

Steering Columns System

Injection plastic covers

EU SAFETY & QUALITY STANDARD CUSTOMIZED ASSEMBLY ITALIAN DESIGN OPERATOR COMFORT









DYNAMICA pag. 6-7



CLVIEW pag. 8



CLVIEW Short and Medium pag. 9



CL501 pag. 10



CL501 Short pag. 11



CL701 pag. 12



CL701 Short pag. 13



CL2100 pag. 14



CL2100 Short and Medium pag. 15



CL2300-I pag. 16



CL2300-I MCD pag. 17



CL2350 pag. 18



CL4000 pag. 19



CL5000 J pag. 20



CL5000 J Short pag. 21



CL6000 pag. 22



CL6000 Short pag. 23



CL7000 pag. 24



CL7000 Short pag. 25



SERIE 6 pag. 28



SERIE 9 pag. 28



SERIE 18 pag. 30



SERIE 10 pag. 29



SERIE 11 pag. 29



SERIE 12 pag. 30



J-Cluster pag. 31



NIMBUS pag. 31



D100TFT pag. 32



Knob

pag. 31

SMARTVIEW pag. 32



SLIMTITAN pag. 32



STEERINGVIEW pag. 32



KEYCAN pag. 32

DYNAMICA





RAL 9005 RAL 7015

STANDARD FEATURES

Injection plastic covers: RAL7015 or RAL9005

Panel with canbus keypad with 5 pushbuttons: hazard function and 4 functions switches customizable

Accomodation stalk switches on LH and/or RH side

CANBUS plug and play

Wiring harness (standard or customized)

Customizable logo with or without backlight

Option solar light sensor for automatic lighting

DUAL TILT ADJUSTMENT

Upper pivot, located at mid column lenght, operated push lever on left side (30° toward operator) Lower pivot, located at the base of the column, operated by a dedicated pedal (5° toward windshield and 20° toward operator) Possibility to choice pedal position: left, central or right side

Both tilt adjustment are gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (75 mm)

Operated by center cap on steering wheel



DYNAMICA

MPR metal pillar tilt 75 mm



FRONT PANEL

Small control panel with serial communication (Can Bus) where 5 control buttons are integrated, 4 of which can be configured as a function symbol, LED color and for software functionality. Aesthetic design of the buttons allows them to be used inside the cab with Keycan product. (see page 32)

SOLAR LIGHT SENSOR

Possibility of inserting a sunlight sensor for automatic activation of street lights.



CUSTOMER LOGO

The side finishes placed in the lower part of the column can be customized with the customer logo and can also be backlit.



LOWER TILTING PEDAL

on request, the pedal can be positioned on the right side, left or in a central position





CLVIEW







metal pillar	tilt	75 mm
MPR	30°, 5° 20°	<u>□</u> 五

RAL 9005 RAL 7015

STANDARD FEATURES

Injection plastic covers: RAL9005 or RAL7015
Accomodation for ignition switch
Panel with 2 rocker switches and 4 leds indicator lights
Accomodation stalk switches on LH and/or RH side
Dedicated steering wheel + Display 7" (page 31)
Wiring harness (standard or customized)
DUAL TILT ADJUSTMENT
Upper pivot , located at mid column lenght, operated push lever on left side (30° toward operator)
Lower pivot located at the base of the column, operated by a dedicated pedal on left side (5° toward windshield and 20° toward operator)
Both tilt adjustment are gas strut assisted
TELESCOPIC ADJUSTMENT

Located onto upper section (75 mm)

Operated by dedicated pull lever located under-near the steering wheel



CLVIEW Short and Medium





30°

MPR

the steering wheel











RAL 9005 RAL 7016

STANDARD FEATURES

Top side thermoformed plastic covers and bottom side injection plastic covers: RAL9005 or RAL7016

Accomodation for ignition switch

Accomodation for Slim Titan display 7" (page 31)

Panel with 6 rocker switches and 1 hazard switch

Accomodation stalk switches on LH and/or RH side

Steering wheel (pages 26, 27, 28, 29)

Wiring harness (standard or customized)

SINGLE TILT ADJUSTMENT

Upper pivot , located at mid column lenght, operated by handle lever on left side (5° toward windshield 20° toward operator)

TELESCOPIC ADJUSTMENT

Located onto upper section (60 mm)









CL501 Short





RAL 9005 RAL 7016

STANDARD FEATURES

Top side thermoformed plastic covers and bottom side injection plastic covers: RAL9005 or RAL7016

Accomodation for ignition switch

Accomodation for Slim Titan display 7" (page 31)

Panel with 6 rocker switches and 1 hazard switch

Accomodation stalk switches on LH and/or RH side

Steering wheel (pages 26, 27, 28, 29)

Wiring harness (standard or customized)

DUAL TILT ADJUSTMENT

Upper pivot , located at mid column lenght, operated handle lever on left side (5° toward windshield 20° toward operator)

TELESCOPIC ADJUSTMENT

Located onto upper section (60 mm)











BCH 50 provide the second seco

RAL 7016

RAL 9005

STANDARD FEATURES
Injection plastic covers: RAL9005 or RAL7016
Accomodation for ignition switch
Accomodation for emergency stop push button
Panel with 3 rocker switches
Accomodation stalk switches on LH and/or RH side
Steering wheel (pages 26, 27, 28, 29)
Wiring harness (standard or customized)
SINGLE TILT ADJUSTMENT
Upper pivot , located at mid column lenght, operated by handle lever on left side (5° toward windshield 20° toward operator)

TELESCOPIC ADJUSTMENT

Located onto upper section (60 mm)



CL701 Short





STANDARD FEATURES
Injection plastic covers: RAL9005 or RAL7016
Accomodation for ignition switch
Accomodation for emergency stop push button
Panel with 3 rocker switches
Accomodation stalk switches on LH and/or RH sid
Steering wheel (pages 26, 27, 28, 29)
Wiring harness (standard or customized)
SINGLE TILT ADJUSTMENT
Operated by handle lever on left side (5° toward windshield 30° toward operator)
TELESCOPIC ADJUSTMENT

Located onto upper section (60 mm)







MPR 5° 20° A I I metal pillar tilt 75 mm

30°

RAL 9005 RAL 7015

STANDARD FEATURES

Accomodation for ignition switch

Panel with 2 rocker switches and 4 led indicator lights

Accomodation stalk switches on LH and/or RH side

Steering wheel (pages 26, 27, 28, 29)

Wiring harness (standard or customized)

DUAL TILT ADJUSTMENT

Upper pivot , located at mid column lenght, operated by push lever on left side (30° toward operator)

Lower pivot located at the base of the column, operated by a dedicated pedal on left side (5° toward windshield and 20° toward operator)

Both tilt adjustment are gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (75 mm)

Operated by dedicated pull lever located under-near the steering wheel









CL2100 Short and Medium



	STANDARD FEATURES Injection plastic covers: RAL9005 or RAL7015 Accomodation for ignition switch Panel with 2 rocker switches and 4 led indicator lights Accomodation stalk switches on LH and/or RH side Steering wheel (pages 26, 27, 28, 29) Wiring harness (standard or customized) SINGLE TILT ADJUSTMENT Located at mid column lenght, operated by push lever on left side (30° toward operator) Adjustment are gas strut assisted TELESCOPIC ADJUSTMENT Located onto upper section (75 mm) Operated by dedicated pull lever located under-near the steering wheel

15

CL2300-I



5 + 21° **CBK** metal pillar tilt 50 mm RAL 7016

Accomodation stalk switches on LH side Steering wheel (pages 26, 27, 28, 29) Wiring harness (standard or customized) SINGLE TILT ADJUSTMENT Pivot located at the base of the column, operated by a dedicated pedal on left side (5°+21° toward operator) Tilt adjustment is gas strut assisted **TELESCOPIC ADJUSTMENT**

Located onto upper section (50 mm)

Operated by center cap on steering wheel

4xØ12

2

CL2300-I MCD



CBK5+metal pillartilt50 mmRAL 9004RAL 7016

STANDARD FEATURES

Injection plastic covers: RAL9004 or RAL7016 Panel with 2 keycan or warning lights module and keycan or Smart-View cluster

Accomodation stalk switches on LH side

Steering wheel (pages 26, 27, 28, 29)

Wiring harness (standard or customized)

SINGLE TILT ADJUSTMENT

Pivot located at the base of the column, operated by a dedicated pedal on left side (5°+21° toward operator) Tilt adjustment is gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (50 mm)

Operated by center cap on steering wheel



Keycan + Keycan



Warning Lights Module + Keycan



Smartview





RAL 9005 RAL 7016

STANDARD FEATURES

Injection plastic covers: RAL9005 or RAL7016

Accomodation stalk switches on LH and/or RH sides

Steering wheel (pages 26, 27, 28, 29)

Wiring harness (standard or customized)

SINGLE TILT ADJUSTMENT

Pivot located at the base of the column, operated by a dedicated pedal in central position (start position 14°, move 5° toward windshield and 10° toward operator)

Adjustment are gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (80 mm)

Operated by center cap on steering wheel









RAL 7016





STANDARD FEATURES

RAL 9005

Injection plastic covers: RAL9005 or RAL7016

Accomodation for ignition switch

Smat-View CanBus Digital Cluster with 2,4" display (page 31)

Accomodation stalk switches on LH and/or RH side

Steering wheel (pages 26, 27, 28, 29)

Wiring harness (standard or customized)

DUAL TILT ADJUSTMENT

Upper pivot , located at mid column lenght, operated Push button on the top side (30° toward operator)

Lower pivot located at the base of the column, operated by a dedicated pedal on left side (5° toward windshield and 20° toward operator)

Both tilt adjustment are gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (100 mm)

Operated by center cap on steering wheel









CL5000 J



metal pillar tilt 60 mm **RAL 9005 RAL 7015 STANDARD FEATURES** Injection plastic covers: RAL9005 or RAL7015 Accomodation for ignition switch Accomodation for J-Cluster or Nimbus (page 30) Panel with 8 rocker switches Accomodation stalk switches on LH and/or RH side

30°

Wiring harness (standard or customized)

DUAL TILT ADJUSTMENT

BCH

Upper pivot , located at mid column lenght, operated by push lever on left side (5° toward windshield 30° toward operator)

Lower pivot located at the base of the column, operated % $\label{eq:lower}$ by a dedicated pedal on left side (5° toward windshield and 20° toward operator)

58

 $(\bigcirc$

A - A

Both tilt adjustment are gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (60 mm)

Operated by push lever on left side



CL5000 J Short



BCH metal pillar tilt 60 mm 60 mm

30°

Wiring harness (standard or customized)

SINGLE TILT ADJUSTMENT

Operated by push lever on left side (5° toward windshield 30° toward operator)

Tilt adjustment are gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (60 mm)

Operated by push lever on left side









30°

RAL 9005 RAL 7016

STANDARD FEATURES

Injection plastic covers: RAL9005 or RAL7016

Accomodation for ignition switch

Panel with 4 rocker switches or 2 KeyCan module or Smartview cluster (page 31)

Accomodation stalk switches on LH and/or RH side

Option steering wheel (pages 26, 27, 28)

Wiring harness (standard or customized)

SINGLE TILT ADJUSTMENT

Upper pivot operated by 1° step of pedal on bottom side (5° toward windshield and 30° toward operator)

Tilt adjustment is gas strut assisted

TELESCOPIC ADJUSTMENT

Located onto upper section (100 mm)

Operated by 2° step of pedal on bottom side

CLUSTER OPTION

On all the serie CL 6000 is possible to have it with different kind of clusters: D100TFT or NIMBUS (see images page 21)







CL6000 Short

156



30°

100 mm

tilt

5°[×]

MOXI

10

metal pillar





RAL 9005 RAL 7016

STANDA	RD FEATURES
Injection	plastic covers: RAL9005 or RAL7016
Accomod	ation for ignition switch
Accomod (page 31	lation for Smart View Cluster with 2,4" display)
Panel wit	th 7 rocker switches
Accomod	ation stalk switches on LH and/or RH side
Option st	teering wheel (pages 26, 27, 28)
Wiring h	arness (standard or customized)
SINGLE	TILT ADJUSTMENT
	l by handle lever on left side (5° toward wind-)° toward operator)
TELESCO	OPIC ADJUSTMENT
Located	onto upper section (60 mm)
Operated	l by handle lever on left side
	5







CL7000 Short

<image>



RAL 9005 RAL 7016

STANDARD FEATURES

Injection plastic covers: RAL9005 or RAL7016 Accomodation for ignition switch Accomodation for Smart View Cluster with 2,4" display (page 31)

Panel with 7 rocker switches

Accomodation stalk switches on LH and/or RH side

Option steering wheel (pages 26, 27, 28)

Wiring harness (standard or customized)

SINGLE TILT ADJUSTMENT

Operated by handle lever on left side (5° toward windshield 30° toward operator)

TELESCOPIC ADJUSTMENT

Located onto upper section (60 mm)



Standard cone



PERTEX STANDARD CONE: TOOTH Z=

CONE NUMBER	THREAD M	CONE TOPER	< CONE	Ø CONE	Ø E. TOOTH	тоотн	Ø PINS	OVER TWO
3	M=18x1.5	1:16	1°47'23''	21.0	20.5	36	1.35	22.16
4	M=18x1.5	1:19.26	1°29'14''	21.55	21.7	36	1.587	24.12
5	M=18x1.5	1:19.26	1°29'14''	21.84	21.7	36	1.587	24.12
20	M=16x1.5	1:12	2°23'10''	17.9	17.4	40	1.320	19.48
24	M=16x1.5	1.46:20	2°5'25''	18.16	17.5	36	1.35	19.35
29	M=14x1.5	1:4.15	6°52'03''	16.5	15.8	36	1.320	17.72
35	M=16x1.5	1:3.43	8°17'37''	19.4	19.0	48	0.96	20.1

PERTEX WHEEL ATTACK: TOOTH Z=

CONE NUMBER	THREAD M	CONE TOPER	< CONE	Ø CONE	Ø E. TOOTH	TOOTH	Ø PINS	OVER TWO
18	M=16x2	-	-	-	19.6	38	0.96	20.43
28	M=18x1.5	-	-	-	23.95	24	2.25	26.65
32	M=18x1.5	-	-	-	21.7	36	1.587	24.12

PERTEX STANDARD CONE: WOODRUFF 5X6.5

CONE NUMBER	THREAD M	CONE TOPER	< CONE	Ø CONE
1	M=18x1.5	1:20	1°25'55''	23.2
2	M=18x1.5	1:20	1°25'55''	20.53
6	M=16x1.5	1:8	3°34'34''	18.6
7	M=16x1.5	1:7.5	3°48'50''	18.2
21	M=18x1.5	1:16	1°47'23''	20.0



Standard flange



SERIE 6 Polypropylene





Part Number	A	В	С	D	Teeth	Taper	E	F	G	Н
VOL1636C2	45	26	/	/	/	1:7,5	19,20	/	11,65	5
VOL1636C5	45	26	/	/	/	1:7,5	21,60	/	12,30	5
VOL1636DA	45	26	1	/	1	1:20	24,80	1	15,40	5
VOL1636D4	45	26	13	20,78	36	1:19,26	23,02	22,04	1	/
VOL163618	45	26	/	18,30	36	1	/	19,80	1	1

SERIE 9 Polypropylene





Codice Part Number	x	Y	A	В	C	D	Denti Teeth	Cono Taper	E	F	G	н
VOL1930C2	300	81	45	26	/	1	/	1:7,5	19,20	/	11,65	5
VOL1930C2P	300	131	45	26	/	1	/	1:7,5	19,20	/	11,65	5
VOL1930DA	300	81	45	26	/	1	/	1:20	24,80	/	15,40	5
VOL1936C2	360	100	45	26	/	/	/	1:7,5	19,20	/	11,65	5
VOL1936C5	360	100	45	26	/	1	/	1:7,5	21,60	/	12,30	5
VOL1936DA	360	100	45	26	/	1	/	1:20	24,80	/	15,40	5
VOL1936DAP	360	150	45	26	/	1	/	1:20	24,80	/	15,40	5
VOL193680	360	130	45	26	16	16,60	40	1:12	18,86	17,82	/	/

SERIE 10 Polypropylene





Codice Part Number	A	в	c	D	Denti Teeth	Cono Taper	E	F	G	н
VOL1032C2	45	26	1	1	/	1:7,5	19,20	/	11,65	5
VOL1032DA	45	26	1	/	1	1:20	24,80	/	15,40	5
VOL1032D4	45	26	13	20,78	36	1:19,26	23,02	22,04	1	1
VOL1032ET	45	26	18	16,627	40	1:12	18,86	17,826	/	1
VOL1032ET2	45	26	1	1	/	1:7,6	19,64	1	12,40	5
VOL1032MI	45	26	1	/	/	1:20	17,40	/	12	5

SERIE 11 Polyurethane





Part Number	X	Y	Z	A	В	С	D	Teeth	Taper	E	F	G	Н
VOL11138DA	380	110	/	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL11138DAP	380	165	143	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL11138D4	380	110	/	45	26	13	20,78	36	1:19,26	21,50	22,04	/	/
VOL11138D4P	380	165	143	45	26	13	20,78	36	1:19,26	21,50	22,04	/	/
VOL11138T3	380	110	/	45	26	14,50	19,38	36	1:16	20,95	20,68	/	/
VOL11138T3P	380	165	143	45	26	14,50	19,38	36	1:16	20,95	20,68	/	/
VOL11138AU	380	110	/	45	26	/	/	/	1:20	20,53	/	14,30	5
VOL11138AUP	380	165	143	45	26	/	/	/	1:20	20,53	/	14,30	5
VOL111405DA	405	125	/	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL111405DAP	405	182	161	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL111405D4	405	125	/	45	26	13	20,78	36	1:19,26	21,50	22,04	/	/
VOL111405D4P	405	182	161	45	26	13	20,78	36	1:19,26	21,50	22,04	/	/
VOL111405T3	405	125	/	45	26	14,50	19,38	36	1:16	20,95	20,68	/	/
VOL111405T3P	405	182	161	45	26	14,50	19,38	36	1:16	20,95	20,68	/	/

SERIE 12 Polyurethane







Part Number	Х	Y	Z	A	В	C	D	Teeth	Taper	E	F	G	H
VOL11235DA	350	75	1	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL11235DAP	350	128	138	45	26	/	1	1	1:20	23,20	/	15,40	5
VOL11235D4	350	75	1	45	26	13	20,78	36	1:19,26	21,50	22,04	/	/
VOL11235D4P	350	128	138	45	26	13	20,78	36	1:19,26	21,50	22,04	/	/
VOL11235T3	350	75	1	45	26	14,50	19,38	36	1:16	20,95	20,68	/	/
VOL11235T3P	350	128	138	45	26	14,50	19,38	36	1:16	20,95	20,68	/	/
VOL11235C2	350	75	1	45	26	/	/	/	1:7,9	15,90	/	11,65	5
VOL11235C2P	350	128	138	45	26	1	/	/	1:7,9	20,53	/	14,30	5

SERIE 18 Polyurethane



PART NUMBER	X	Y	z	A	В	С	D	TEETH	TAPER	E	F	G	н
VOL1832AU	320	100	/	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL1832DA	320	100	/	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL1832DAP	320	162	125	45	26	/	/	/	1:20	23,20	/	15,40	5
VOL1832D4	320	100	/	45	26	13	20,78	36	1:19,26	21,50	22,04	/	/
VOL1832D4P	320	162	125	45	26	13	20,78	36	1:19,26	21,50	22,04	1	/
VOL1832C2	320	100	/	45	26	/	/	/	1:7,9	15,90	/	11,65	5
VOL1832C2P	320	162	125	45	26	/	/	/	1:7,9	20,53	/	14,30	5
VOL1835DAP	350	166	137	45	26	/	/	/	1:20	23,20	/	15,40	5



KNOB



ACC0018 Polypropylene knob



ACC2100 Polyurethane knob



ACC2101 Polyurethane knob



ACC1138 Polyurethane knob

CLUSTER





Combines the features of traditional pointer indicators with the performace and flexibility of LCD TFT color high resolution display. Specifically designed for harsh environmental application, J-Cluster is the right instrument for machinary with and without cabin.

NIMBUS



Cluster in solid state solution, with display 5" TFT color 800 cd (IPS technology) and 7 led indicators. Powerfull microcontroller and large memory size: 32bit, 8 Mb Flash and 8 Mb Ram.

D100TFT



D100TFT is equipped with display 2,4" TFT color high-brightness in IPS technology, canbus line SAE J1939 and several inputs and outputs that allow to manage optional functions.

DISPLAY

SMARTVIEW



SMARTVIEW is an ultra-compact instrument equipped with a TFT color display 2,4", 5 LED indicators and 3 pushbuttons. Suitable for applications where space is limited, it is able to manage and display all the information on the machine. Able to connect both via CANBUS and with "traditional" signals, it is the right compromise between cost-effectiveness and high performance.

SLIMTITAN



Is presented as the new line of instruments designed for applications where minimum space and maximum flexibility are required, combined with high visual performance and structural robustness. With a minimal design, SLIMTI-TAN fits perfectly into any type of dashboard. Equipped with a capacitive touchscreen managed by an intelligent algorithm, they ensure excellent optical performance as well as the possibility of using the touch function even while wearing protective gloves.

STEERING VIEW



Is an innovative steering wheel in which there is a multifunction dashboard with a high-brightness display in 7" wide screen TFT LCD technology and 800×480 resolution. Steering View meets the needs of those who need maximum visibility in the cab by giving the possibility to manage and view all the parameters of the machine. The instrument in the center of the steering wheel has the peculiarity of remaining fixed, thus allowing maximum ergonomics and functionality.

KEYCAN

KEYCAN



Is a new concept of modular keypad that allows you to customize the design of the dashboard according to your needs. The 4 pushbuttons that make up the keyboard are easily customizable. Each of them is equipped with 3 RGB LEDs that indicate its status and allow you to adjust the intensity of the 7 different possible colors. The keys also have a seat to accommodate a plastic plate on which the desired symbol is lasered. KeyCAN is programmable via CANBUS and equipped with the J1939 stack. The keyCAN can be mounted horizontally or vertically thanks to the possibility of freely positioning the keys.



IMEL Division

Via Repubblica, 7 - 41011 Campogalliano, MO (Italy) Tel. +39 0522 636911 - Fax. +39 0522 695753 **www.ama.it** - ama@ama.it

AMA S.p.A. Accessori Macchine Agricole

Via Giacomo Puccini, 28 - 42018 San Martino in Rio (RE) Italy Tel. +39 0522 636911 - Fax +39 0522 695753 **www.ama.it** - ama@ama.it

> COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV ISO 9001• ISO 14001