COMPLETE CATALOGUE



OLEODINAMICA O.R.T.A. S. R.L.



O.R.T.A. srl - Via Giacosa, 33 25135 S. Eufemia (BS) - Italy

ENGLISH















O.R.T.A. S .r .l. is an Italian company in Brescia and we are manufacturer of hydraulic control valves.

The hydraulic activities started in 1954 with "Oleodinamica Tagliapini".

Our standard production is composed from:

-monoblock valves from 25 to 120 lit/min from 1 to 6 spools

-modular valves from 15 to 120 lit/min from 1 to 12 spools

-solenoid diverter valves

-manual diverters

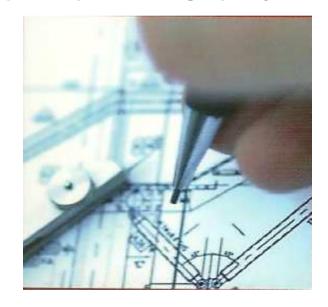
-manifold with cartridge

-cetop3, cetop5 and other solenoid valves for power packs

-joystick with cable

- radio remote control proportional for our electro - hydraulic proportional valves. We can have a competitive price with high-quality thanks our OEM products







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Tel. +39 030 363627 Fax +39 030 362761

www.orta.it mail to: antonio.tagliapini@orta.it filippo.tagliapini@orta.it





S O M M A R



01	MONOBLOCK VALVES MB/25 MAX 45 LIT/MIN 350 BAR FROM 1 TO 6 SPOOLS	MB/25
02	MONOBLOCK VALVES MB/31 MAX 60 LIT/MIN 350 BAR ONLY 1 SPOOLS	MB/31
03	MONOBLOCK VALVES MB/35 MAX 60 LIT/MIN 350 BAR FROM 1 TO 4 SPOOLS	MB/35
04	MONOBLOCK VALVES MB/60 MAX 80 LIT/MIN 350 BAR FROM 1 TO 3 SPOOLS	MB/60
05	MODULAR VALVES LD/08 MAX 50 LIT/MIN 350 BAR FROM 1 TO 12 SPOOLS	LD/08
06	MODULAR VALVES LDB/12 MAX 80 LIT/MIN 350 BAR FROM 1 TO 12 SPOOLS	LDB/12
07	MODULAR VALVES LDA/16 MAX 120 LIT/MIN 350 BAR FROM 1 TO12 SPOOLS	LDA/16
80	SOLENOID VALVES LDE/06 MODULAR MAX 30 LIT/MIN 250 BAR	LDE/06
09	SOLENOID DIVERTER VALVES SINGOL OR MODULAR 3,6,8,10 WAYS	EDF
10	MANUAL DIVERTER VALVES 3,6 WAYS	MDF



S O M M A R



11	SOLENOID VALVES 1/4" BSP MODULAR	TBV/06
12	SOLENOID VALVES CETOP 3 AND MANIFOLD	EL-08
13	SOLENOID VALVES CETOP 5 AND MANIFOLS	EDL-10
14	DOUBLE CHECK VALVE PILOTATED	VDP
15	RELIEF /PRESSURE VALVES IN LINE	VMPT
16	HOSE RUPTURE VALVES(PARACADUTE)	VPCC
17	UNIDIRECTIONAL CHECK VALVES	VNR-C
18	OVERCENTER VALVES	VBB
19	FLOW REGULATOR 2 AND 3 WAYS COMPENSATED AND NOT	VRF
20	DIRECT ACTING SEQUENCE VALVES	VSQL



S O M M A R



Œ.	21	FLOATING AND ANTICAVITATION SOLENOID VALVES	FVA
85	22		
	23		
	24		
	25		
	26		
	27		
	28		
	29		
88	30		



















MB25/1

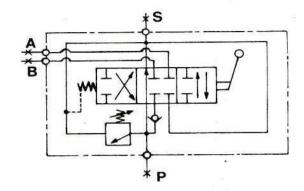
MONOBLOCK VALVES

MAX FLOW	45 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	180 BAR
LEAKAGE TO 100 BAR	1CC/MIN
WEIGHT	KG. 2,3
CONFIGURATION	PARALLEL

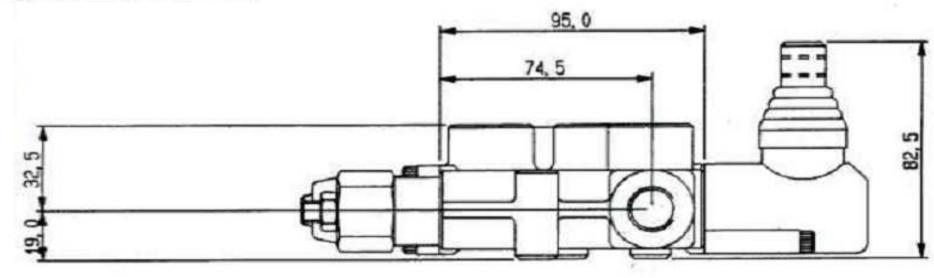
STANDARD THREADS BSP GAS

Attacco	Dimens.	Dimens Spec
P	3/8"	1/2
P sup	3/8"	1/2
A/B	3/8*	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"

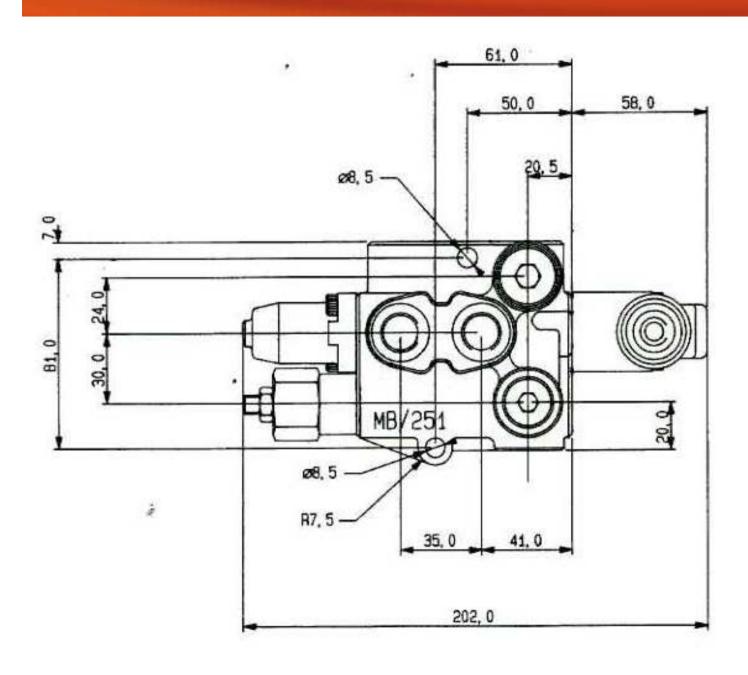
STANDARD CONFIGURATION



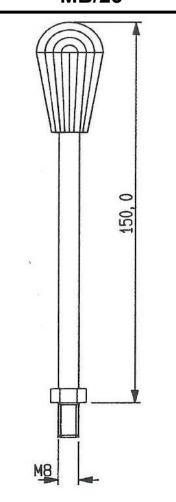








STANDARD LEVER MB/25



MB25/2

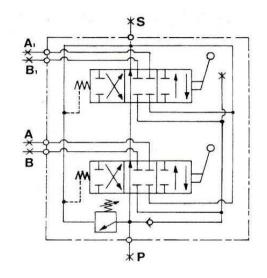
MONOBLOCK VALVES

MAX FLOW	45 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	180 BAR
LEAKAGE TO 100 BAR	1CC/MIN
WEIGHT	KG. 3,5
CONFIGURATION	PARALLEL

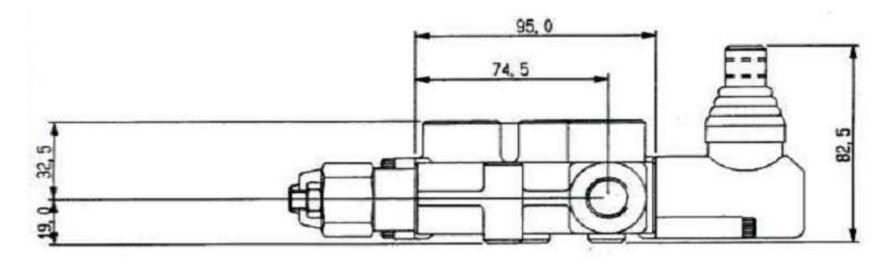
STANDARD THREADS BSP GAS

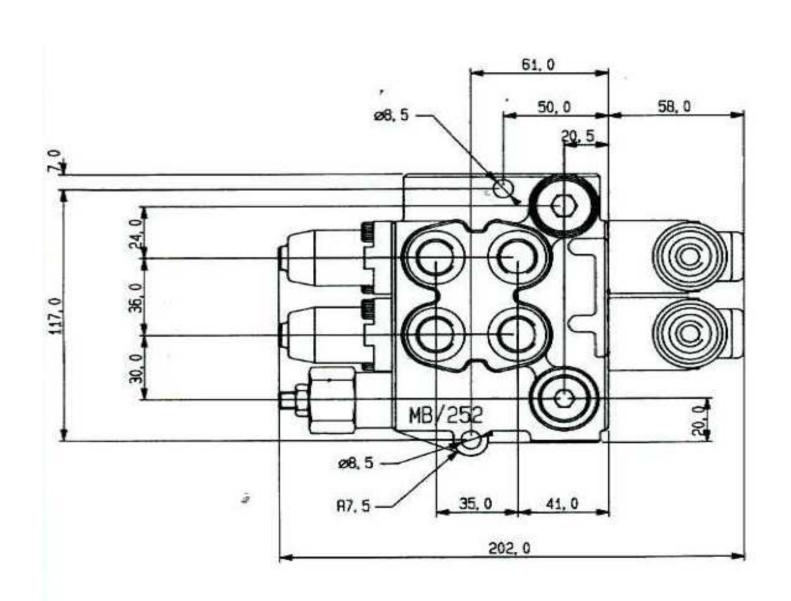
Attacco	Dimens.	Dimens Spec
P	3/8"	1/2
P sup	3/8"	1/2"
A/B	3/8"	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"

STANDARD CONFIGURATION











MB25/3

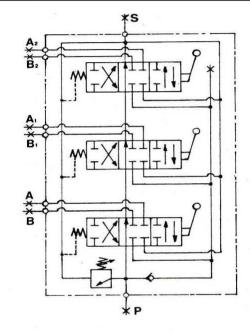
MONOBLOCK VALVES

MAX FLOW	45 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	180 BAR
LEAKAGE	1CC/MIN
WEIGHT	KG. 4,7
CONFIGURATION	PARALLEL

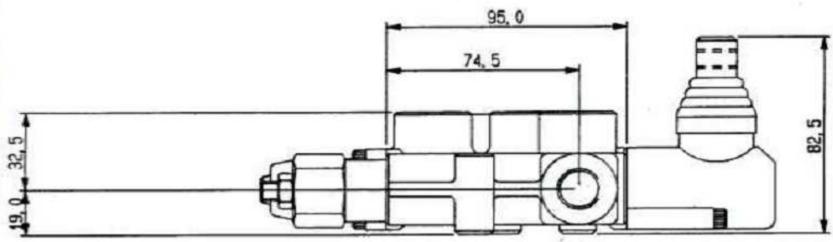
STANDARD THREADS BSP GAS

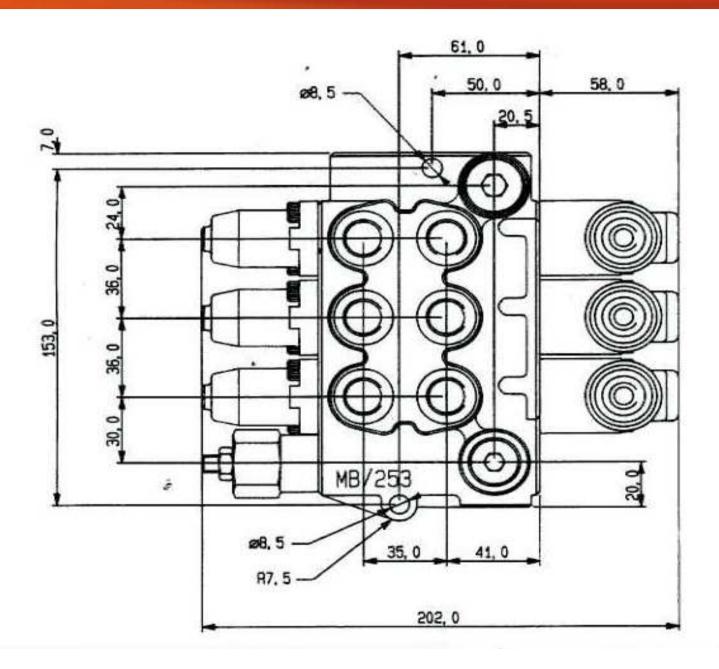
Attacco	Dimens.	Dimens Spec
P	3/8"	1/2
P sup	3/8"	1/2"
A/B	3/8*	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"

STANDARD CONFIGURATION









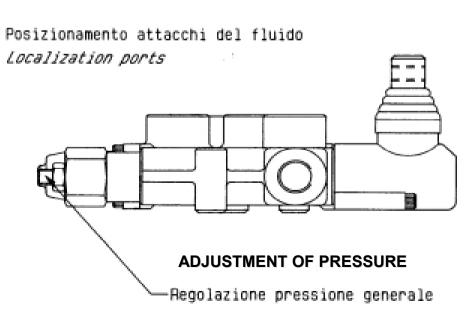


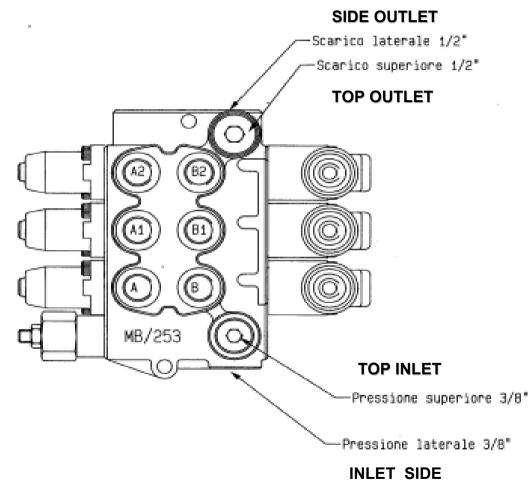


CONFIGURATION CONNECTIONS P-A-B-T MB/25

STANDARD THREADS BSP GAS

Attacco	Dimens.	Dimens Spec
P	3/8"	1/2"
P sup	3/8"	1/2"
A/B	3/8"	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"



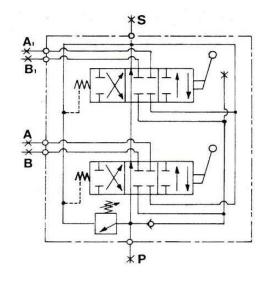


	I
MAX FLOW	45 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	180 BAR
LEAKAGE TO 100 BAR	1CC/MIN
WEIGHT	KG. 6
CONFIGURATION	PARALLEL

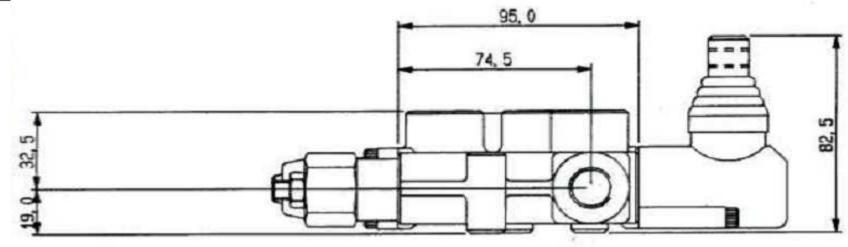
STANDARD THREADS BSP GAS

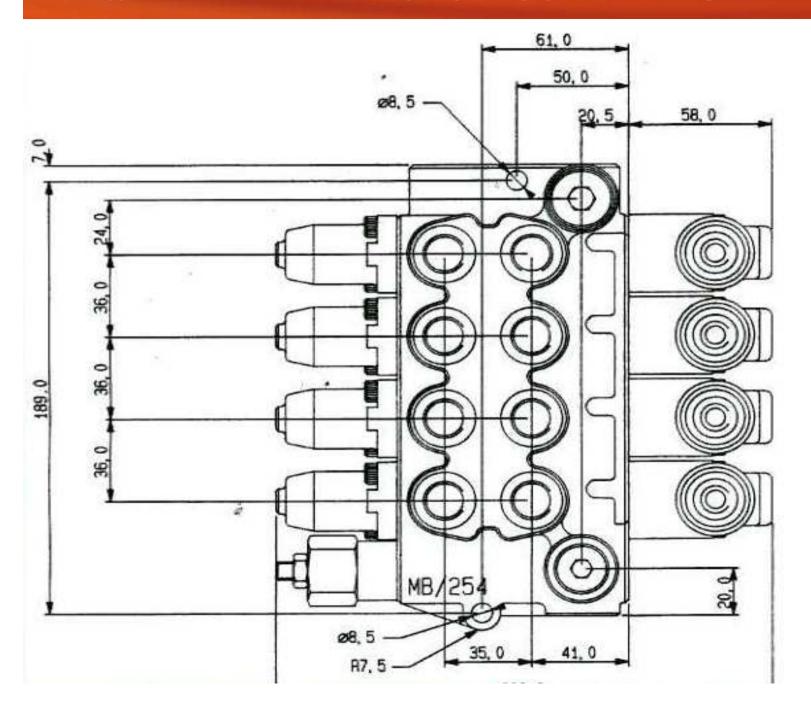
Attacco	Dimens.	Dimens Spec
P	3/8"	1/2"
P sup	3/8"	1/2
A/B	3/8"	1/2"
T	1/2"	1/2"
T SUD	1/2"	1/2"

STANDARD CONFIGURATION











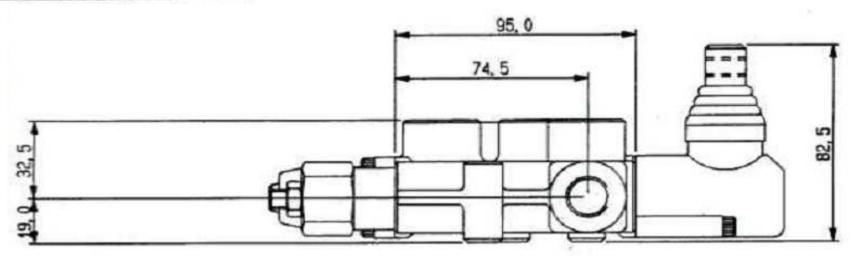
MAX FLOW	45 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	180 BAR
LEAKAGE TO 100 BAR	1CC/MIN
WEIGHT	KG. 7.2
CONFIGURATION	PARALLEL

A. T	*S
A ₁	
A × B	

STANDARD CONFIGURATION



Attacco	Dimens.	Dimens Spec
P	3/8"	1/2"
P sup	3/8"	1/2
A/B	3/8*	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"

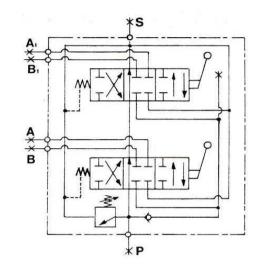


MB25/6

MONOBLOCK VALVES

MAX FLOW	45 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	180 BAR
LEAKAGE TO 100 BAR	1CC/MIN
WEIGHT	KG. 8.4
CONFIGURATION	PARALLEL

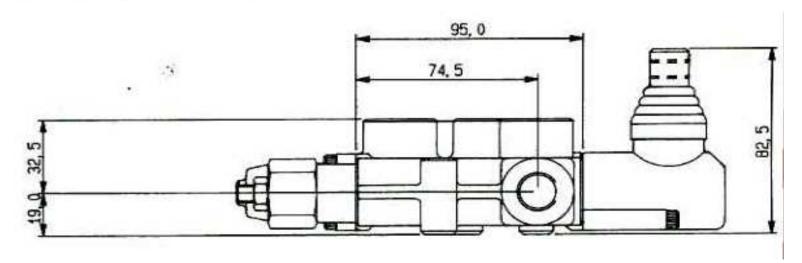
STANDARD CONFIGURATION



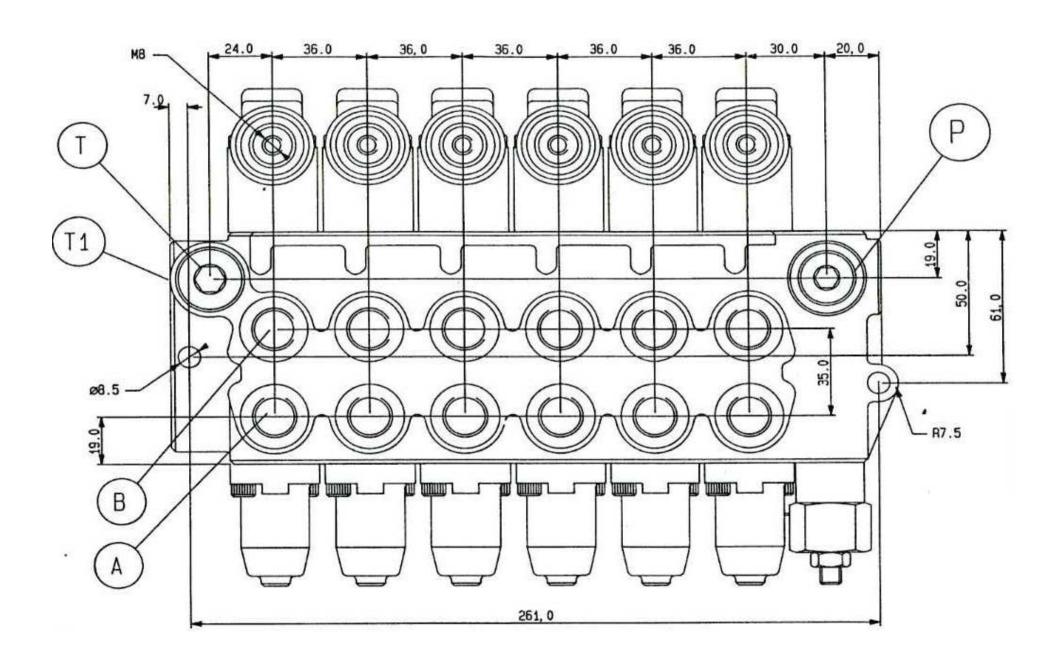


STANDARD THREADS BSP GAS

Attacco	Dimens.	Dimens Spec
P	3/8"	1/2"
P sup	3/8"	1/2
A/B	3/8"	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"







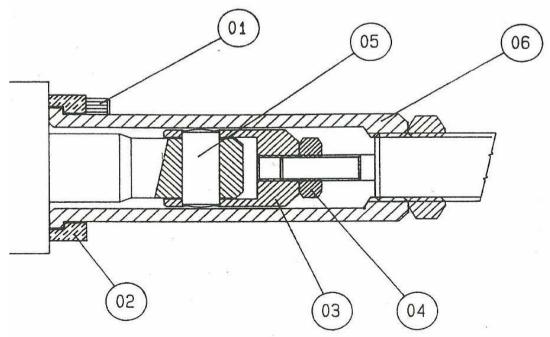


CABLE CONTROL FOR MB/25 MB/31 MB/35

Pos.	Denominazione	Qaunt.	Codice
01	Vite di fissaggio M5X14	2	50-015
02	Flangia di fissaggio	1	01-063
03	Attacco stelo	1 1	01-103
04	Dado M6	1	65-053
05	Spina di attacco	1	01-069
06	Cappellotto portacavo	1	01-102

KIT FOR CABLE CONTROL

ATTACCO PCD/35

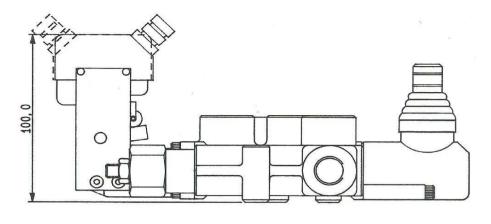


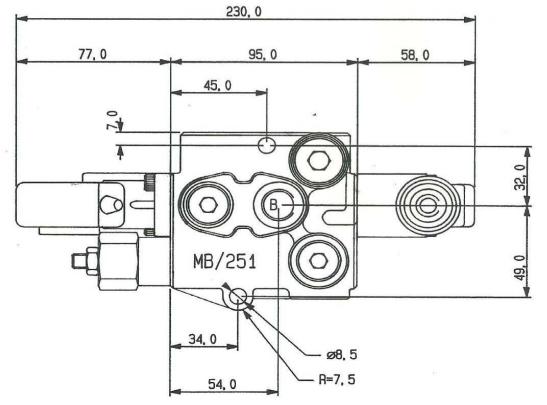
THE SAME FOR MB/25-MB/31-MB/35





MB/25 WITH SWITCH CONTROL MICRO

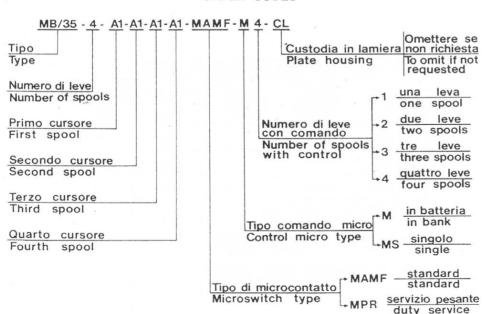






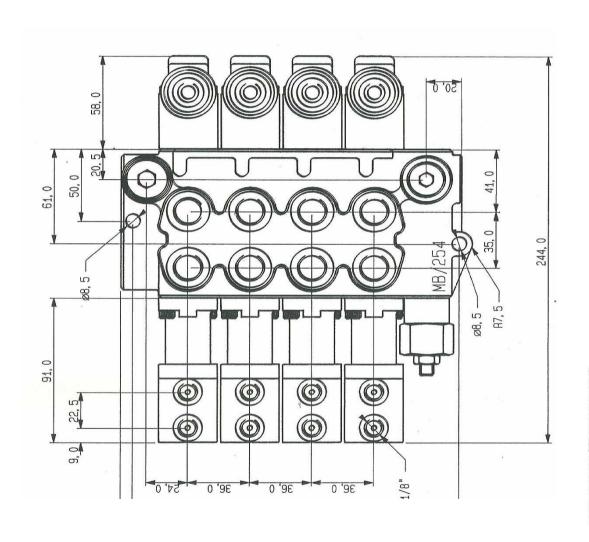
THE SAME KIT FOR MB/25-MB/35

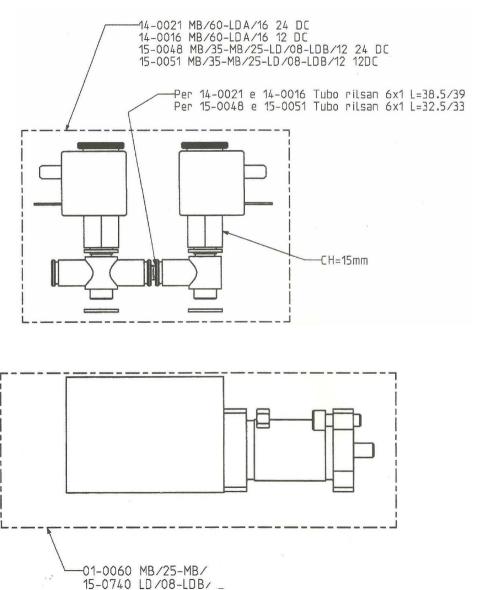
ORDER CODES





MB/25 PNEUMATIC AND ELETRO-PNEUMATIC CONTROL



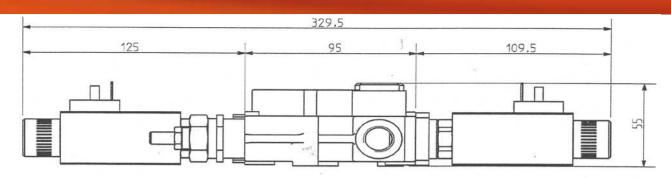


08-0130 MB/60-LDA/16

MB/25

MONOBLOCK VALVES





ELETRIC ON-OFF CONTROL

Sect -A-81 Thread Option Ports 2 117 FIXING HOSE-A-P-A-B 3/8 BSP 1/2 BSP 153 189 4 1/2 BSP 5 225 261 B (A)

TYPE OF CIRCUITS AVAILABLE

AED	DOUBLE ACTING
EED	SINGLE ACTING
CED	A e B in T

* Standard

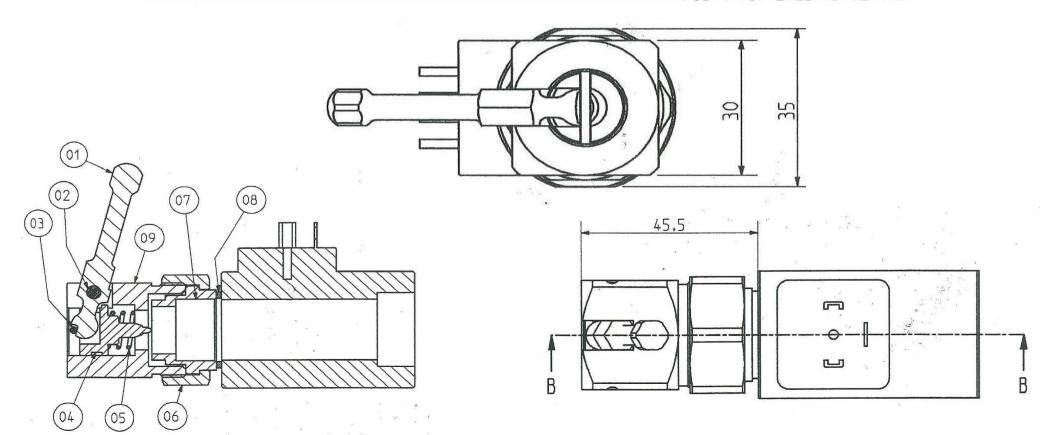
			0,0,100	9	
Max Flow	Exc Press	Solenoids	Watts	Ampere	Connect
55	150	12 DC	40*	3.33	DIN 43650
45	180	24 DC	40*	1.66	DIN 43650
35	210		50	4.16	
25	250		50	2.08	



MANUAL EMERGENCY DEVICE "DET" FOR MB/25 ON-OFF

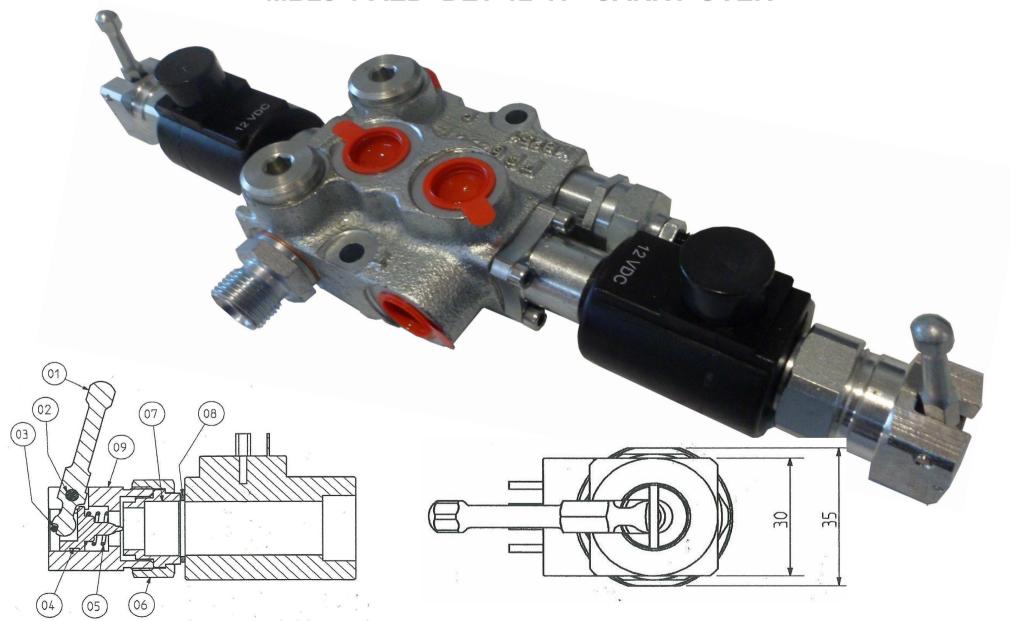
Pos	Named	Code	QTY	Pos	Named	Code	Qty
01	Handle	02-180	1	05	Spring	M-118	1
02	Swiwel	02-183	1	06	Nut	02-176	1
03	Retained pin	54-004	1	07*	Fixed screw	02-178	1
04	Spool	02-182	1	. 08	Spacers	55-053	1
				. 09	Main body	02-180	1

* Pos 7 for EM35 is 02-172





MB25-1-AED+DET-12-YP+CARRY-OVER

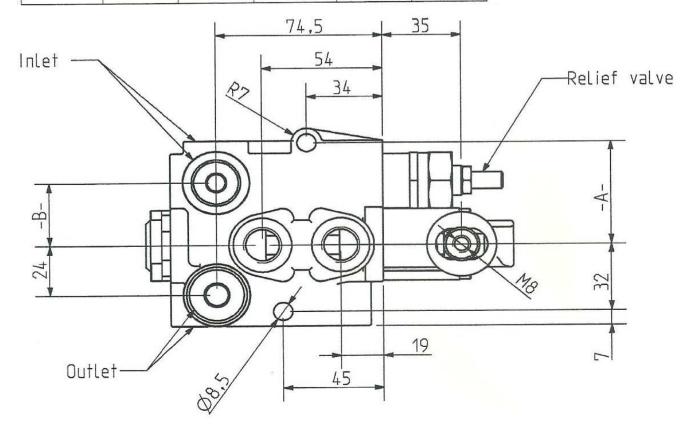


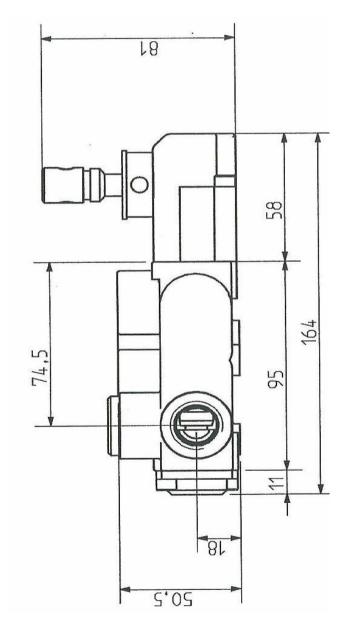


MB25-DXC-COMPACT VERSION- INLET ON THE RIGHT

FIXING HOLE

N° Sect	-A-	-B-	N° Sect	-A-	-B-
1	49	30	4	157	138
2	85	66	5	193	174
3	121	102	6	229	210

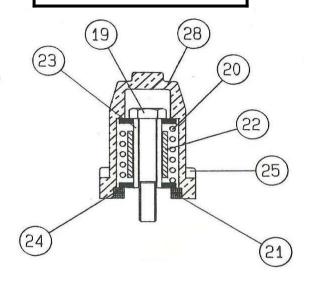




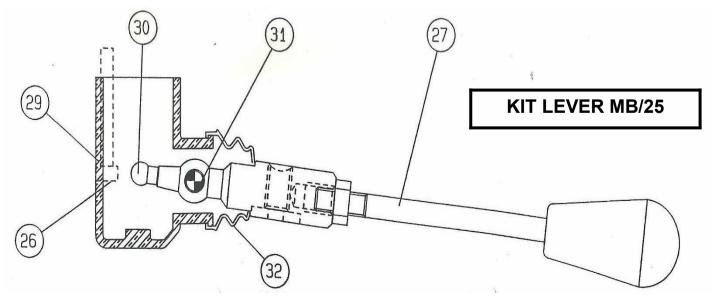


KIT 1 AND KIT LEVER SPARE PARTS FOR MB/25

KIT SPRING 1 FOR MB25 KIT 1 COD . 000000



POSIZ	NOME/NAME	CODICE-CODE	QUANT
19	VITE 6X40 SCREW	50022	1
20	MOLLA STELO SPRING SPOOL	M-0471	1
21	ANELLO DIST SPACERS	01196	2
22	DISTANZIALE SPACERS	01013	1
23	TUBO FISSO	01008	1
24	ROND. MOLLA WASHER SPRING	01007	2
25	VITE TCE 5X14 SCREW	50015	2
26	VITE TCE 5X40 SCREW	50014	5
27	ASTA LEVA	91000	1
28	CAPPELLOTTO COVER	010111	1 1
29	CORPO SUPPORTO	010391	1 1
30	SN0D0	01147	1 1
31	SPINA	01142	1 1
32	SOFFIETTO	R510	1





10

12

SPARE PARTS LIST OF MB/25 BODY WITH RELIEF VALVES

Pos Cod

29017

Denom

RITEGNO M-064 MOLLA RIT

60092 OR 12, 42x1, 78

29027 STELO -A-CORPO

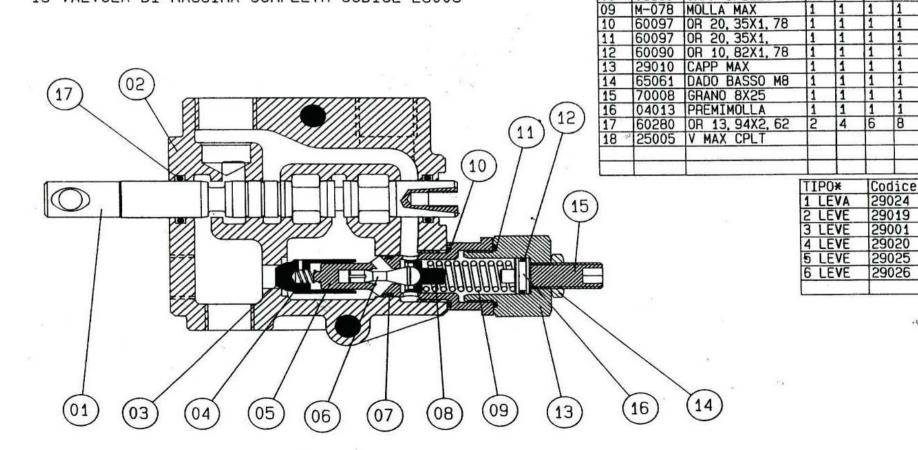
29009 VALV MAX

01192 SPILLO MAX

01190 CAPP SPILLO

ORTA srl BRESCIA-ITALIA-06/97

SCHEMA RICAMBI VALVOLA MB/25-TAVOLA 0001 CORPO-STELO-VALVOLA DI MASSIMA 18-VALVOLA DI MASSIMA COMPLETA CODICE 25005

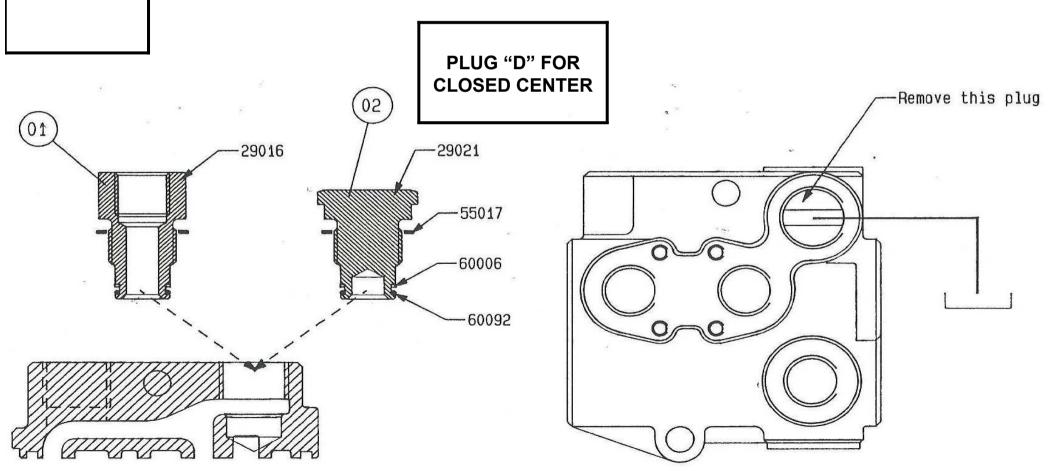




ASSEMBLING PLUG CARRY-OVER OR CLOSED CENTER

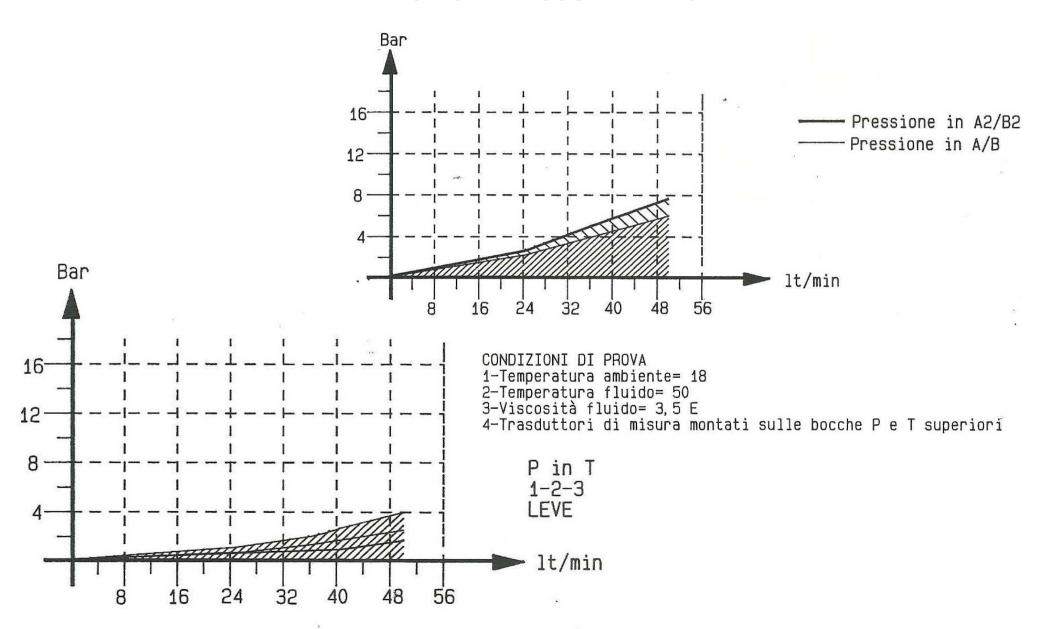
Pos	Cod	Denom
01	25030	COMPLETO H/25
02	25031	COMPLETO D/25

CARRY-OVER PLUG "H" FOR THE LINE OF PRESSURE



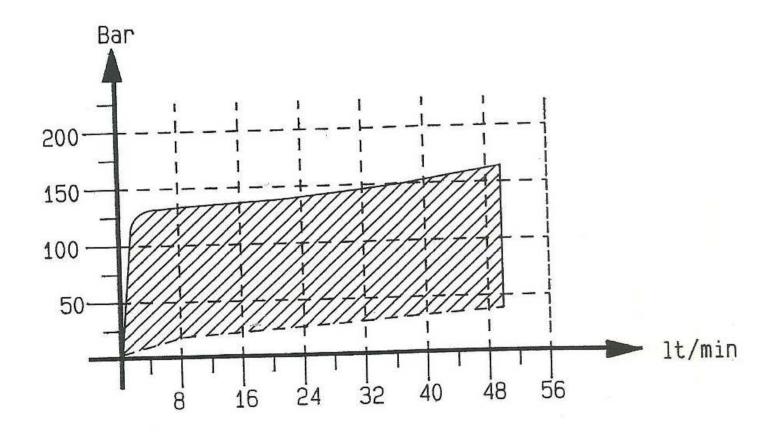


DROP OF PRESSURE MB25





CURVE PRESSURE /FLOW OF RELIEF VALVE DIRECT ACTING WITH SPRING 80-250 BAR



CONDIZIONI DI PROVA

1-Temperatura ambiente= 18 2-Temperatura fluido= 50 3-Viscosità fluido= 3,5 E 4-Trasduttori di misura montati sulle bocche P e T superiori



TYPE OF CIRCUIT AVAILABLE

SCHEMA	SIGLA	CARATTERISTICHE
SCHEME	CODE	FEATURES
B A T T T T T T T T T T T T T T T T T T	А	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi chiusi. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot open center $(P \rightarrow S)$ in central position. Cylinder closed. Lever pushed $P \rightarrow A$ $B \rightarrow S$. Lever pulled $P \rightarrow B$ $A \rightarrow S$.
1 2 3	С	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi allo scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot open center $(P \rightarrow S)$ in central position. Cylinders at the exhaust. Lever pushed $P \rightarrow A$ $B \rightarrow S$, lever pulled $P \rightarrow B$ $A \rightarrow S$.
1 2 3 ——————————————————————————————————	D	Cursore a centro chiuso $(P \rightarrow)$ in posizione centrale. Utilizzi chiusi. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Ottenibile anche montando sullo scarico il tappo "D" (tav. 0022) Shaft pilot center closed $(P \rightarrow)$ in central position. Cylinders closed. Lever pushed $P \rightarrow B \rightarrow S$ lever pulled $P \rightarrow B A \rightarrow S$. It is possible to obtain it also mounting at the exhaust the cap "D" (tav. 0022)
B A T	В	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzo B chiuso, utilizzo A allo scarico. A leva spinta $P \rightarrow S$, $B \rightarrow S$ a leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot center open $(P \rightarrow S)$ in central position. Cylinder B closed, cylinder A at the exhaust. Lever pushed $P \rightarrow A$ $B \rightarrow S$ lever pulled $P \rightarrow B$ $A \rightarrow S$.
	Е	Cursore a centro aperto (P—S) in posizione centrale per cilindri a semplice effetto. Utilizzo chiuso. A leva spinta P-B—S. a leva tirata P—B Shaft pilot center open (P—S) in central position for cylinders simple effect. Cylinder closed. Lever pushed P-B—S. Lever pulled P—S.
	F	Cursore a centro aperto (P→S) in posizione centrale per cilindri a semplice effetto. Utilizzo chiuso. A leva spinta P→A. a leva tirata P-A→S. Shaft pilot open center (P→S) in central position for cylinders simple effect. Cylinder closed. Lever pushed P→A. Lever pulled P-A→S.
1 2 3 4 — BA	G	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi chiusi. Per cilindri a doppo effetto con IV posizione flottante. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva ulteriormente spinta $A \cdot B \rightarrow S$ con aggancio di ritenuta. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot center open $(P \rightarrow S)$ in central position. Cylinders closed. For cylinders double effect. Lever pushed $P \rightarrow A \cdot B \rightarrow S$. Lever much more pushed $A \cdot B \rightarrow S$ with hooking of groove. Lever pulled $P \rightarrow B \cdot A \rightarrow S$.

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
B A	1	Cursore a centro aperto ($P \rightarrow S$) in posizione centrale. Utilizzo A chiuso. Utilizzo B a scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$.
4-111-11-1		Shaft pilot open center (P \rightarrow S) in central position. Port A closed. Port B at exhaust. Lever pushed P \rightarrow A B \rightarrow S. Lever pulled P \rightarrow B A \rightarrow S.
— 1 2 3 ————————————————————————————————	М	Cursore a centro chiuso. In posizione centrale. Ufilizzi allo scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$ $A \rightarrow S$. Ottenibile anche montando sullo scarico il tappo "D" con cursore tipo "C".
\T + _T X		Shaft pilot closed center in central position. Cylinders at the exhaust. Lever pushed P→A, B→S. Lever pulled P→B, A→S. It is possible to obtain it also mounting on the exhaust the cap "D" with shaft pilot type "C".
1 2 3 ——————————————————————————————————	N	Cursore a centro chiuso. In posizione centrale utilizzo B a scarico. Utilizzo A chiuso. A leva spinta P→A B→S. A leva tirata P→B A→S. Ottenibile anche montando sullo scarico il tappo «D» con cursore tipo «I».
4-11-7-1		Shaft pilot closed center. In central position cylinder B at the exhaust. Cylinder A closed. Lever pushed P→A B→S. Lever pulled P→B A→S. It is possible to obtain it also mounting on the exhaust the cap *D* with shaft pilot type *I*.
— 1 2 3 — — A	0	Cursore a centro chiuso. In posizione centrale utilizzo A a scarico. Utilizzo B chiuso. A leva spinta P→A, B→S a leva tirata P→B A→S. Ottenibile anche montando sullo scarico il tappo «D» con cursore tipo «B»
— 1 2 —		Shaft pilot center closed. In central position cylinder A at exhaust. Cylinder B closed. Lever pushed P→A, B→S. Lever pulled P→B A→S. It is possible also to obtain it mounting on the exhaust the cap "D» with shaft pilot type "B».
B B	Р	Cursore a centro aperto, per cilindri a semplice effetto o mo- tori unidirezionali, in posizione centrale utilizzo B a scarico, a leva tirata P→B
\		Shaft pilot open center. For cylinders simple effect or unidirectional engines. In central position cylinder B at the exhaust. Lever pulled P→B
	0	Cursore a centro aperto per cilindri a semplice effetto o moto- ri unidirezionali, in posizione centrale utilizzo A, a scarico a leva spinta P→A.
\[\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Q	Shaft pilot open center for cylinders simple effect or unidirectional engines. In central position cylinder A at the exhaust. Lever pushed P→A.



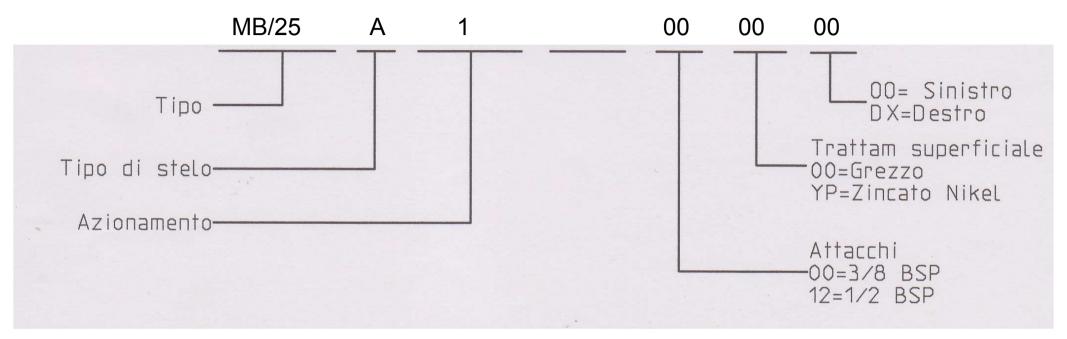
TYPE OF CONTROL AVAILABLE

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
1 2 3 MM	1	Posizione 2: stabile. Posizioni 1-3: ritorno a molla in posizione 2. Position 2: stable. Position 1-3: spring return in pos. 2.
1 3 WM	213	Posizione 3: stabile. Leva normalmente rientrata tirando la leva vado in posizione 1. Transitorio aperto = 213-C - transitorio chiuso = 213-D. Position 3: stable. Lever normally reentered pulling the lever go in position 1. Transient open = 213-C - Transien closed = 213-D
1 2 M	212	Posizione 2: stabile. Tirando la leva vado in posizione 1. Rilasciando torna in posizione 2. Position 2: stable, Pulling the lever go in position 1. Leaving it returns in position 2
2 3 MM	223	Posizione 2: stabile. Spingendo la leva vado in posizione 3. Rilasciando torna in posizione 2. Position 2: stable. Pushing the lever go in position 2. Leaving it returns in position 2.
1 3 MM	213/B	Posizione 1: stabile. Leva normalmente fuori. Spingendo la leva vado in posizione 3 transitorio aperto = 213/B-C - transitorio chiuso = 213/B-D Position 1: stable. Levere normally out. Pushing the lever go in position 3 transient open: 213/B-C - transien closed: 213/B-D
1 2 M	212/B	Posizione 1: stabile. Leva normalmente fuori. Spingendo la leva vado in posizione 2. Rilasciando torna in posizione 1. Position 1: stable. Lever normally out pushing the lever go in position 2 leaving it returns in position 1.
2 3 MM	223/B	Posizione 3: stabile. Leva normalmente dentro. Tirando la leva vado in posizione 2. Rilasciando torna in posizione 3: Position 3: stable. Lever normally in. Pulling the lever go in position 2. Leaving it returns in position 3.
1 2 3	3	Ritenuta a scatti nelle 3 posizioni. Groove release in three position.

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
1 3	4	Ritenuta a scatti nelle posizioni estreme. Transitorio aperto = 4C, transitorio chiuso = 4D. Groove release in extrems position. Transient open = 4C - Transient closed = 4D
2 3	423	Ritenuta a scatti nelle posizioni 2-3 posizione centrale e a leva spinta stabili. Groove release in positions 2-3. Central position and stables in pushed lever.
1 2	412	Ritenuta a scatti nelle posizioni 1-2 posizione centrale e a leva tirata stabili. Groove release in position 1-2. Central position and stables in pulled lever.
1 2 3 MM	5	Ritenuta a scatti in posizione 3 a leva spinta. Posizione centrale 2 stabile. Posizione 1 con leva tirata con ritorno a molla in posizione 2. Groove release in position 3 in pushed lever. Central position N° 2 stable. Position 1 with pulled lever with spring return in position 2.
1 2 3 2	6	Azionamento con servocomando pneumatico posizione 2 sta- bile. Posizioni estreme 1-3 con ritorno al centro. Operating with pneumatic serve control. Position 2 stable. Ex- trem positions 1-3 with return in the center.
1 2 3 4	7	Ritenuta a scatti nelle 4 posizioni. È possibile solo con cursore di tipo G. Groove release in the four positions. It is possible only with shaft pilot type G.
1 2 3	8	Azionamento con servocomando oleodinamico. Posizione 2 stabile. Posizioni 1-3 con ritorno a molla in posizione 2 (senza leva di azionamento). Operating with pneumatic serve control. Position 2 stable. Positions 1-3 with spring return in position 2 (without lever of operation).
1 2 3	9	Ritenuta a scatti in posizione 1 a leva tirata. Posizione centra- le 2 stabile. Posizione 3 a leva spinta con ritorno a molla al centro. Groove release in position 1 lever pulled. Central position 2 stable. Position 3 lever pushed with spring return in the center.



COMPLETE CODE



IF NOT SPECIFIED THE RELIEF VALVE IS SET TO 175 BAR

IF REQUIRED THE SPECIFIC SET OF PRESSURE WRITE: MB25-1-A1-T250

IF REQUIRED SURFACE TREATMENT OF WHITE ZINC WRITE: MB25-1-A1-YP

IF REQUIRED SPECIAL THREADS WRITE: MB25-1-12 MEANS P-A-B-T-1/2"BSP

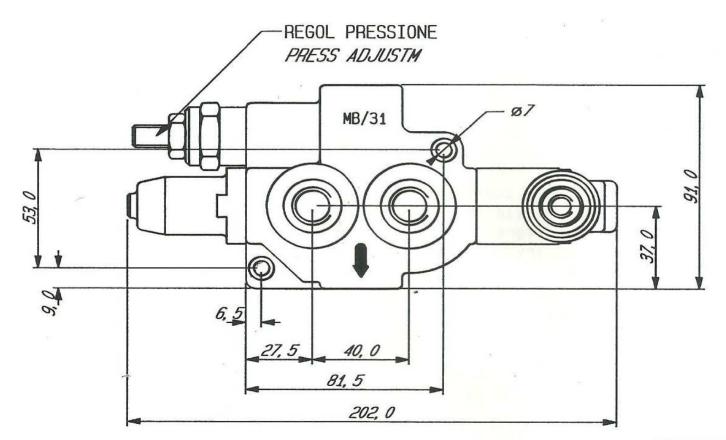
IF REQUIRED INLET ON THE RIGHT WRITE: MB25-1-A1-DX



MB31-1-A1

MAX FLOW	60 LIT/MIN
MAX PRESSURE	350 BAR

STANDARD	OPTIONAL
3/8 BSP	1/2 BSP
3/8 BSP	1/2 BSP
3/8 BSP	1/2 BSP
	3/8 BSP 3/8 BSP



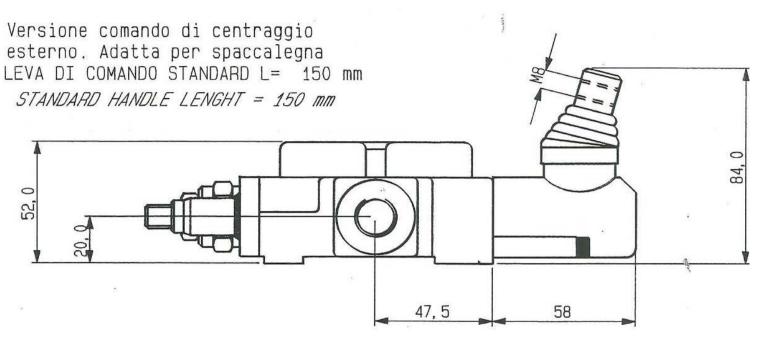


LEVA DI COMANDO STANDARD L= 150 mm STANDARD HANDLE LENGHT = 150 mm

PESO KG 1, 8

VERSIONE STANDARD CON ENTRATA A SINISTRA A RICHIESTA ENTRATA DESTRA (VEDI DISEGNO)

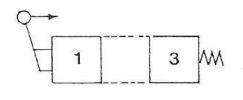
MB31-1-A213/B





ATTACCHI	STANDARD	OPTIONAL
Р	3/8 BSP	1/2 BSP
A-B	3/8 BSP	1/2 BSP
T	3/8 BSP	1/2 BSP

PESO KG 1, 8
WEIGHT 1.8 KG



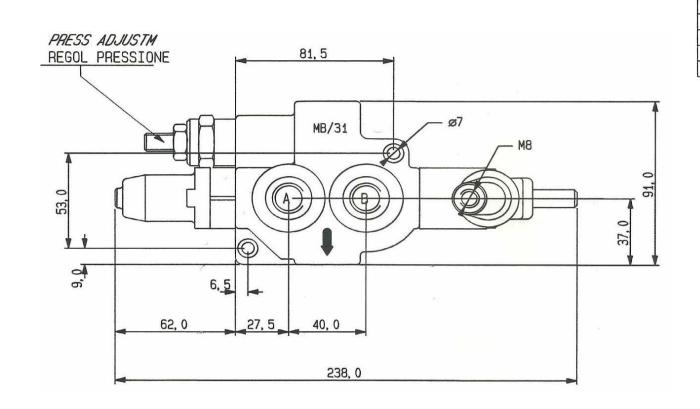
213/B

Posizione 1: stabile. Leva normalmente fuori. Spingendo la leva vado in posizione 3 transitorio aperto = 213/B-C - transitorio chiuso = 213/B-D

Position 1: stable. Levere normally out. Pushing the lever go in position 3 transient open: 213/B-C - transien closed: 213/B-D



MB31-1-A213-DCSP



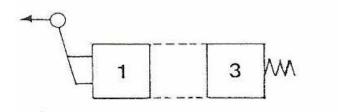
ATTACCHI	STANDARD	OPTIONAL
Р	3/8 BSP	1/2 BSP
A-B	3/8 BSP	1/2 BSP
T	3/8 BSP	1/2 BSP



PESO KG 1, 8

WEIGHT 1.8 KG

LEVA DI COMANDO STANDARD L= 150 mm STANDARD HANDLE LENGHT = 150 mm



213

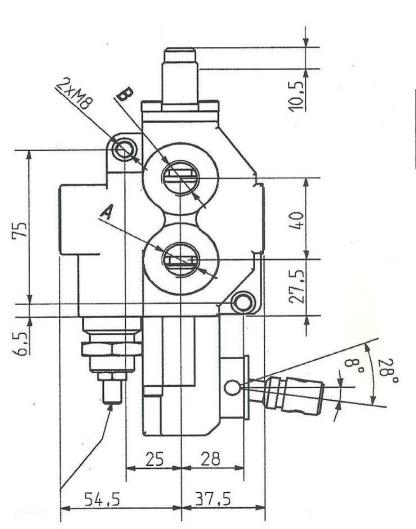
Posizione 3: stabile. Leva normalmente rientrata tirando la leva vado in posizione 1. Transitorio aperto = 213-C - transitorio chiuso = 213-D.

Position 3: stable. Lever normally reentered pulling the lever go in position 1. Transient open = 213-C - Transien closed = 213-D



MB31-1-A213/B-ECO-H15

P-T-A-B da 3/8" codice 181374 P-T-A-B da 1/2" codice 181376



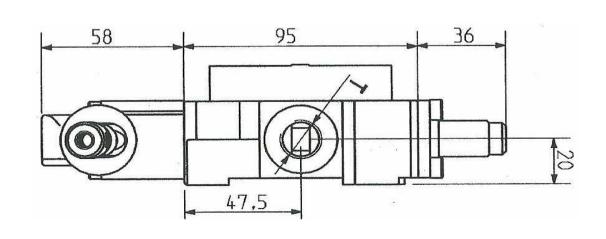
LEVA DI COMANDO STANDARD L= 150 mm STANDARD HANDLE LENGHT = 150 mm

PESO KG 1, 8

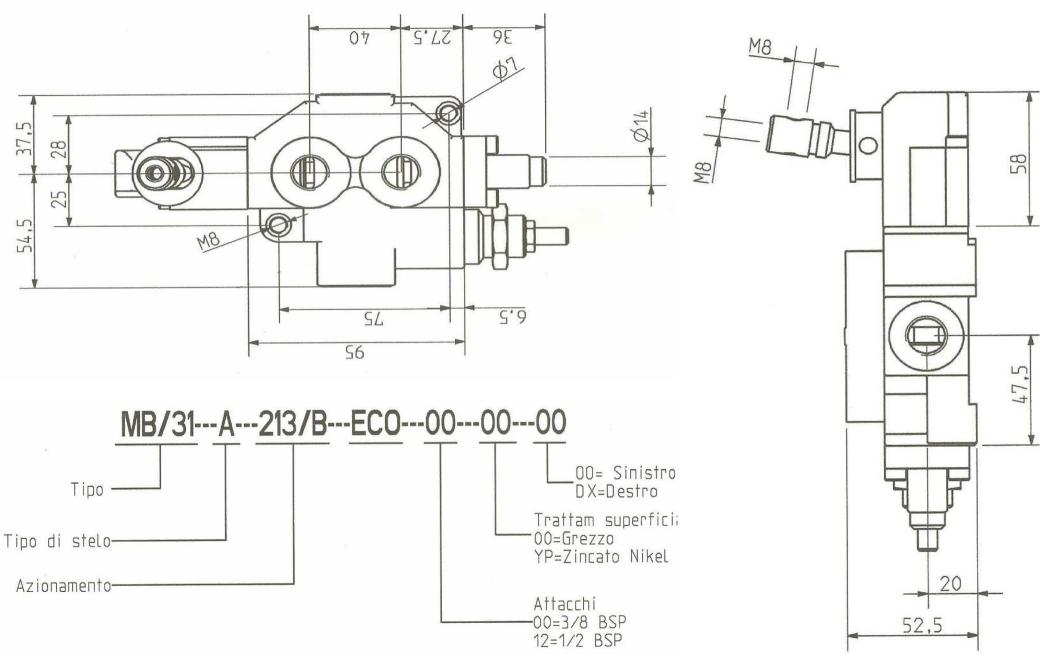
FILETTATURE STANDARD

ATTACCHI	STANDARD	OPTIONAL
Р	3/8 BSP	1/2 BSP
A-B	3/8 BSP	1/2 BSP
T	3/8 BSP	1/2 BSP



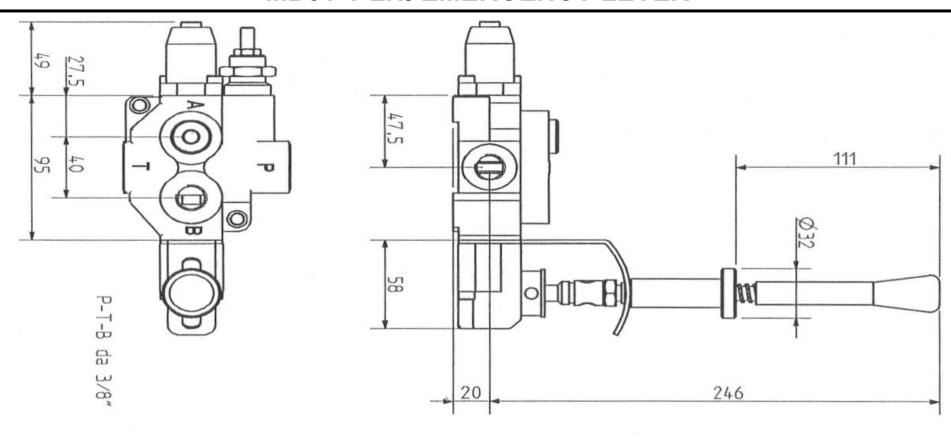


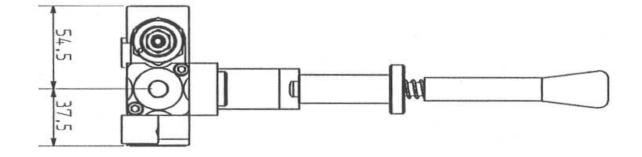






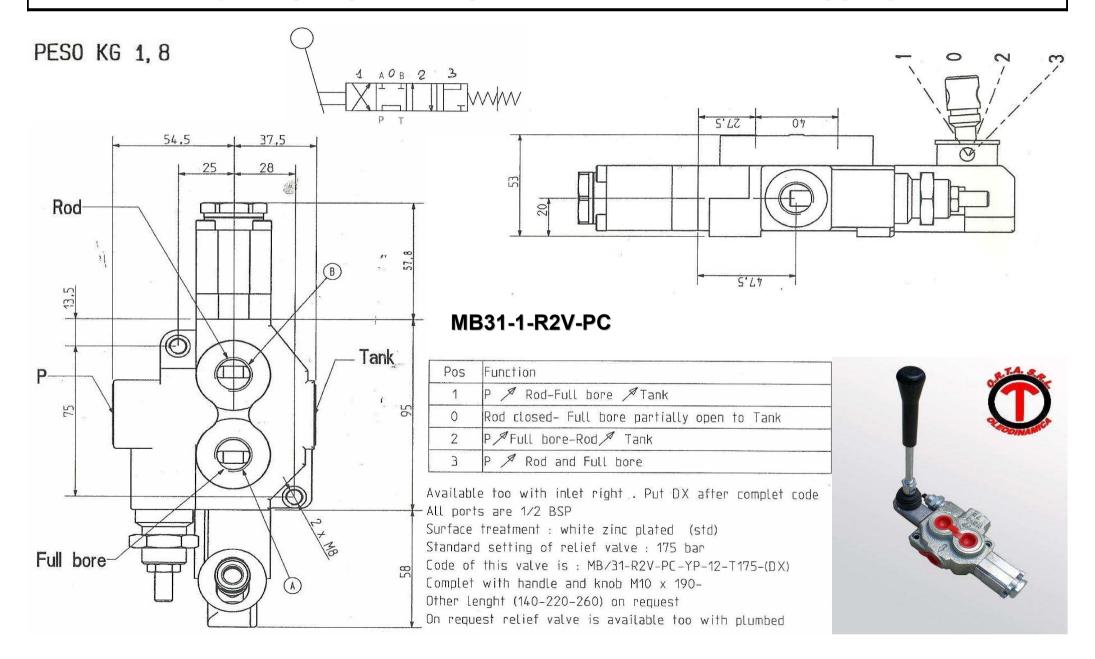
MB31-1-LNI-EMERGENCY LEVER





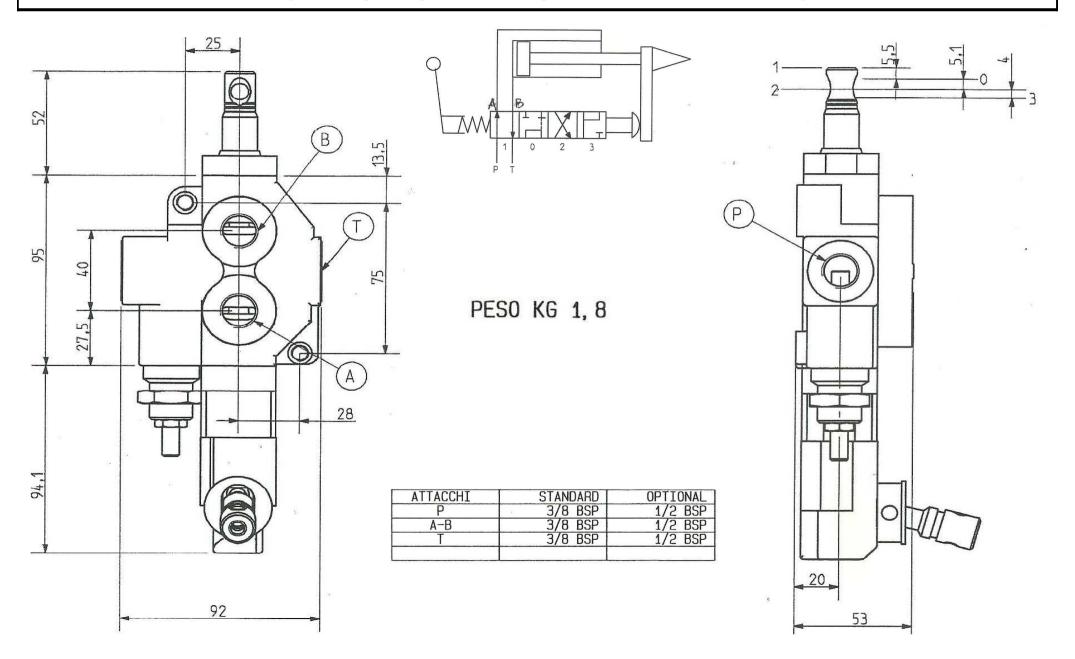


MB31-1-DUAL SPEED RIGENERATIVE-R2V-CENTRAL POSITION



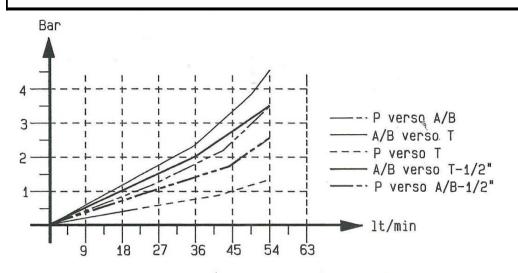


MB31-1-DUAL SPEED- RIGENERATIVE-R2V-A213B



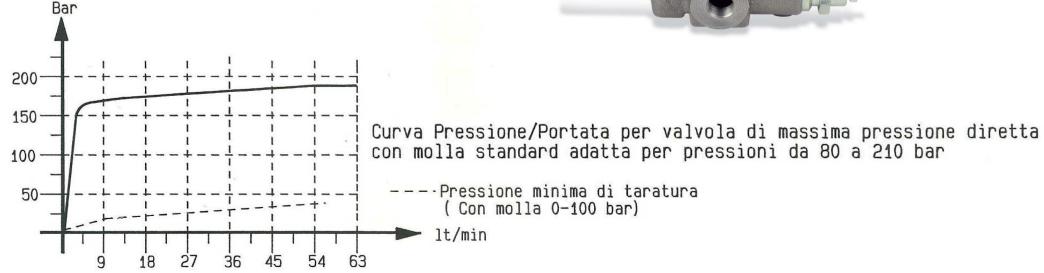


DROP OF PRESSURE MB31-1 AND CURVES FLOW/PRESSURE



CONDIZIONI DI PROVA 1-Temperatura ambiente= 18 2-Temperatura fluido= 50 3-Viscosità fluido= 3,5 E



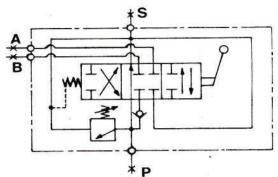


MB/35-1

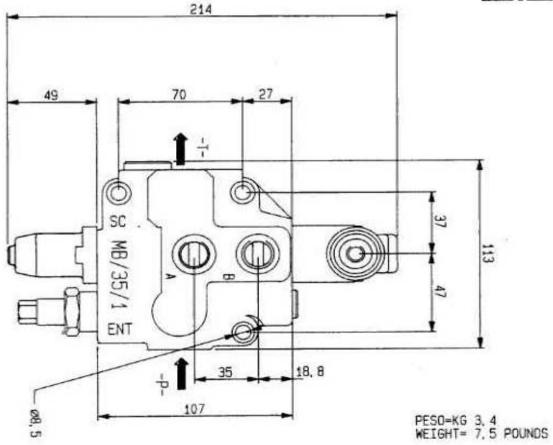
MONOBLOCK VALVES

MAX FLOW	60 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	80 BAR
LEAKAGE TO 100 BAR	1CC/MIN
WEIGHT	KG. 3,4
CONFIGURATION	PARALLEL

STANDARD CONFIGURATION





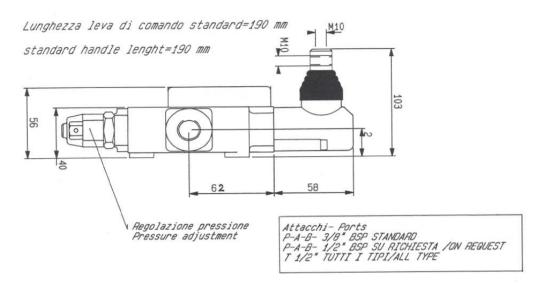


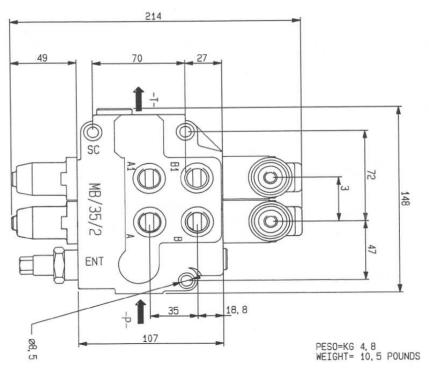
STANDARD THREADS BSP GAS

Attacco	Dimens.	Dimens Spec
P	3/8"	1/2
P sup	3/8"	1/2
A/B	3/8"	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"

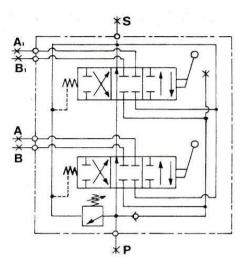
MB/35-2

MONOBLOCK VALVES





STANDARD CONFIGURATION





STANDARD THREADS BSP GAS

Attacco	Dimens.	Dimens Spec
P	3/8"	1/2
P sup	3/8"	1/2
A/B	3/8"	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"

PESO=KG 6, 4 WEIGHT= 14, 1 POUNDS

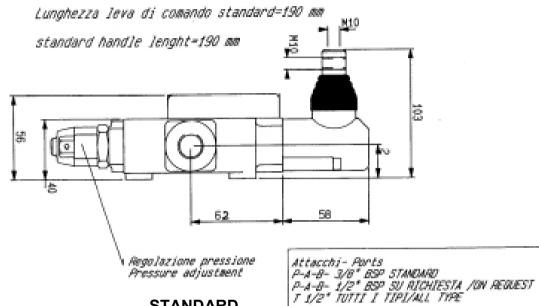


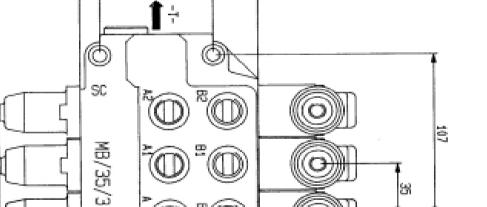
MAX FLOW	60 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	80 BAR
LEAKAGE TO 100 BAR	2CC/MIN
WEIGHT	KG. 6,4
CONFIGURATION	PARALLEL

ENT

214

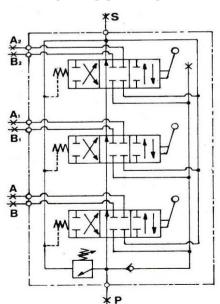
8



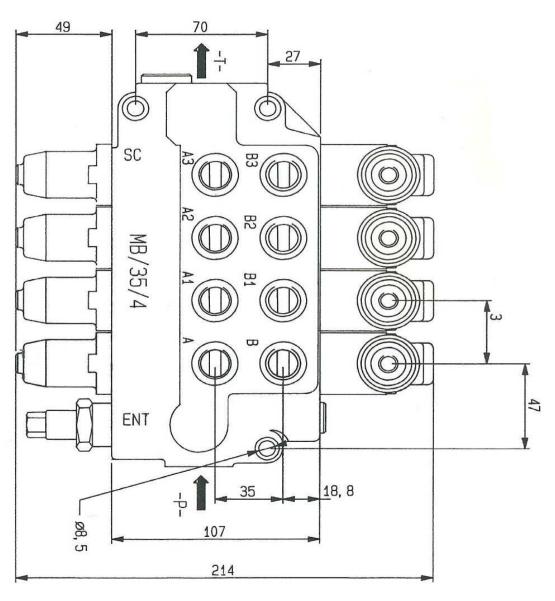


18. 8

STANDARD CONFIGURATION

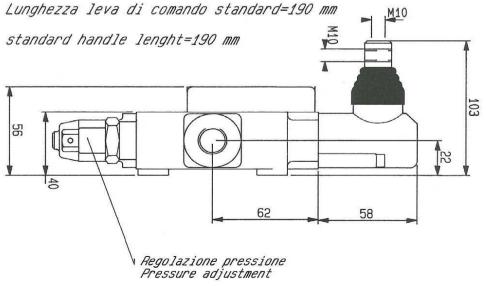






MAX FLOW	60 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	80 BAR
LEAKAGE TO 100 BAR	2CC/MIN
WEIGHT	KG. 7,8
CONFIGURATION	PARALLEL

Attacco	Dimens.	Dimens Spec
P	3/8"	1/2
P sup	3/8"	1/2"
A/B	3/8"	1/2"
T	1/2"	1/2"
T sup	1/2"	1/2"





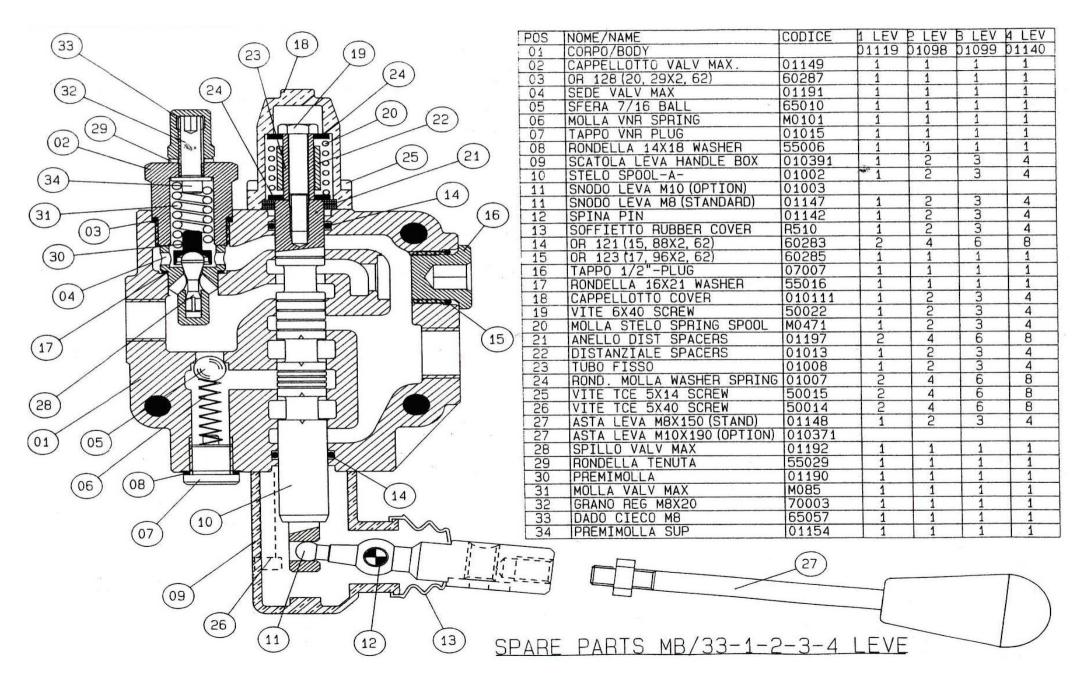
MB35/3-A1-A1-A1 COD.013000

MB35/4-A1-A1-A1 COD.014000



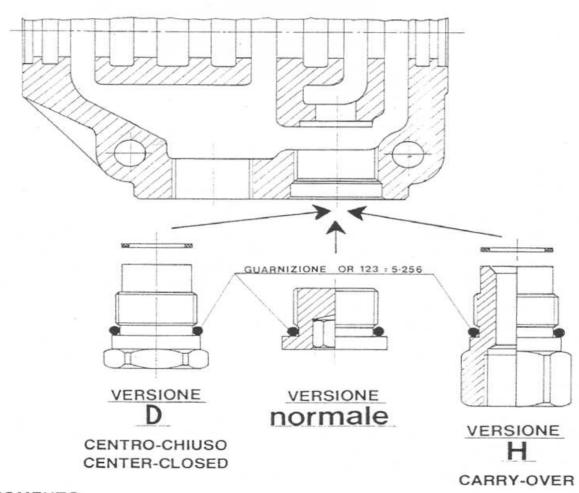








ASSEMBLY CARRY-OVER "H" PLUG AND CLOSED CENTER "D" PLUG FOR MB/35



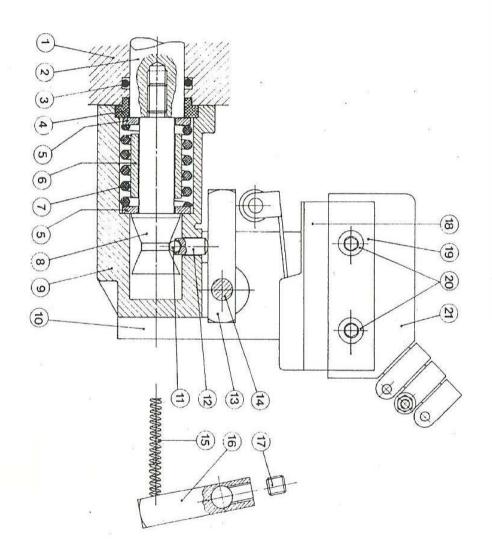
MASSIMO MOMENTO TORCENTE DI CHIUSURA

-- = 7+1 KG. MT (70+10 Nm. × mt)

MAXIMUM. COUPLE.



SPARE PARTS MICRO FOR MB/35 E MB/25



PART.	DENOMIN	AZIONE	QUANTITÀ
1	Corpo monoblocco		1
2	Stelo		1
3	Guarnizione OR 121 = OR 5-617		1 1
4	Anello di centramento		1
5	Rondella reggi molla		2
6	Tubetto distanziale		1
7	Molla richiamo stelo		1
8	Pesao camme		1
9	Cappellotto		1
10	Piastra porta micro		1
11	Sfera 1/8"		1
12	Pistoncino porta sfera		1
13	Asta comando micro		1
14	Perno porta aste		1
15	Molla richiamo perno		1
16	Asta porta molla		1
17	Grano bloccaggio		1
18	Microcontatto		1
19	Piastrina		1
20	Viti T.C.E. 4×25		2
21	Cuffia protezione micro		1

CARATTERISTICHE ELETTRICHE MICRO MAMF ELETRICAL FEAUTURES MICROSWITCH MAMF

Tensione re	Carico * resistivo	Carico** induttivo	Carico motore-Motor load	
Voltage	Resistive load	Inductive load	N.C.	NA NO
125 Vca 125 VAC	15 A	10 A	3 A	1,5 A
250 Vca 250 VAC	10 A	6 A	2 A	1 A .
125 Vcc 125 VDC	0,4 A	0,05 A	0,05 A	0,05 A

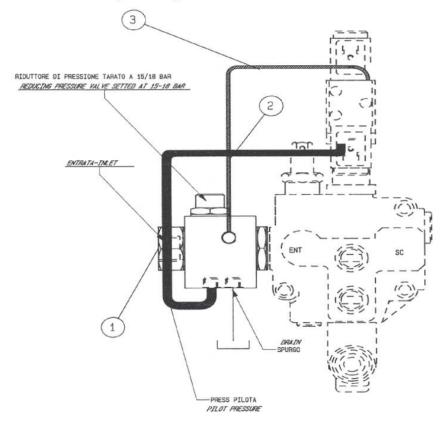
ELETRO-HYDRAULIC PILOTATED CONTROL 66

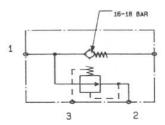


TYPE GAE IN THE INLET

Gruppo valvola direzionale ad 1 leva con comando elettro-oleodinamico tipo 66 e con gruppo di alimentazione in entrata del tipo GAE/12

Lay-out directional valve 1 handle with on-off electro-hydraulik control 66 type and inlet kit feeding GAE/12 type

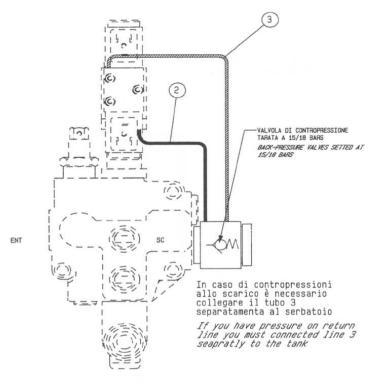




TYPE VCP IN THE OUTLET

Gruppo valvola direzionale ad 1 leva con comando elettro-oleodinamico tipo 66 e con gruppo di alimentazione in scarico del tipo VCP/34

Lay-out directional valve 1 handle with on-off electro-hydraulik control 66 type and back-pressure valve VCP/34 type



2=TUBAZIONE DI PILOTAGGIO-PILOT PRESSURE LINE 3=TUBAZIONE DI DRENAGGIO-DRAIN LINE

In caso di cilondri a semplice effetto verificare sempre che la pressione di discesa del cilindro a vuoto sia superiore alla pressione di taratura della valvola di contropressione. Non usare su distributori con utilizzi a scarico.

In questi casi è necessario usare il gruppo GAE/12 ved. foglio 66-001

If you used single acting cylinder you must check that pressure up of cylinder must be higher at back-pressure of check valve. Do not use directional valve with free flow in neutral position. In these cases you must be used feeding valve GAE/12 type see data sheet 66-001

ELETRO-HYDRAULIC PILOTATED CONTROL 66



ELETRIC DRAW FOR THE 66 CONTROL ELETRO-HYDRAULIC PILOTATED



+

FUSIBILE 5A 12 CC
FUSIBILE 2,5 A 24 CC

TASTO A MOLLA

BOBINA 2A

BOBINA 1A

CARATTERISTICHE ELETTRICHE BOBINE

PER OGNI ELEMENTO AGGIUNTIVO

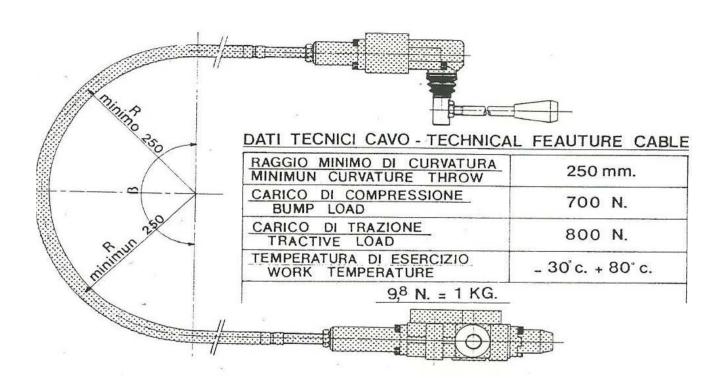
VOLTS	AMPERE	WATTS
12 CC	1, 50	18
24 CC	0.75	18

LE BOBINE ELETTRICHE SONO DIMENSIONATE PER FUNZIONAMENTO CON INTERMITTENZA 100%.

LA TENSIONE DI ESERCIZIO DOVRA' ESSERE CONTENUTA NEL +/- 10 %



CABLE CONTROL FOR MB/25 E MB/35



THE SAME FOR MB/25-MB/35-MB/31 PAGE N°19

(B)	90°	180°	270°	360°
RENDIMENTO * EFFICENCY *	0,8	0,7	0,65	0,55
* CALCOLATO	CON CA	VO L	3000	-
* CALCULATED	WITH C	ABLE L:	3000	.

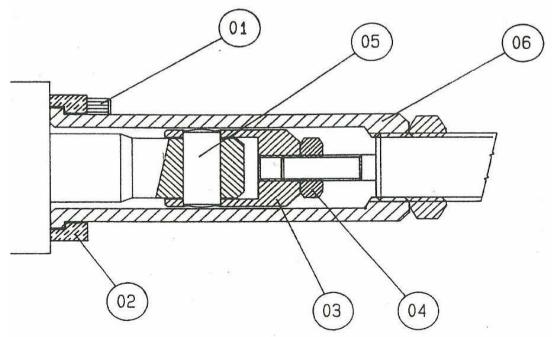


CABLE CONTROL FOR MB/25 MB/31 MB/35

Pos.	Denominazione	Qaunt.	Codice
01	Vite di fissaggio M5X14	2	50-015
02	Flangia di fissaggio	1	01-063
03	Attacco stelo	1 1	01-103
04	Dado M6	1	65-053
05	Spina di attacco	1	01-069
06	Cappellotto portacavo	1	01-102

KIT PCD FOR CABLE CONTROL

ATTACCO PCD/35



THE SAME FOR MB/25-MB/31-MB/35





TYPE OF CIRCUIT AVAILABLE

SCHEMA	SIGLA	CARATTERISTICHE
SCHEME	CODE	FEATURES
B A T T T T T T T T T T T T T T T T T T	А	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi chiusi. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot open center $(P \rightarrow S)$ in central position. Cylinder closed. Lever pushed $P \rightarrow A$ $B \rightarrow S$. Lever pulled $P \rightarrow B$ $A \rightarrow S$.
1 2 3 ——————————————————————————————————	С	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi allo scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot open center $(P \rightarrow S)$ in central position. Cylinders at the exhaust. Lever pushed $P \rightarrow A$ $B \rightarrow S$, lever pulled $P \rightarrow B$ $A \rightarrow S$.
	D	Cursore a centro chiuso $(P \rightarrow)$ in posizione centrale. Utilizzi chiusi. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Ottenibile anche montando sullo scarico il tappo "D" (tav. 0022) Shaft pilot center closed $(P \rightarrow)$ in central position. Cylinders closed. Lever pushed $P \rightarrow A B \rightarrow S$ lever pulled $P \rightarrow B A \rightarrow S$. It is possible to obtain it also mounting at the exhaust the cap "D" (tav. 0022)
BA T T T T T	В	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzo B chiuso, utilizzo A allo scarico. A leva spinta $P \rightarrow S$, $B \rightarrow S$ a leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot center open $(P \rightarrow S)$ in central position. Cylinder B closed, cylinder A at the exhaust. Lever pushed $P \rightarrow A$ $B \rightarrow S$ lever pulled $P \rightarrow B$ $A \rightarrow S$.
	E	Cursore a centro aperto (P \rightarrow S) in posizione centrale per cilindri a semplice effetto. Utilizzo chiuso. A leva spinta P \rightarrow S a leva tirata P \rightarrow S Shaft pilot center open (P \rightarrow S) in central position for cylinders simple effect. Cylinder closed. Lever pushed P \rightarrow S. Lever pulled P \rightarrow S.
	F	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale per cilindri a semplice effetto. Utilizzo chiuso. A leva spinta $P \rightarrow A$. a leva tirata $P \cdot A \rightarrow S$. Shaft pilot open center $(P \rightarrow S)$ in central position for cylinders simple effect. Cylinder closed. Lever pushed $P \rightarrow A$. Lever pulled $P \cdot A \rightarrow S$.
1 2 3 4 — BA	G	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi chiusi. Per cilindri a doppo effetto con IV posizione flottante. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva ulteriormente spinta $A \cdot B \rightarrow S$ con aggancio di ritenuta. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot center open $(P \rightarrow S)$ in central position. Cylinders closed. For cylinders double effect. Lever pushed $P \rightarrow A \cdot B \rightarrow S$. Lever much more pushed $A \cdot B \rightarrow S$ with hooking of groove. Lever pulled $P \rightarrow B \cdot A \rightarrow S$.

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
B A	1	Cursore a centro aperto ($P \rightarrow S$) in posizione centrale. Utilizzo A chiuso. Utilizzo B a scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$.
4-111-1	•	Shaft pilot open center (P \rightarrow S) in central position. Port A closed. Port B at exhaust. Lever pushed P \rightarrow A B \rightarrow S. Lever pulled P \rightarrow B A \rightarrow S.
— 1 2 3 ————————————————————————————————	M	Cursore a centro chiuso. In posizione centrale. Ufilizzi allo scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$ $A \rightarrow S$. Ottenibile anche montando sullo scarico il tappo "D" con cursore tipo "C".
\T + _T X	M	Shaft pilot closed center in central position. Cylinders at the exhaust. Lever pushed P→A, B→S. Lever pulled P→B, A→S. It is possible to obtain it also mounting on the exhaust the cap "D" with shaft pilot type "C".
1 2 3 ——————————————————————————————————		Cursore a centro chiuso. In posizione centrale utilizzo B a scarico. Utilizzo A chiuso. A leva spinta P→A B→S. A leva tirata P→B A→S. Ottenibile anche montando sullo scarico il tappo «D» con cursore tipo «I».
4-11-7-1	N	Shaft pilot closed center. In central position cylinder B at the exhaust. Cylinder A closed. Lever pushed $P \rightarrow A B \rightarrow S$. Lever pulled $P \rightarrow B A \rightarrow S$. It is possible to obtain it also mounting on the exhaust the cap $*D$ ° with shaft pilot type $*J$ °.
— 1 2 3 — — A		Cursore a centro chiuso. In posizione centrale utilizzo A a scarico. Utilizzo B chiuso. A leva spinta P→A, B→S a leva tirata P→B A→S. Ottenibile anche montando sullo scarico il tappo «D» con cursore tipo «B»
— 1 2 —	0	Shaft pilot center closed. In central position cylinder A at exhaust. Cylinder B closed. Lever pushed P→A, B→S. Lever pulled P→B A→S. It is possible also to obtain it mounting on the exhaust the cap "D» with shaft pilot type "B».
B B	P	Cursore a centro aperto, per cilindri a semplice effetto o mo- tori unidirezionali, in posizione centrale utilizzo B a scarico, a leva tirata P→B
\	P	Shaft pilot open center. For cylinders simple effect or unidirectional engines. In central position cylinder B at the exhaust. Lever pulled P→B
	0	Cursore a centro aperto per cilindri a semplice effetto o moto- ri unidirezionali, in posizione centrale utilizzo A, a scarico a leva spinta P→A.
\[\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Q	Shaft pilot open center for cylinders simple effect or unidirectional engines. In central position cylinder A at the exhaust. Lever pushed P→A.



TYPE OF CONTROL AVAILABLE

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
1 2 3 MM	1	Posizione 2: stabile. Posizioni 1-3: ritorno a molla in posizione 2. Position 2: stable. Position 1-3: spring return in pos. 2.
1 3 WM	213	Posizione 3: stabile. Leva normalmente rientrata tirando la leva vado in posizione 1. Transitorio aperto = 213-C - transitorio chiuso = 213-D. Position 3: stable. Lever normally reentered pulling the lever go in position 1. Transient open = 213-C - Transien closed = 213-D
1 2 M	212	Posizione 2: stabile. Tirando la leva vado in posizione 1. Rilasciando torna in posizione 2. Position 2: stable, Pulling the lever go in position 1. Leaving it returns in position 2
2 3 MM	223	Posizione 2: stabile. Spingendo la leva vado in posizione 3. Rilasciando torna in posizione 2. Position 2: stable. Pushing the lever go in position 2. Leaving it returns in position 2.
1 3 MM	213/B	Posizione 1: stabile. Leva normalmente fuori. Spingendo la leva vado in posizione 3 transitorio aperto = 213/B-C - transitorio chiuso = 213/B-D Position 1: stable. Levere normally out. Pushing the lever go in position 3 transient open: 213/B-C - transien closed: 213/B-D
1 2 M	212/B	Posizione 1: stabile. Leva normalmente fuori. Spingendo la leva vado in posizione 2. Rilasciando torna in posizione 1. Position 1: stable. Lever normally out pushing the lever go in position 2 leaving it returns in position 1.
2 3 MM	223/B	Posizione 3: stabile. Leva normalmente dentro. Tirando la leva vado in posizione 2. Rilasciando torna in posizione 3: Position 3: stable. Lever normally in. Pulling the lever go in position 2. Leaving it returns in position 3.
1 2 3	3	Ritenuta a scatti nelle 3 posizioni. Groove release in three position.

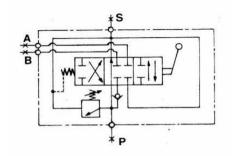
SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
1 3	4	Ritenuta a scatti nelle posizioni estreme. Transitorio aperto = 4C, transitorio chiuso = 4D. Groove release in extrems position. Transient open = 4C - Transient closed = 4D
2 3	423	Ritenuta a scatti nelle posizioni 2-3 posizione centrale e a leva spinta stabili. Groove release in positions 2-3. Central position and stables in pushed lever.
1 2	412	Ritenuta a scatti nelle posizioni 1-2 posizione centrale e a leva tirata stabili. Groove release in position 1-2. Central position and stables in pulled lever.
1 2 3 MM	5	Ritenuta a scatti in posizione 3 a leva spinta. Posizione centrale 2 stabile. Posizione 1 con leva tirata con ritorno a molla in posizione 2. Groove release in position 3 in pushed lever. Central position N° 2 stable. Position 1 with pulled lever with spring return in position 2.
1 2 3 2	6	Azionamento con servocomando pneumatico posizione 2 sta- bile. Posizioni estreme 1-3 con ritorno al centro. Operating with pneumatic serve control. Position 2 stable. Ex- trem positions 1-3 with return in the center.
1 2 3 4	7	Ritenuta a scatti nelle 4 posizioni. È possibile solo con cursore di tipo G. Groove release in the four positions. It is possible only with shaft pilot type G.
1 2 3	8	Azionamento con servocomando oleodinamico. Posizione 2 stabile. Posizioni 1-3 con ritorno a molla in posizione 2 (senza leva di azionamento). Operating with pneumatic serve control. Position 2 stable. Positions 1-3 with spring return in position 2 (without lever of operation).
1 2 3	9	Ritenuta a scatti in posizione 1 a leva tirata. Posizione centra- le 2 stabile. Posizione 3 a leva spinta con ritorno a molla al centro. Groove release in position 1 lever pulled. Central position 2 stable. Position 3 lever pushed with spring return in the center.



MAX FLOW	80 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	80 BAR
LEAKAGE TO 100 BAR	2CC/MIN
WEIGHT	KG. 6,4
CONFIGURATION	PARALLEL

FILETTATI
IMENSIONS
1/2" BSP
3/4" BSP

SCHEMA



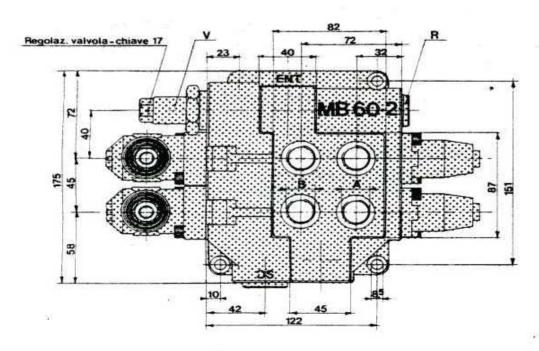


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P	Pressione	Pressure - inlets
A-B	Utilizzi	Service ports
s	Scarico	Tank - exaust
٧	Regolazione Press. massima	Relief valve adjustament
R	Tappo valvola controllo carico	Load-checks valve plug
Q	Tappo valvola controllo carico collegam, in serie	Load - checks valve plug

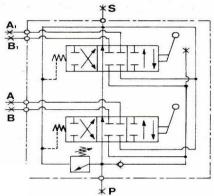


MAX FLOW	80 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	80 BAR
LEAKAGE TO 100 BAR	2CC/MIN
WEIGHT	KG. 9,3
CONFIGURATION	PARALLEL



	I FILETTATI
THREAD D	DIMENSIONS
P-A-B	1/2" BSP
S	3/4" BSP

SCHEMA



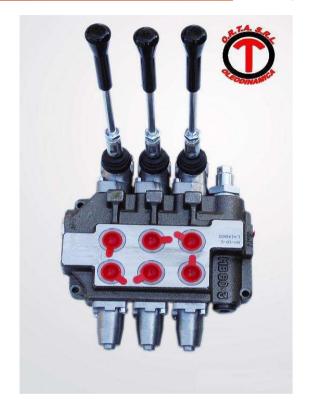


P	Pressione	Pressure - inlets
A-B	Utilizzi	Service ports
s	Scarico	Tank - exaust
٧	Regolazione Press. massima	Relief valve adjustament
R	Tappo valvola controllo carico	Load-checks valve plug
Q	Tappo valvola controllo carico collegam. in serie	



MAX FLOW	80 LIT/MIN
MAX PRESSURE	350 BAR
BACK PRESSURE	80 BAR
LEAKAGE TO 100 BAR	2CC/MIN
WEIGHT	KG. 12,2
CONFIGURATION	PARALLEL

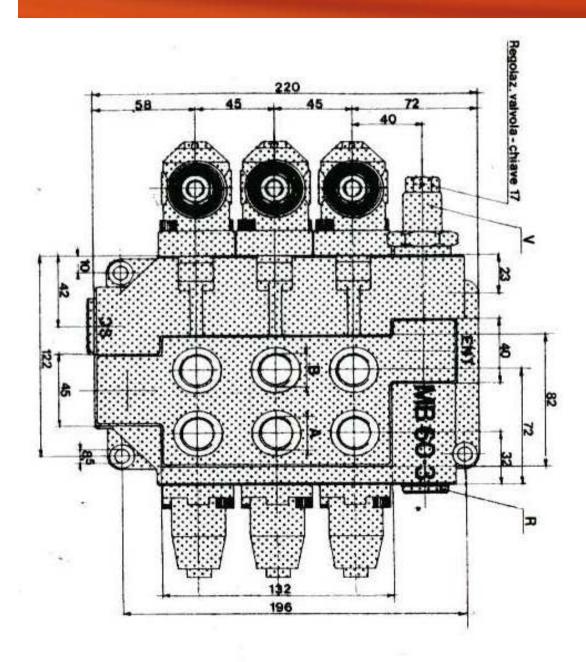
ATTACCH	I FILETTATI
THREAD D	IMENSIONS
P-A-B	1/2" BSF
S	3/4" BSP

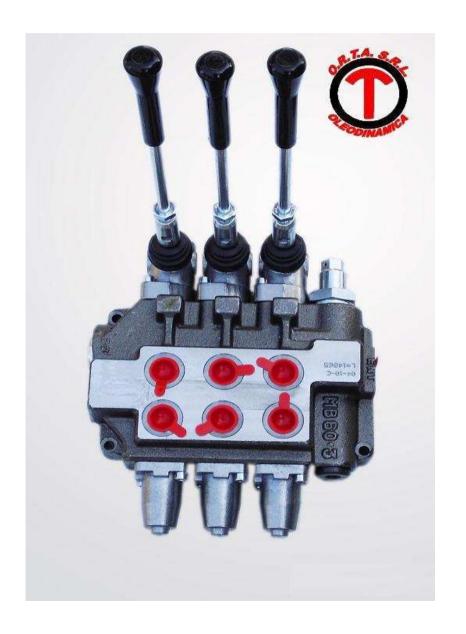


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P	Pressione	Pressure - inlets
A-B	Utilizzi	Service ports
s	Scarico	Tank - exaust
٧	Regolazione Press. massima	Relief valve adjustament
R	Tappo valvola controllo carico	Load-checks valve plug
Q	Tappo valvola controllo carico collegam, in serie	Load - checks valve plug

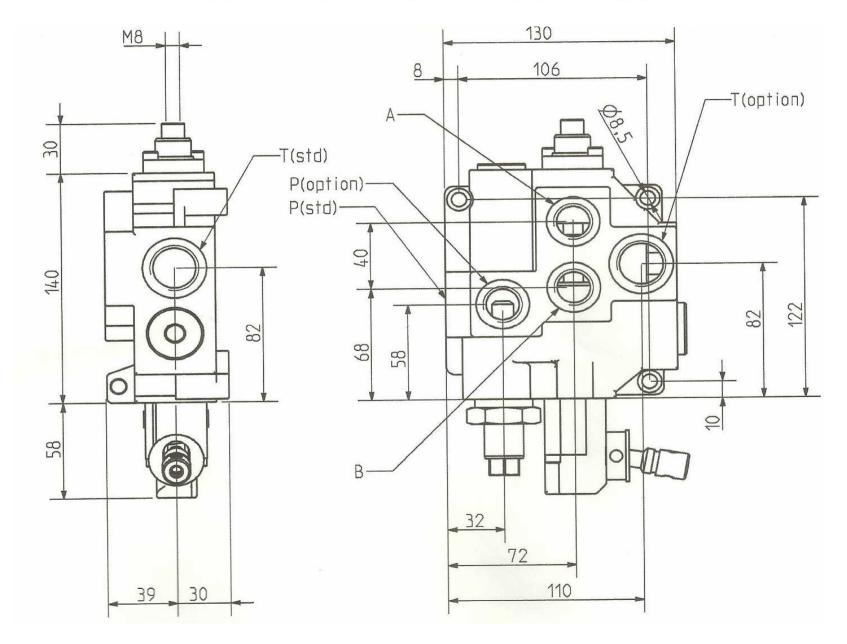






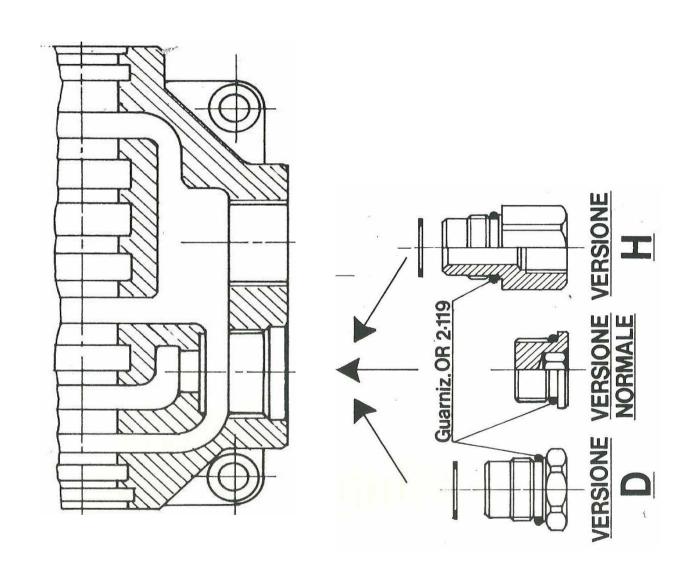


MB/60/1-A213/B-ECO-H15-ECO VERSION





ASSEMBLY DIAGRAM FOR CARRY-OVER "H" PLUG OR CLOSED CENTER "D" PLUG

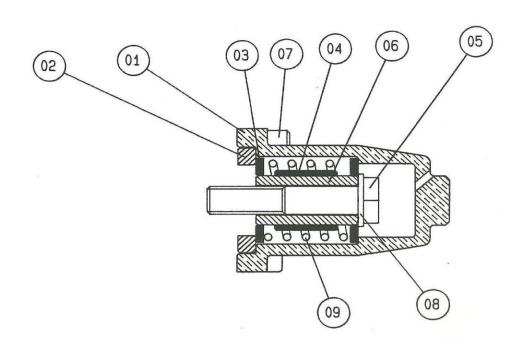


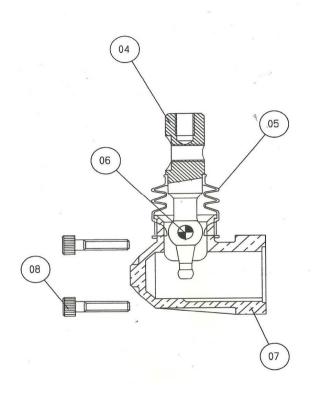
Centro chiuso
Center closed
MASSIMO MOMENTO
ORCENTE DI CHIUSURA 7+1 KG. MT

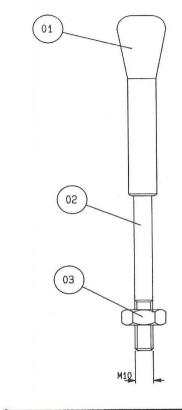


KIT 1 SPRING THREE POSITION

KIT LEVER FOR MB/60





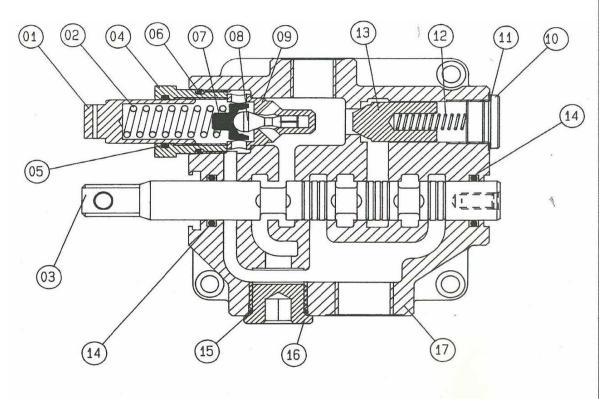


POS.	DENOMINAZIONE/ NAMED	CODICE	QUANT
01	CORPO CAPPELLOTTO	05-007	1
02	ANELLO CENTRAGGIO	05-027	1
03	RONDELLA MOLLA	05-080	2
04	DISTANZIALE CORSA	08-023	1
05	VITE TE M8X40	50-060	1
06	DISTANZIALE FISSO	05-055	1
07	VITE FISS M6X14	50-007	2
08	RONDELLA FERMO	55-027	1
09	MOLLA RICHIAMO	M-043	1

POS	DENOMINAZIONE	CODICE	Quant	NOTE
01	Pomolo gomma	01-123	1	
02	Asta leva 1=260 mm	01-0372	1	
03	Dado di bloccaggio	65-060	1	
04	Sfera snodata	08-012	1	
05	Soffietto in gomma	R-391	1	
06	Spina	08-067	1	
07	Scatola leva	800-80	1	
07 08	Viti fissaggio TCCE M6X25	50-008	2	
		<u></u>		



SPARE PARTS BODY MB/60



POS	DENOMINAZIONE	CODICE	1 Leva	2 Leve	3 leve		NOTE
01	Cappellotto premimolla	09-031	1	1	1		
02	Molla massima pressione	M-008	1	1	1		
03	Stelo comando tipo A	08-013	1.	2	3		
03	Stelo comando tipo E	08-042					
03	Stelo comando tipo C	08-068					
04	Cappellotto sede	09-030	1	1	1		
05	Oring 21, 82x3, 53	60-473	1	1	1	OR	2-212
06	Oring 28, 42x2, 62	60-295	1	1	1	OR	2-122
07	Cappuccio spillo	08-066	1	1	1		
08	Spillo massima pressione	08-065	1	1	1		
09	Sede spillo	08-064	1	1	1		
10	Tappo valvola ritegno	09-044	1	1	1		
11	Rondella tenuta	55-009	1	1	1		
12	Molla valvola ritegno	M-010	1	1	1		
13	Otturatore valvola ritegnd	09-015	1	1	1		
14	Oring 20, 22x3, 53	60-472	2	4	6	OR	2-211
15	Oring 23, 47x2, 62	60-291	1	1	1	OR	2-119
16	Tappo cilindrico 3/4	11-027	1	1	1		
17	Corpo valvola 1 leva	08-033	1				4
17	Corpo valvola 2 leve	08-034		1			
17	Corpo valvola 3 leve	08-040			1		



TYPE OF CIRCUIT AVAILABLE

SCHEMA	SIGLA	CARATTERISTICHE
SCHEME	CODE	FEATURES
B A T T T T T T T T T T T T T T T T T T	А	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi chiusi. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot open center $(P \rightarrow S)$ in central position. Cylinder closed. Lever pushed $P \rightarrow A$ $B \rightarrow S$. Lever pulled $P \rightarrow B$ $A \rightarrow S$.
1 2 3	С	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi allo scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot open center $(P \rightarrow S)$ in central position. Cylinders at the exhaust. Lever pushed $P \rightarrow A$ $B \rightarrow S$, lever pulled $P \rightarrow B$ $A \rightarrow S$.
1 2 3 ——————————————————————————————————	D	Cursore a centro chiuso $(P \rightarrow)$ in posizione centrale. Utilizzi chiusi. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Ottenibile anche montando sullo scarico il tappo "D" (tav. 0022) Shaft pilot center closed $(P \rightarrow)$ in central position. Cylinders closed. Lever pushed $P \rightarrow B \rightarrow S$ lever pulled $P \rightarrow B A \rightarrow S$. It is possible to obtain it also mounting at the exhaust the cap "D" (tav. 0022)
B A T	В	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzo B chiuso, utilizzo A allo scarico. A leva spinta $P \rightarrow S$, $B \rightarrow S$ a leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot center open $(P \rightarrow S)$ in central position. Cylinder B closed, cylinder A at the exhaust. Lever pushed $P \rightarrow A$ $B \rightarrow S$ lever pulled $P \rightarrow B$ $A \rightarrow S$.
	Е	Cursore a centro aperto (P—S) in posizione centrale per cilindri a semplice effetto. Utilizzo chiuso. A leva spinta P-B—S. a leva tirata P—B Shaft pilot center open (P—S) in central position for cylinders simple effect. Cylinder closed. Lever pushed P-B—S. Lever pulled P—S.
	F	Cursore a centro aperto (P→S) in posizione centrale per cilindri a semplice effetto. Utilizzo chiuso. A leva spinta P→A. a leva tirata P-A→S. Shaft pilot open center (P→S) in central position for cylinders simple effect. Cylinder closed. Lever pushed P→A. Lever pulled P-A→S.
1 2 3 4 — BA	G	Cursore a centro aperto $(P \rightarrow S)$ in posizione centrale. Utilizzi chiusi. Per cilindri a doppo effetto con IV posizione flottante. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva ulteriormente spinta $A \cdot B \rightarrow S$ con aggancio di ritenuta. A leva tirata $P \rightarrow B$, $A \rightarrow S$. Shaft pilot center open $(P \rightarrow S)$ in central position. Cylinders closed. For cylinders double effect. Lever pushed $P \rightarrow A \cdot B \rightarrow S$. Lever much more pushed $A \cdot B \rightarrow S$ with hooking of groove. Lever pulled $P \rightarrow B \cdot A \rightarrow S$.

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
B A	1	Cursore a centro aperto ($P \rightarrow S$) in posizione centrale. Utilizzo A chiuso. Utilizzo B a scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$, $A \rightarrow S$.
4-111-1	1	Shaft pilot open center (P \rightarrow S) in central position. Port A closed. Port B at exhaust. Lever pushed P \rightarrow A B \rightarrow S. Lever pulled P \rightarrow B A \rightarrow S.
— 1 2 3 ————————————————————————————————	М	Cursore a centro chiuso. In posizione centrale. Ufilizzi allo scarico. A leva spinta $P \rightarrow A$, $B \rightarrow S$. A leva tirata $P \rightarrow B$ $A \rightarrow S$. Ottenibile anche montando sullo scarico il tappo "D" con cursore tipo "C".
\T + _T X		Shaft pilot closed center in central position. Cylinders at the exhaust. Lever pushed P→A, B→S. Lever pulled P→B, A→S. It is possible to obtain it also mounting on the exhaust the cap "D" with shaft pilot type "C".
1 2 3 ——————————————————————————————————	N	Cursore a centro chiuso. In posizione centrale utilizzo B a scarico. Utilizzo A chiuso. A leva spinta P→A B→S. A leva tirata P→B A→S. Ottenibile anche montando sullo scarico il tappo «D» con cursore tipo «I».
4-11-7-1		Shaft pilot closed center. In central position cylinder B at the exhaust. Cylinder A closed. Lever pushed P→A B→S. Lever pulled P→B A→S. It is possible to obtain it also mounting on the exhaust the cap *D* with shaft pilot type *I*.
— 1 2 3 — — A		Cursore a centro chiuso. In posizione centrale utilizzo A a scarico. Utilizzo B chiuso. A leva spinta P→A, B→S a leva tirata P→B A→S. Ottenibile anche montando sullo scarico il tappo «D» con cursore tipo «B»
— 1 2 —	0	Shaft pilot center closed. In central position cylinder A at exhaust. Cylinder B closed. Lever pushed P→A, B→S. Lever pulled P→B A→S. It is possible also to obtain it mounting on the exhaust the cap "D» with shaft pilot type "B».
B B	Р	Cursore a centro aperto, per cilindri a semplice effetto o mo- tori unidirezionali, in posizione centrale utilizzo B a scarico, a leva tirata P→B
\		Shaft pilot open center. For cylinders simple effect or unidirectional engines. In central position cylinder B at the exhaust. Lever pulled P→B
	Q	Cursore a centro aperto per cilindri a semplice effetto o moto- ri unidirezionali, in posizione centrale utilizzo A, a scarico a leva spinta P→A.
\[\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Shaft pilot open center for cylinders simple effect or unidirectional engines. In central position cylinder A at the exhaust. Lever pushed P→A.



TYPE OF CONTROL AVAILABLE

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
1 2 3 MM	1	Posizione 2: stabile. Posizioni 1-3: ritorno a molla in posizione 2. Position 2: stable. Position 1-3: spring return in pos. 2.
1 3 WM	213	Posizione 3: stabile. Leva normalmente rientrata tirando la leva vado in posizione 1. Transitorio aperto = 213-C - transitorio chiuso = 213-D. Position 3: stable. Lever normally reentered pulling the lever go in position 1. Transient open = 213-C - Transien closed = 213-D
1 2 M	212	Posizione 2: stabile. Tirando la leva vado in posizione 1. Rilasciando torna in posizione 2. Position 2: stable, Pulling the lever go in position 1. Leaving it returns in position 2
2 3 MM	223	Posizione 2: stabile. Spingendo la leva vado in posizione 3. Rilasciando torna in posizione 2. Position 2: stable. Pushing the lever go in position 2. Leaving it returns in position 2.
1 3 MM	213/B	Posizione 1: stabile. Leva normalmente fuori. Spingendo la leva vado in posizione 3 transitorio aperto = 213/B-C - transitorio chiuso = 213/B-D Position 1: stable. Levere normally out. Pushing the lever go in position 3 transient open: 213/B-C - transien closed: 213/B-D
1 2 M	212/B	Posizione 1: stabile. Leva normalmente fuori. Spingendo la leva vado in posizione 2. Rilasciando torna in posizione 1. Position 1: stable. Lever normally out pushing the lever go in position 2 leaving it returns in position 1.
2 3 MM	223/B	Posizione 3: stabile. Leva normalmente dentro. Tirando la leva vado in posizione 2. Rilasciando torna in posizione 3: Position 3: stable. Lever normally in. Pulling the lever go in position 2. Leaving it returns in position 3.
1 2 3	3	Ritenuta a scatti nelle 3 posizioni. Groove release in three position.

SCHEMA SCHEME	SIGLA CODE	CARATTERISTICHE FEATURES
1 3	4	Ritenuta a scatti nelle posizioni estreme. Transitorio aperto = 4C, transitorio chiuso = 4D. Groove release in extrems position. Transient open = 4C - Transient closed = 4D
2 3	423	Ritenuta a scatti nelle posizioni 2-3 posizione centrale e a leva spinta stabili. Groove release in positions 2-3. Central position and stables in pushed lever.
1 2	412	Ritenuta a scatti nelle posizioni 1-2 posizione centrale e a leva tirata stabili. Groove release in position 1-2. Central position and stables in pulled lever.
1 2 3 MM	5	Ritenuta a scatti in posizione 3 a leva spinta. Posizione centrale 2 stabile. Posizione 1 con leva tirata con ritorno a molla in posizione 2. Groove release in position 3 in pushed lever. Central position N° 2 stable. Position 1 with pulled lever with spring return in position 2.
1 2 3 2	6	Azionamento con servocomando pneumatico posizione 2 sta- bile. Posizioni estreme 1-3 con ritorno al centro. Operating with pneumatic serve control. Position 2 stable. Ex- trem positions 1-3 with return in the center.
1 2 3 4	7	Ritenuta a scatti nelle 4 posizioni. È possibile solo con cursore di tipo G. Groove release in the four positions. It is possible only with shaft pilot type G.
1 2 3	8	Azionamento con servocomando oleodinamico. Posizione 2 stabile. Posizioni 1-3 con ritorno a molla in posizione 2 (senza leva di azionamento). Operating with pneumatic serve control. Position 2 stable. Positions 1-3 with spring return in position 2 (without lever of operation).
1 2 3	9	Ritenuta a scatti in posizione 1 a leva tirata. Posizione centra- le 2 stabile. Posizione 3 a leva spinta con ritorno a molla al centro. Groove release in position 1 lever pulled. Central position 2 stable. Position 3 lever pushed with spring return in the center.