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*Ergonomic grip IE2
with coloured front plate,
5 on-off momentary push-buttons,
3 with raise cap actuator
2 with flush cap actuator*



Description:

Multifunction ergonomic grip' series IE2 can be supplied as individual units spare or mounted on our electrical and hydraulic joysticks.

For its ergonomic design and for all the possible configuration mix of push-buttons, rockers, proportional rollers and other safety and signalling devices, the operator can manage in an easy, precise and intuitive way, using just one hand, multiple working functions simultaneously or in sequence, with minimum effort and maximum safety for people and properties.

In fact, the operator can focus his attention on the machine's work functions without the necessity of having to look away in search of fixed control devices, located in the most diverse positions inside the cabin or on the dashboard.

Particular care has been given to the choice of all control and adjustment components placed on the grip, giving priority to their safety, reliability and durability, even in the more difficult environment conditions, to the ergonomics of commands and to the easy availability, choosing the world's most avant-garde partners.

A wide range of optional accessories, including various mounting adapters and levers, rubber protection boots, standard or customized wiring with many types of connectors, can match different requirements for any kind of application.

This catalogue contains the most frequent standard combination, but the handle is much more flexible than it can appear. It's possible to develop customized variants with auxiliary electronic circuits, diodes, relays for automatic sequential circuits.

*Ergonomic grip IE2 with 4 contacts
"on-off" mini-joystick, 1 proportional
Hall effect roller with 2 channels
and 1 side mounted rotary
potentiometer*



The data and the technical features in this catalogue are not binding. The manufacturer reserves the right to carry out modifications, by its unquestionable judgement and without prior notice, in order to improve its products. The manufacturer is not responsible for damage to people or properties caused by an improper use of the product.

Technical features:

Handle:

- Shell material:	Techno polymer PPO
- UV resistance:	Good
- Mineral oil resistance:	Good
- Protection degree:	IP54
- Ambient temperature range:	from -20° to + 60°C
- Adapter material:	Zinc plated steel or brass

Standard pushbutton (off-on type A and B):

- Maximum current:	5 A resistive, 3 A inductive
- Input voltage range:	from 5 to 28 VDC
- Electrical life:	from 25.000 cycles at max. current to 1.000.000 cycles at 1A resistive
- Mechanical life:	1.000.000 cycles
- Protection degree:	IP64 standard (IP68 on request)
- Ambient temperature range:	from - 55° to + 85°C
- Total operating stroke:	2 mm max.
- Operating force:	7,5±0,2 N
- Terminal materials:	Gold plated silver alloy

Terminals:

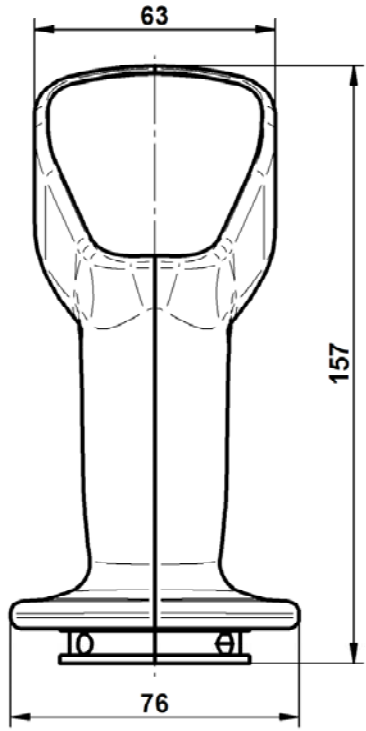
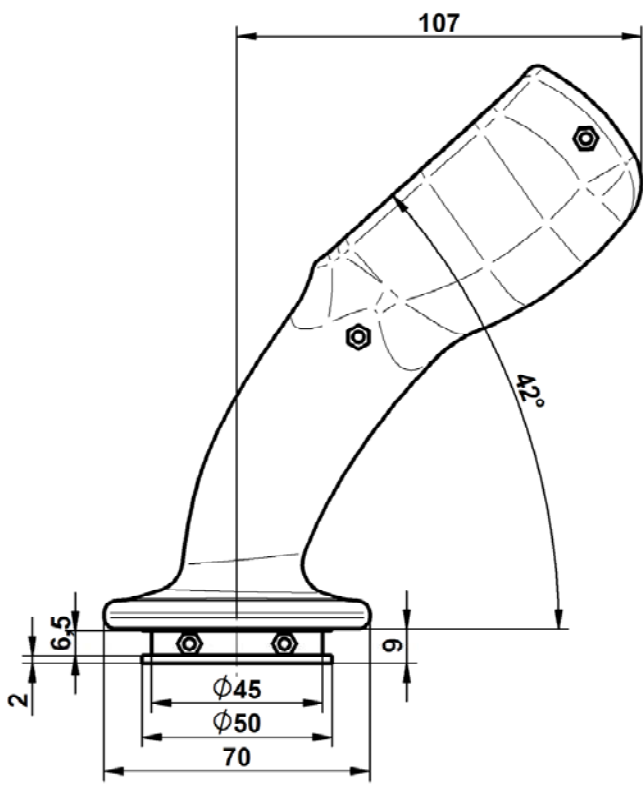
- Terminal material:	Tinned copper strands
- External insulation material:	Silicon or PVC
- Wire sleeve material:	Black polyester fibre
- Wire section:	0,50 mm ²
- Rope making wires:	Class 6 VDE 0295
- Approvals:	UL - CSA - HAR
- Standard length:	500 mm (other length on request)

*Ergonomic grip IE2
with four on-off 4-way
push-buttons
with customized front plate*

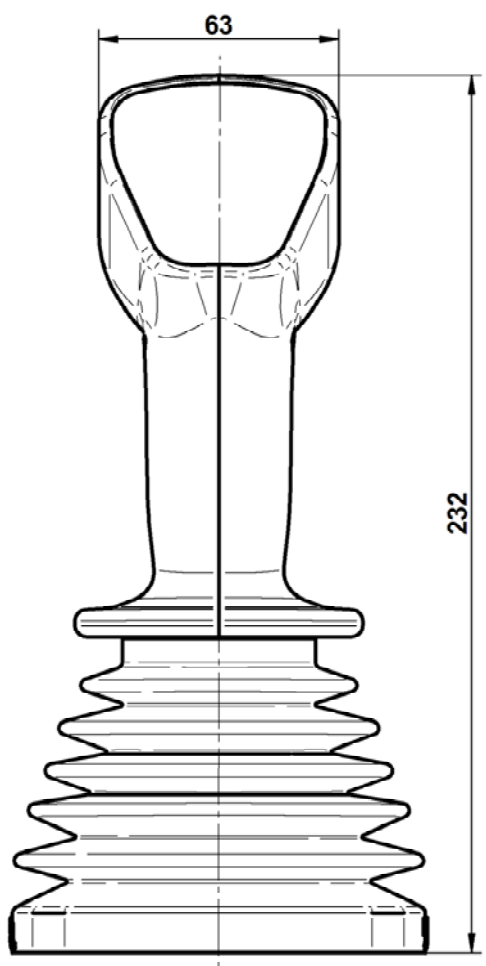
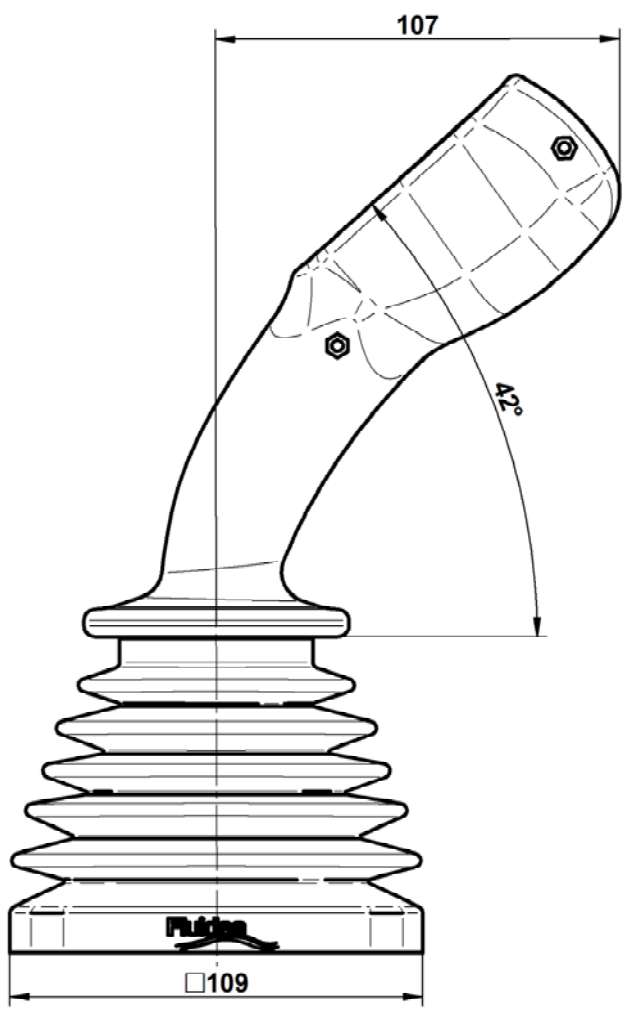


MULTIFUNCTION ERGONOMIC GRIP IE2

Overall dimensions



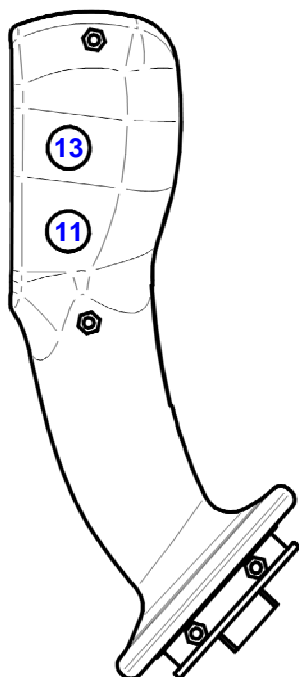
Handle IE2 without rubber boot



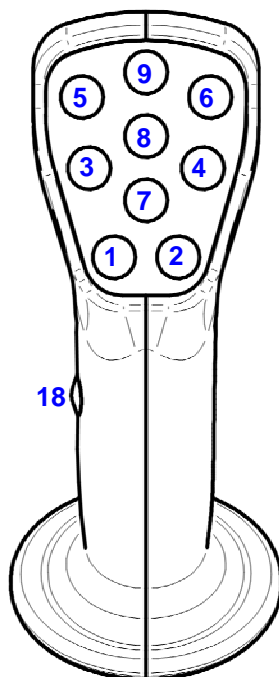
Handle IE2 with rubber boot type Q

Standard push-button positions

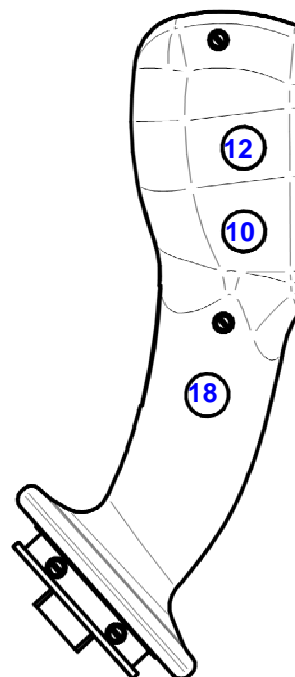
For the combined position of push-button, rocker switch, proportional roller, 4-way push-buttons, led and other devices, please contact our sales office.



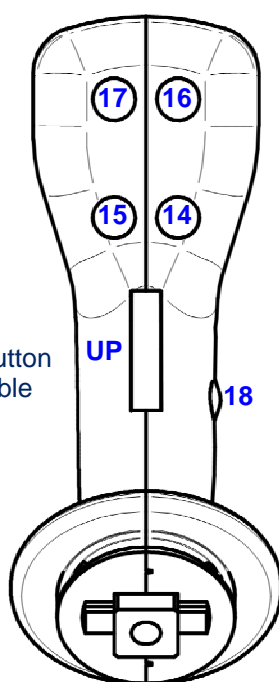
Right shell DX



Front view



Left shell SX



Bottom view

Safety trigger UP and push-button in position 18 are not compatible together

MULTIFUNCTION ERGONOMIC GRIP IE2

Front plate colour range

Black (standard)	N	Red	R	Blue	B
White	W	Yellow	Y	Green	G



Standard push-buttons colour range

Orange	O		Yellow	Y		Red	R	
White	W		Grey	H		Green	G	
Blue	B		Black	N		Violet	V	

The colours are valid for the N.O. momentary standard push-buttons, with raised cap (**A**) or flush (**B**) and without signalling led

MULTIFUNCTION ERGONOMIC GRIP IE2

Push-buttons, rocker and lever switches

For the colour choice of the serviceable push-button caps type **B** (flush) and **A** (raised) of the first row see table at page 7

							
"OFF-MOM" Flush green	BG	"OFF-MOM" Raised violet	AV	"OFF-MOM" Flush yellow with led	BLY	"OFF-MOM" Raised red with led	ALR
							
"OFF-ON" latching green without led	IBV	"OFF-ON" latching green with led	IBGL	"MOM-OFF-MOM" 3 latching positions	I3I	"OFF-ON" 2 latching positions	I2S
							
"OFF-ON" 2 momentary positions	I2I	"START-STOP" Yellow latching	ISS	Momentary rocker switch "MOM-OFF-MOM"	R3I	Latching rocker switch "ON-OFF-ON"	R3S
							
Latching/momentary rocker switch "ON-OFF-MOM"	R3SI	Latching diverter "ON-OFF-ON" + led	R3SL	Momentary diverter "OFF-MOM"	R2I	Latching diverter "OFF-ON"	R2S

MULTIFUNCTION ERGONOMIC GRIP IE2

Rocker diverters, 4-way push-buttons and proportional rollers

			
Latching diverter "ON-OFF-ON" D3S	Momentary diverter "MOM-OFF-MOM" D3I	Black safety guard for diverter PSN	Red safety guard for diverter PSR
			
Latching diverter "ON-OFF-ON"+ led D3IL	Safety trigger UP	4-way momentary pushbutton MJ4	Knob potentiometer PRV
			
Linear Hall effect proportional pushbutton PLP	Hall effect proportional button PLB	4-way Hall effect potentiometer MJP	Return spring proportional roller RPR
			
Yellow return spring proportional roller RPY	Grey return spring proportional roller RPG	Blue return spring proportional roller RPB	Proportional roller with PWM integrated RPW

MULTIFUNCTION ERGONOMIC GRIP IE2

High brightness signalling leds

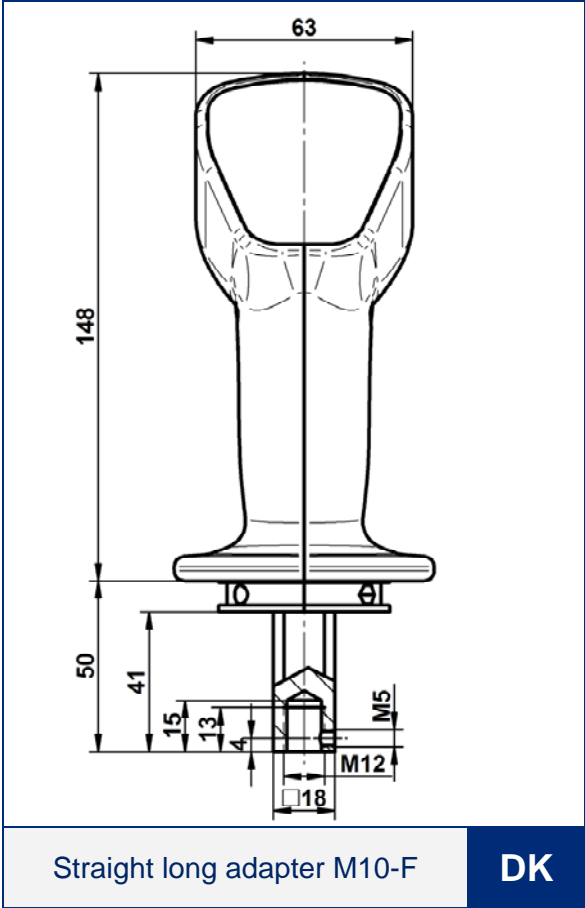
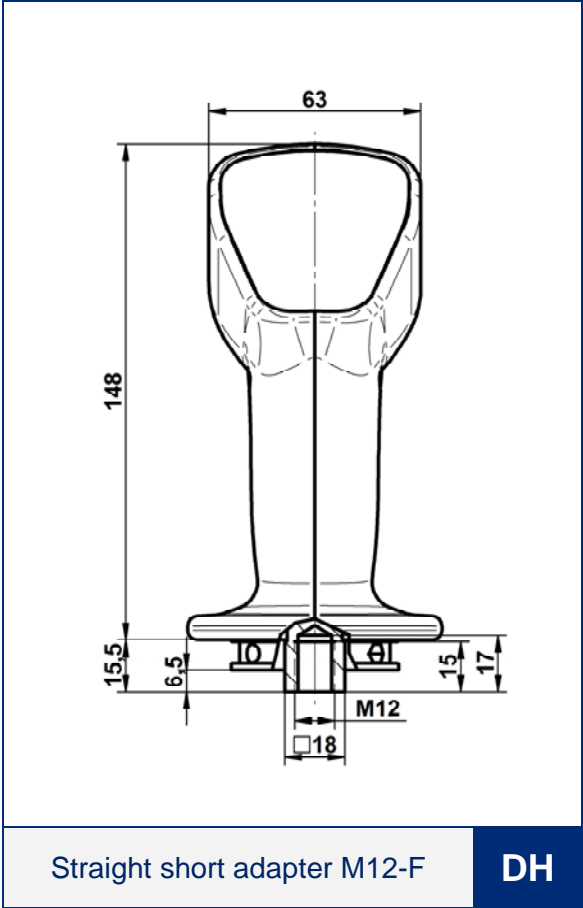
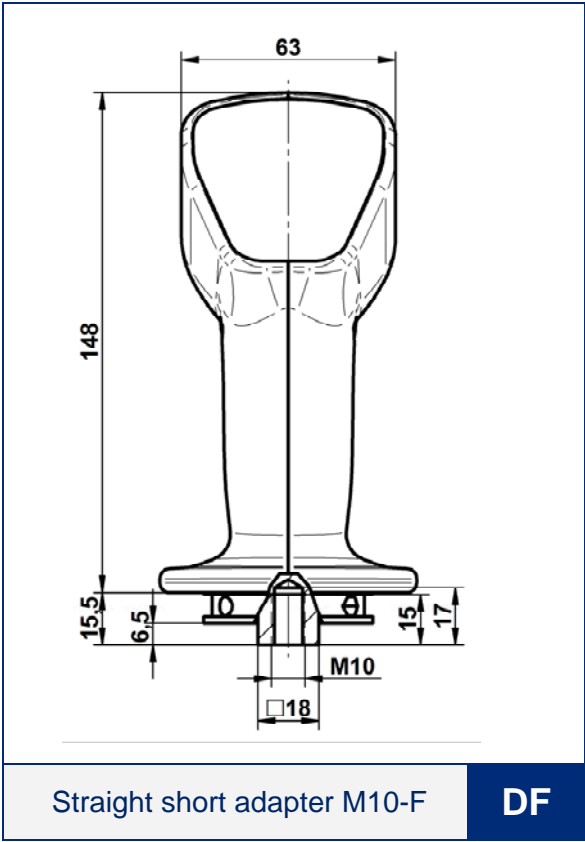
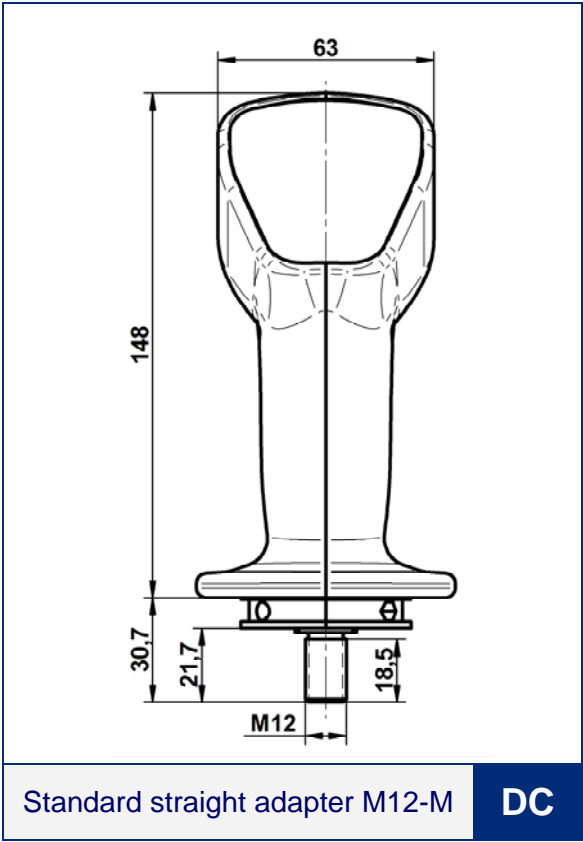
							
Yellow led ø8	L8Y	Red led ø8	L8R	Green led ø8	L8G	Blue led ø8	L8B
							
Yellow led ø6	L6Y	Red led ø6	L6R	Green led ø6	L6G	Blue led ø6	L6B

*Wired and loosen push-buttons
are available on request*



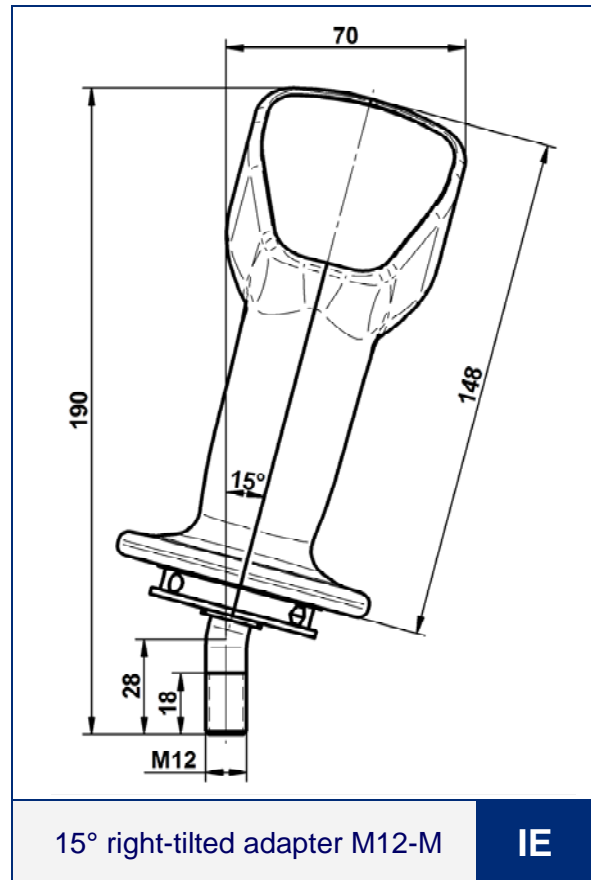
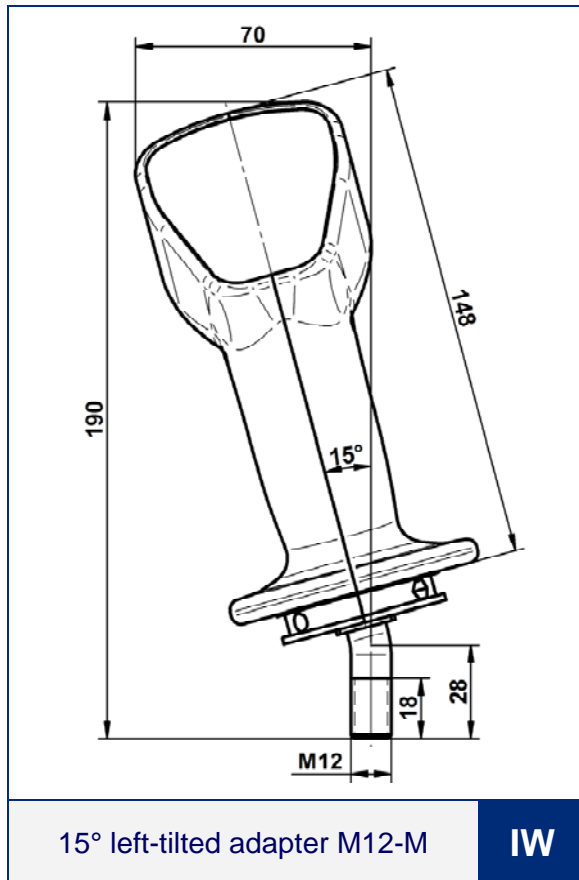
MULTIFUNCTION ERGONOMIC GRIP IE2

Mounting adapters

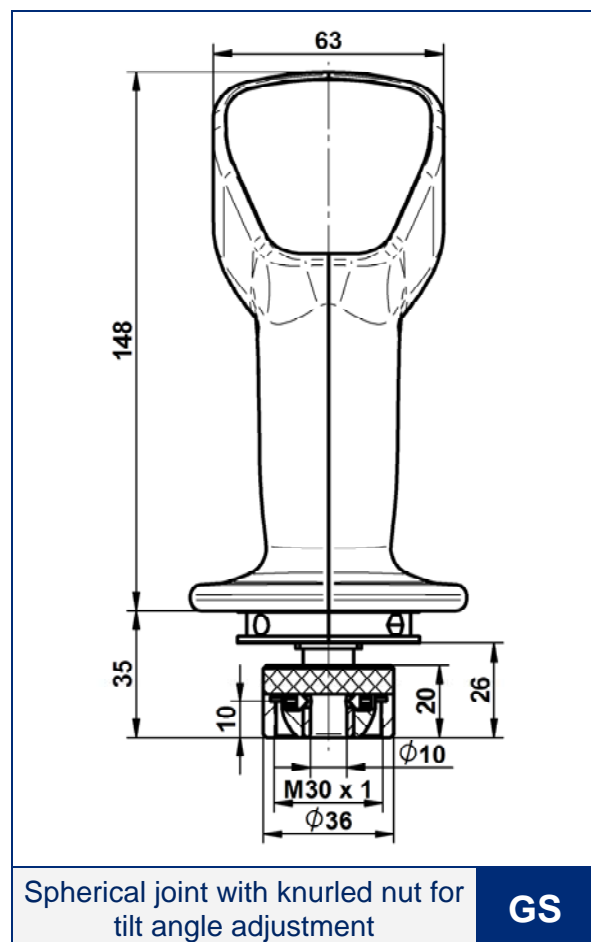


MULTIFUNCTION ERGONOMIC GRIP IE2

Mounting adapter



The spherical joint type **GS**, shown on the side, allows to adjust the handle tilt angle from 0° up to 20° in any direction by stopping it with the knurled nut in the desired position.

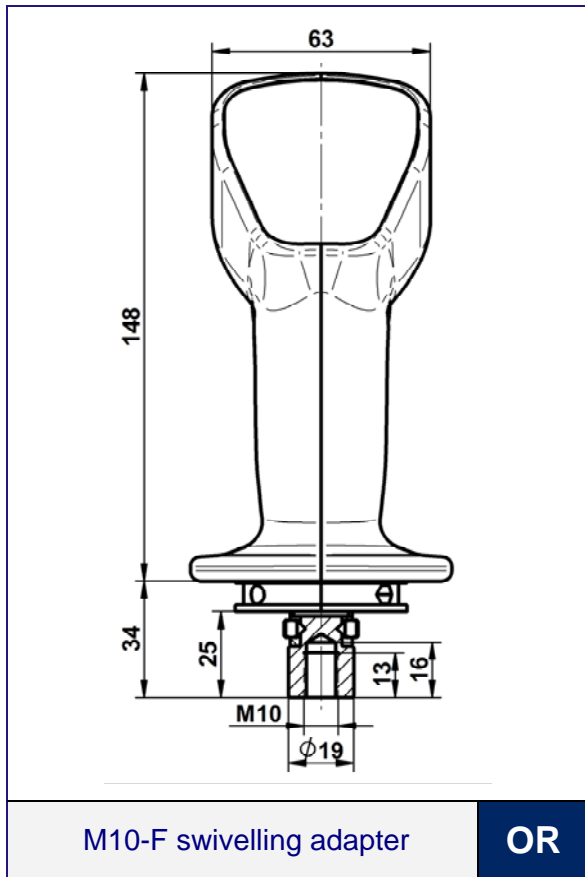


ERGONOMIC HANDLES IE2

Mounting adapter

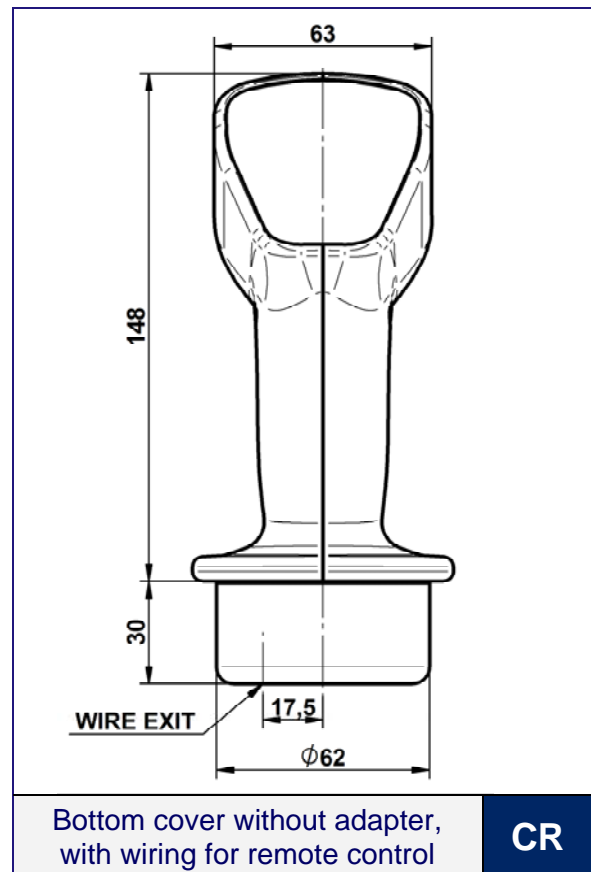
*IE2 ergo grip with adapter type **OR** assembled with 2 items to swivel the handle avoiding the rotation of the handle wires.*

The typical application is the direct mounting on the lever of hydraulic main valve.



M10-F swivelling adapter

OR



Bottom cover without adapter, with wiring for remote control

CR

*IE2 ergonomic grip with 4 momentary push-buttons with safety trigger, bottom cover type **CR** and wiring and circular connector, used for the remote control of a rescue pulley.*



MULTIFUNCTION ERGONOMIC GRIP IE2

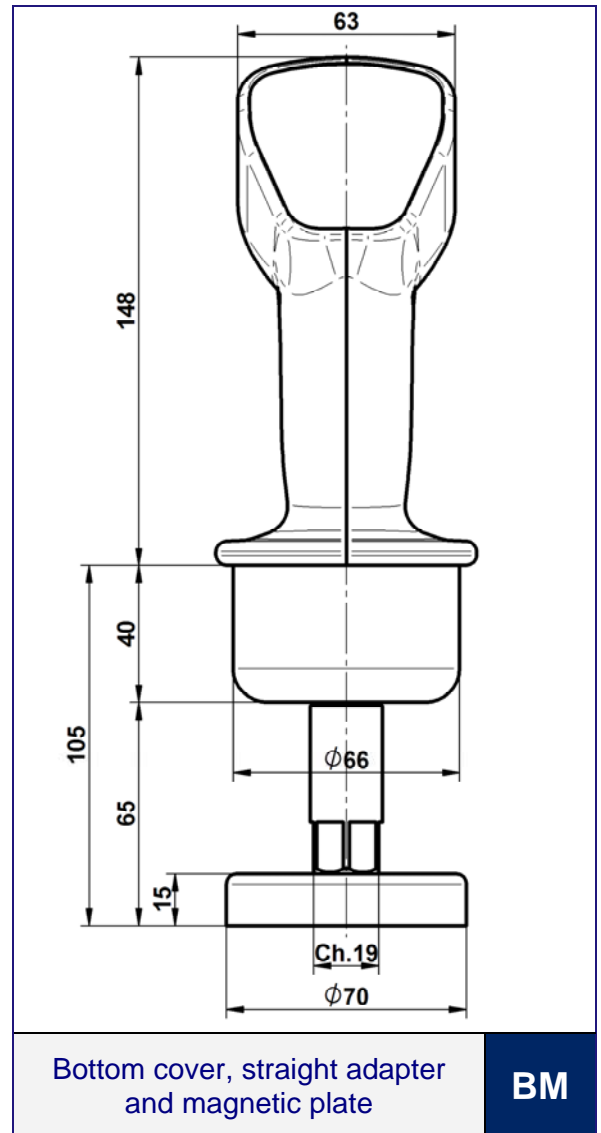
Handle with bottom cover type BM, straight with magnetic plate.

There are two holes for wire exit, lighter plug or connector for service vehicles, for control, with multicore cable and customized connector on request.

A typical application is the wire remote control of on-off or proportional functions of agricultural machines, air spray, brush cutter and machines for the maintenance of orchards and vineyard.

The handle is fixed in the desired position in the tractor to suit the various tools in the machine.

Mounting adapter



*IE2 ergonomic grip with 8 momentary push-buttons, 1 latching push-button with integrated led, 1 supply line signalling led, bottom cover type **BM** with magnetic plate fastening, power supply cable with lighter plug and multicore output cable with connector; used to control 3 double acting cylinders and 1 single direction rotating hydraulic motor on an agricultural auxiliary equipment for vineyard maintenance.*



MULTIFUNCTION ERGONOMIC GRIP IE2

Wiring configuration

Without wires	Z
Single high flexibility , section 0,50 mm ²	G
Multicore cable, section 0,50 mm ²	M
Special wire on request (specify features)	S

Wire length

Without wires	00
Standard length, from handle bottom (cm)	50
Length on request, from handle bottom (cm)	300

Wire terminals

Without wires	Z
Wire terminal with 5 mm strip, without tinplate	N
With faston (specify brand and type)	S
Connector (specify brand and type) with wired terminals	C

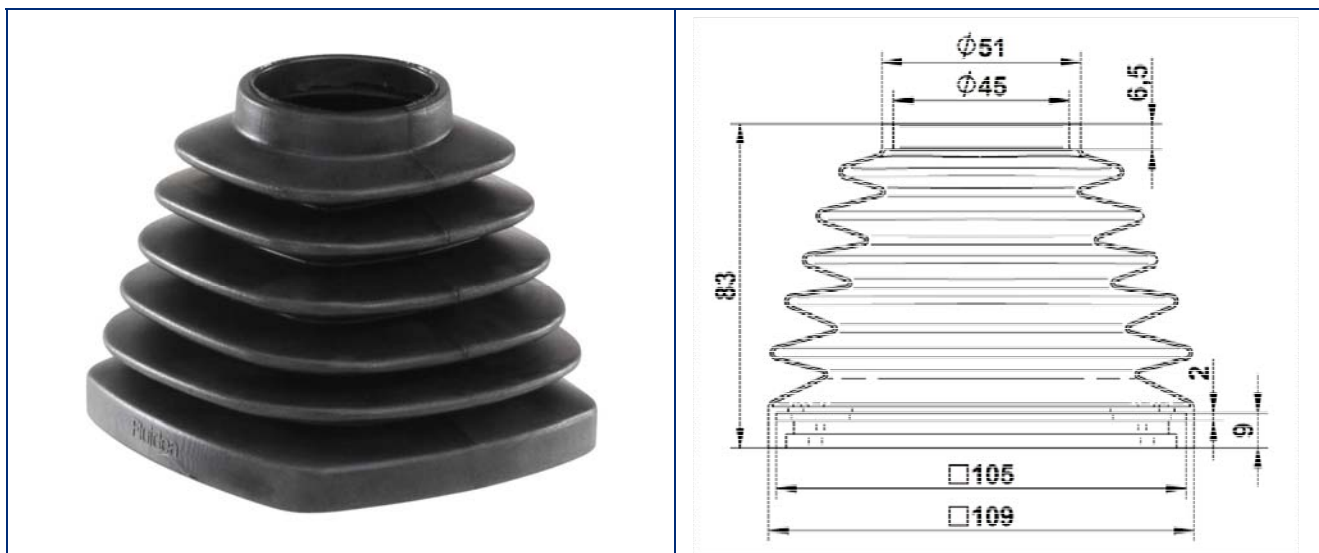


Customized wiring with connectors are available on request



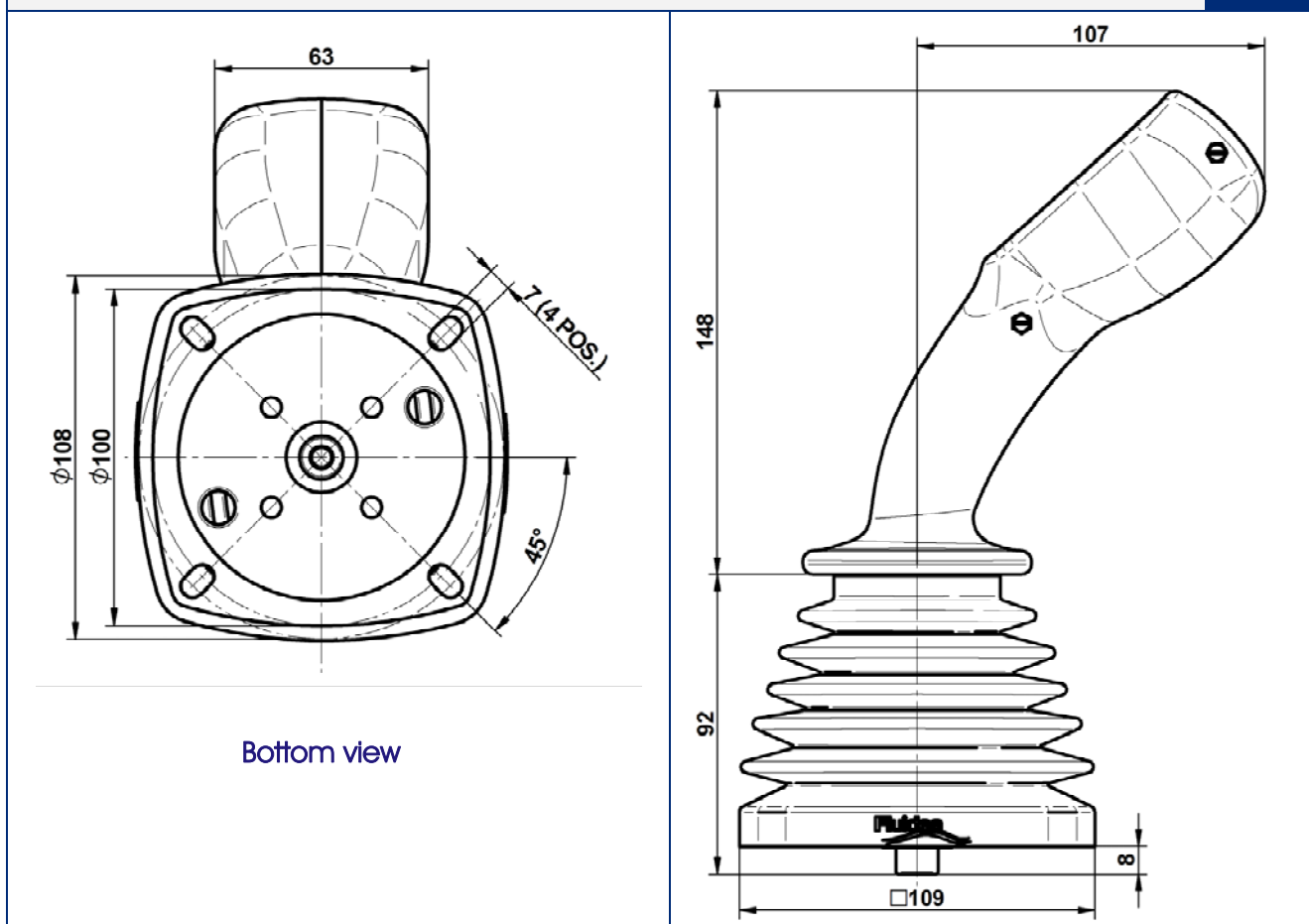
MULTIFUNCTION ERGONOMIC GRIP IE2

Rubber boot:



With square boot

Q



Bottom view

With rubber boot and flanged mounting kit

F

MULTIFUNCTION ERGONOMIC GRIP IE2

Ordering key:

IE2	N	BG1	BY2	AR3	AB4	UP	DF	G	50	N	Q
-----	---	-----	-----	-----	-----	----	----	---	----	---	---

Rubber boot (page 16)

(Omit if not required)

- with square rubber boot = **Q**
- with rubber boot and flanged mounting kit = **F**

Wire terminals (page 15):

- without wires = **Z**
- wire terminal with 5 mm strip, without tinplate = **N**
- with faston (specify brand and type) = **S**
- Connector (specify brand and type) with wired terminals = **C**

Cable length, in cm (page 15):

- without wires = **00**
- standard length, from handle bottom (cm) = **50**
- length on request, from handle bottom (cm) = **XX**

Wire configuration (page 15):

- without wire = **Z**
- single high flexibility, section 0,50 mm² with PVC sleeve = **G**
- Multicore cable, section 0,50 mm² (with silicon protection) = **M**
- Special wire on request (specify features) = **S**

Mounting adapters (pages 11-14):

- standard straight adapter M12-M = **DC**
- straight short adapter M10 - F = **DF**
- straight long adapter M12-F = **DK**
- straight short adapter M12-F = **DH**
- 15° left-tilted adapter M12-M = **IW**
- 15° right-tilted adapter M12-M = **IE**
- spherical joint with knurled nut for tilt angle adjustment = **GS**
- swivelling adapter M10-F = **OR**
- bottom cover without adapter, with wiring for remote control = **CR**
- bottom cover, straight adapter and magnetic plate = **BM**

Safety trigger (page 9)

- standard safety trigger = **UP** (omit if not needed)

- standard push-button with raised blue cap actuator = **AB4**
push-button or led code (**pages 8 ÷ 10**), position (**page 6**)

- standard push-button with raised red cap actuator = **AR3**
push-button or led code (**pages 8 ÷ 10**), position (**page 6**)

- standard push-button with flush yellow cap actuator = **BY2**
push-button or led code (**pages 8 ÷ 10**), position (**page 6**)

- standard push-button with flush green cap actuator = **BG1**
push-button or led code (**pages 8 ÷ 10**), position (**page 6**)

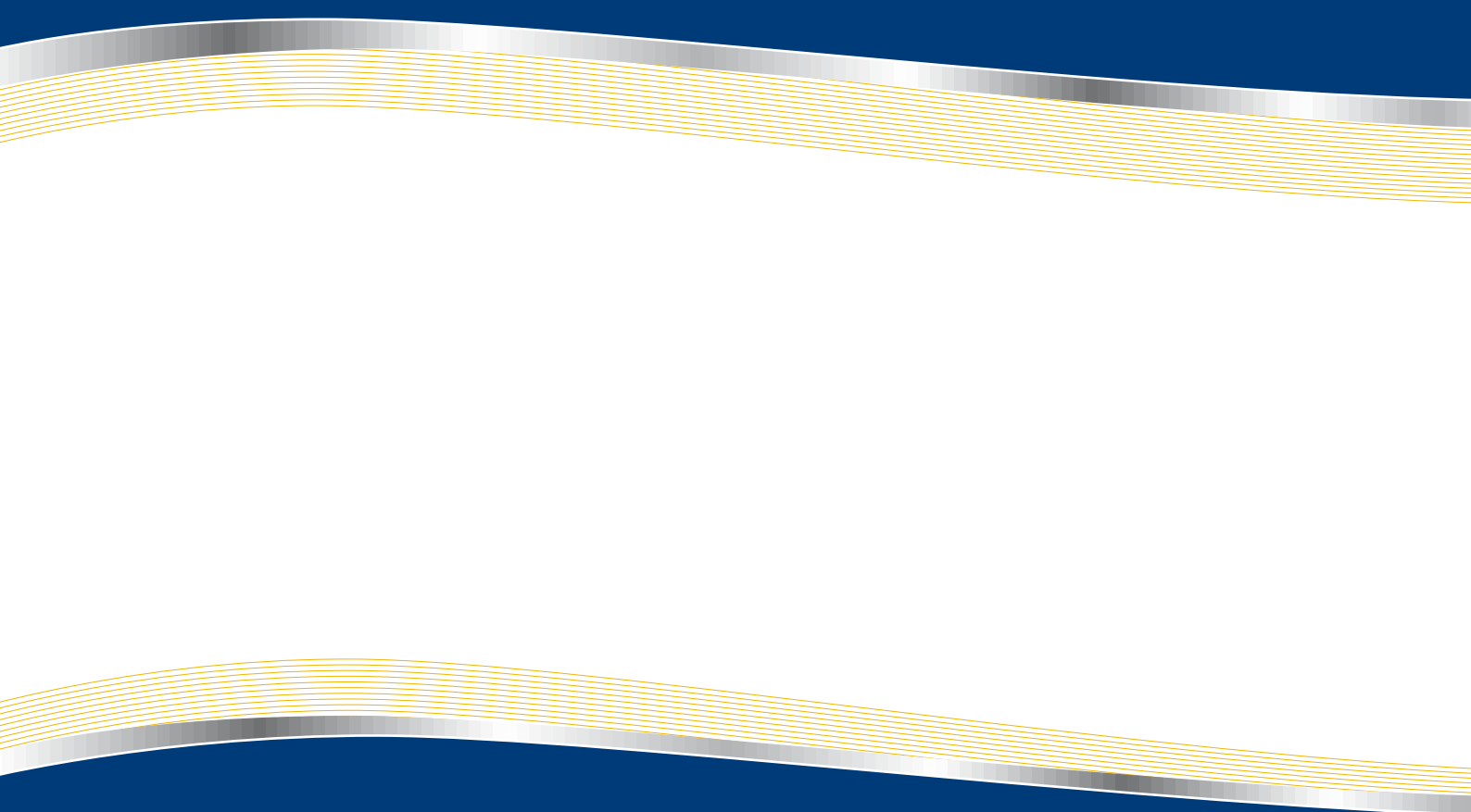
Display colour (page 7)

- black standard = **N**
- white = **W**
- red = **R**
- yellow = **Y**
- blue = **B**
- green = **G**

IE2 = model

Design and production of remote control components & systems

The comprehensive range includes the following manufactured and marketed equipment:

- Hydraulic pumps and motors
 - Directional control valves
 - Proportional pressure reducing valves
 - Hydraulic, pneumatic and electric joysticks
 - Radio controls and electronic controllers
 - Control pads, dashboards and armrests
 - Ergonomic, cylindrical and palm grips
 - Electro-hydraulics pilot blocks
 - Hydraulic filters
 - heat exchangers and cooling systems
 - Fluid monitoring and diagnostic equipment
 - Bell housings, driving flanges & elastic couplings
- 
- The lower half of the page features decorative wavy lines. A thick, metallic-looking silver band curves across the width of the page, with several thin, parallel yellow lines just below it. This pattern repeats further down the page.