330		Ou_BcRed	Ecoline Barcode Reader Red LED
331		Ou_BlwInfeed	Ecoline & Sturtz Infeed Blower
332			
333		OuA_PopUp1Off	Sturtz Infeed Push To Backfence 1 Open
334		OuA_PopUp2Off	Sturtz Infeed Push To Backfence 2 Open
335		OuA_PopUp3Off	Sturtz Infeed Push To Backfence 3 Open
336		OuA_PopUp4Off	Sturtz Infeed Push To Backfence 4 Open
337		OuA_PopUp5Off	Sturtz Infeed Push To Backfence 5 Open
338		OuA_PopUp6Off	Sturtz Infeed Push To Backfence 6 Open
339		OuA_PopUp7Off	Sturtz Infeed Push To Backfence 7 Open
340		OuB_SpOff1	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #1
341		OuB_SpOff2	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #2
342		OuB_SpOff3	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #3
343		OuB_SpOff4	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #4
344		OuB_SpOff5	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #5
345		OuB_SpOff6	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #6
346		OuB_SpOff7	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #7
347		OuB_SpOff8	Spindle Off relay - Turn spindle off on Beckhoff Quad Inverter System #8
350	Y1	Ou_CLIT	
351	Y2	Ou_CLIS	
352	Y3	Ou_CLO	
353	Y4	Ou_INDEX	Conveyor Motor
354	Y5	Ou_CLUTC	
355	Y6	Ou_STRAI	
356	Y7	Ou_CLCL	ClampClamp hold - used on Ecoline Flowline with DOS control
357	Y8	Ou_ALIGN	
358	Y9 Y31	Ou_SMOT	
359	Y10	Ou_MLOAD	Load Wheel / Roller Motor
360	Y11	Ou_WBLOW	

362	RY1	SPIN1	*Spindle 1 Control Relay 1 Select on ZX5 Twin Inverter System*
363	RY2	SPIN2	*Spindle 2 Control Relay 1 Select on ZX5 Twin Inverter System*
364	RY3	SPIN3	*Spindle 3 Control Relay 1 Select on ZX5 Twin Inverter System*
365	RY4	SPIN4	*Spindle 4 Control Relay 1 Select on ZX5 Twin Inverter System*
366	RY5	SPIN5	*Spindle 5 Control Relay 1 Select on ZX5 Twin Inverter System*
367	RY6	SPIN6	*Spindle 6 Control Relay 1 Select on ZX5 Twin Inverter System*
368		SPIN7	*Spindle 7 Control Relay 1 Select on ZX5 Twin Inverter System*
369		SPIN8	*Spindle 8 Control Relay 1 Select on ZX5 Twin Inverter System*
370	OY1	Ou_EJPSH	
372	OY3	Ou_GRPSH	
373	OY4 Y27 Y373	Ou_OBLOW	Sturtz Outfeed Sensor Blower
374		Ou_SRSTM/H	BB added M/H to description because we need to keep M/H and Saw side separate
375	Y54	Ou_OMBLW	Material Load Blower on Module A on Zx5
376		SPDP3	
377		SPDP5	
378		Ou_ServoEnMH	Added by BB
379		Ou_ServoEnSaw	Added by BB
380			
381	Y381	OuF_ConvBrake	Outfeed Conveyor Motor Brake
382	Y382	OuA_ConvBrake	Infeed Conveyor Motor Brake
383		Ou_CLOUO	Under roller on outfeed side of V notch assembly
384	Y52	Ou_IPULL	
385	Y53	Ou_IGRIP	OuA_IGrip on ZX5
386		OuB_CLOI	
387		Ou_VMOT	
388		Ou_WMOT	
389	Y32	Ou_VICUT	
390	Y33	Ou_VOCUT	
391	Y36	Ou_WICUT	
392	Y37	Ou_WOCUT	
393	Y42	Ou_CLOO	Roller clamps on far outfeed side of Machining centre
394	Y43	Ou_CLOUI	Under roller on infeed side of V notch assembly
395	Y44	Ou_CLV	Fixed V notch clamp (front). Used for top and side V clamps on ZX5
396		Ou_CLW	Fixed V notch clamp (Rear)
397	Y16	SPPL1	
		Ou_VOURO	Microline
398	Y17	SPPL2	
		Ou_BLOWC	Microline
399	Y18	SPPL3	
		Ou_BLOWD	Microline
400	Y19	SPPL4	
		Ou_OPEN	Microline
401	Y20	SPPL5	
		Ou_WASTE	Microline
402	Y21	SPPL6	
		Ou_SWMOT	Microline
403	Y22	SPPL7	
		Ou_SAWC	Microline
404	Y23	SPPL8	

		Ou_S90	Microline
405		Ou_S135	Microline
406		Ou_CLSIV	Microline
407		Ou_CLSIP	Microline
408		Ou_CLSOV	Microline see 418
409		Ou_CLSOP	Microline
410		Ou_CLSIH	Microline
411		Ou_CLSOH	Microline
412		Ou_EJPS2	Microline
413		Ou_RRBLW	Ring Rack Blower
414		Ou_RREXT	Ring Rack Extractor
415		Ou_IDLE	v3.67 Idle Beacon
416		Ou_InvDP	Inverter Double Plunge Current Boost also 271
418		Ou_CLSOV	Microline - M005 moved to this number because it did not work on 408 (608) See Microline Issue Saw Outfeed Clamp
419	Y419	Ou_GripPulse	Pulse Output for grip height Somatec unit
425	Reserved	SPBL1	Spindle blow outputs reserved due to SPPLn+28 in Spindle On code. See Monday item
426	Reserved	SPBL2	
427	Reserved	SPBL3	
428	Reserved	SPBL4	
429	Reserved	SPBL5	
430	Reserved	SPBL6	
431	Reserved	SPBL7	
432	Reserved	SPBL8	
433			
440			