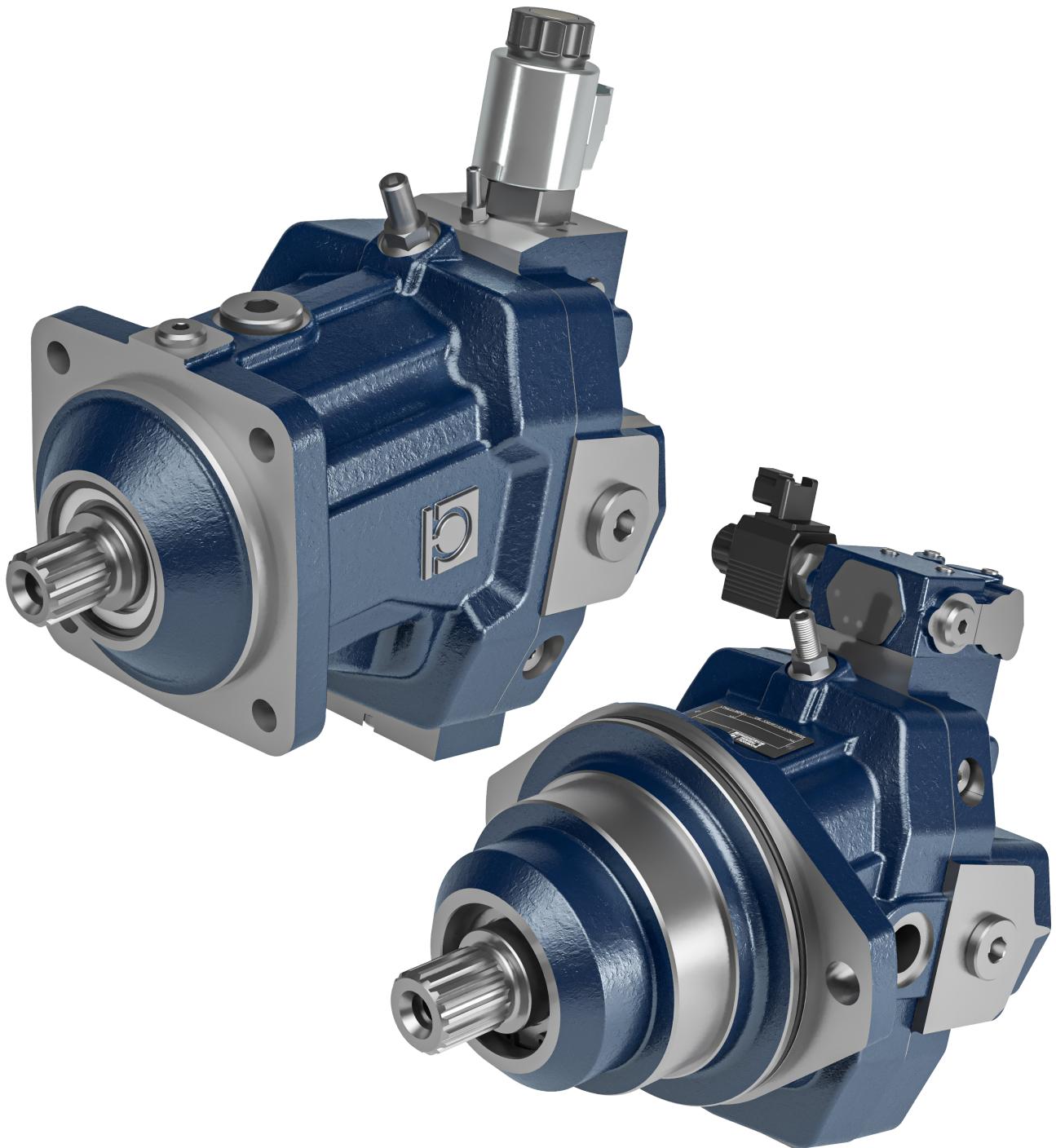


### Motori a pistoni assiali ad asse inclinato





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Introduzione	4
Ottimizzazione della durata dei cuscinetti nelle applicazioni con forze radiali	5
Applicazioni di forze assiali all'albero	7
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HPBA 080-108	31
HPBA 110-130	53
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**Introduzione**

I motori variabili ad asse inclinato sono stati progettati in modo da ottenere un elevato angolo di inclinazione dei pompanti rispetto all'asse dell'albero uscente. Rispetto ai motori a piatto inclinato, che raggiungono i 18° di angolo di inclinazione, nelle versioni Bent Axis si riescono a raggiungere i 25°.

Tale geometria offre vari vantaggi:

- elevata coppia di spunto;
- elevato range di variazione della cilindrata;
- elevata efficienza volumetrica e meccanica;
- elevata velocità massima;
- elevate pressioni massime.

I motori Bent Axis Bondioli e Pavesi possono essere impiegati con altri prodotti in sistemi a circuito chiuso e aperto per il trasferimento ed il controllo della potenza idraulica. Possono essere provvisti di valvola di flussaggio (di serie la valvola monta uno strozzatore di Ø1,7). La variazione della cilindrata da massima a minima avviene tramite pilotaggio idraulico ad alta o a bassa pressione, oppure tramite comando elettrico, in funzione delle richieste del cliente.

La versione a comando elettrico ON-OFF, permette una regolazione della cilindrata minima pari al 30% della cilindrata massima.

La versione a comando proporzionale invece, grazie alla geometria utilizzata per la sua progettazione, permette un ampio range di variazione della cilindrata, fino al raggiungimento dei 0° di inclinazione dei pompanti (cilindrata minima nulla).

La funzione estesa della capacità di zero gradi crea opportunità per migliorare facilmente le prestazioni della macchina per:

- assist drive sull'asse sterzante di macchine ad alta inerzia (ad esempio mietitrebbie) e potrebbe includere Anti Slip controllo;
- macchine fuoristrada che richiedono Anti Slip Control (irroratrice semovente);
- applicazioni multimotore che richiedono modalità di lavoro e di trasporto ottimizzate che utilizzano la posizione zero gradi per la massima velocità di trasporto;
- miglioramento della pendenza della macchina.

## Ottimizzazione della durata dei cuscinetti nelle applicazioni con forze radiali

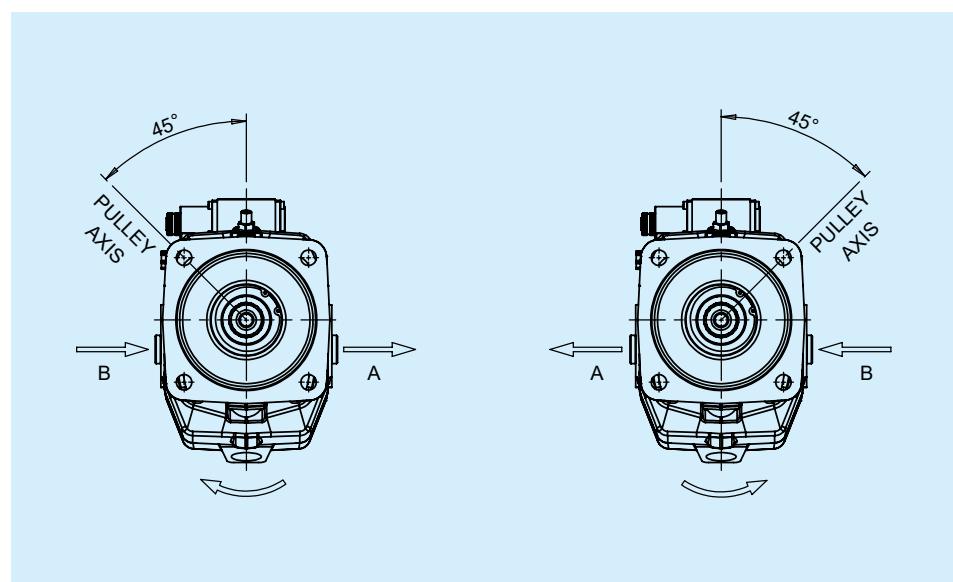
La direzione di applicazione del carico radiale influenza la durata dei cuscinetti del motore.

Una direzione ottimale della forza consente quindi di ridurre la sollecitazione sui cuscinetti e di ottenere una durata di vita maggiore degli stessi.

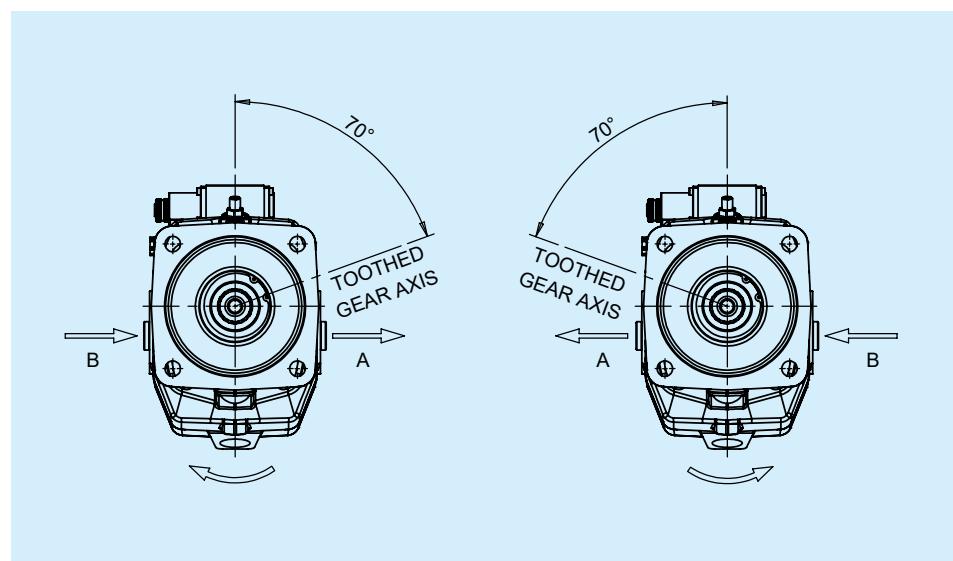
L'angolo di applicazione del carico è consigliato in funzione del senso di rotazione e del tipo di applicazione.

Per il calcolo della durata dei cuscinetti in base all'applicazione, si prega di contattare i nostri uffici tecnici.

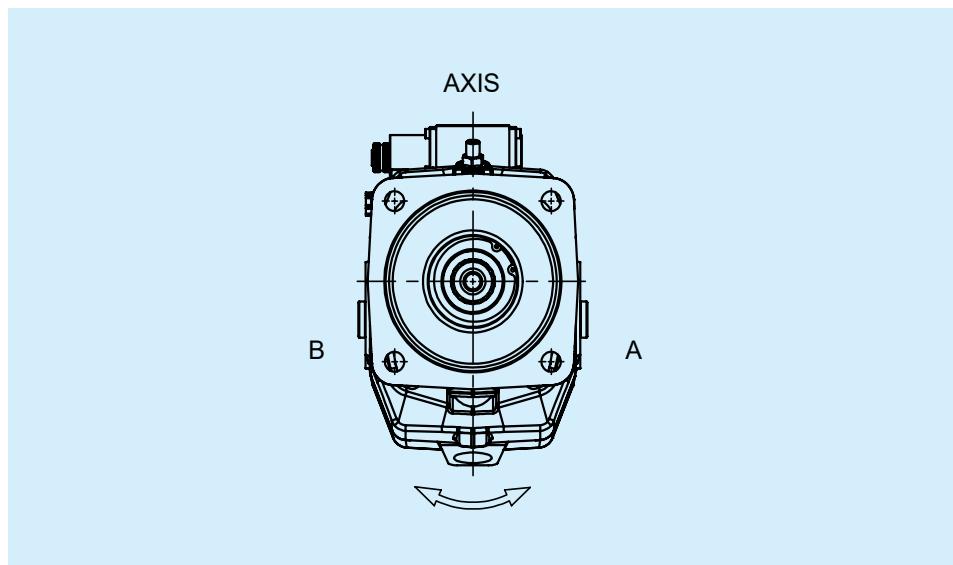
Asse puleggia



Asse ruota dentata



Asse per qualsiasi applicazione (senso di rotazione alternato)

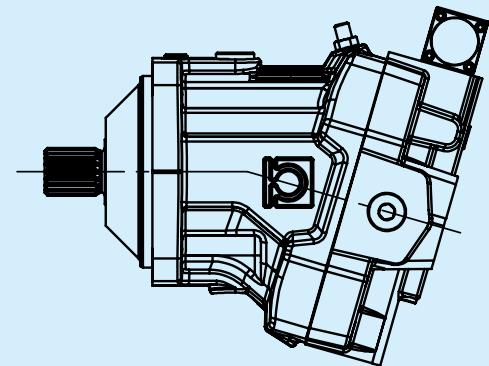


## Applicazioni di forze assiali all'albero

Possono essere applicate all'albero forze assiali di compressione (vedi tabella).

È bene evitare invece carichi assiali di trazione che possono ridurre la vita del cuscinetto principale.

FA  
+ -

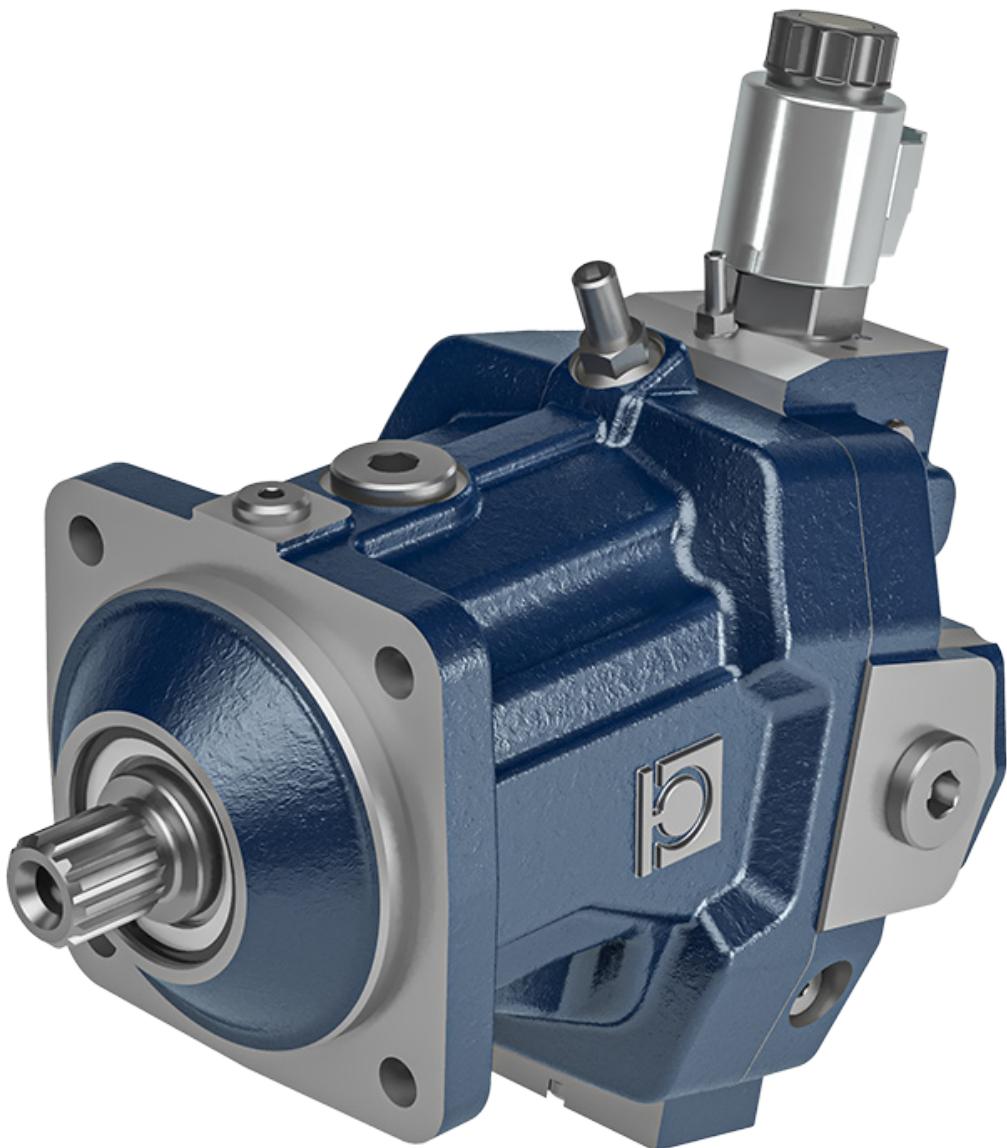


cm <sup>3</sup>	in <sup>3</sup>	Cilindrata Teorica	Carico assiale MAX senza pressione (*)	Carico assiale MAX a pressione di esercizio
		N	N	N/bar
60	3,66	1340	1340	118
78	4,76	1340	1340	141
80	4,88	1840	1840	141
108	6,59	1840	1840	184
110	6,71	2000	2000	184
130	7,93	2000	2000	230
160	9,76	3650	3650	230
200	12,2	3650	3650	270

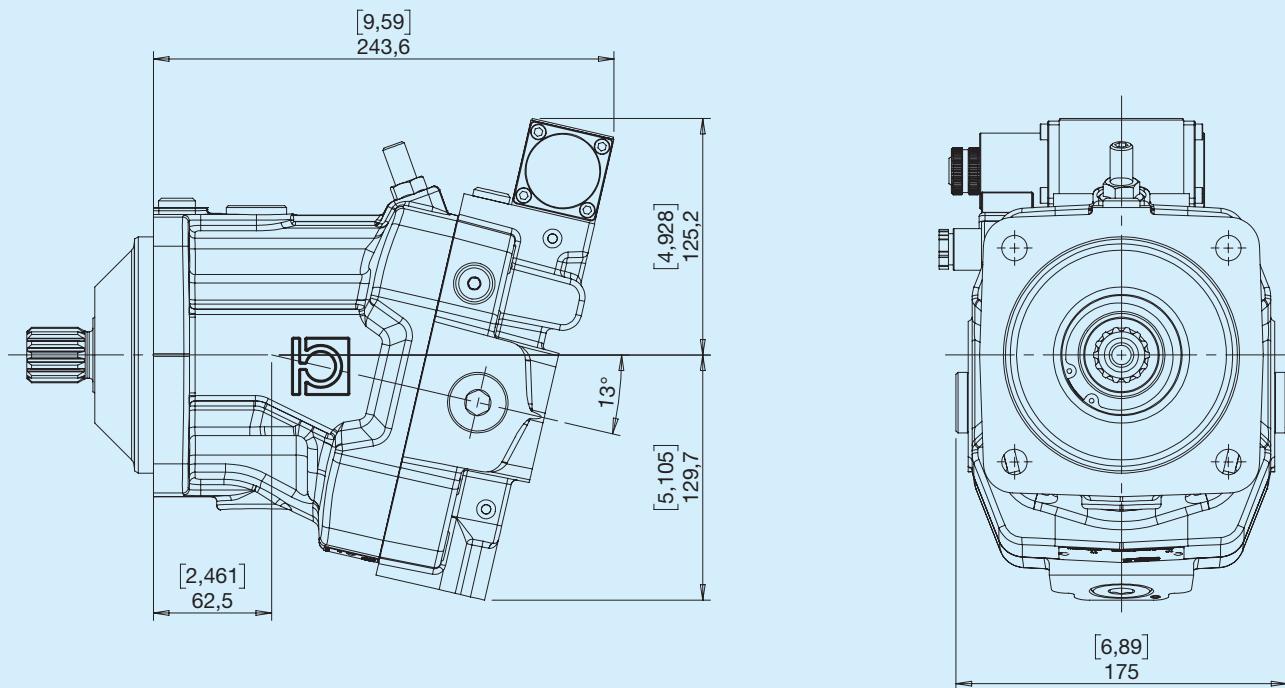
(\*) I valori indicati sono quelli massimi e non vanno applicati in funzionamento continuo.



## Motori a cilindrata variabile HPBA 060-078

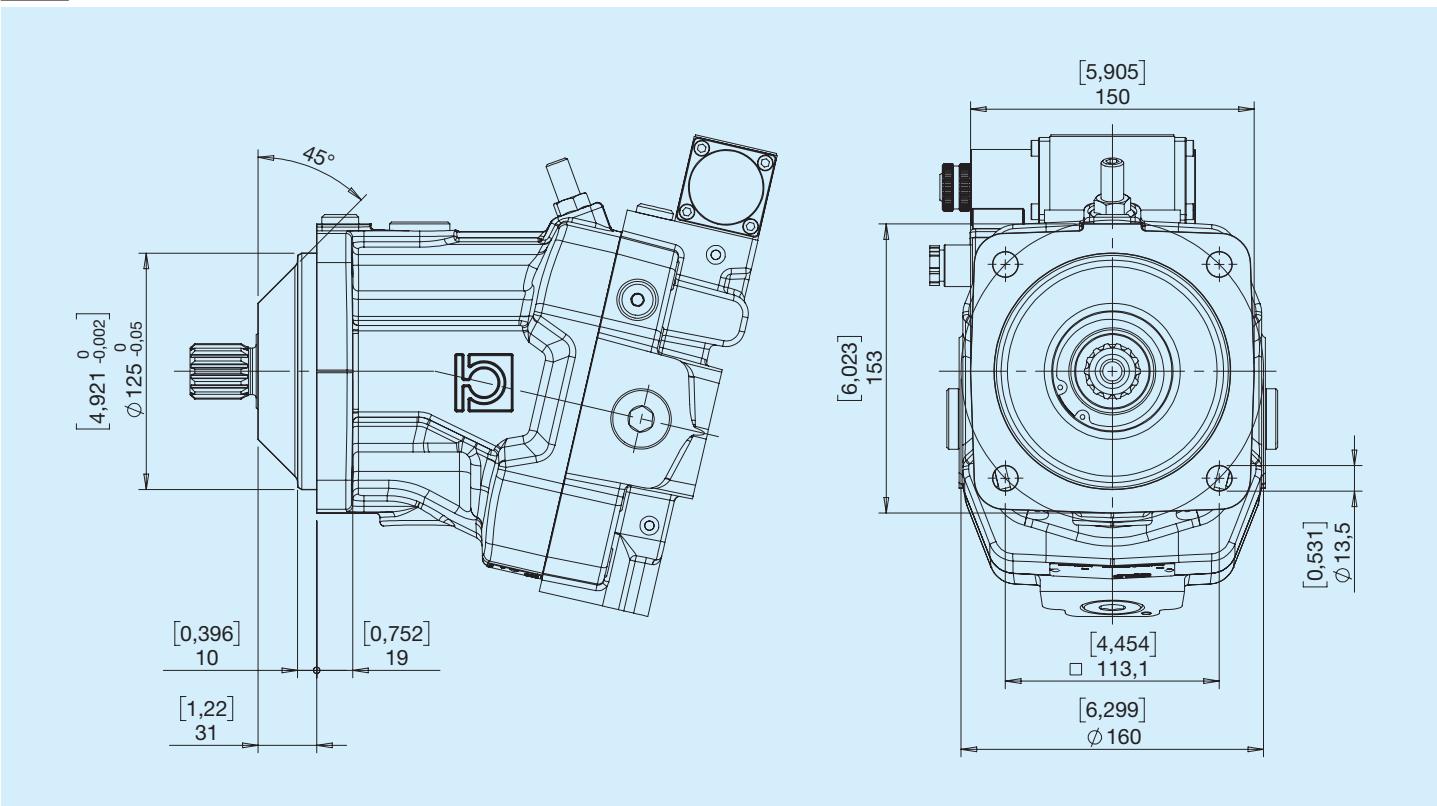


Prima di iniziare l'utilizzo leggere attentamente il documento ISTRUZIONI GENERALI D'IMPIEGO POMPE E MOTORI A PISTONI ASSIALI PER CIRCUITO CHIUSO.

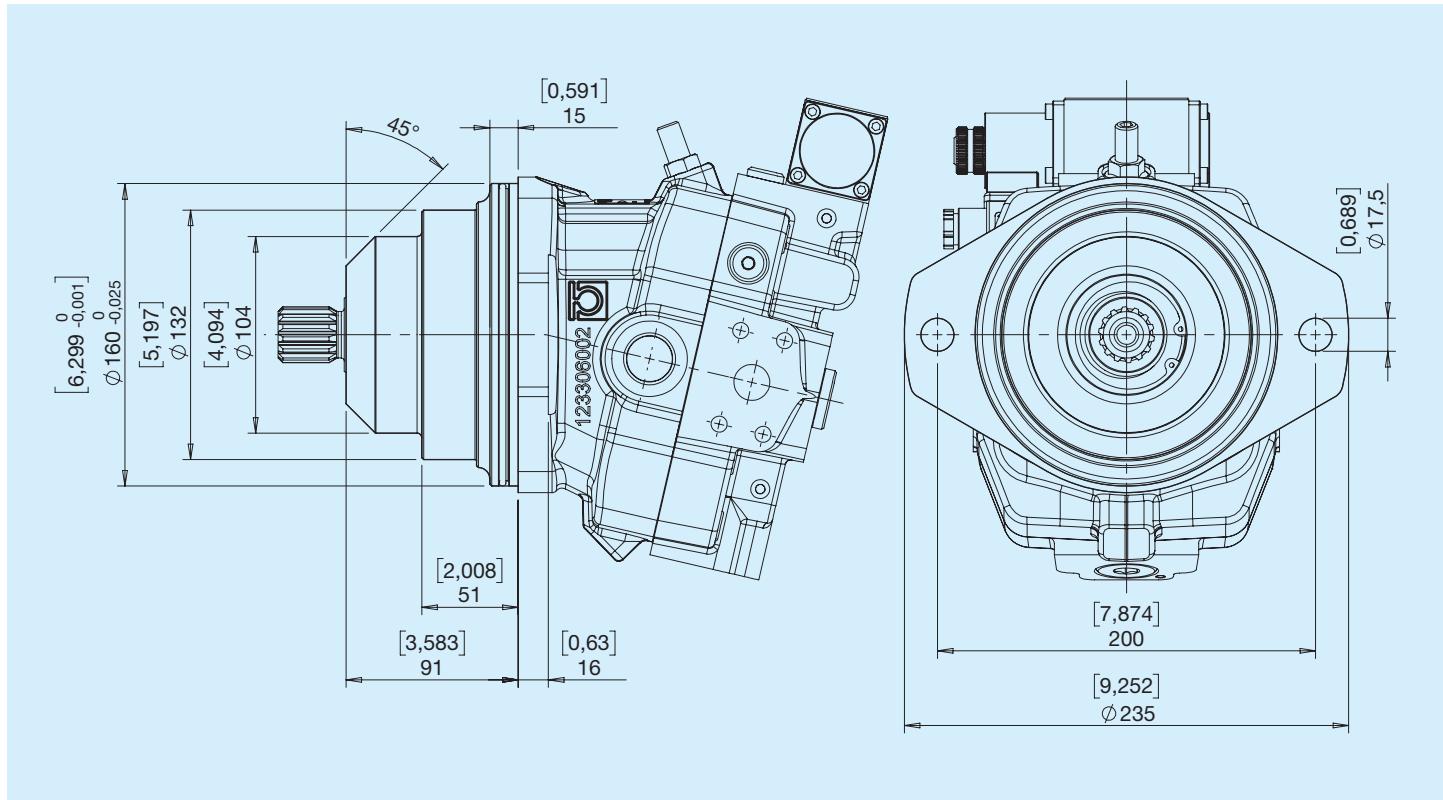


HPBA	Cilindrata teorica		Oscillante	Pressione Continua		Pressione intermittente		Pressione picco		Velocità di rotazione			Massa	
	cm³	in³		°	bar	psi	bar	psi	bar	psi	MAX (max V) min⁻¹	MAX (min V) min⁻¹	MIN min⁻¹	kg
<b>060</b>	60	3,66	25	380	5510	400	5800	450	6525	4400	5500	500	28	62
<b>078</b>	78	4,76	26	300	4350	350	5075	400	5800	4400	5500	500	28,7	63

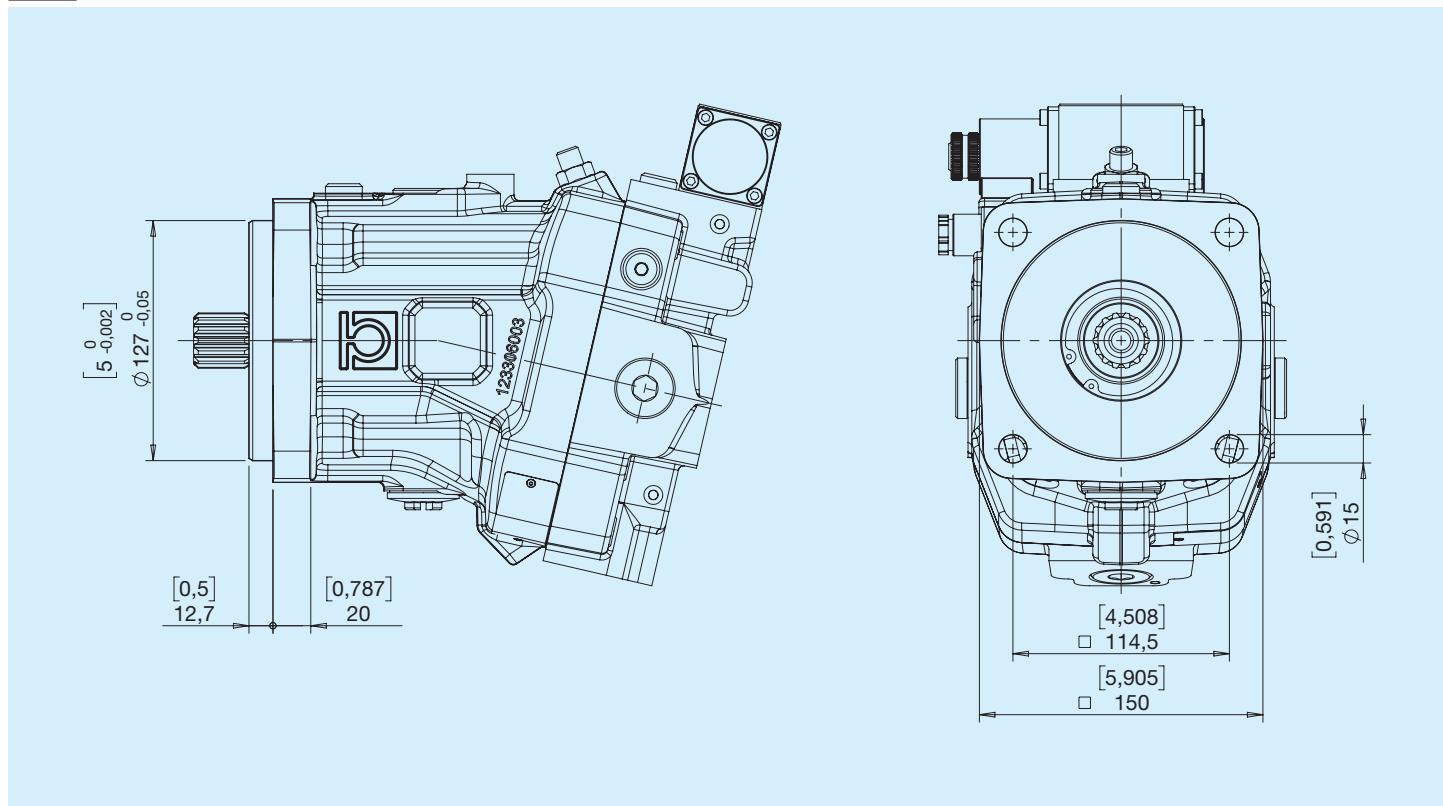
## I ISO 4 fori standard



## P ISO 2 fori centraggio a cartuccia

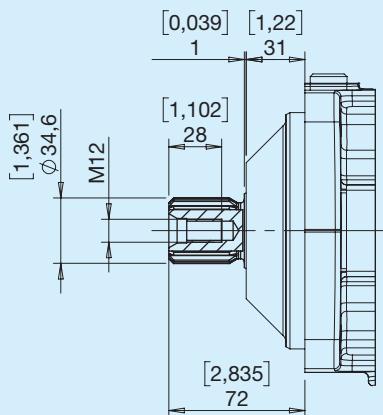


**S** SAE C



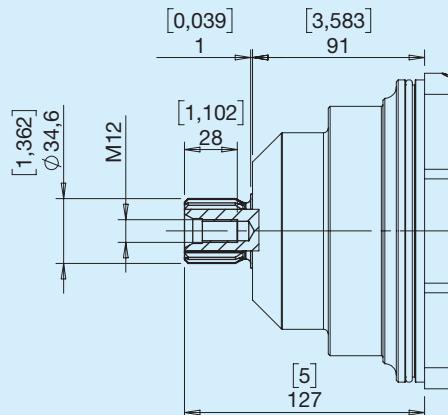
**C** DIN 5480 W35x2x30x16

Versione ISO 4 fori standard



Coppia Max 860 Nm

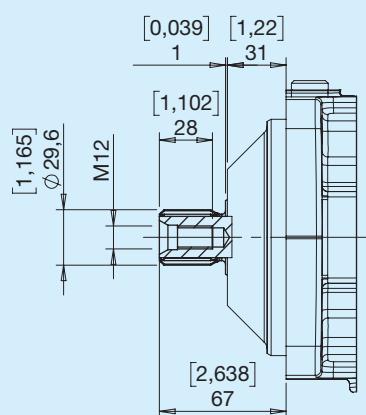
Versione ISO 2 fori a cartuccia



Coppia Max 860 Nm

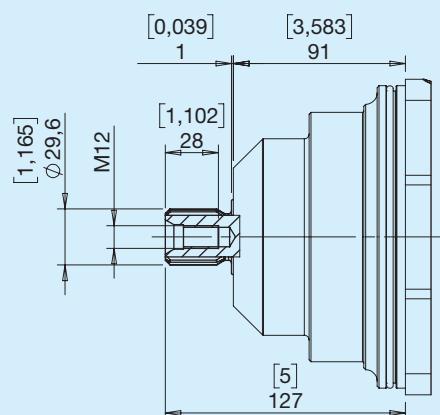
**1** DIN 5480 W30x2x30x14

Versione ISO 4 fori standard



Coppia Max 590 Nm

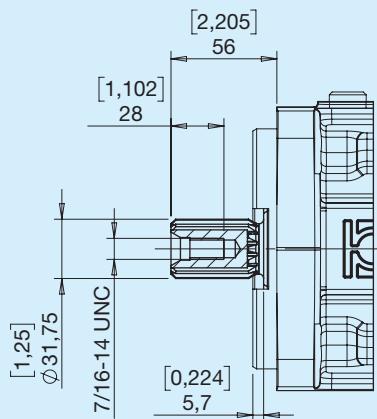
Versione ISO 2 fori a cartuccia



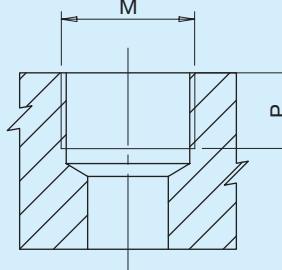
Coppia Max 590 Nm

**3** SAE 14T 12/24 DP

Versione SAE C

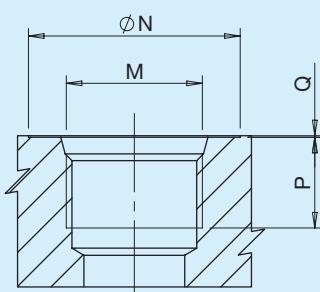


## Tipo G



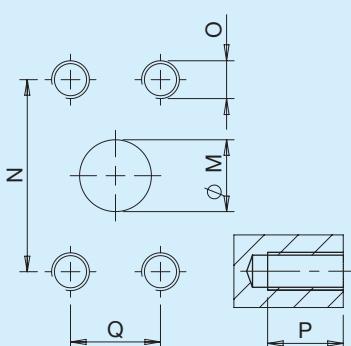
Tipo	M	P	
		Nm	mm in
G2	Port ISO 1179-1 - G 1/4	17	8 0,31
G6	Port ISO 1179-1 - G 3/4	90	19 0,75
G7	Port ISO 1179-1 - G 1	160	19 0,75

## Tipo U



Tipo	Dim.	N		P		Q		M	Nm
		mm	in	mm	in	mm	in		
U2	1/4'	20	0,79	12	0,47	0,3	0,01	Port ISO 11926-1-7/16-20	17
U6	3/4'	41	1,61	20	0,79	0,3	0,01	Port ISO 11926-1-1 1/16-12	90
U7	1'	49	1,93	18	0,70	0,3	0,01	Port ISO 11926-1-1 5/16-12	160

## Tipo N

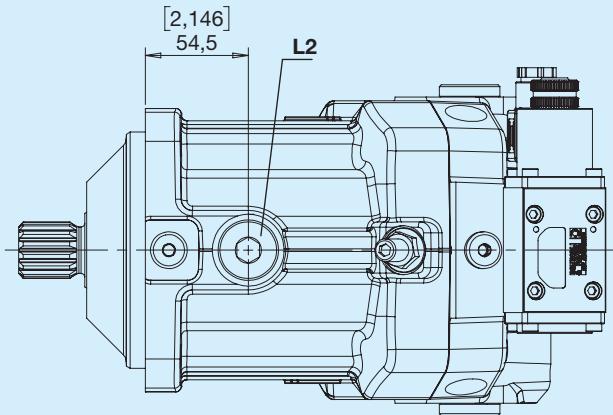
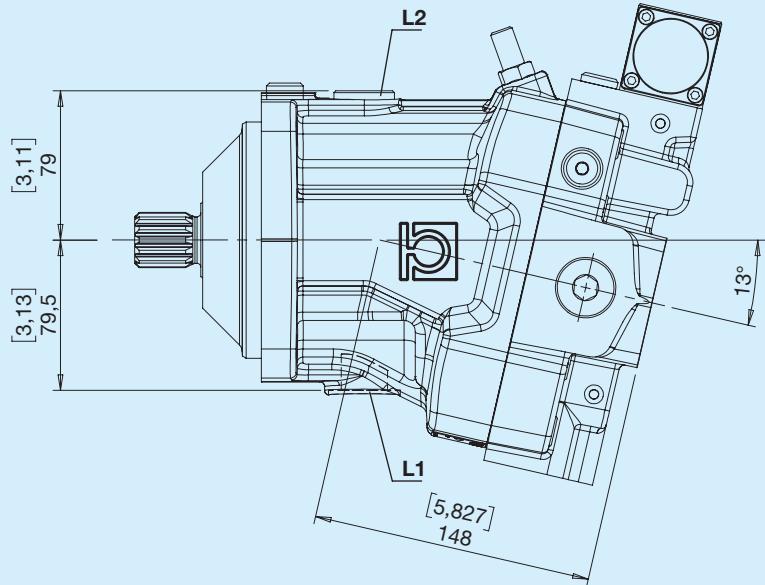
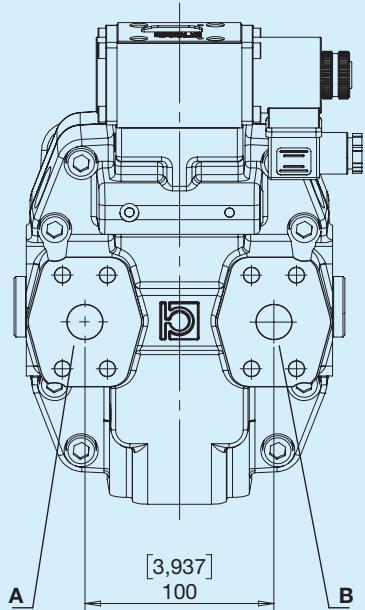


Tipo	M		N		Q		P		O
	mm	in	mm	in	mm	in	mm	in	
N6	19	0,75	50,8	2	23,8	0,94	17	0,67	M10 38

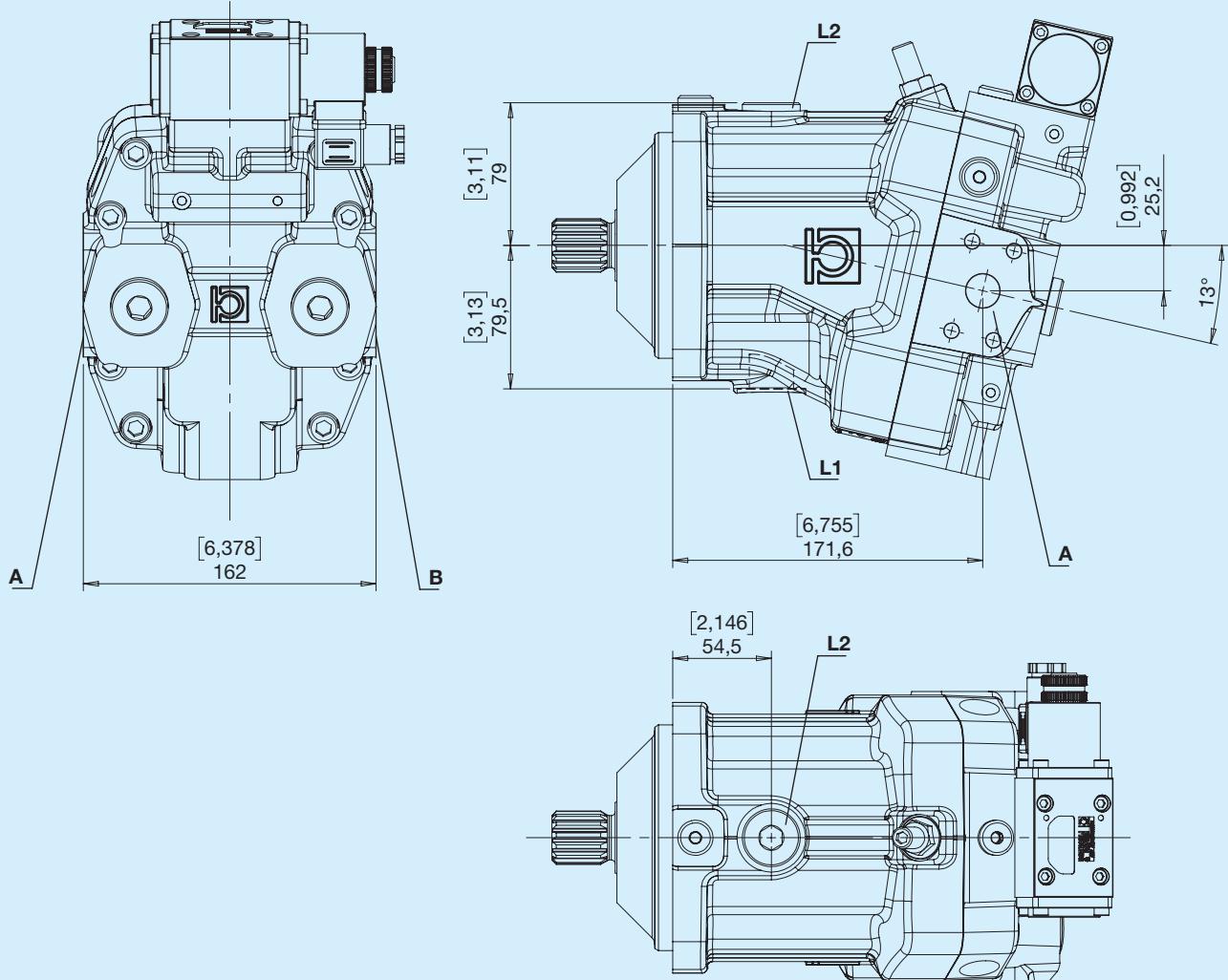
### Combinazioni

Tipo	Inlet/outlet A-B	Drenaggio L1-L2	Pilotaggio a-b-x
<b>G</b>	G7	G6	G6
<b>U</b>	U7	U6	U6
<b>N</b>	N6	G6	G2
<b>M</b>	N6	U6	U2

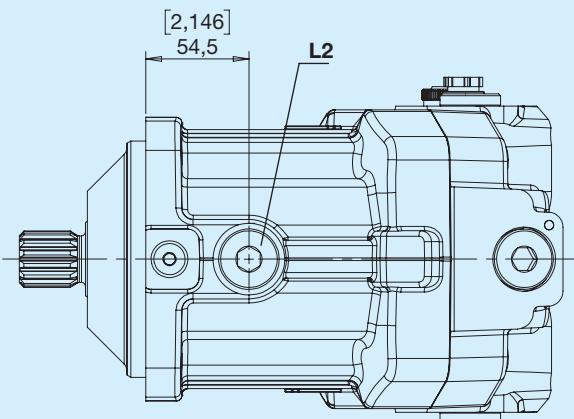
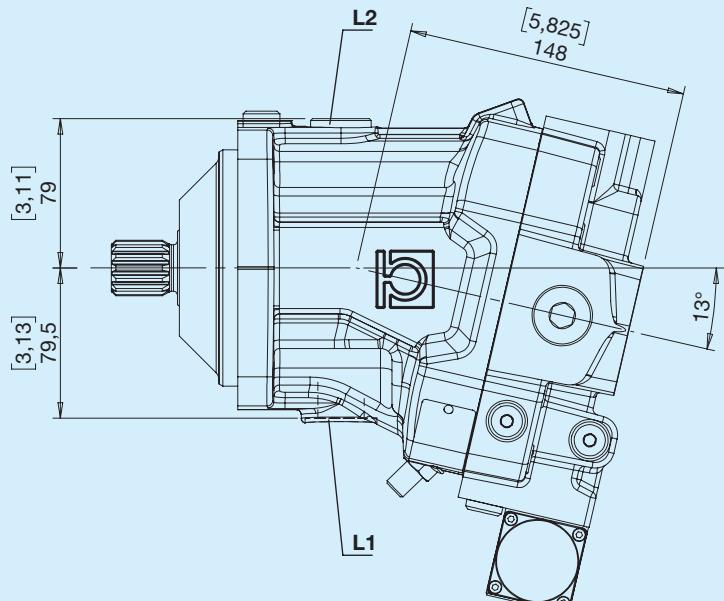
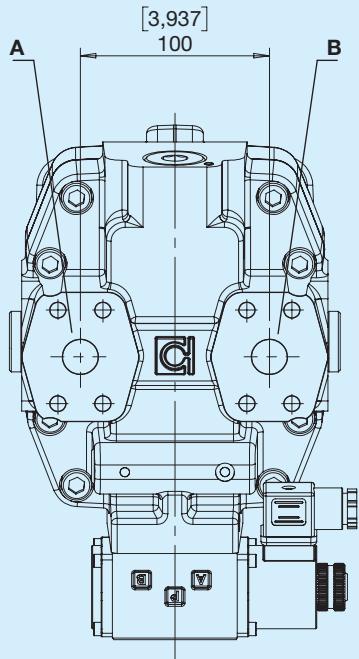
**P** Posteriori



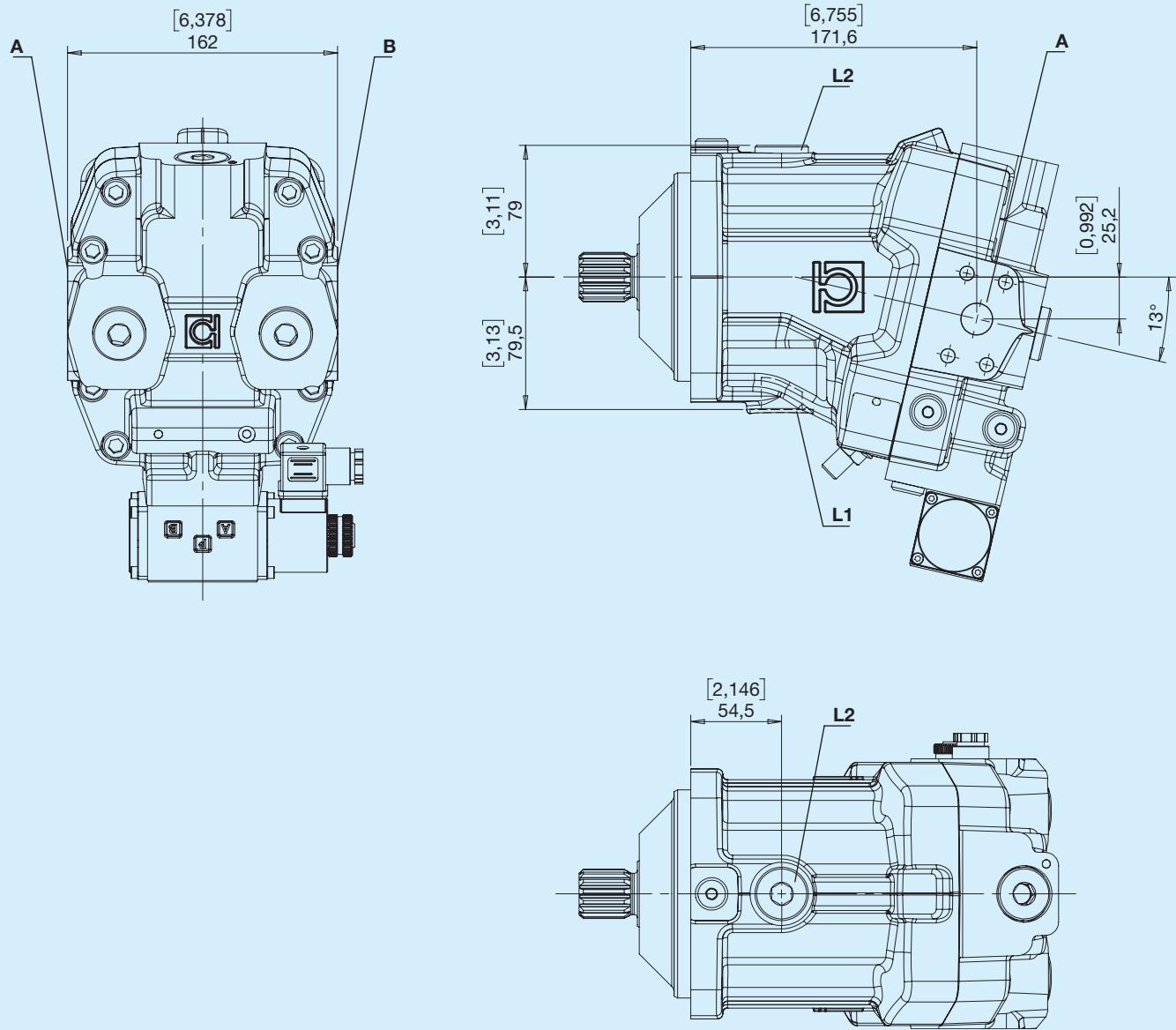
### L Lateral contrapposte



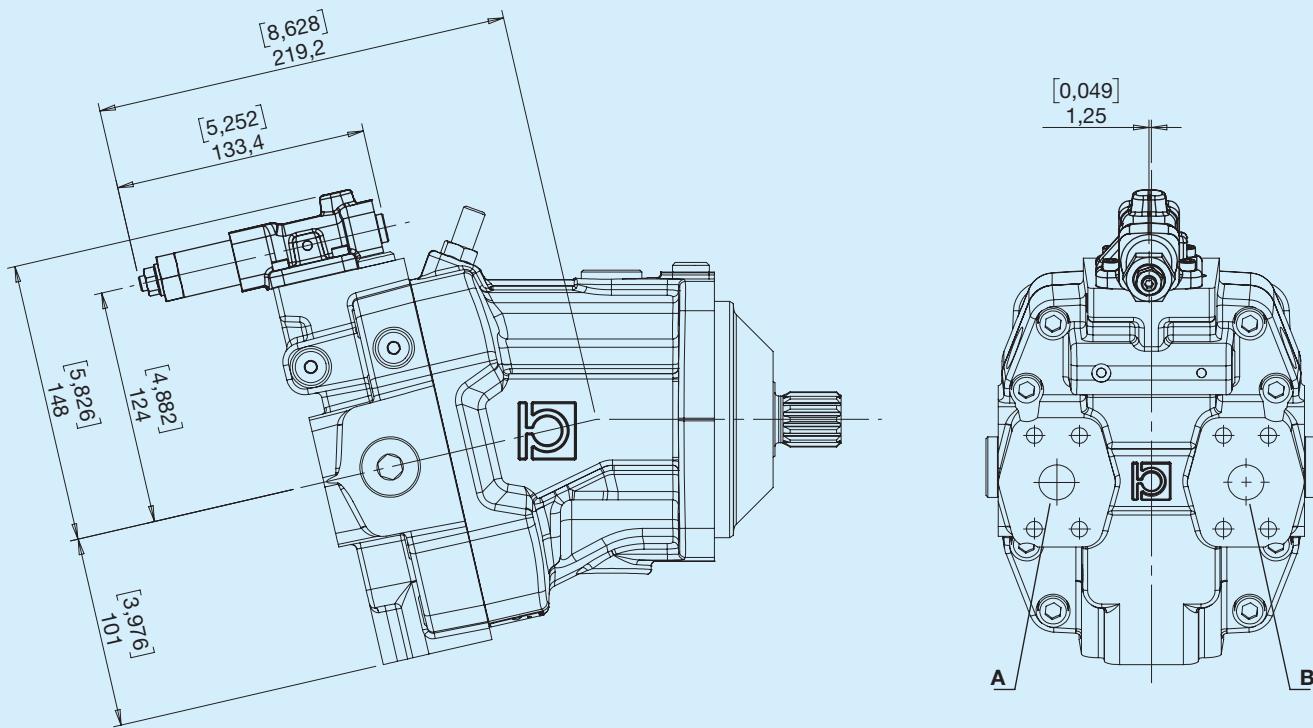
**Y** Posteriori distributore ruotato



### J Lateral contrapposte distributore ruotato

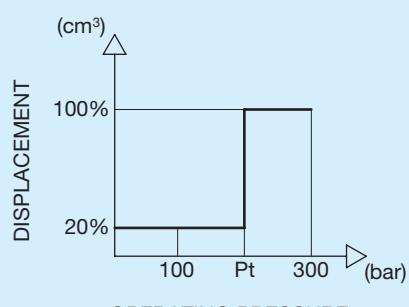


## A Idraulico automatico ON/OFF

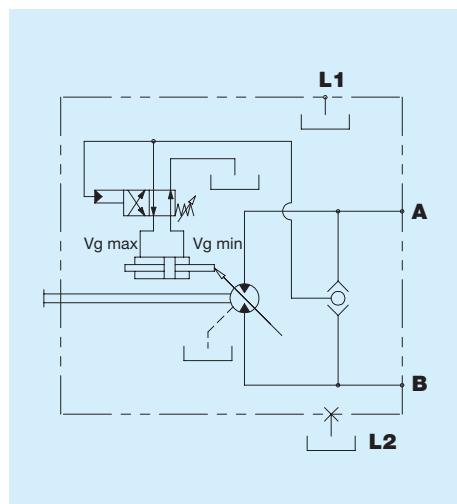


Ingresso	Rotazione
A	Sinistra
B	Destra

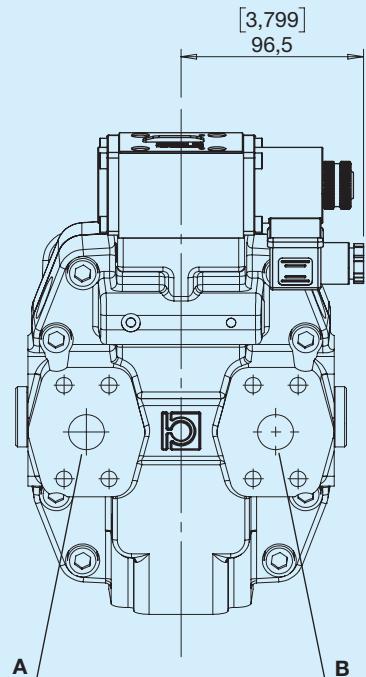
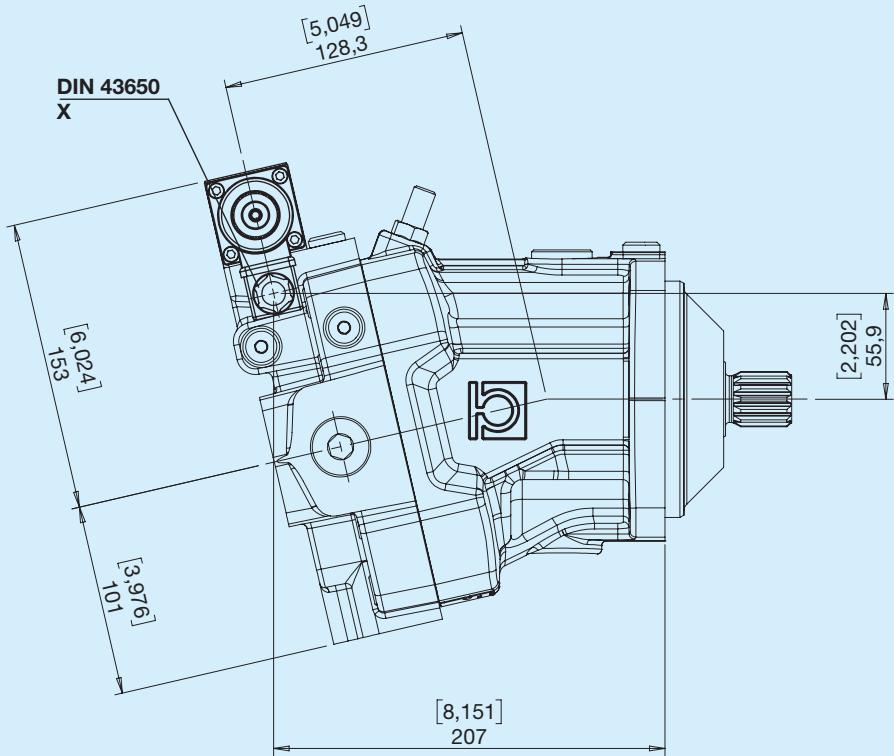
## Pilotaggio



## Schema idraulico



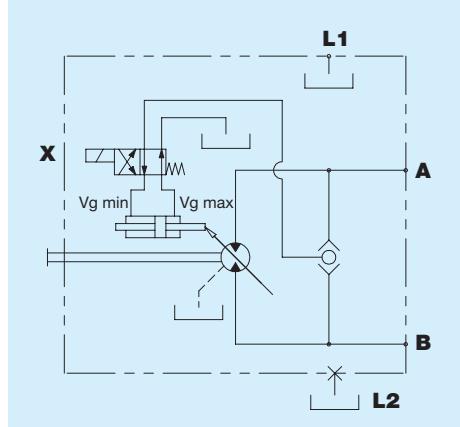
**E** Elettrico a 2 posizioni 12V



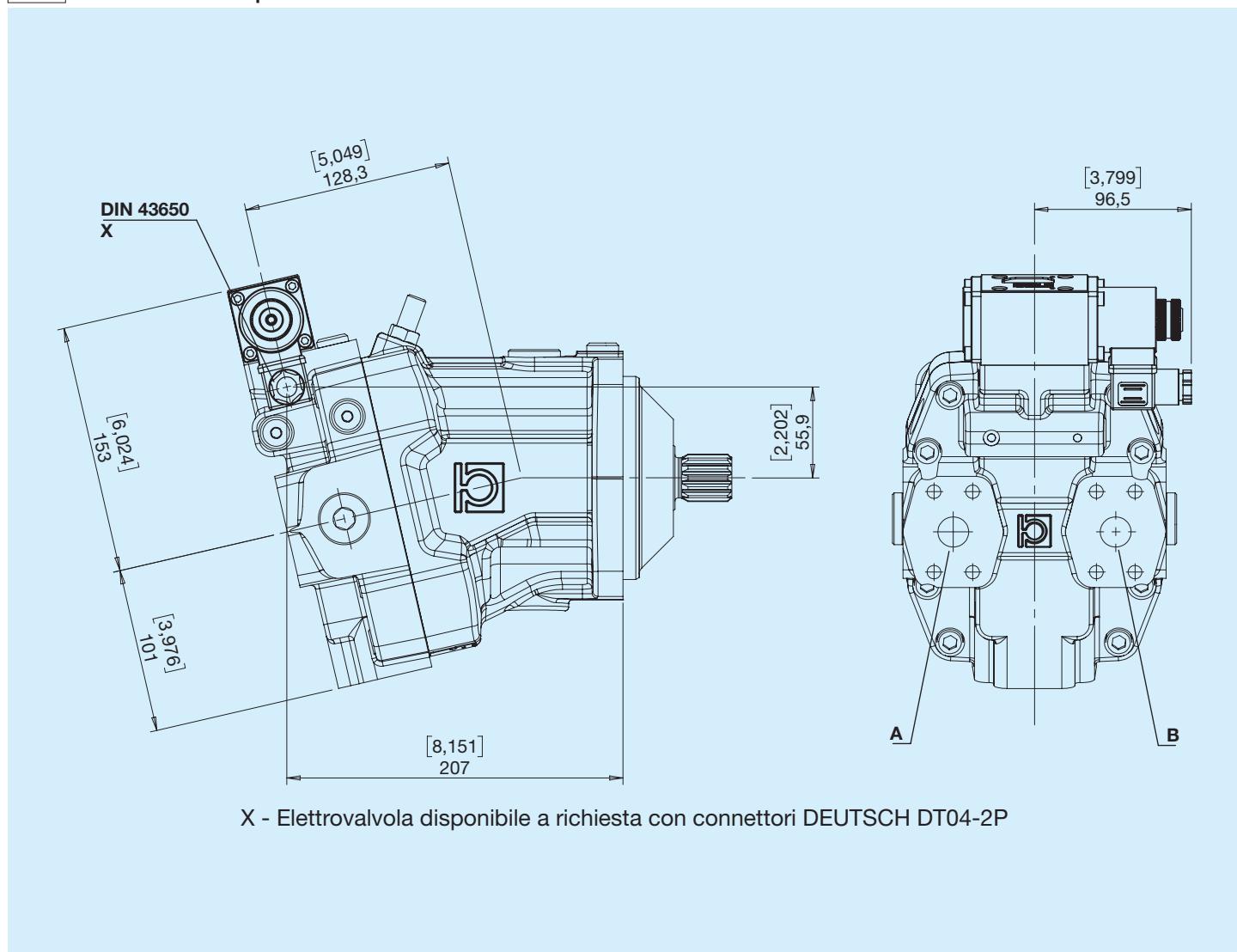
X - Elettrovalvola disponibile a richiesta con connettori DEUTSCH DT04-2P

## Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra

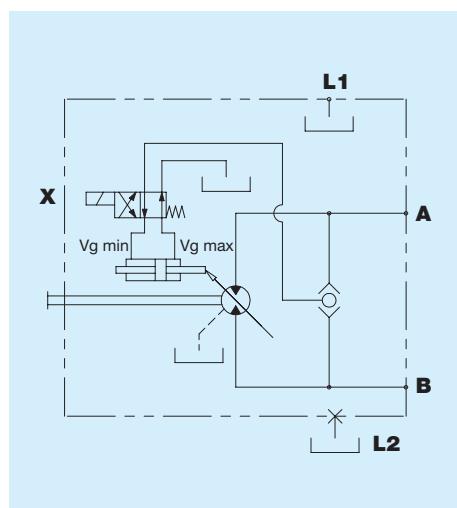


**F** Elettrico a 2 posizioni 24V

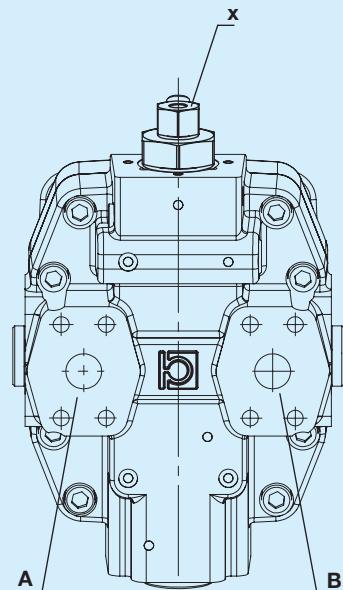
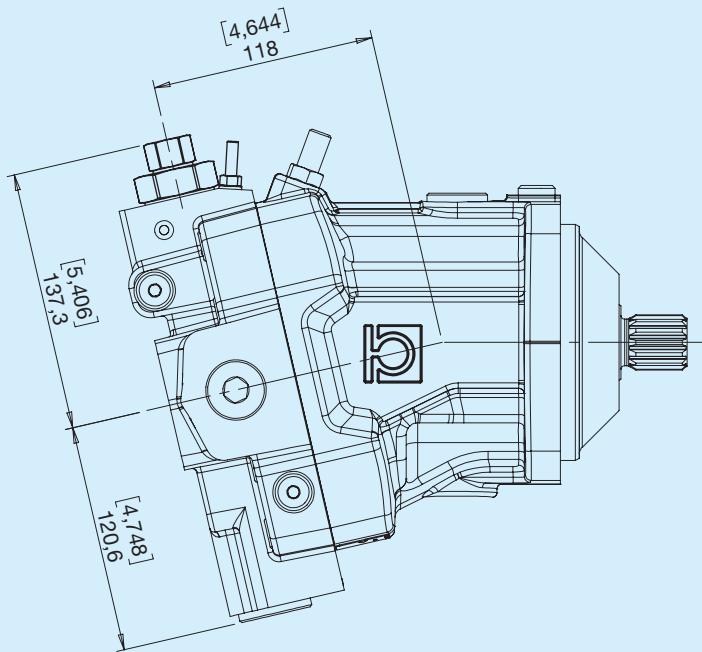


## Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra



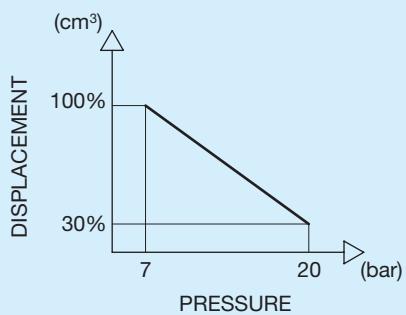
## G Idraulico proporzionale



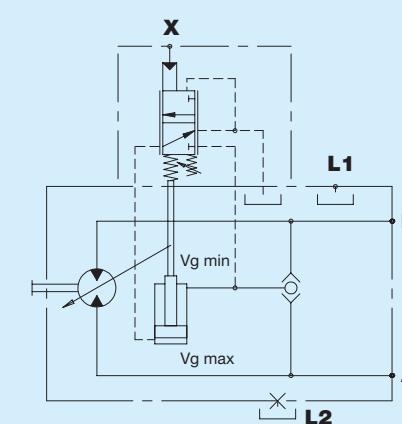
X - Pilotaggio G1/8

Ingresso	Rotazione
A	Sinistra
B	Destra

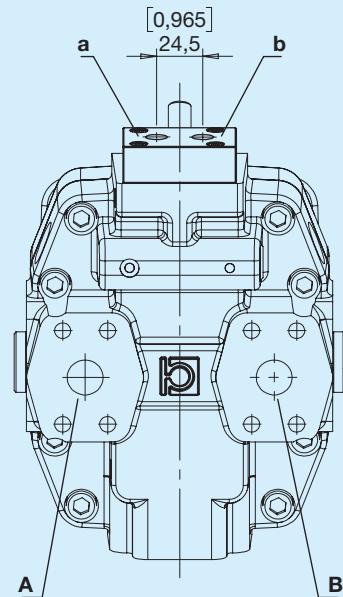
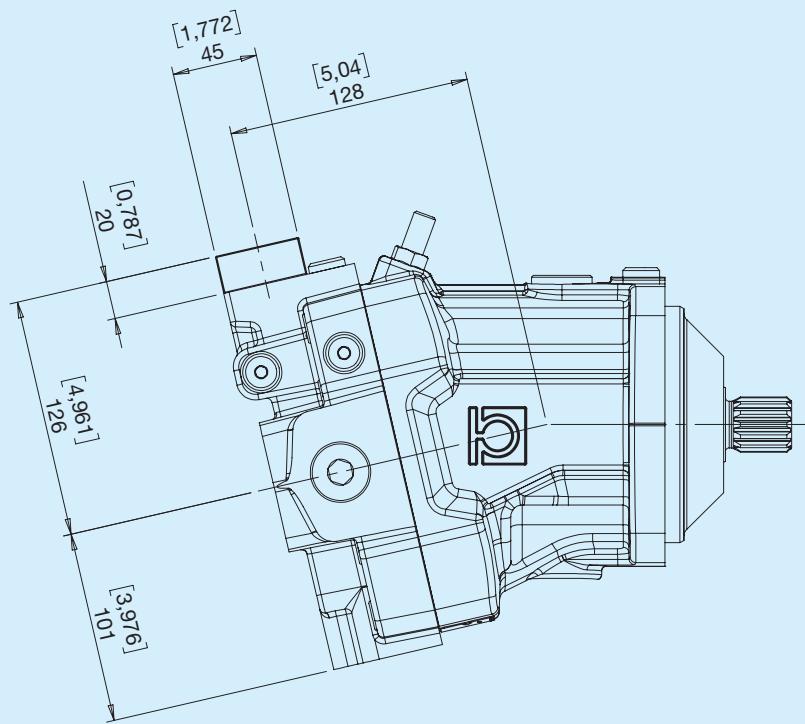
## Pilotaggio



## Schema idraulico

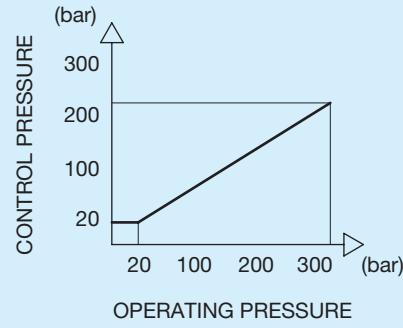


## H Idraulico diretto a 2 posizioni

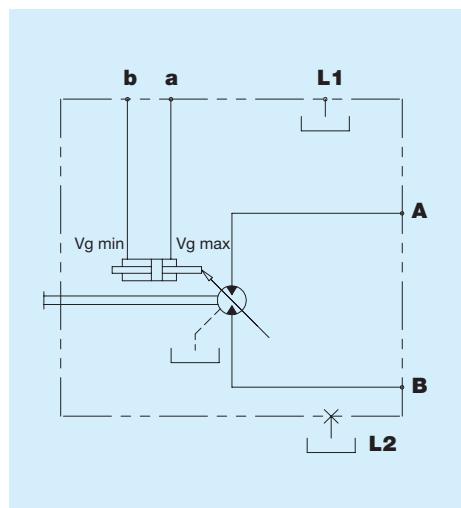


Ingresso	Rotazione
A	Sinistra
B	Destra

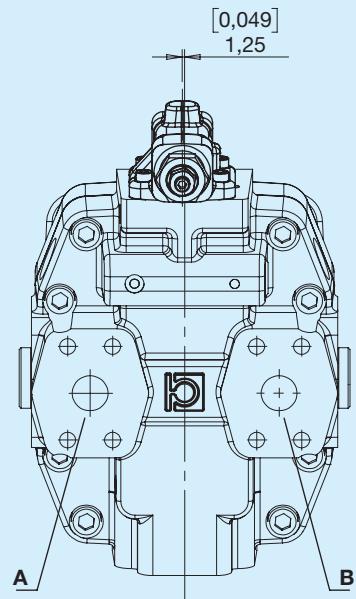
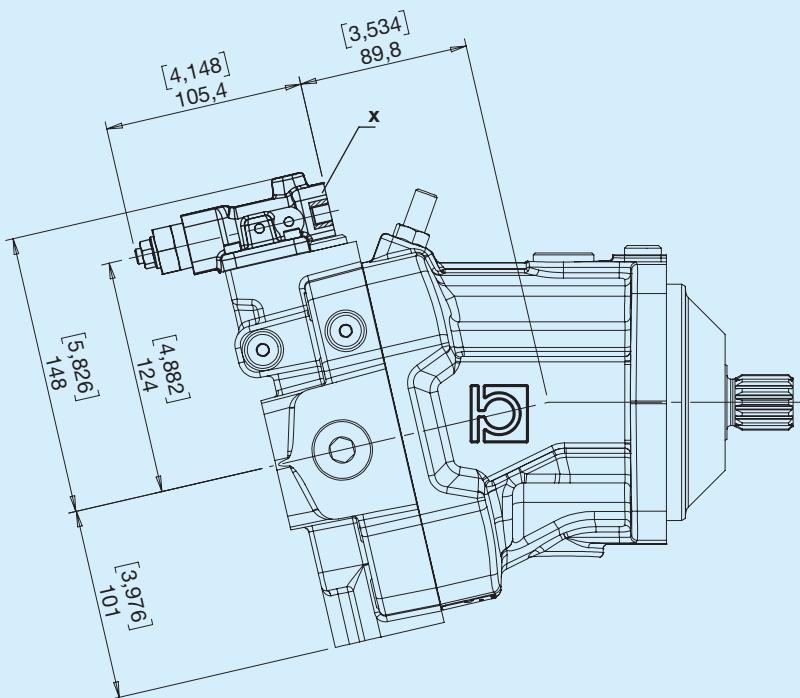
Pilotaggio



Schema idraulico



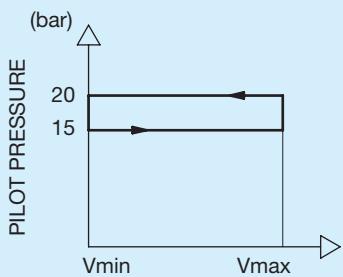
**K** Idraulico a 2 posizioni a bassa pressione



X - Pilotaggio G1/8

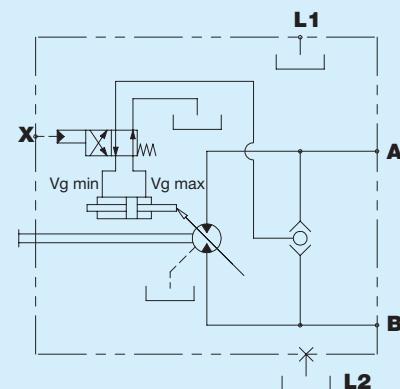
Ingresso	Rotazione
A	Sinistra
B	Destra

Diagramma

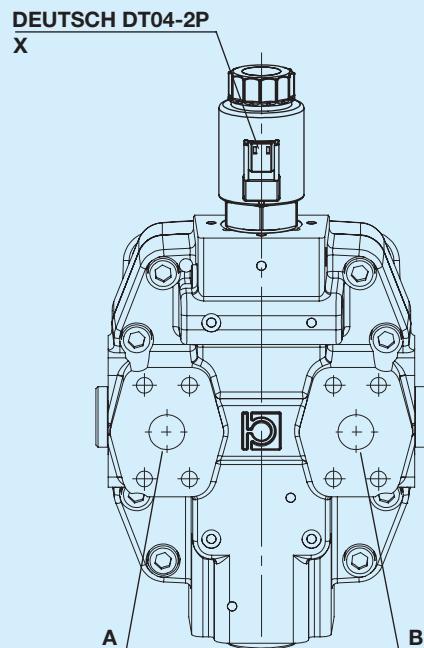
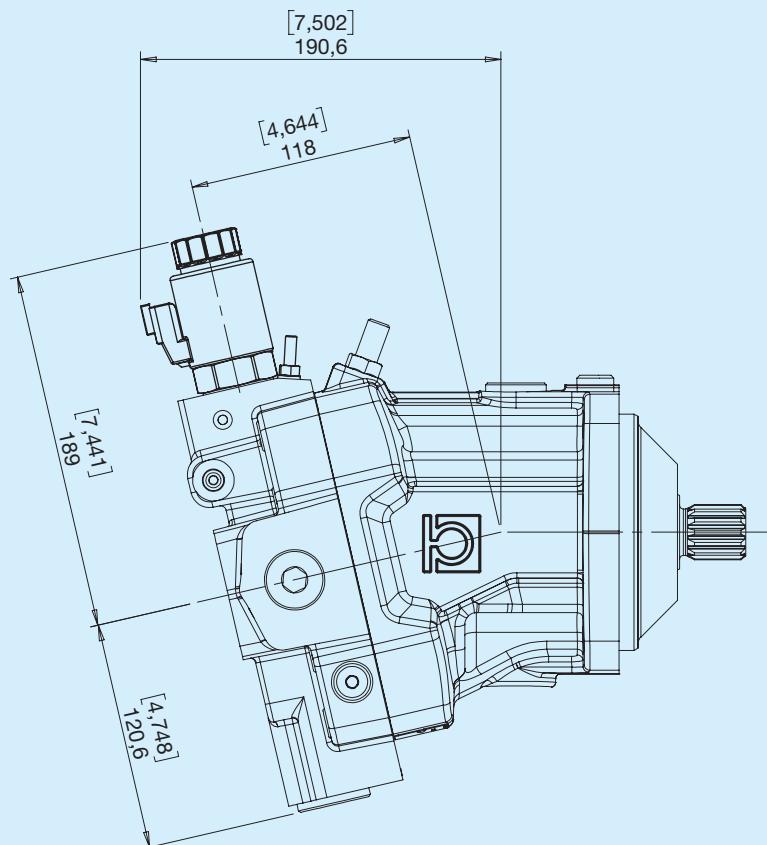


Normalmente il motore è in cilindrata massima. Applicando una pressione esterna sul pilotaggio, si ottiene la variazione di cilindrata alla minima. Per una corretta variazione della cilindrata attenersi ai valori di pilotaggio riportati nel diagramma.

Schema idraulico



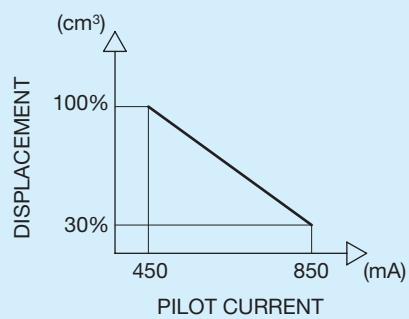
**O** Elettrico proporzionale retroazionato 12V



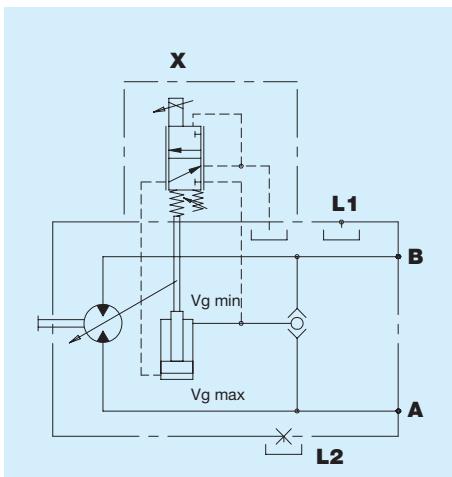
X - Elettrovalvola

Ingresso	Rotazione
A	Sinistra
B	Destra

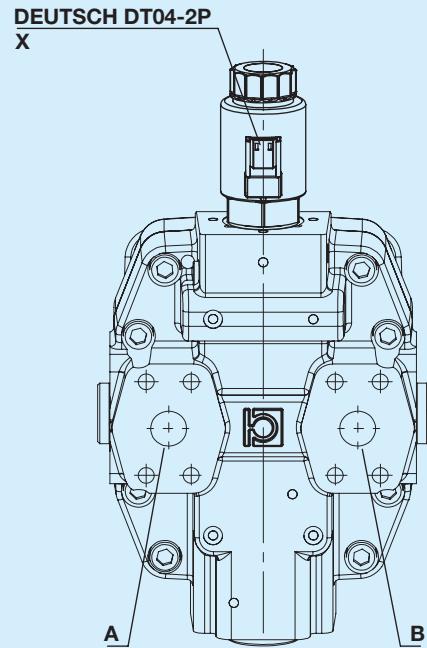
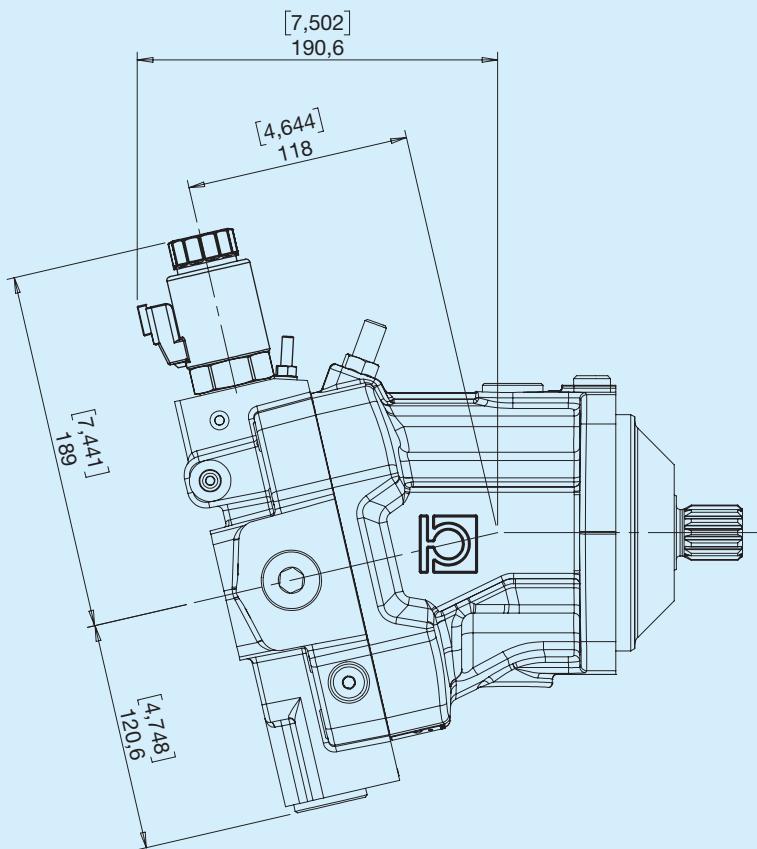
## Pilotaggio



## Schema idraulico



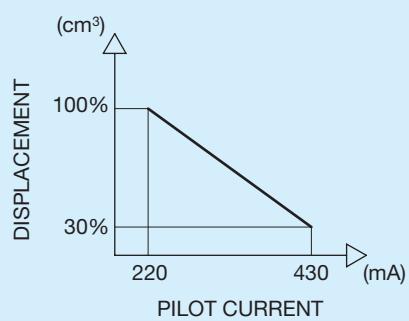
**V** Elettrico proporzionale retroazionato 24V



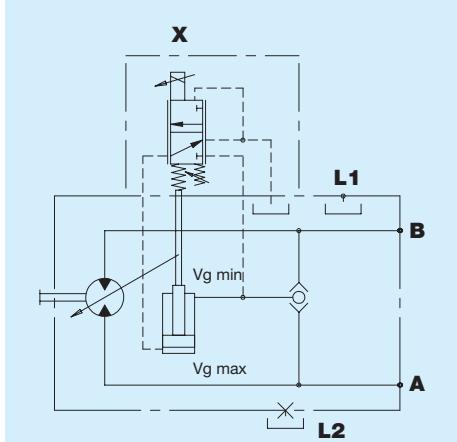
X - Elettrovalvola

Pilotaggio

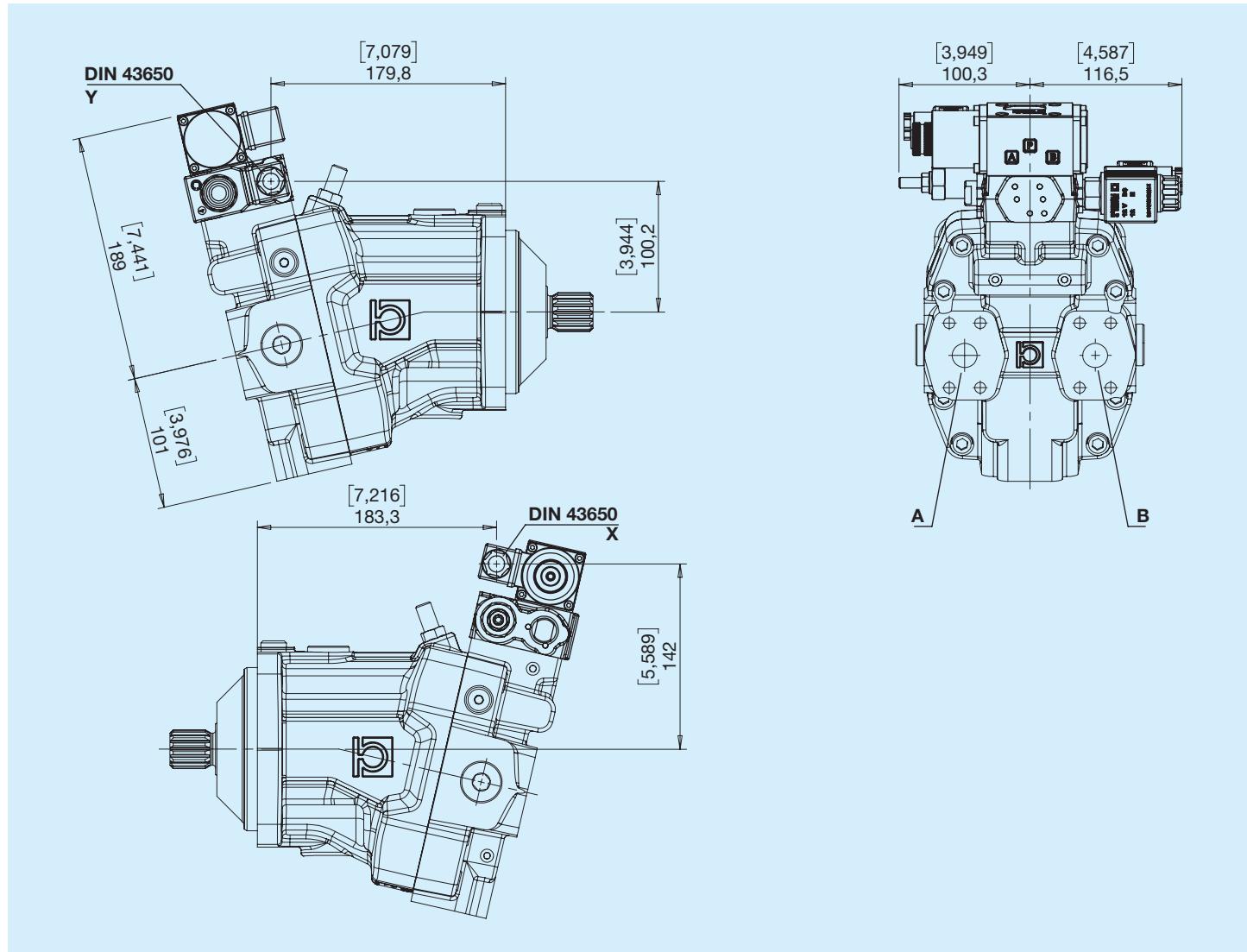
Ingresso	Rotazione
A	Sinistra
B	Destra



Schema idraulico

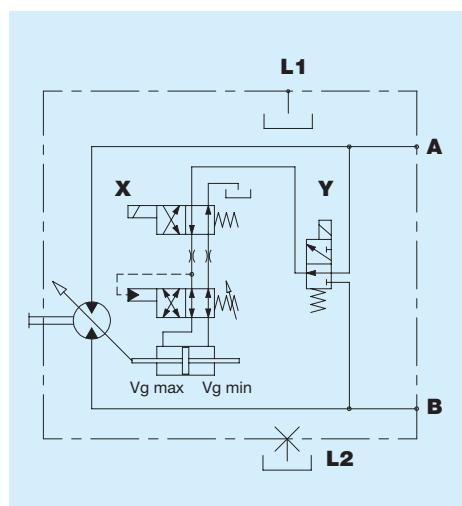


**R** Elettrico ON/OFF con pressure override e selettrice di canale

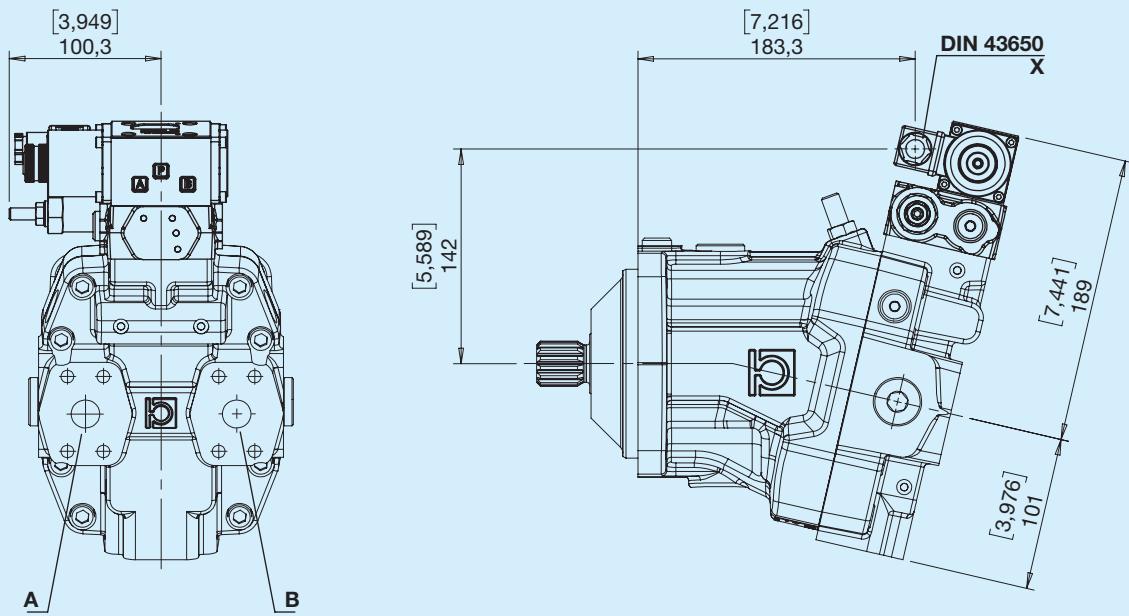


Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra

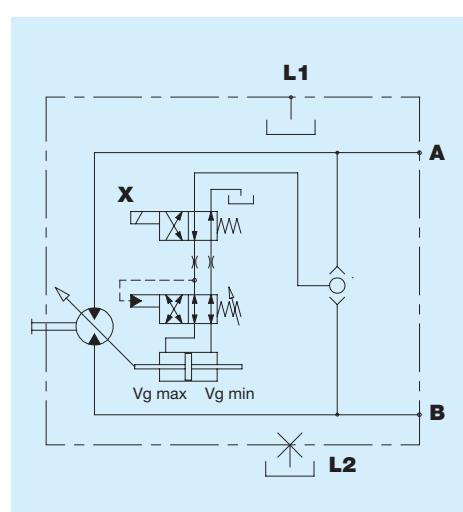


**U** Elettrico ON/OFF con pressure override

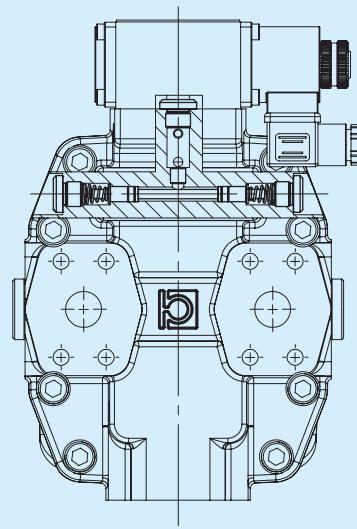
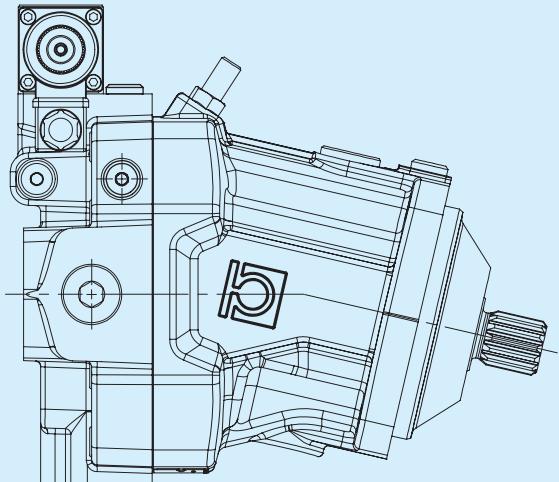


Ingresso	Rotazione
A	Sinistra
B	Destra

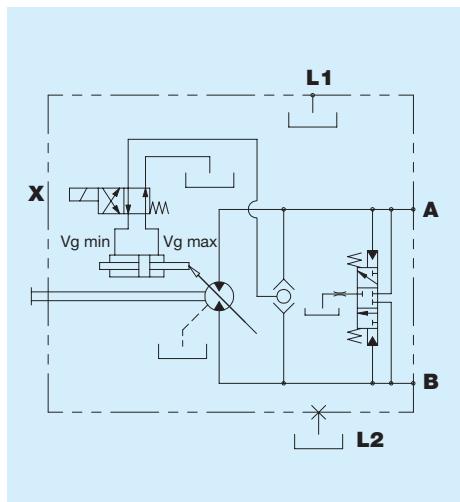
Schema idraulico



**V** Valvola di flussaggio (5-7 l/min)



Schema idraulico

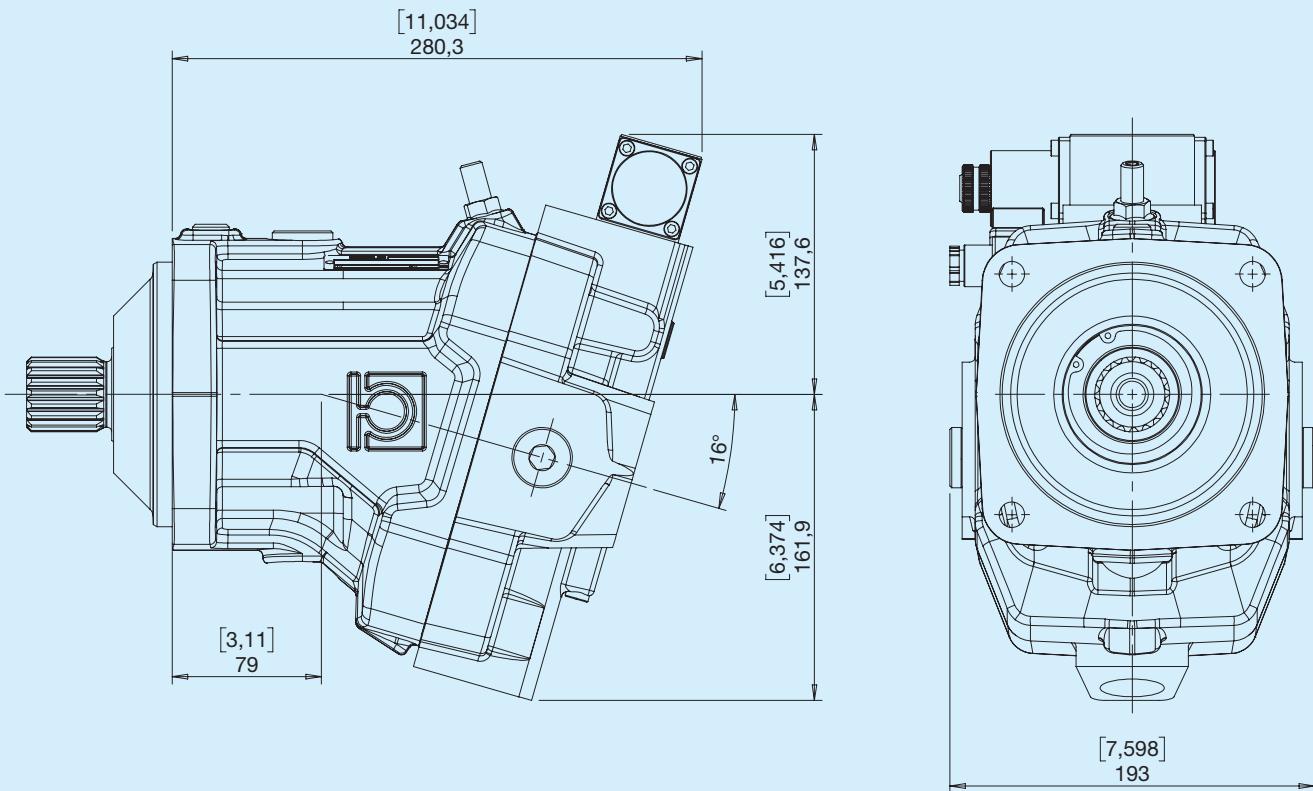


HPBA	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2	3												
060				078										
4	5													
6														
7														
8														
9														
10														
11														
12	13	14												

## Motori a cilindrata variabile HPBA 080-108

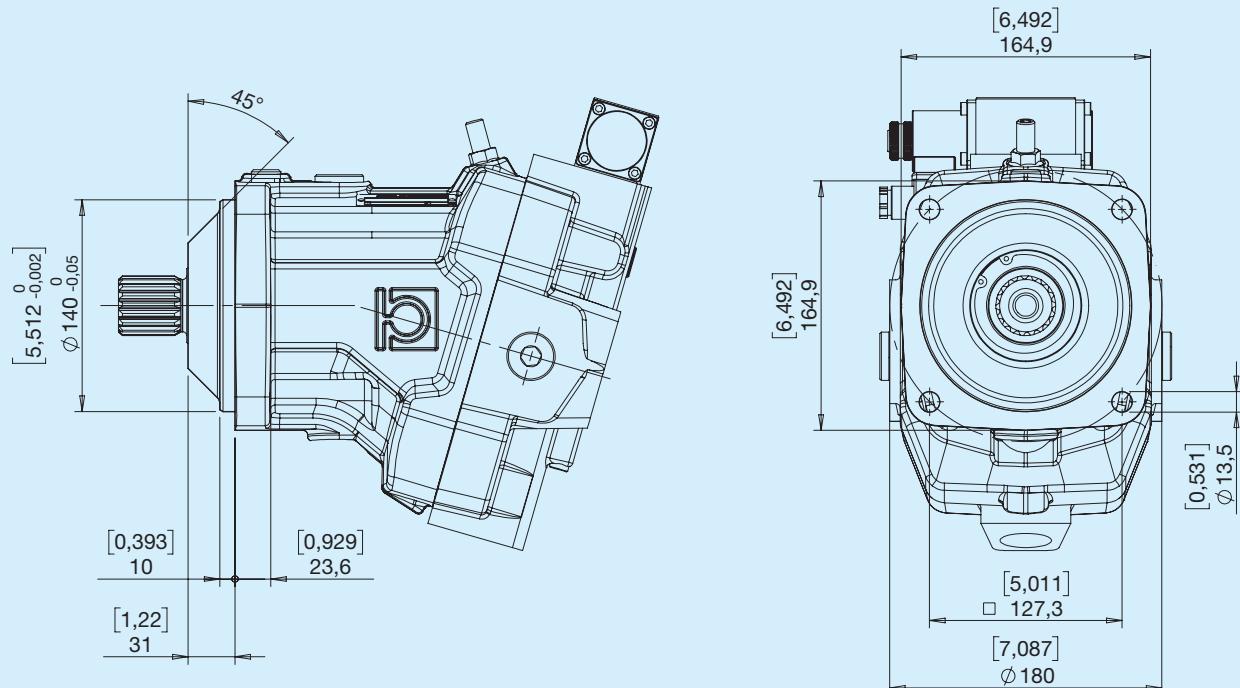


Prima di iniziare l'utilizzo leggere attentamente il documento ISTRUZIONI GENERALI D'IMPIEGO POMPE E MOTORI A PISTONI ASSIALI PER CIRCUITO CHIUSO.

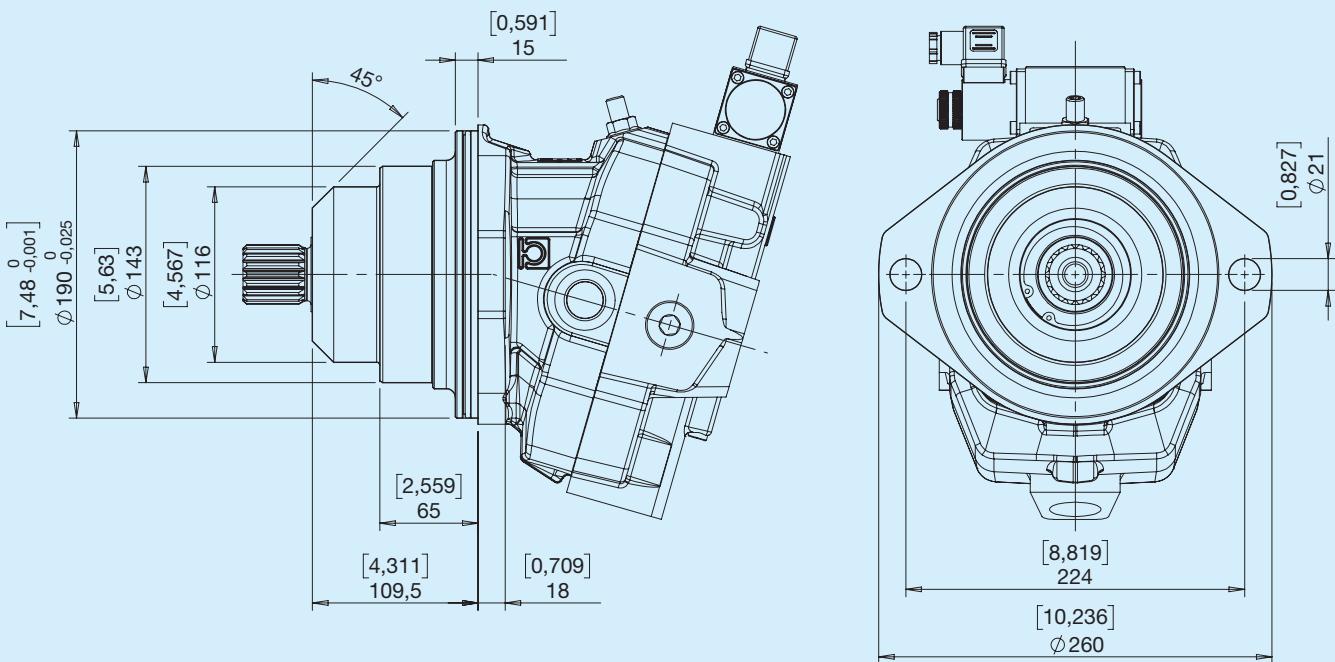


HPBA	Cilindrata teorica		Oscillante °	Pressione Continua bar		Pressione intermittente bar		Pressione picco bar		Velocità di rotazione			Massa	
	cm <sup>3</sup>	in <sup>3</sup>		psi	bar	psi	bar	psi	bar	psi	MAX (max V) min <sup>-1</sup>	MAX (min V) min <sup>-1</sup>	MIN min <sup>-1</sup>	kg
<b>080</b>	80	4,88	25	350	5075	400	5800	450	6525	3200	5000	500	38	84
<b>108</b>	108	6,59	25	350	5075	400	5800	450	6525	3200	5000	500	38	84

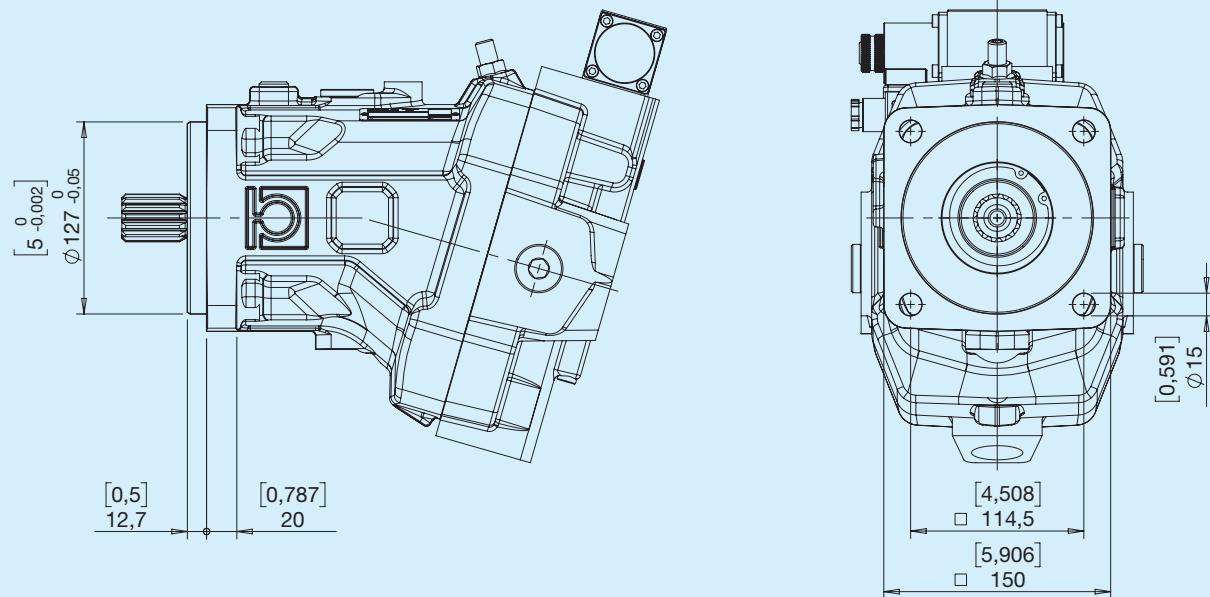
## I ISO 4 fori standard



## P ISO 2 fori centraggio a cartuccia

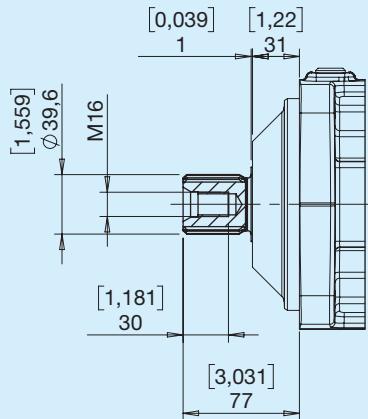


**S** SAE C



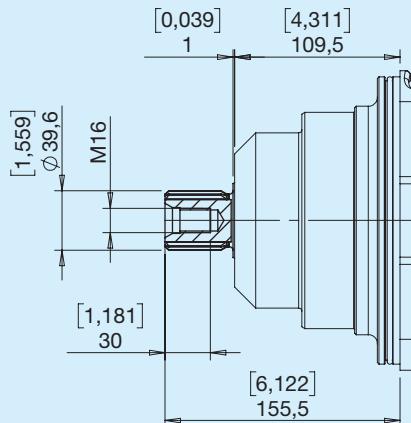
**B** DIN 5480 W40x2x30x18

Versione ISO 4 fori standard



Coppia Max 1310 Nm

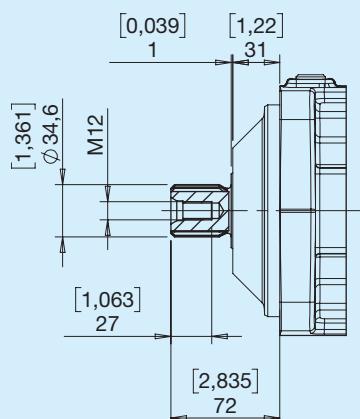
Versione ISO 2 fori a cartuccia



Coppia Max 1310 Nm

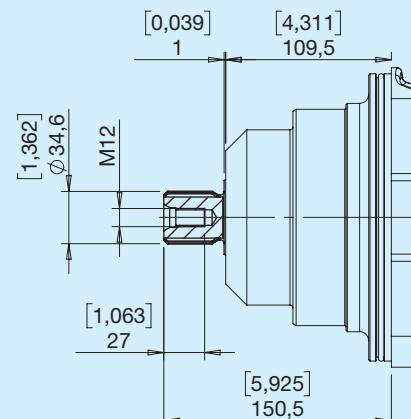
**C** DIN 5480 W35x2x30x16

Versione ISO 4 fori standard



Coppia Max 860 Nm

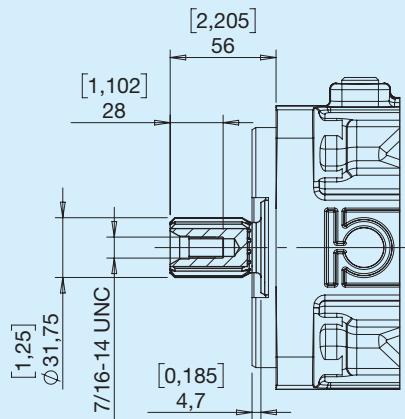
Versione ISO 2 fori a cartuccia



Coppia Max 860 Nm

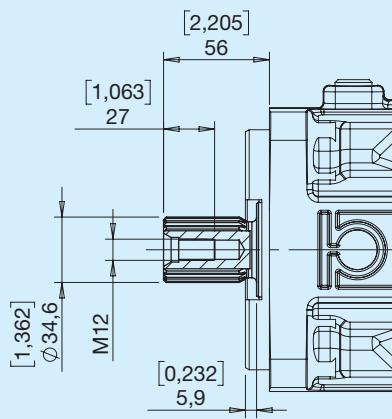
### 3 SAE 14T 12/24 DP

Versione SAE C



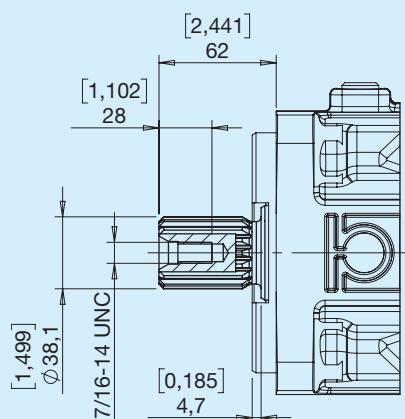
### 7 SAE 21T 16/32 DP

Versione SAE C

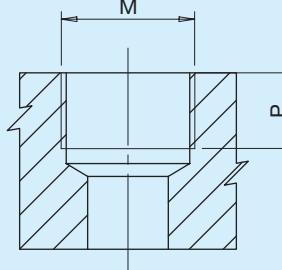


### Z SAE 17T 12/24 DP

Versione SAE C

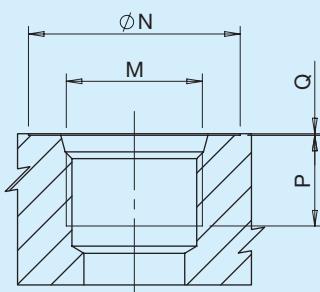


## Tipo G



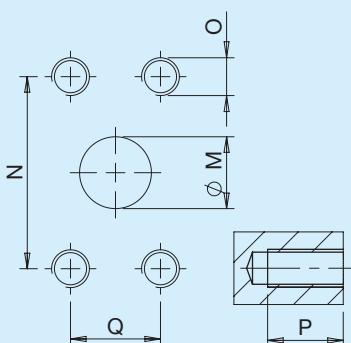
Tipo	M	P	
		Nm	mm in
G2	Port ISO 1179-1 - G 1/4	17	8 0,31
G6	Port ISO 1179-1 - G 3/4	90	19 0,75
G7	Port ISO 1179-1 - G 1	160	19 0,75

## Tipo U



Tipo	Dim.	N		P		Q		M	Nm
		mm	in	mm	in	mm	in		
U2	1/4'	20	0,79	12	0,47	0,3	0,01	Port ISO 11926-1-7/16-20	17
U6	3/4'	41	1,61	20	0,79	0,3	0,01	Port ISO 11926-1-1 1/16-12	90
U7	1'	49	1,93	18	0,70	0,3	0,01	Port ISO 11926-1-1 5/16-12	160

## Tipo N

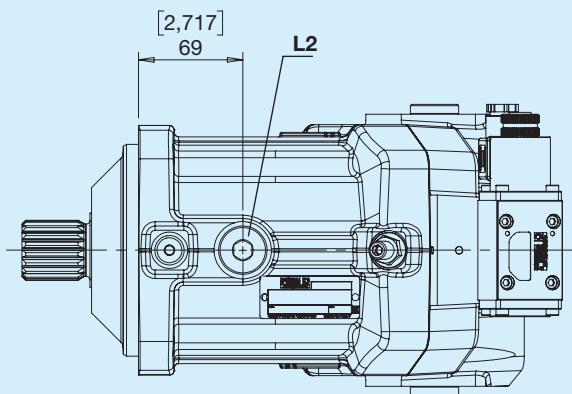
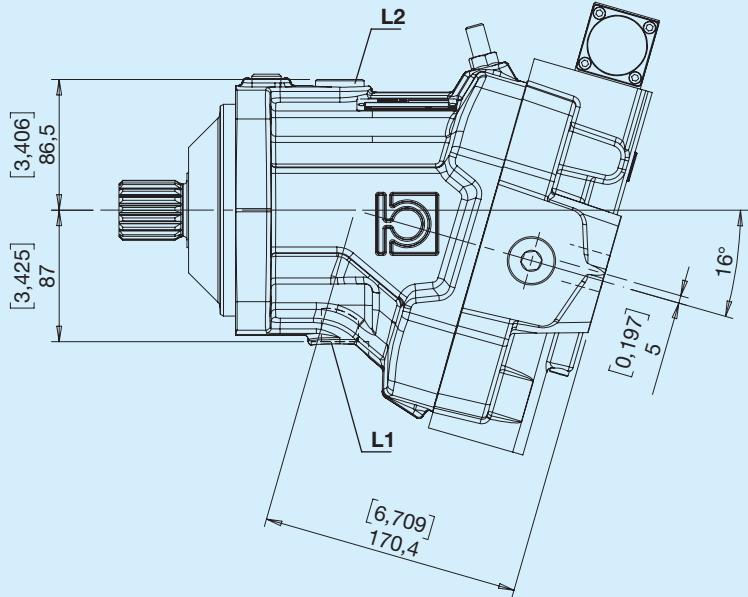
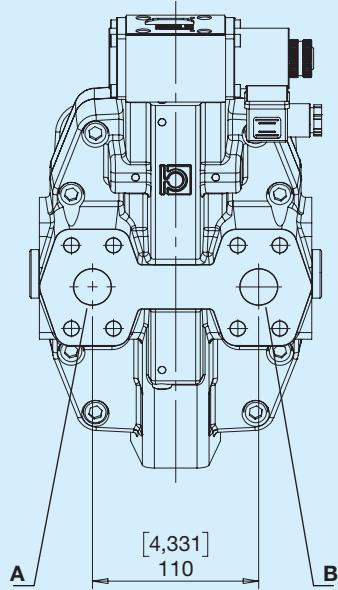


Tipo	M		N		Q		P		O
	mm	in	mm	in	mm	in	mm	in	
N7	25	1	57,15	2,25	27,76	1,09	20	0,79	M12 70

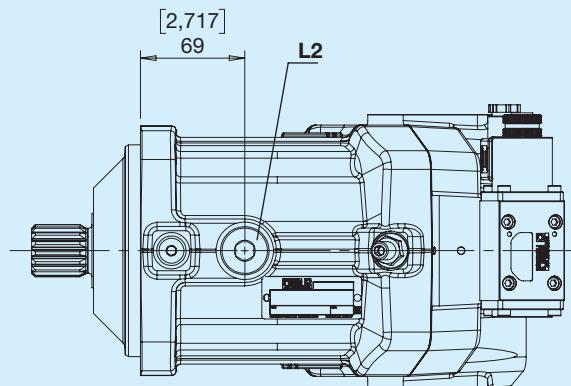
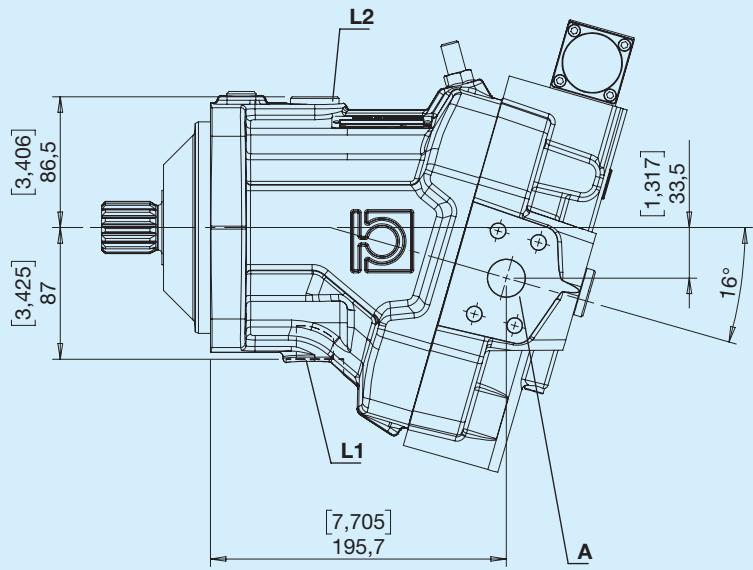
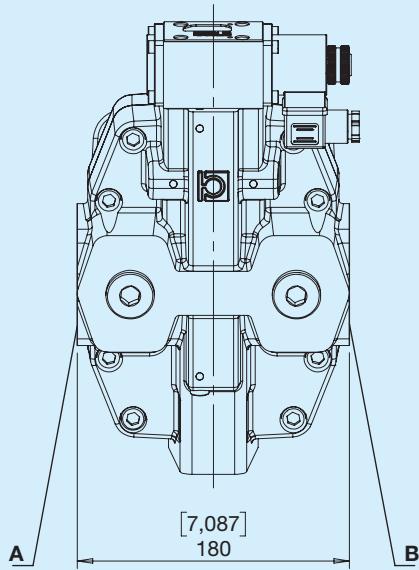
### Combinazioni

Tipo	Inlet/outlet A-B	Drenaggio L1-L2	Pilotaggio a-b-x
<b>G</b>	G7	G6	G6
<b>U</b>	U7	U6	U6
<b>N</b>	N7	G6	G2
<b>M</b>	N7	U6	U2

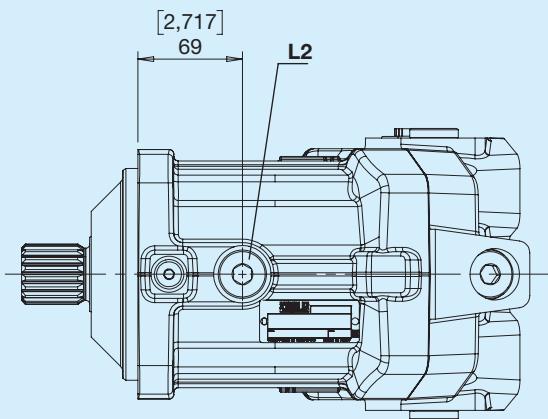
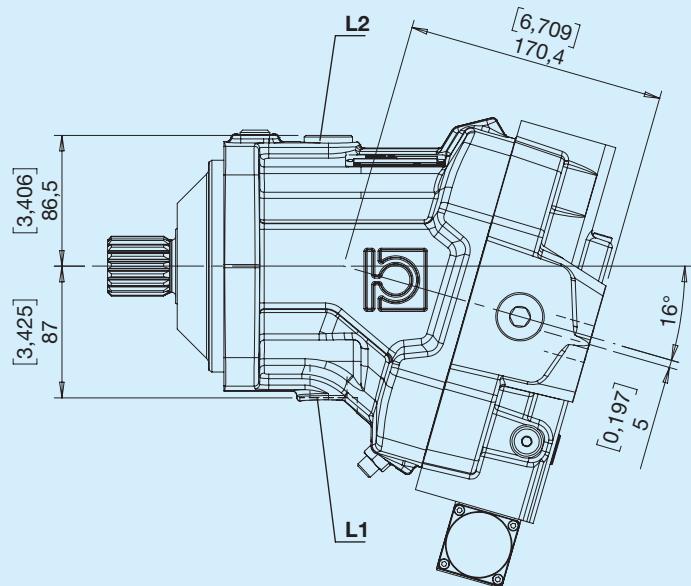
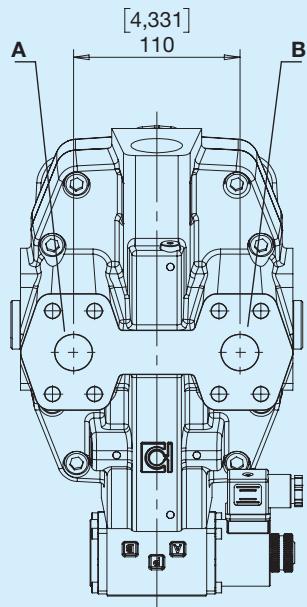
**P** Posteriori



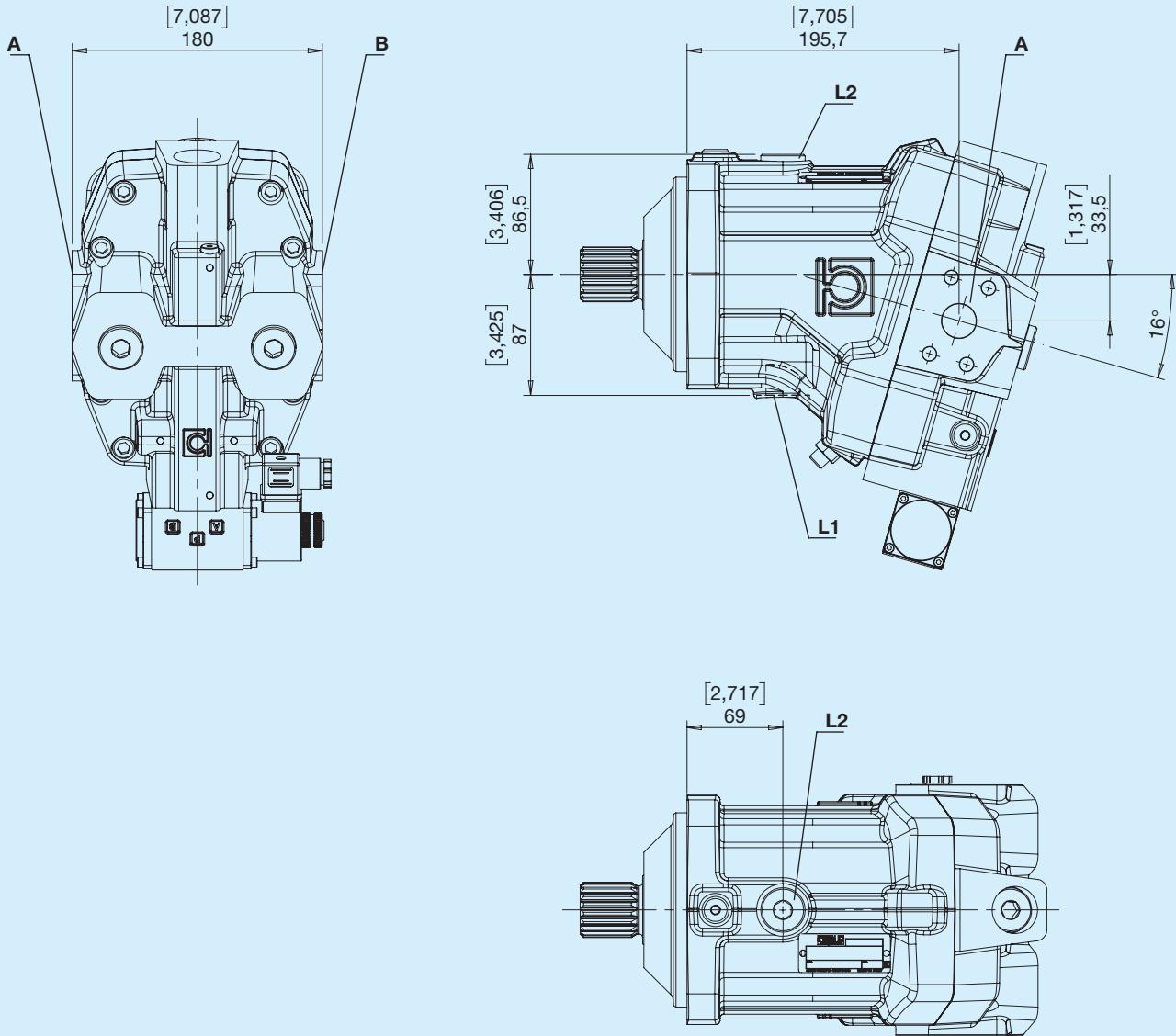
**L** Lateral contrapposte



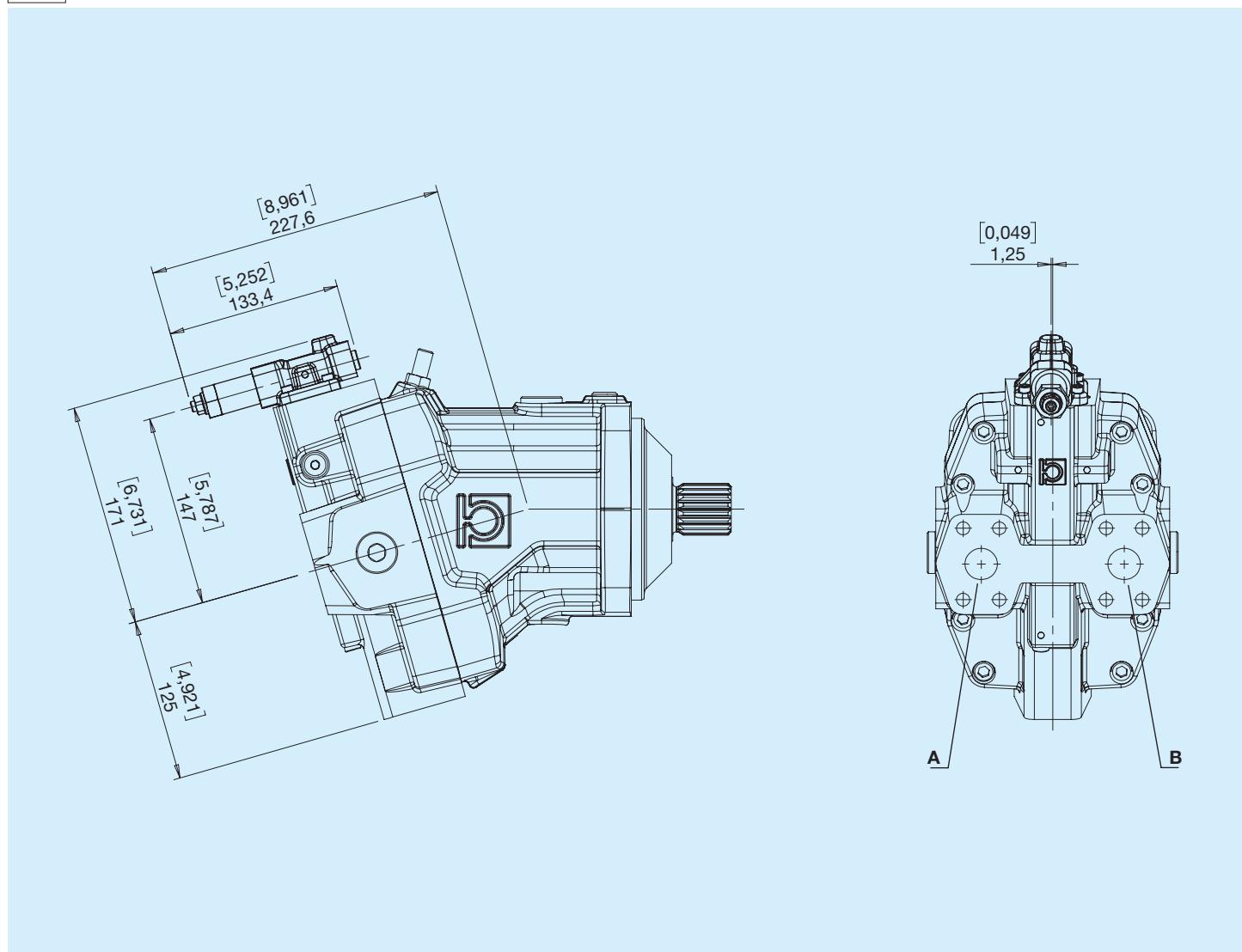
**Y** Posteriori distributore ruotato



### J Lateral contrapposte distributore ruotato

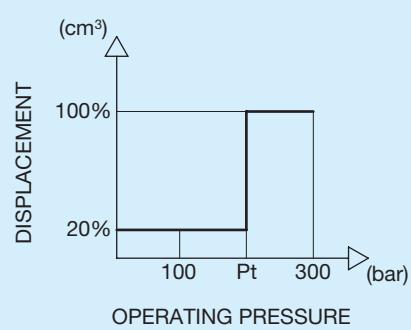


## A Idraulico automatico ON/OFF

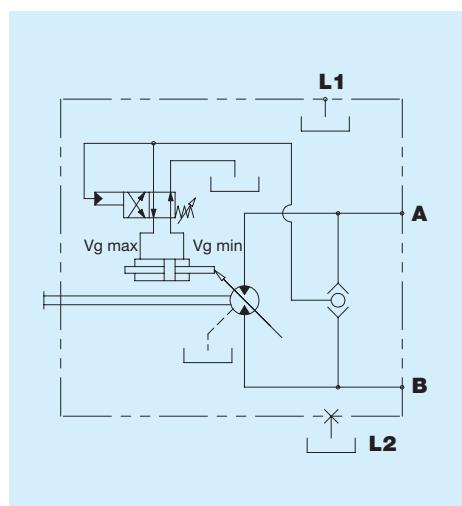


## Pilotaggio

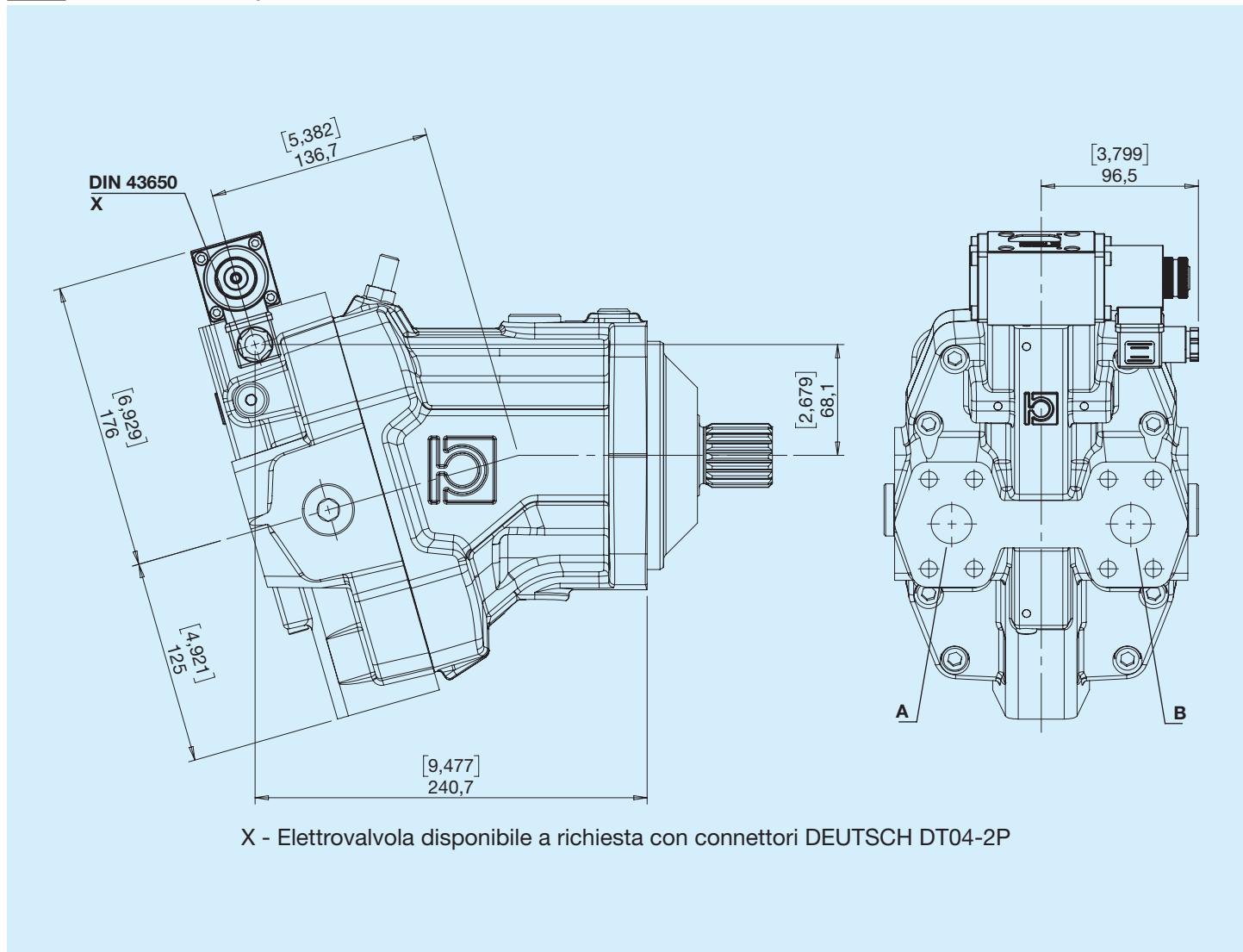
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico

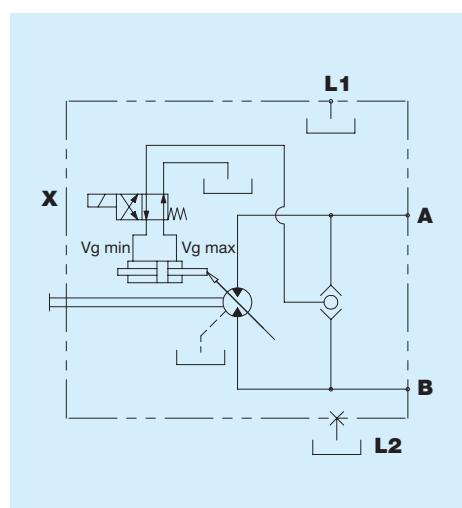


## E Elettrico a 2 posizioni 12V

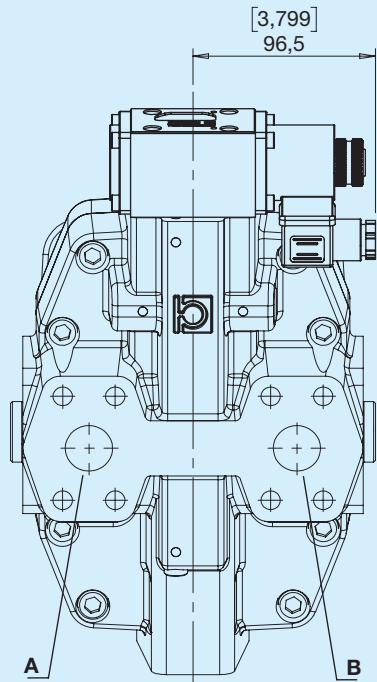
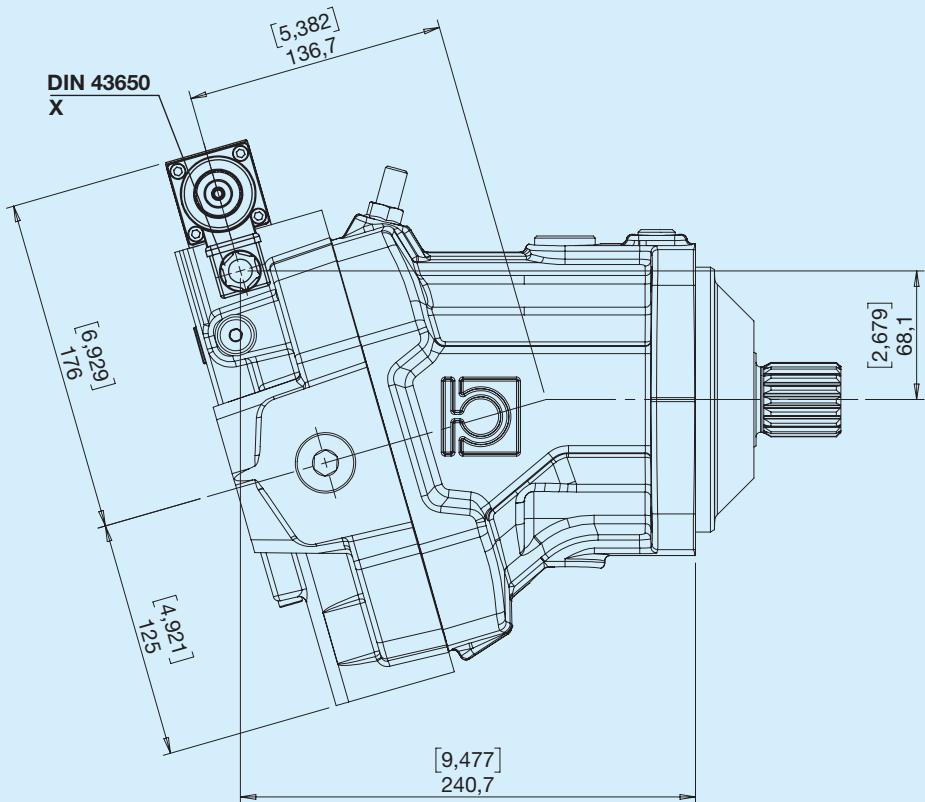


## Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra



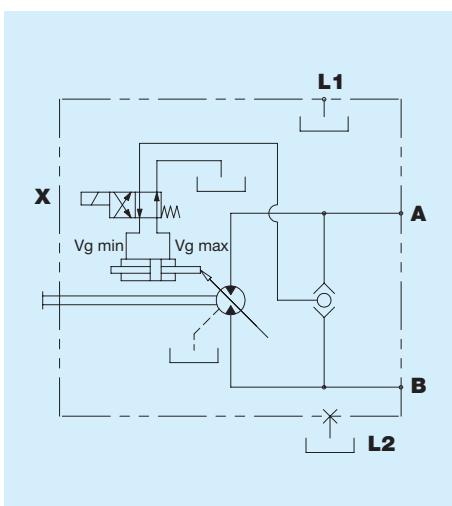
**F** Elettrico a 2 posizioni 24V



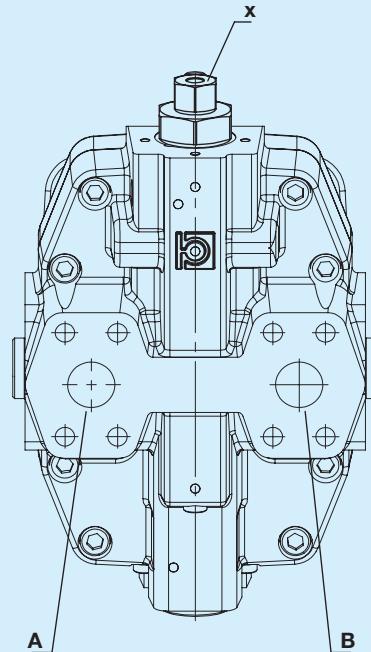
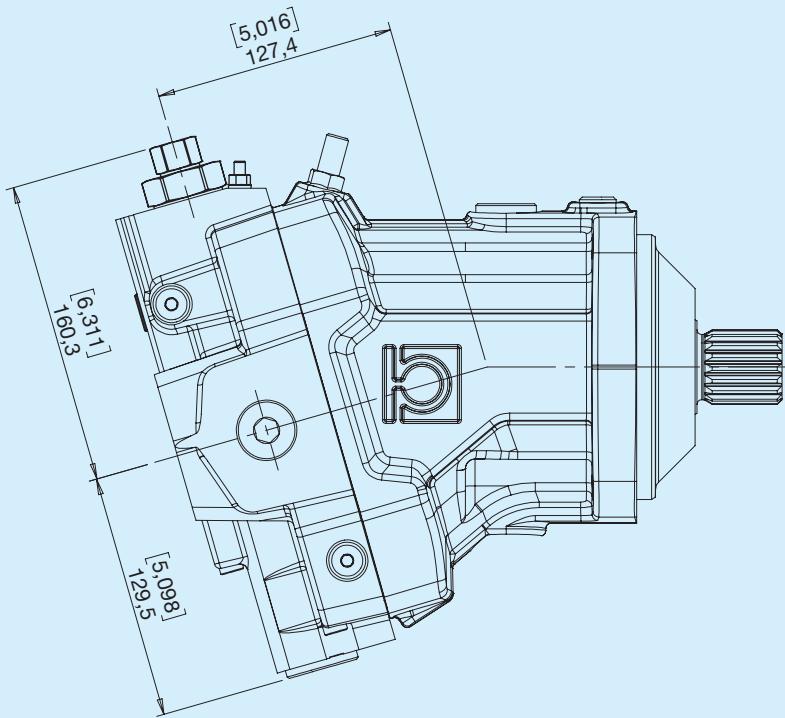
X - Elettrovalvola disponibile a richiesta con connettori DEUTSCH DT04-2P

Ingresso	Rotazione
A	Sinistra
B	Destra

Schema idraulico



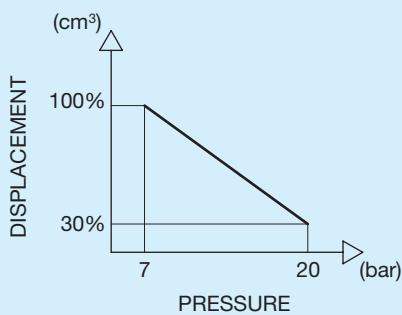
## G Idraulico proporzionale



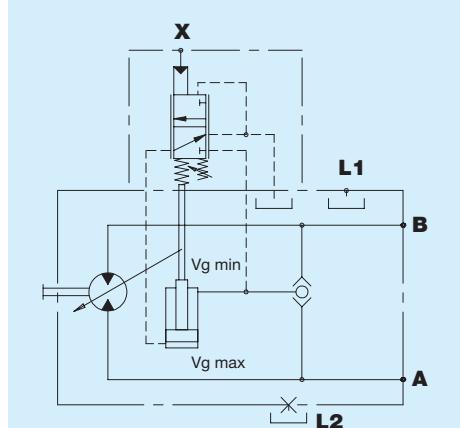
X - Pilotaggio G1/8

Ingresso	Rotazione
A	Sinistra
B	Destra

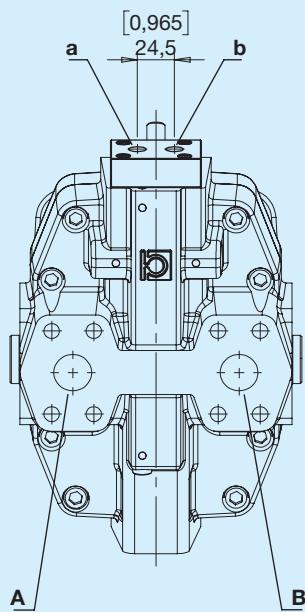
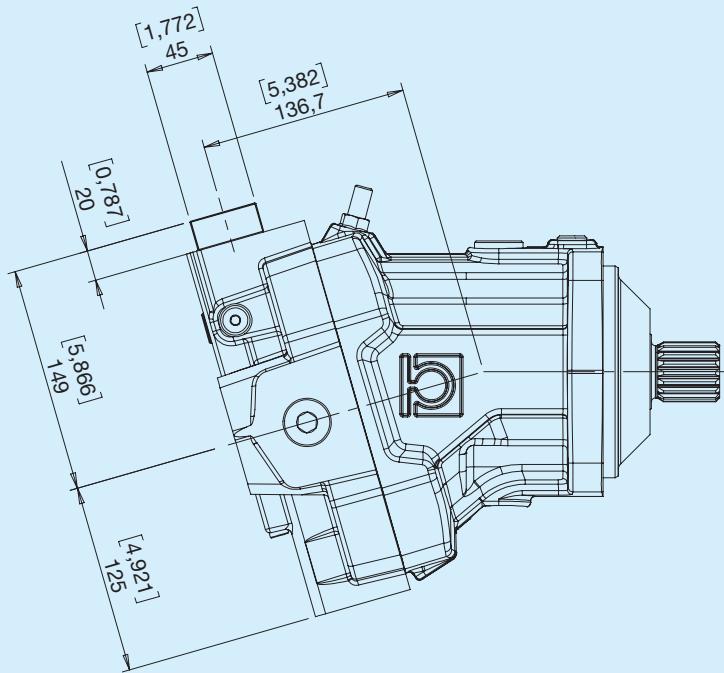
## Pilotaggio



## Schema idraulico

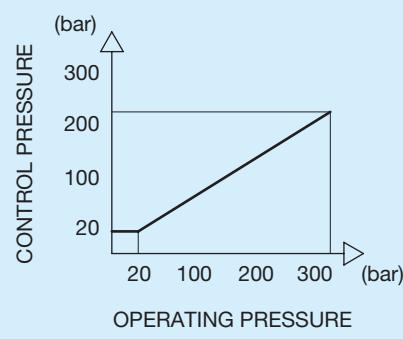


## H Idraulico diretto a 2 posizioni

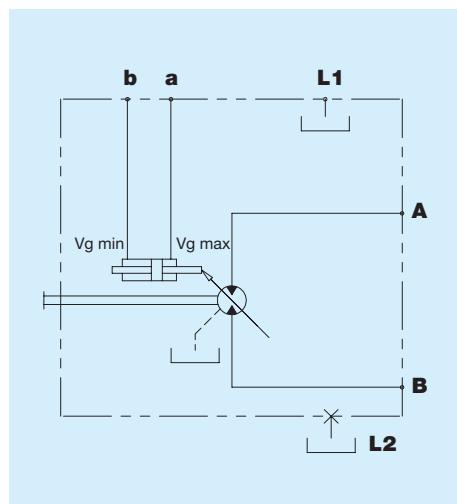


## Pilotaggio

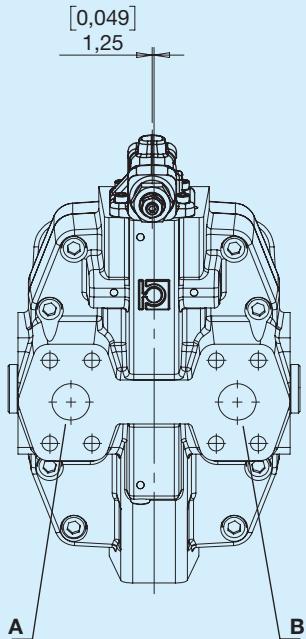
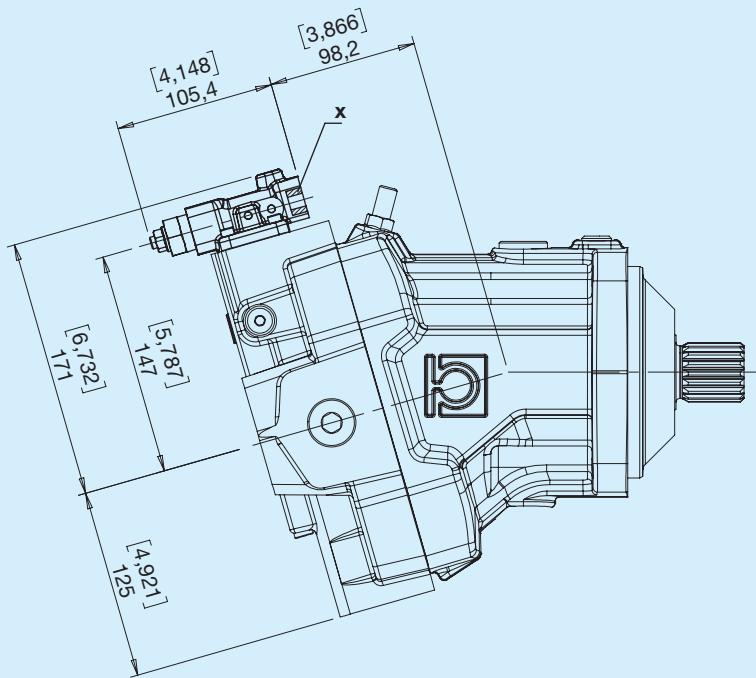
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico



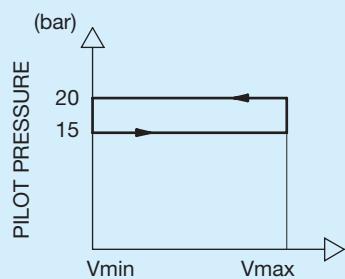
**K** Idraulico a 2 posizioni a bassa pressione



X - Pilotaggio G1/8

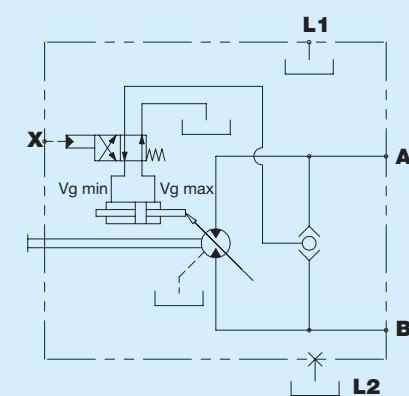
Ingresso	Rotazione
A	Sinistra
B	Destra

Diagramma

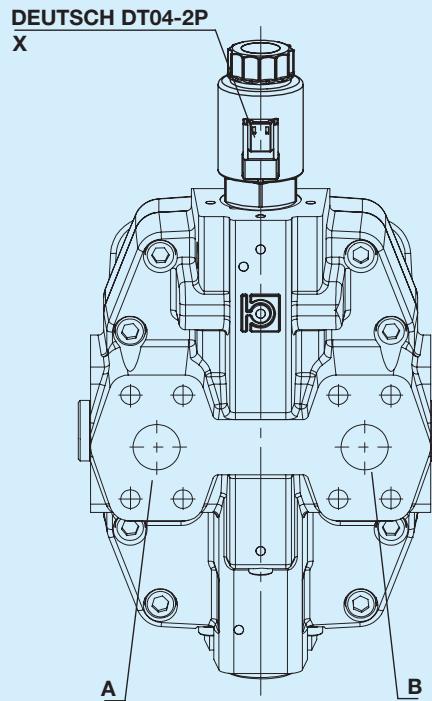
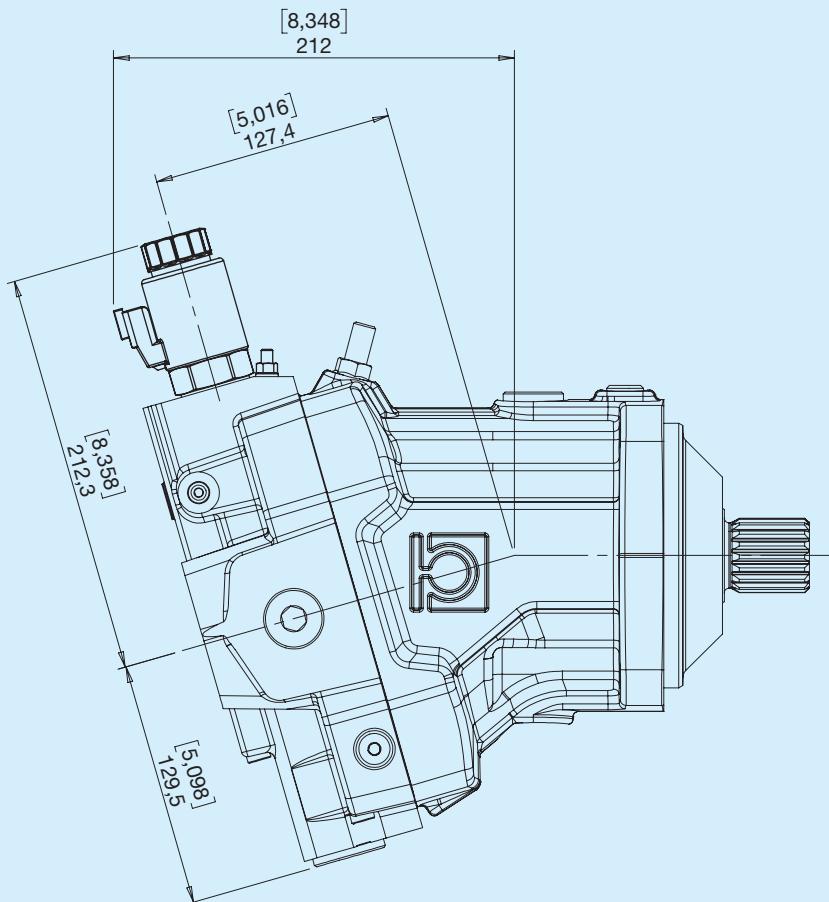


Normalmente il motore è in cilindrata massima. Applicando una pressione esterna sul pilotaggio, si ottiene la variazione di cilindrata alla minima. Per una corretta variazione della cilindrata attenersi ai valori di pilotaggio riportati nel diagramma.

Schema idraulico



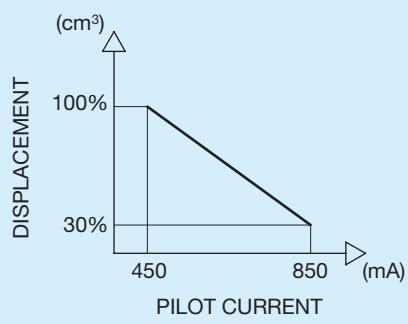
**O** Elettrico proporzionale retroazionato 12V



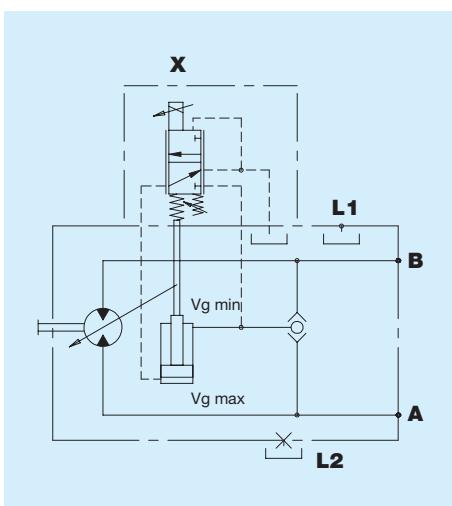
X - Elettrovalvola

## Pilotaggio

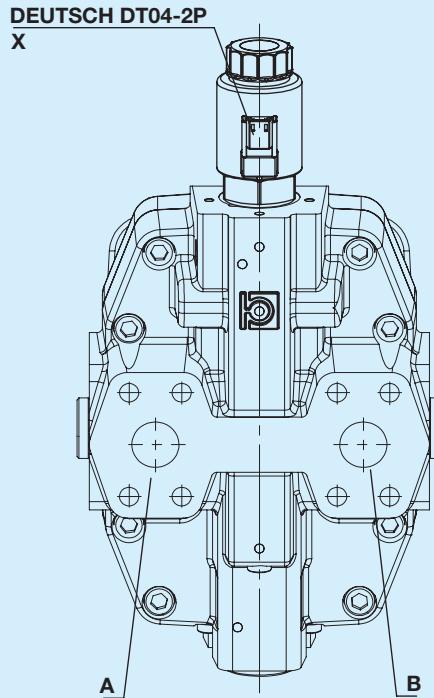
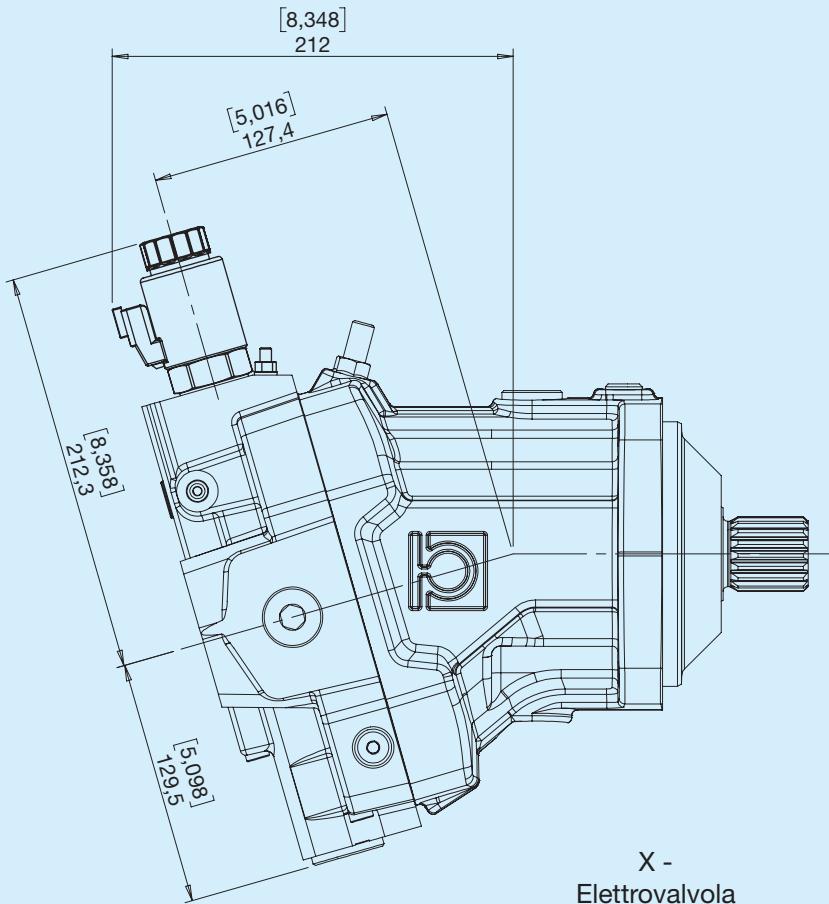
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico

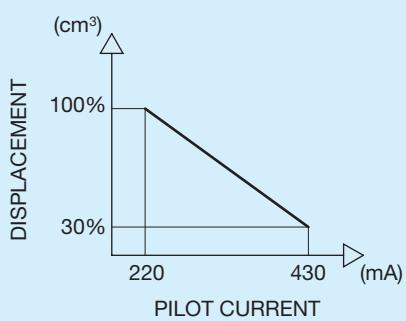


## V Elettrico proporzionale retroazionato 24V

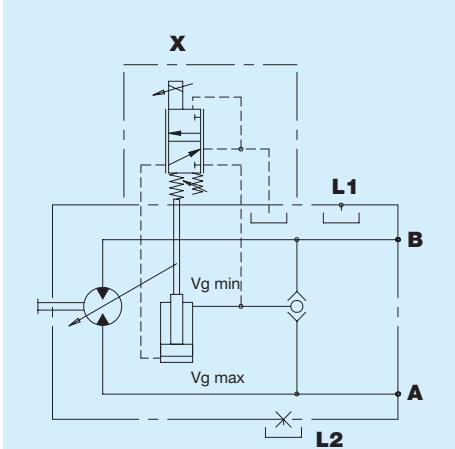


## Pilotaggio

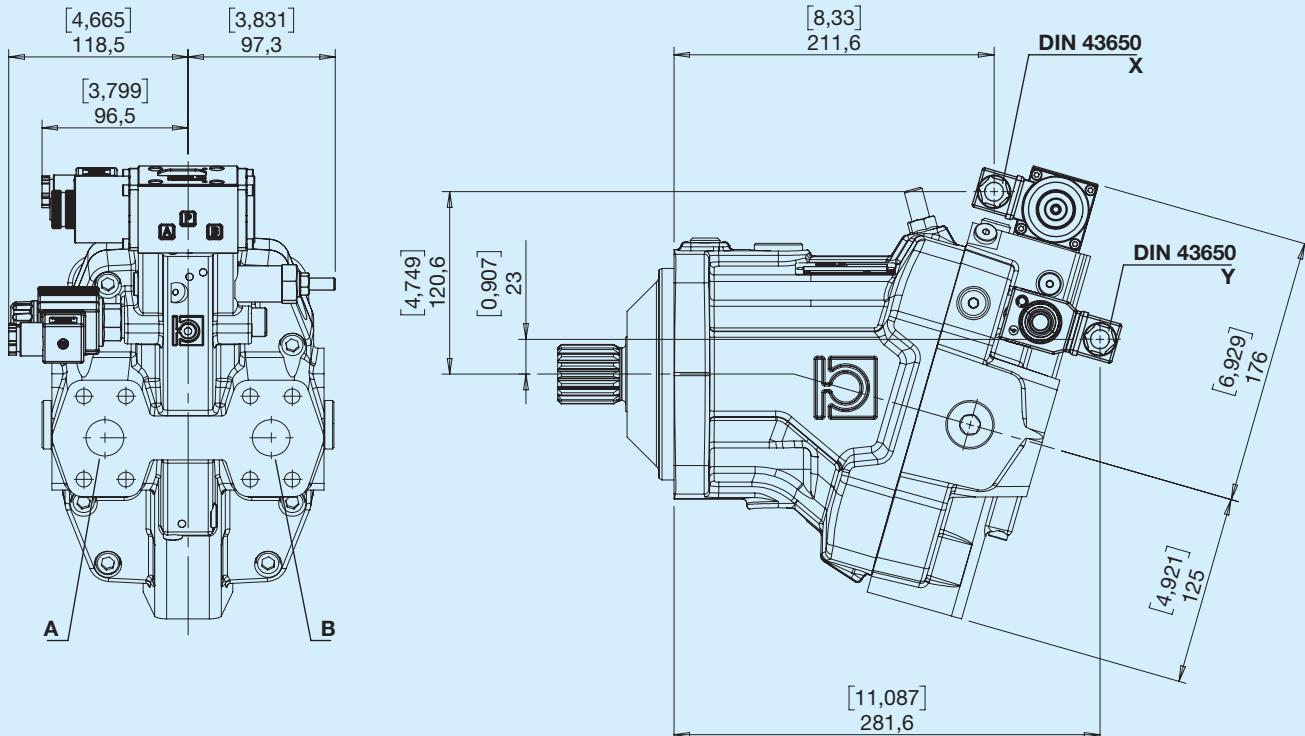
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico

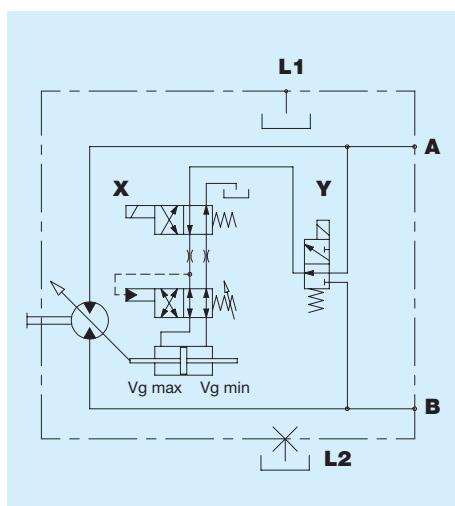


**R** Elettrico ON/OFF con pressure override e selettrice di canale

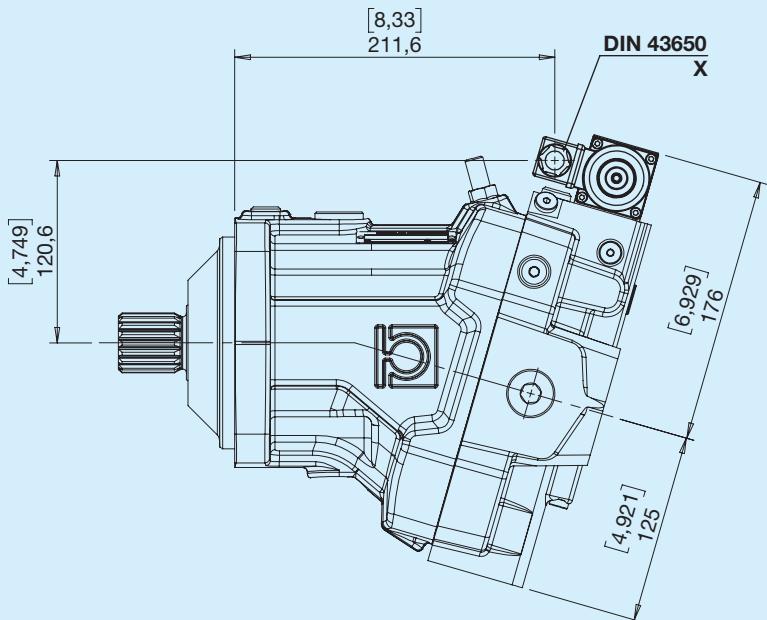
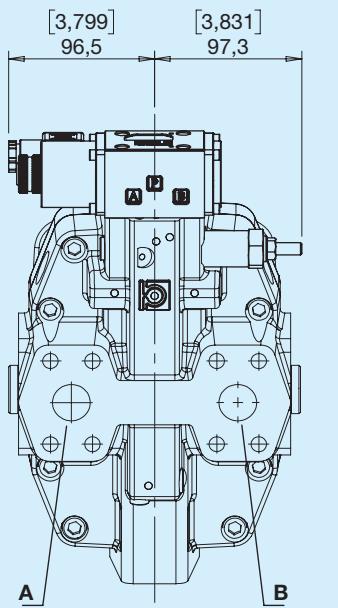


Ingresso	Rotazione
A	Sinistra
B	Destra

Schema idraulico

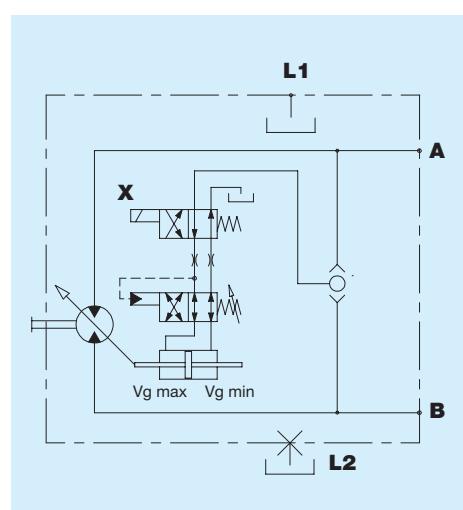


**U** Elettrico ON/OFF con pressure override

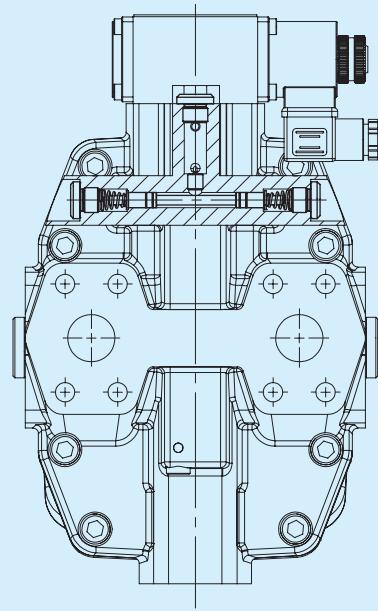
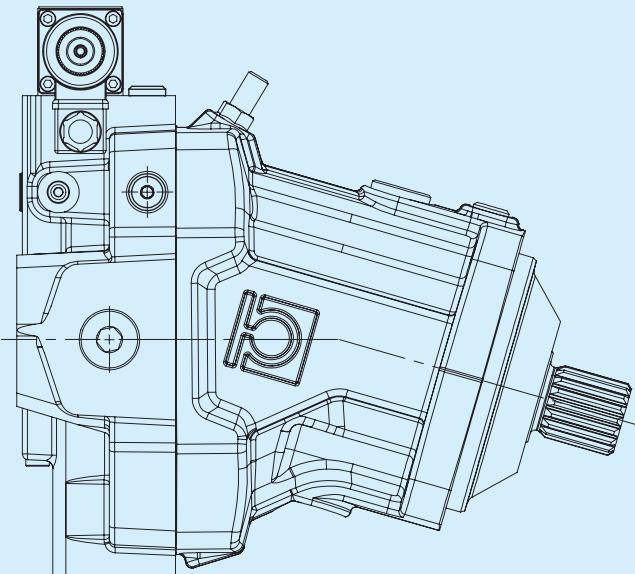


Ingresso	Rotazione
A	Sinistra
B	Destra

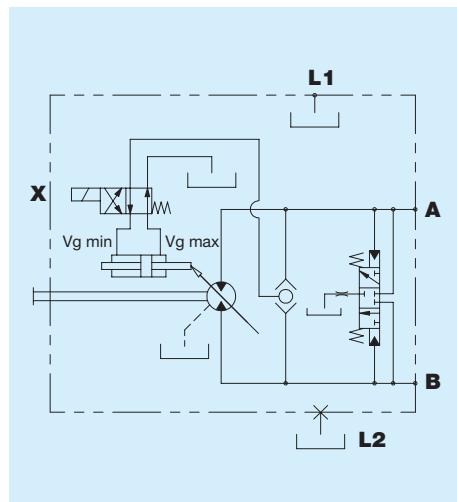
## Schema idraulico



**V** Valvola di flussaggio (5-7 l/min)



Schema idraulico

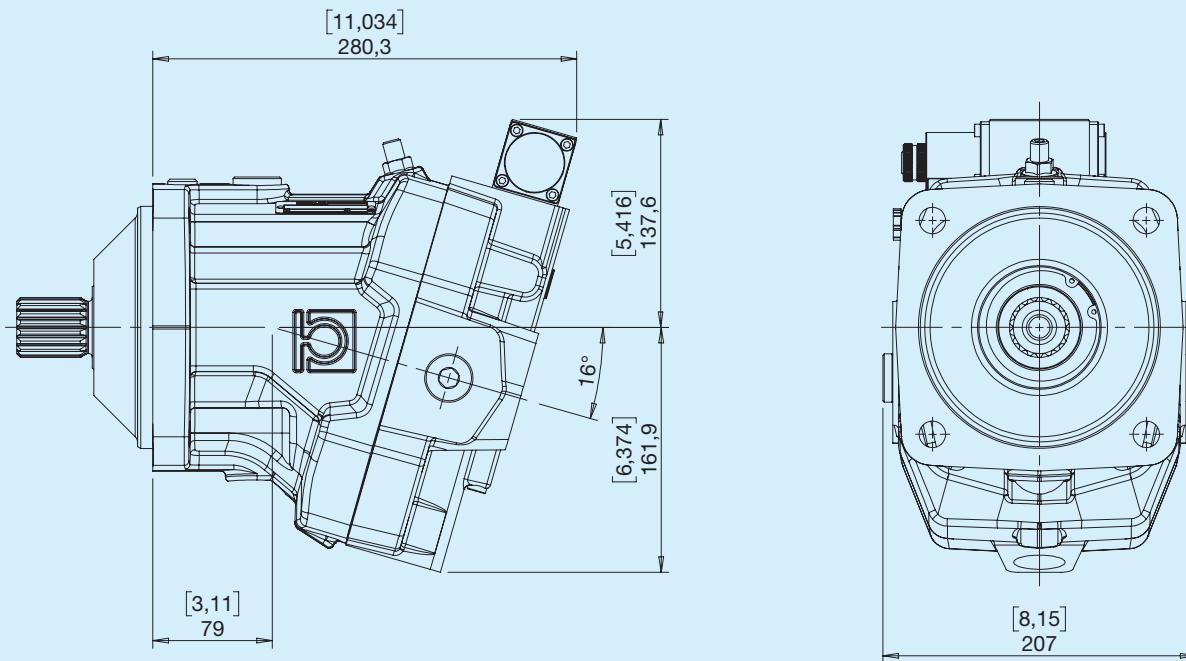


<b>HPBA</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2	3												
080				108										
4	5													
6														
7														
8														
9														
10														
11														
12	13	14												

## Motori a cilindrata variabile HPBA110-130

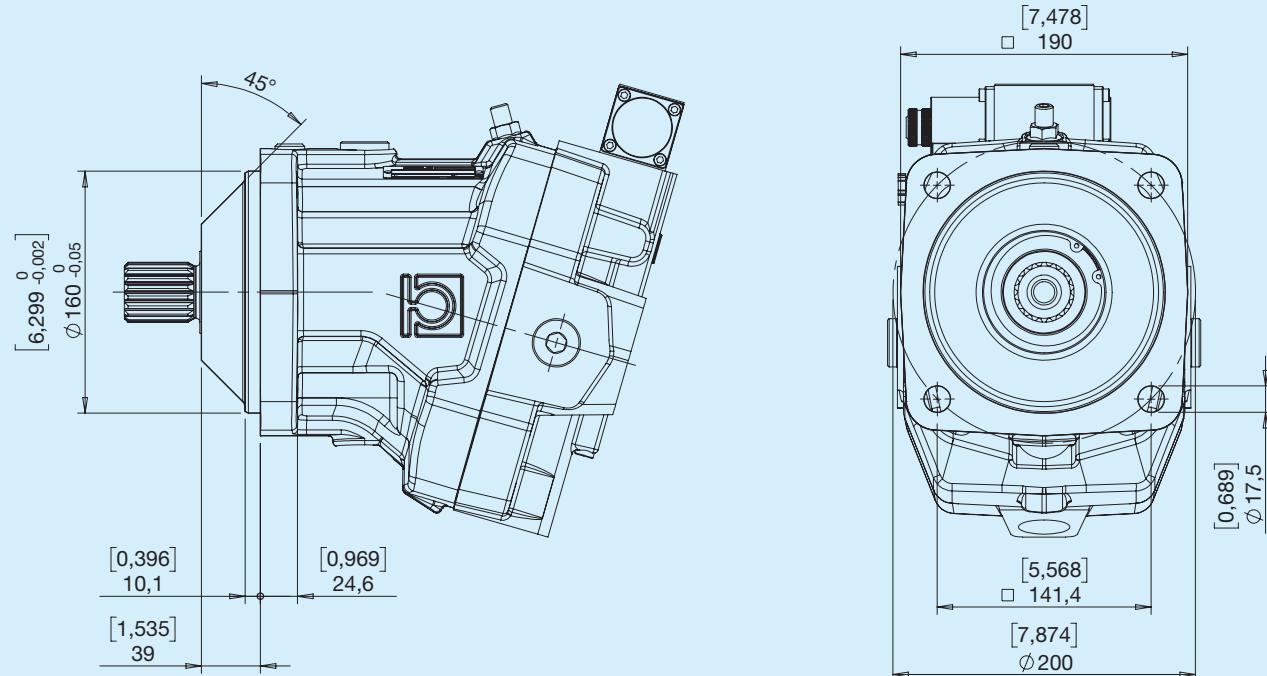


Prima di iniziare l'utilizzo leggere attentamente il documento ISTRUZIONI GENERALI D'IMPIEGO POMPE E MOTORI A PISTONI ASSIALI PER CIRCUITO CHIUSO.

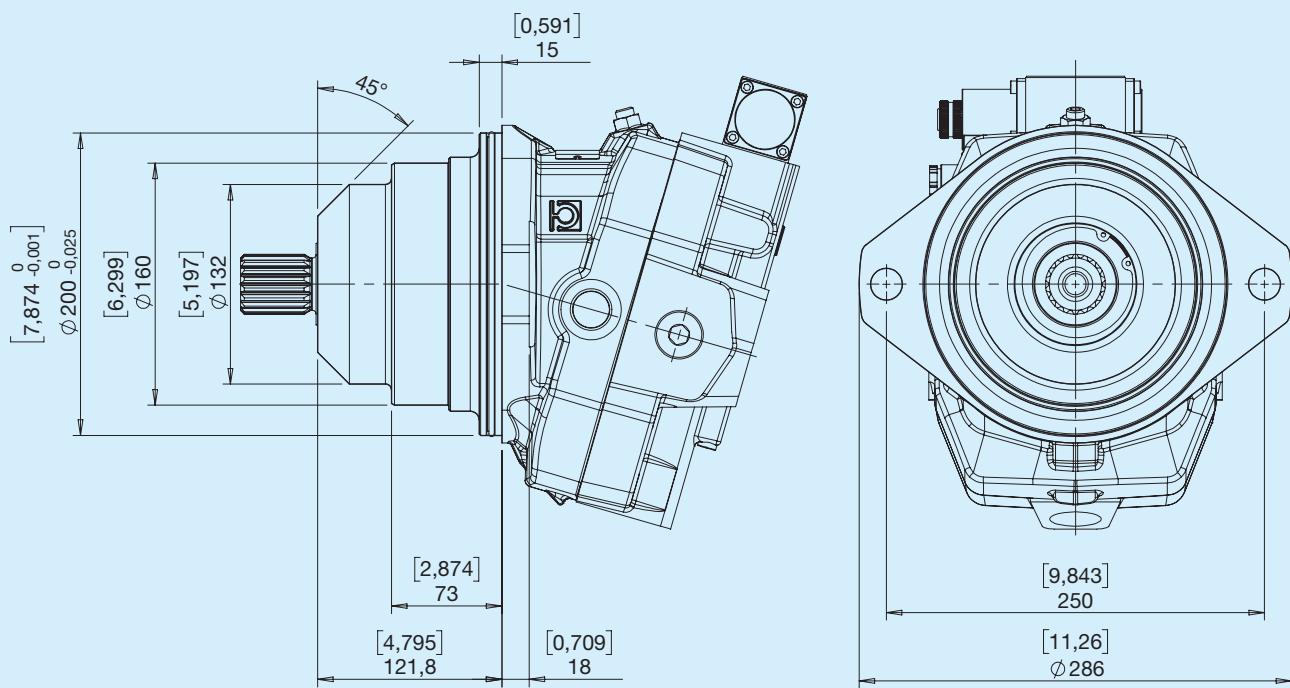


HPBA	Cilindrata teorica		Oscillante	Pressione Continua		Pressione intermittente		Pressione picco		Velocità di rotazione			Massa	
	cm <sup>3</sup>	in <sup>3</sup>		°	bar	psi	bar	psi	bar	psi	MAX (max V) min <sup>-1</sup>	MAX (min V) min <sup>-1</sup>	MIN min <sup>-1</sup>	kg
<b>110</b>	110	6,71	26	350	5075	400	5800	450	6525	2900	4500	500	45	99
<b>130</b>	130	7,93	25	350	5075	400	5800	450	6525	2900	4500	500	51	112

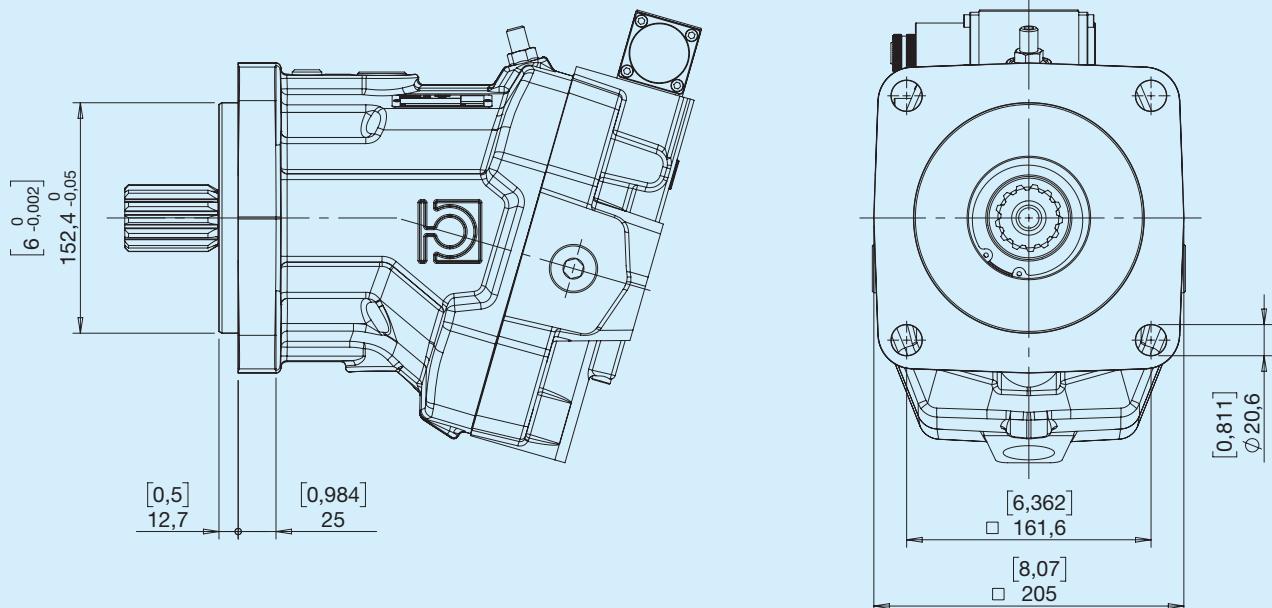
## I ISO 4 fori standard



## P ISO 2 fori centraggio a cartuccia

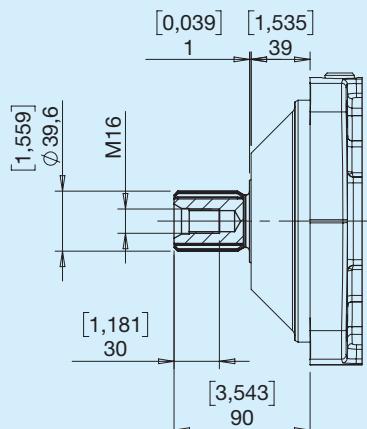


**S** SAE D



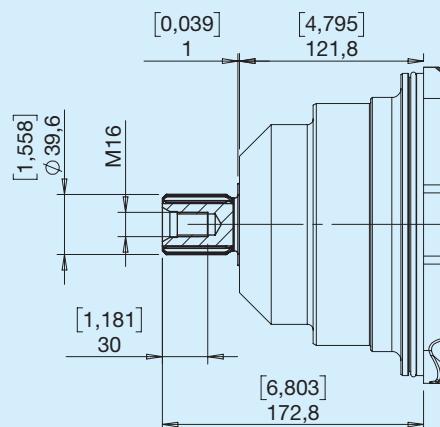
**B** DIN 5480 W40x2x30x18

Versione ISO 4 fori standard



Coppia Max 1310 Nm

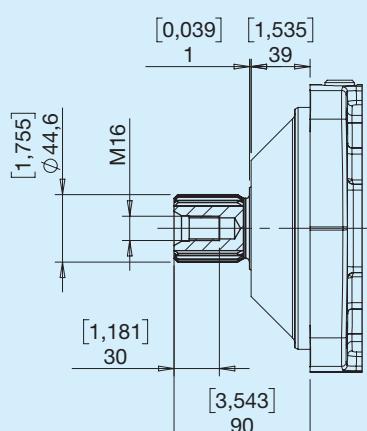
Versione ISO 2 fori a cartuccia



Coppia Max 1310 Nm

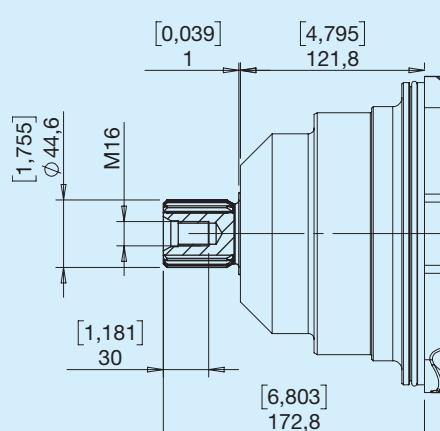
**D** DIN 5480 W45x2x30x21

Versione ISO 4 fori standard



Coppia Max 1980 Nm

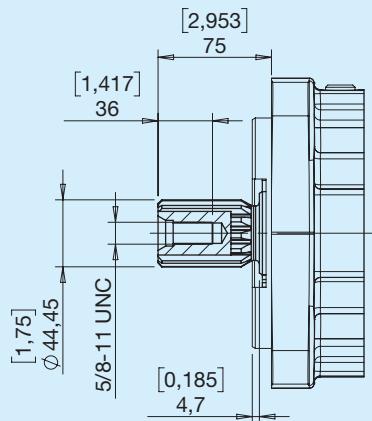
Versione ISO 2 fori a cartuccia



Coppia Max 1980 Nm

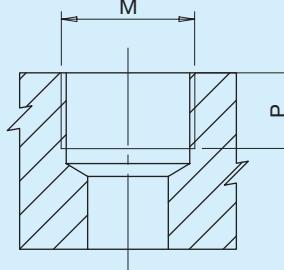
9 SAE 13T 8/16 DP

Versione SAE D



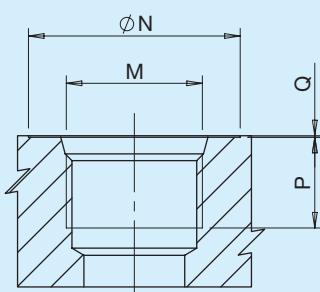
Coppia Max 2600 Nm

## Tipo G



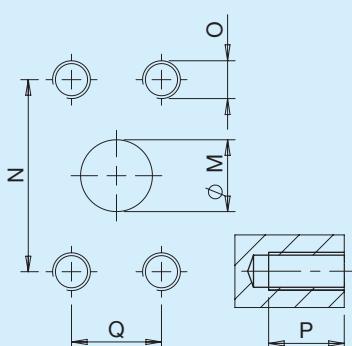
Tipo	M	P	
		Nm	mm in
G2	Port ISO 1179-1 - G 1/4	17	8 0,31
G6	Port ISO 1179-1 - G 3/4	90	19 0,75
G7	Port ISO 1179-1 - G 1	160	19 0,75

## Tipo U



Tipo	Dim.	N		P		Q		M	Nm
		mm	in	mm	in	mm	in		
U2	1/4'	20	0,79	12	0,47	0,3	0,01	Port ISO 11926-1-7/16-20	17
U6	3/4'	41	1,61	20	0,79	0,3	0,01	Port ISO 11926-1-1 1/16-12	90
U7	1'	49	1,93	18	0,70	0,3	0,01	Port ISO 11926-1-1 5/16-12	160

## Tipo N

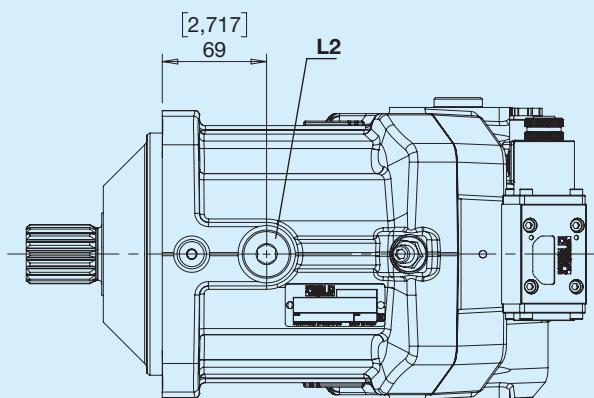
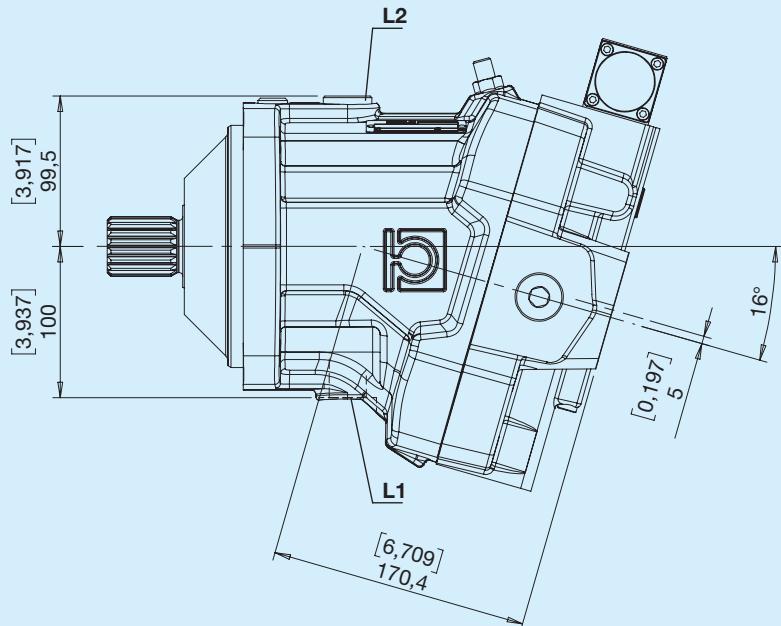
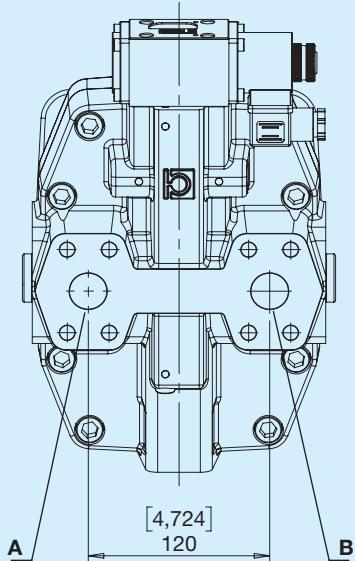


Tipo	M		N		Q		P		Nm
	mm	in	mm	in	mm	in	mm	in	
N7	25	1	57,15	2,25	27,76	1,09	20	0,79	M12 70

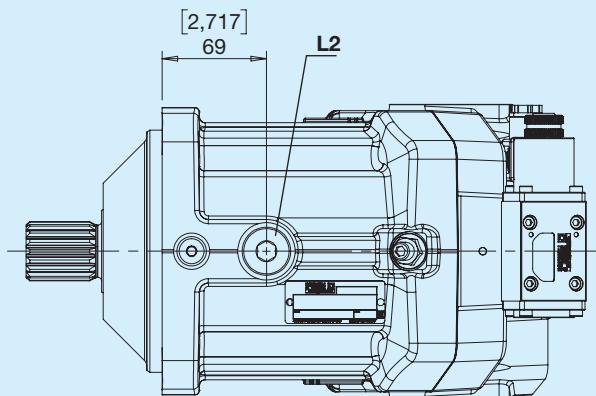
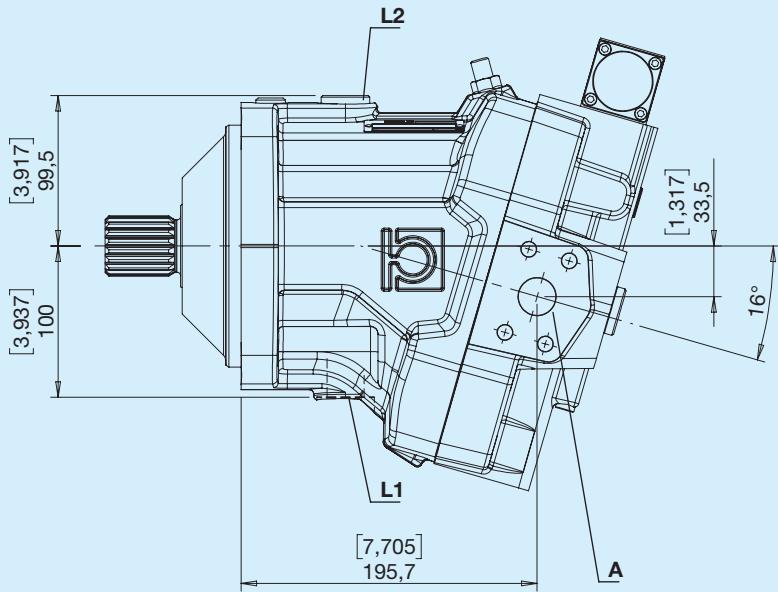
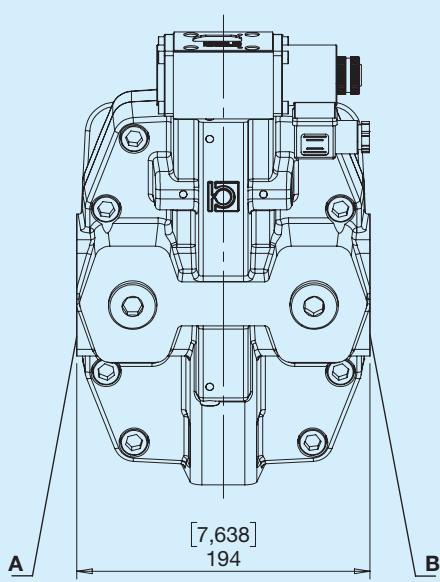
### Combinazioni

Tipo	Inlet/outlet A-B	Drenaggio L1-L2	Pilotaggio a-b-x
<b>G</b>	G7	G6	G6
<b>U</b>	U7	U6	U6
<b>N</b>	N7	G6	G2
<b>M</b>	N7	U6	U2

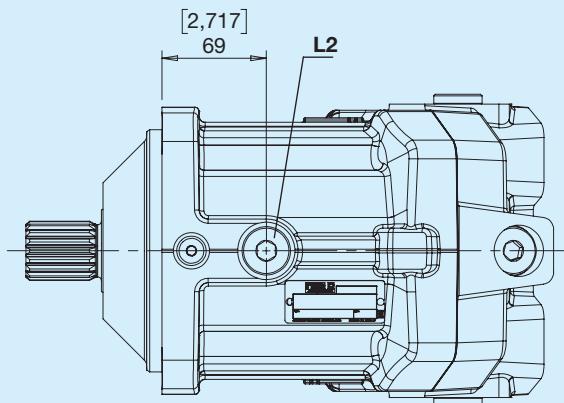
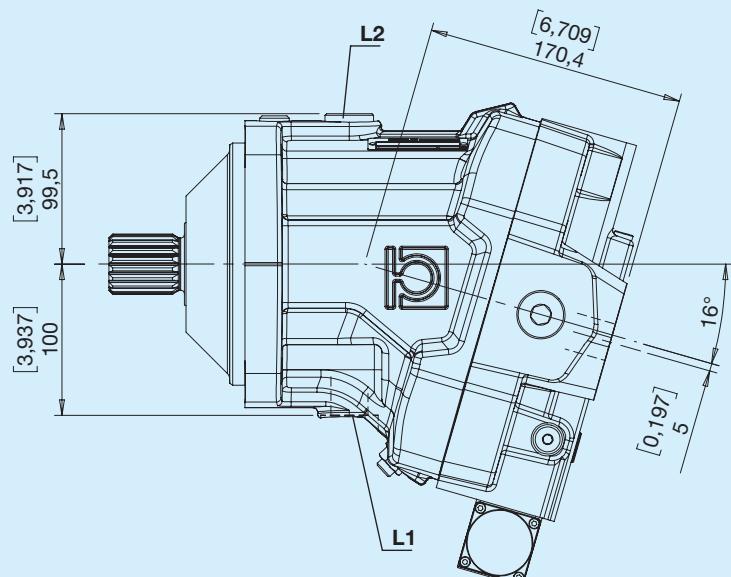
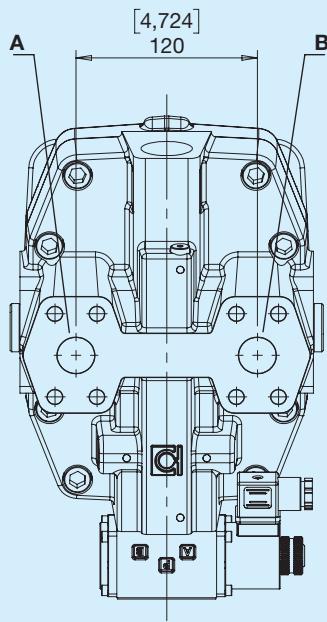
**P** Posteriori



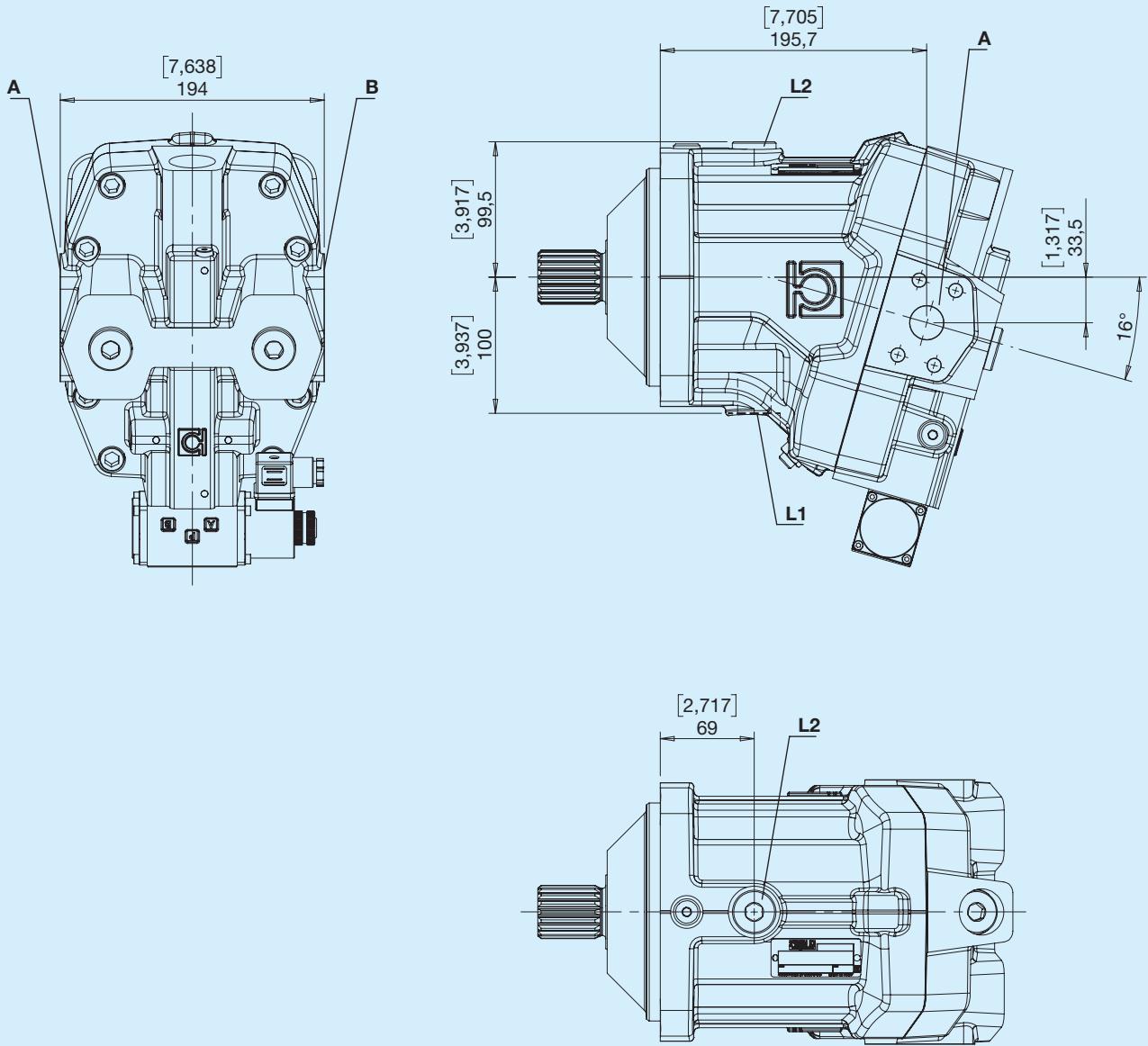
**L** Lateral contrapposte



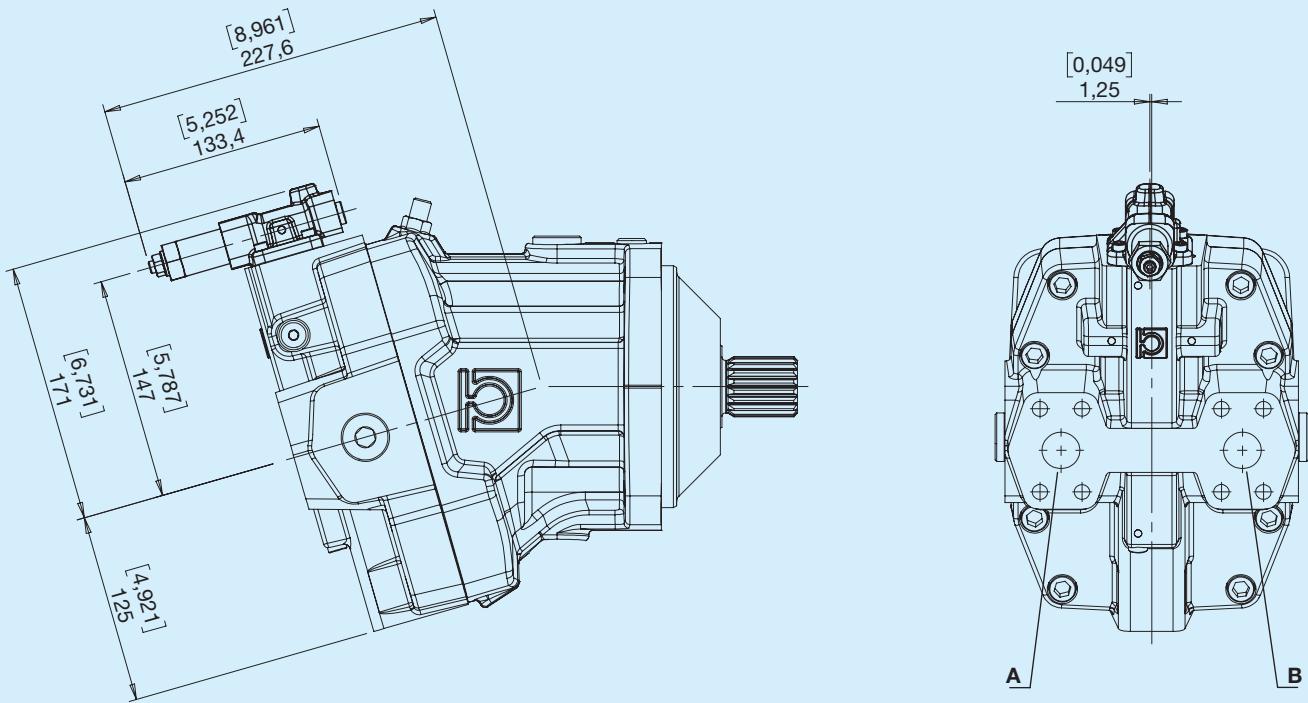
**Y** Posteriori distributore ruotato



### J Lateral contrapposte distributore ruotato

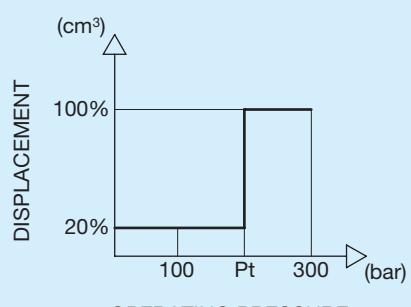


## A Idraulico automatico ON/OFF

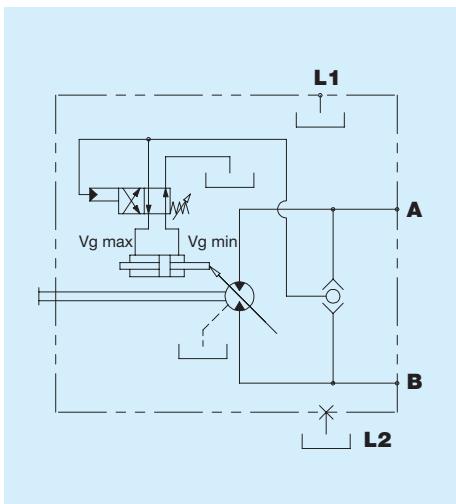


Ingresso	Rotazione
A	Sinistra
B	Destra

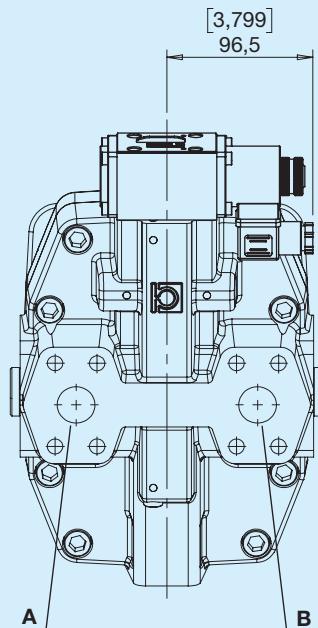
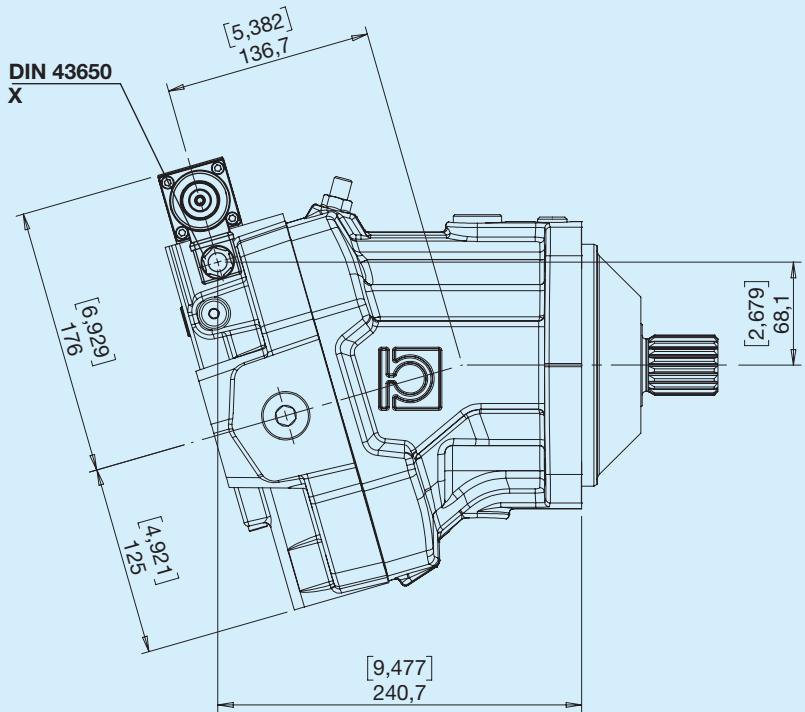
## Pilotaggio



## Schema idraulico



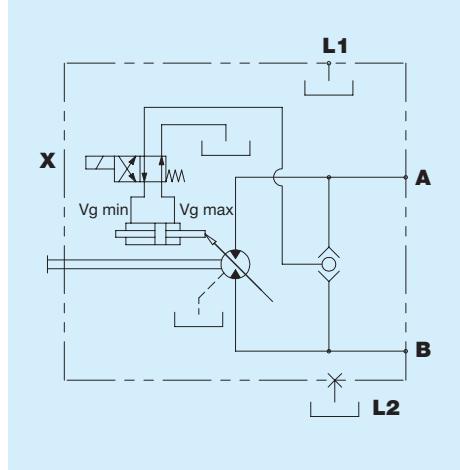
**E** Elettrico a 2 posizioni 12V



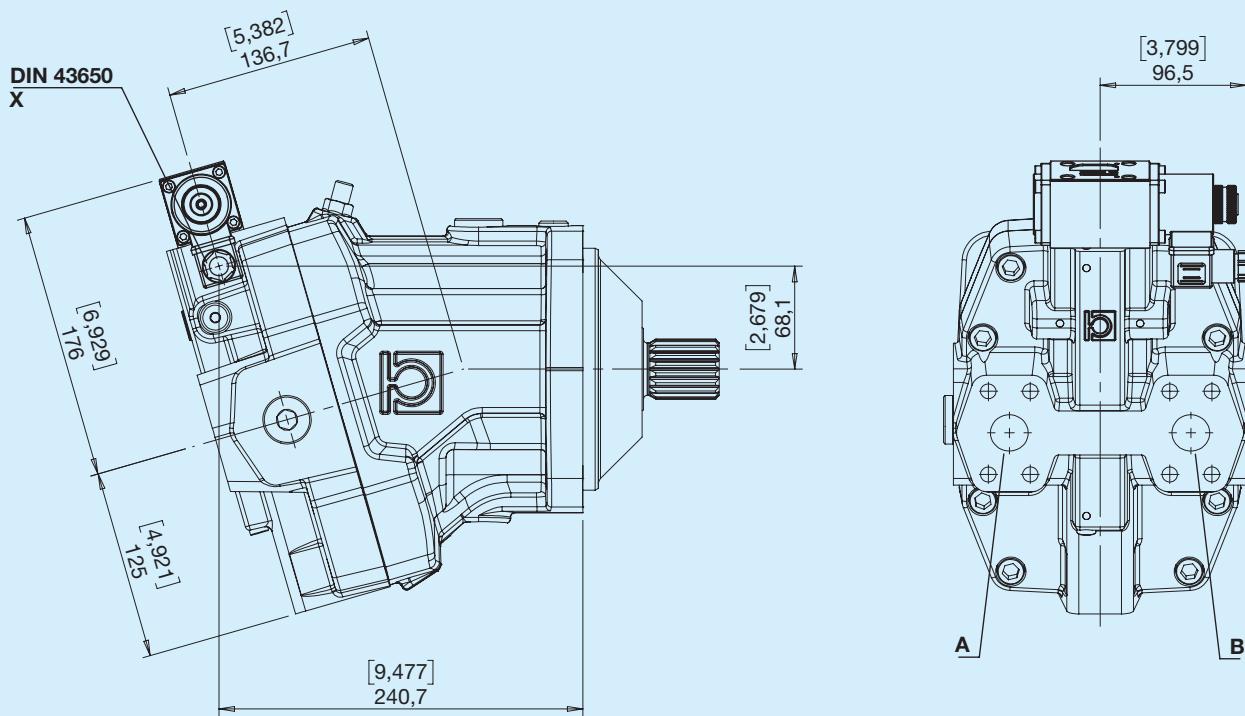
X - Elettrovalvola disponibile a richiesta con connettori DEUTSCH DT04-2P

## Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra



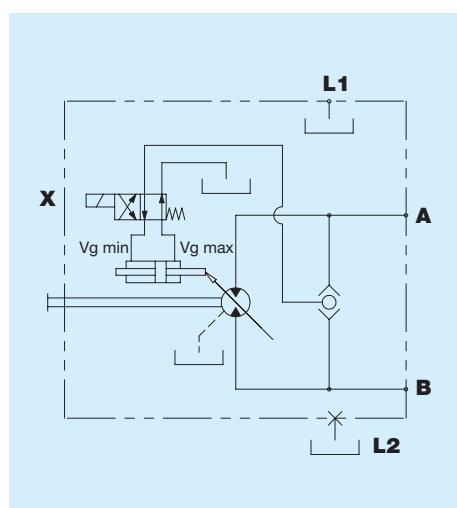
**F** Elettrico a 2 posizioni 24V



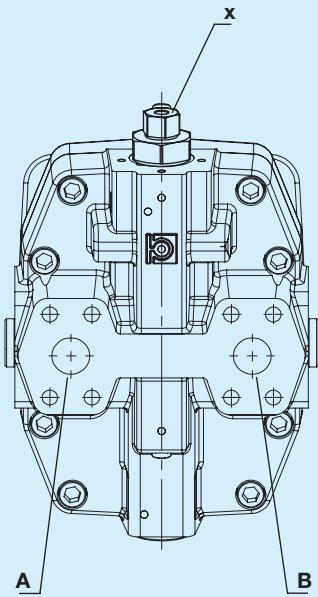
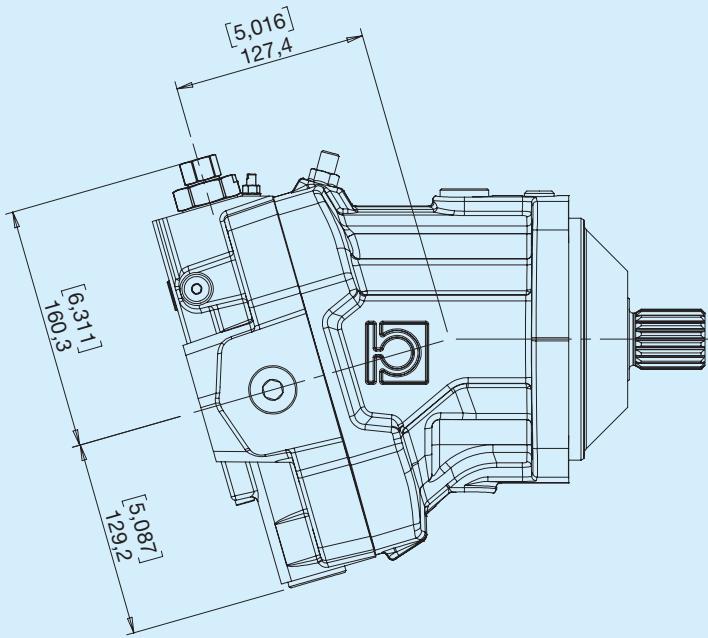
X - Elettrovalvola disponibile a richiesta con connettori DEUTSCH DT04-2P

## Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra



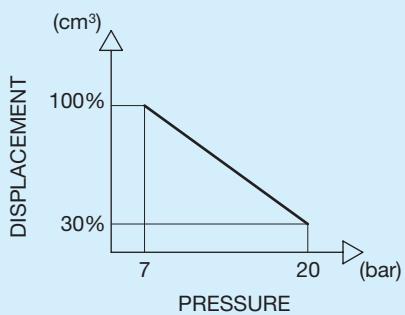
## G Idraulico proporzionale



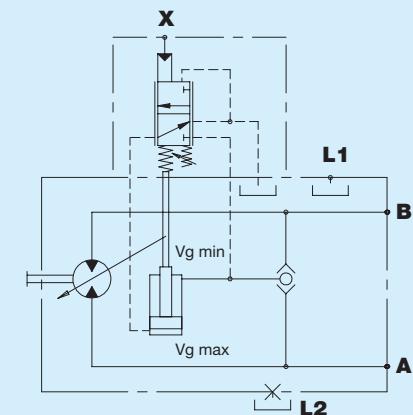
X - Pilotaggio G1/8

Ingresso	Rotazione
A	Sinistra
B	Destra

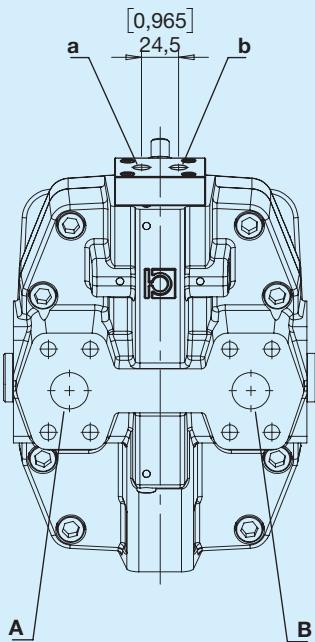
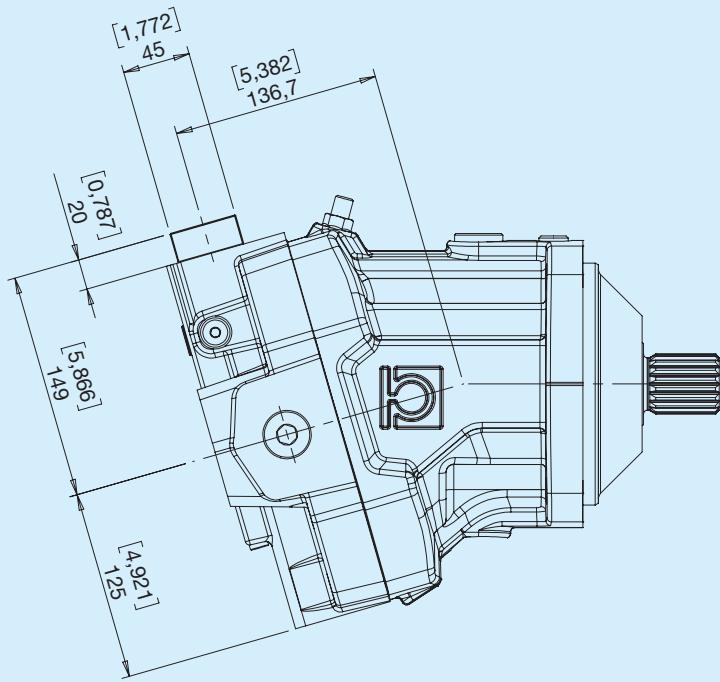
## Pilotaggio



## Schema idraulico

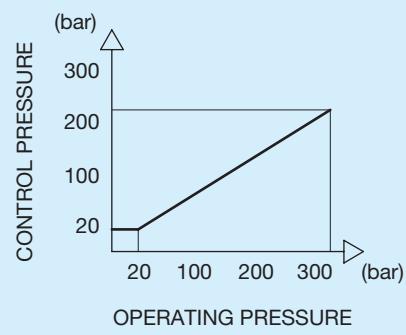


## H Idraulico diretto a 2 posizioni

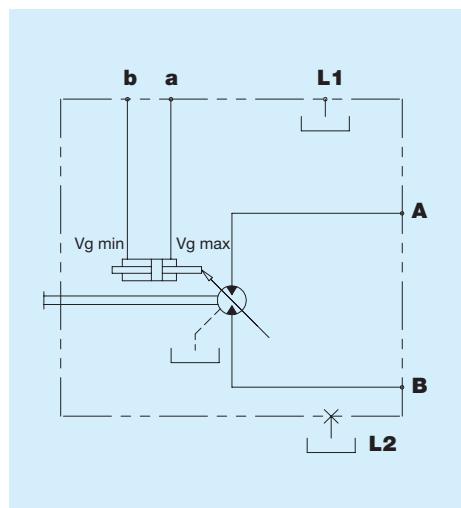


Ingresso	Rotazione
A	Sinistra
B	Destra

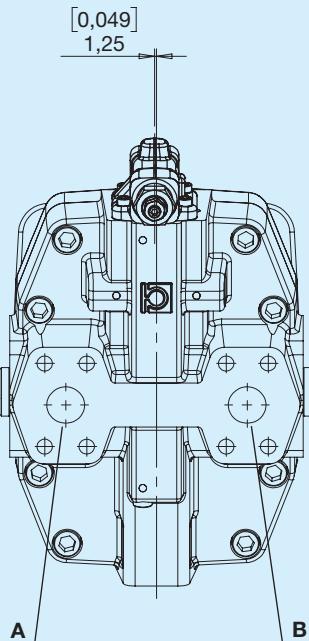
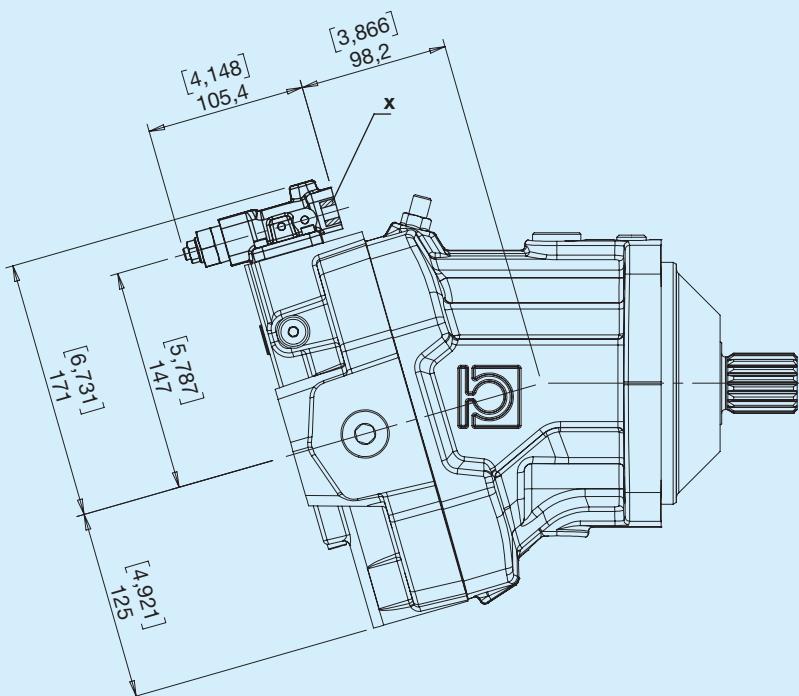
## Pilotaggio



## Schema idraulico



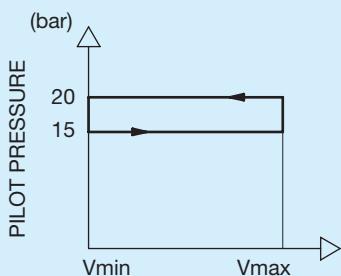
### K Idraulico a 2 posizioni a bassa pressione



X - Pilotaggio G1/8

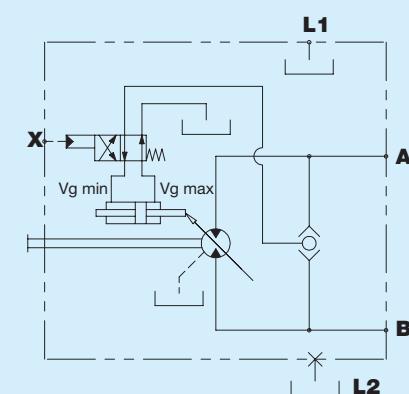
Ingresso	Rotazione
A	Sinistra
B	Destra

Diagramma

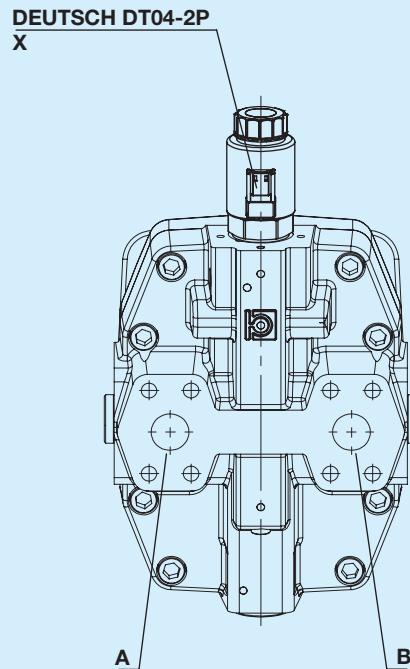
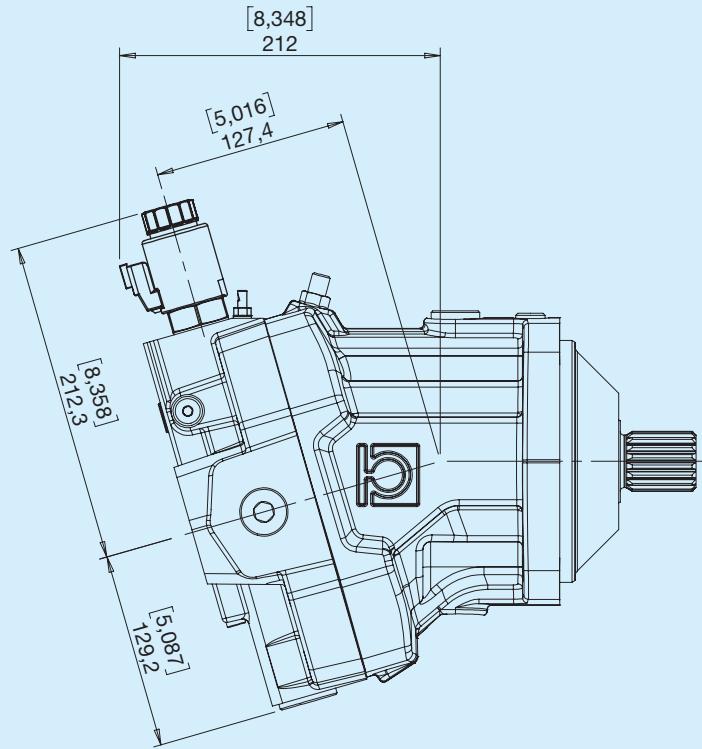


Normalmente il motore è in cilindrata massima. Applicando una pressione esterna sul pilotaggio, si ottiene la variazione di cilindrata alla minima. Per una corretta variazione della cilindrata attenersi ai valori di pilotaggio riportati nel diagramma.

Schema idraulico



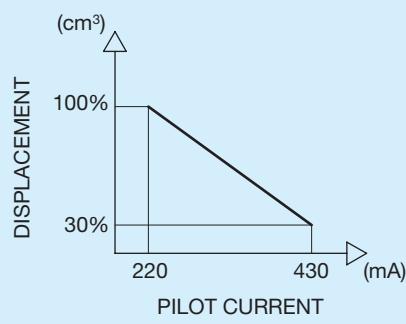
**O** Elettrico proporzionale retroazionato 12V



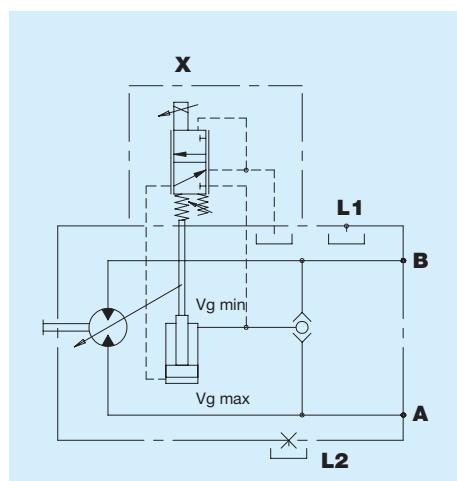
X - Elettrovalvola

## Pilotaggio

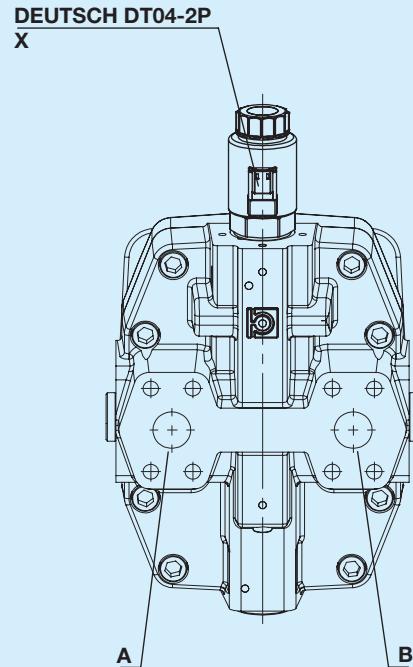
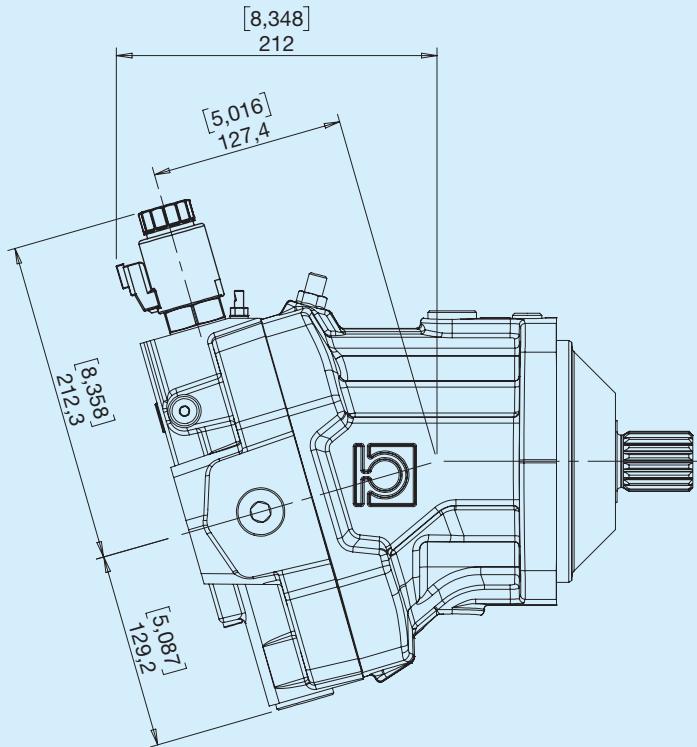
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico



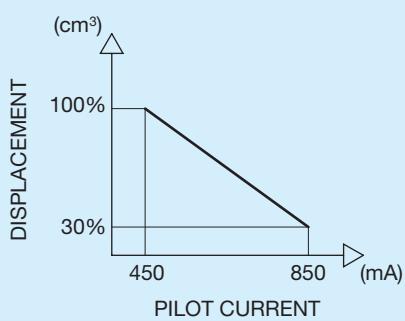
**V** Elettrico proporzionale retroazionato 24V



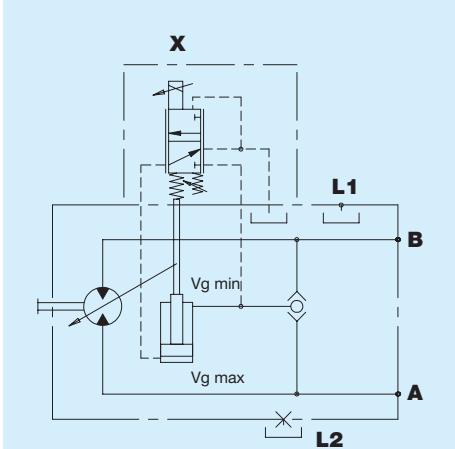
X - Elettrovalvola

## Pilotaggio

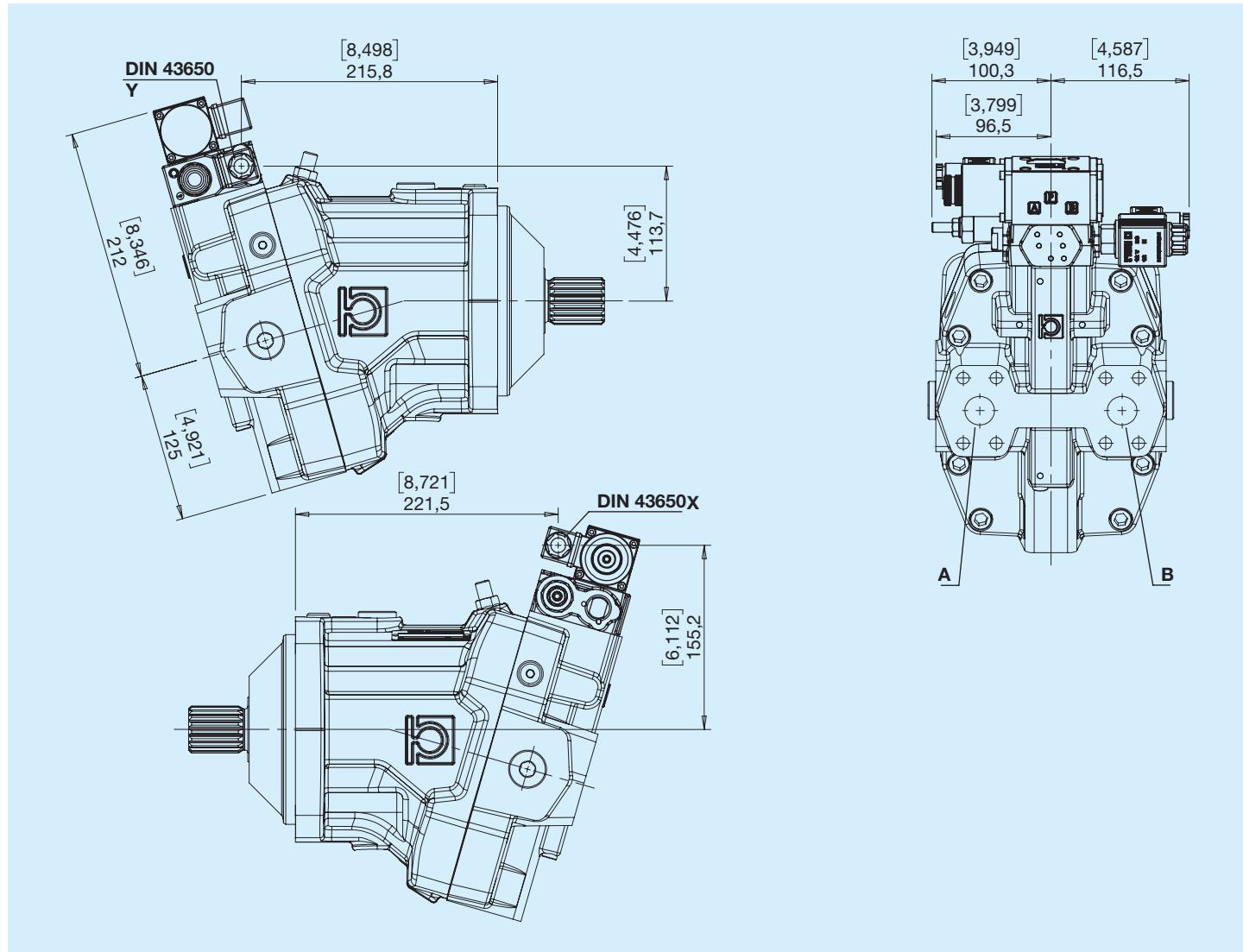
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico

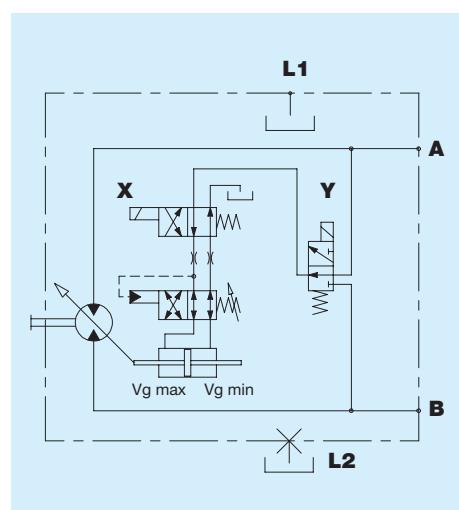


**R** Elettrico ON/OFF con pressure override e selettrice di canale

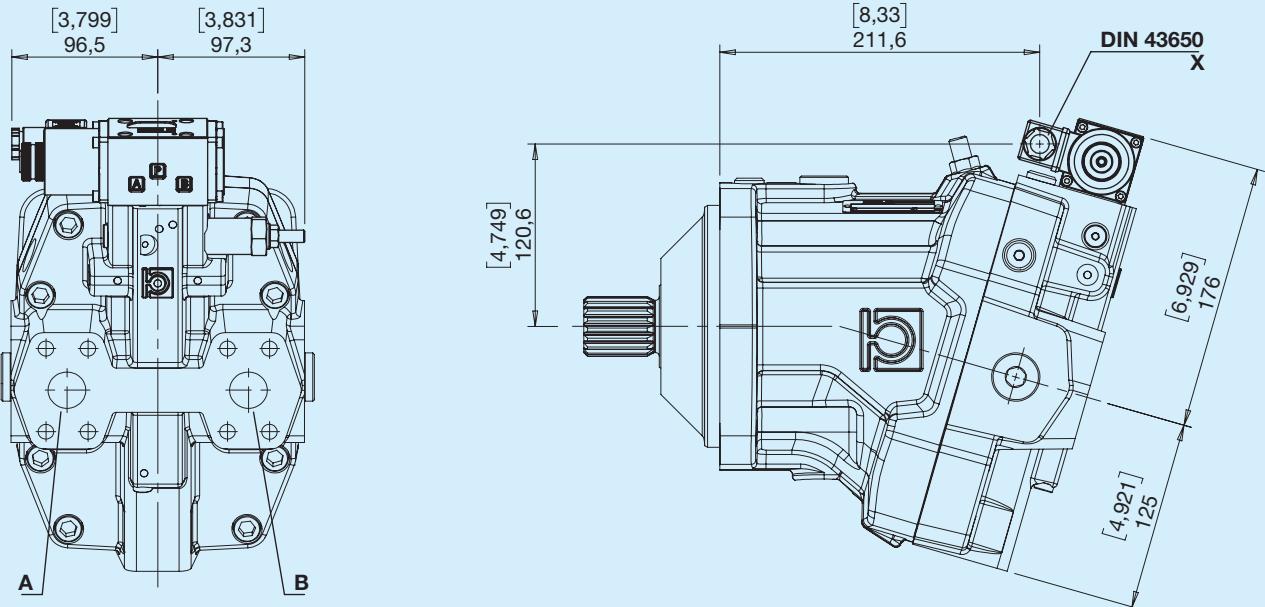


Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra

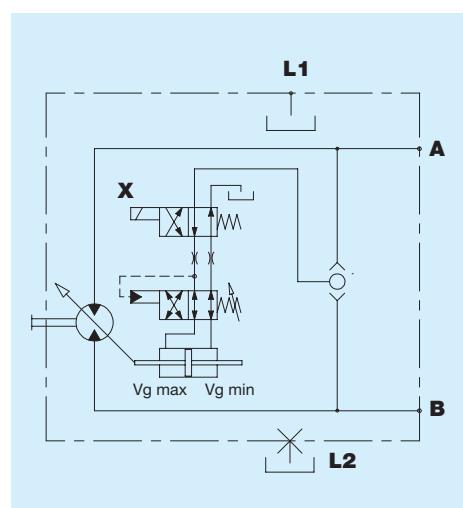


### U Elettrico ON/OFF con pressure override

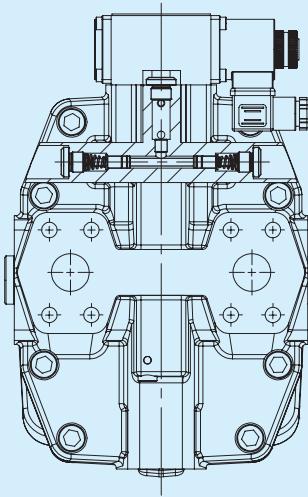
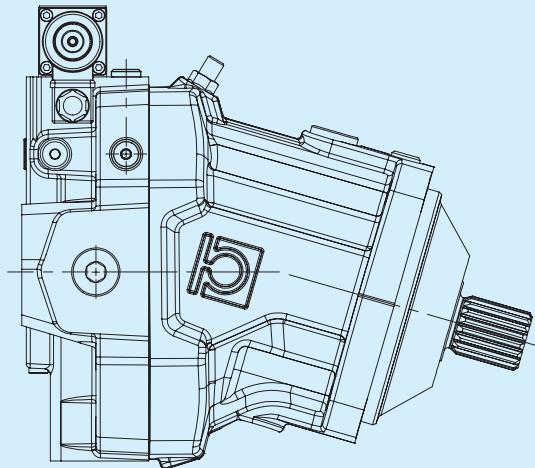


Ingresso	Rotazione
A	Sinistra
B	Destra

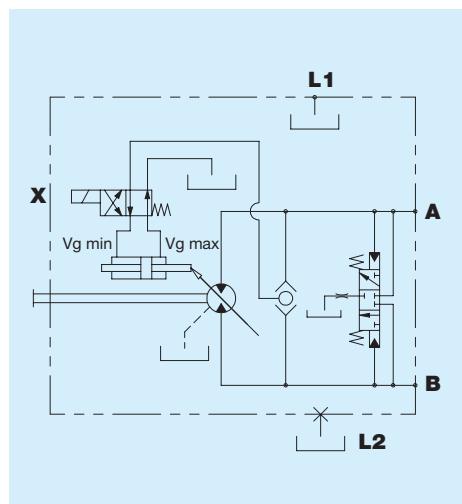
### Schema idraulico



**V** Valvola di flussaggio (5-7 l/min)

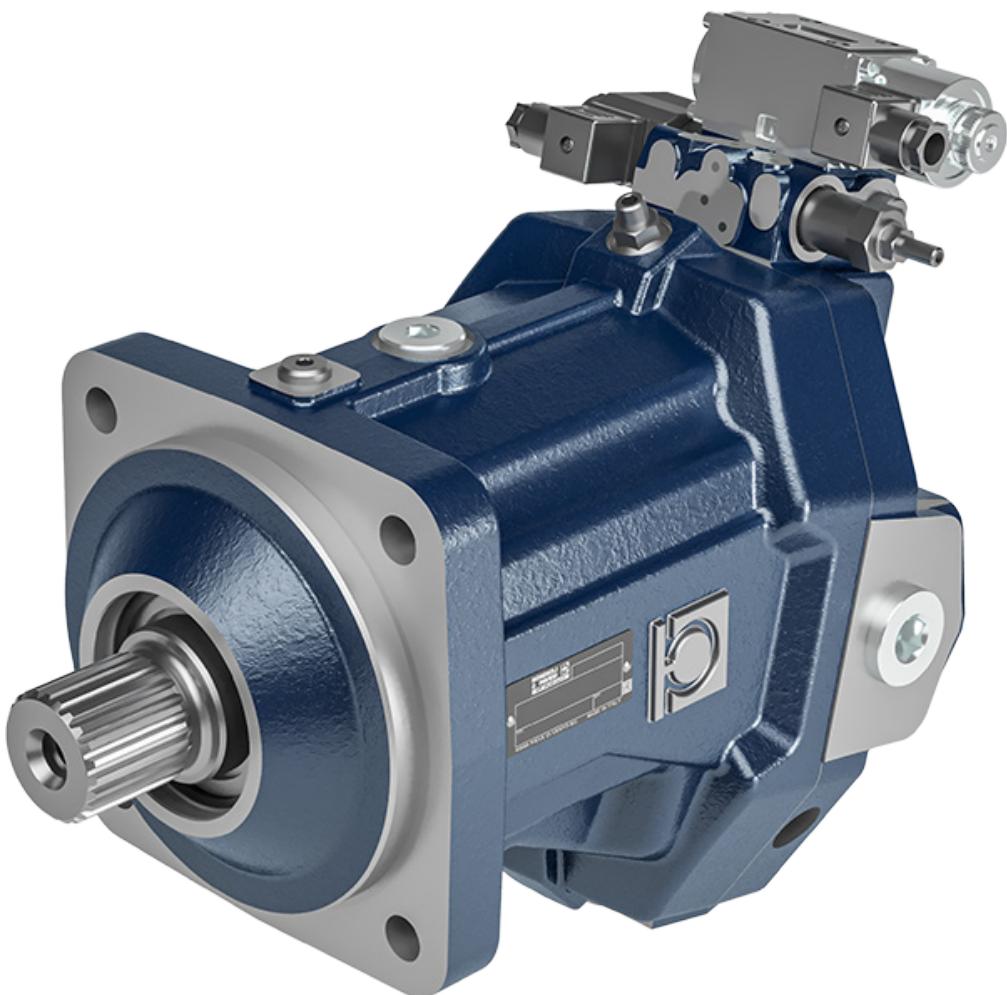


Schema idraulico

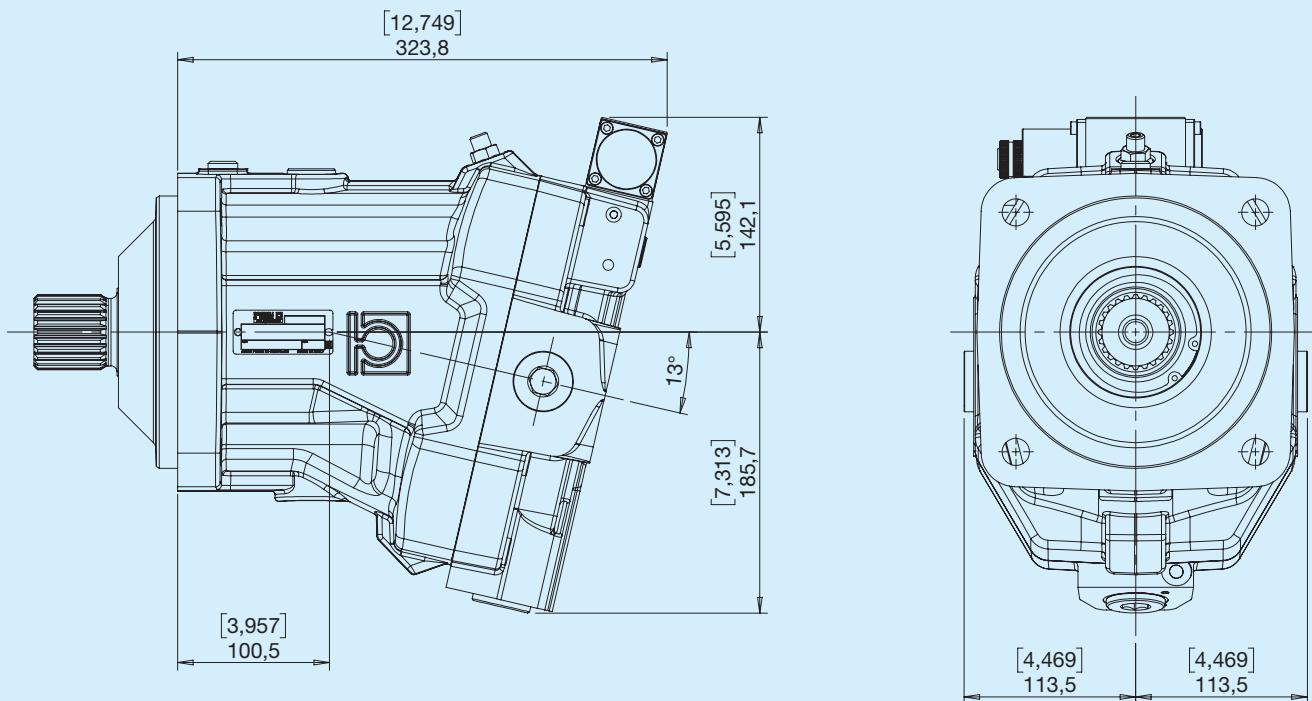


<b>HPBA</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	2	3												
110				130										
4	5													
6														
7														
8														
9														
10														
11														
12	13	14												

## Motori a cilindrata variabile HPBA 160-200

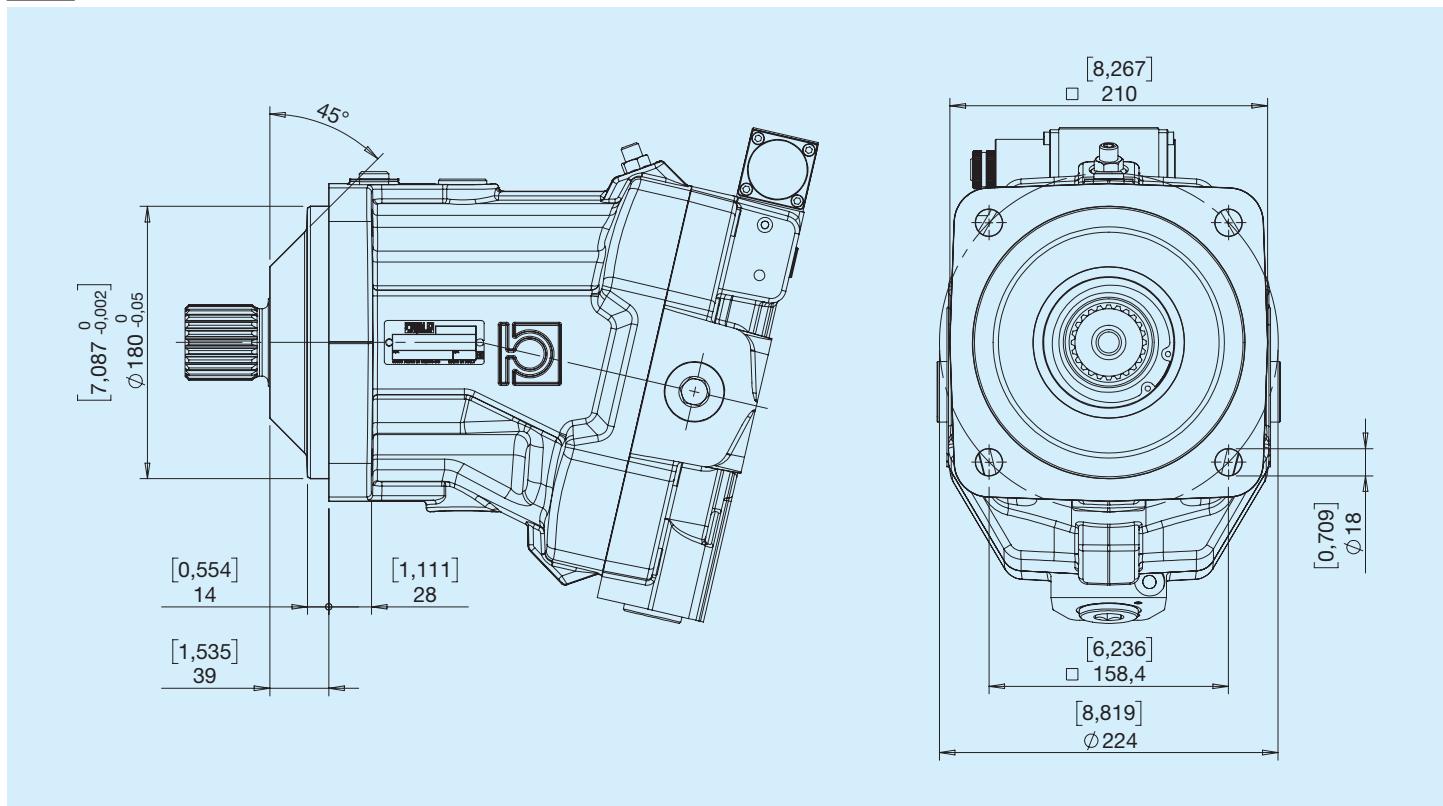


Prima di iniziare l'utilizzo leggere attentamente il documento ISTRUZIONI GENERALI D'IMPIEGO POMPE E MOTORI A PISTONI ASSIALI PER CIRCUITO CHIUSO.

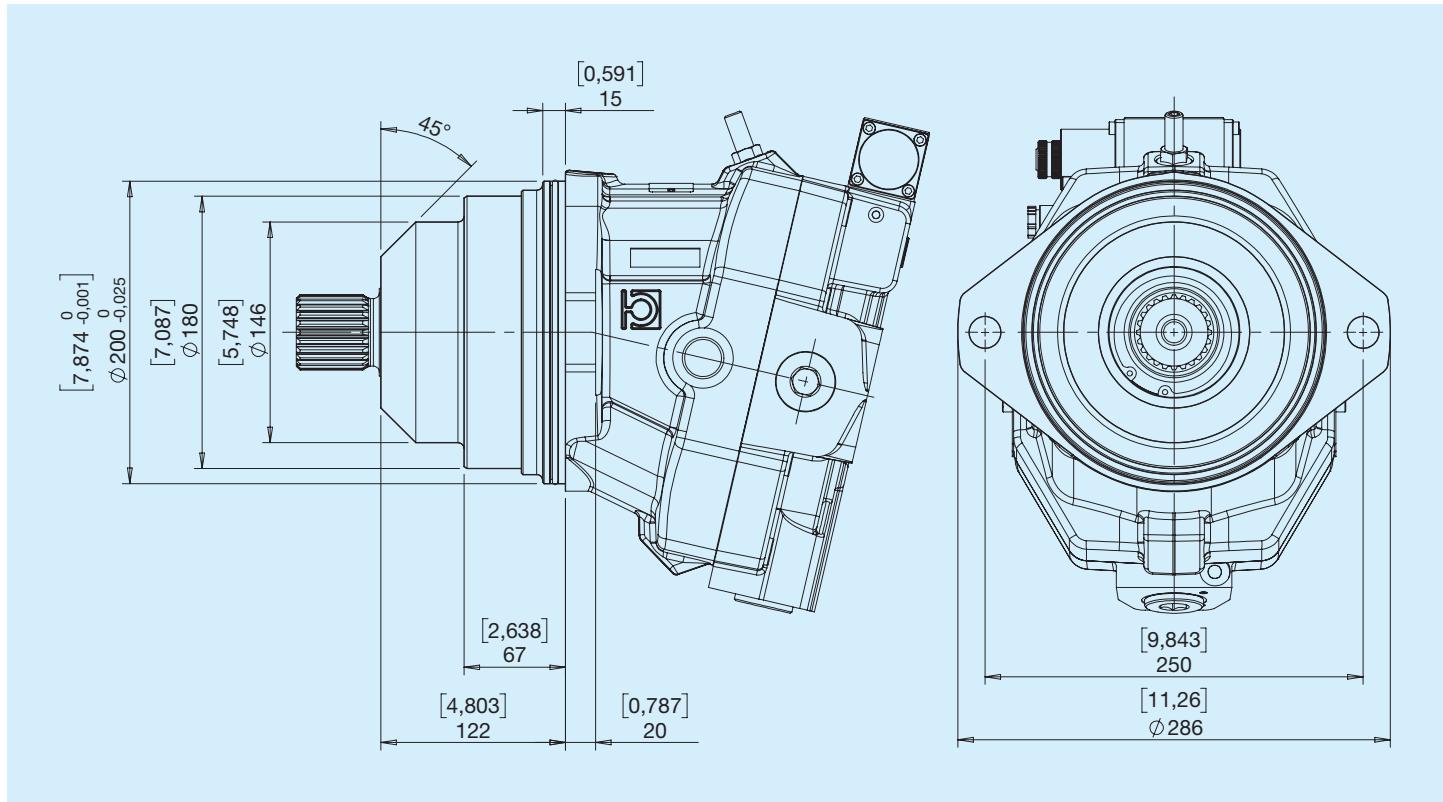


HPBA	Cilindrata teorica		Oscillante	Pressione Continua		Pressione intermittente		Pressione picco		Velocità di rotazione			Massa	
	cm <sup>3</sup>	in <sup>3</sup>		°	bar	psi	bar	psi	bar	psi	MAX (max V) min <sup>-1</sup>	MAX (min V) min <sup>-1</sup>	MIN min <sup>-1</sup>	kg
<b>160</b>	160	9,77	25	380	5510	400	5800	450	6525	3100	4000	500	80	176
<b>200</b>	200	12,20	25	350	5075	380	5510	420	6090	2800	4000	500	81,7	180

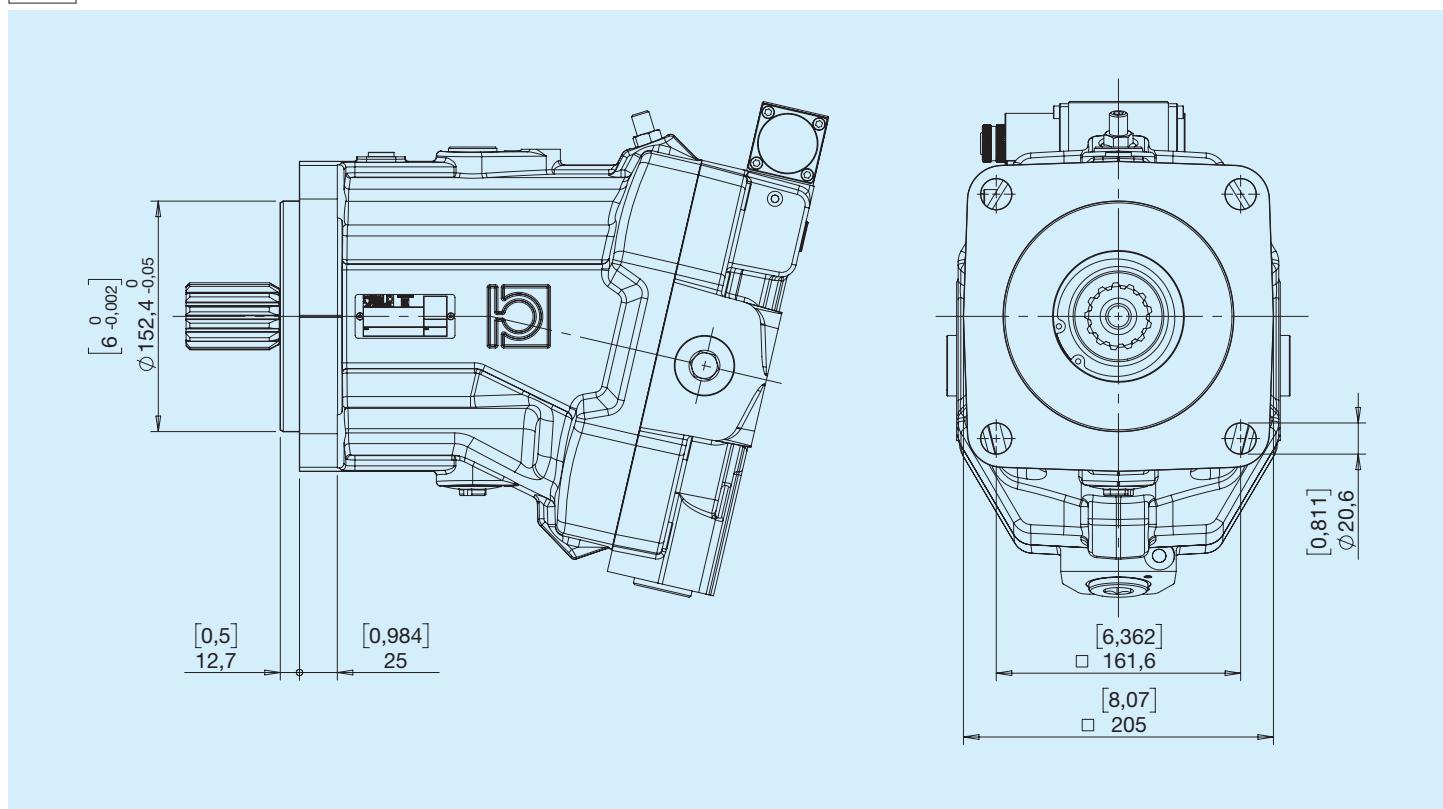
## I ISO 4 fori standard



## P ISO 2 fori centraggio a cartuccia

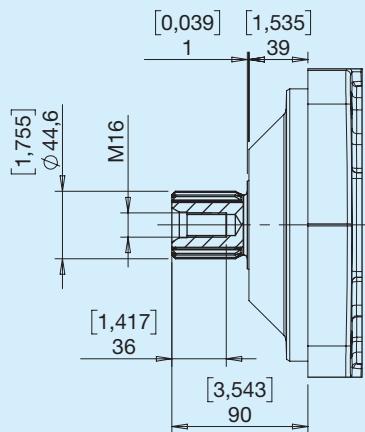


**S** SAE D



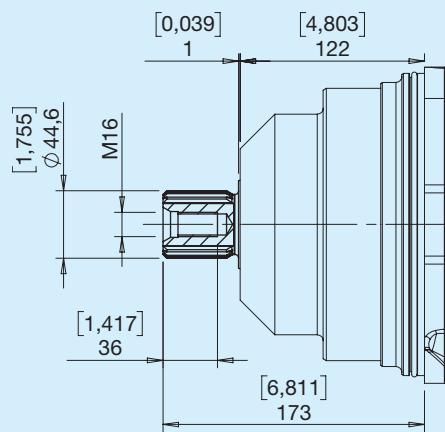
**D** DIN 5480 W45x2x30x21

Versione ISO 4 fori standard



Coppia Max 1980 Nm

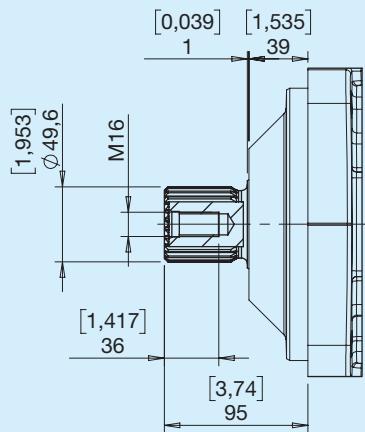
Versione ISO 2 fori a cartuccia



Coppia Max 1980 Nm

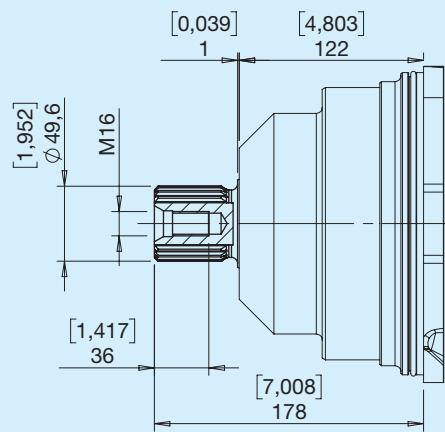
**E** DIN 5480 W50x2x30x24

Versione ISO 4 fori standard



Coppia Max 2860 Nm

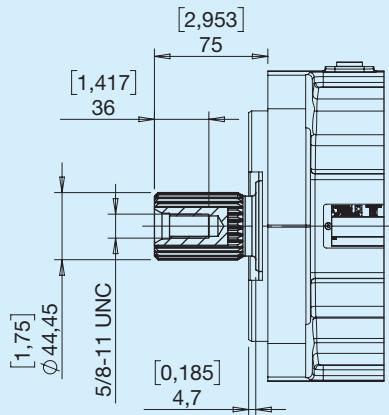
Versione ISO 2 fori a cartuccia



Coppia Max 2860 Nm

### N SAE 27T 16/32 DP

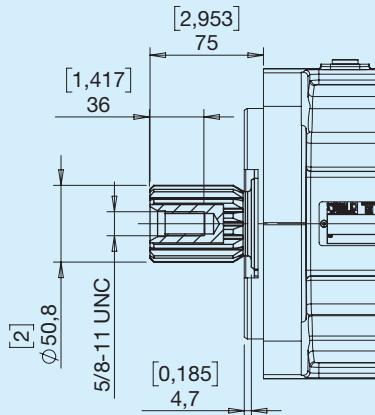
Versione SAE D



Coppia Max 2700 Nm

### X SAE 15T 8/16 DP

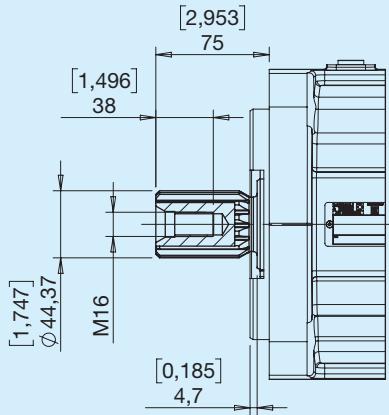
Versione SAE D



Coppia Max 3400 Nm

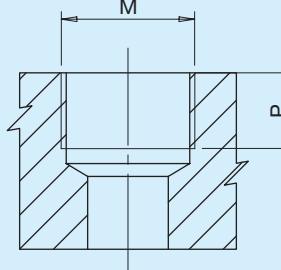
### 9 SAE 13T 8/16 DP

Versione SAE D



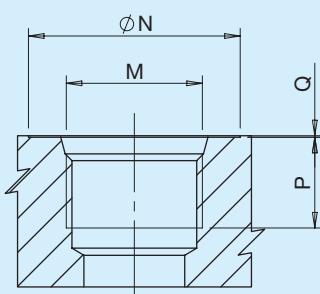
Coppia Max 2600 Nm

## Tipo G



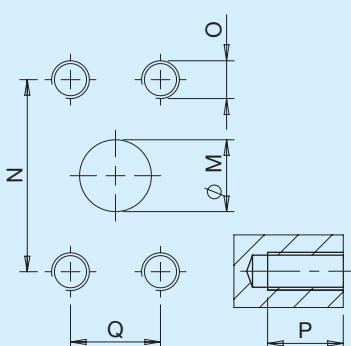
Tipo	M	P	
		Nm	mm in
G2	Port ISO 1179-1 - G 1/4	17	8 0,31
G6	Port ISO 1179-1 - G 3/4	90	19 0,75
G7	Port ISO 1179-1 - G 1	160	19 0,75

## Tipo U



Tipo	Dim.	N		P		Q		M	Nm
		mm	in	mm	in	mm	in		
U2	1/4'	20	0,79	12	0,47	0,3	0,01	Port ISO 11926-1-7/16-20	17
U6	3/4'	41	1,61	20	0,79	0,3	0,01	Port ISO 11926-1-1 1/16-12	90
U7	1'	49	1,93	18	0,70	0,3	0,01	Port ISO 11926-1-1 5/16-12	160

## Tipo N

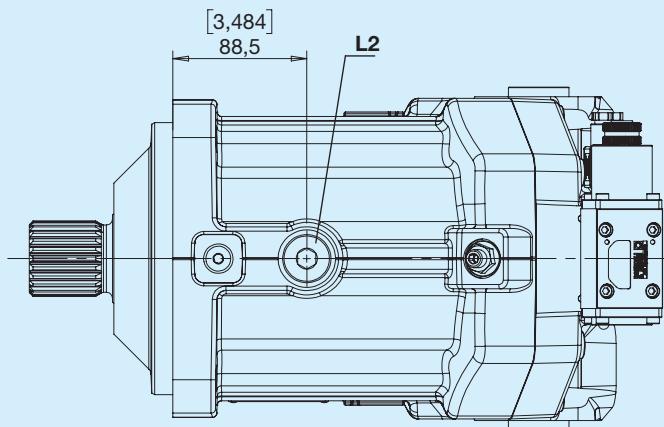
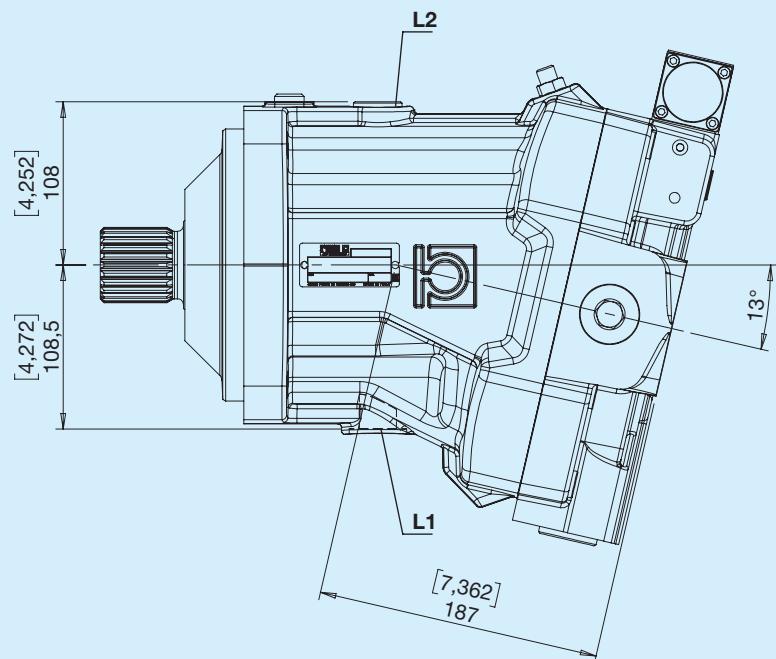
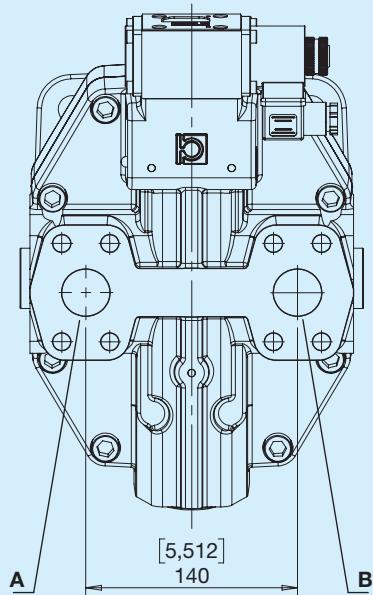


Tipo	M		N		Q		P		O
	mm	in	mm	in	mm	in	mm	in	
N8	32	1,26	66,7	2,62	31,8	1,25	20	0,79	M12 70

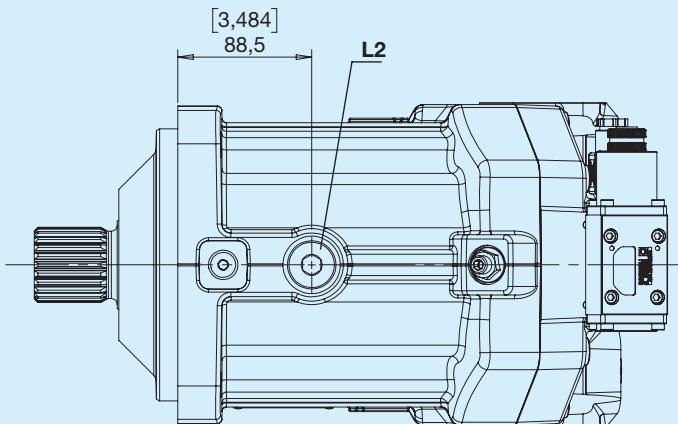
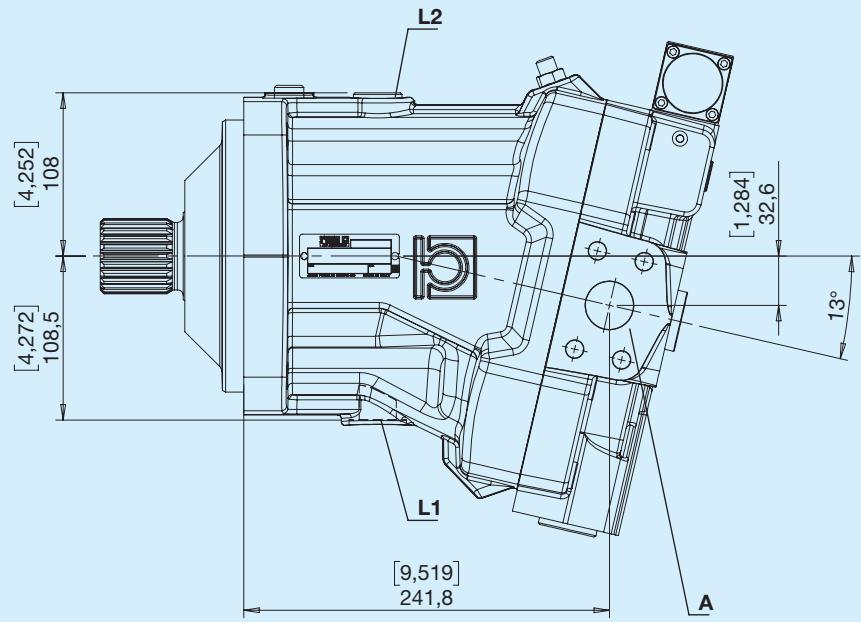
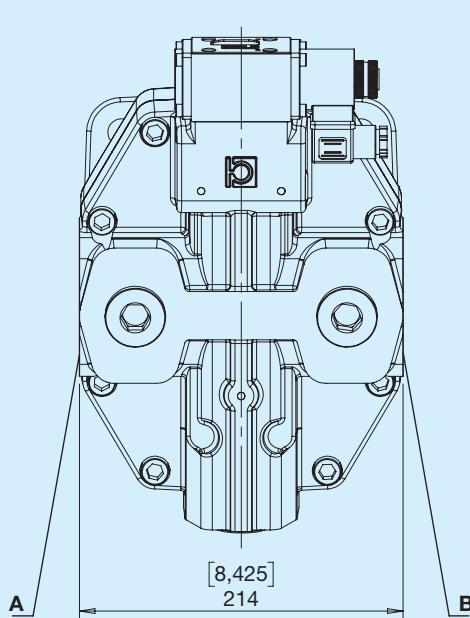
### Combinazioni

Tipo	Inlet/outlet A-B	Drenaggio L1-L2	Pilotaggio a-b-x
<b>G</b>	G7	G6	G6
<b>U</b>	U7	U6	U6
<b>N</b>	N8	G6	G2
<b>M</b>	N8	U6	U2

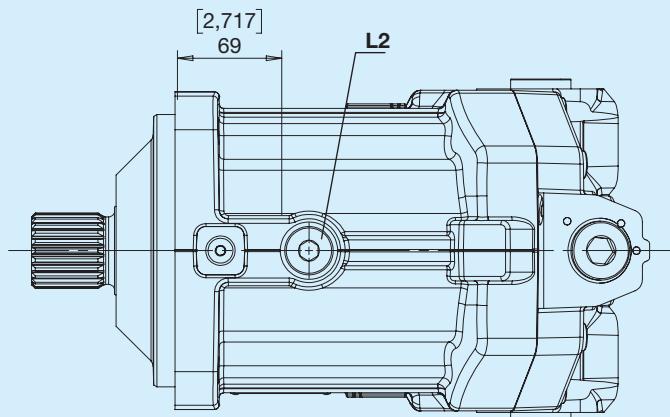
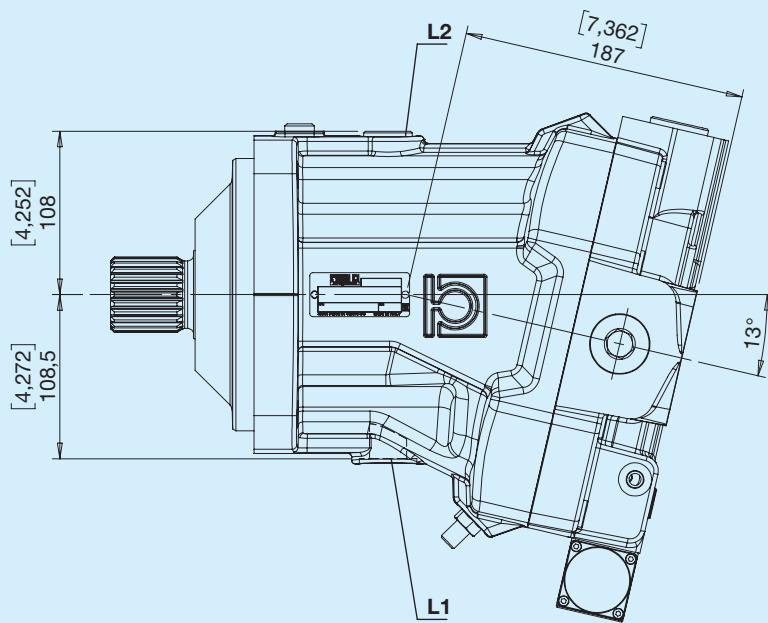
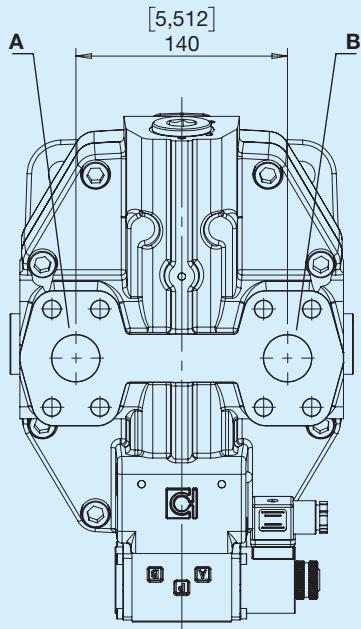
**P** Posteriori



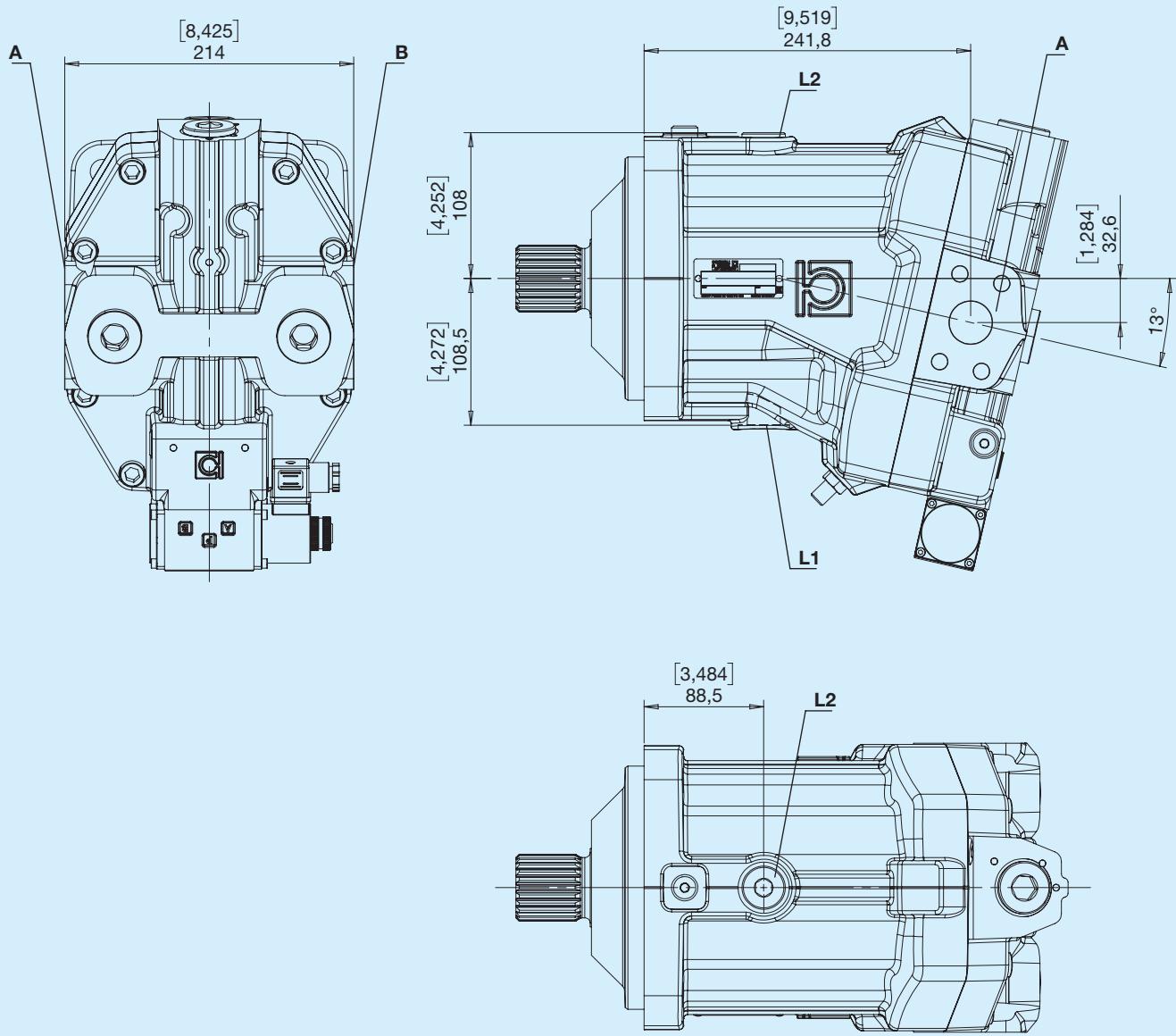
### L Lateral contrapposte



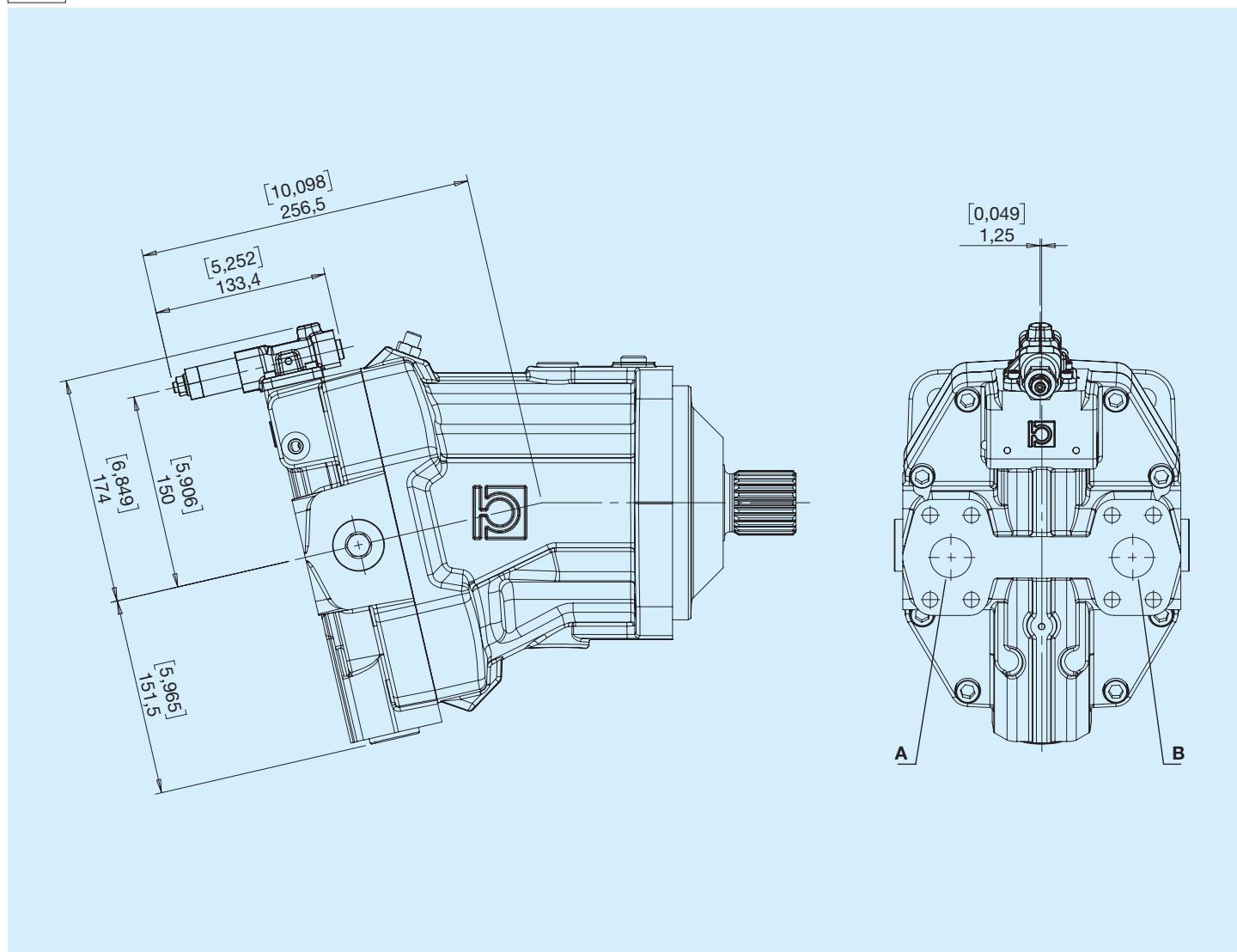
**Y** Posteriori distributore ruotato



### J Lateral contrapposte distributore ruotato

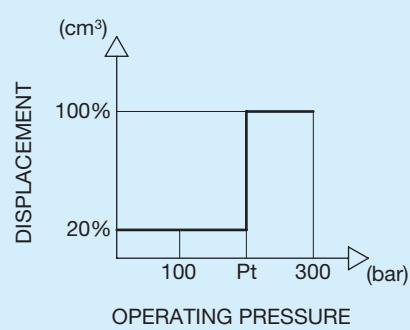


## A Idraulico automatico ON/OFF



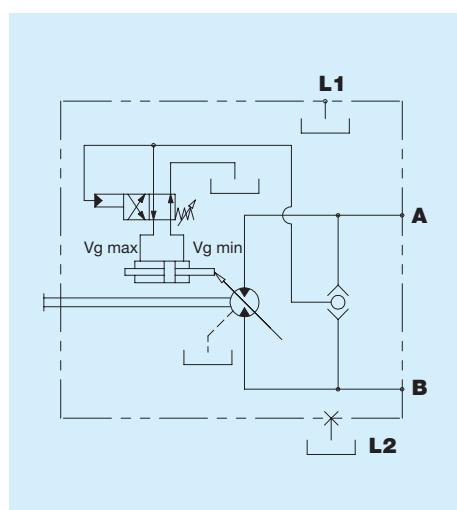
## Pilotaggio

Ingresso	Rotazione
A	Sinistra
B	Destra

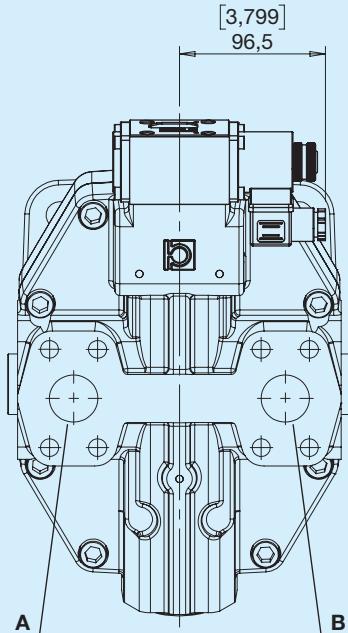
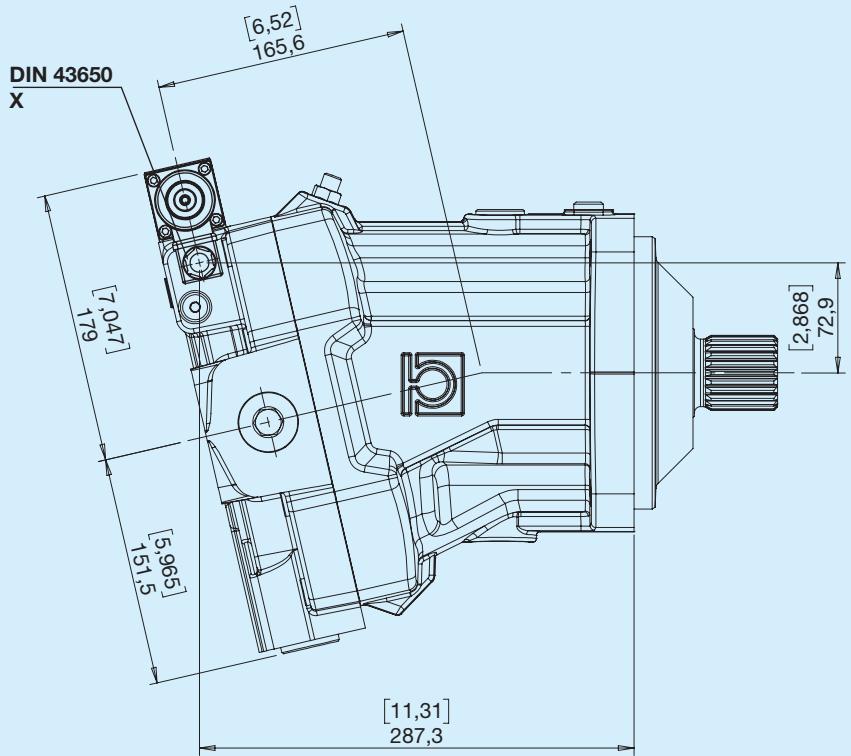


$P_t$  - Pressione di taratura (secondo specifica cliente)

## Schema idraulico



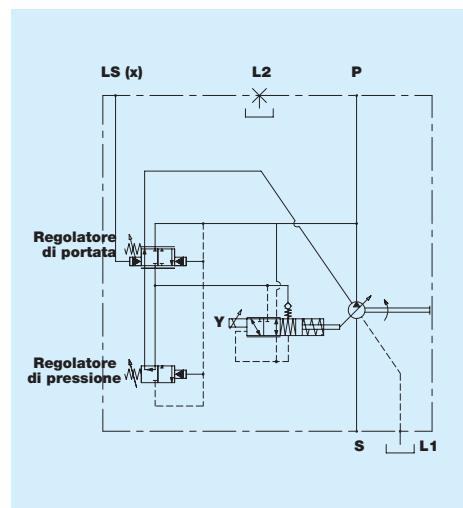
**E** Elettrico a 2 posizioni 12V



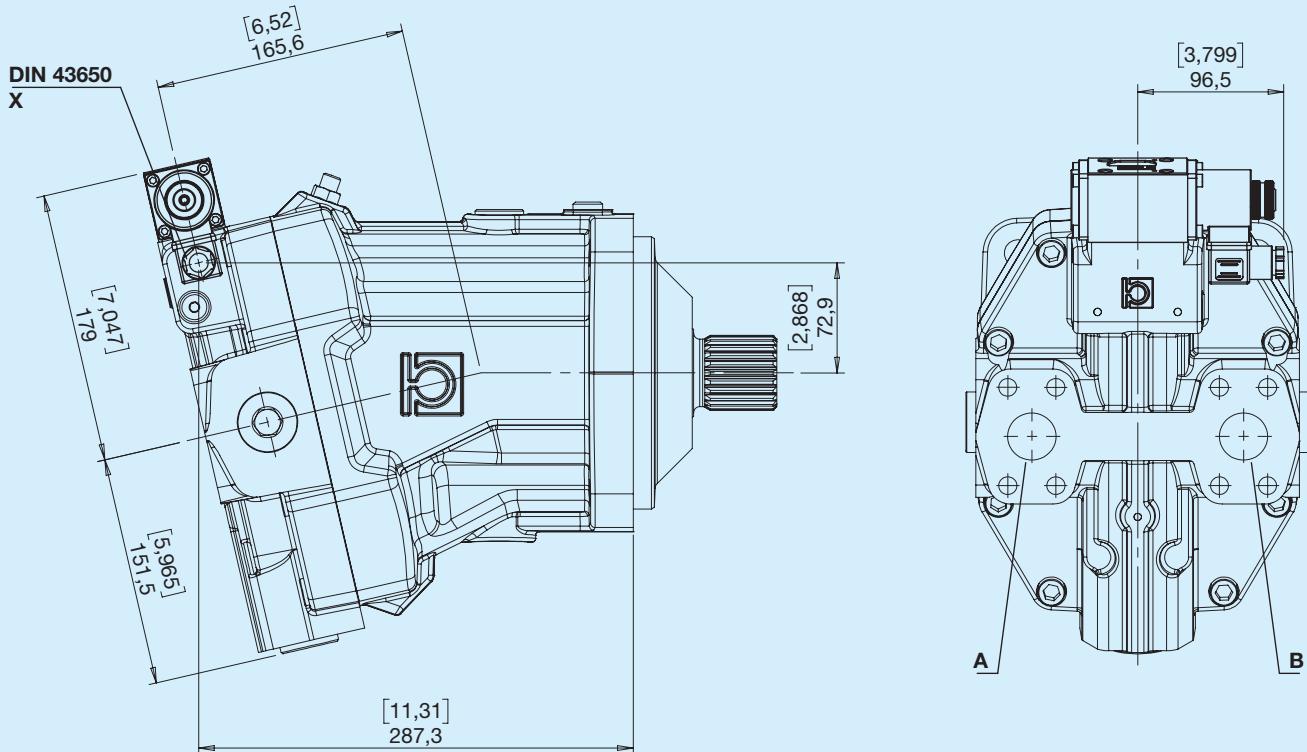
X - Elettrovalvola disponibile a richiesta con connettori DEUTSCH DT04-2P

## Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra



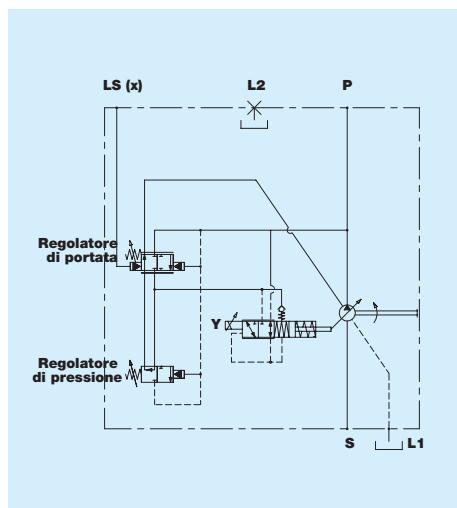
**F** Elettrico a 2 posizioni 24V



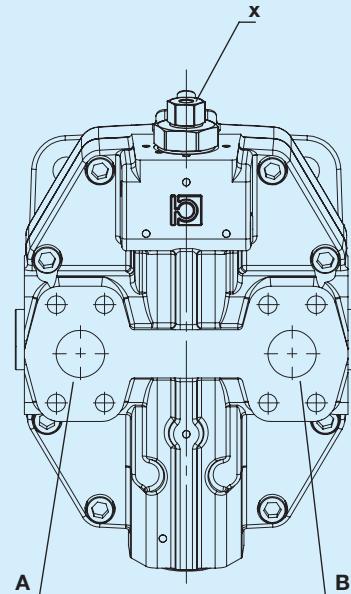
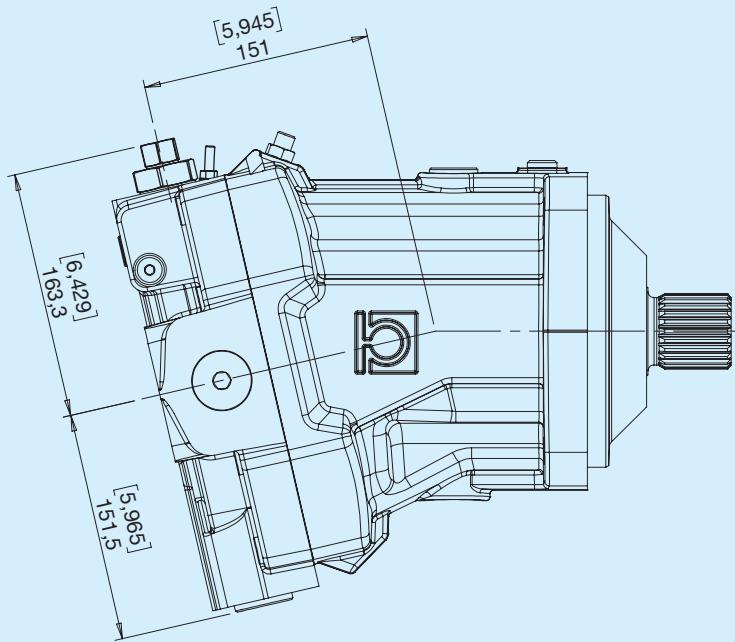
X - Elettrovalvola disponibile a richiesta con connettori DEUTSCH DT04-2P

## Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra



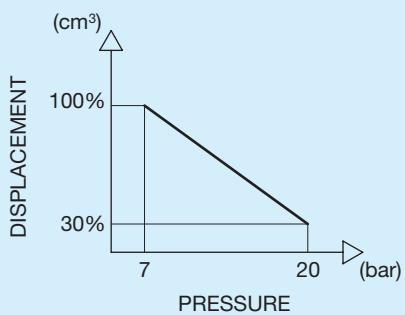
### G Idraulico proporzionale



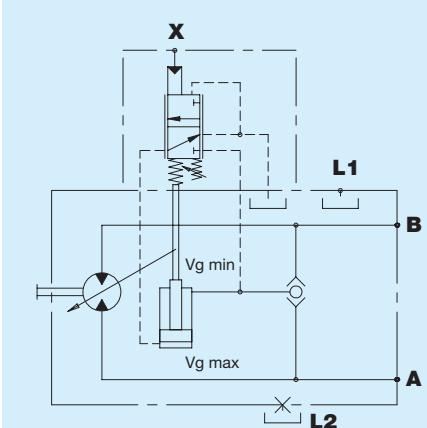
X - Pilotaggio G1/8

### Pilotaggio

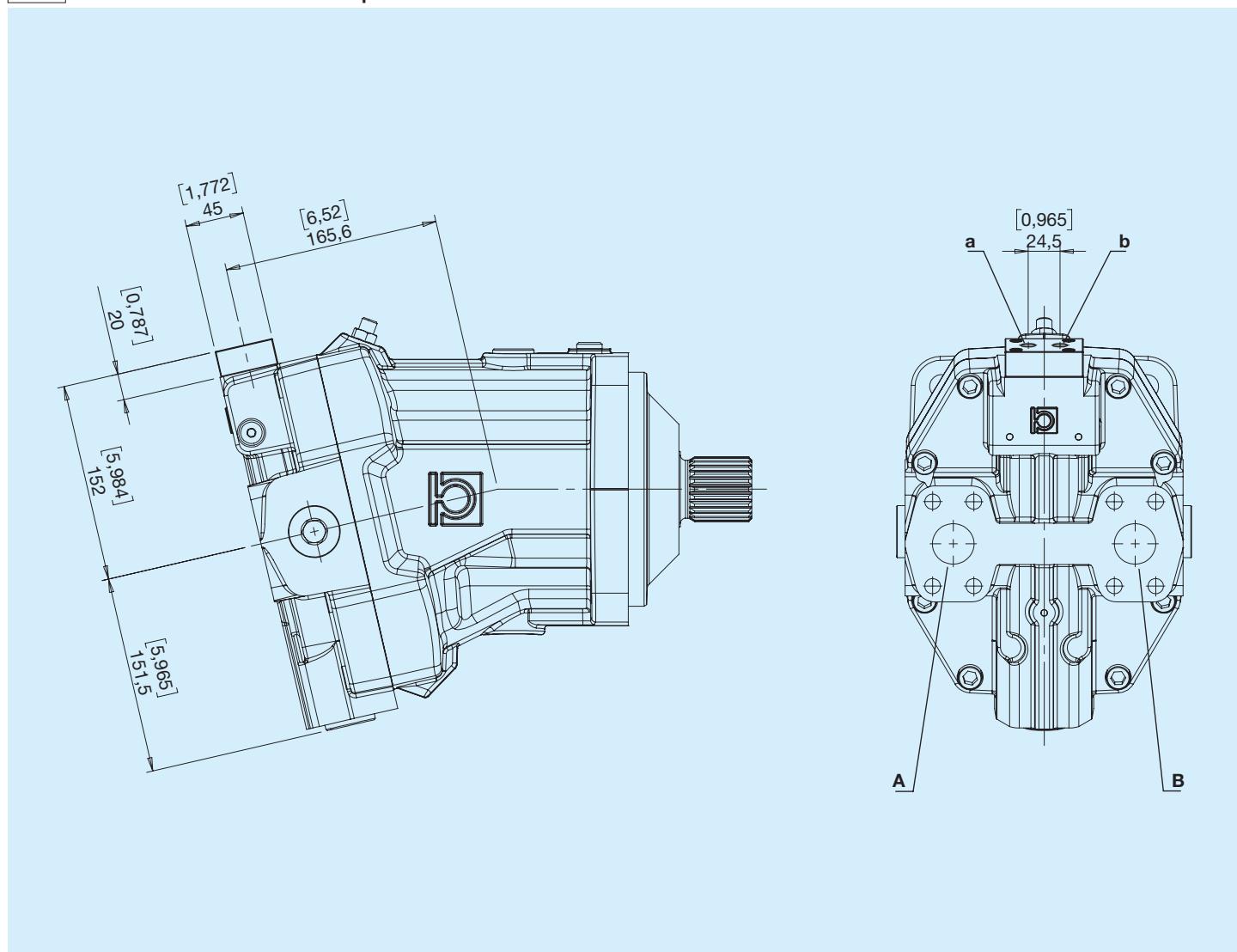
Ingresso	Rotazione
A	Sinistra
B	Destra



### Schema idraulico

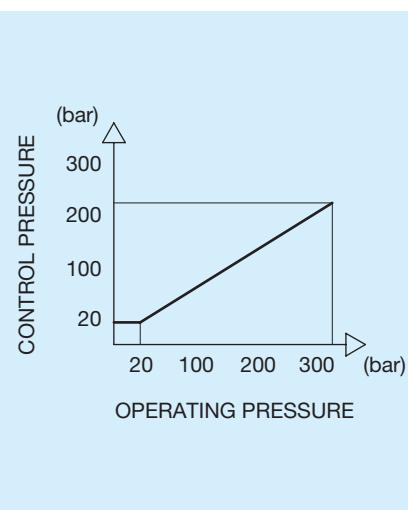


## H Idraulico diretto a 2 posizioni

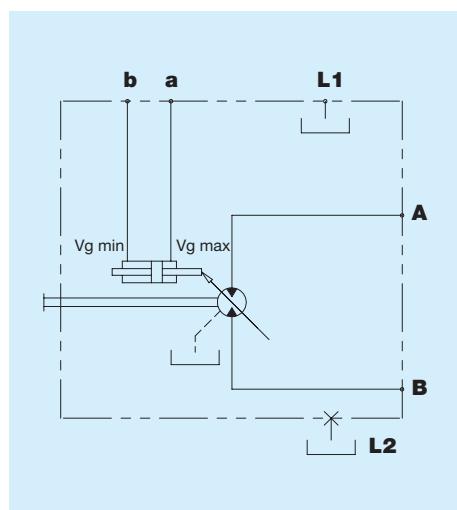


### Pilotaggio

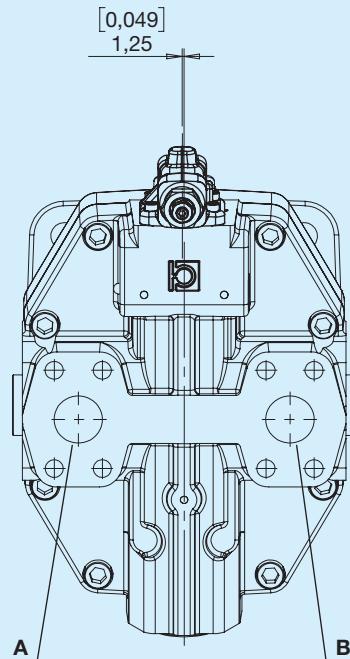
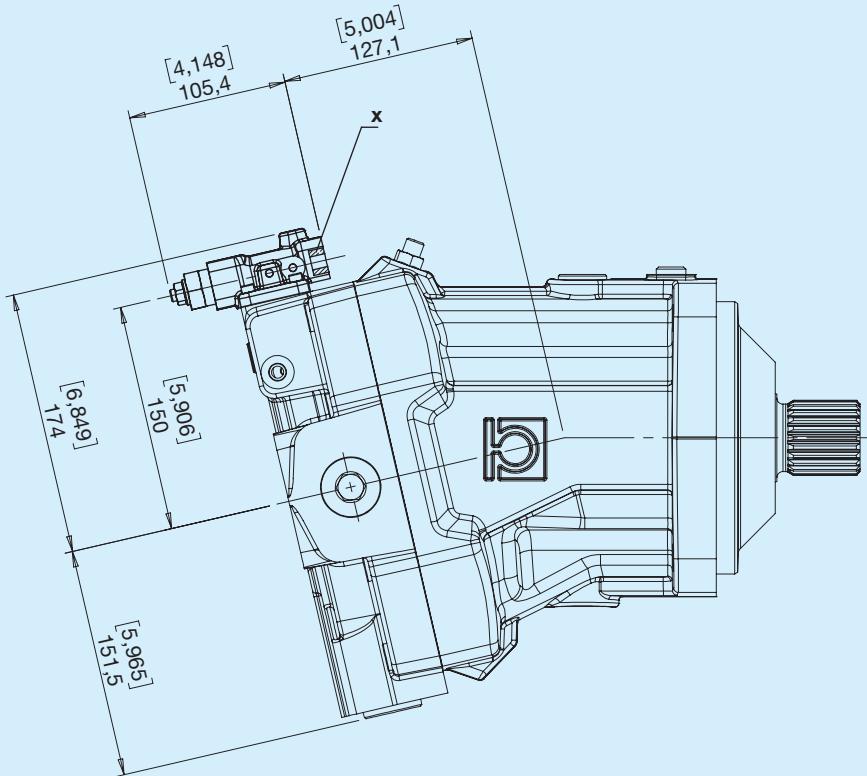
Ingresso	Rotazione
A	Sinistra
B	Destra



### Schema idraulico



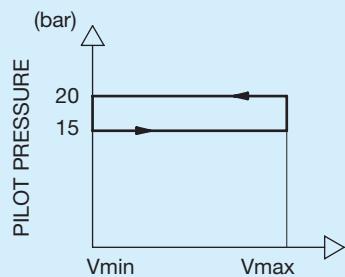
## K Idraulico a 2 posizioni a bassa pressione



X - Pilotaggio G1/8

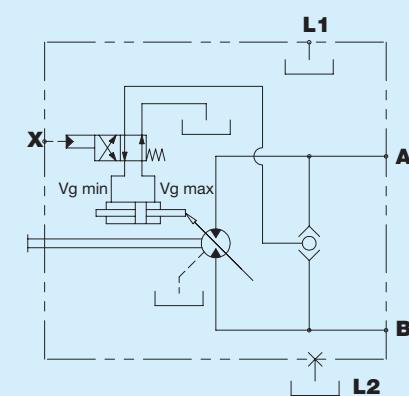
Ingresso	Rotazione
A	Sinistra
B	Destra

### Diagramma

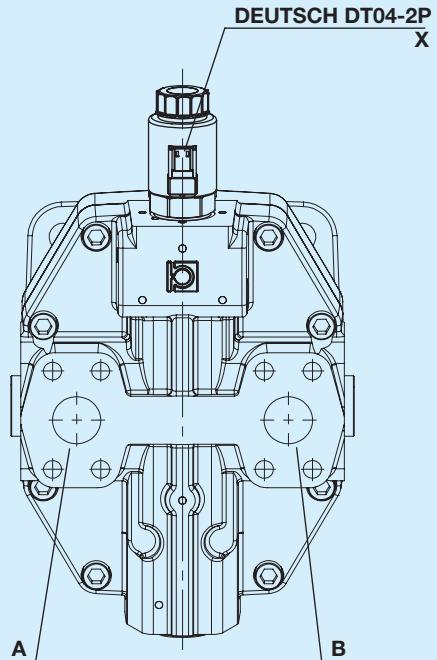
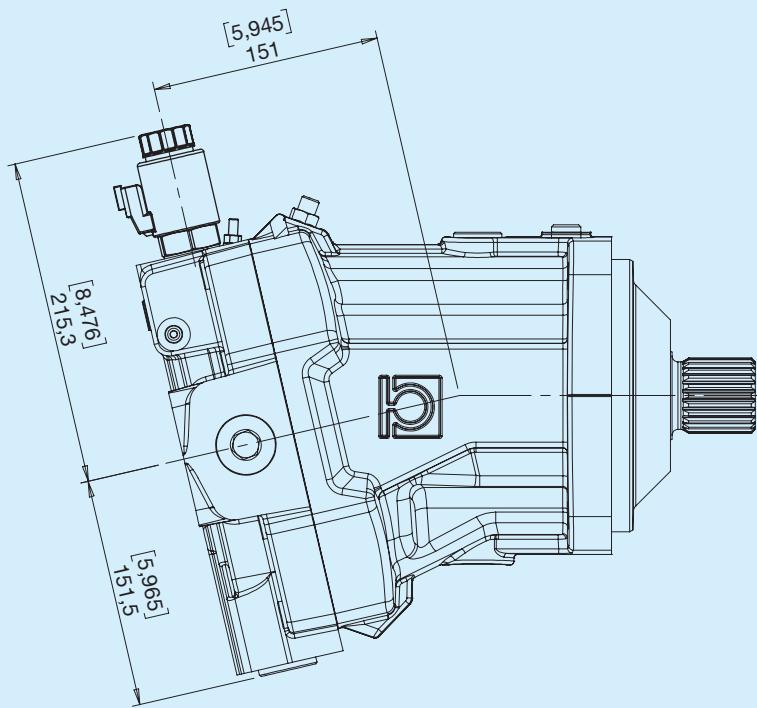


Normalmente il motore è in cilindrata massima. Applicando una pressione esterna sul pilotaggio, si ottiene la variazione di cilindrata alla minima. Per una corretta variazione della cilindrata attenersi ai valori di pilotaggio riportati nel diagramma.

### Schema idraulico



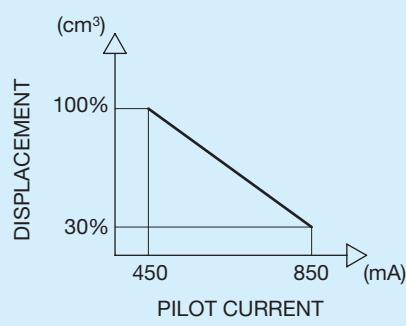
**O** Elettrico proporzionale retroazionato 12V



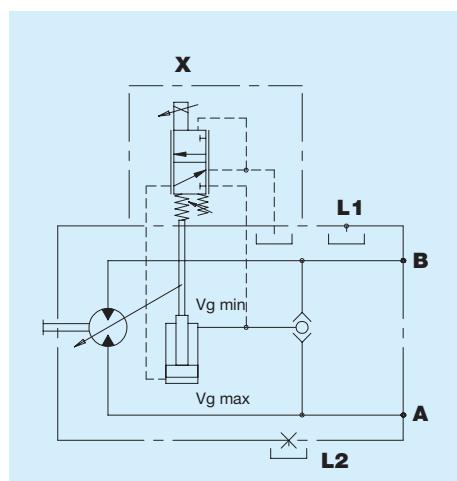
X - Elettrovalvola

## Pilotaggio

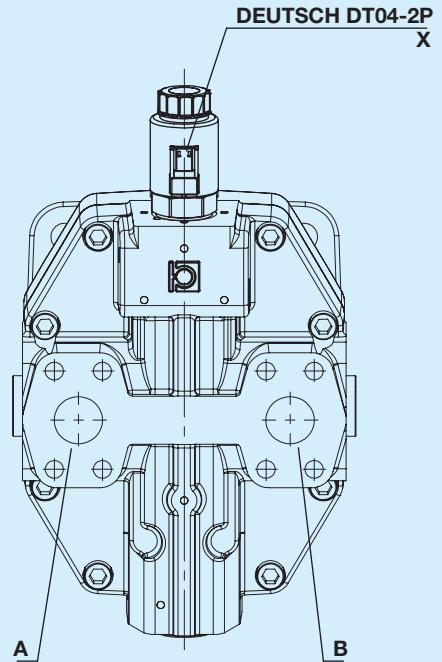
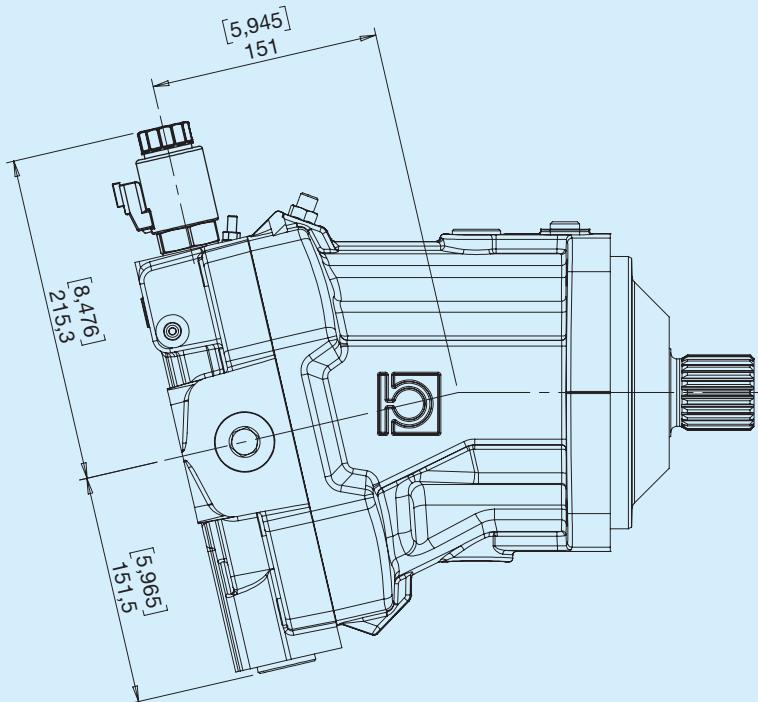
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico



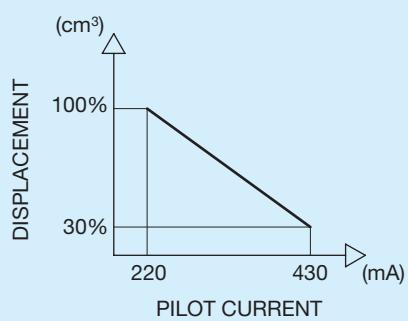
**V** Elettrico proporzionale retroazionato 24V



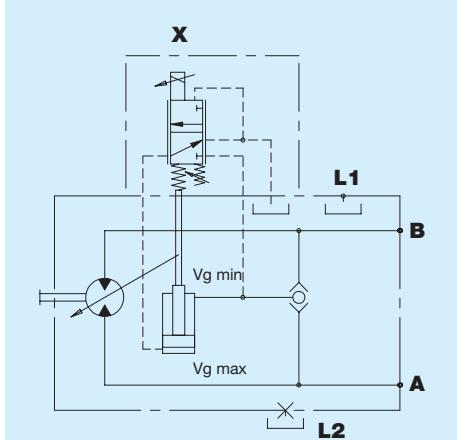
X - Elettrovalvola

## Pilotaggio

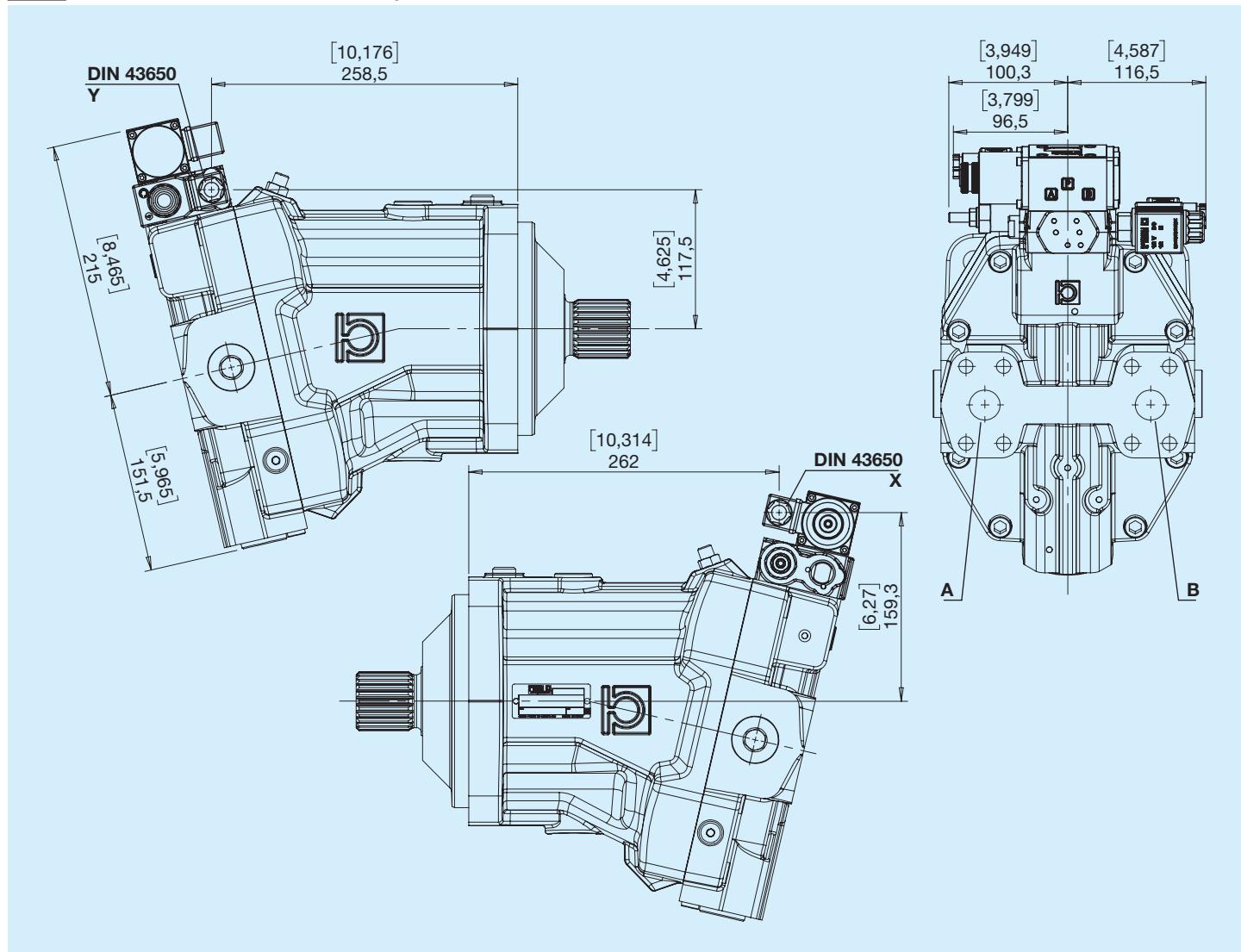
Ingresso	Rotazione
A	Sinistra
B	Destra



## Schema idraulico

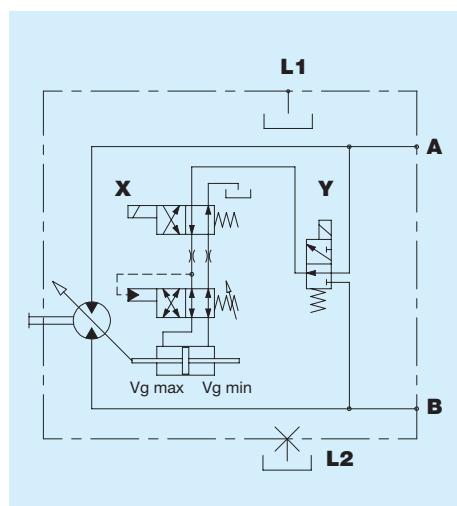


**R** Elettrico ON/OFF con pressure override e selettrice di canale

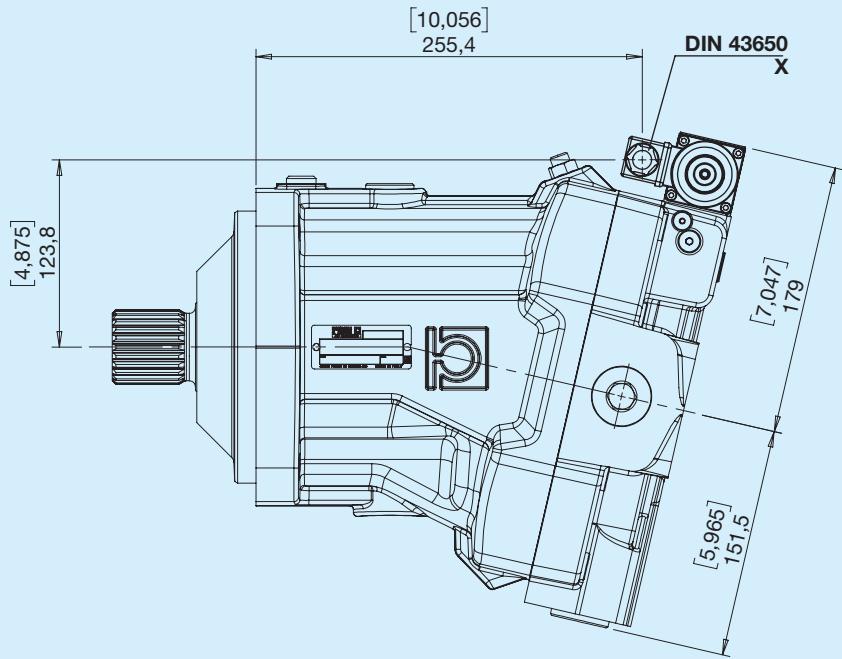
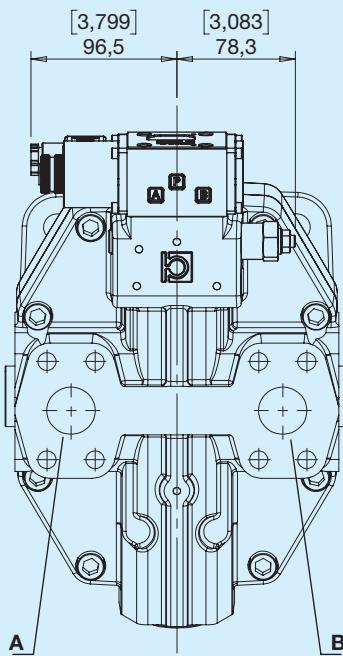


Schema idraulico

Ingresso	Rotazione
A	Sinistra
B	Destra

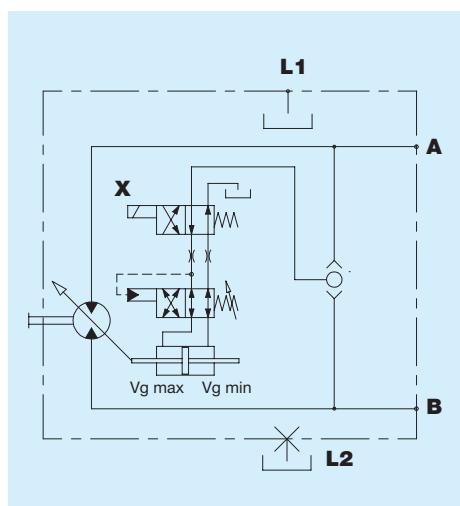


**U** Elettrico ON/OFF con pressure override

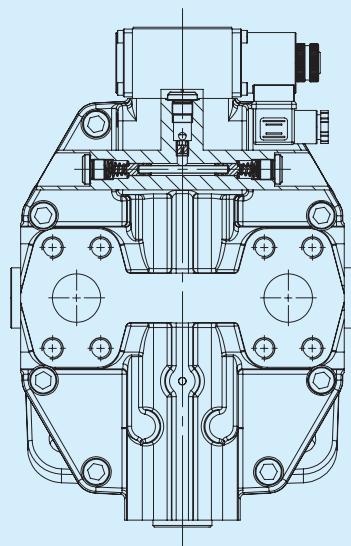
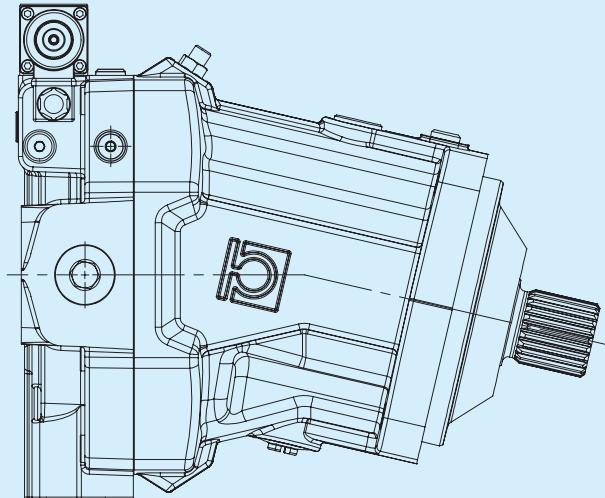


Ingresso	Rotazione
A	Sinistra
B	Destra

### Schema idraulico



**V** Valvola di flussaggio (5-7 l/min)



Schema idraulico

