

# Hyva Tip Controls

## Introduction

### Hyva tip controls

Hyva offers a complete range of tip controls to engage the power take-off and valves in your hydraulic system. The standard Hyva controls meet every local legislation with safety features such as the automatic P.T.O. disengagement. This control makes driving with an engaged P.T.O. impossible. The tipping controls are standard delivered with three positions; tip, lower and automatic neutral locking position.

### Standard Hyva tip controls

The following controls are available:

- ∞ Tip control for P.T.O.
- ∞ Tip control for tipping valve
- ∞ Tip control for P.T.O. & tipping valve

They are available with or without spring return on Tip control. The control for P.T.O./valve has an automatic disengage on the P.T.O. switch as an option.

The standard controls are equipped with a warning light to show that the P. T.O. is engaged. Perfectly proportional lowering is possible in combination with the Hyva PT valve. Proportional lowering makes partially unloading ever so easy. Detailed specification sheets are available on request.

### Narrow tip controls with additions for multi-sections

The multi-section tip control can be used in cases where more functions should be controlled, for instance taildoors, multi-kaps or hookloaders. The tipping control is ideal for small cabine spaces.

### Basic section for tippers

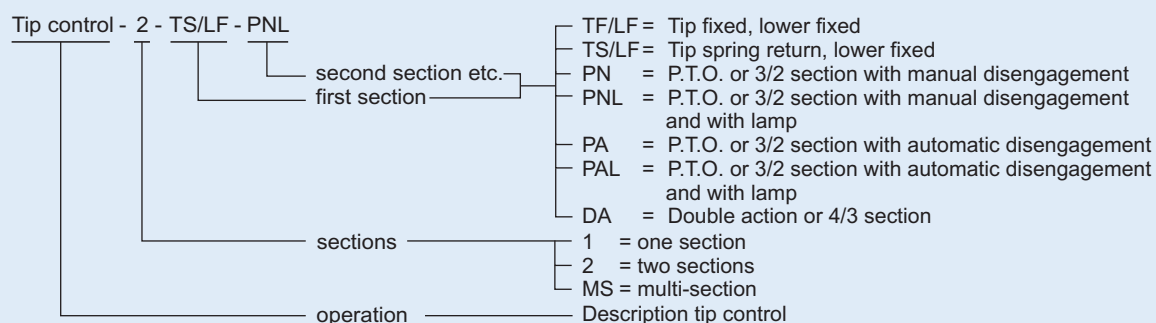
The multi-section tip control always starts with the basic section 147 50 430 H, which is a double acting, double proportional section to operate (tipping) valves. The lever of the basic section is spring return to both sides up to 30° of the handle. When the operator pushes to full 32° the lever can be locked in the both end positions. In the basic section 2 threaded holes M6 at 58 mm pitch are available for fitting the valve on a mounting plate.

### Extra sections

Additional up to 8 sections can be fitted. Following extra sections are available:

- ∞ 147 50 460 H as an extra 4/3 section to operate non-proportional valves with 3 positions.
- ∞ 147 50 455 H as an extra 3/2 section to operate non-proportional valves with 2 positions.
- ∞ 147 50 450 H as an extra 3/2 section with pneumatic pressure switch (to engage a control light) to operate non-proportional valves with 2 positions. This valve can be fitted only at the end because of the pressure switch.

### Code system tip control

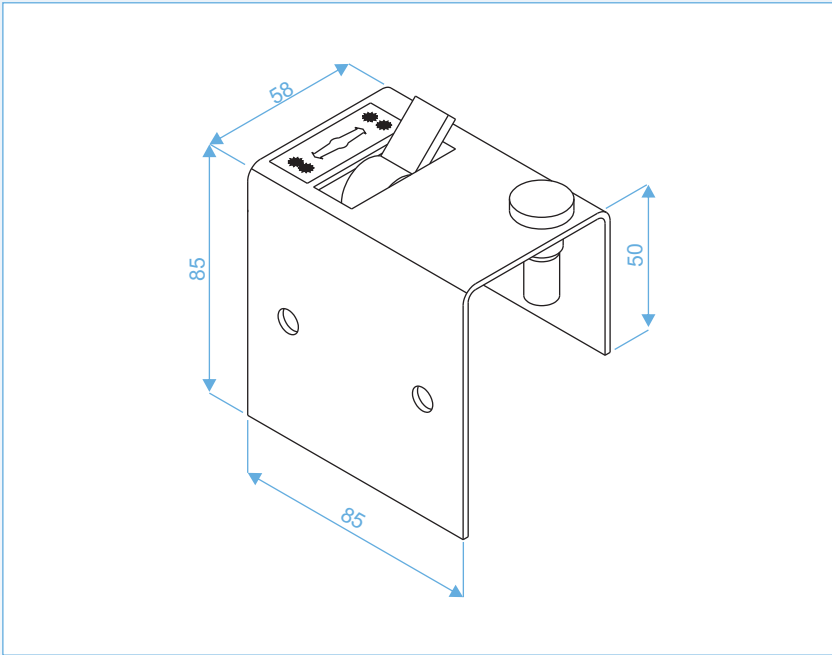


# 1-section tip controls

## Tip control 1-section (P.T.O. control)

Part no.	Description	Kit no.	Max. press. (bar)	Min. press. (bar)	Ports		
					(1)	(3)	(23)
147 51 082 H	Tip control P.T.O. - 1 - PN	FA150A	12 bar	5 bar	M12	M12	M12

Kit FA150A consists of control and air kit



## Connections

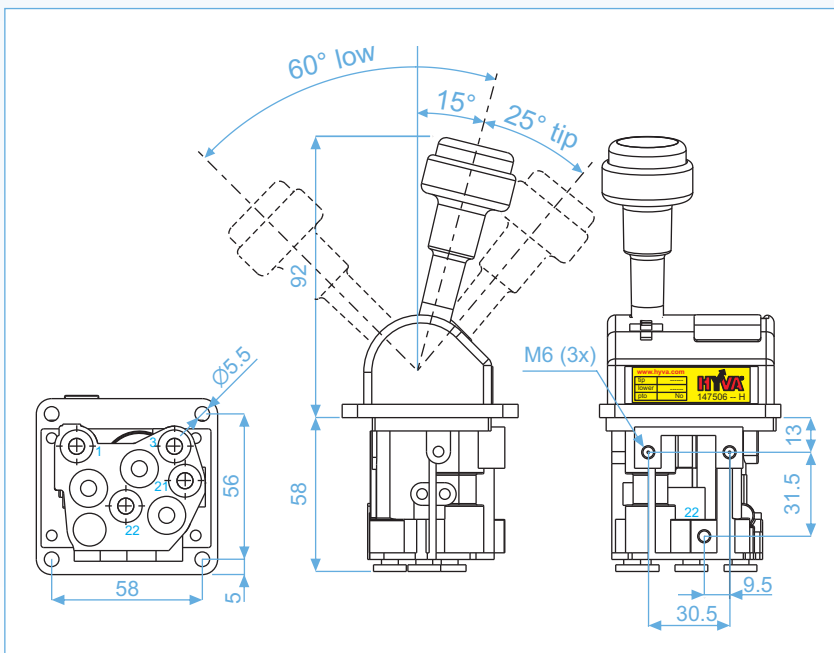
- 1 : air inlet  
3 : air exhaust  
23 : working port (P.T.O.)



### Proportional tip control 1-section (tipping valve control)

Part no.	Description	Kit no.	Max. press. (bar)	Min. press. (bar)	Ports			
					(1)	(3)	(21)	(22)
147 50 665 H	Tip control-air-TF/LF	FB150A	12 bar	5 bar	G1/8"	M5	G1/8"	G1/8"
147 50 667 H	Tip control-air-TS/LF		12 bar	5 bar	G1/8"	M5	G1/8"	G1/8"

Kit FB150A consists of control and air kit



## Connections

- 1 : air inlet  
3 : air exhaust  
21 : lowering connection  
(to tipping valve)  
22 : tipping connection  
(to tipping valve)



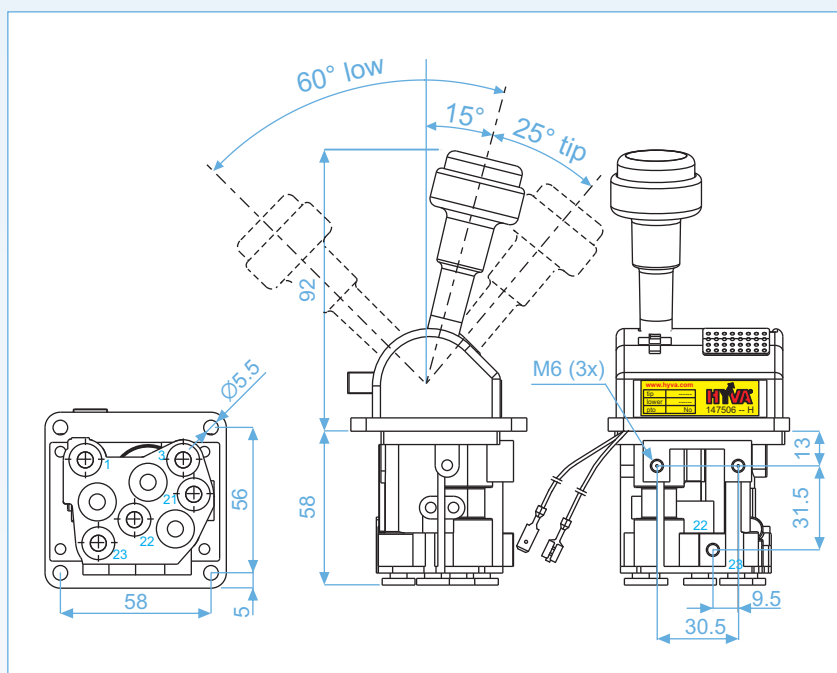
# Hyva Tip controls

## 2-section tip controls

### Proportional tip control 2-sections (P.T.O. & tipping valve control)

Part no.	Description	Kit no. (bar)	Max. press. (bar)	Min. press. (1)	Ports				
					(3)	(21)	(22)	(23)	
147 50 644 H	Tip-pto control-air-TF/LF - PNL	FC150A	12 bar	5 bar	G1/8"	M5	G1/8"	G1/8"	G1/8"
147 50 646 H	Tip-pto control-air-TS/LF - PNL		12 bar	5 bar	G1/8"	M5	G1/8"	G1/8"	G1/8"
147 50 650 H	Tip-pto control-air-TF/LF - PAL	FC250A	12 bar	5 bar	G1/8"	M5	G1/8"	G1/8"	G1/8"
147 50 652 H	Tip-pto control-air-TS/LF - PAL		12 bar	5 bar	G1/8"	M5	G1/8"	G1/8"	G1/8"

Kit FC consists of the tip control and air kit



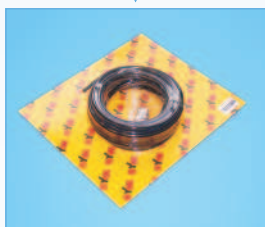
#### Connections

- 1 : air inlet
- 3 : air exhaust
- 21 : lowering connection  
(to tipping valve)
- 22 : tipping connection  
(to tipping valve)
- 23 : working port P.T.O.



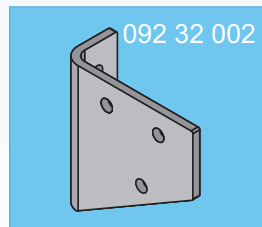
### Air kit 1-section control for P.T.O.

Part no.	Description	Qty.
147 51 094 K	Air kit for P.T.O. consisting of:	
019 15 307 H	Elbow coupling for tip control M12-6mm	2
148 75 007 15	Air tube 4x6 (15 m)	1
148 75 500	Air tube tie	4



### Support for proportional tip control

Part no.	Description
092 05 002	Support for control valve CP20
092 32 002	Tip control bracket for 14750652
147 52 532H	Support tip control complete kit



### Air kit 2-section controls for P.T.O. & valve

Part no.	Description	Qty.
147 50 119 K	Air kit for P.T.O./valve consisting of:	
092 25 005	T-piece for air tube 4x6	1
148 75 007 25	Air tube 4x6 (25 m)	1
148 75 500	Air tube tie	8



# Hyva Tip Controls

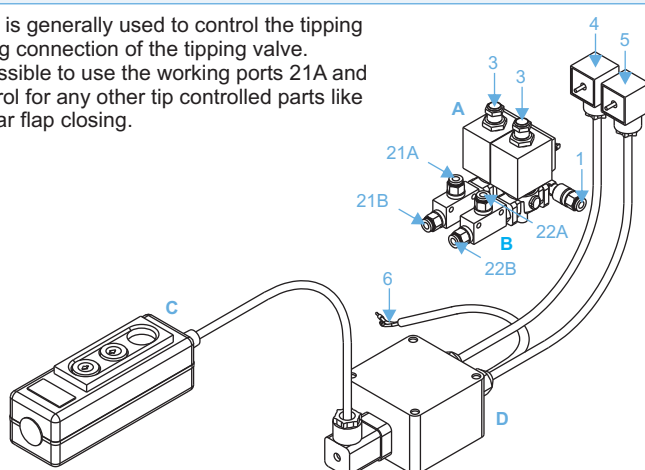
## 2-section tip controls

### Electro pneumatic control 2-sections with pneumatic cabin connection

Part no.	Description	Max. press. (bar)	Min. press. (bar)	Ports				Volt (V)
				(1)	(3)	(21)	(22)	

147 52 201	Electro pneumatic dual control - 2 - TS/LF	12 bar	5 bar	G1/8"	G1/8"	G1/8"	G1/8"	24
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This control is generally used to control the tipping and lowering connection of the tipping valve.  
It is also possible to use the working ports 21A and 22A to control for any other tip controlled parts like P.T.O. or rear flap closing.



- 1 : air inlet
- 3 : air exhausts
- 21A : lowering connection (to tipping valve)
- 21B : lowering connection (from cab tip control)
- 22A : tipping connection (to tipping valve)
- 22B : lowering connection (from cab tip control)
- 4 : lowering solenoid connector
- 5 : tipping solenoid connector
- 6 : power supply connection

#### Spare parts

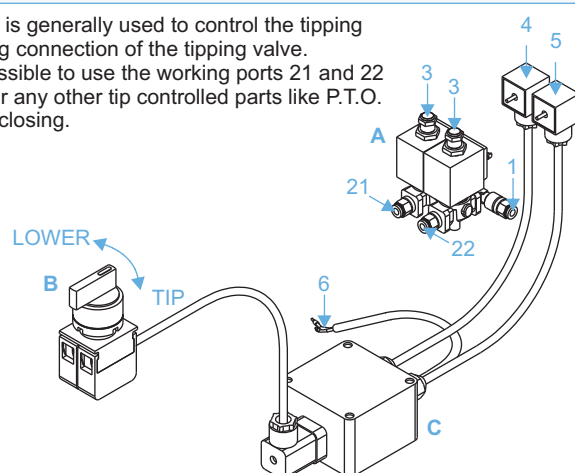
Pos.	Part no.	Description	Qty.
A	147 52 221	Electro pneumatic valves (complete)	1
B	147 52 222	Shuttle valve set	1
C	147 52 225	Remote control	1
D	147 52 226	Connecting box	1

### Electro pneumatic control 2-sections

Part no.	Description	Max. press. (bar)	Min. press. (bar)	Ports				Volt (V)
				(1)	(3)	(21)	(22)	

147 52 200	Electro pneumatic control - 2 - TS/LF	12 bar	5 bar	G1/8"	G1/8"	G1/8"	G1/8"	24
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This control is generally used to control the tipping and lowering connection of the tipping valve.  
It is also possible to use the working ports 21 and 22 to control for any other tip controlled parts like P.T.O. or rear flap closing.



- 1 : air inlet
- 3 : air exhausts
- 21 : lowering connection (to tipping valve)
- 22 : tipping connection (to tipping valve)
- 4 : lowering solenoid connector
- 5 : tipping solenoid connector
- 6 : power supply connection box

#### Spare parts

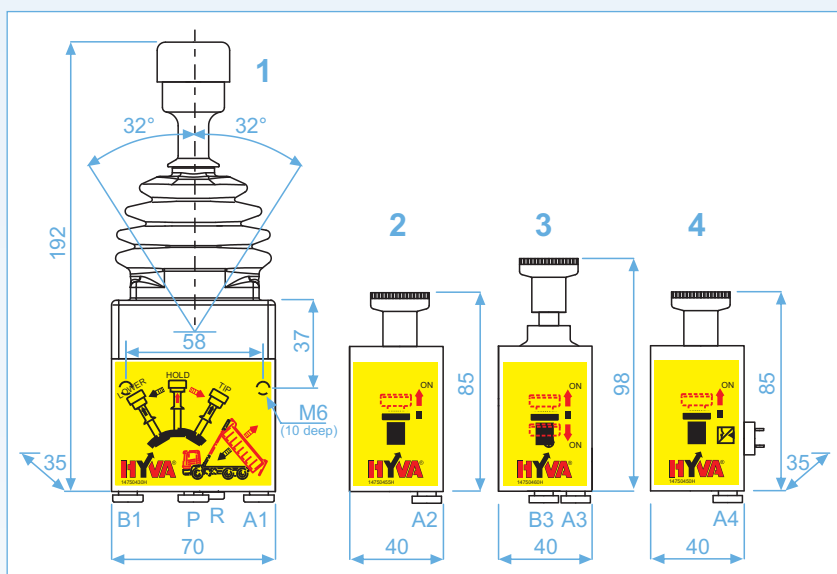
pos.	part no.	Description	Qty.
A	147 52 221	Electro pneumatic valves (complete)	1
B	147 54 135	Electric tipping switch	1
C	147 52 226	Connecting box	1

# Hyva Tip Controls

## Multi-section tip controls

### Proportional tip control multi section with optional additional sections

Part no.	Description	Pos.	Max. press. (bar)	Min. press. (bar)	Ports			
					(A)	(B)	(P)	(R)
147 50 430 H	Tip control flat model MS-air-TF/LF	1	12 bar	5 bar	6 mm	6 mm	6 mm	6 mm
147 50 440 H	Tip control flat model MS-air-TS/LF	1	12 bar	5 bar	6 mm	6 mm	6 mm	6 mm
147 50 455 H	Tip control flat model-air-3/2 section	2	12 bar	5 bar	6 mm	-	-	-
147 50 460 H	Tip control flat model-air-4/3 section	3	12 bar	5 bar	6 mm	6 mm	-	-
147 50 450 H	Tip control flat model-air-3/2 push sens	4	12 bar	5 bar	6 mm	-	-	-



- P : air inlet
- R : air exhaust
- A1 : tipping connection  
(to tipping valve)
- B1 : lowering connection  
(to tipping valve)
- A2 : working port additional  
3/2 section
- A3 : working port additional  
4/3 section
- A4 : working port additional  
3/2 section with pressure  
switch
- B3 : working port additional  
4/3 section



### Mounting kit for multi-section

The components should be ordered and will be supplied as loose parts and should be assembled during installation. To combine the valves you need to order mounting kits for the extra sections. Mounting kit numbers are 147 50 51x H, where x is the number of sections you want to add (so 147 50 513 H for three extra sections). The pneumatic hose sizes must have 6 mm OD, because connectors are integrated in the tip control.

Part no.	Description
147 50 511 H	Mounting kit for one extra section
147 50 512 H	Mounting kit for two extra sections
147 50 513 H	Mounting kit for three extra sections

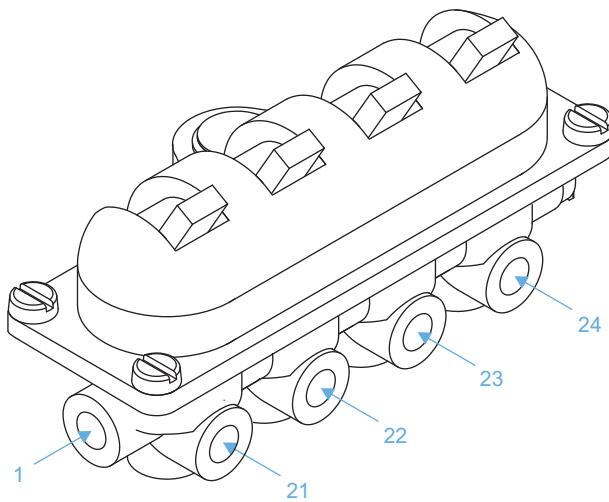


# Hyva Tip Controls

## CAC tip controls

### Tip control multi-section CAC series

Part no.	Description	Max. press. (bar)	Min. press. (bar)	Ports				
				(1)	(21)	(22)	(23)	(24)
147 50 210 H	Control pneumatic - 1 - TF/LF - PNL	12 bar	5 bar	M12x1,25	M12x1,25	-	-	-
147 50 220 H	Control pneumatic - 1 - TF/LF - PN	12 bar	5 bar	M12x1,25	M12x1,25	-	-	-
147 50 230 H	Control pneumatic - 2 - TF/LF - PNL	12 bar	5 bar	M12x1,25	M12x1,25	M12x1,25	-	-
147 50 240 H	Control pneumatic - 2 - TF/LF - PN	12 bar	5 bar	M12x1,25	M12x1,25	M12x1,25	-	-
147 50 250 H	Control pneumatic - 3 - TF/LF - PNL	12 bar	5 bar	M12x1,25	M12x1,25	M12x1,25	M12x1,25	-
147 50 260 H	Control pneumatic - 3 - TF/LF - PN	12 bar	5 bar	M12x1,25	M12x1,25	M12x1,25	M12x1,25	-
147 50 270 H	Control pneumatic - 4 - TF/LF - PNL	12 bar	5 bar	M12x1,25	M12x1,25	M12x1,25	M12x1,25	M12x1,25



- 1 : air inlet
- 21 : working port 1
- 22 : working port 2
- 23 : working port 3
- 24 : working port 4





# Hyva Tip Controls

## Accessories

### Pneumatic knock-off for front-end cylinders

Part no.	Description
147 53 150	Knock-off MK V for FC
147 53 155	Knock-off MK V for FC with mounting support



### Pneumatic knock-off for 3-way cylinders

Part no.	Description
147 52 955	Knock-off for DC

The hydraulic knock-off's can be found in the valve part of the catalogue



### Air couplings

Part no.	Description
019 66 082 H	Air coupling - 00 - 6mm - 8mm - push-in
148 10 515	Air coupling - 00 - M5 - 6mm - push-in
148 10 517	Air coupling - 00 - 1/8" BSPOT - 6mm - push-in
148 10 566	Air coupling - 90 - 1/8" BSPOT - 6mm - push-in
148 11 005	Air coupling - 00 - M22 - 6mm - push-in
019 15 290 H	Air coupling - 00 - M12 - 6mm
019 15 307 H	Air coupling - 90 - M12 - 6mm



### Air tube connectors

Part no.	Description
092 25 001	Air coupling - 00 - 6mm - 6mm
092 25 002	Air coupling - 00 - 8mm - 8mm
092 25 003	Air coupling - 00 - 10mm - 10mm
092 25 004	Air coupling - 00 - 12mm - 12mm



# Hyva Tip Controls

## Accessories

### T-piece for air tube

Part no.	Description
092 25 005	T-piece for air tube 6mm - push-in



### Pneumatic pressure indicator

Part no.	Description
092 25 010	T-piece pneumatic 3x 1/8" BSP IT
019 64 001 H	Pressure switch pneumatic 1/8" BSP OT
019 64 000 H	Control light



### Air tube

Part no.	Description
148 75 00715	air tube - L=15m - coil=4x6mm
148 75 00725	air tube - L=25m - coil=4x6mm
148 75 00735	air tube - L=35m - coil=4x6mm



### Air tube 3-lines

Part no.	Description
148 75 030	Air tube 3-line in 1 jacket 4x6mm (3X)

