



**BREVINI**<sup>®</sup>

*Motion Systems*



## SH7V

***MOTORI A PISTONI ASSIALI A CILINDRATA  
VARIABILE PER CIRCUITO APERTO E CHIUSO***

**VARIABLE DISPLACEMENT AXIAL MOTORS  
FOR OPEN AND CLOSED CIRCUIT**

## DESCRIZIONE - CARATTERISTICHE DESCRIPTION - FEATURES

I motori idraulici della serie SH7V sono del tipo a pistoni assiali, a corpo inclinato, a cilindrata variabile adatti all'impiego sia in circuito aperto che in circuito chiuso.

Il distributore a superficie sferica, l'accurata lavorazione e l'alta qualità dei materiali e dei componenti usati, consentono ai motori della serie SH7V di lavorare fino a 430 bar in continuo e di sopportare picchi di 480 bar. Testati in laboratorio e sperimentati sul campo questi motori hanno dimostrato una lunga durata in esercizio con elevati rendimenti, anche con cattive condizioni di filtrazione. Il supporto dell'albero realizzato mediante cuscinetti a rotolamento è dimensionato in modo da sopportare elevati carichi assiali e radiali.

La disponibilità di vari regolatori e diversi tipi di albero dà ai motori a pistoni SH7V la capacità di adattarsi alle più diverse tipologie di impianto, sia nel settore mobile che nel settore industriale.

SH7V series are a family of variable displacement motors, bent axis piston design for operation in both open and closed circuit. The proven design incorporating the lens shape valve plate, the high quality components and manufacturing techniques make able the SH7V series motors to provide up to 430 bar [6235 psi] continuous and 480 bar [6960 psi] peak performance. Fully laboratory tested and field proven, these motors provide maximum efficiency and long life even at very bad filtering conditions. Heavy duty bearings permit high radial and axial loads. Versatile design includes a variety of control and shaft ends that will adapt the SH7V series motors to any application both industrial and mobile.

# CARATTERISTICHE TECNICHE

## TECHNICAL SPECIFICATIONS

### Fluidi:

Utilizzare fluidi a base minerale con additivi anticorrosione, antiossidanti e antirosa (HL o HM) con viscosità alla temperatura di esercizio di 15÷40 cSt. Una viscosità limite di 800 cSt è ammissibile solo per brevi periodi in condizione di partenza a freddo. Non sono ammesse viscosità inferiori ai 10 cSt. Viscosità comprese tra i 10 e i 15 cSt sono tollerate solo in casi eccezionali e per brevi periodi. Per maggiori dettagli consultare la sezione Fluidi e filtrazione

### Temperature:

Non è ammesso il funzionamento dell'unità con temperature del fluido idraulico superiori a 115°C e inferiori a -25°C. Per maggiori dettagli consultare la sezione Fluidi e filtrazione

### Filtrazione:

Una corretta filtrazione contribuisce a prolungare la durata in esercizio dell'unità a pistoni. Per un corretto impiego dell'unità a pistoni la classe di contaminazione massima ammessa è 21/19/16 secondo la ISO 4406:1999. Per maggiori dettagli consultare la sezione Fluidi e filtrazione.

### Pressione di esercizio:

La pressione massima ammessa sulle bocche in pressione è di 430 bar continuo e 480 bar di picco. Nel caso di due motori collegati in serie limitare la pressione totale P1+P2 a 700 bar massimi.

### Hydraulic fluids:

Use fluids with mineral oil basis and anticorrosive, antioxidant and wear preventing addition agents (HL or HM). Viscosity range at operating temperature must be of 15÷40 cSt. For short periods and upon cold start, a max. viscosity of 800 cSt is allowed. Viscosities less than 10 cSt are not allowed. A viscosity range of 10÷15 cSt is allowed for extreme operating conditions and for short periods only. For further information see at Fluids and filtering section

### Operating temperature:

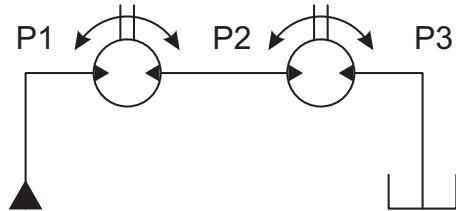
The operating temperature of the oil must be within -25°C ÷ 115°C [-13°F ÷ 239°F]. The running of the unit with oil temperature higher than 115°C [239°F] or lower than -25°C [-13°F] is not allowed. For further information see at Fluids and filtering section

### Filtering:

A correct filtering helps to extend the service life of axial piston units. In order to ensure a correct functioning of the unit, the max. permissible contamination class is 21/19/16 according to ISO 4406:1999. For further details see at Fluids and filtration section.

### Operating pressure:

The maximum permissible pressure on pressure ports is 430 bar [6235 psi] continuous and 480 bar [6960 psi] peak. If two motors are connected in series, total pressure has to be limited to following values: P1+P2 700 bar max. [10150 psi max].



### Pressione in carcassa:

La pressione massima ammessa in carcassa è di 10 bar. Una pressione superiore può compromettere la durata e la funzionalità della guarnizione dell'albero di uscita.

### Guarnizioni:

Le guarnizioni utilizzate sulle unità a pistoni assiali SH7V standard sono in FKM (Fluoroelastomer - Viton®). Nel caso di impiego di fluidi speciali contattare Dana Brevini S.p.A.

### Regime minimo di rotazione:

Con regime minimo di rotazione si intende la velocità minima alla quale l'unità a pistoni può ruotare in assenza di sensibili irregolarità di funzionamento. La regolarità di funzionamento a bassi regimi di rotazione è influenzata da numerosi fattori tra cui il tipo di carico applicato e la pressione di funzionamento. Per velocità di rotazione superiori ai 150 giri/min la regolarità di funzionamento è assicurata quasi nella totalità dei casi. Velocità inferiori sono generalmente possibili. Per casi particolari contattare Dana Brevini S.p.A.

### Case drain pressure:

Maximum permissible case drain pressure is 10 bar [145 psi]. A higher pressure can damage the main shaft seal or reduce its life.

### Seals:

Seals used on standard SH7V series axial piston motors are of FKM seals (Fluoroelastomer - Viton®). In case of use of use special fluids, contact Dana Brevini S.p.A.

### Minimum rotating speed:

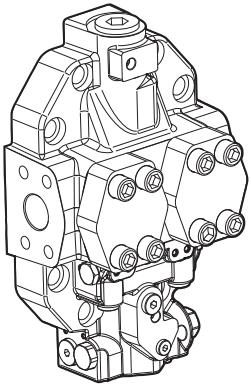
Under "minimum rotating speed" we mean the minimum speed ensuring a smooth running of the piston unit. Operation smoothness at low speeds depends on many factors, as type of load and operating pressure. At a speed higher than 150 rpm, a smooth running is ensured almost in every case. Lower speeds are, usually, possible. For special applications please contact Dana Brevini S.p.A.

### **Piastre di attacco:**

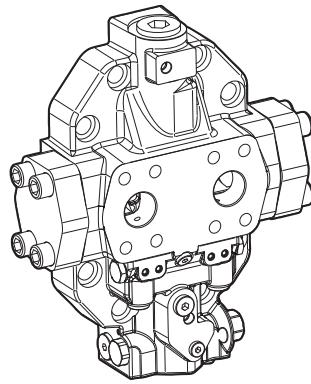
Il coperchio dei motori SH7V è dotato di bocche di ammissione e scarico sia laterali (coperchio LM-LS) sia frontal (coperchio FM-FS). Il motore viene fornito con le bocche non utilizzate chiuse mediante flangie cieche. Al momento dell'ordine specificare quali bocche si intende utilizzare.

### **Port plates:**

The SH7V motor port plate has inlet and outlet ports, both lateral (LM-LS cover) and frontal (FM-FS cover). Unused ports are plugged with blind flanges. The kind of ports to be used must be specified when ordering.



Coperchio LM-LS  
LM-LS port plate



Coperchio FM-FS  
FM-FS port plate

### **Valvola di lavaggio:**

I motori possono essere forniti con la valvola di lavaggio integrata per l'impiego in circuito chiuso.

### **Installazione:**

I motori possono essere installati in qualsiasi direzione e posizione. Queste unità a pistoni hanno le bocche separate dalla carcassa e devono essere obbligatoriamente drenate. L'installazione con albero verticale e al di sopra del serbatoio comporta alcune limitazioni. Per maggiori dettagli consultare la sezione Norme generali di installazione.

### **Flushing valve:**

The motors can be equipped with built in flushing valve for closed circuit operation.

### **Installation:**

SH7V series motors can be installed in every position or direction. These axial piston units have separate ports and drain chambers and so must be always drained. Installation of the unit with shaft in vertical position and above the tank involves some limitations. For further details see at General installation guidelines.

# DATI TECNICI

## TECHNICAL DATA

Dimensione / Size				055	075	108	160	200
Cilindrata / Displacement	Standard	$Vg_{max}$	$cm^3/giro$ [in³/rev]	61 [3.72]	80.58 [4.91]	112.5 [6.86]	160.8 [9.81]	216 [13.176]
		$Vg_{min}$	$cm^3/giro$ [in³/rev]	30 [1.83]	40 [2.44]	56 [3.416]	80 [4.88]	108 [6.59]
	Minima raggiungibile Minimum possible	$Vg_{min}$	$cm^3/giro$ [in³/rev]	12.2 [0.74]	16 [0.97]	22 [1.34]	32.2 [1.96]	43 [2.62]
	Opzionale Optional	$Vg_0$	$cm^3/giro$ [in³/rev]	0 [0]	0 [0]	0 [0]	0 [0]	0 [0]
Pressione max / Max pressure	cont.	$p_{nom}$	bar [psi]	430 [6235]	430 [6235]	430 [6235]	430 [6235]	430 [6235]
	picco / peak	$p_{max}$	bar [psi]	480 [6960]	480 [6960]	480 [6960]	480 [6960]	480 [6960]
Portata max ammessa / Max flow		$q_{max}$	l/min [U.S. gpm]	271 [71.5]	322 [85]	400 [105.6]	500 [132]	626 [165.37]
Velocità max a $Vg_{max}$ e $q_{max}$ / Max speed at $Vg_{max}$ e $q_{max}$		$n_{max}$	rpm	4450	4000	3550	3100	2900
Velocità lim. a $Vg < Vg_{max}$ <sup>(2)</sup> / Max speed at $Vg < Vg_{max}$ <sup>(2)</sup>		$n_{max\ lim}$	rpm	7000	6150	5600	5000	4600
Velocità lim. a $Vg_0$ / Max speed at $Vg_0$		$n_{max0\ lim}$	rpm	8350	7350	6300	5500	5100
Costante di coppia $Vg_{max}$ / Torque costant $Vg_{max}$		$T_k$	Nm/bar [lbf·ft/psi]	0.97 [0.04]	1.28 [0.06]	1.79 [0.09]	2.56 [0.13]	3.44 [0.17]
Potenza max at $q_{max}$ e $p_{nom}$ / Max power at $q_{max}$ e $p_{nom}$		$p_{max}$	kW [hp]	194 [259.9]	231 [309.5]	273 [365.8]	330 [442.2]	449 [602.1]
Coppia max a $Vg$ max / Max torque at $Vg$ max	Cont. ( $p_{nom}$ )	$T_{nom}$	Nm [lbf·ft]	418 [308]	552 [406.8]	770 [567.5]	1101 [811.4]	1479 [1090]
	picco/peak ( $p_{max}$ )	$T_{max}$	Nm [lbf·ft]	466 [343.4]	616 [453.9]	859 [633]	1230 [906.5]	1651 [1216]
Momento di inerzia / Moment of inertia		$J$	$kg \cdot m^2$ [lbf·ft²]	0.005 [0.12]	0.009 [0.22]	0.0124 [0.31]	0.026 [0.616]	0.035 [0.829]
Peso <sup>(3)</sup> / Weight <sup>(3)</sup>		$m$	kg [lb]	28 [61.7]	36 [79.3]	47 [103.6]	63 [138.4]	82 [180.7]
Portata di drenaggio <sup>(4)</sup> / Drain flow <sup>(4)</sup>	.	$q_d$	l/min [U.S. gpm]	3 [0.79]	4 [1.05]	5 [1.32]	5 [1.32]	5 [1.32]

(Valori teorici, senza considerare  $\eta_{hm}$  e  $\eta_v$ ; valori arrotondati). Le condizioni di picco non devono durare più dell' 1% di ogni minuto. Evitare il funzionamento continuo, contemporaneamente alla massima velocità e alla massima pressione.

(Theoretical values, without considering  $\eta_{hm}$  and  $\eta_v$ ; approximate values). Peak operations must not exceed 1% of every minute. Avoid continuously working at simultaneously maximum pressure and maximum speed.

### Note:

(1) Le cilindrate massime e minime possono essere variate con continuità.

Nell'ordine indicare i valori di  $Vg_{max}$  and  $Vg_{min}$  richiesti.

(2) Determinazione della velocità ammissibile. Il valore di  $n_{max}$  può essere aumentata riducendone la cilindrata massima del motore. Per la determinazione della relazione tra  $Vg_{max}$  e  $n_{max}$  utilizzare il diagramma a lato. La velocità massima ammissibile del motore è  $n_{max\ lim}$ .

(3) Valori indicativi.

(4) Valori massimi a 250 bar [3625 psi] con olio minerale a 45°C [113°F] e viscosità 35 cSt.

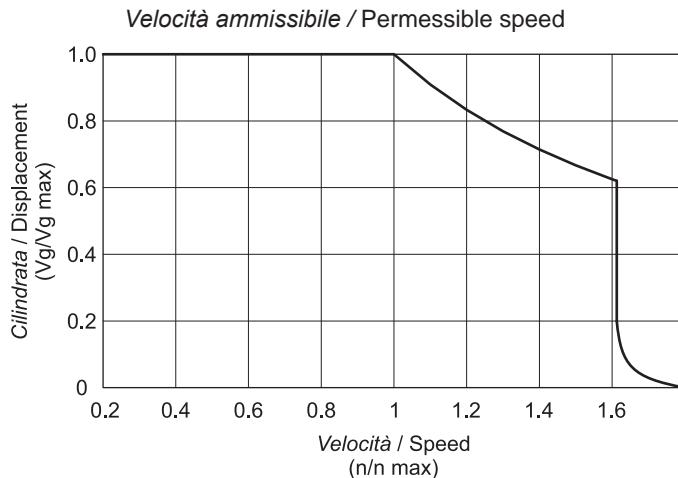
### Notes:

(1) Maximum and minimum displacement can be changed with continuity. When ordering state  $Vg_{max}$  and  $Vg_{min}$  required.

(2) Determination of admissible speed  $n_{max}$  value can be increased by reducing motor maximum displacement. To determine the relationship between  $Vg_{max}$  and  $n_{max}$  use the right side chart. Motor maximum admissible speed is  $n_{max\ lim}$ .

(3) Approximate values.

(4) Maximum value at 250 bar [3625 psi] with mineral oil at 45°C [113°F] and 35 cSt of viscosity.



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Le seguenti lettere o numeri del codice, sono state sviluppate per identificare tutte le configurazioni possibili dei motori SH7V. Usare il seguente modulo per identificare le caratteristiche desiderate. **Tutte le lettere o numeri del codice devono comparire in fase d'ordine.** Si consiglia di leggere attentamente il catalogo prima di iniziare la compilazione del codice di ordinazione.

The following alphanumeric codes system has been developed to identify all of the configuration options for the SH7V motors. Use the model code below to specify the desired features. **All alphanumeric digits system of the code must be present when ordering.** We recommend to carefully read the catalogue before filling the ordering code.

**CODICE PRODOTTO / MODEL CODE**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

**1 - SERIE / SERIES**

<b>SH7V</b>	Motore a pistoni assiali a cilindrata variabile per circuito aperto e chiuso Variable displacement axial piston motor for open and closed circuit
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**2 - MOTORE / MOTOR**

<b>M</b>	Motor Motore
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**3 - CILINDRATA / DISPLACEMENT**

<b>055</b>	55 cm <sup>3</sup> /rev 3.355 in <sup>3</sup> /rev
<b>075</b>	75 cm <sup>3</sup> /rev 4.575 in <sup>3</sup> /rev
<b>108</b>	108 cm <sup>3</sup> /rev 6.588 in <sup>3</sup> /rev
<b>160</b>	160 cm <sup>3</sup> /rev 9.76 in <sup>3</sup> /rev
<b>200</b>	216 cm <sup>3</sup> /rev 13.176 in <sup>3</sup> /rev

**4 - LIMITAZIONE CILINDRATA MASSIMA / MAXIMUM DISPLACEMENT LIMITATION**

		Cilindrata / Displacement	055	075	108	160	200
<b>61÷30</b>	Da 61 cm <sup>3</sup> /giro a 30 cm <sup>3</sup> /giro From 61 cm <sup>3</sup> /rev to 30 cm <sup>3</sup> /rev	Standard 61 cm <sup>3</sup> /giro	•	/	/	/	/
<b>80÷64</b>	Da 80 cm <sup>3</sup> /giro a 64 cm <sup>3</sup> /giro From 80 cm <sup>3</sup> /rev to 64 cm <sup>3</sup> /rev	Standard 80 cm <sup>3</sup> /giro	/	•	/	/	/
<b>112÷91</b>	Da 112 cm <sup>3</sup> /giro a 91 cm <sup>3</sup> /giro From 112 cm <sup>3</sup> /rev to 91 cm <sup>3</sup> /rev	Standard 112 cm <sup>3</sup> /giro	/	/	•	/	/
<b>160÷130</b>	Da 160 cm <sup>3</sup> /giro a 130 cm <sup>3</sup> /giro From 160 cm <sup>3</sup> /rev to 130 cm <sup>3</sup> /rev	Standard 160 cm <sup>3</sup> /giro	/	/	/	•	/
<b>216÷172</b>	Da 216 cm <sup>3</sup> /giro a 172 cm <sup>3</sup> /giro From 216 cm <sup>3</sup> /rev to 172 cm <sup>3</sup> /rev	Standard 216 cm <sup>3</sup> /giro	/	/	/	/	•

• Disponibile - Available

/ Non Disponibile - Not Available

**5 - LIMITAZIONE CILINDRATA MINIMA / MINIMUM DISPLACEMENT LIMITATION**

		Cilindrata / Displacement	055	075	108	160	200
<b>12÷42</b>	Da 12 cm <sup>3</sup> /giro a 42 cm <sup>3</sup> /giro From 12 cm <sup>3</sup> /rev to 42 cm <sup>3</sup> /rev	Standard 30 cm <sup>3</sup> /giro	•	/	/	/	/
<b>16÷56</b>	Da 16 cm <sup>3</sup> /giro a 56 cm <sup>3</sup> /giro From 16 cm <sup>3</sup> /rev to 56 cm <sup>3</sup> /rev	Standard 40 cm <sup>3</sup> /giro	/	•	/	/	/
<b>22÷80</b>	Da 22 cm <sup>3</sup> /giro a 80 cm <sup>3</sup> /giro From 22 cm <sup>3</sup> /rev to 80 cm <sup>3</sup> /rev	Standard 56 cm <sup>3</sup> /giro	/	/	•	/	/
<b>32÷112</b>	Da 32 cm <sup>3</sup> /giro a 112 cm <sup>3</sup> /giro From 32 cm <sup>3</sup> /rev to 112 cm <sup>3</sup> /rev	Standard 80 cm <sup>3</sup> /giro	/	/	/	•	/
<b>43÷108</b>	Da 43 cm <sup>3</sup> /giro a 108 cm <sup>3</sup> /giro From 43 cm <sup>3</sup> /rev to 108 cm <sup>3</sup> /rev	Standard 108 cm <sup>3</sup> /giro	/	/	/	/	•
<b>0</b>	0 cm <sup>3</sup> /giro 0 cm <sup>3</sup> /rev		•	•	•	•	•

• Disponibile - Available

/ Non Disponibile - Not Available

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

#### 6 - FLANGIA / MOUNT FLANGE

	Description	Cilindrata / Displacement				
		055	075	108	160	200
OC	ISO 4 Fori Ø 125 mm ISO 4 Bolts Ø 125 mm [Ø 4.921 in]	•	/	/	/	/
OD	ISO 4 Fori Ø 140 mm ISO 4 Bolts Ø 140 mm [Ø 5.511 in]	/	•	/	/	/
OE	ISO 4 Fori Ø 160 mm ISO 4 Bolts Ø 160 mm [Ø 6.299 in]	/	/	•	/	/
OF	ISO 4 Fori Ø 180 mm ISO 4 Bolts Ø 180 mm [Ø 7.086 in]	/	/	/	•	/
OG	ISO 4 Fori Ø 200 mm ISO 4 Bolts Ø 200 mm [Ø 7.87 in]	/	/	/	/	•
05	SAE-C 4 Fori SAE-C 4 Bolts	•	•	/	/	/
08	SAE-D 4 Fori SAE-D 4 Bolts	/	/	•	•	/
10	SAE-E 4 Fori SAE-E 4 Bolts	/	/	/	/	•

• Disponibile - Available

/ Non Disponibile - Not Available

#### 7 - ESTERMITÀ ALBERO / SHAFT END

	Description	Cilindrata / Displacement				
		055	075	108	160	200
S20	Scanalato Z27 - 16/32 DP Splined 27T - 16/32 DP	/	/	•	•	/
S19	Scanalato Z15 - 8/16 DP Splined 15T - 8/16 DP	/	/	/	•	•
S15	Scanalato Z13 - 8/16 DP Splined 13T - 8/16 DP	/	/	•	•	/
S12	Scanalato Z14 - 12/24 DP Splined 14T - 12/24 DP	•	•	/	/	/
SAR	Scanalato W50x2x30x24 - DIN 5480 Splined W50x2x30x24 - DIN 5480	/	/	/	•	•
SAP	Scanalato W45x2x30x21 - DIN 5480 Splined W45x2x30x21 - DIN 5480	/	/	•	•	/
SAO	Scanalato W40x2x30x18 - DIN 5480 Splined W40x2x30x18 - DIN 5480	/	•	•	• <sup>1)</sup>	/
SAM	Scanalato W35x2x30x16 - DIN 5480 Splined W35x2x30x16 - DIN 5480	•	•	/	/	/
SAI	Scanalato W30x2x30x14 - DIN 5480 Splined W30x2x30x14 - DIN 5480	•	/	/	/	/
C18	Cilindrico Ø44.45 mm 1.75 in Parallel keyed	/	/	•	• <sup>1)</sup>	/
C17	Cilindrico Ø31.75 mm 1.25 in Parallel keyed	•	/	/	/	/
CAJ	Cilindrico Ø45 mm 1.772 in Parallel keyed	/	/	/	•	/
CAK	Cilindrico Ø40 mm 1.574 in Parallel keyed	/	/	•	/	/
CAY	Cilindrico Ø35 mm - 10x8x56 1.378 in Parallel keyed - 0.39x0.31x2.2	/	•	/	/	/
CAW	Cilindrico Ø30 mm 1.181 in Parallel keyed	•	/	/	/	/

• Disponibile - Available

/ Non Disponibile - Not Available

1) Speciale a richiesta - Special on request



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

#### 8 - COPERCHIO DISTRIBUTORE / PORT COVER

		Cilindrata / Displacement									
		055		075		108		160		200	
		OC	05	OD	05	OE	08	OF	08	OG	10
<b>FM</b>	Attacchi Frontali Metrici Metric End Main ports	•	•	•	•	•	•	•	•	•	•
<b>FS</b>	Attacchi Frontali SAE SAE End Main ports	•	•	•	•	•	•	•	•	•	•
<b>LM</b>	Attacchi Laterali Metrici Metric Main Ports positioned 180° apart	•	•	•	•	•	•	•	•	•	•
<b>LS</b>	Attacchi Laterali SAE SAE Main Ports positioned 180° apart	•	•	•	•	•	•	•	•	•	•

• Disponibile - Available

/ Non Disponibile - Not Available

#### Attenzione

Per attacchi Metrici (FM-LM) si intendono quelli del Coperchio distributore + Regolatore

Per attacchi SAE (FS-LS) si intendono quelli del Coperchio distributore + Regolatore

#### Attenzione

Per attacchi Metrici (FM-LM) si intendono quelli del Coperchio distributore + Regolatore

Per attacchi SAE (FS-LS) si intendono quelli del Coperchio distributore + Regolatore

#### 9 - TENUTA / SEAL

V	FKM
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#### 10 - REGOLATORE / CONTROL

<b>RPE</b>	Regolatore a pressione di esercizio Working pressure control
<b>ROE</b>	Regolatore a pressione di esercizio $\Delta p$ 100 bar Working pressure control $\Delta p$ 100 bar
<b>2EE</b>	Regolatore elettromagnetico a due posizioni con limitatore di pressione Electric two positions control with pressure override
<b>2EN</b>	Regolatore elettromagnetico a due posizioni Electric two positions control
<b>2IE</b>	Regolatore idraulico a due posizioni con limitatore di pressione Hydraulic two positions control with pressure override
<b>2IN</b>	Regolatore idraulico a due posizioni Hydraulic two positions control
<b>REE</b>	Regolatore elettromagnetico proporzionale con limitatore di pressione Electric proportional control with pressure override
<b>RED</b>	Regolatore elettromagnetico proporzionale con limitatore di pressione a doppia soglia Electric proportional control with double step pressure override
<b>REN</b>	Regolatore elettromagnetico proporzionale Electric proportional control
<b>RIE</b>	Regolatore idraulico proporzionale con limitatore di pressione Hydraulic proportional control with pressure override
<b>RID</b>	Regolatore idraulico proporzionale con limitatore di pressione a doppia soglia Hydraulic proportional control with double step pressure override
<b>RIN</b>	Regolatore idraulico proporzionale Hydraulic proportional control
<b>RPI</b>	Regolatore a pressione di esercizio con limitatore idraulico Working pressure control with hydraulic override
<b>ROI</b>	Regolatore a pressione di esercizio $\Delta p$ 100 bar con limitatore idraulico Working pressure control $\Delta p$ 100 bar with hydraulic override
<b>ROS</b>	Regolatore a pressione di esercizio $\Delta p$ 100 bar con limitatore elettrico Working pressure control $\Delta p$ 100 bar with electric override
<b>RPS</b>	Regolatore a pressione di esercizio con limitatore elettrico Working pressure control with electric override

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
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**11 - CARATTERISTICA REGOLATORE  
CONTROL SPECIFICATION**

		Regolatore / Control															
		RPE	ROE	2EE	2EN	2IE	2IN	REE	RED (1)	REN	RID (1)	RIE	RIN	RPI	ROI	ROS	RPS
1	Posizione Regolatore Displacement setting	Da Cilindrata Massima a Cilindrata Minima ( $V_{g_{max}} \rightarrow V_{g_{min}}$ ) From Maximum Displacement to Minimum Displacement ( $V_{g_{max}} \rightarrow V_{g_{min}}$ )	/	/	•	•	•	•	•	•	•	•	•	/	/	/	
2		Da Cilindrata Minima a Cilindrata Massima ( $V_{g_{min}} \rightarrow V_{g_{max}}$ ) From Minimum Displacement to Maximum Displacement ( $V_{g_{min}} \rightarrow V_{g_{max}}$ )	•	•	/	•	/	•	/	•	/	/	•	•	•	•	
00	Non necessaria None		/	/	/	/	/	•	/	/	/	/	/	/	/	/	
(*)	Pressione di Taratura (*) Pressure Setting (*)	100÷400 bar [1430÷ 5802 PSI]	•	/	•	/	•	/	•	/	•	/	•	/	/	/	
		100÷350 bar [1430÷ 5076 PSI]	/	•	/	/	/	/	/	/	/	/	/	•	•	•	
(*)	Inizio regolazione pressione di Pilotaggio (*) Start of control, Setting range (*)	5-10-15-20 bar [72-145-218-290 PSI]	/	/	/	/	/	/	/	/	•	•	•	/	/	/	
		Δp Cambio cilindrata Δp Displacement change	25 bar [363 PSI]	/	/	/	/	/	/	/	/	•	•	/	/	/	
12	Tensione Voltage	12 - Connector DIN43650	/	/	•	•	/	/	•	•	•	/	/	/	/	•	
24		24 - Connector DIN43650	/	/	•	•	/	/	•	•	•	/	/	/	/	•	
D2		12 - Deutsch DT04	/	/	•	•	/	/	•	/	•	/	/	/	/	•	
D4		24 - Deutsch DT04	/	/	•	•	/	/	•	/	•	/	/	/	/	•	
A2		12 V - ATEX T6 (Solo / Only 55 2EN)	/	/	/	•	/	/	/	/	•	/	/	/	/	/	
A4		24 V - ATEX T6 (Solo / Only 55 2EN)	/	/	/	•	/	/	/	/	•	/	/	/	/	/	
04	Strozzatore (**) Control orifice (**)	Con Strozzatore Ø 0.4 mm With Ø 0.4 mm [Ø 0.015 in] Control Orifice	•	/	•	•	•	•	/	/	/	/	/	/	/	/	
05		Con Strozzatore Ø 0.5 mm With Ø 0.5 mm [Ø 0.0196 in] Control Orifice	/	•	/	/	/	/	•	•	•	•	•	•	•	•	
07		Con Strozzatore Ø 0.7 mm With Ø 0.7 mm [Ø 0.027 in] Control Orifice	•	•	•	•	•	•	•	•	•	•	•	•	•	•	

**Attenzione:**

I valori di taratura indicati, sono validi solo in condizioni di cilindrata massima e minima delle rispettive cilindrate. Per valori differenti, verificarne la fattibilità usando i diagrammi dei regolatori presenti sul catalogo.

**(\*) Indicare valore di taratura**

- Richiesta - Required
- / Non Richiesta - Not Required

**Warning:**

The values showed are only valid in maximum and minimum displacement conditions of the respective displacement. For different values, verify the possibility with the control diagrams present on the catalogue.

**(\*) Supply the setting value**

- Required
- / Not Required

**(\*\*) Lo strozzatore Ø 0.4 mm (standard), fornisce una risposta graduale (max-to-min e min-to-max), mentre lo strozzatore Ø 0.5-0.7 mm (opzionale), garantisce un cambio cilindrata più veloce.**

**(\*\*) Ø 0.4 mm [Ø 0.015 in] (standard) nozzle, provides a smooth control response (max-to-min and min-to-max), while Ø 0.5-0.7 mm [Ø 0.0196-0.027 in] (optional) nozzle, provides a faster reaction.**





1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

## 12 - VALVOLA / VALVE

	XXX	Cilindrata / Displacement	055	075	108	160	200
			•	•	•	•	•
XXXX	Non Richieste NONE		•	•	•	•	•
VCD1	Valvola controllo discesa VCD/1 VCD/1 Pilot assisted overcentre valve	LM	LM	LM	LM	LM	LM
VCD2	Valvola controllo discesa VCD/2 VCD/2 Pilot assisted overcentre valve	/	LM	LM	LM	LM	LM
VCR2	Valvola controllo rotazione VCR2 D/AF VCR2 D/AF Double acting overcentre valve	FM	/	/	/	/	/
VCR4	Valvola controllo rotazione e traslazione VCR4 VCR4 double acting overcentre valve	/	FM	FM	FM	FM	/

• Disponibile - Available

/ Non Disponibile - Not Available

Le valvole sono disponibili solo con coperchi distributori ISO, per versione SAE contattare Uff.Tecnico.

Il valore LM - FM indica che la valvola è disponibile solo con coperchio LM - FM

The valves are available with ISO port cover only, please contact Technical department for SAE version

The LM - FM digit means that the valve is only available with LM - FM port cover

## 13 - CARATTERISTICHE VALVOLA FLANGIATA / FLANGED VALVES FEATURES

	000	Caratteristica non necessaria Feature not necessary	Valvola / Valve				
			XXXX	VCD1	VCD2	VCR2	VCR4
002	Non Tarata (Campo Taratura 0÷350 bar)(Rapporto di pilotaggio 2.9:1) - Controllo in rotazione DX Not Set 0÷350 bar [0 to 5075 psi][Piloting ratio 2.9:1] - Control of rotation CW	/	•	/	/	/	/
006	Non Tarata (Campo Taratura 0÷350 bar)(Rapporto di pilotaggio 2.9:1) - Controllo in rotazione SX Not Set 0÷350 bar [0 to 5075 psi][Piloting ratio 2.9:1] - Control of rotation CCW	/	•	/	/	/	/
003	Non Tarata (Campo Taratura 250÷500 bar)(Rapporto di pilotaggio 13:1) - Controllo in rotazione DX Not Set 250÷500 bar [3625 to 7250 psi][Piloting ratio 13:1] - Control of rotation CW	/	/	•	/	/	/
007	Non Tarata (Campo Taratura 250÷500 bar)(Rapporto di pilotaggio 13:1) - Controllo in rotazione SX Not Set 250÷500 bar [3625 to 7250 psi][Piloting ratio 13:1] - Control of rotation CCW	/	/	•	/	/	/
010	Non Tarata - Alluminio (Campo Taratura 60÷350 bar)(Rapporto di pilotaggio 6.2:1) Not Set - Aluminum [60÷350 bar [870 to 5075 psi][Piloting ratio 6.2:1]	/	/	/	•	/	/
013	Non Tarata (Campo Taratura 140÷350 bar)(Rapporto di pilotaggio 4.5:1) Not Set 140÷350 bar [2030 to 5075 psi][Piloting ratio 4.5:1]	/	/	/	/	/	•

• Disponibile - Available

/ Non Disponibile - Not Available

Per la fornitura di valvole tarate contattare Uff.Tecnico.

Per le caratteristiche vedere il catalogo valvole

Please contact Technical department for valve which requie specific setting.

For the feature see catalogue valves.

## 14 - VALVOLA DI LAVAGGIO / FLUSHING VALVE

PR	Predisposto per Valvola di lavaggio Arranged for Flushing Valve
06	Valvola di lavaggio VSC/F - 6 l/min VSC/F Flushing valve - 6 l/min [1.58 U.S. gpm]
09	Valvola di lavaggio VSC/F - 10.5 l/min VSC/F Flushing valve - 10.5 l/min [2.77 U.S. gpm]
15	Valvola di lavaggio VSC/F - 15 l/min VSC/F Flushing valve - 15 l/min [3.96 U.S. gpm]
21	Valvola di lavaggio VSC/F - 20 l/min VSC/F Flushing valve - 20 l/min [5.28 U.S. gpm]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

#### 15 - CARATTERISTICA SERIE / SERIE FEATURE

		Cilindrata / Displacement				
		055	075	108	160	200
XX	Nessuna caratteristica None	•	•	•	•	•
TC	Tachimetro + sensore con cavo Tachometer + Sensor with cable	•	• <sup>(1)</sup>	• <sup>(2)</sup>	• <sup>(2)</sup>	/
TS	Tachimetro con predisposizione per sensore Prepared for tachometer sensor	•	• <sup>(1)</sup>	• <sup>(2)</sup>	• <sup>(2)</sup>	/
TW	Tachimetro + sensore effetto Hall 2 canali PNP - 5V Tachometer + sensor 2-channel-Hall effect PNP - 5V	/	• <sup>(2)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	•
TZ	Tachimetro + sensore effetto Hall 2 canali Tachometer + sensor 2-channel-Hall effect	/	• <sup>(2)</sup>	• <sup>(1)</sup>	• <sup>(1)</sup>	•

• Disponibile - Available

/ Non Disponibile - Not Available

(1) Solo versione Metrica (ISO) / Only Metric (ISO) Version

(2) Solo versione SAE / Only SAE Version

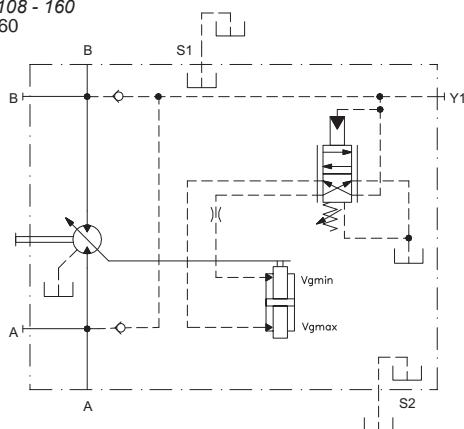
#### 16 - VERNICIATURA / PAINTING

XX	Non Richieste Not Required
01	Verniciato Nero RAL 9005 Black Painted RAL 9005
02	Verniciato Blu RAL 5015 Blue Painted RAL 5015

Il regolatore a pressione d'esercizio consente la variazione della cilindrata da  $Vg_{min}$  a  $Vg_{max}$  quando la pressione d'esercizio aumenta oltre la soglia di taratura, in modo tale che il motore funziona alla  $V_g$  quando si richiede bassa coppia ed alta velocità ed alla  $V_g$  quando si richiede la massima coppia e la minima velocità. Il motore mantiene la  $Vg_{min}$  finché la pressione d'esercizio raggiunge il valore di taratura (pressione di taratura). Se la pressione aumenta ulteriormente il motore passa da  $Vg_{min}$  a  $Vg_{max}$ . La posizione standard del regolatore è (2) ( $Vg_{min} \rightarrow Vg_{max}$ ). La pressione di taratura è regolabile fra 100 e 400 bar.

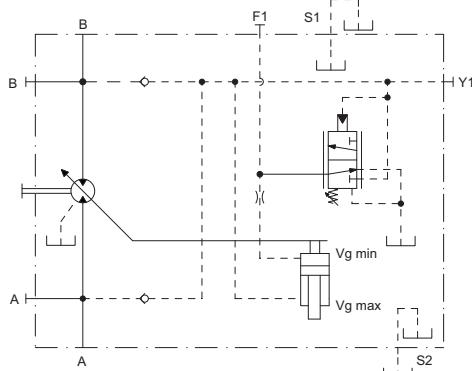
Dimensioni: 055 - 075 - 108 - 160

Size: 055 - 075 - 108 - 160



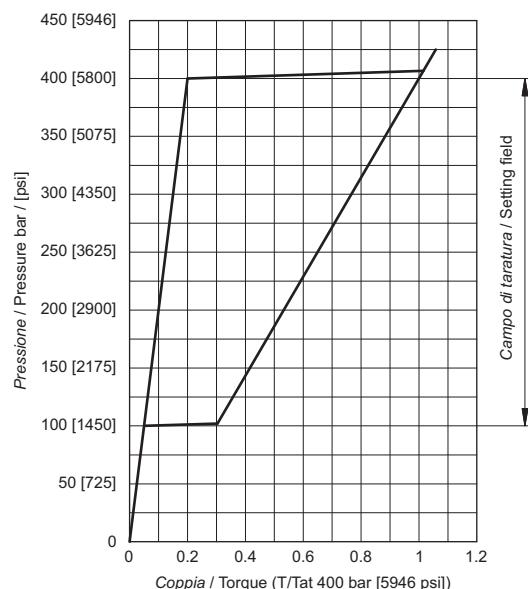
Dimensioni: 200

Size: 200

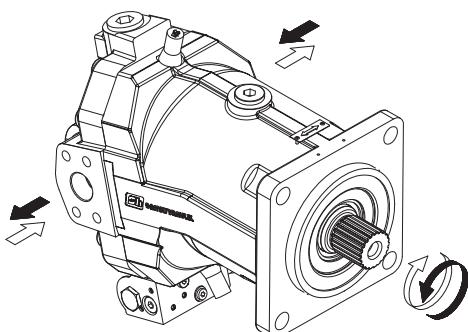


La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The working pressure control allows to swivel the motor displacement from  $Vg_{min}$  to  $Vg_{max}$  when the operating pressure rises beyond the preset operating pressure, so that the motor is at  $Vg_{min}$  when min torque and max speed are required and at  $Vg_{max}$  when max torque and min speed are required. The operating pressure applies a force on the spool which is matched by an adjustable spring. The motor keeps the setting value (pressure setting). Once the preset pressure rises beyond, the motor swivels from  $Vg_{min}$  to  $Vg_{max}$ . The swivel range is from  $Vg_{min}$  to  $Vg_{max}$  (displacement setting type 2 as per our ordering code). Start of control adjustable between 100 and 400 bar [1450 and 5800 psi].



The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.



Il regolatore RPS è un regolatore a pressione d'esercizio che consente la variazione della cilindrata da  $Vg_{min}$  a  $Vg_{max}$  quando la pressione d'esercizio aumenta oltre la soglia di taratura, in modo tale che il motore funzioni alla  $Vg_{min}$  quando si richiede bassa coppia ed alta velocità ed alla  $Vg_{max}$  quando si richiede la massima coppia e la minima velocità. Il motore mantiene la  $Vg_{min}$  finché la pressione d'esercizio raggiunge il valore di taratura (pressione di taratura). Il  $\Delta p$  della pressione d'esercizio che consente la variazione fra la cilindrata minima e quella massima è circa 10 bar (come con il regolatore RPE).

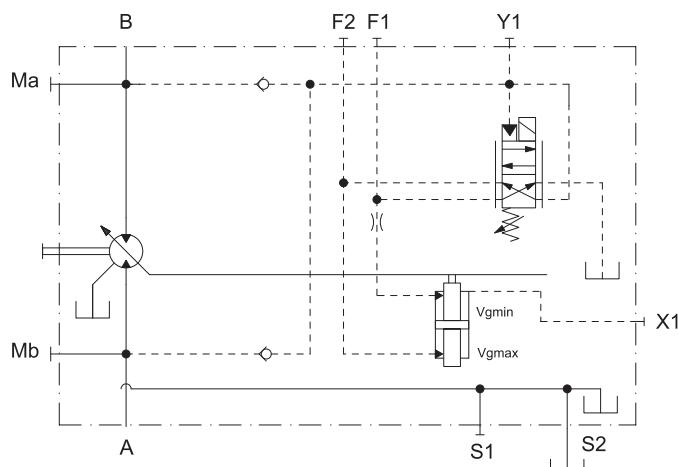
Il comando a pressione di esercizio può essere sovrastato attraverso un segnale elettrico; quando il solenoide viene attivato, il motore raggiunge la cilindrata massima senza fermarsi in una posizione intermedia.

La posizione standard dei regolatori è (2) ( $Vg_{min} \rightarrow Vg_{max}$ ). La pressione di taratura del regolatore RPS è regolabile fra 100 e 300 bar.

**Indicare in fase d'ordine:**

Pressione di taratura del regolatore.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

RPS control is a pressure related control which permits the changing of displacement  $Vg_{min}$  to  $Vg_{max}$  when working pressure exceeds setting threshold, so that the motor works at  $Vg_{min}$  when low torque and high speed are required and at  $Vg_{max}$  when high torque and low speed are required. The motor stands at  $Vg_{min}$  till working pressure reaches setting threshold.  $\Delta p$  of working pressure that allows the changing of displacement from minimum to maximum is around 10 bar (such as RPE control).

This pressure related control can be overridden by an electrical signal; when solenoid is energized, the motor reaches maximum displacement without stopping in an intermediate position.

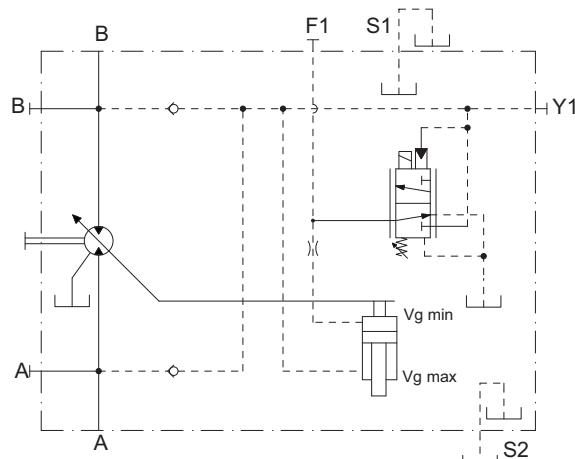
Swivel range from  $Vg_{min}$  to  $Vg_{max}$  (assembly type 2 as per our ordering code).

Setting pressure range is 100-300 bar.

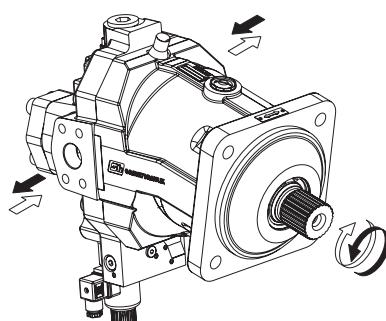
**When ordering please clearly state:**

Control pressure setting.

Dimensioni: 200  
 Size: 200



The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.



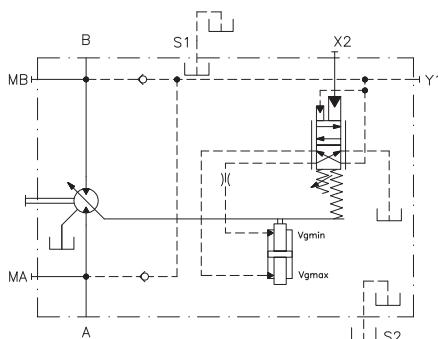
Il dispositivo a pressione d'esercizio con limitatore idraulico rende possibile ridurre la pressione di taratura del comando ROE per mezzo di una pressione di pilotaggio esterna sull'attacco X2. La pressione di taratura del regolatore ROE è ridotta proporzionalmente alla pressione di pilotaggio con un rapporto 1/17 (per ogni bar di pressione di pilotaggio la pressione di taratura si abbassa di 17 bar). La massima pressione di pilotaggio non deve eccedere i 100 bar. Ad esempio, sia la pressione di taratura del regolatore ROE 300 bar. Applicando una pressione di pilotaggio su X2 pari a 10 bar la pressione d'intervento si abbassa a 130 bar ( $300 - (10 \times 17) = 130$ ). Se fosse necessario variare la cilindrata verso  $V_g_{max}$  indipendentemente dalla pressione d'esercizio, una pressione di pilotaggio di 20 bar deve agire su X2.

La posizione standard dei regolatori è (2) ( $V_g_{min} \rightarrow V_g_{max}$ ). La pressione di taratura del regolatore ROE è regolabile fra 100 e 350 bar.

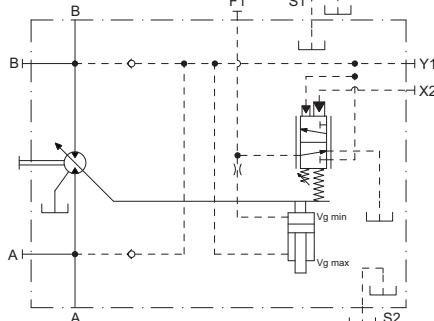
**Indicare in fase d'ordine:**

Pressione di taratura del regolatore.

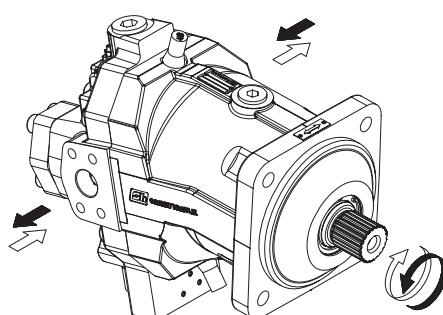
Dimensioni: 055 - 075 - 108 - 160  
Size: 055 - 075 - 108 - 160



Dimensioni: 200  
Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura



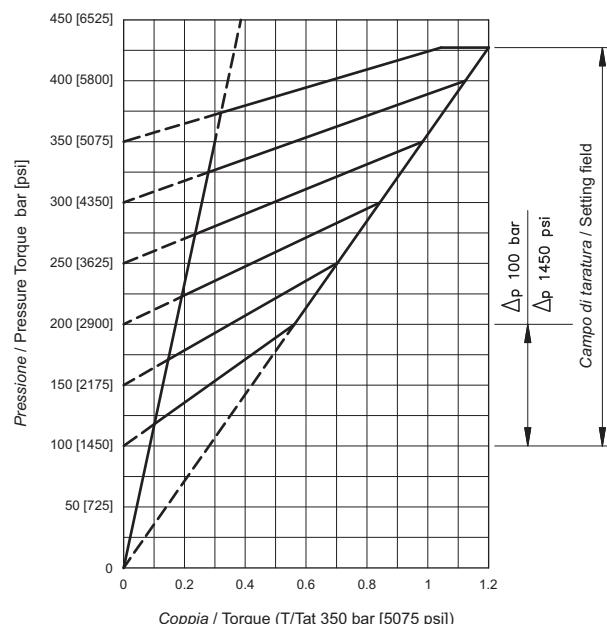
The hydraulic limiting device makes possible to reduce the pressure setting of ROE control by means of an external pilot pressure applied at port X2. The ROE control pressure setting is reduced proportionally to the pilot pressure in the ratio of 1/17 (for each pilot pressure bar, the preset operating pressure is reduced of 17 bar) [170 psi each 10 psi of pilot pressure]. Max permissible pilot pressure at port X2 = 100 bar [1450 psi].

Example: preset operating pressure of ROE control = 300 bar [4350 psi]. By applying at port X2 a pilot pressure of 10 bar [145 psi], the pressure setting comes to 130 bar [1885 psi] ( $300 - (10 \times 17) = 130$ ) (4350 - (145 \* 17) = 1885). Should it be required to swivel the motor to  $V_g_{max}$  independently from the operating pressure, a pilot pressure of 20 bar [290 psi] should be applied at port X2.

Swivel range from  $V_g_{min}$  to  $V_g_{max}$  (assembly type 2 as per our ordering code). Start of control adjustable between 100 and 350 bar [1450 and 5000 psi].

**When ordering please clearly state:**

Control pressure setting.



The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

Il regolatore ROS è un regolatore a pressione d'esercizio che consente la variazione della cilindrata da  $Vg_{min}$  a  $Vg_{max}$  quando la pressione d'esercizio aumenta oltre la soglia di taratura, in modo tale che il motore funzioni alla  $Vg_{min}$  quando si richiede bassa coppia ed alta velocità ed alla  $Vg_{max}$  quando si richiede la massima coppia e la minima velocità. Il motore mantiene la  $Vg_{min}$  finché la pressione d'esercizio raggiunge il valore di taratura (pressione di taratura). Il  $\Delta p$  della pressione d'esercizio che consente la variazione fra la cilindrata minima e quella massima è 100 bar (come con il regolatore ROE).

Il comando a pressione di esercizio può essere sovrastato attraverso un segnale elettrico; quando il solenoide viene attivato, il motore raggiunge la cilindrata massima senza fermarsi in una posizione intermedia.

La posizione standard del regolatore è (2) ( $Vg_{min} \rightarrow Vg_{max}$ ). La pressione di taratura del regolatore ROS è regolabile fra 100 e 300 bar.

**Indicare in fase d'ordine:**

Pressione di taratura del regolatore

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160

ROS control is a pressure related control which permits the changing of displacement  $Vg_{min}$  to  $Vg_{max}$  when working pressure exceeds setting threshold, so that the motor works at  $Vg_{min}$  when low torque and high speed are required and at  $Vg_{max}$  when high torque and low speed are required. The motor stands at  $Vg_{min}$  till working pressure reaches setting threshold.  $\Delta p$  of working pressure that allows the changing of displacement from minimum to maximum is 100 bar (such as ROE control).

This pressure related control can be overridden by an electrical signal; when solenoid is energized, the motor reaches maximum displacement without stopping in an intermediate position.

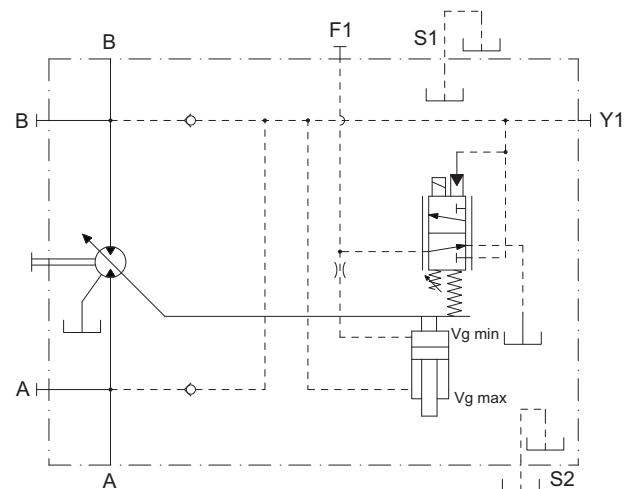
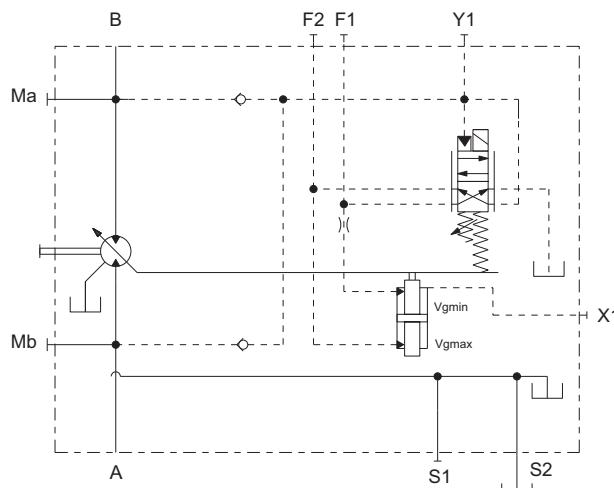
Swivel range from  $Vg_{min}$  to  $Vg_{max}$  (assembly type 2 as per our ordering code).

Setting pressure range is 100-300 bar.

**When ordering please clearly state:**

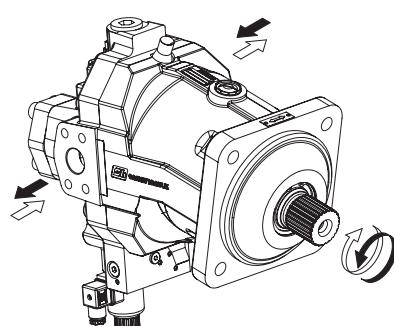
Control pressure setting.

Dimensioni: 200  
 Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.



Il dispositivo a pressione d'esercizio con limitatore idraulico rende possibile ridurre la pressione di taratura del comando RPE per mezzo di una pressione di pilotaggio esterna sull'attacco X2. La pressione di taratura del regolatore RPE è ridotta proporzionalmente alla pressione di pilotaggio con un rapporto 1/17 (per ogni bar di pressione di pilotaggio la pressione di taratura si abbassa di 17 bar). La massima pressione di pilotaggio non deve eccedere i 100 bar. Ad esempio, sia la pressione di taratura del regolatore RPE 300 bar. Applicando una pressione di pilotaggio su X2 pari a 10 bar la pressione d'intervento si abbassa a 130 bar ( $300 - (10 \times 17) = 130$ ). Se fosse necessario variare la cilindrata verso  $Vg_{max}$  indipendentemente dalla pressione d'esercizio, una pressione di pilotaggio di 20 bar deve agire su X2.

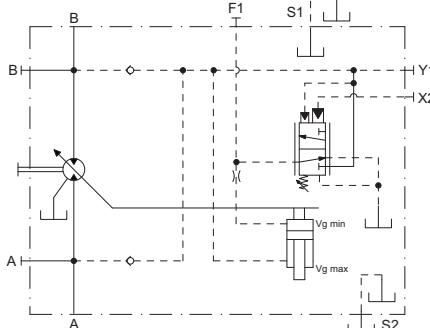
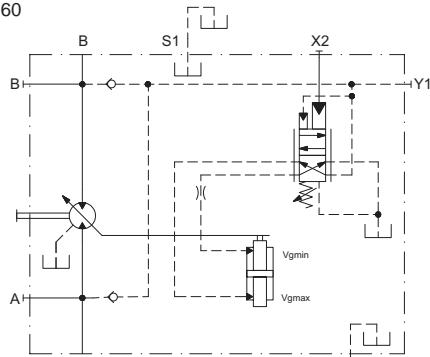
La posizione standard dei regolatori è (2) ( $Vg_{min} \rightarrow Vg_{max}$ ). La pressione di taratura del regolatore RPE è regolabile fra 100 e 400 bar.

**Indicare in fase d'ordine:**

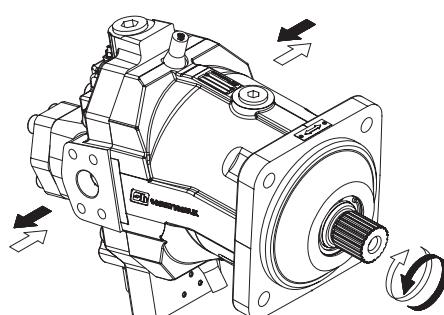
Pressione di taratura del regolatore.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160

Dimensioni: 200  
 Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura



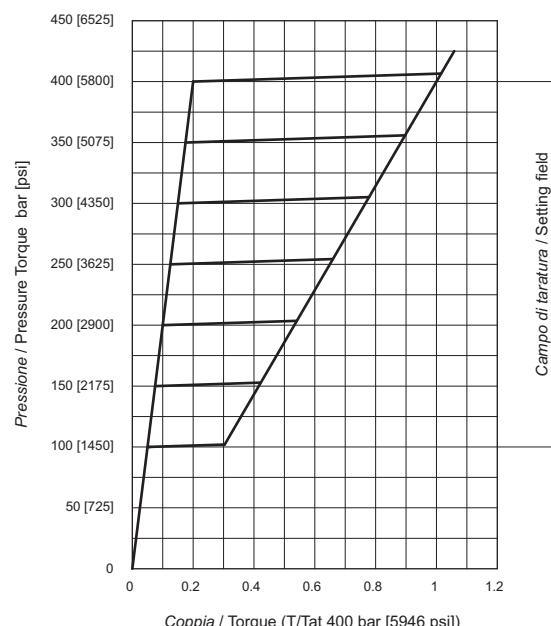
The hydraulic limiting device makes possible to reduce the pressure setting of RPE control by means of an external pilot pressure applied at port X2. The RPE control pressure setting is reduced proportionally to the pilot pressure in the ratio of 1/17 (for each pilot pressure bar, the preset operating pressure is reduced of 17 bar) [170 psi each 10 psi of pilot pressure]. Max permissible pilot pressure at port X2 = 100 bar [1450 psi].

Example: preset operating pressure of RPE control = 300 bar [4350 psi]. By applying at port X2 a pilot pressure of 10 bar [145 psi], the pressure setting comes to 130 bar [1885 psi] ( $300 - (10 \times 17) = 130$ ) ( $4350 - (145 \times 17) = 1885$ ). Should it be required to swivel the motor to  $Vg_{max}$  independently from the operating pressure, a pilot pressure of 20 bar [290 psi] should be applied at port X2.

Swivel range from  $Vg_{min}$  to  $Vg_{max}$  (assembly type 2 as per our ordering code). Start of control adjustable between 100 and 400 bar [1450 and 5800 psi].

**When ordering please clearly state:**

Control pressure setting.



The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

Il regolatore "ROE" consente la variazione della cilindrata in un campo maggiore di pressione rispetto al regolatore "RPE". L'aumento del campo di pressione per la variazione dalla  $Vg_{min}$  alla  $Vg_{max}$  consente un comportamento più dolce e graduale del motore durante la variazione. Il regolatore "ROE" consente la variazione della cilindrata con campi di pressione indicati in tabella.

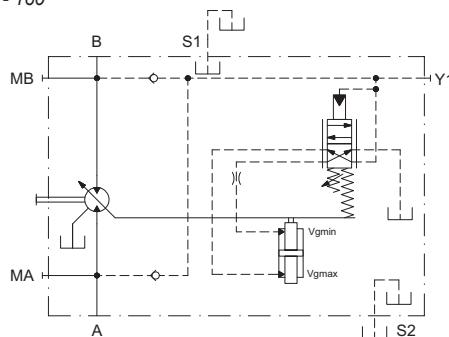
The "ROE" control allows a larger pressure range for displacement variation in comparison to "RPE" control. The increase of pressure range for variation from  $Vg_{min}$  to  $Vg_{max}$  allows a smoother working of the motor during displacement variation. The "ROE" allows the displacement variation with the pressure range show in the table.

$\Delta p$ bar [psi]	$P_{min}$ bar [psi]	$P_{max}$ bar [psi]
100 [1450]	100 [1450]	350 [5075]

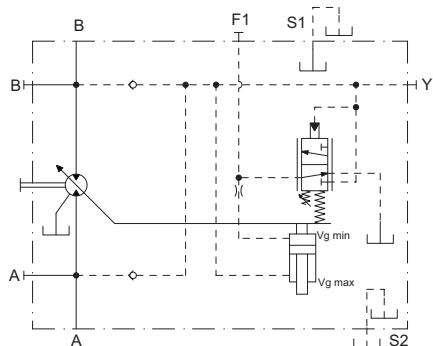
In cui:

- $\Delta p$  è il delta della pressione d'esercizio che consente la variazione fra la cilindrata minima e quella massima.
- $P_{min}$  è la pressione minima a cui si può tarare l'inizio della variazione di cambio cilindrata.
- $P_{max}$  è la pressione massima a cui si può tarare l'inizio della variazione di cambio cilindrata.

Dimensioni: 055 - 075 - 108 - 160  
Size: 055 - 075 - 108 - 160

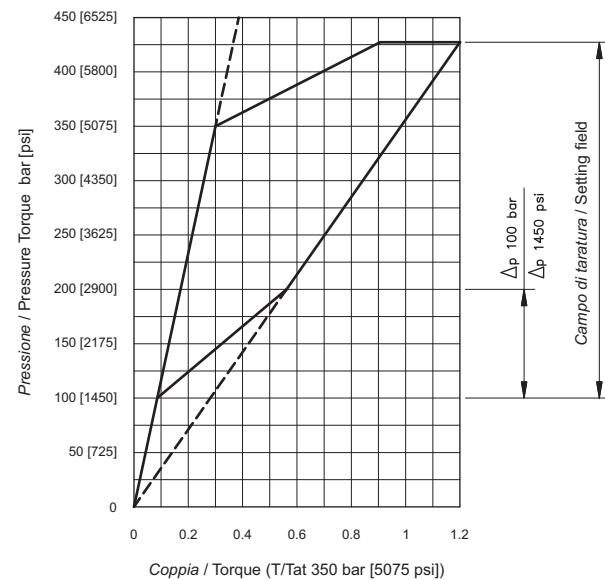


Dimensioni: 200  
Size: 200



Where:

- $\Delta p$  is the working pressure range that allows the displacement variation.
- $P_{min}$  is the minimum pressure at which displacement variation starting can be set.
- $P_{max}$  is the maximum pressure at which displacement variation starting can be set.

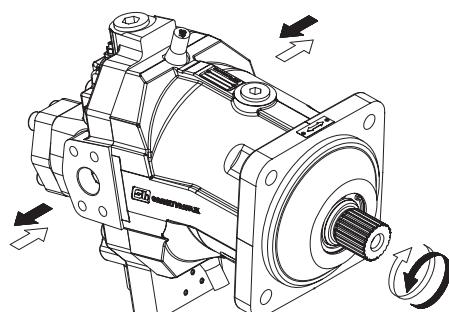


**Attenzione:** qualora siano presenti limitazioni di cilindrata il regolatore varierà in un  $\Delta p$  ridotto rispetto al suo standard. Contattare Dana Brevini per maggiori informazioni.

**Warning:** in case of displacement limitation, the control shall vary of a reduced  $\Delta p$  with respect to its standard one. Please contact Dana Brevini for more info.

La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

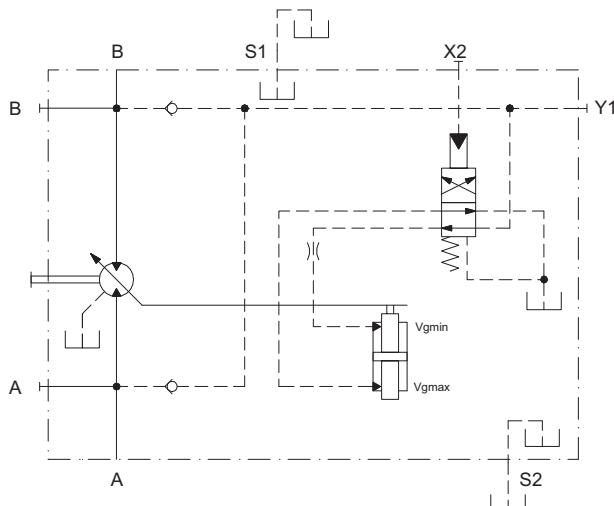


Il regolatore idraulico a due posizioni permette di variare la cilindrata tra  $Vg_{max}$  e  $Vg_{min}$  applicando o no una pressione di pilotaggio sull'attacco X2. La mancanza della molla di retroazione consente l'ottenimento delle sole cilindrate estreme  $Vg_{max}$  e  $Vg_{min}$ . La minima pressione di pilotaggio richiesta è di 10 bar mentre la massima ammessa è di 100 bar su X2. La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ) o (2) ( $Vg_{min} \rightarrow Vg_{max}$ ).

**NOTA:**

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160

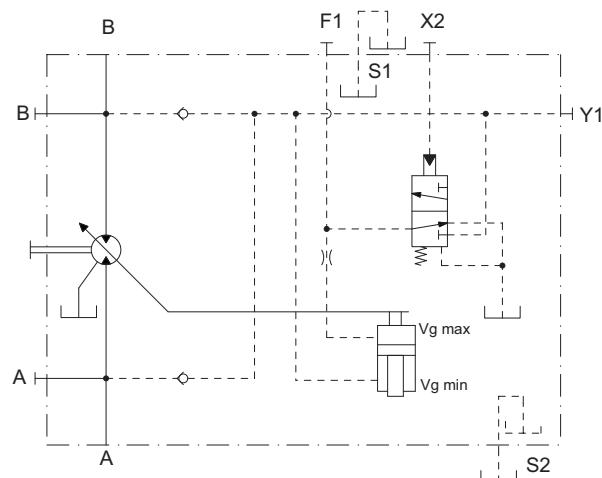


The hydraulic two positions control allows the displacement of the motor to be set to  $Vg_{max}$  or  $Vg_{min}$  by applying or not a pilot pressure at port X2. The feed back spring is missing so  $Vg_{max}$  or  $Vg_{min}$  only can be set. Minimum required pilot pressure = 10 bar [145 psi] and maximum permissible pressure at port X2=100 bar [1450 psi]. The swivel range is 1 (from  $Vg_{max}$  to  $Vg_{min}$ ) or 2 (swivel range from  $Vg_{min}$  to  $Vg_{max}$ ).

**NOTE:**

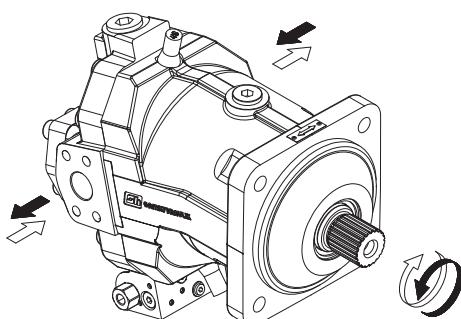
For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1

Dimensioni: 200  
 Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

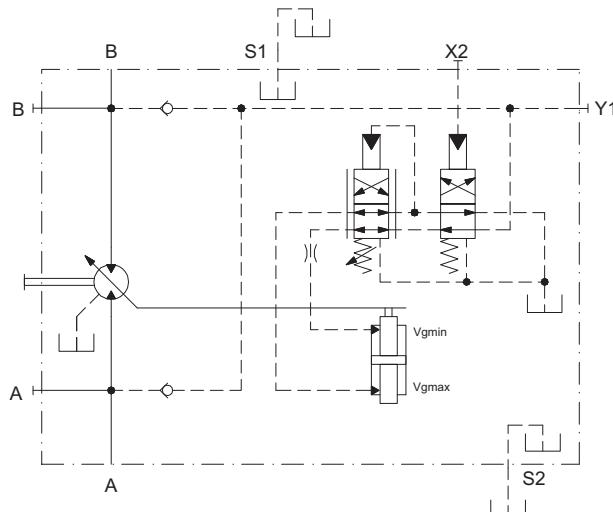


Il regolatore 2IE con dispositivo limitatore di pressione, consente al motore di portarsi alla cilindrata massima  $Vg_{max}$  al raggiungimento della pressione di taratura. Al di sotto di tale soglia, il funzionamento non si discosta da quello del comando 2IN. Applicando una certa pressione di pilotaggio sull'attacco X2 il motore si porta alla  $Vg_{min}$ . La minima pressione di pilotaggio richiesta è di 10 bar mentre la massima ammissibile è di 100 bar su X2. Se la pressione d'esercizio supera quella di taratura il dispositivo limitatore di pressione impone il passaggio alla  $Vg_{max}$ . La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ).

**NOTA:**

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160

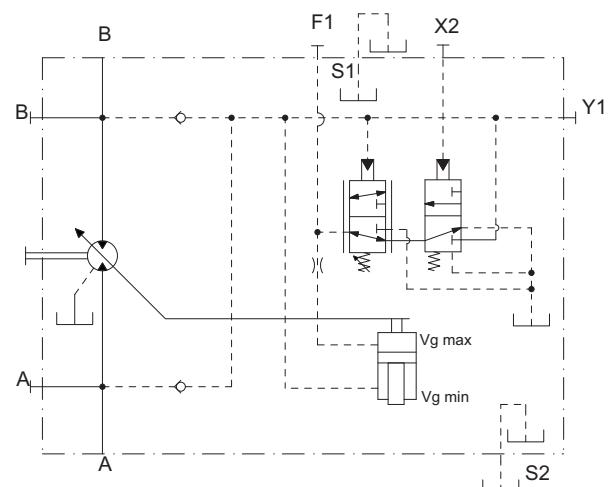


The 2IE control version with the pressure override allows the motor to swivel to  $Vg_{max}$  when the pressure setting is reached. Same as 2IN control, the motor displacement is adjusted to  $Vg_{min}$  when the pilot pressure applied at port X2. Minimum required pilot pressure = 10 bar [145 psi] and maximum permissible pressure at port X2=100 bar [1450 psi]. If the operating pressure rises beyond the pressure setting, the pressure limiting device the motor swivels out to  $Vg_{max}$ . Swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting 1 per our ordering code).

**NOTE:**

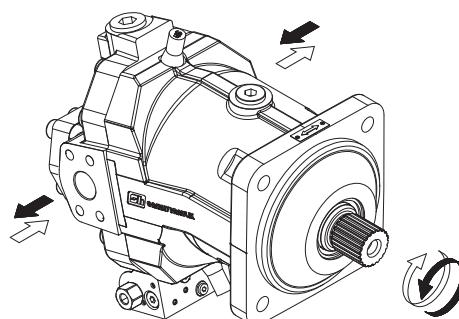
For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.

Dimensioni: 200  
 Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.



Il regolatore elettromagnetico a due posizioni permette di regolare la cilindrata del motore tra  $Vg_{max}$  e  $Vg_{min}$  intervenendo sull'alimentazione di un magnete ON/OFF. La mancanza della molla di retroazione consente di ottenere solo le due cilindrate estreme ( $Vg_{max}$  e  $Vg_{min}$ ).

L'elettromagnete è disponibile nelle versioni 12 Vcc e 24 Vcc. La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ) o (2) ( $Vg_{min} \rightarrow Vg_{max}$ ).

**NOTA:**

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

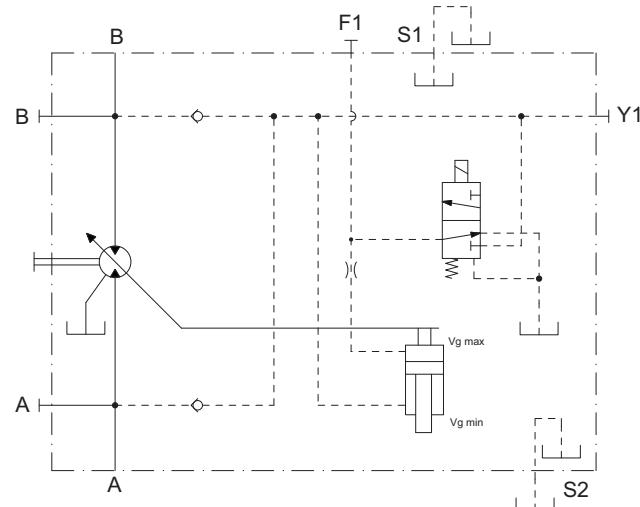
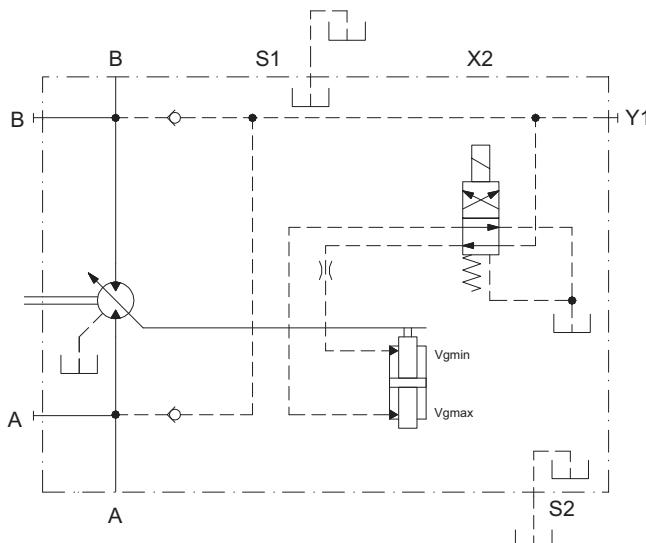
Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160

The electric two positions control allows the displacement of the motor to be set to  $Vg_{max}$  or  $Vg_{min}$  by switching an ON/OFF solenoid valve. The feed back spring is missing so  $Vg_{max}$  or  $Vg_{min}$  only can be set. 12V DC and 24V DC ON/OFF solenoid are available. The swivel range is 1 (from  $Vg_{max}$  to  $Vg_{min}$ ) or 2 (swivel range from  $Vg_{min}$  to  $Vg_{max}$ ).

**NOTE:**

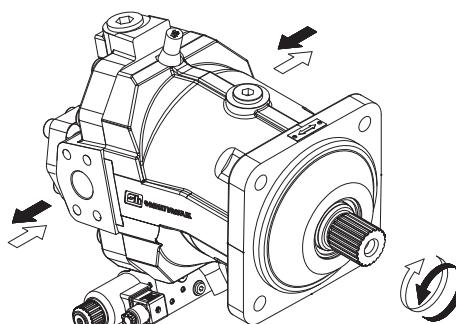
For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.

Dimensioni: 200  
 Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

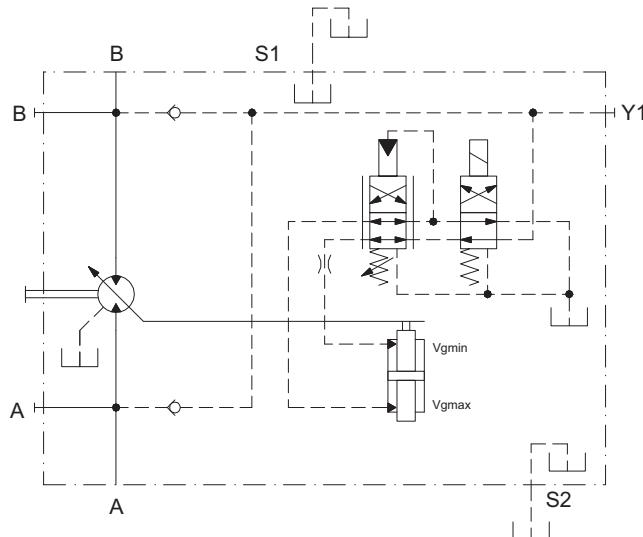


Il regolatore 2EE con dispositivo limitatore di pressione, consente al motore di portarsi alla cilindrata massima  $Vg_{max}$  al raggiungimento della pressione di taratura. Al di sotto di tale soglia, il funzionamento non si discosta da quello del comando 2EN. A magnete non eccitato il motore è alla  $Vg_{max}$ . Quando il magnete è eccitato il motore si porta alla  $Vg_{min}$ . Se la pressione d'esercizio supera quella di taratura il dispositivo limitatore di pressione impone il passaggio alla  $Vg_{max}$ . La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ).

**NOTA:**

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160

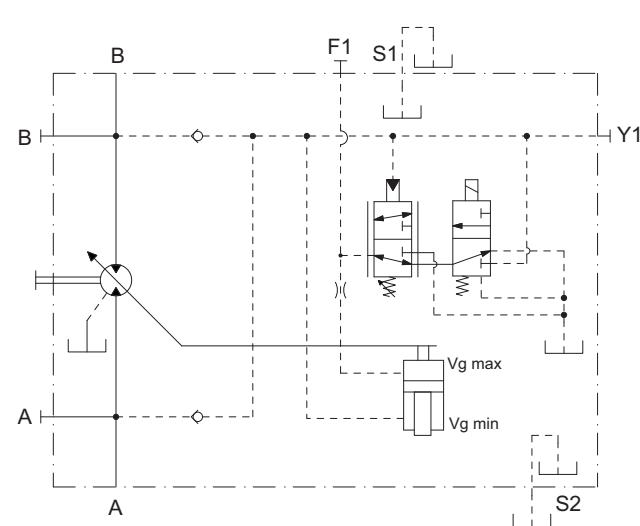


The 2EE control version with the pressure override allows the motor to swivel to  $Vg_{max}$  when the pressure setting is reached. Same as '2EN' control, when solenoid valve is switched off the motor is at  $Vg_{max}$ . The motor displacement is adjusted to  $Vg_{min}$  when the solenoid valve is switched on and if the operating pressure rises beyond the pressure setting, the pressure limiting device overrides the electric two positions control and the motor swivels out to  $Vg_{max}$ . Swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting 1 per our ordering code).

**NOTE:**

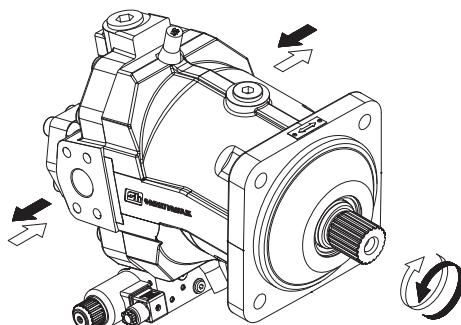
For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.

Dimensioni: 200  
 Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.



Il regolatore idraulico proporzionale consente un adeguamento continuo della cilindrata del motore proporzionalmente alla pressione di pilotaggio applicata sull'attacco X2.

La pressione di pilotaggio applica una forza sul pilota ed il motore varia la cilindrata fino a che la molla di retroazione arriva a bilanciare il sistema di forze. Perciò la cilindrata è variata proporzionalmente alla pressione di pilotaggio.

La posizione standard del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ), ma la posizione (2) ( $Vg_{min} \rightarrow Vg_{max}$ ) è disponibile a richiesta. Inizio regolazione pressione di pilotaggio da 5 bar a 20 bar circa.

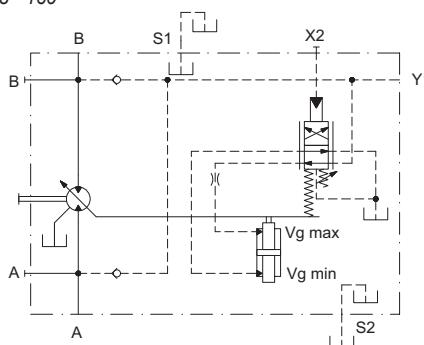
Il campo di variazione della pressione di pilotaggio è 25 bar.

La pressione massima di pilotaggio su X2 = 100 bar.

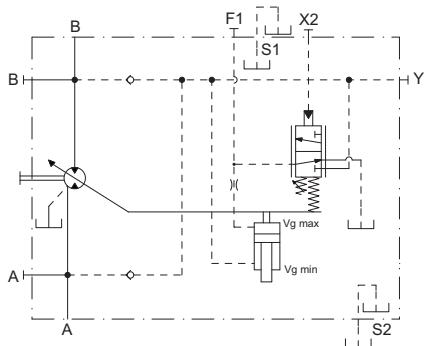
#### NOTA:

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

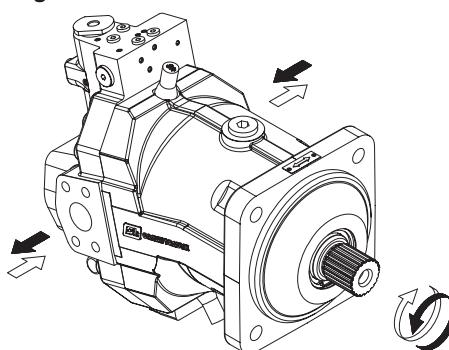
Dimensioni: 055 - 075 - 108 - 160  
Size: 055 - 075 - 108 - 160



Dimensioni: 200  
Size: 200



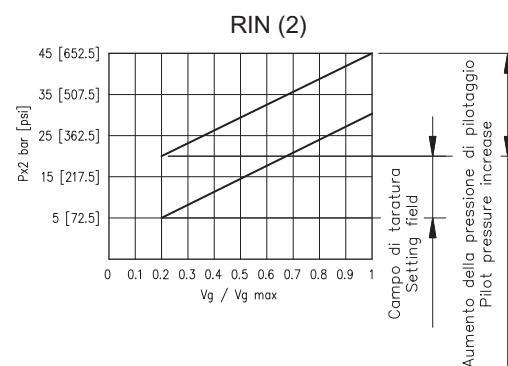
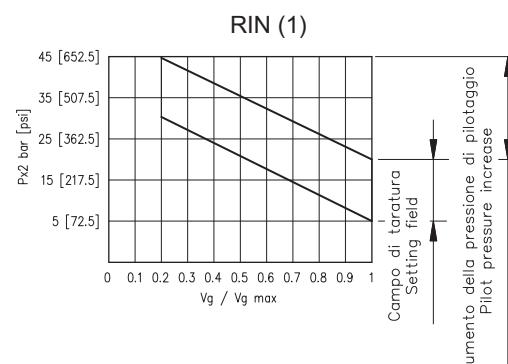
La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura



The hydraulic proportional control allows a stepless adjustment of the motor displacement proportionally to the pilot pressure applied at port X2. The pilot pressure applies a force on the spool and the motor swivels until a force balance on the arm is stored by feed back spring. Therefore the motor displacement is adjusted in direct proportion with the pilot pressure. Usually the swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting type 1 as per our ordering code) so that increasing the pilot pressure the motor swivels towards  $Vg_{min}$ , however, displacement setting type 2 (swivel range from  $Vg_{min}$  to  $Vg_{max}$ ) is also available. Start of control, Setting range from 5 bar [72.5 psi] to 20 bar [290 psi] around. Pilot pressure range 25 bar [362.5 psi]. Max permissible pilot pressure at port X2 = 100 bar [1450 psi].

#### NOTE:

For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.



The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

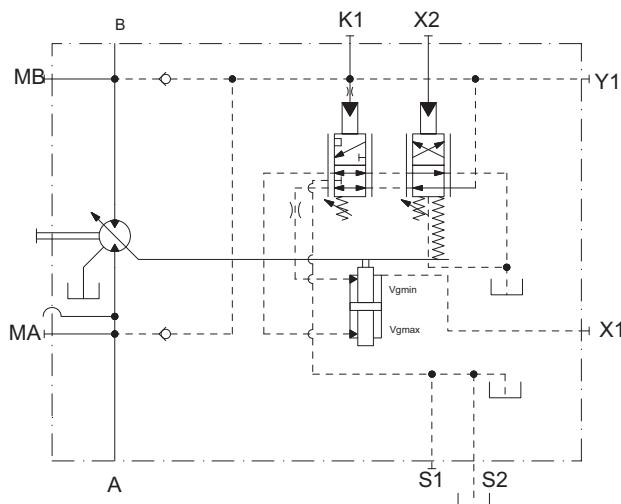
Il regolatore RIE con dispositivo limitatore di pressione, consente al motore di portarsi alla cilindrata massima  $Vg_{max}$  al raggiungimento della pressione di taratura. Al di sotto di tale soglia, il funzionamento non si discosta da quello del comando RIN. Applicando una certa pressione di pilotaggio sull'attacco X2 il motore si porta alla  $Vg_{min}$ . Se la pressione d'esercizio supera quella di taratura il dispositivo limitatore di pressione impone il passaggio alla  $Vg_{max}$ . La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ).

Inizio regolazione pressione di pilotaggio da 5 bar a 20 bar circa.  
 Il campo di variazione della pressione di pilotaggio è 25 bar.  
 La pressione massima di pilotaggio su X2 = 100 bar.

**NOTA:**

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

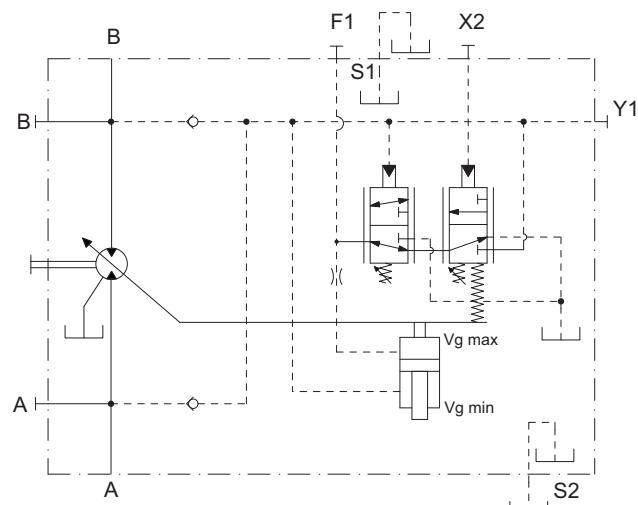
The RIE control version with the pressure override allows the motor to swivel to  $Vg_{max}$  when the pressure setting is reached. Same as RIN control, the motor displacement is adjusted to  $Vg_{min}$  when the pilot pressure applied at port X2. If the operating pressure rises beyond the pressure setting, the pressure limiting device makes the motor swivel out to  $Vg_{max}$ . Swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting 1 per our ordering code).

Start of control, Setting range from 5 bar [72.5 psi] to 20 bar [290 psi] around. Pilot pressure range 25 bar [362.5 psi]. Max permissible pilot pressure at port X2 = 100 bar [1450 psi].

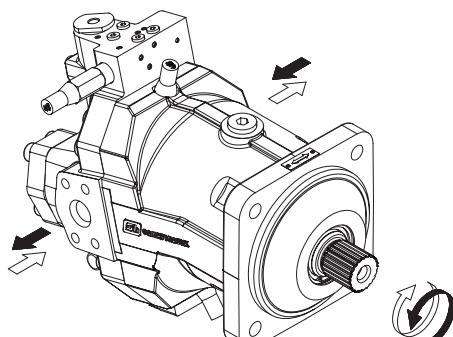
**NOTE:**

For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.

Dimensioni: 200  
 Size: 200



The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.



Il regolatore RID con dispositivo limitatore di pressione, consente al motore di portarsi alla cilindrata massima  $Vg_{max}$  al raggiungimento della pressione di taratura. Al di sotto di tale soglia, il funzionamento non si discosta da quello del comando RIN. Applicando una certa pressione di pilotaggio sull'attacco X2 il motore si porta alla  $Vg_{min}$ . Se la pressione d'esercizio supera quella di taratura il dispositivo limitatore di pressione impone il passaggio alla  $Vg_{max}$ . La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ).

Applicando una pressione all'attacco X3, la taratura del limitatore di pressione può essere sovrastata a favore di un diverso valore di taratura.

Il campo di variazione della pressione di pilotaggio su X3 è da 16 bar a 64 bar.

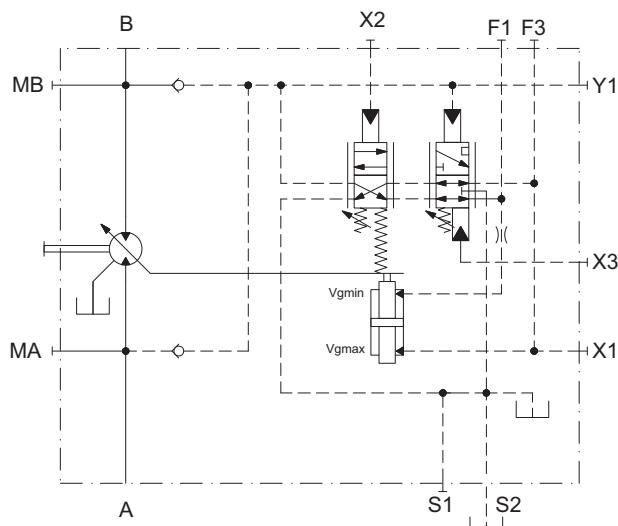
Inizio regolazione pressione di pilotaggio da 5 bar a 20 bar circa.

Il campo di variazione della pressione di pilotaggio è 25 bar. La pressione massima di pilotaggio su X2 = 100 bar.

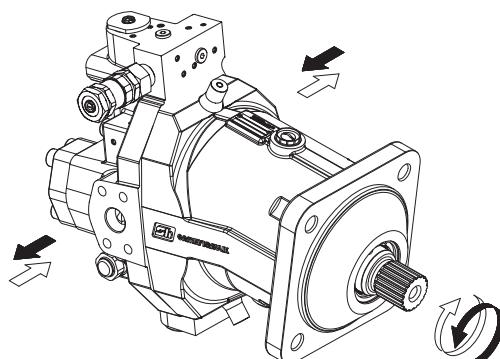
#### NOTA:

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura



The RID control version with the pressure override allows the motor to swivel to  $Vg_{max}$  when the pressure setting is reached. Same as RIN control, the motor displacement is adjusted to  $Vg_{min}$  when the pilot pressure applied at port X2. If the operating pressure rises beyond the pressure setting, the pressure limiting device the motor swivels out to  $Vg_{max}$ . Swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting 1 per our ordering code).

Applying a pressure to port X3, the setting of PE control can be overridden by a different value of pressure.

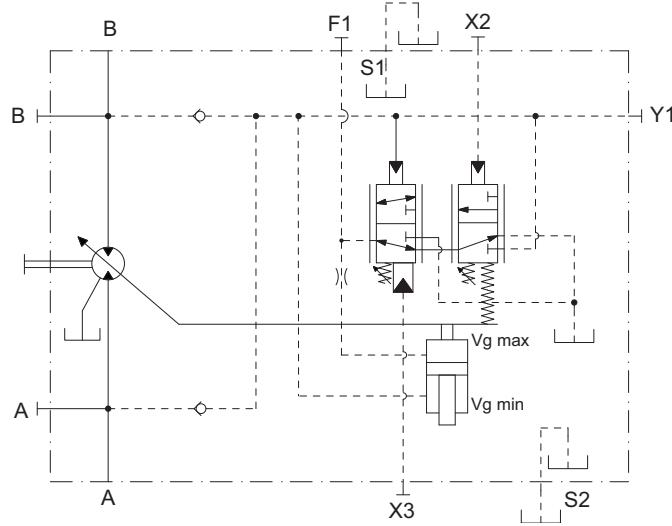
Setting range from 16 bar [232 psi] to 64 bar [928 psi] around.

Start of control, Setting range from 5 bar [72.5 psi] to 20 bar [290 psi] around. Pilot pressure range 25 bar [362.5 psi]. Max permissible pilot pressure at port X2 = 100 bar [1450 psi].

#### NOTE:

For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.

Dimensioni: 200  
 Size: 200



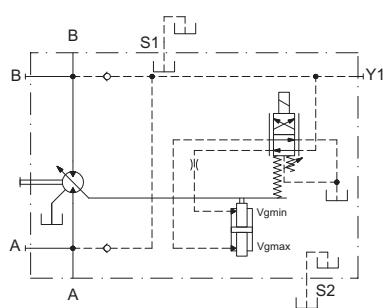
The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

Il regolatore elettromagnetico proporzionale consente una variazione continua e programmabile dalla cilindrata proporzionalmente all'intensità della corrente di alimentazione di un solenoide proporzionale disponibile nella versione a 12V o 24V e con attacco DIN 43650 o DEUTSCH. L'elettromagnete proporzionale applica una forza sul pilota proporzionale all'intensità di corrente ed il motore varia la sua cilindrata fino a che la molla di retroazione ripristina l'equilibrio. L'alimentazione è a corrente continua a 24V (12V). Il campo di regolazione della corrente è compreso tra 200 (400) e 600 (1200) mA (con regolazioni standard delle cilindrate massima e minima). Massima corrente ammessa 800 (1600) mA. La posizione standard del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ) ma la posizione (2) ( $Vg_{min} \rightarrow Vg_{max}$ ) è disponibile a richiesta. Per controllare il magnete proporzionale sono disponibili i regolatori elettronici da ordinare separatamente.

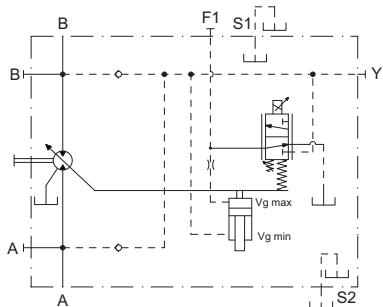
**NOTA:**

Per un regolatore performante un pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

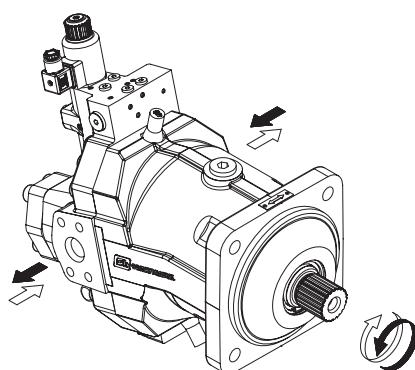
Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160



Dimensioni: 200  
 Size: 200



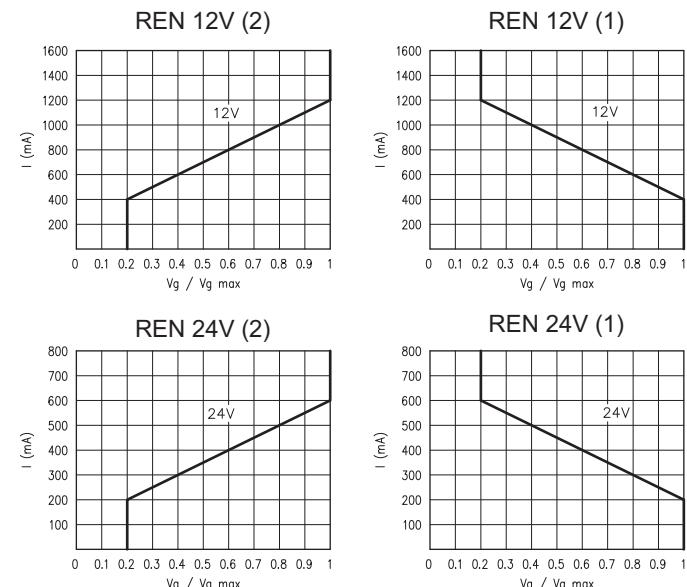
La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura



The electrical proportional control allows stepless and programmable adjustment of the motor displacement proportionally to the current strength supplied to a proportional solenoid valve available in 12V DC and 24V DC version and with connector DIN 43650 o DEUTSCH. The proportional solenoid valve applies a force on the spool proportional to the current strength and the motor swivels until a force balance is restored by a feed-back spring. To control the proportional solenoid valve a 24V DC (12V DC) supply is required. Current range between 200 (400) and 600 (1200) mA approx. (with standard setting of Max and Min displacement). Max permissible current = 800 (1600) mA. Usually the swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting type 1 as per our ordering code) so that increasing the current strength the motor swivels towards  $Vg_{min}$ , however displacement setting type 2 (swivels range from  $Vg_{min}$  to  $Vg_{max}$ ) is also available. The electronic devices are available to control the solenoid (they must be ordered separately).

**NOTE:**

For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.



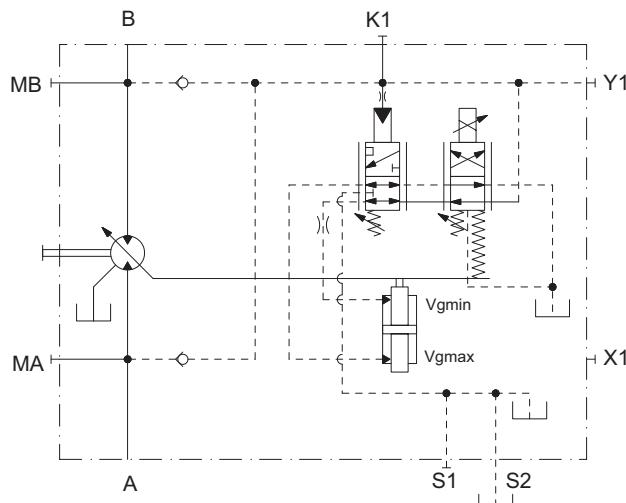
The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

Il regolatore REE con dispositivo limitatore di pressione, consente al motore di portarsi alla cilindrata massima  $Vg_{max}$  al raggiungimento della pressione di taratura. Al di sotto di tale soglia, il funzionamento non si discosta da quello del comando REN. Il solenoide proporzionale è disponibile nella versione a 12V o 24V e con attacco DIN 43650 o DEUTSCH. A magnete non eccitato il motore è alla  $Vg_{max}$ . Quando il magnete è eccitato il motore si porta alla  $Vg_{min}$ . Se la pressione d'esercizio supera quella di taratura il dispositivo limitatore di pressione impone il passaggio alla  $Vg_{max}$ . La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ).

**NOTA:**

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160

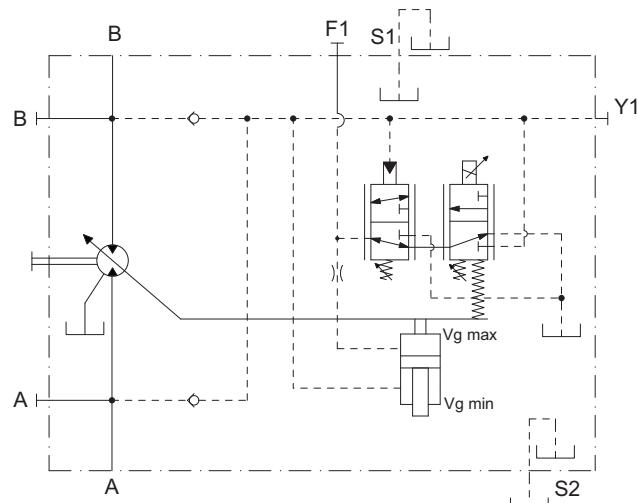


The REE control version with the pressure override allows the motor to swivel to  $Vg_{max}$  when the pressure setting is reached. Same as REN control, when solenoid valve is switched off the motor is at  $Vg_{max}$ . The proportional solenoid valve is available in 12V DC and 24V DC version and with connector DIN 43650 o DEUTSCH. The motor displacement is adjusted to  $Vg_{min}$  when the solenoid valve is switched on and if the operating pressure rises beyond the pressure setting, the pressure limiting device overrides the electric two positions control and the motor swivels out to  $Vg_{max}$ . Swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting 1 per our ordering code).

**NOTE:**

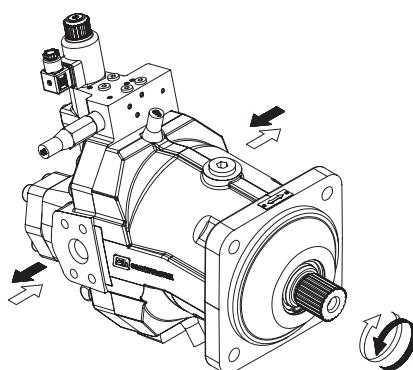
For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A (B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.

Dimensioni: 200  
 Size: 200



La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.



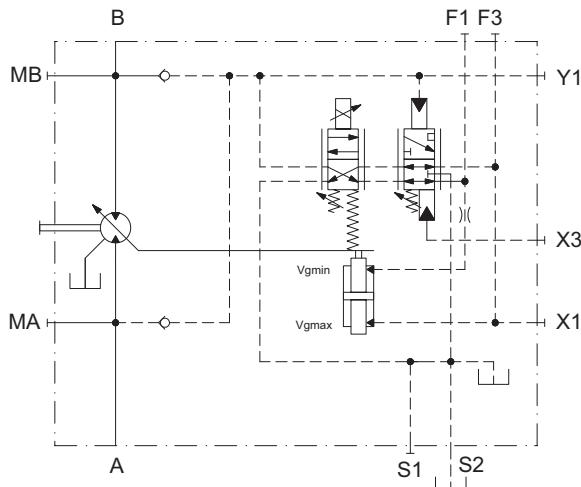
Il regolatore RED con dispositivo limitatore di pressione, consente al motore di portarsi alla cilindrata massima  $Vg_{max}$  al raggiungimento della pressione di taratura. Al di sotto di tale soglia, il funzionamento non si discosta da quello del comando REN. Il solenoide proporzionale è disponibile nella versione a 12V o 24V e con attacco DIN 43650 o DEUTSCH. A magnete non eccitato il motore è alla  $Vg_{max}$ . Quando il magnete è eccitato il motore si porta alla  $Vg_{min}$ . Se la pressione d'esercizio supera quella di taratura il dispositivo limitatore di pressione impone il passaggio alla  $Vg_{max}$ .

La posizione del regolatore è (1) ( $Vg_{max} \rightarrow Vg_{min}$ ).  
 Applicando una pressione all'attacco X3, la taratura del limitatore di pressione può essere sovrastata a favore di un diverso valore di taratura. Il campo di variazione della pressione di pilotaggio su X3 è da 16 bar a 64 bar.

#### NOTA:

Per un regolatore performante un'pressione di esercizio di almeno 20 bar è necessaria sull'utenza A (B). Se nell'applicazione quest'ultima non è garantita, deve essere applicata una pressione ausiliaria di almeno 20 bar sull'attacco Y1.

Dimensioni: 055 - 075 - 108 - 160  
 Size: 055 - 075 - 108 - 160



The RED control version with the pressure override allows the motor to swivel to  $Vg_{max}$  when the pressure setting is reached. Same as REN control, when solenoid valve is switched off the motor is at  $Vg_{max}$ . The proportional solenoid valve is available in 12V DC and 24V DC version and with connector DIN 43650 or DEUTSCH. The motor displacement is adjusted to  $Vg_{min}$  when the solenoid valve is switched on and if the operating pressure rises beyond the pressure setting, the pressure limiting device overrides the electric two positions control and the motor swivels out to  $Vg_{max}$ . Swivel range is from  $Vg_{max}$  to  $Vg_{min}$  (displacement setting 1 per our ordering code).

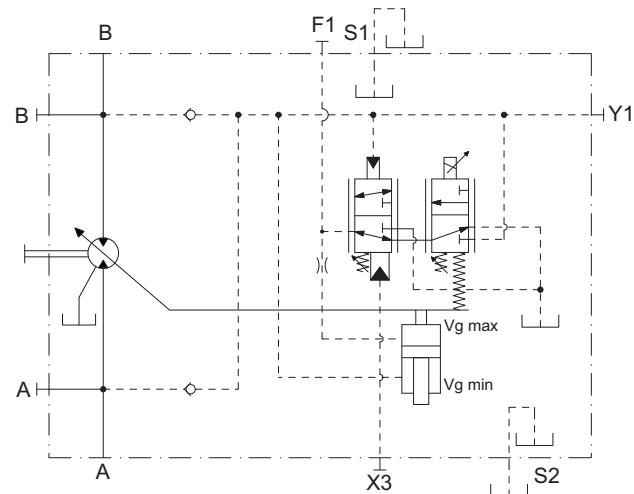
Applying a pressure to port X3, the setting of PE control can be overridden by a different value of pressure.

Setting range from 16 bar [232 psi] to 64 bar [928 psi] around.

#### NOTE:

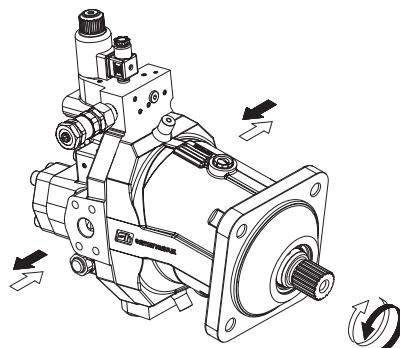
For reliable control, an operating pressure of at least 20 bar [290 psi], is necessary at port A(B). If in the application this pressure is not guaranteed, an auxiliary pressure of 20 bar [290 psi] is to be applied at port Y1.

Dimensioni: 200  
 Size: 200

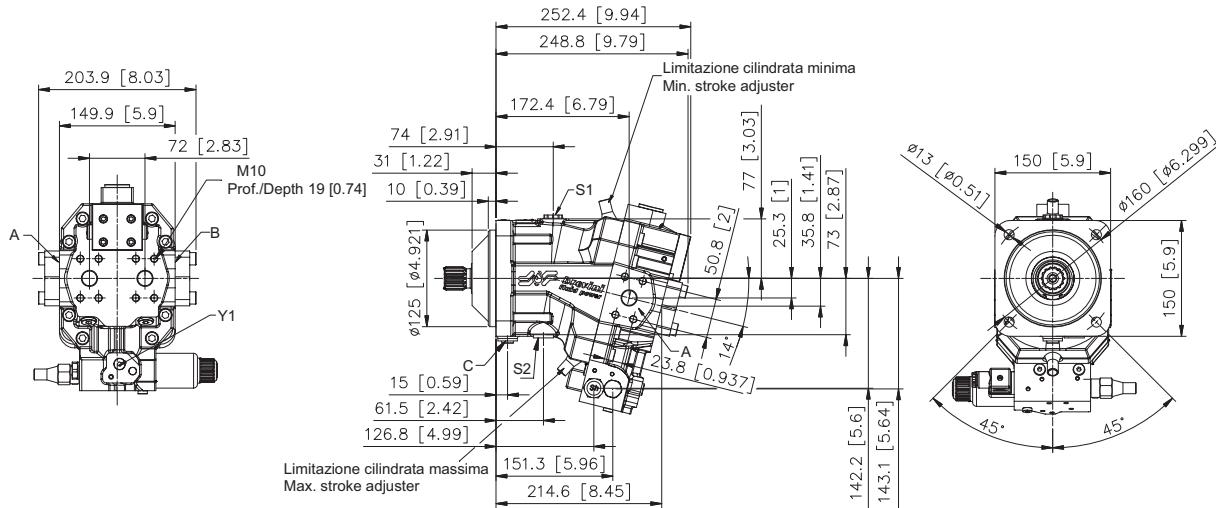


La relazione tra il senso di rotazione dell'albero del motore SH7V e la direzione del flusso è illustrata in figura

The relation between direction of rotation of shaft and direction of flow in SH7V motor is shown in the picture below.

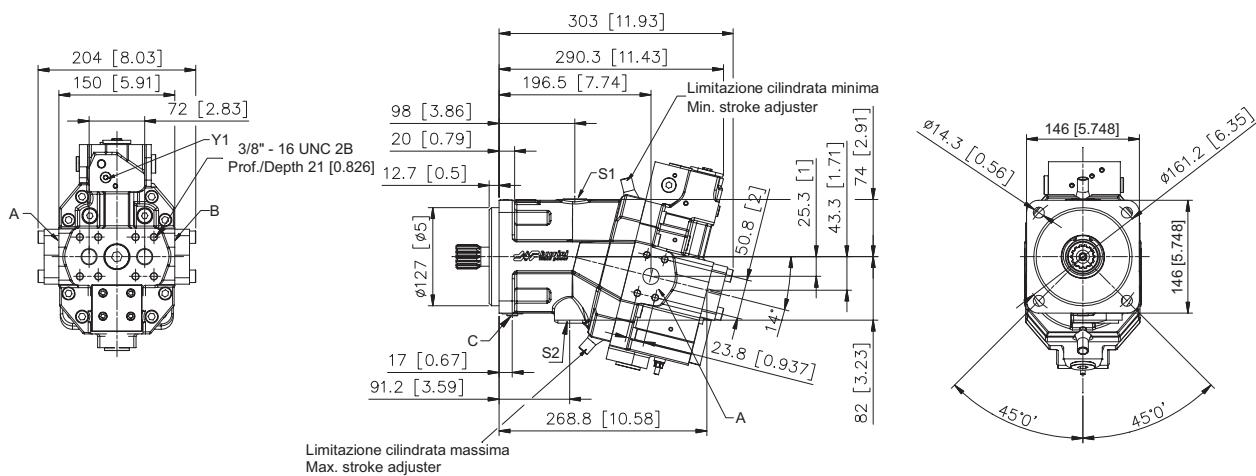


**Motore SH7V 055 - Flangia ISO 4 Fori (OC)**  
**SH7V 055 Motor - Mounting flange ISO 4 Bolts (OC)**



A-B: Utenze / Service line ports - 3/4" SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 1/8 G (BSPP)  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 1/2 G (BSPP)  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 1/8 G (BSPP)

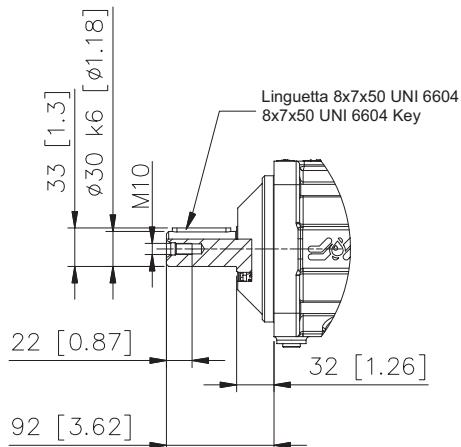
**Motore SH7V 055 - Flangia SAE-C 4 Fori (05)**  
**SH7V 055 Motor - Mounting flange SAE-C 4 Bolts (05)**



A-B: Utenze / Service line ports - 3/4" SAE 6000  
C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 7/16"-20 UNF  
S1-S2: Bocche di drenaggio carcassa / Case drain port - 1"1/16-12 UN 2B  
Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 7/16"-20 UNF-2B

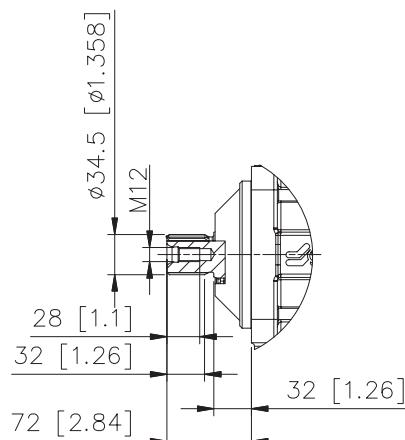
**CAW**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 30\text{ mm}$  [1.181 in]



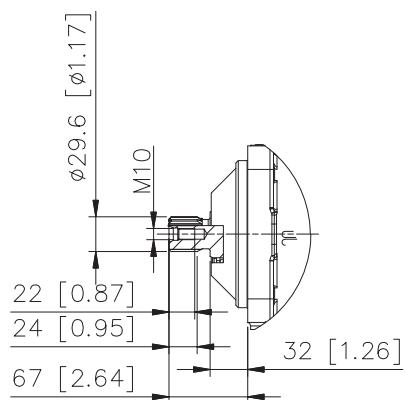
**SAM**

SCANALATO / SPLINED  
 $W35x2x30x16$  - DIN 5480



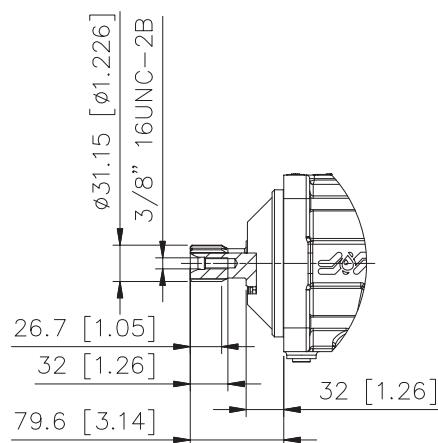
**SAI**

SCANALATO / SPLINED  
 $W30x2x30x14$  - DIN 5480



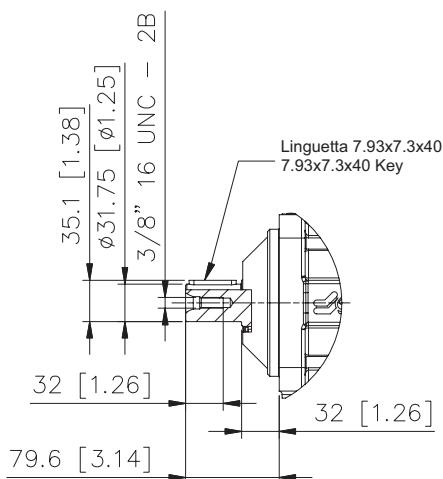
**S12**

SCANALATO / SPLINED  
 14T 12/24 DP



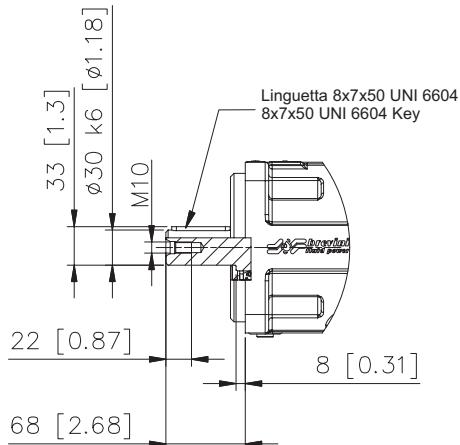
**C17**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 31.75\text{ mm}$  [1.25 in]



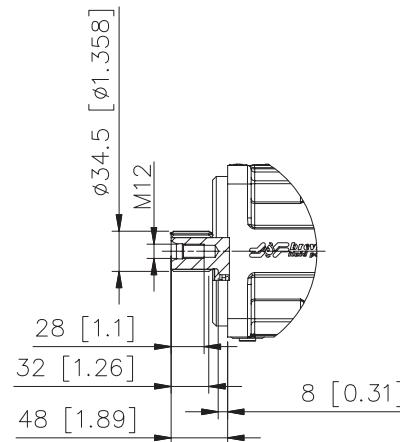
**CAW**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 30\text{ mm}$  [1.181 in]



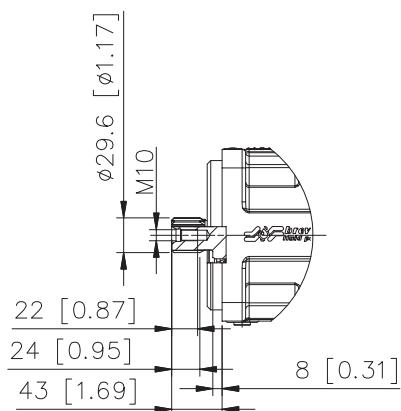
**SAM**

SCANALATO / SPLINED  
 $W35 \times 2 \times 30 \times 16$  - DIN 5480



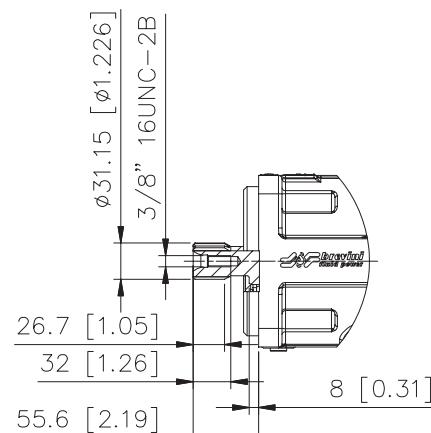
**SAI**

SCANALATO / SPLINED  
 $W30 \times 2 \times 30 \times 14$  - DIN 5480



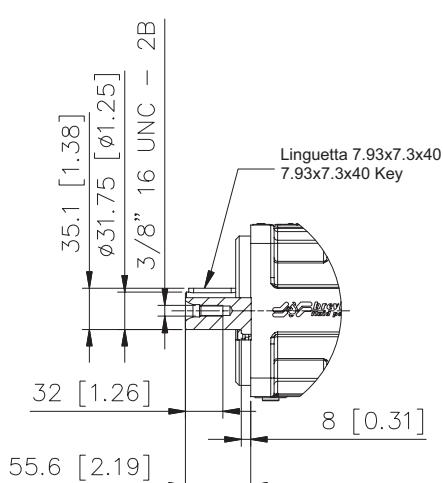
**S12**

SCANALATO / SPLINED  
 14T 12/24 DP

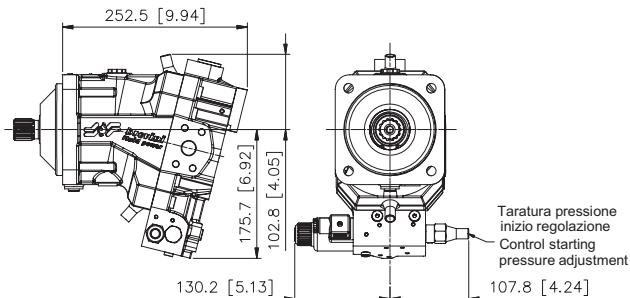


**C17**

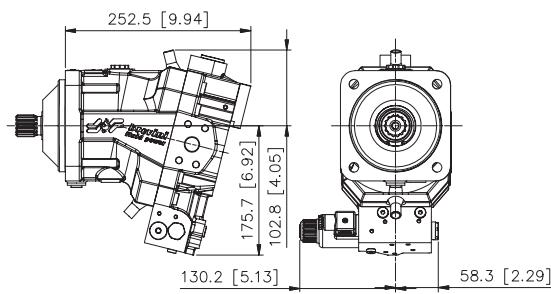
CILINDRICO / PARALLEL KEYED  
 $\varnothing 31.75\text{ mm}$  [1.25 in]



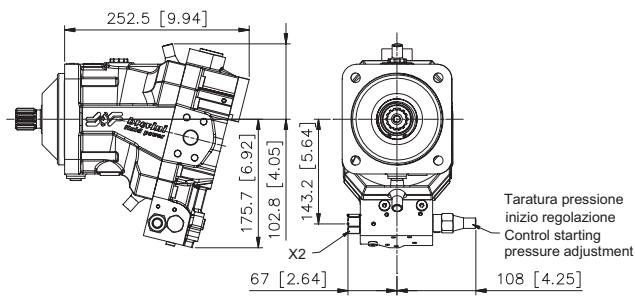
**Regolatore 2EE**  
**2EE Control**



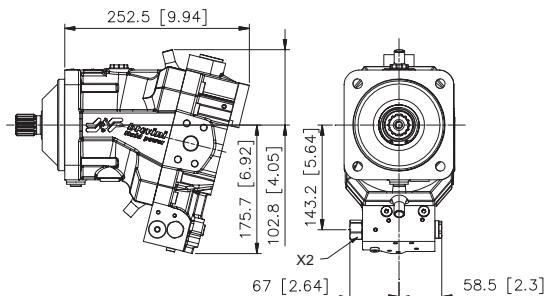
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IE**  
**2IE Control**



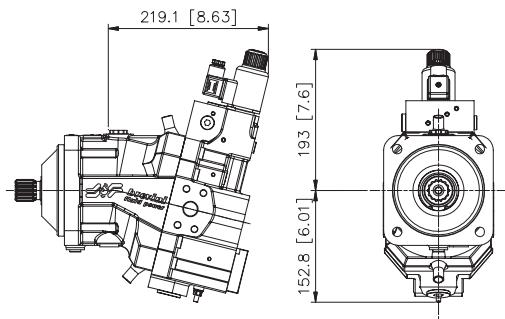
**Regolatore 2IN**  
**2IN Control**



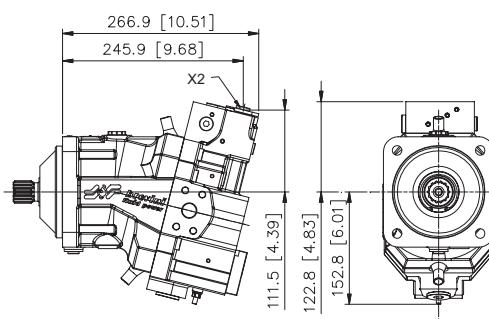
X2: Attacco pilotaggio - 1/4 G (BSPP)  
 X2: Piloting port - 1/4 G (BSPP)

X2: Attacco pilotaggio - 1/4 G (BSPP)  
 X2: Piloting port - 1/4 G (BSPP)

**Regolatore REN**  
**REN Control**

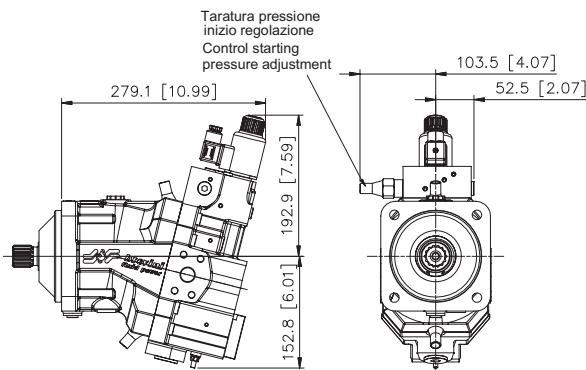


**Regolatore RIN**  
**RIN Control**

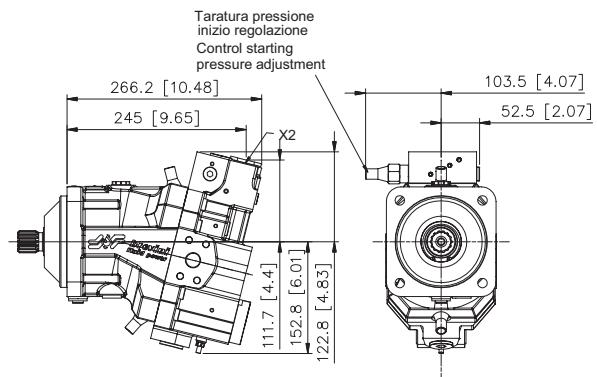


X2: Attacco pilotaggio - 1/4 G (BSPP)  
 X2: Piloting port - 1/4 G (BSPP)

**Regolatore REE**  
REE Control

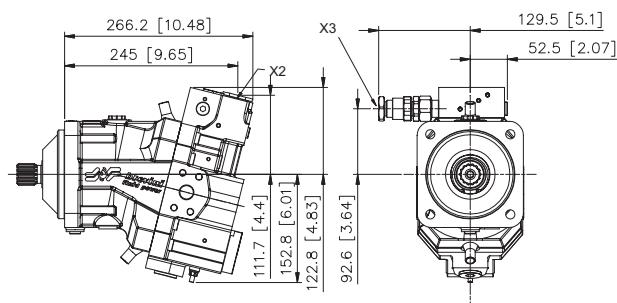


**Regolatore RIE**  
RIE Control

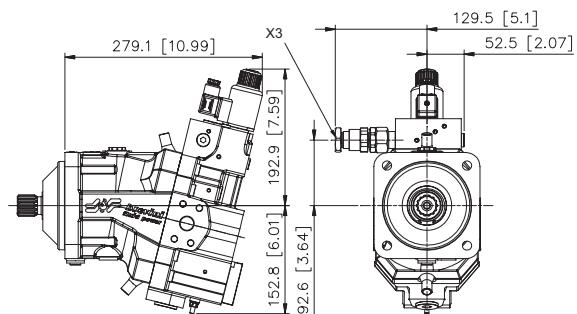


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RID**  
RID Control



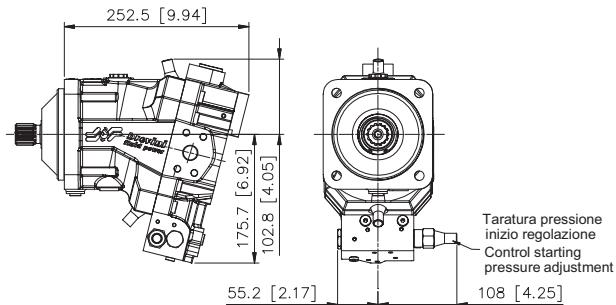
**Regolatore RED**  
RED Control



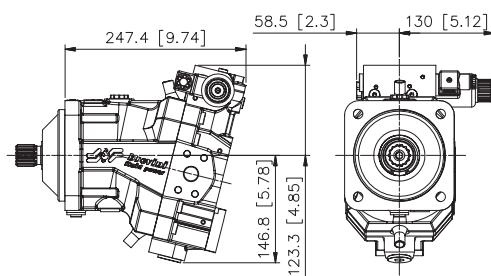
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

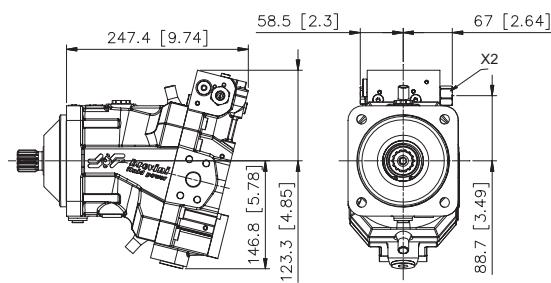
**Regolatore RPE  
RPE Control**



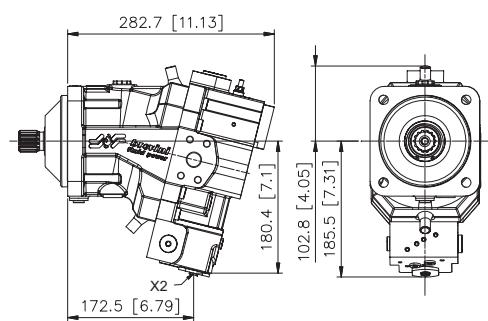
**Regolatore 2EN  
2EN Control**



**Regolatore 2IN  
2IN Control**



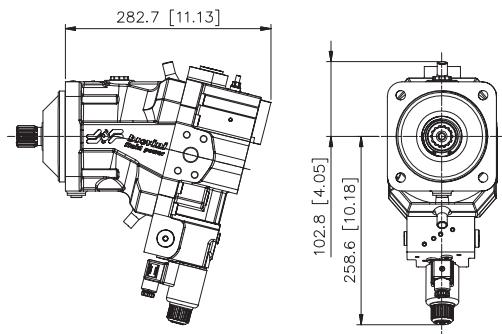
**Regolatore RIN  
RIN Control**



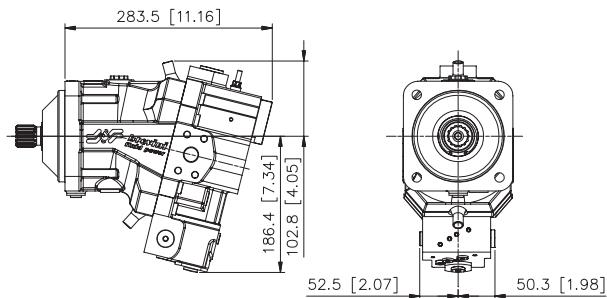
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

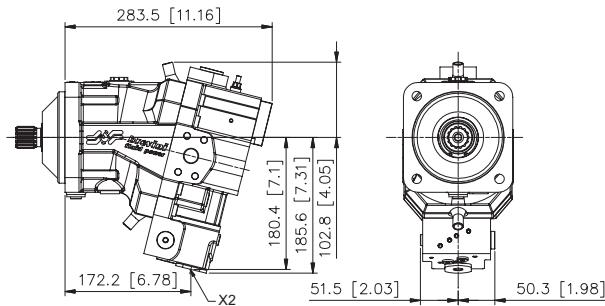
**Regolatore REN  
REN Control**



**Regolatore ROE  
ROE Control**

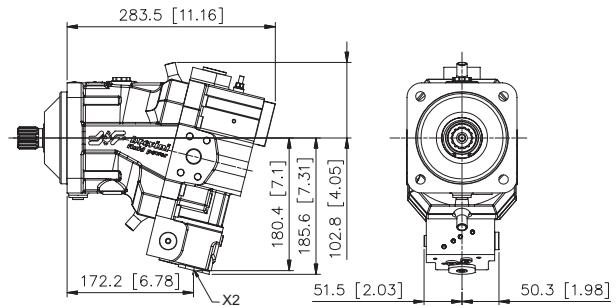


**Regolatore ROI**  
ROI Control



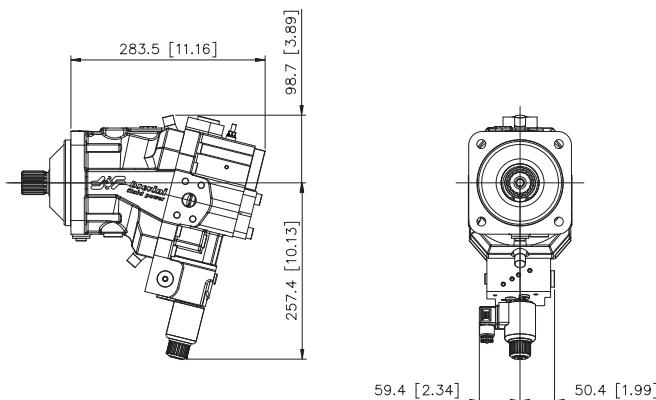
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RPI**  
PRI Control

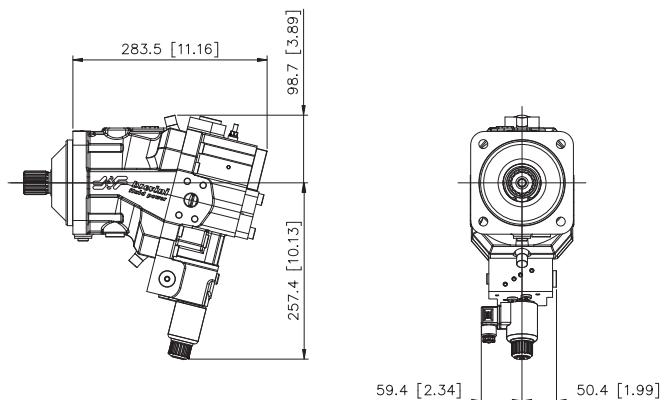


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

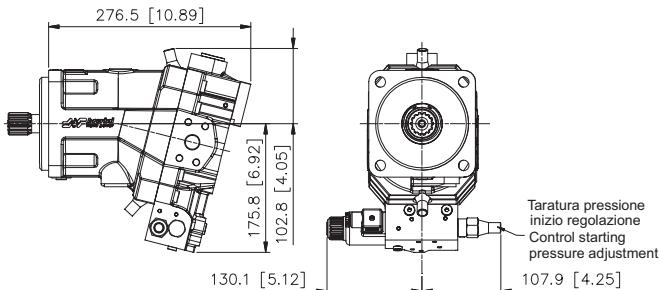
**Regolatore ROS**  
ROS Control



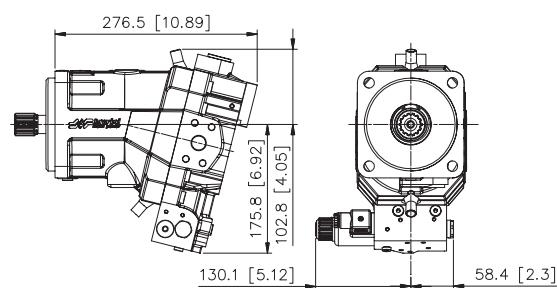
**Regolatore RPS**  
RPS Control



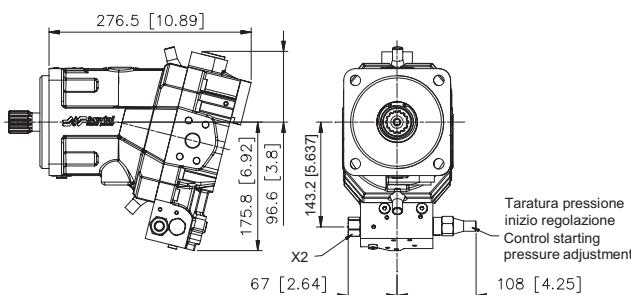
**Regolatore 2EE  
2EE Control**



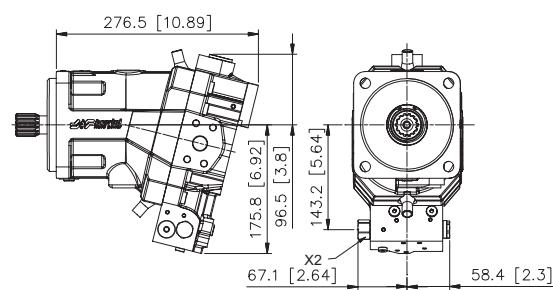
**Regolatore 2EN  
2EN Control**



**Regolatore 2IE  
2IE Control**



**Regolatore 2IN  
2IN Control**



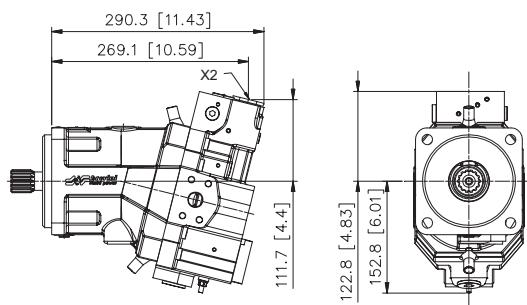
X2: Attacco pilotaggio - 7/16"-20 UNF

X2: Piloting port - 7/16"-20 UNF

X2: Attacco pilotaggio - 7/16"-20 UNF

X2: Piloting port - 7/16"-20 UNF

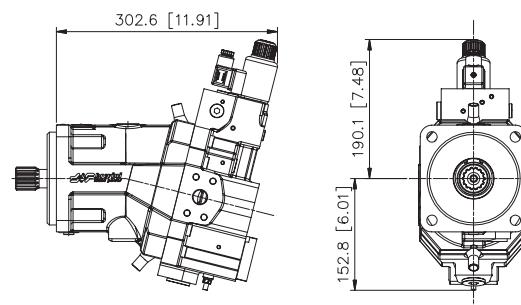
**Regolatore RIN  
RIN Control**



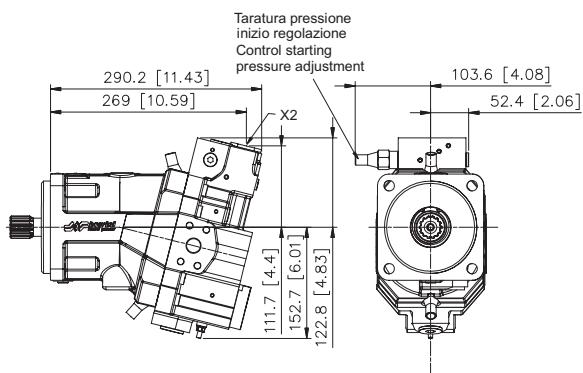
X2: Attacco pilotaggio - 7/16"-20 UNF

X2: Piloting port - 7/16"-20 UNF

**Regolatore REN  
REN Control**



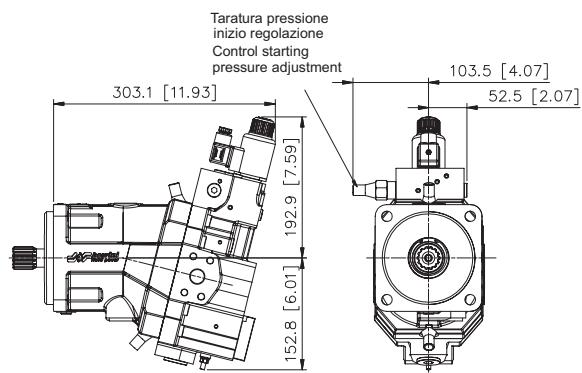
**Regolatore RIE**  
**RIE Control**



X2: Attacco pilotaggio - 7/16"-20 UNF

X2: Piloting port - 7/16"-20 UNF

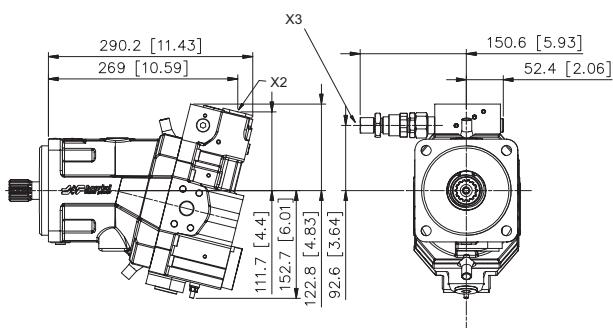
**Regolatore REE**  
**REE Control**



X2: Attacco pilotaggio - 7/16"-20 UNF

X2: Piloting port - 7/16"-20 UNF

**Regolatore RID**  
**RID Control**



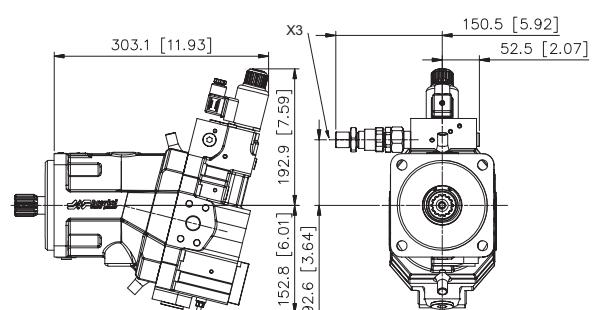
X2: Attacco pilotaggio - 7/16"-20 UNF

X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF

X2: Piloting port - 7/16"-20 UNF

X3: Double step piloting port - 7/16"-20 UNF

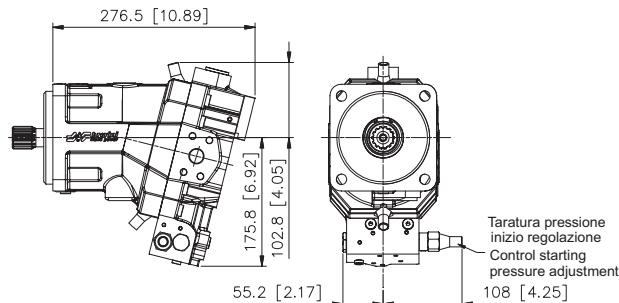
**Regolatore RED**  
**RED Control**



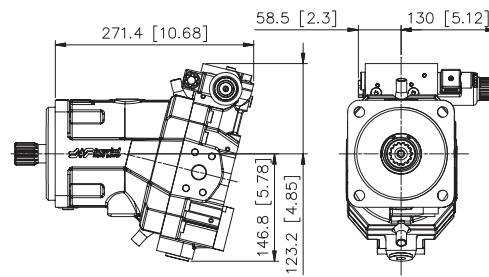
X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF

X3: Double step piloting port - 7/16"-20 UNF

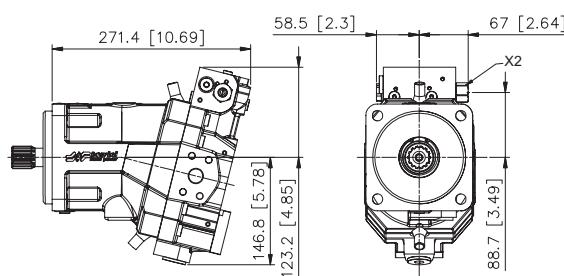
**Regolatore RPE**  
**RPE Control**



**Regolatore 2EN**  
**2EN Control**

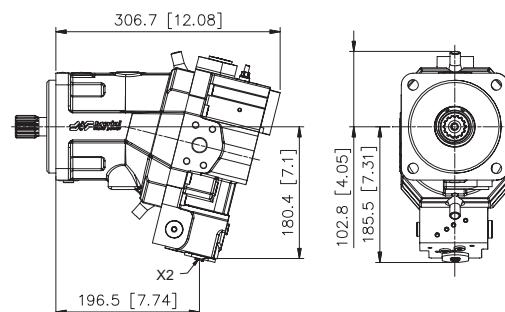


**Regolatore 2IN**  
**2IN Control**



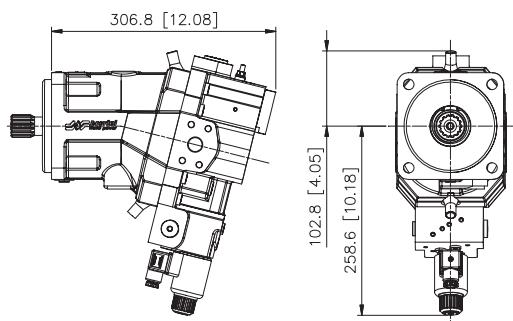
X2: Attacco pilotaggio - 7/16"-20 UNF  
 X2: Piloting port - 7/16"-20 UNF

**Regolatore RIN**  
**RIN Control**

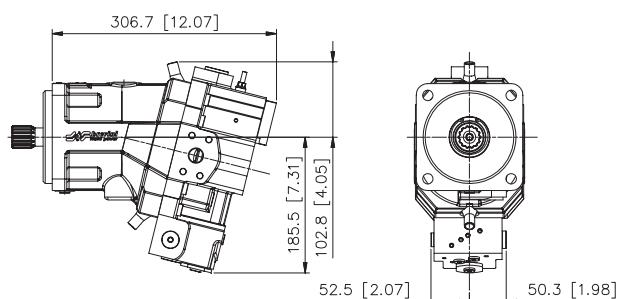


X2: Attacco pilotaggio - 7/16"-20 UNF  
 X2: Piloting port - 7/16"-20 UNF

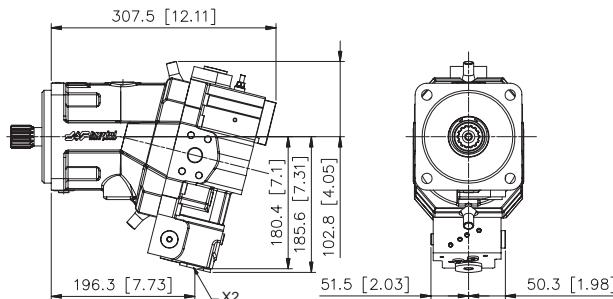
**Regolatore REN**  
**REN Control**



**Regolatore ROE**  
**ROE Control**

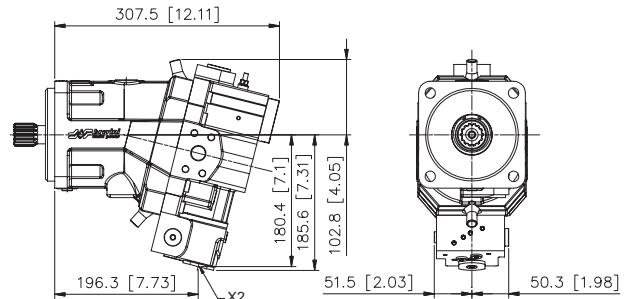


**Regolatore ROI**  
ROI Control



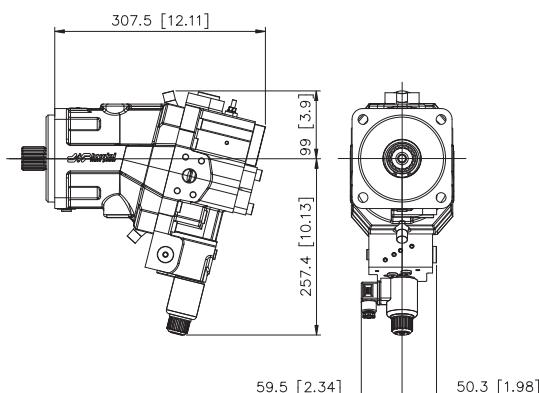
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore RPI**  
RPI Control

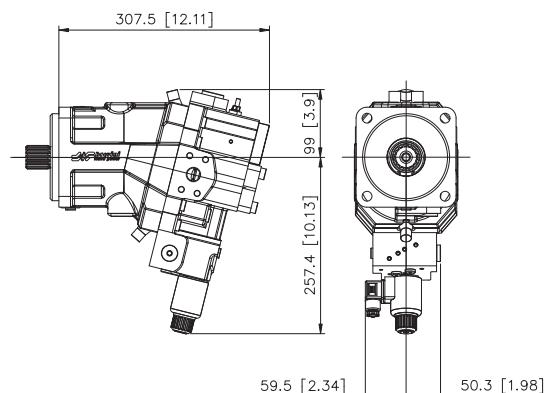


X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

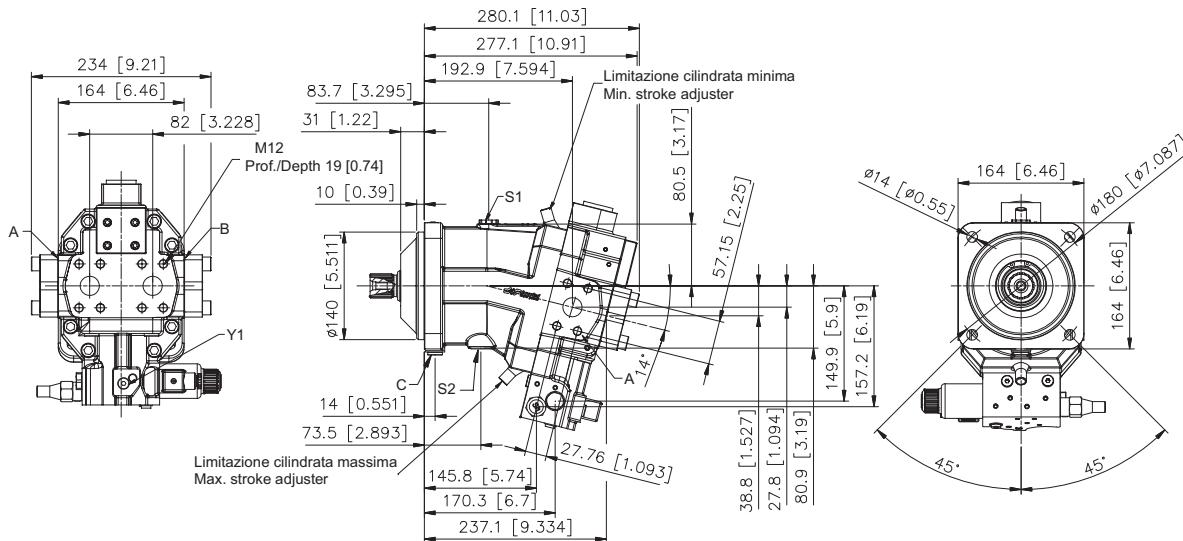
**Regolatore ROS**  
ROS Control



**Regolatore RPS**  
RPS Control

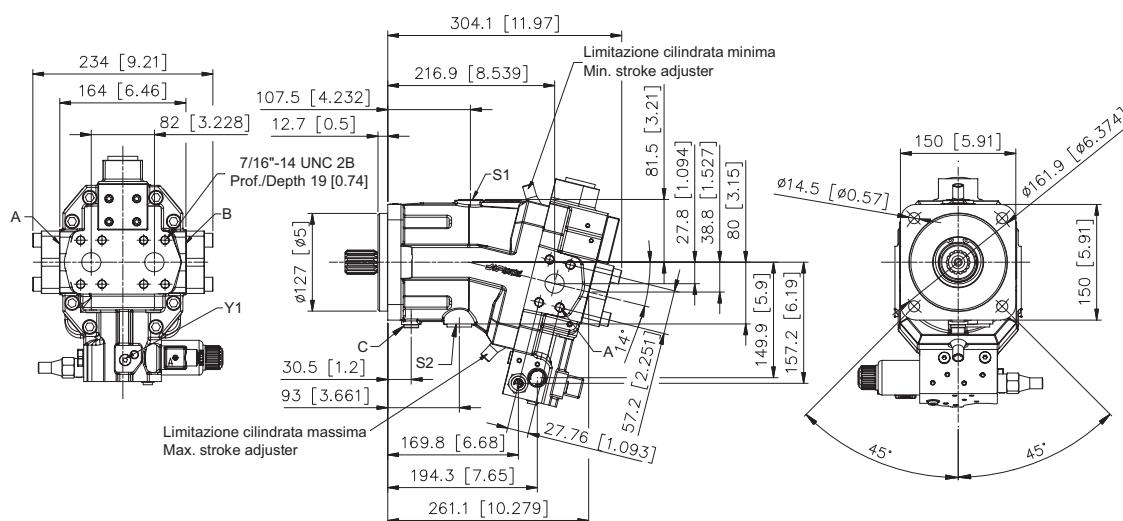


**Motore SH7V 075 - Flangia ISO 4 Fori (OD)**  
**SH7V 075 Motor - Mounting flange ISO 4 Bolts (OD)**



- A-B: Utenze / Service line ports - 1" SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 1/4 G (BSPP)  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 1/2 G (BSPP)  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 1/8 G (BSPP)

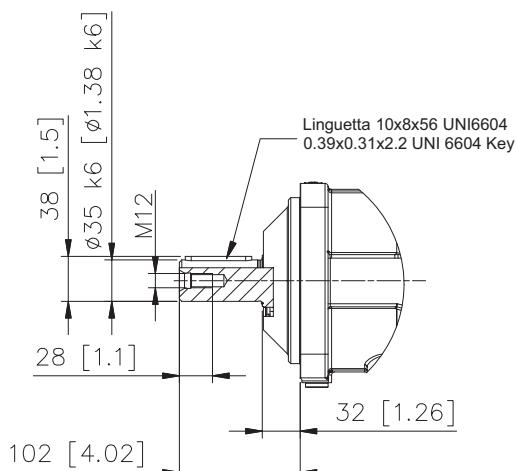
**Motore SH7V 075 - Flangia SAE-C 4 Fori (05)**  
**SH7V 075 Motor - Mounting flange SAE-C 4 Bolts (05)**



- A-B: Utenze / Service line ports - 1" SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 7/16"-20 UNF  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 1"1/16-12 UN 2B  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 7/16"-20 UNF-2B

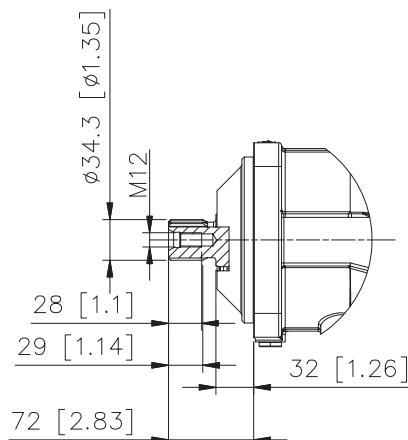
**CAY**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 35\text{ mm}$  [1.377 in]



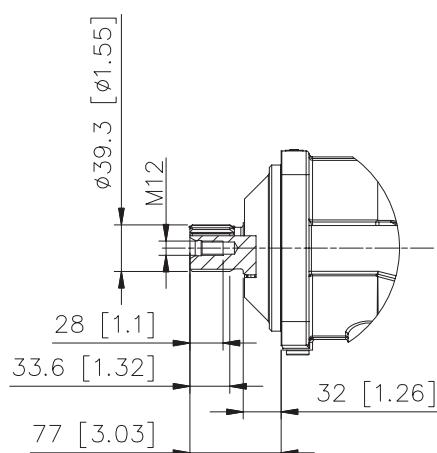
**SAM**

SCANALATO / SPLINED  
 $W35 \times 2 \times 30 \times 16$  - DIN 5480



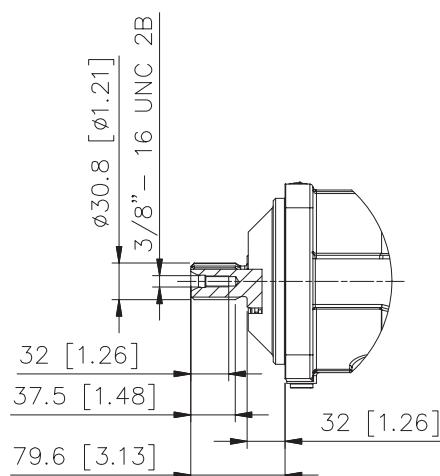
**SAO**

SCANALATO / SPLINED  
 $W40 \times 2 \times 30 \times 18$  - DIN 5480



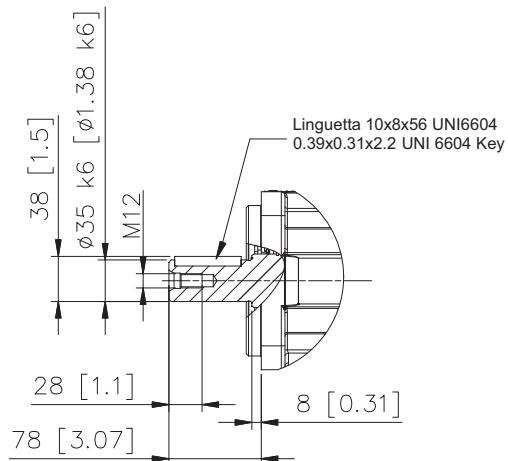
**S12**

SCANALATO / SPLINED  
14T 12/24 DP



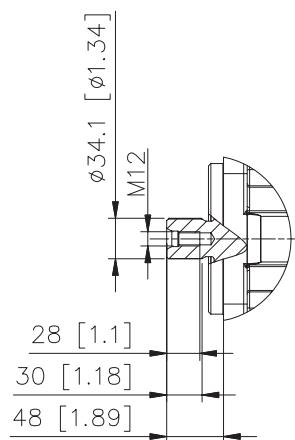
**CAY**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 35\text{ mm}$  [1.377 in]



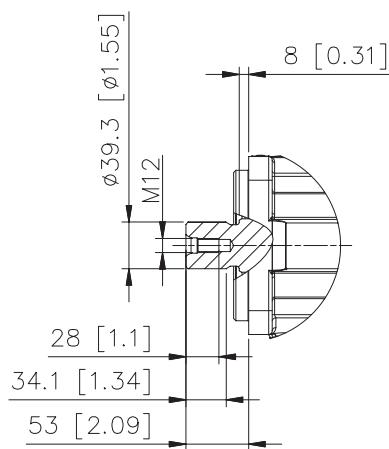
**SAM**

SCANALATO / SPLINED  
 $W35 \times 2 \times 30 \times 16$  - DIN 5480



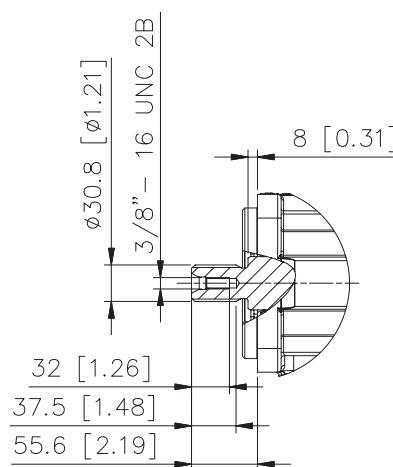
**SAO**

SCANALATO / SPLINED  
 $W40 \times 2 \times 30 \times 18$  - DIN 5480

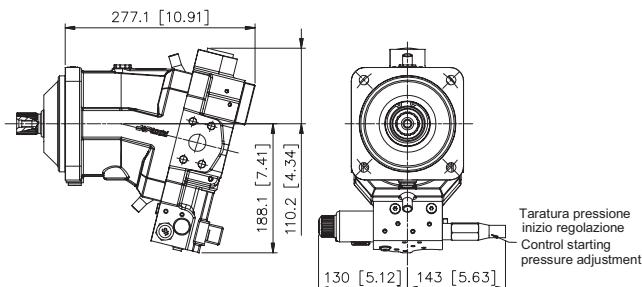


**S12**

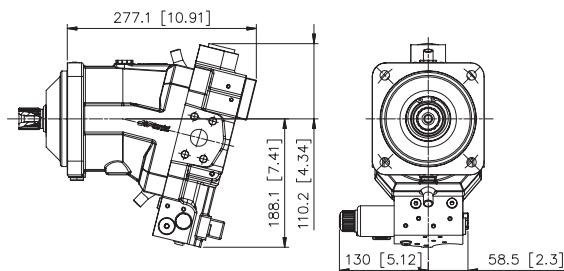
SCANALATO / SPLINED  
 $14T\ 12/24\ DP$



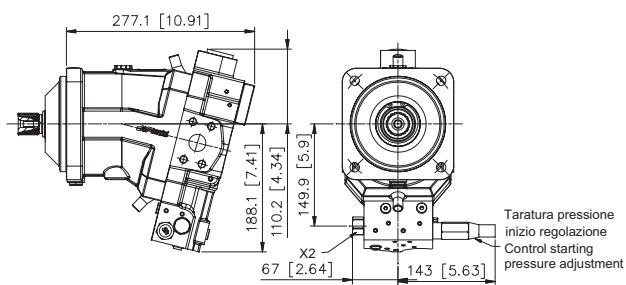
**Regolatore 2EE**  
**2EE Control**



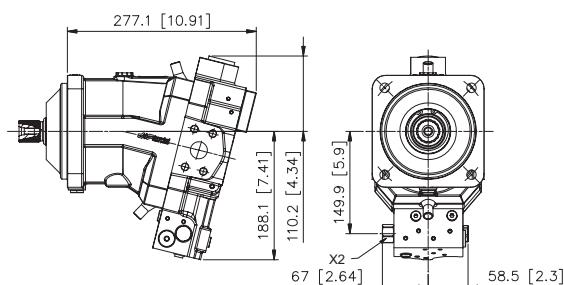
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IE**  
**2IE Control**



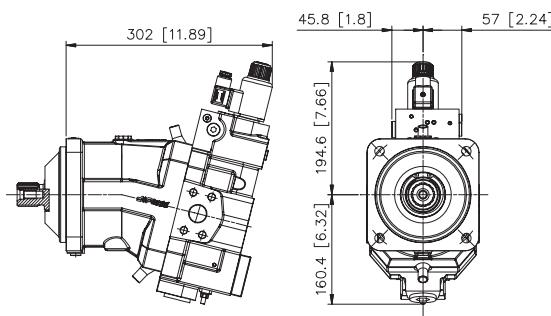
**Regolatore 2IN**  
**2IN Control**



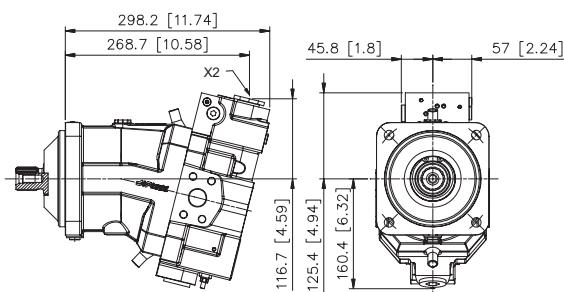
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore REN**  
**REN Control**

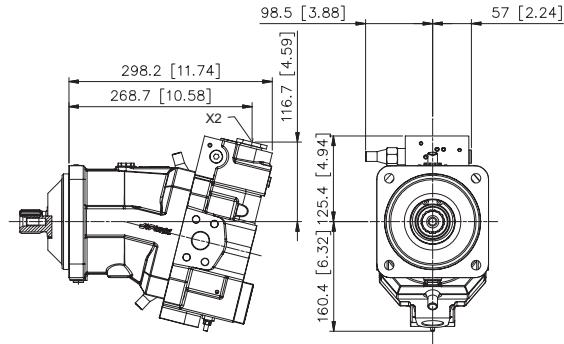


**Regolatore RIN**  
**RIN Control**



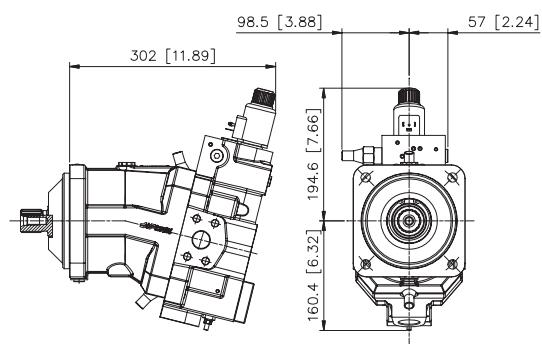
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RIE**  
RIE Control

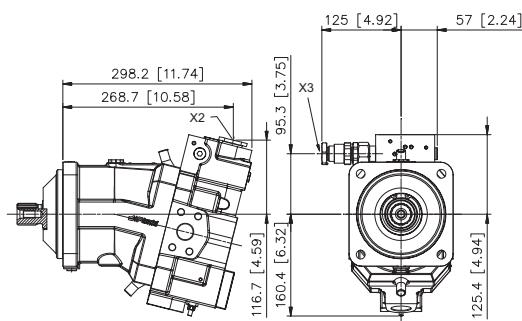


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore REE**  
REE Control

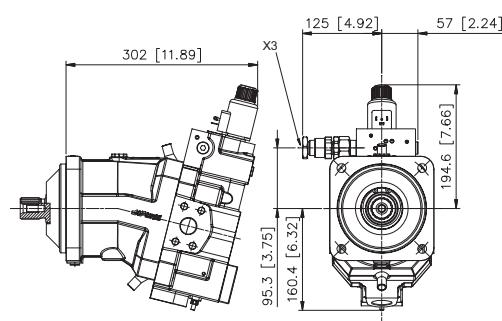


**Regolatore RID**  
RID Control



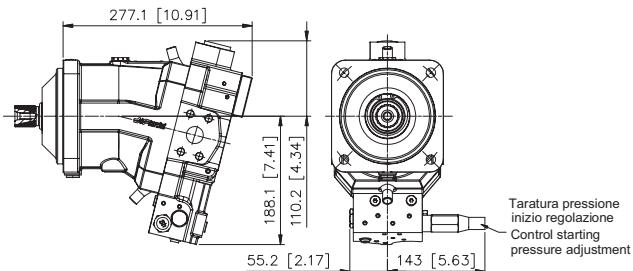
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

**Regolatore RED**  
RED Control

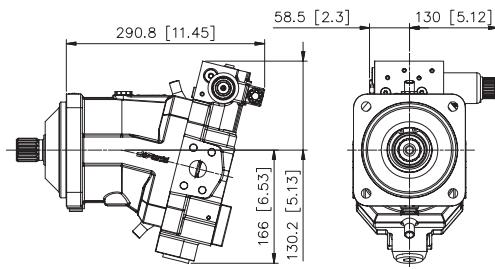


X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

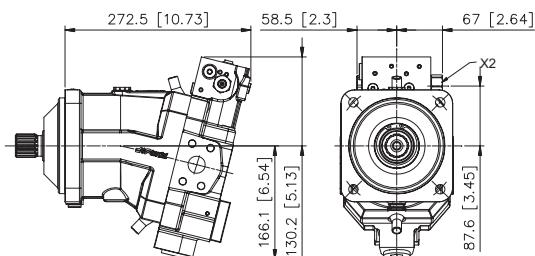
**Regolatore RPE**  
**RPE Control**



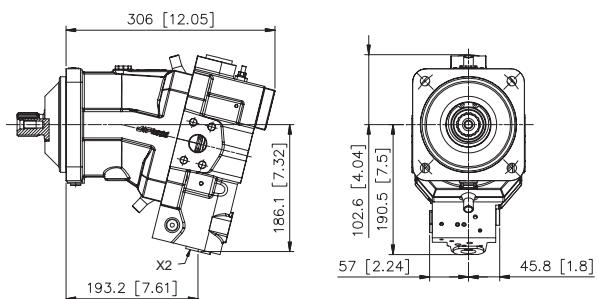
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IN**  
**2IN Control**



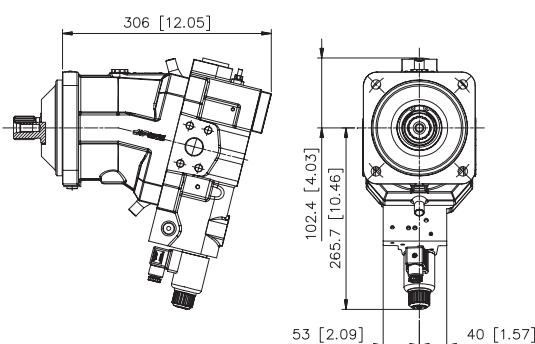
**Regolatore RIN**  
**RIN Control**



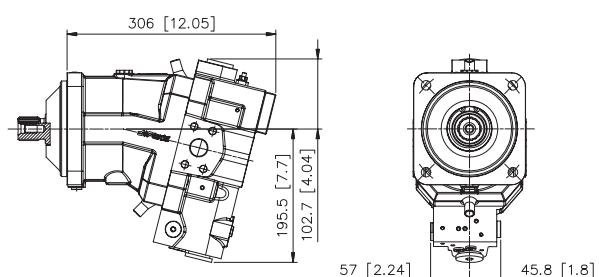
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

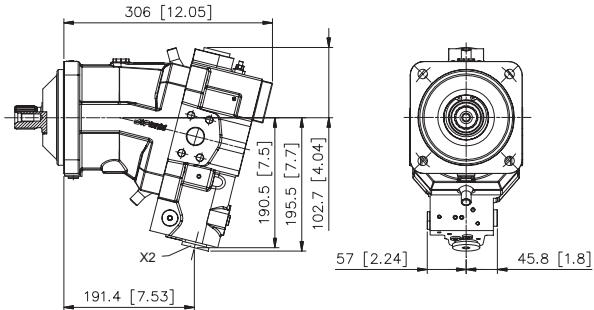
**Regolatore REN**  
**REN Control**



**Regolatore ROE**  
**ROE Control**

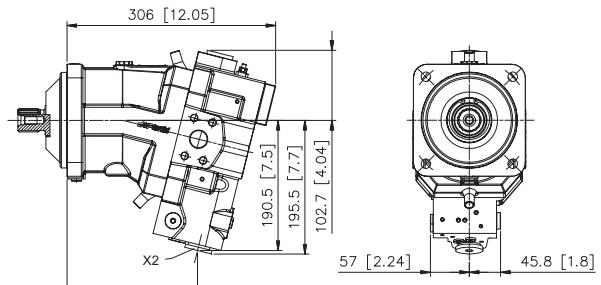


**Regolatore ROI**  
ROI Control



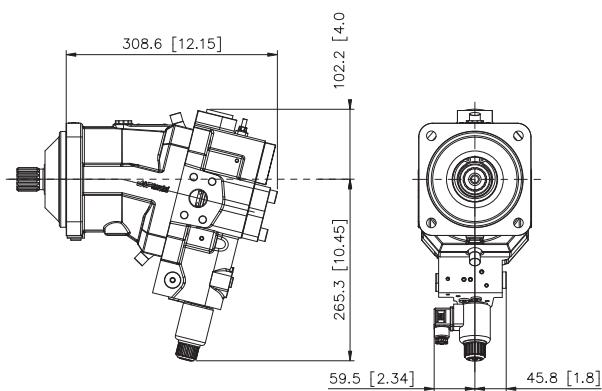
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RPI**  
RPI Control

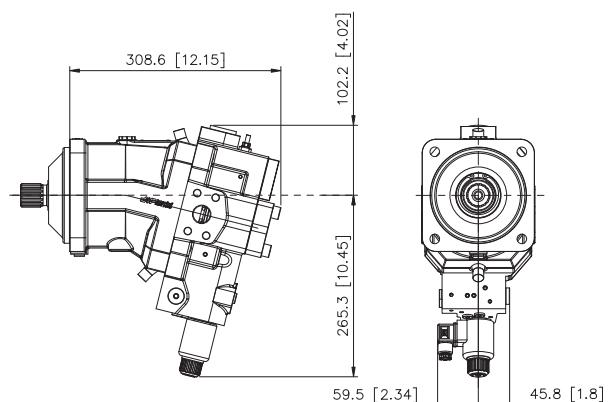


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

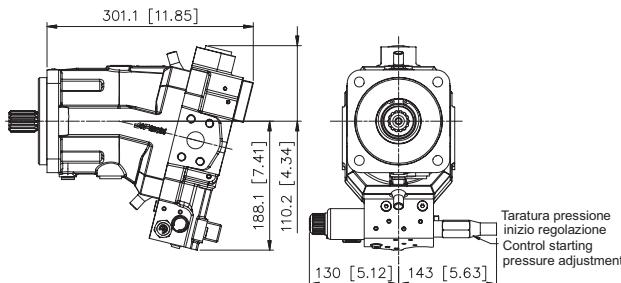
**Regolatore ROS**  
ROS Control



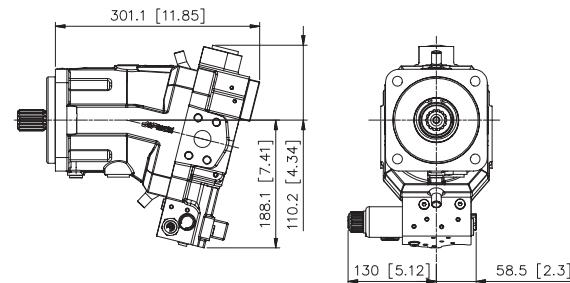
**Regolatore RPS**  
RPS Control



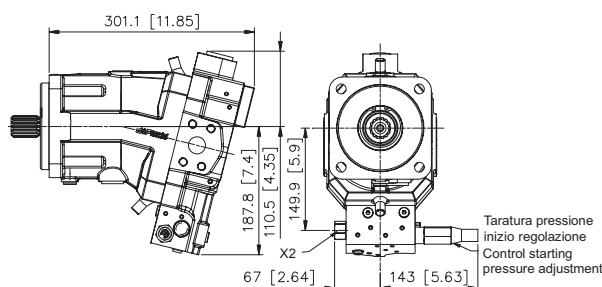
**Regolatore 2EE**  
**2EE Control**



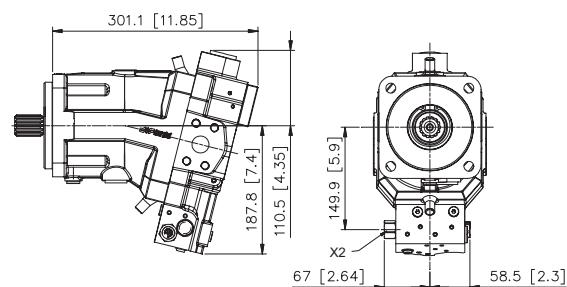
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IE**  
**2IE Control**



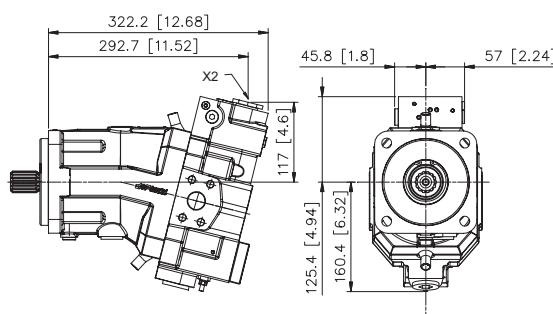
**Regolatore 2IN**  
**2IN Control**



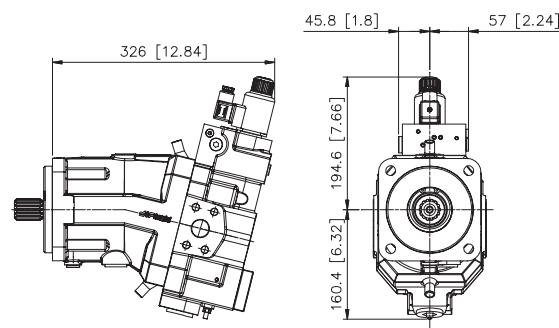
X2: Attacco pilotaggio - 7/16"-20 UNF  
 X2: Piloting port - 7/16"-20 UNF

X2: Attacco pilotaggio - 7/16"-20 UNF  
 X2: Piloting port - 7/16"-20 UNF

**Regolatore RIN**  
**RIN Control**

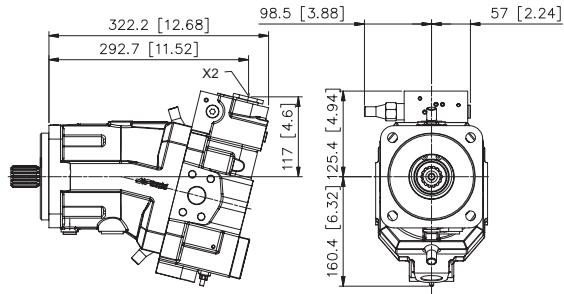


**Regolatore REN**  
**REN Control**



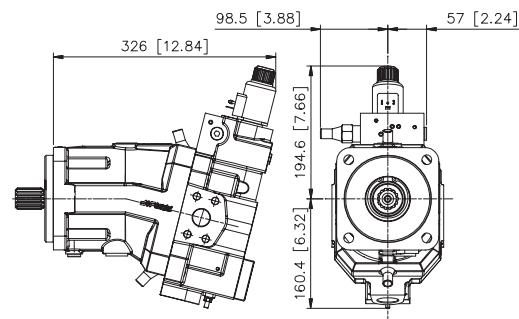
X2: Attacco pilotaggio - 7/16"-20 UNF  
 X2: Piloting port - 7/16"-20 UNF

**Regolatore RIE**  
RIE Control



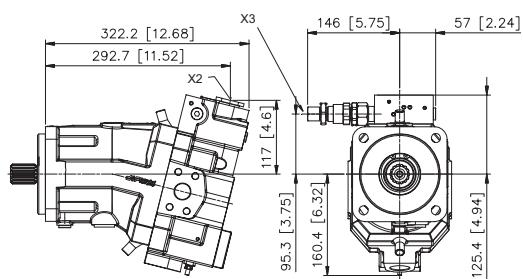
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore REE**  
REE Control



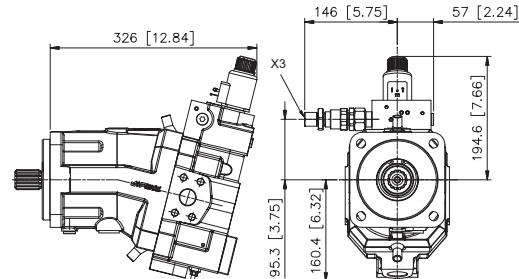
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore RID**  
RID Control



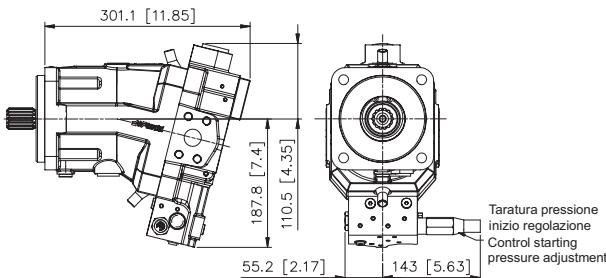
X2: Attacco pilotaggio - 7/16"-20 UNF  
X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

**Regolatore RED**  
RED Control

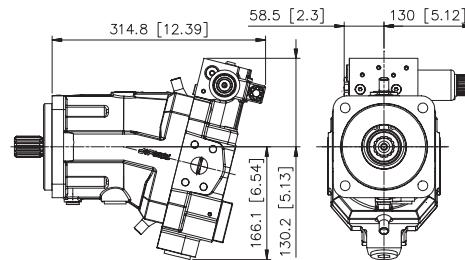


X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

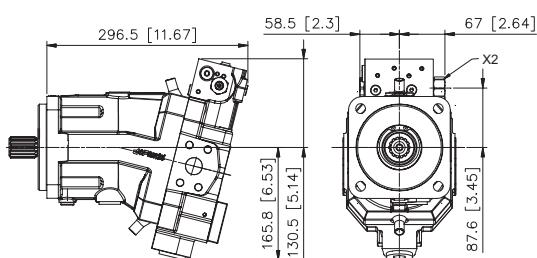
**Regolatore RPE**  
**RPE Control**



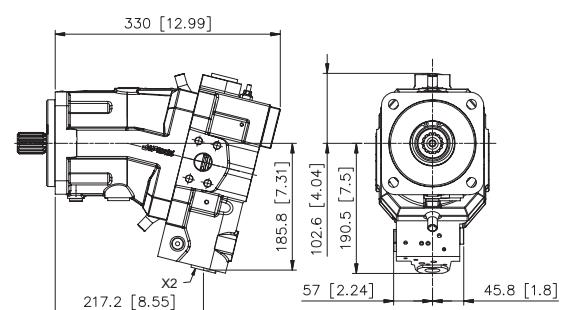
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IN**  
**2IN Control**

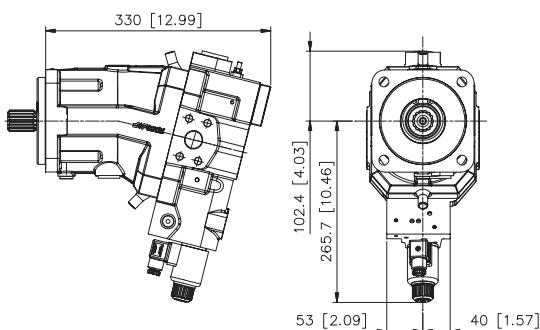


**Regolatore RIN**  
**RIN Control**

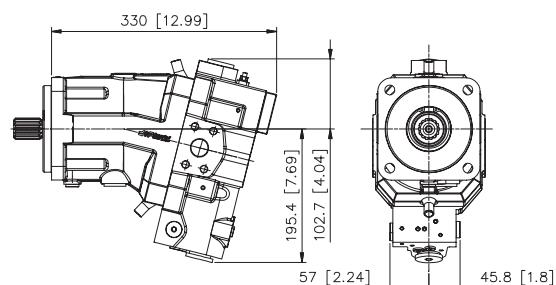


X2: Attacco pilotaggio - 7/16"-20 UNF  
 X2: Piloting port - 7/16"-20 UNF

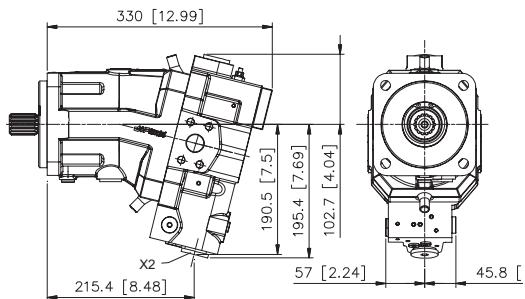
**Regolatore REN**  
**REN Control**



**Regolatore ROE**  
**ROE Control**

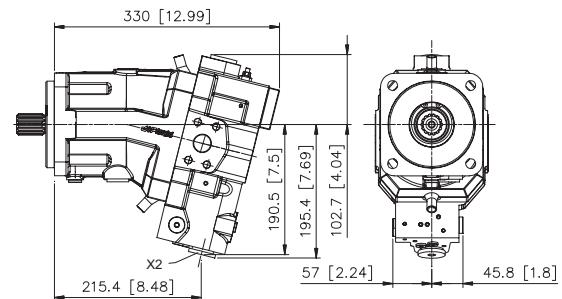


**Regolatore ROI**  
ROI Control



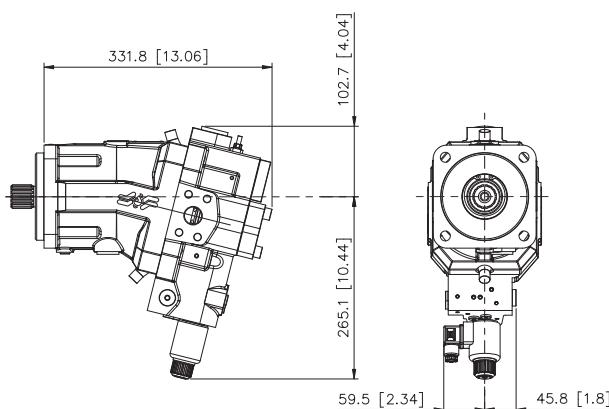
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore RPI**  
RPI Control

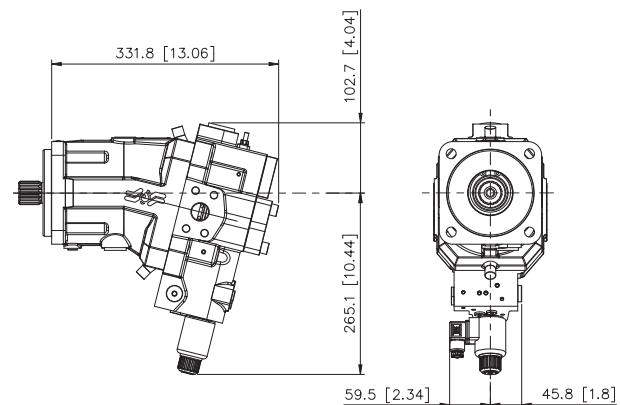


X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

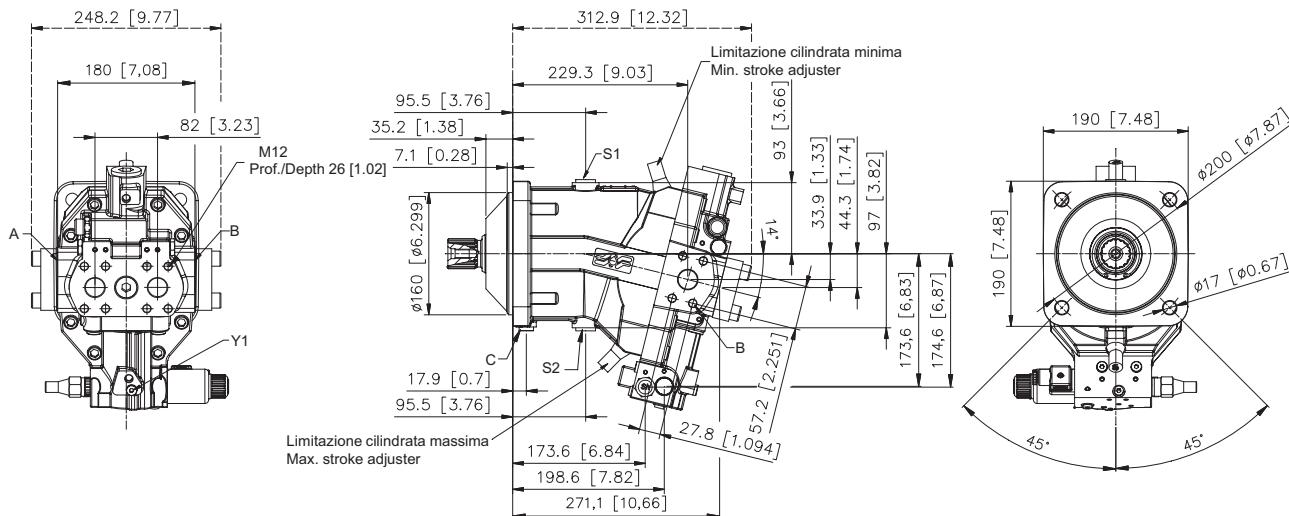
**Regolatore ROS**  
ROS Control



**Regolatore RPS**  
RPS Control

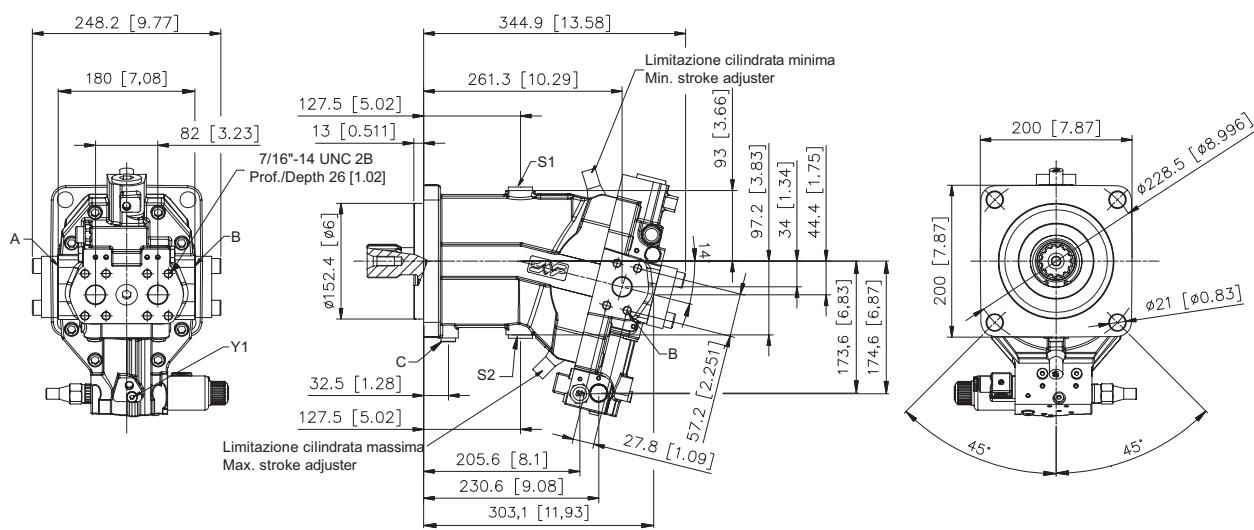


**Motore SH7V 108 - Flangia ISO 4 Fori (OE)**  
**SH7V 108 Motor - Mounting flange ISO 4 Bolts (OE)**



- A-B: Utenze / Service line ports - 1" SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 1/4 G (BSPP)  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 1/2 G (BSPP)  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 1/8 G (BSPP)

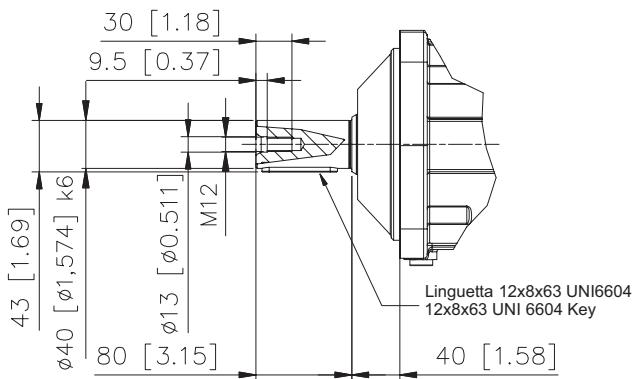
**Motore SH7V 108 - Flangia SAE-C 4 Fori (08)**  
**SH7V 075 Motor - Mounting flange SAE-C 4 Bolts (08)**



- A-B: Utenze / Service line ports - 1" SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 7/16"-20 UNF  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 1"1/16-12 UN 2B  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 7/16"-20 UNF-2B

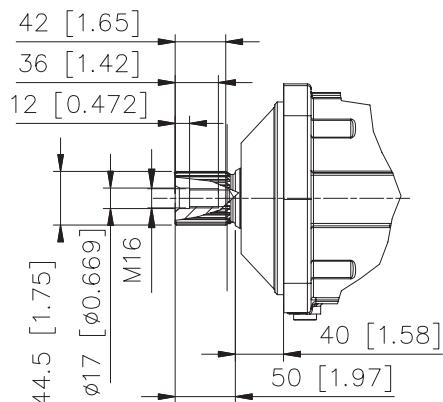
**CAK**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 40\text{ mm}$  [1.56 in]



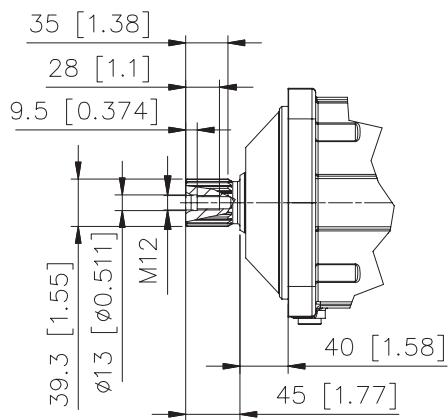
**SAP**

SCANALATO / SPLINED  
 $W45x2x30x21$  - DIN 5480



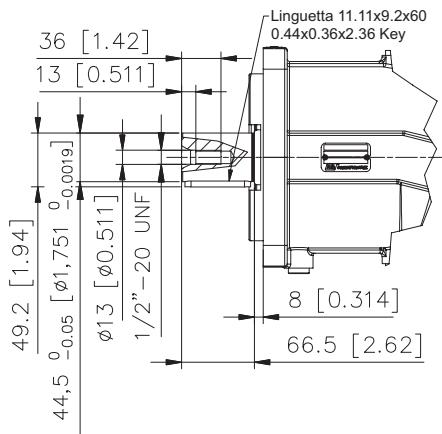
**SA0**

SCANALATO / SPLINED  
 $W40x2x30x18$  - DIN 5480



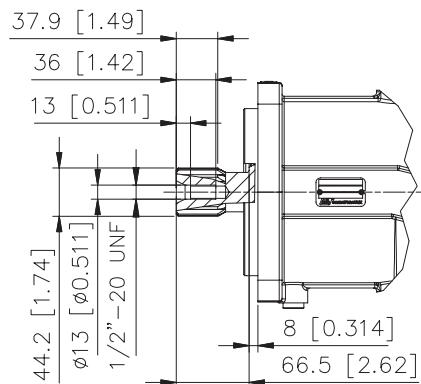
**C18**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 44.45\text{ mm}$  [1.75 in]



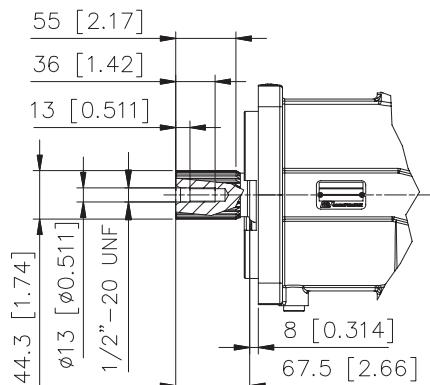
**S15**

SCANALATO / SPLINED  
 $13T\ 8/16\ DP$

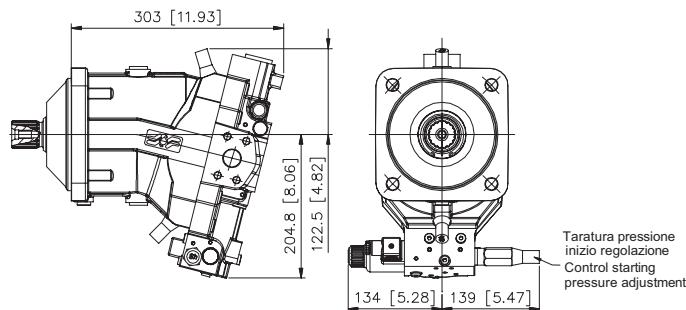


**S20**

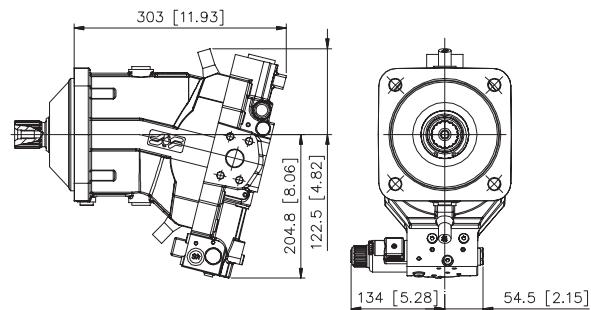
SCANALATO / SPLINED  
 $27T\ 16/32\ DPD$



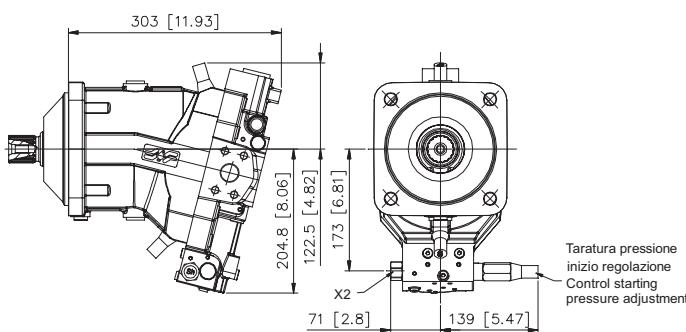
**Regolatore 2EE  
2EE Control**



**Regolatore 2EN  
2EN Control**

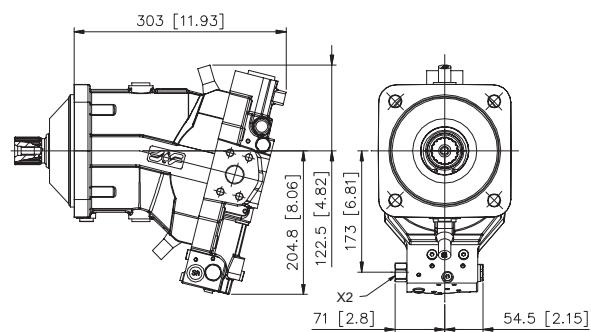


**Regolatore 2IE  
2IE Control**



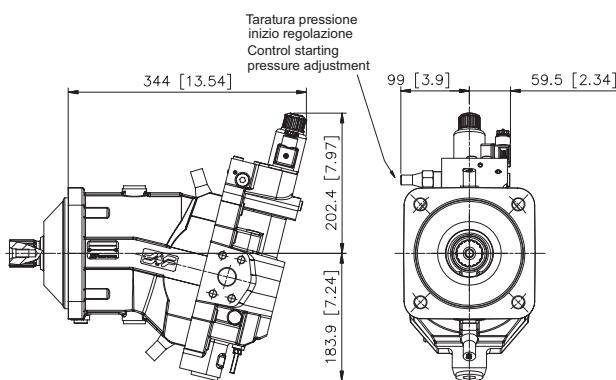
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore 2IN  
2IN Control**

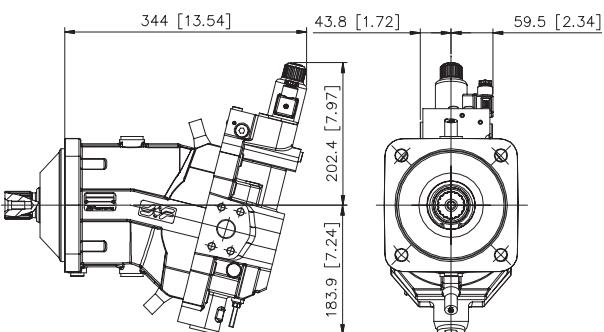


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

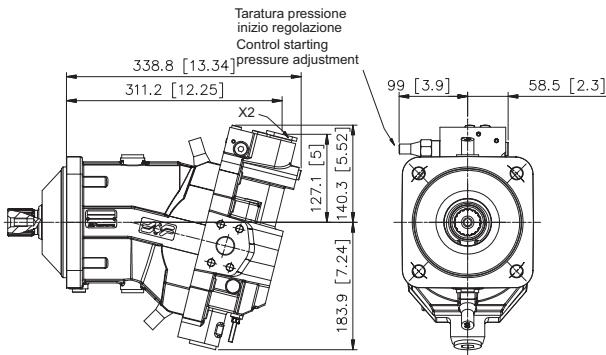
**Regolatore REE  
REE Control**



**Regolatore REN  
REN Control**

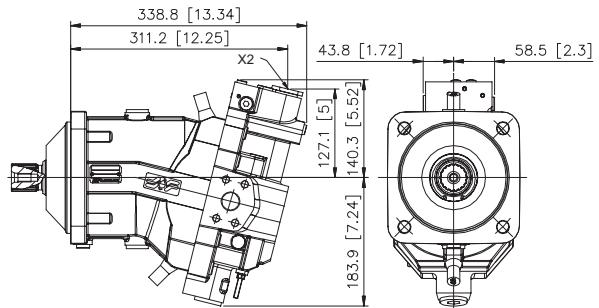


**Regolatore RIE**  
**RIE Control**



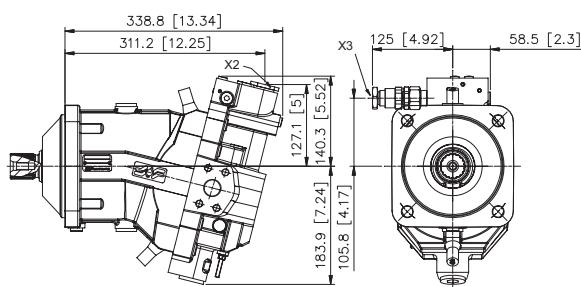
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RIN**  
**RIN Control**



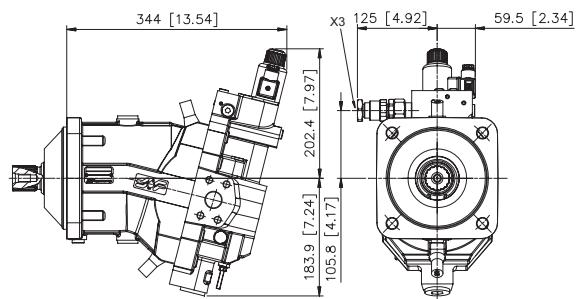
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RID**  
**RID Control**



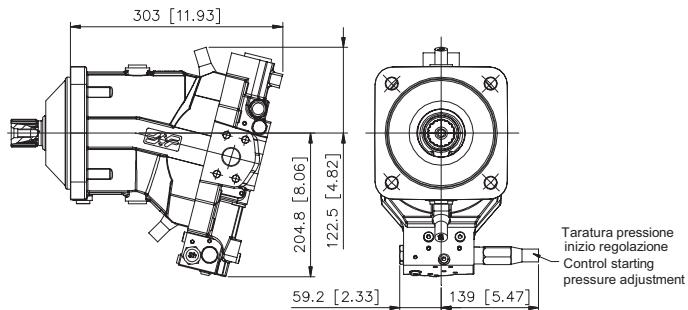
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

**Regolatore RED**  
**RED Control**

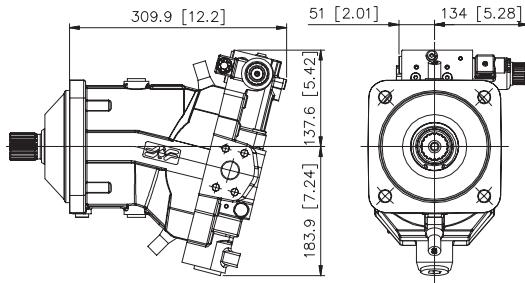


X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

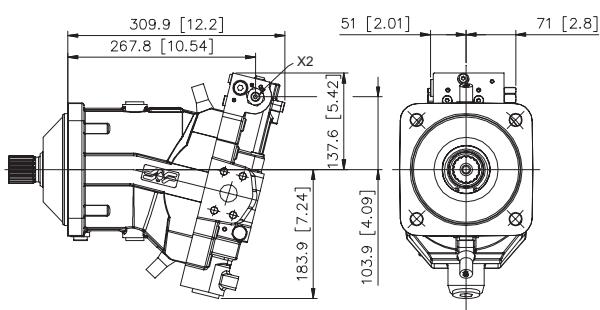
**Regolatore RPE  
RPE Control**



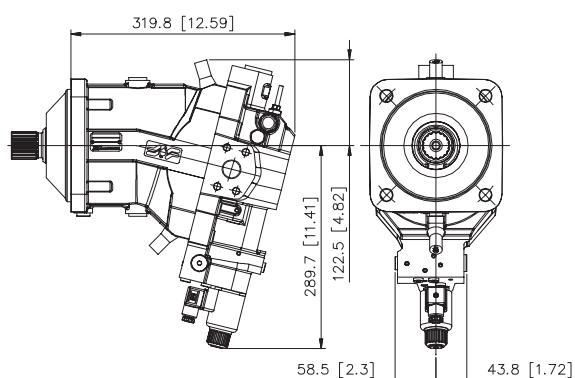
**Regolatore 2EN  
2EN Control**



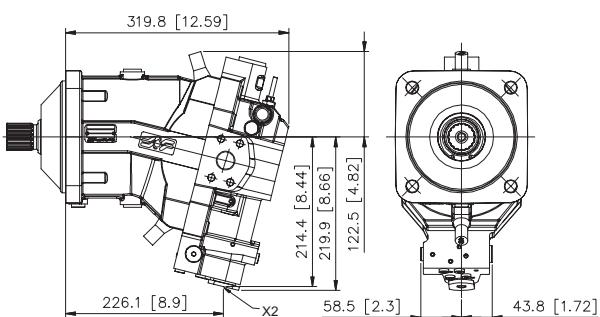
**Regolatore 2IN  
2IN Control**



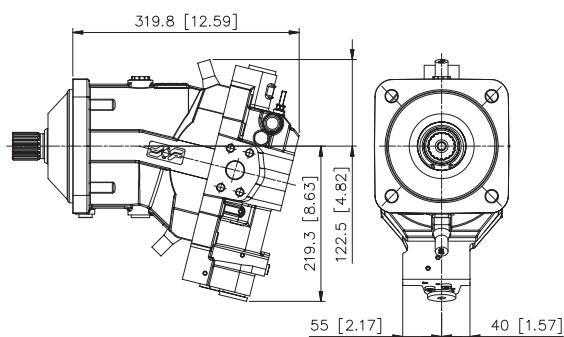
**Regolatore REN  
REN Control**



**Regolatore RIN  
RIN Control**



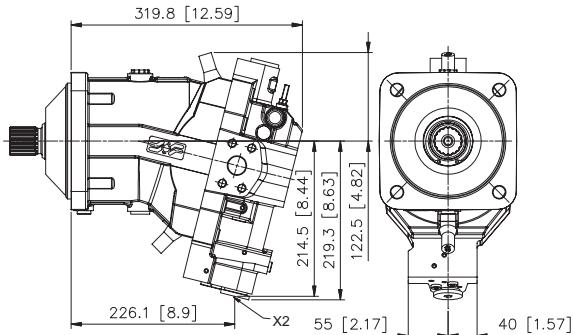
**Regolatore ROE  
ROE Control**



X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

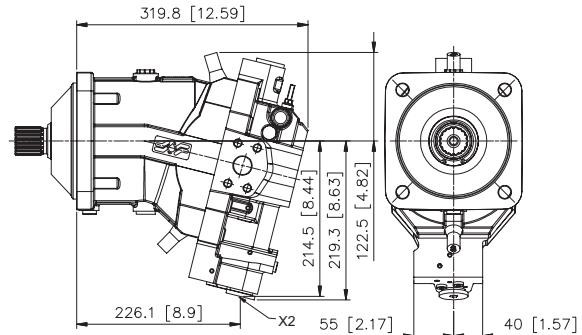
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore ROI**  
ROI Control



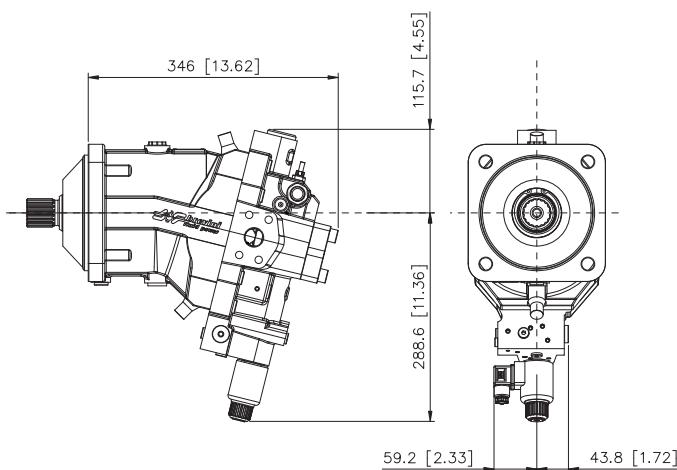
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RPI**  
RPI Control

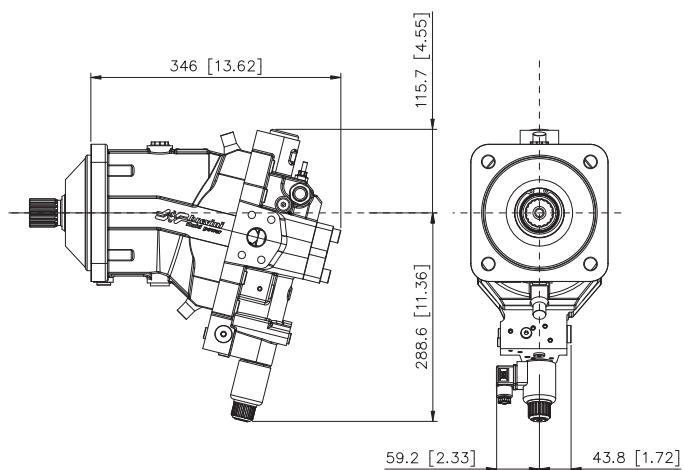


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

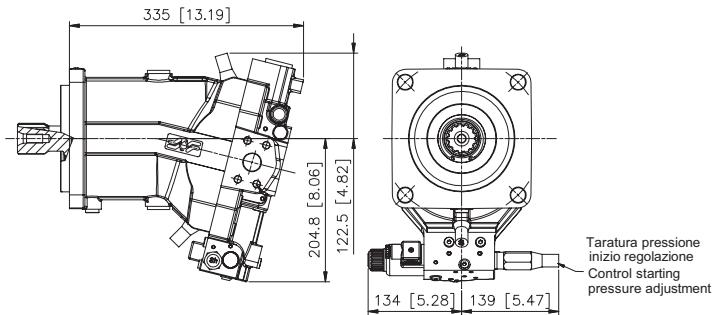
**Regolatore ROS**  
ROS Control



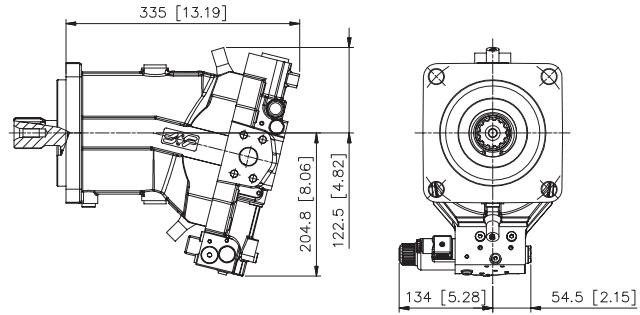
**Regolatore RPS**  
RPS Control



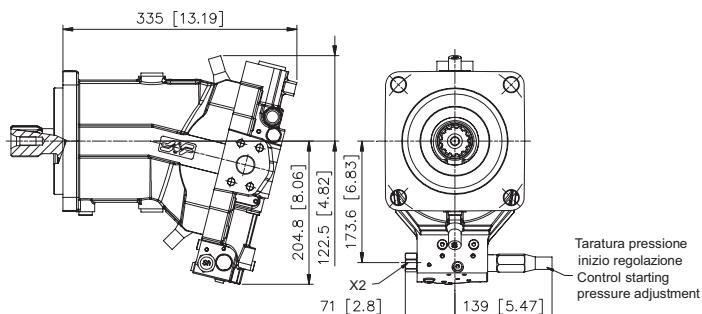
**Regolatore 2EE  
2EE Control**



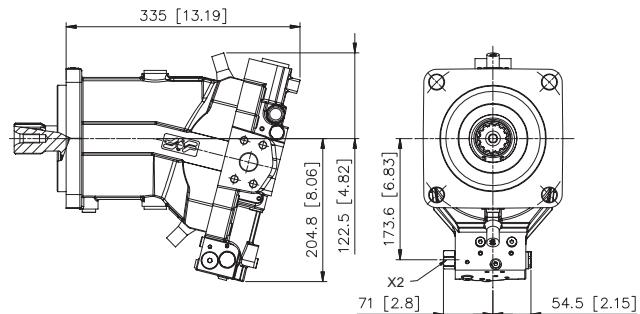
**Regolatore 2EN  
2EN Control**



**Regolatore 2IE  
2IE Control**



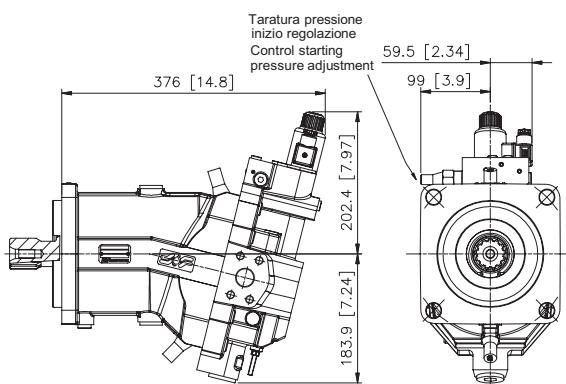
**Regolatore 2IN  
2IN Control**



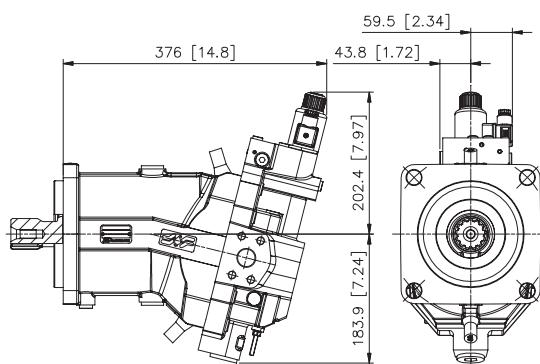
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

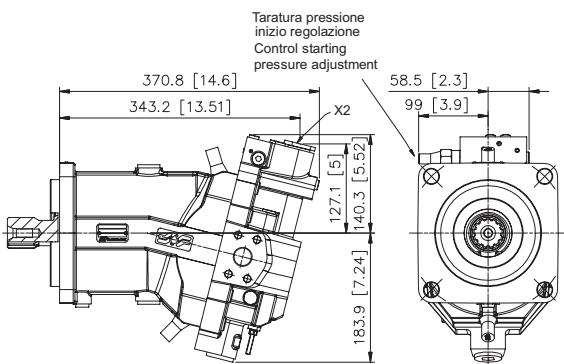
**Regolatore REE  
REE Control**



**Regolatore REN  
REN Control**

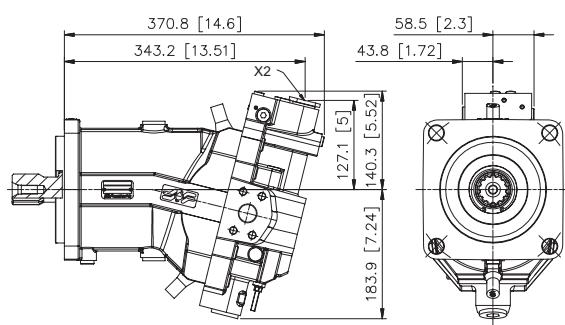


**Regolatore RIE**  
RIE Control



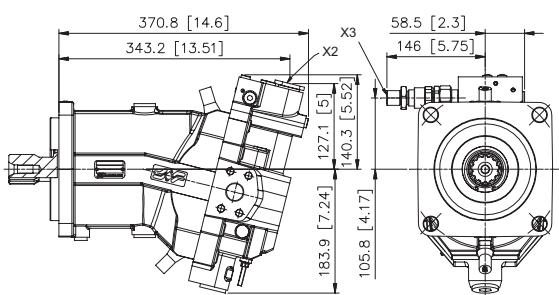
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore RIN**  
RIN Control



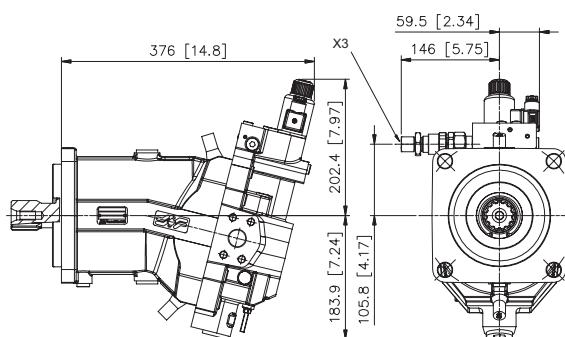
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore RID**  
RID Control



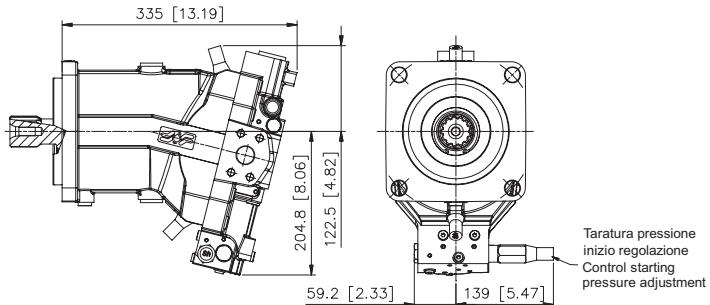
X2: Attacco pilotaggio - 7/16"-20 UNF  
X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

**Regolatore RED**  
RED Control

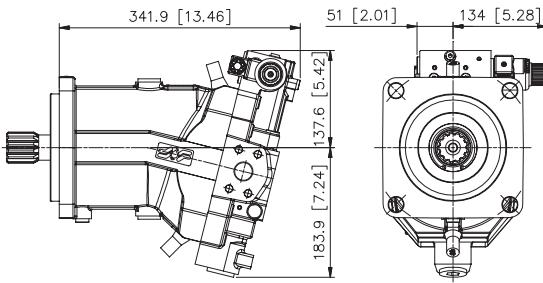


X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

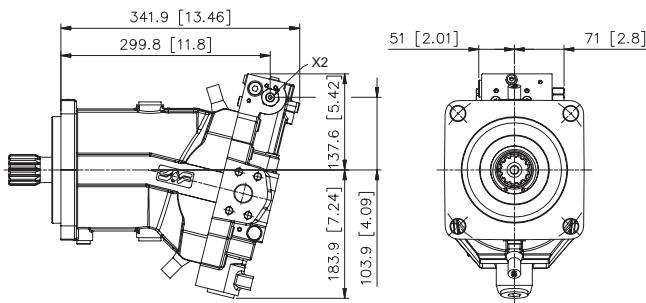
**Regolatore RPE  
RPE Control**



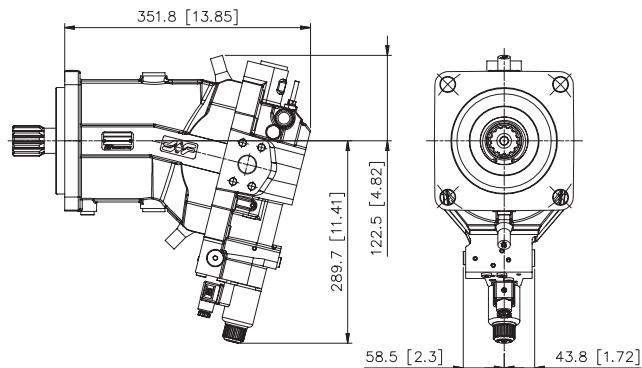
**Regolatore 2EN  
2EN Control**



**Regolatore 2IN  
2IN Control**

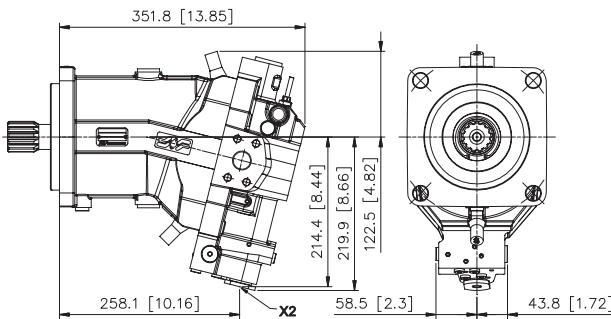


**Regolatore REN  
REN Control**

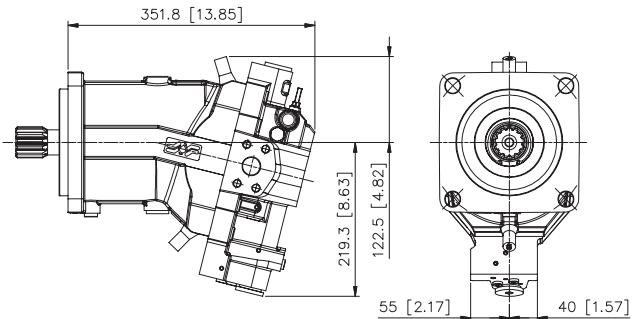


X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore RIN  
RIN Control**

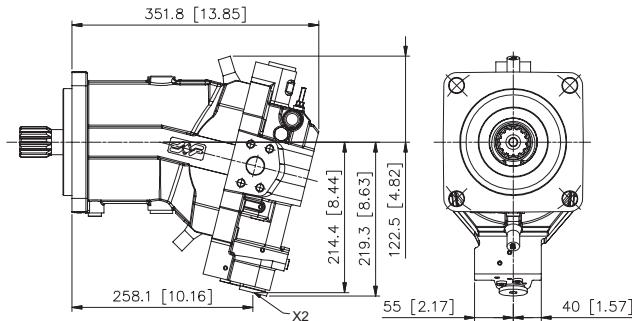


**Regolatore ROE  
ROE Control**



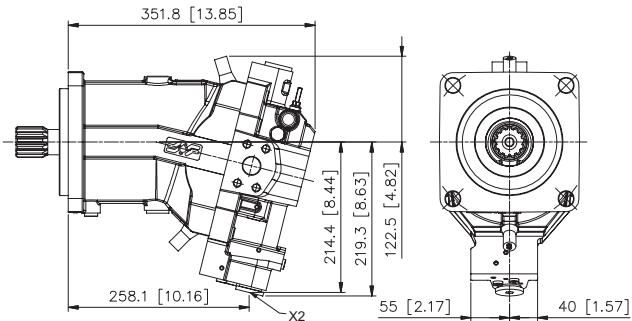
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore ROI**  
ROI Control



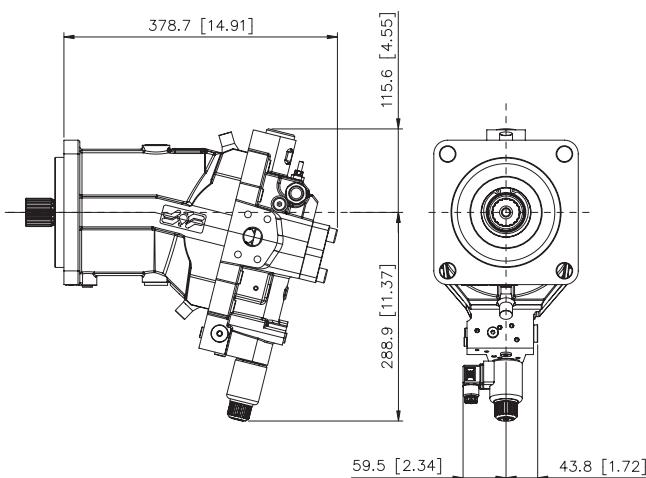
X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

**Regolatore RPI**  
RPI Control

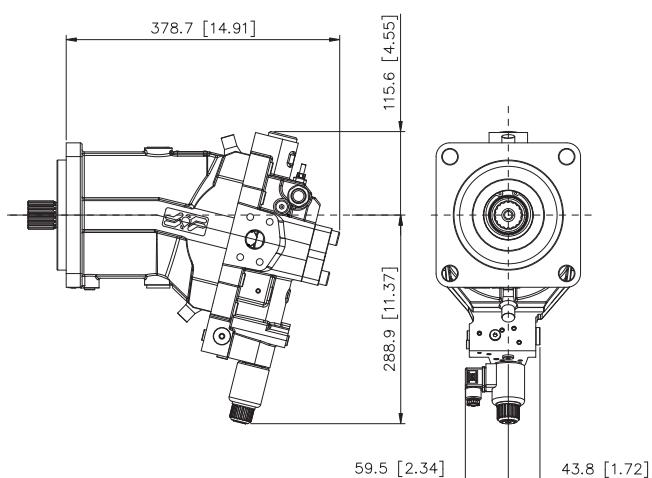


X2: Attacco pilotaggio - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF

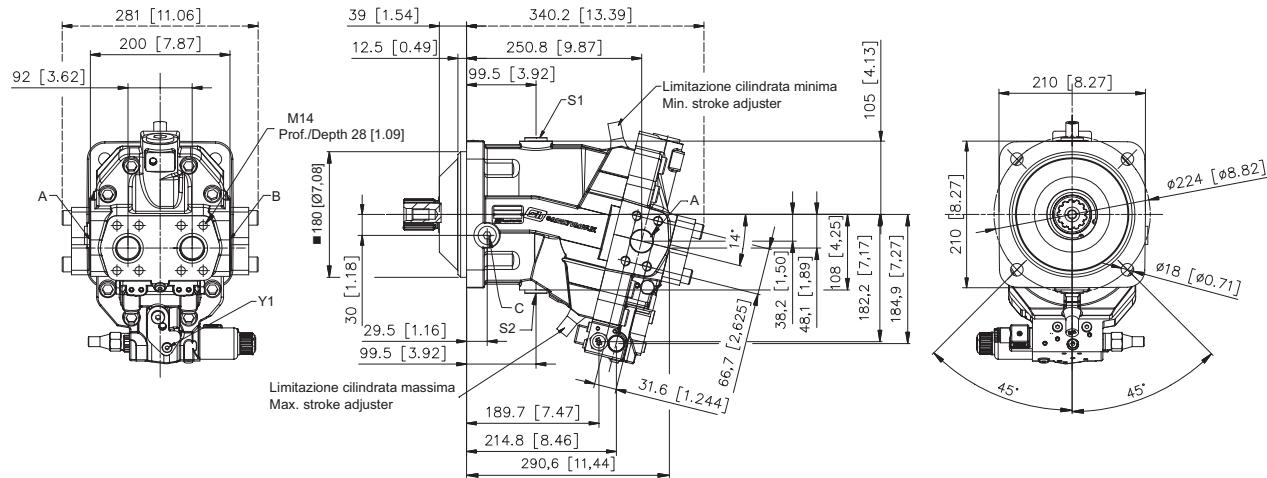
**Regolatore ROS**  
ROS Control



**Regolatore RPS**  
RPS Control

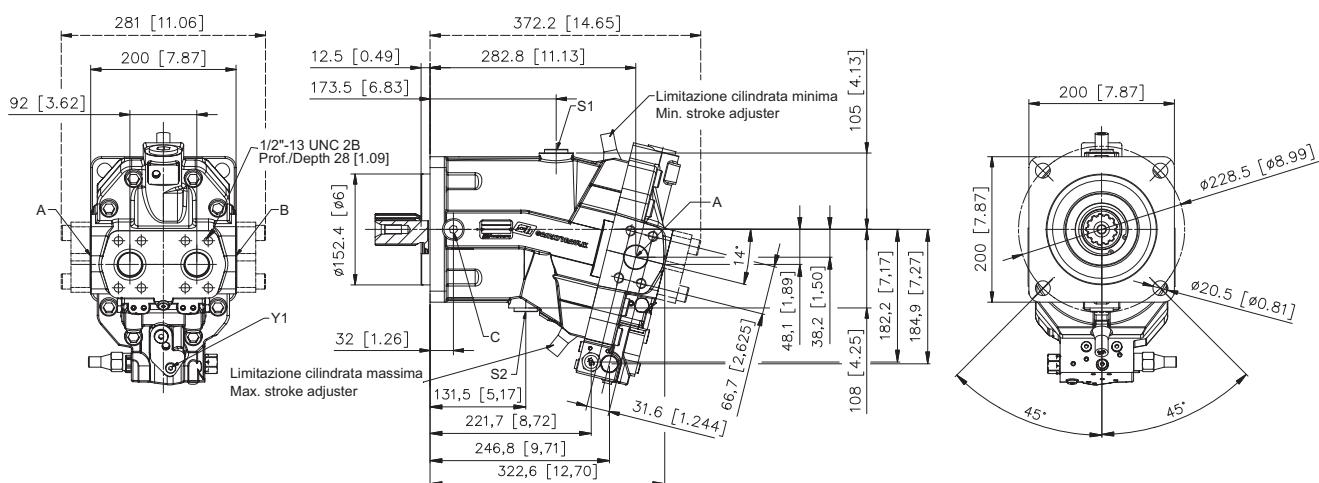


**Motore SH7V 160 - Flangia ISO 4 Fori (OF)**  
**SH7V 160 Motor - Mounting flange ISO 4 Bolts (OF)**



- A-B: Utenze / Service line ports - 1"1/4 SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 1/2 G (BSPP)  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 3/4 G (BSPP)  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 1/8 G (BSPP)

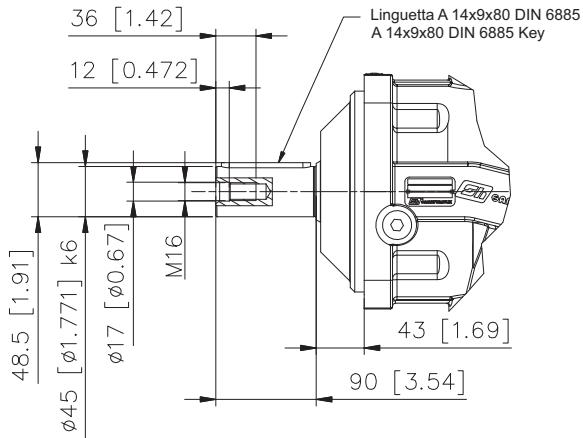
**Motore SH7V 160 - Flangia SAE-D 4 Fori (08)**  
**SH7V 160 Motor - Mounting flange SAE-D 4 Bolts (08)**



- A-B: Utenze / Service line ports - 1"1/4 SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 3/4"-16 UNF-2B  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 1"1/16-12 UN 2B  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 7/16"-20 UNF-2B

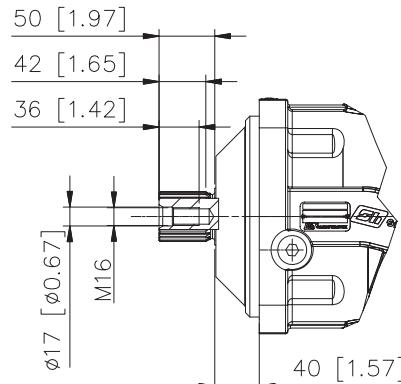
**CAJ**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 45$  mm [1.772 in]



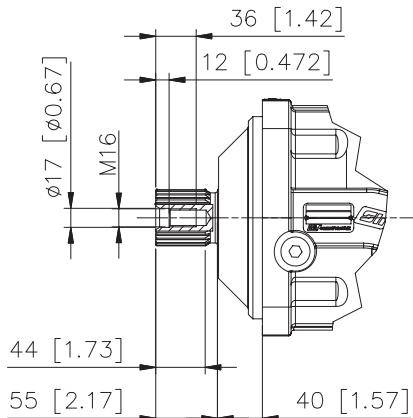
**SAP**

SCANALATO / SPLINED  
 $W45 \times 2 \times 30 \times 21$  - DIN 5480



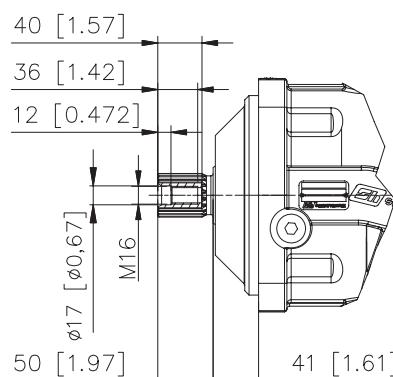
**SAR**

SCANALATO / SPLINED  
 $W50 \times 2 \times 30 \times 24$  - DIN 5480



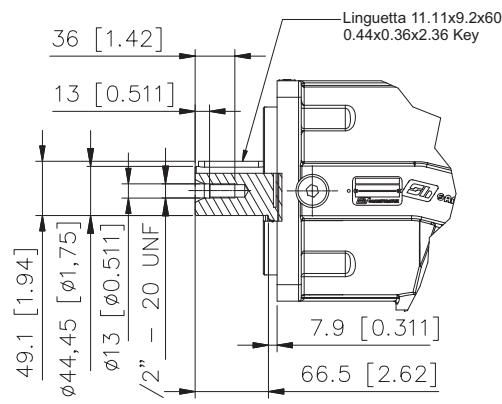
**SA0**

SCANALATO / SPLINED  
 $W40 \times 2 \times 30 \times 18$  - DIN 5480



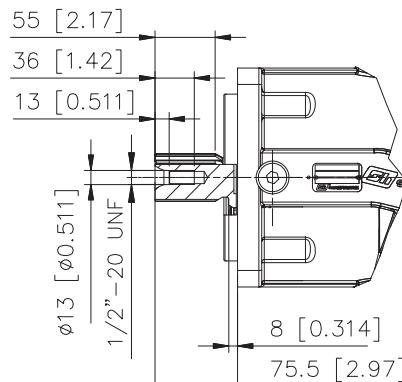
**C18**

CILINDRICO / PARALLEL KEYED  
 $\varnothing 44.45 \text{ mm}$  [1.75 in]



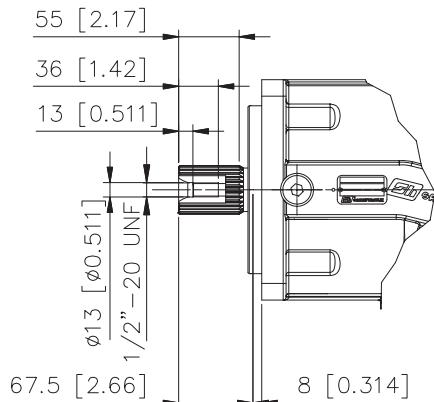
**S15**

SCANALATO / SPLINED  
 $13T 8/16 DP$



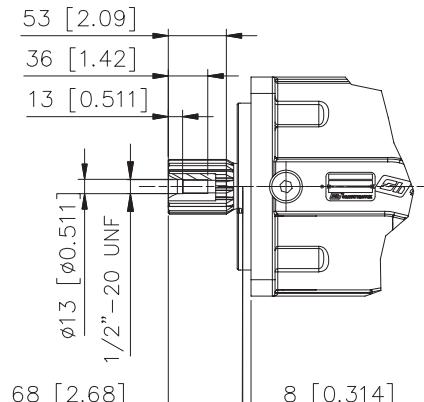
**S20**

SCANALATO / SPLINED  
 $27T 16/32 DPD$

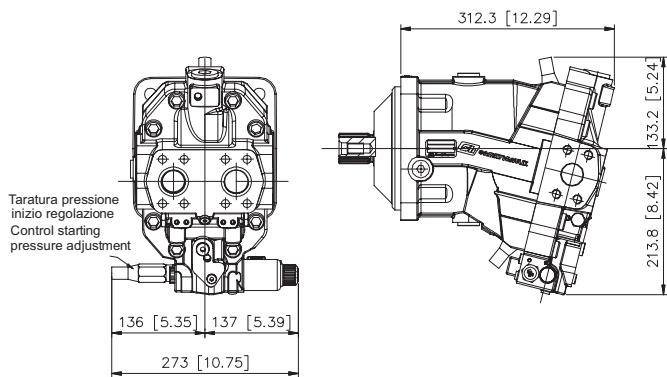


**S19**

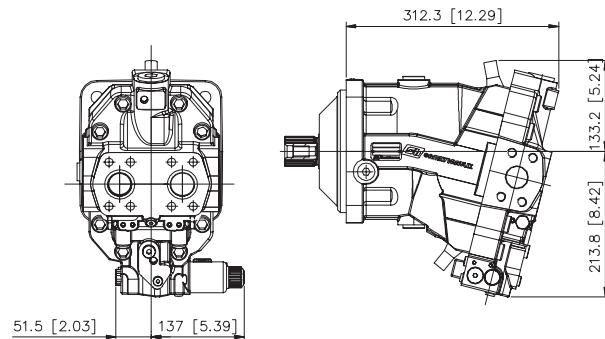
SCANALATO / SPLINED  
 $15T 8/16 DPD$



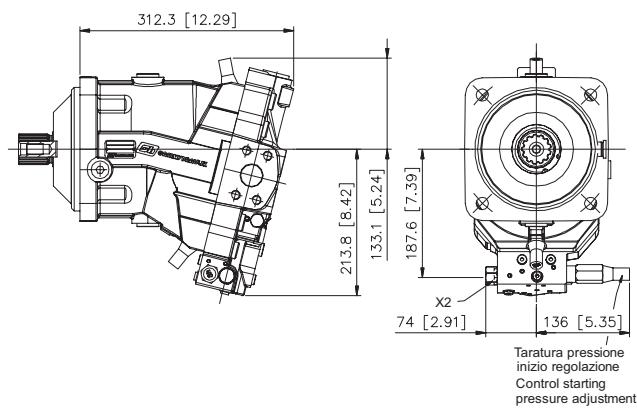
**Regolatore 2EE**  
**2EE Control**



**Regolatore 2EN**  
**2EN Control**

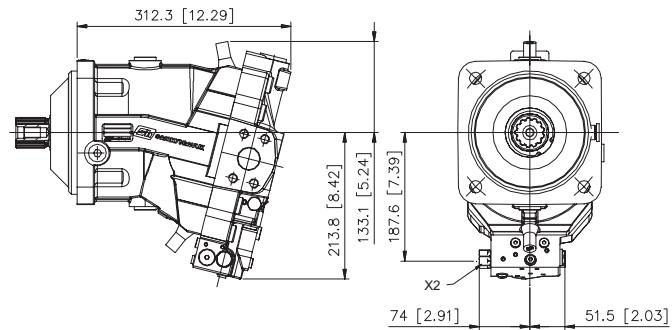


**Regolatore 2IE**  
**2IE Control**



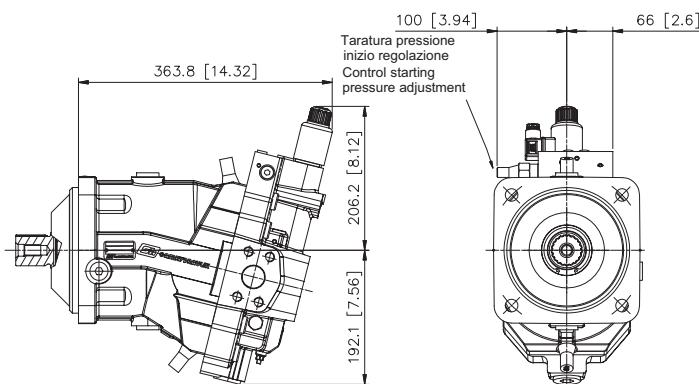
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore 2IN**  
**2IN Control**

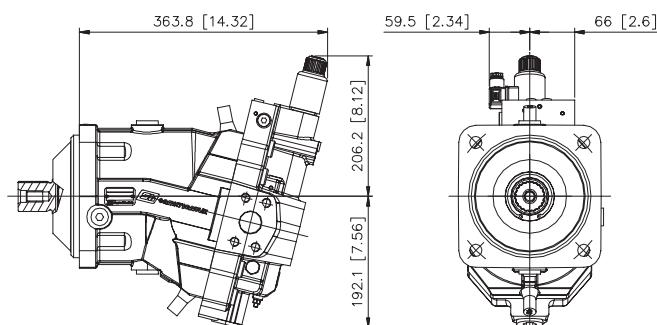


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

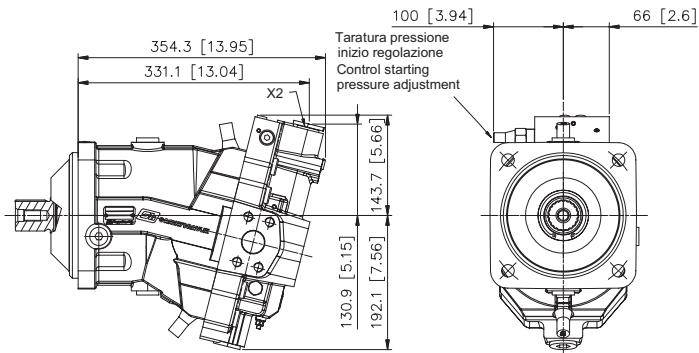
**Regolatore REE**  
**REE Control**



**Regolatore REN**  
**REN Control**

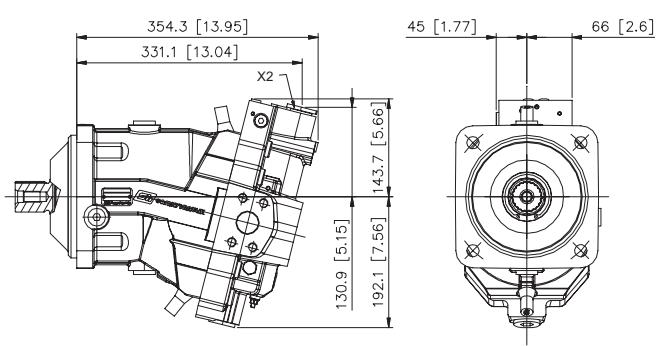


**Regolatore RIE**  
**RIE Control**



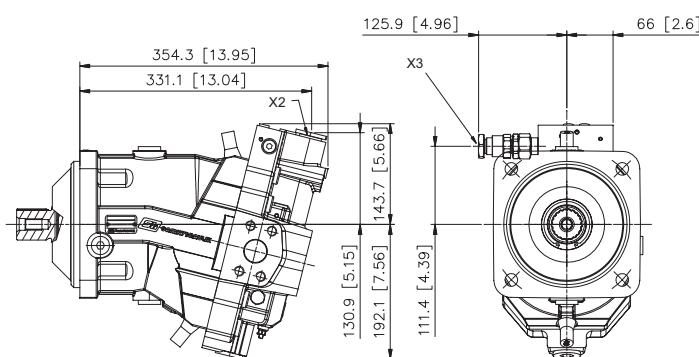
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RIN**  
**RIN Control**



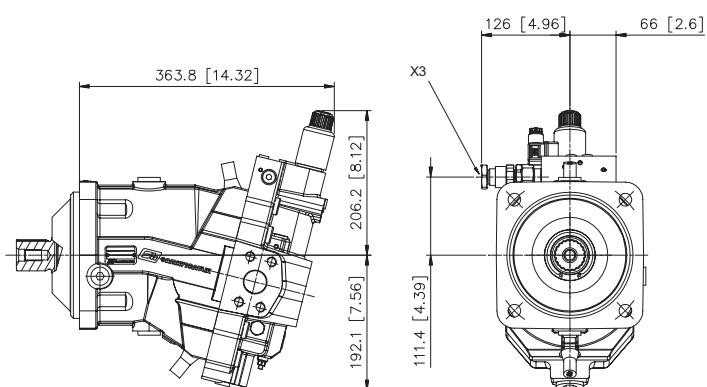
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RID**  
**RID Control**



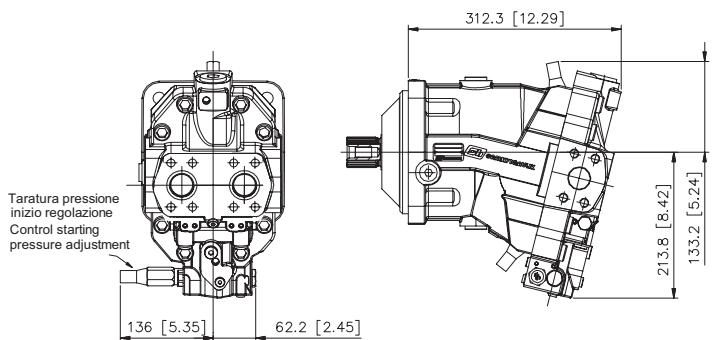
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

**Regolatore RED**  
**RED Control**

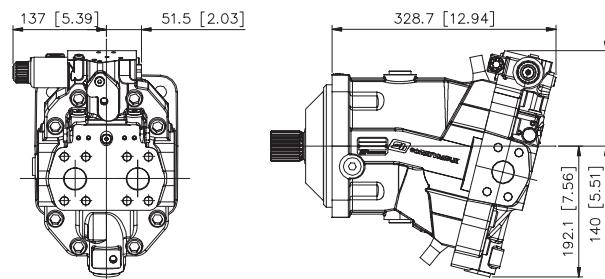


X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

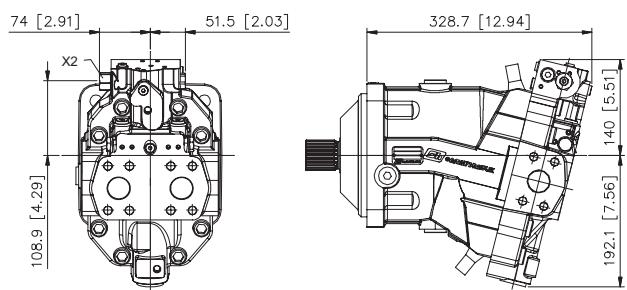
**Regolatore RPE**  
**RPE Control**



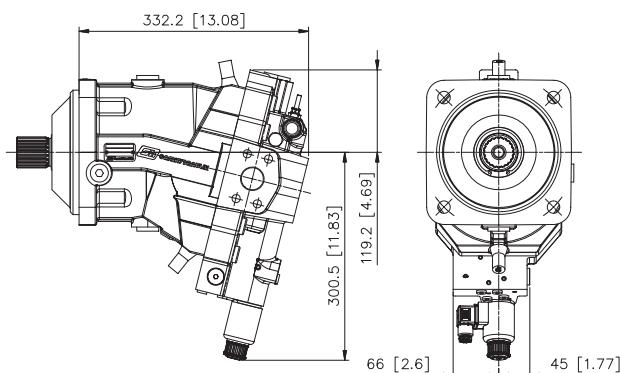
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IN**  
**2IN Control**

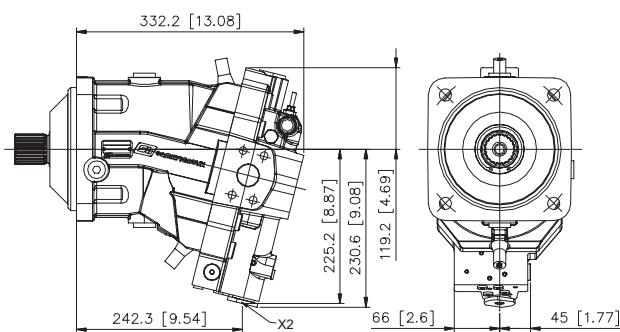


**Regolatore REN**  
**REN Control**

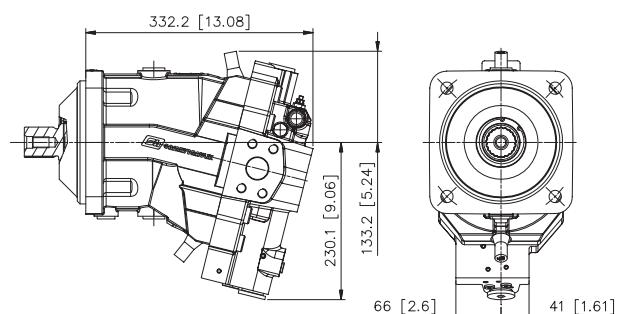


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RIN**  
**RIN Control**

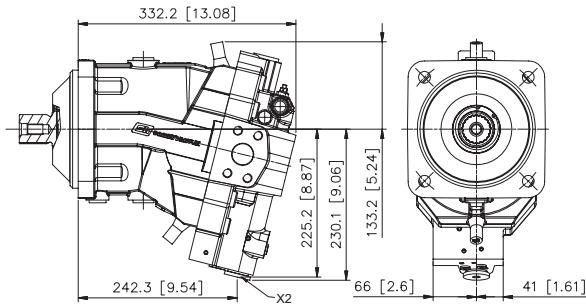


**Regolatore ROE**  
**ROE Control**



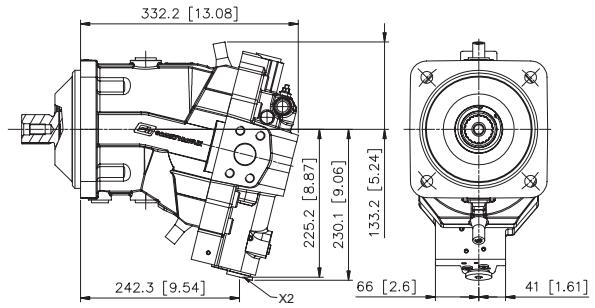
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore ROI**  
ROI Control



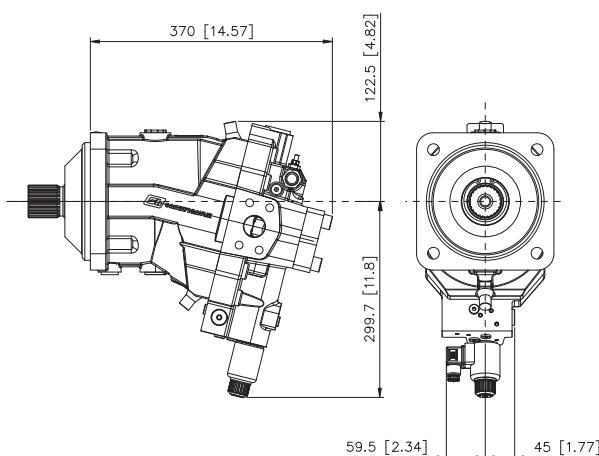
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RPI**  
RPI Control

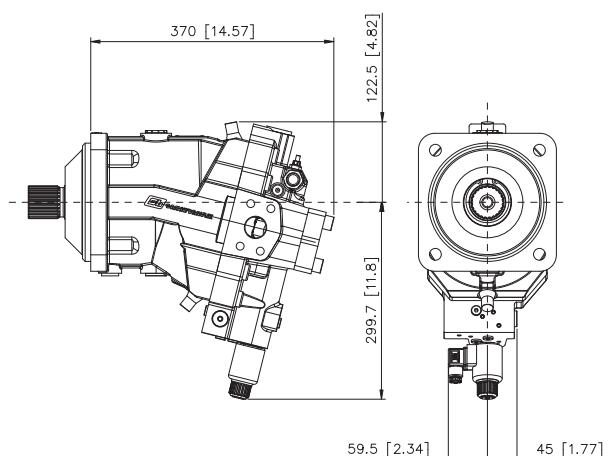


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

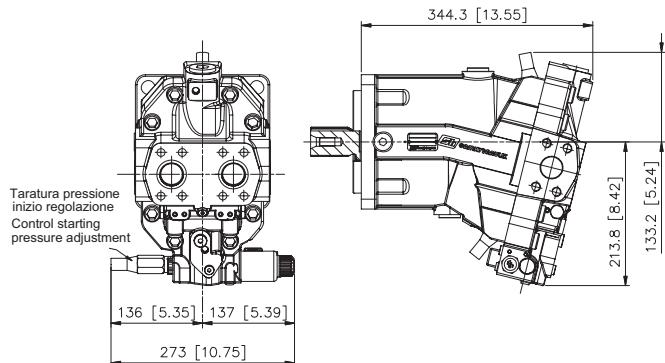
**Regolatore ROS**  
ROS Control



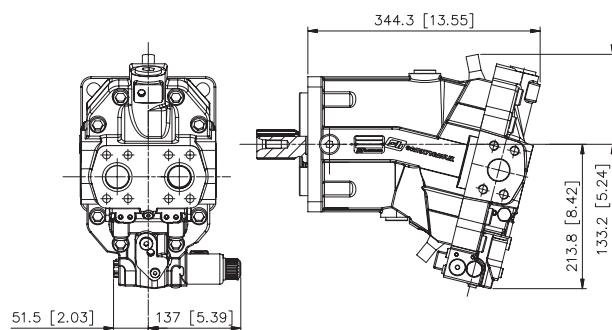
**Regolatore RPS**  
RPS Control



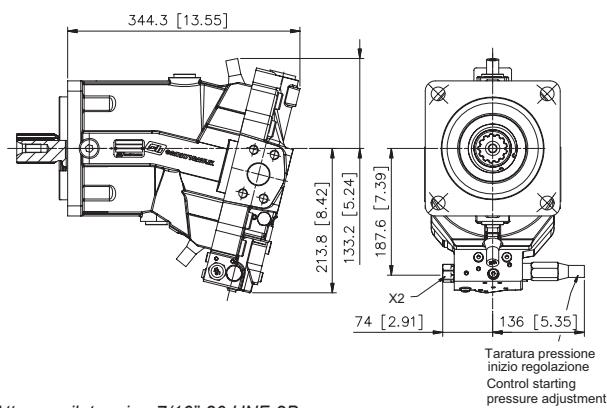
**Regolatore 2EE**  
**2EE Control**



**Regolatore 2EN**  
**2EN Control**

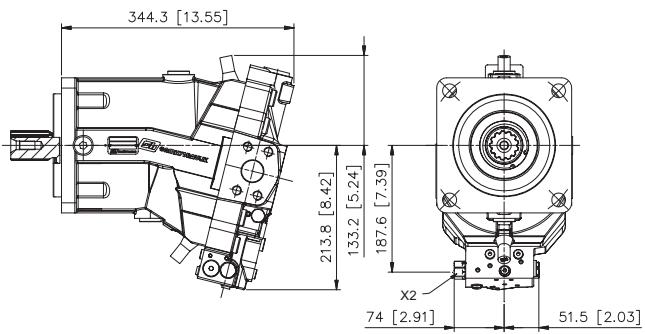


**Regolatore 2IE**  
**2IE Control**



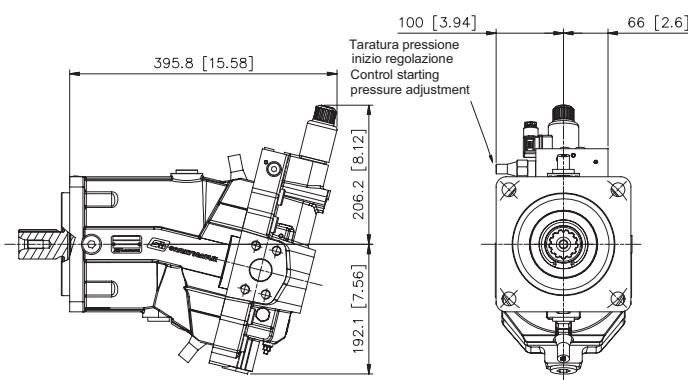
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
 X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore 2IN**  
**2IN Control**

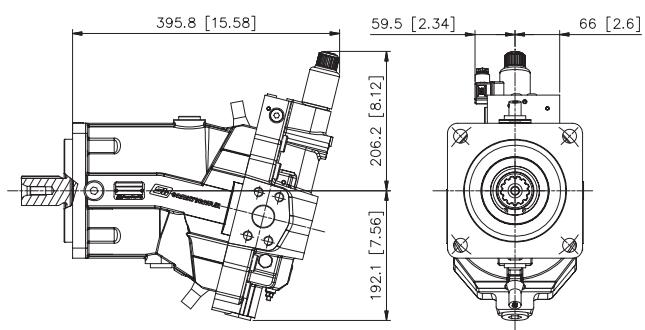


X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
 X2: Piloting port - 7/16"-20 UNF-2B

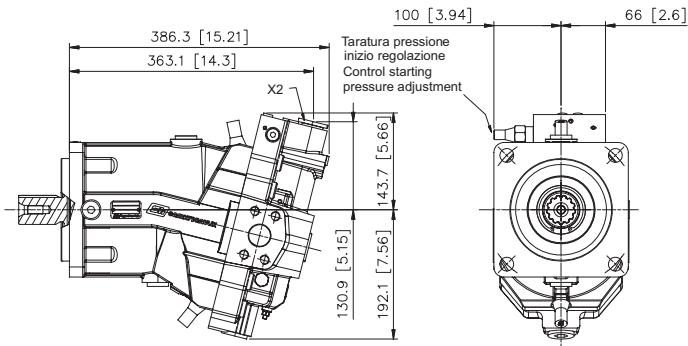
**Regolatore REE**  
**REE Control**



**Regolatore REN**  
**REN Control**

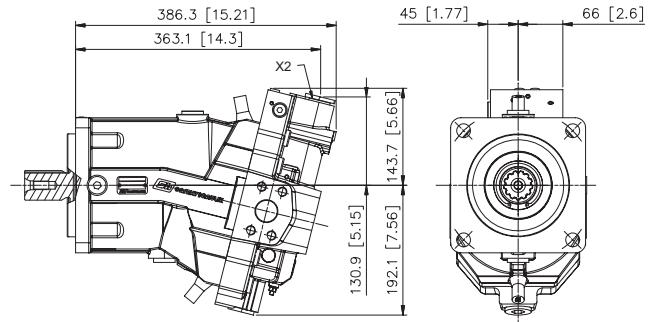


**Regolatore RIE**  
RIE Control



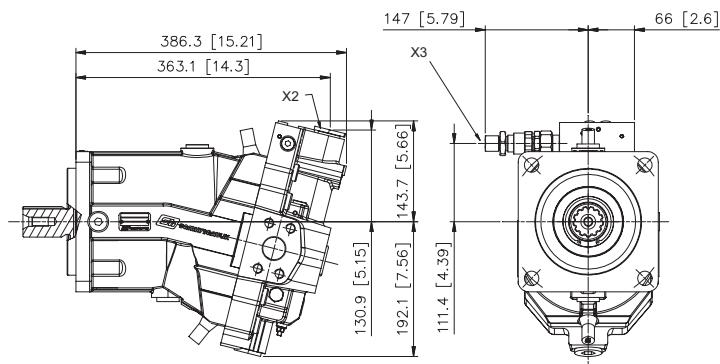
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore RIN**  
RIN Control



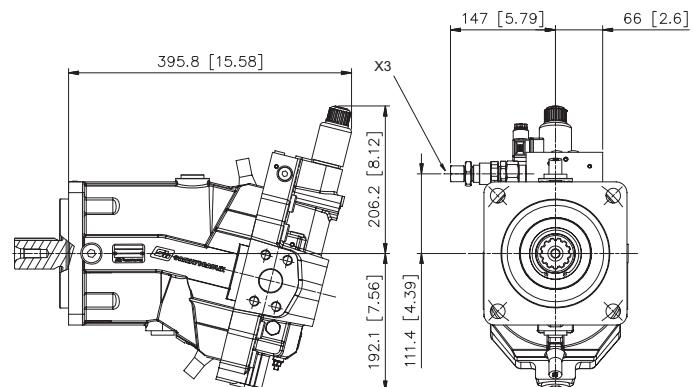
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore RID**  
RID Control



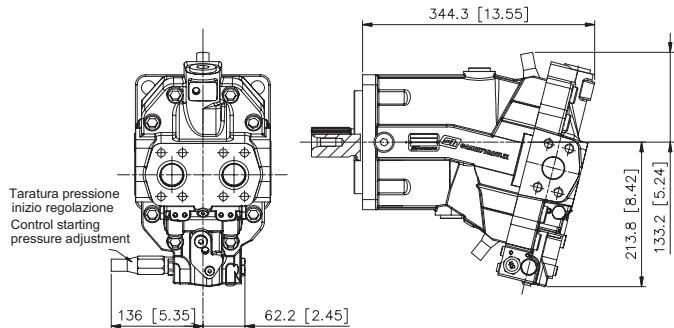
X2: Attacco pilotaggio - 7/16"-20 UNF  
X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

**Regolatore RED**  
RED Control

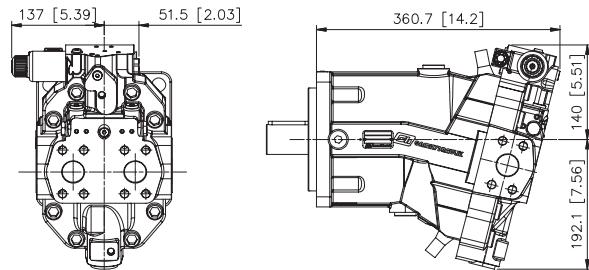


X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

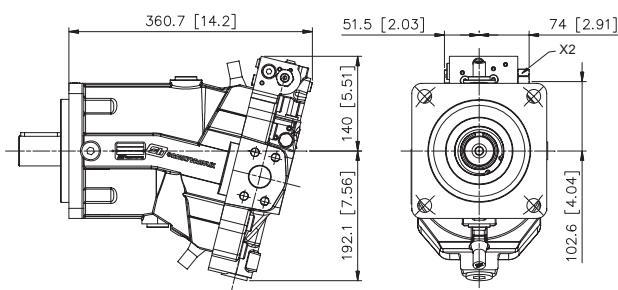
**Regolatore RPE**  
**RPE Control**



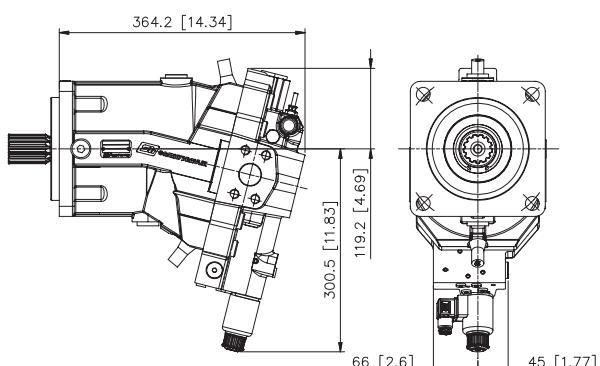
**Regolatore 2EN**  
**2EN Control**



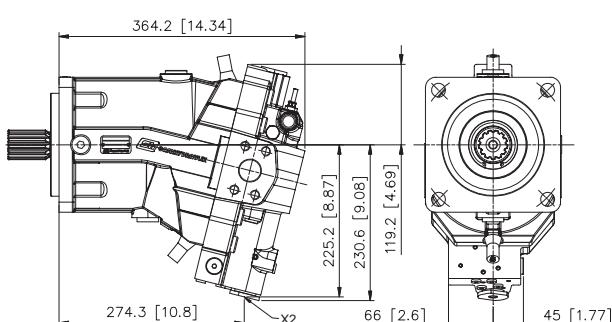
**Regolatore 2IN**  
**2IN Control**



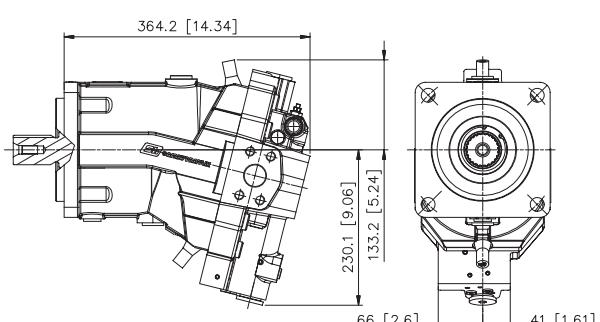
**Regolatore REN**  
**REN Control**



**Regolatore RIN**  
**RIN Control**

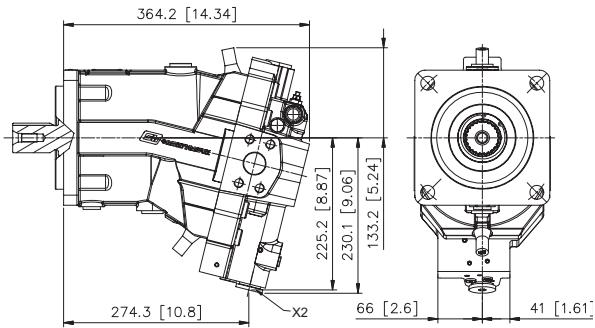


**Regolatore ROE**  
**ROE Control**



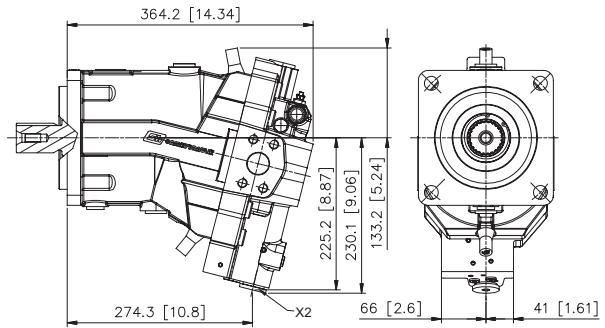
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore ROI**  
ROI Control



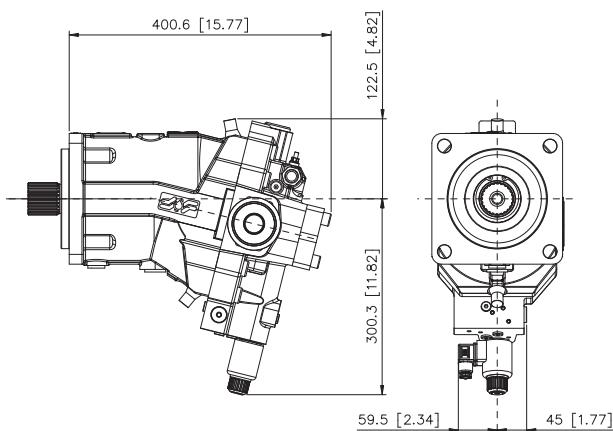
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore RPI**  
RPI Control

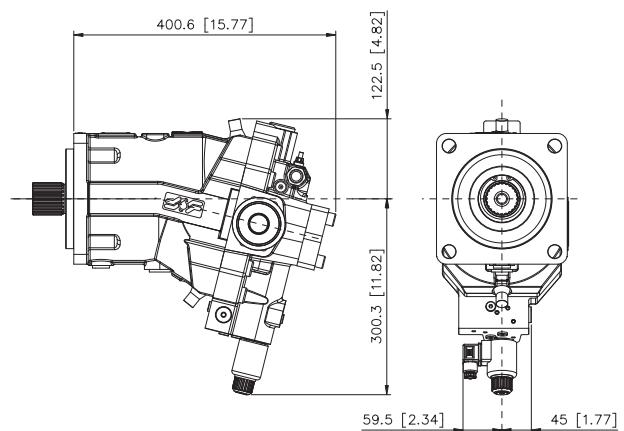


X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

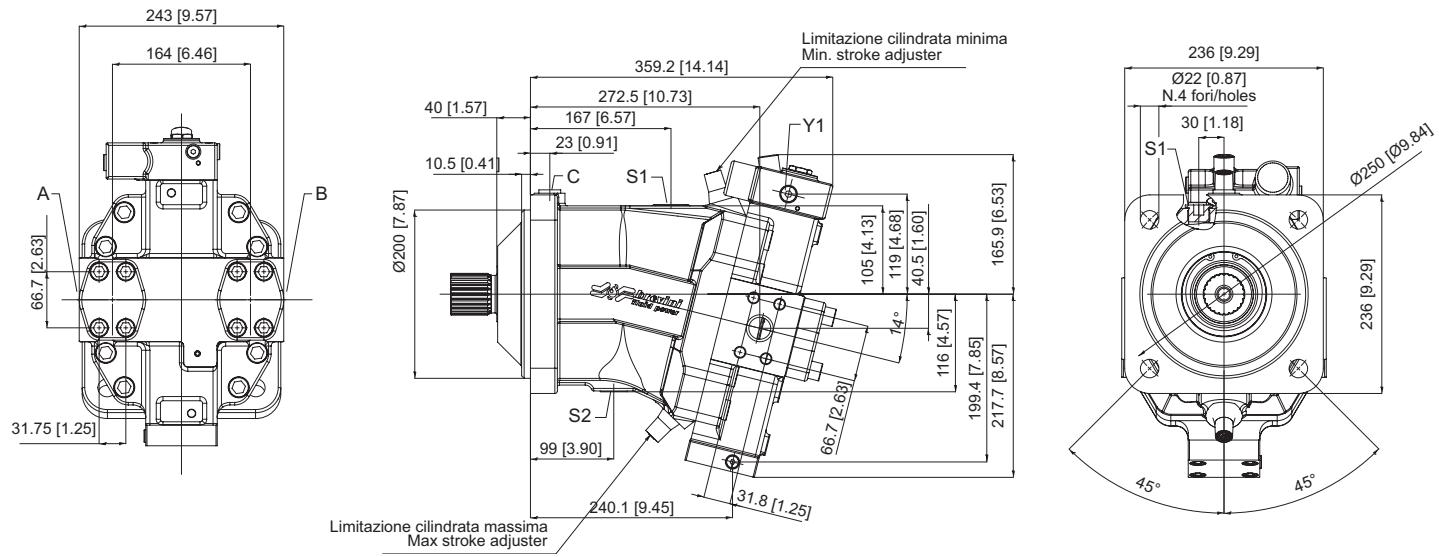
**Regolatore ROS**  
ROS Control



**Regolatore RPS**  
RPS Control

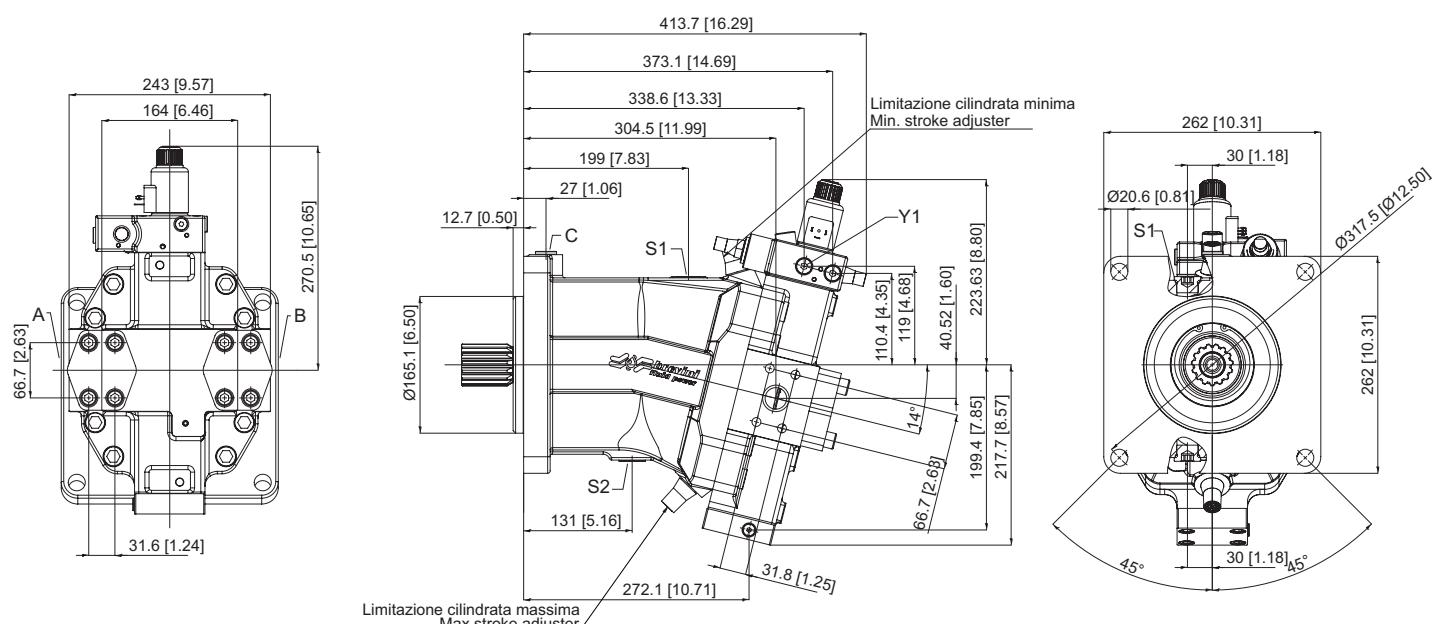


**Motore SH7V 200 - Flangia ISO 4 Fori (OG)**  
**SH7V 200 Motor - Mounting flange ISO 4 Bolts (OG)**



- A-B: Utenze / Service line ports - 1"1/4 SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 1/2 G (BSPP)  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 3/4 G (BSPP)  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 1/8 G (BSPP)

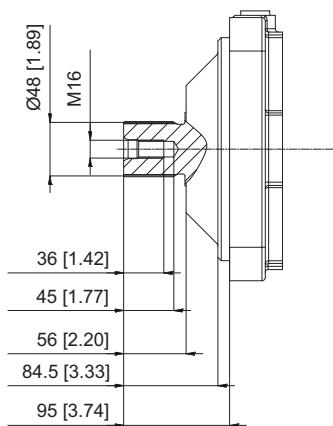
**Motore SH7V 200 - Flangia SAE-D 4 Fori (10)**  
**SH7V 200 Motor - Mounting flange SAE-D 4 Bolts (10)**



- A-B: Utenze / Service line ports - 1"1/4 SAE 6000  
 C: Spurgo aria lavaggio cuscinetti / Air bleed bearings flushing port - 3/4"-16 UNF-2B  
 S1-S2: Bocche di drenaggio carcassa / Case drain port - 1"1/16-12 UN 2B  
 Y1: Attacco pilotaggio pressione di esercizio / Working pressure piloting port - 7/16"-20 UNF-2B

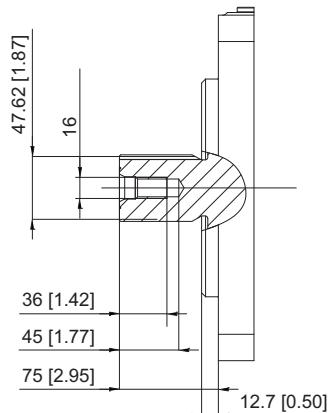
FLANGIA ISO - D 4 FORI (OG)  
MOUNTING FLANGE ISO 4 BOLTS (OG)

**SAR**  
W50X2X30X24 DIN 5480

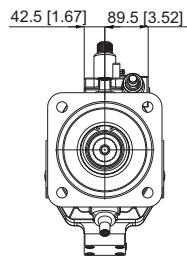
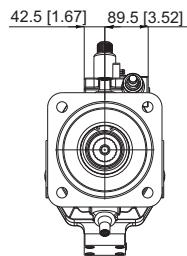
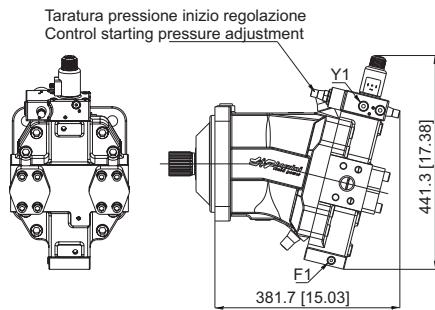


FLANGIA SAE-D 4 FORI (10)  
MOUNTING FLANGE SAE-D 4 BOLTS (10)

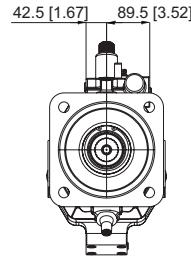
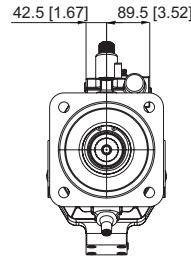
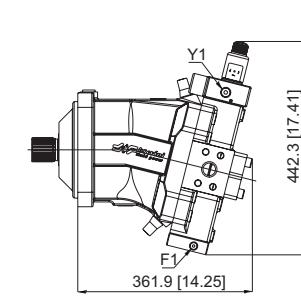
**S19**  
15T 8/16 DP FLAT ROOT SIDE FIT



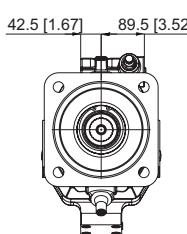
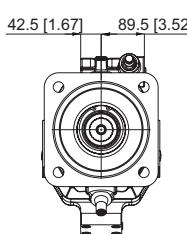
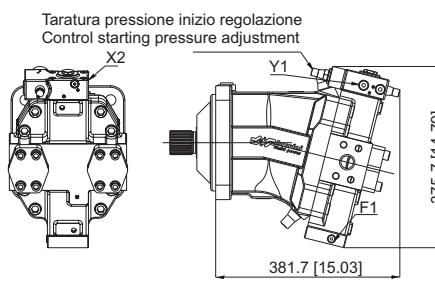
**Regolatore 2EE**  
**2EE Control**



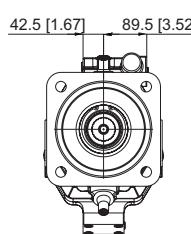
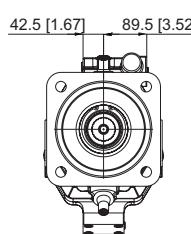
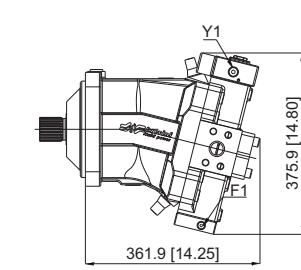
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IE**  
**2IE Control**



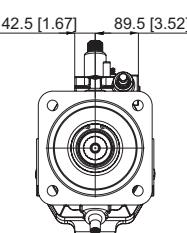
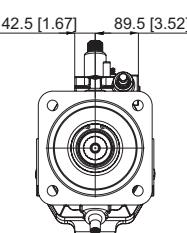
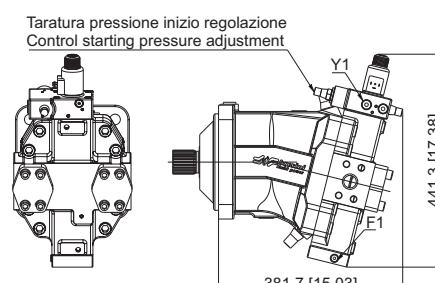
**Regolatore 2IN**  
**2IN Control**



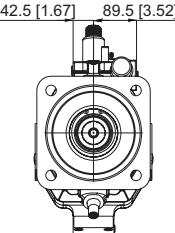
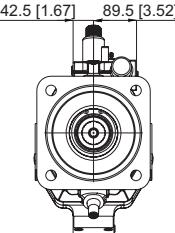
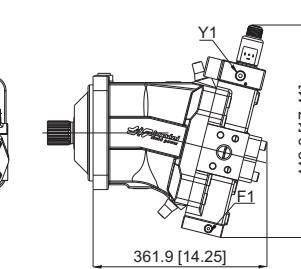
X2: Attacco pilotaggio - 1/4 G (BSPP)  
 X2: Piloting port - 1/4 G (BSPP)

X2: Attacco pilotaggio - 1/4 G (BSPP)  
 X2: Piloting port - 1/4 G (BSPP)

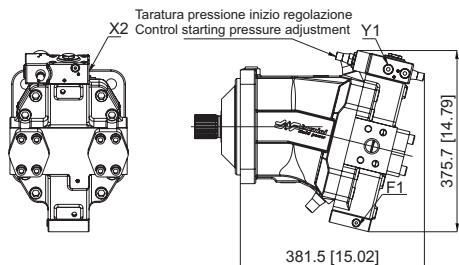
**Regolatore REE**  
**REE Control**



**Regolatore REN**  
**REN Control**

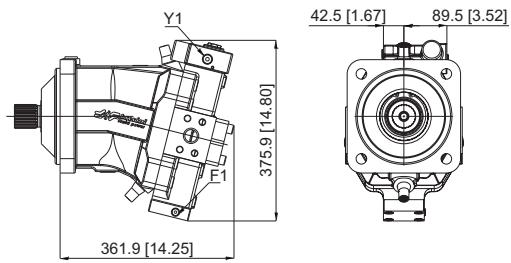


**Regolatore RIE**  
RIE Control



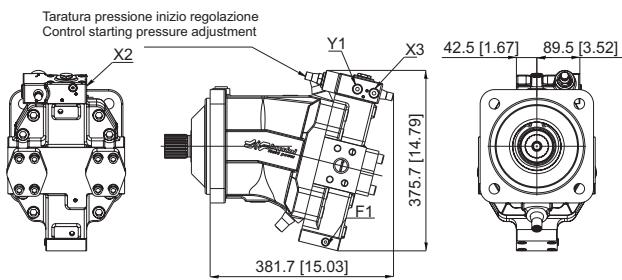
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RIN**  
RIN Control



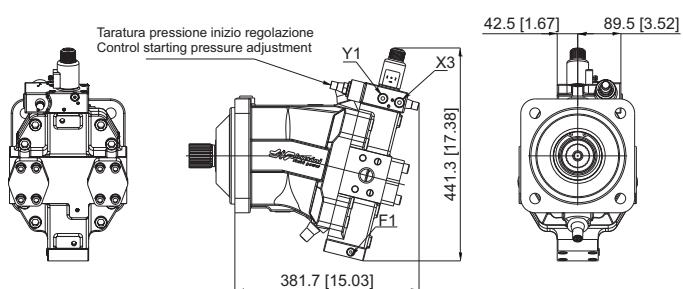
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RID**  
RID Control



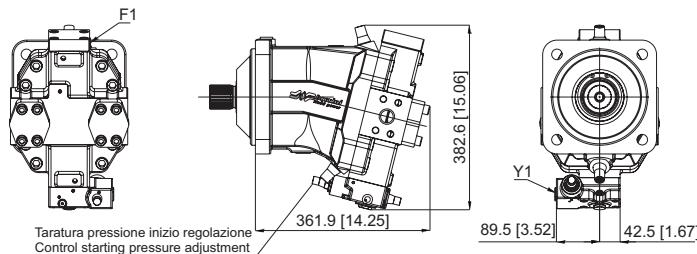
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

**Regolatore RED**  
RED Control

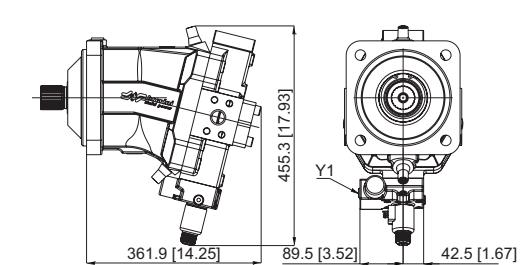


X3: Attacco pilotaggio doppia soglia - 1/4 G (BSPP)  
X3: Double step piloting port - 1/4 G (BSPP)

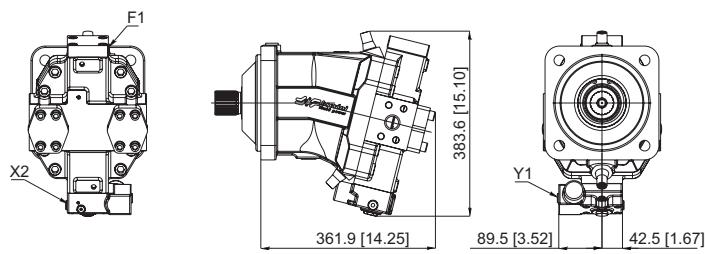
**Regolatore RPE**  
**RPE Control**



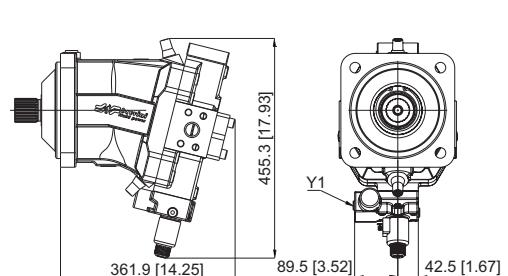
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IN**  
**2IN Control**



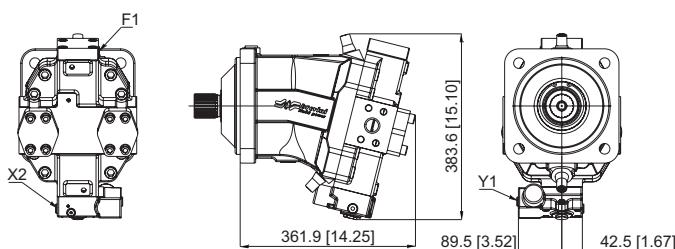
**Regolatore REN**  
**REN Control**



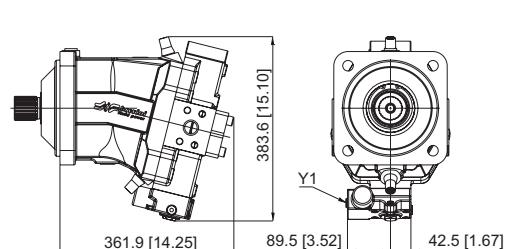
X2: Attacco pilotaggio - 1/4 G (BSPP)

X2: Piloting port - 1/4 G (BSPP)

**Regolatore RIN**  
**RIN Control**



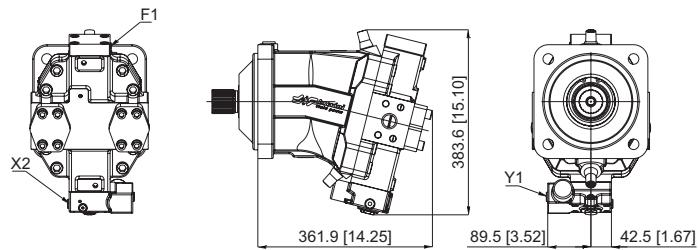
**Regolatore ROE**  
**ROE Control**



X2: Attacco pilotaggio - 1/4 G (BSPP)

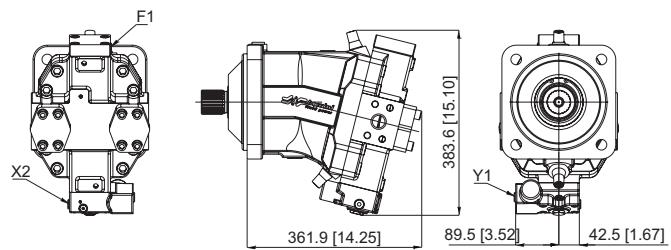
X2: Piloting port - 1/4 G (BSPP)

**Regolatore ROI**  
ROI Control



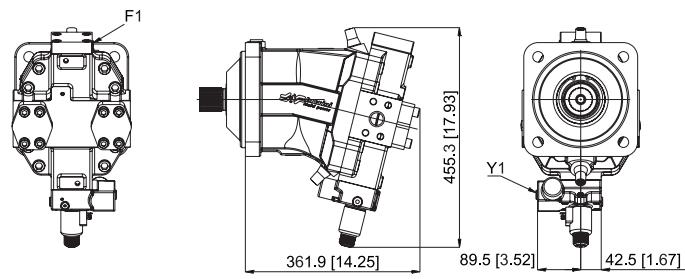
X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

**Regolatore RPI**  
RPI Control

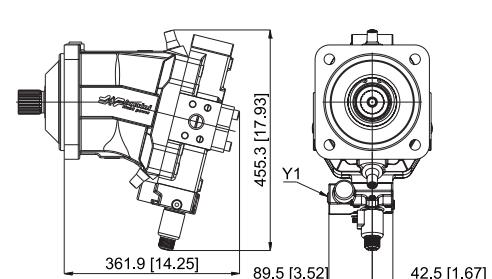


X2: Attacco pilotaggio - 1/4 G (BSPP)  
X2: Piloting port - 1/4 G (BSPP)

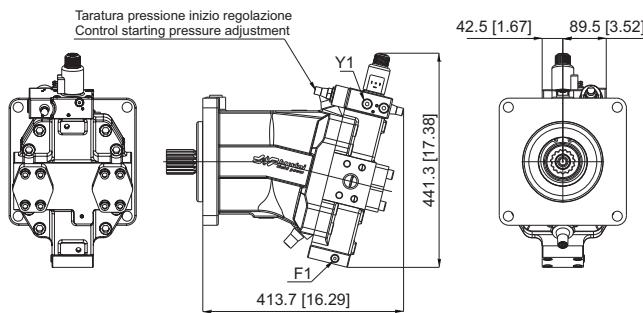
**Regolatore ROS**  
ROS Control



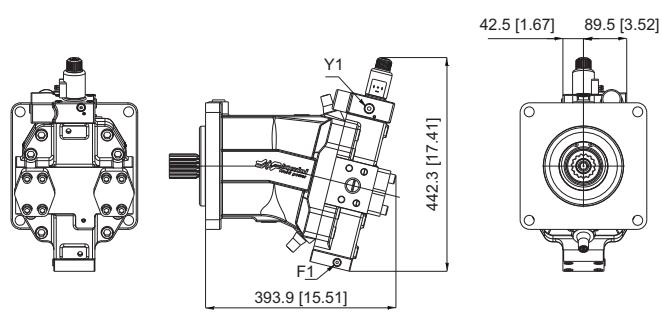
**Regolatore RPS**  
RPS Control



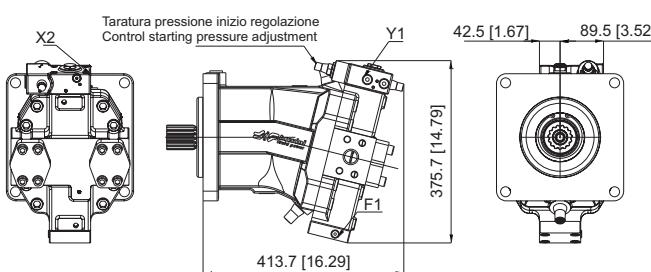
**Regolatore 2EE**  
**2EE Control**



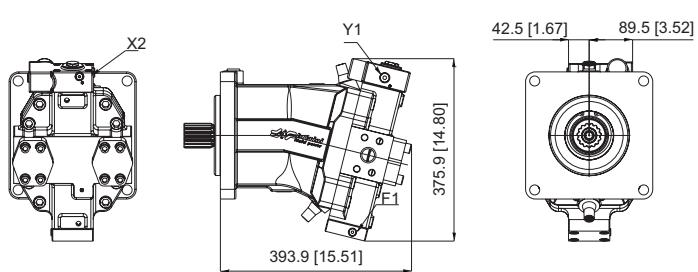
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IE**  
**2IE Control**



**Regolatore 2IN**  
**2IN Control**



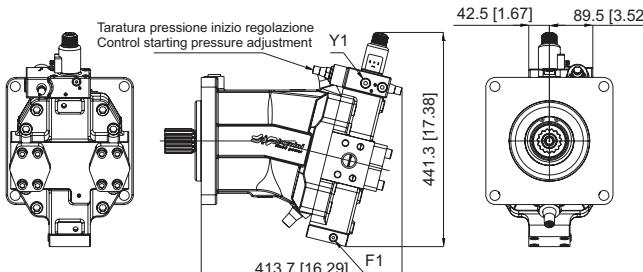
X2: Attacco pilotaggio - 7/16"-20 UNF-2B

X2: Piloting port - 7/16"-20 UNF-2B

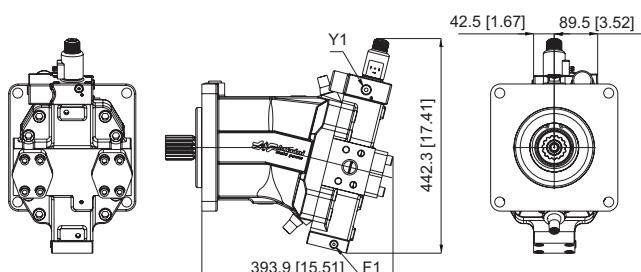
X2: Attacco pilotaggio - 7/16"-20 UNF-2B

X2: Piloting port - 7/16"-20 UNF-2B

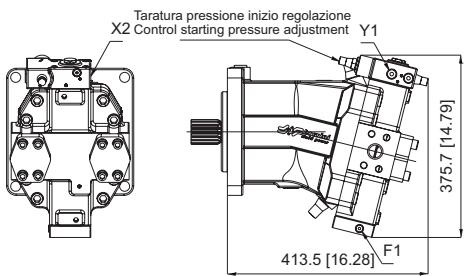
**Regolatore REE**  
**REE Control**



**Regolatore REN**  
**REN Control**

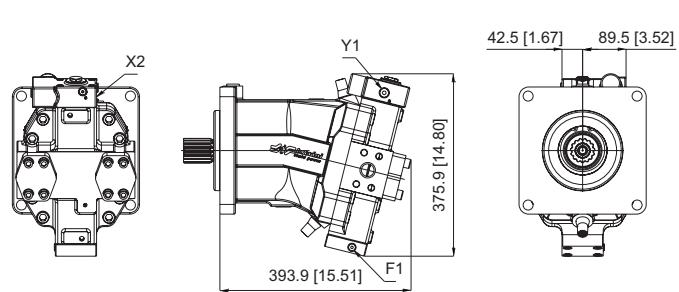


### **Regolatore RIE** RIE Control



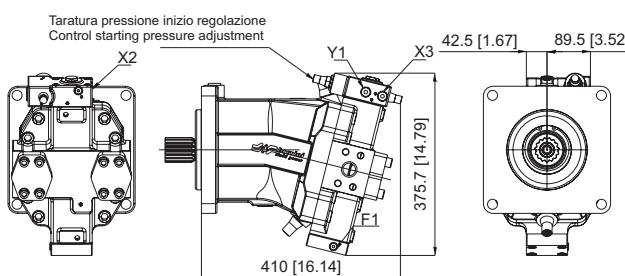
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

### **Regolatore RIN** RIN Control



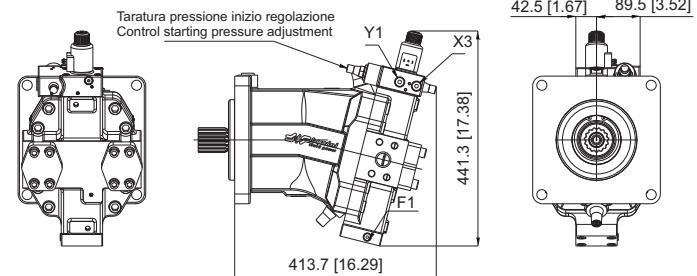
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

### **Regolatore RID** RID Control



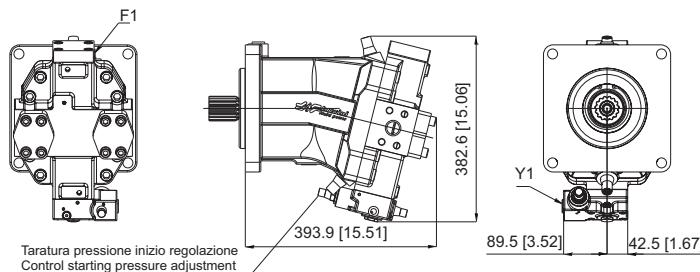
X2: Attacco pilotaggio - 7/16"-20 UNF  
X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X2: Piloting port - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

### **Regolatore RED** RED Control

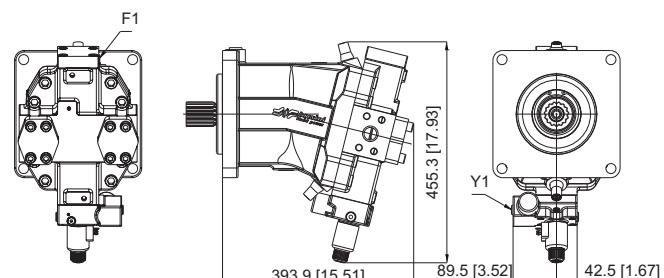


X3: Attacco pilotaggio doppia soglia - 7/16"-20 UNF  
X3: Double step piloting port - 7/16"-20 UNF

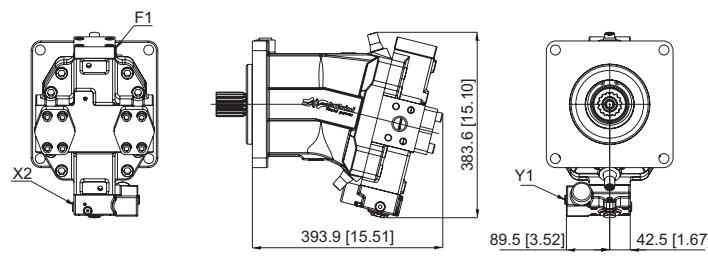
**Regolatore RPE**  
**RPE Control**



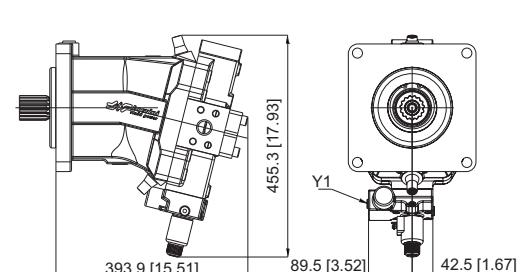
**Regolatore 2EN**  
**2EN Control**



**Regolatore 2IN**  
**2IN Control**



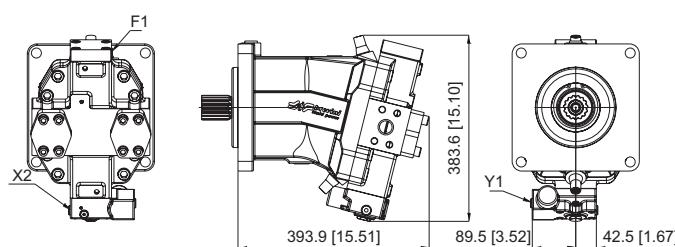
**Regolatore REN**  
**REN Control**



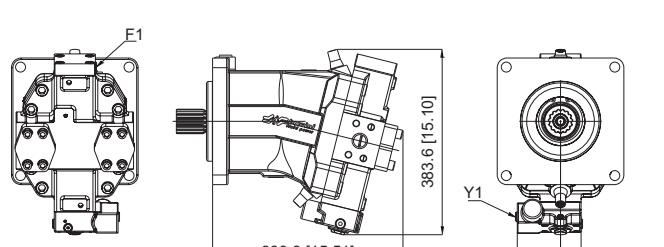
X2: Attacco pilotaggio - 7/16"-20 UNF-2B

X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore RIN**  
**RIN Control**



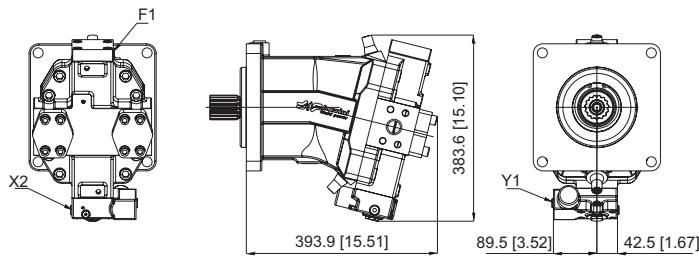
**Regolatore ROE**  
**ROE Control**



X2: Attacco pilotaggio - 7/16"-20 UNF-2B

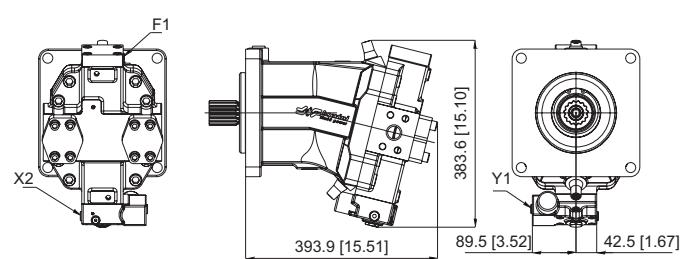
X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore ROI**  
ROI Control



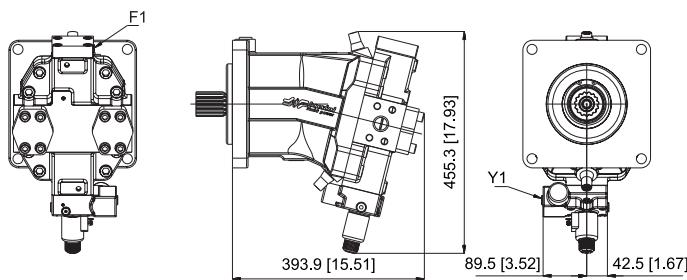
X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore RPI**  
RPI Control

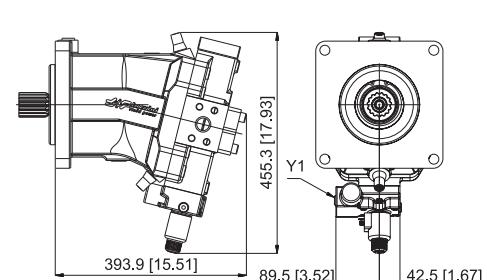


X2: Attacco pilotaggio - 7/16"-20 UNF-2B  
X2: Piloting port - 7/16"-20 UNF-2B

**Regolatore ROS**  
ROS Control



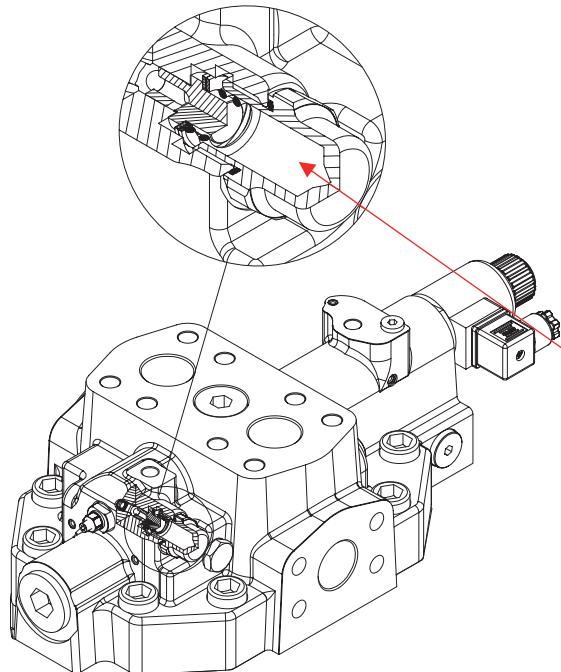
**Regolatore RPS**  
RPS Control



## VALVOLA DI LAVAGGIO FLUSHING VALVE

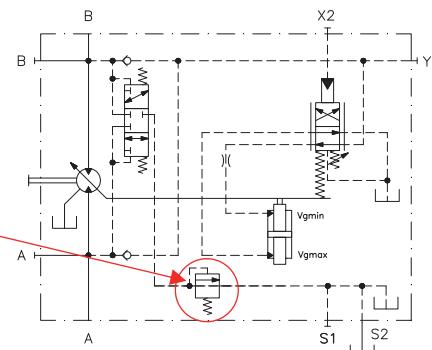
Per l'impiego in circuito chiuso, i motori possono essere forniti con la valvola di lavaggio integrata.

**Solo per SH7V 108 - 160**

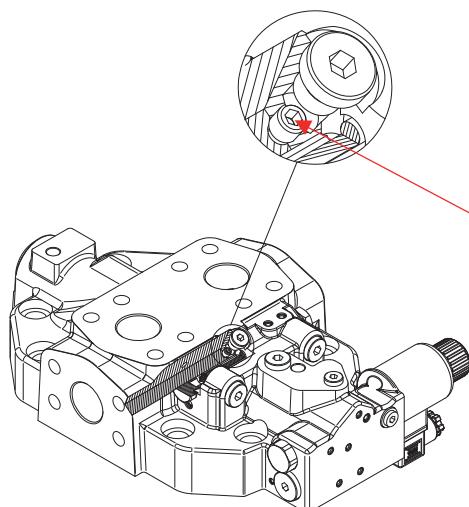


For closed circuit operation, the motors can be equipped with built in flushing valve.

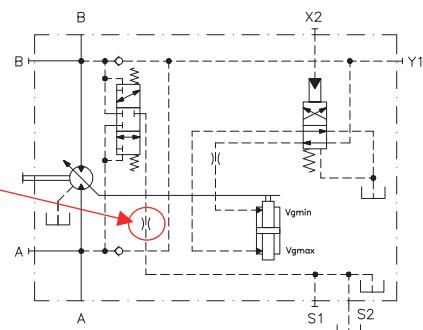
**Only for SH7V 108 - 160**



**Solo per SH7V 160 con regolatori a 2 posizioni**

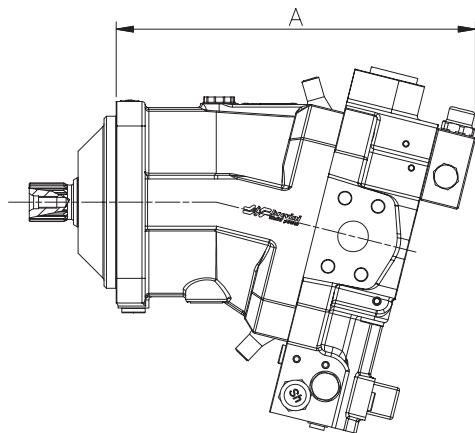


**Only for SH7V 160 with two positions controls**



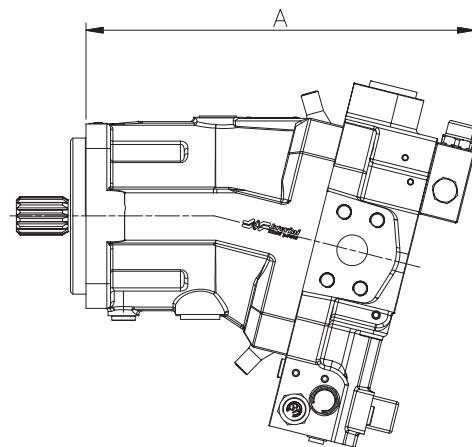
**Solo per SH7V 055 - 075**

**Motore SH7V - 055 - 075 - Flangia ISO**  
**SH7V 055-075 Motor - Mounting flange ISO**

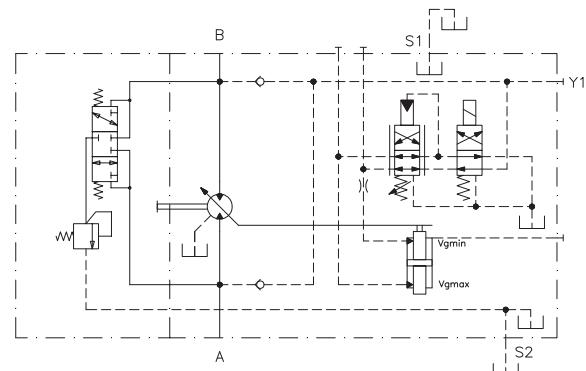


**Only for SH7V 055 - 075**

**Motore SH7V 055 - 075 - Flangia SAE**  
**SH7V 055 - 075 Motor - Mounting flange SAE**

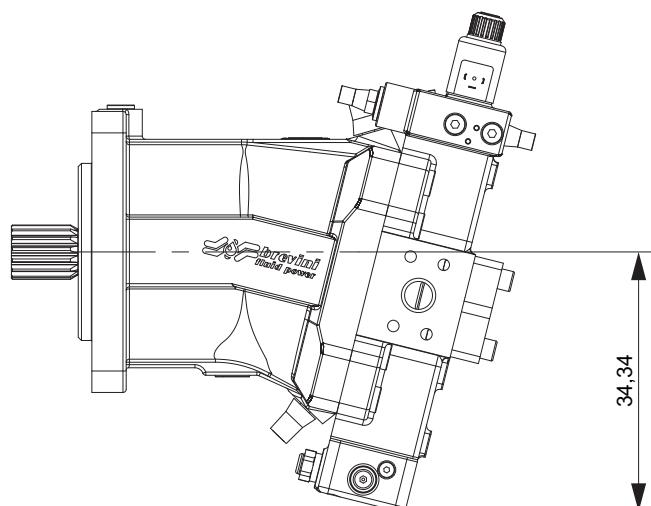


	<b>SH7V 055 ISO</b>	<b>SH7V 075 ISO</b>	<b>SH7V 055 SAE</b>	<b>SH7V 075 SAE</b>
<b>A mm [in]</b>	268.3 [10.56]	292.6 [11.51]	323 [12.72]	316.6 [12.46]



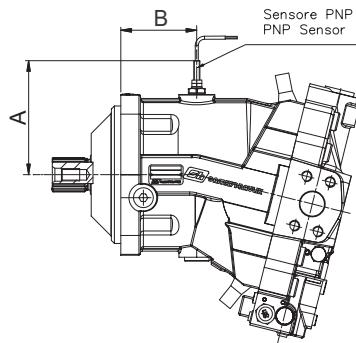
**Solo per SH7V 200**

**Only for SH7V 200**



## VERSIONE CON TACHIMETRO TACHOMETER VERSION

**VERSIONE TC**

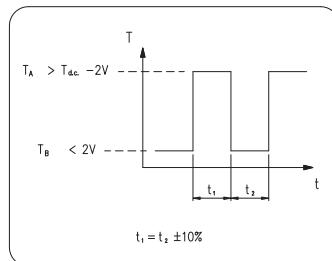


**TC VERSION**

	SH7V 055 ME	SH7V 075 ME	SH7V 160 ME	SH7V 055 SE
A mm [in]	122.2 [4.81]	125.8 [4.95]	149.4 [5.88]	125.8 [4.95]
B mm [in]	74 [2.91]	83.7 [3.29]	99.5 [3.92]	107.5 [4.23]

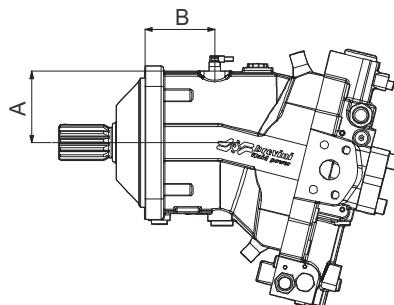
### Segnale in uscita versione elettronica

Numero d'impulsi per giro = 14  
 Principio di funzionamento induttivo  
 Funzione di uscita PNP  
 Tensione nominale 10-30 V d.c.  
 Caricabilità massima 200 mA  
 Frequenza massima 1500 Hz  
 Campo di temperatura -25°C +120°C  
 Grado di protezione IP 67  
 Versioni disponibili:  
 Sensore con cavo a tre fili lunghezza 2 metri  
 Il sensore può essere montato solo sull'attacco  
 drenaggio S1



### Output signal electronic tacho

Number of pulses per revolution = 14  
 Inductive principle  
 Output current PNP  
 Voltage 10-30 V d.c.  
 Max load 200 mA  
 Max frequency 1500 Hz  
 Temperature range -25°C +120°C  
 Enclosure IP 67  
 Available versions:  
 Sensor with 2 metres three wires cable  
 The sensor can be assembled only S1 drain port.

**VERSIONE TW - TZ****TW - TZ VERSION**

	<b>SH7V 075 ME</b>	<b>SH7V 108 ME</b>	<b>SH7V 160 ME</b>	<b>SH7V 200 ME</b>	<b>SH7V 075 SE</b>	<b>SH7V 108 SE</b>	<b>SH7V 160 SE</b>	<b>SH7V 200 SE</b>
<b>A</b> mm [in]	79.9 [3.14]	88.9 [3.49]	96.9 [3.81]	101.9 [4.01]	79.9 [3.14]	88.9 [3.49]	96.9 [3.81]	101.9 [4.01]
<b>B</b> mm [in]	76.5 [3.01]	86.5 [3.40]	92.5 [3.64]	105 [4.13]	100.5 [3.95]	120.5 [4.74]	124.5 [4.90]	105 [4.13]

**TW**

Principio di funzionamento a effetto Hall 2 canali (1 onda quadra -1 digitale er senso di rotazione).

Segnale di uscita PNP

Tensione nominale 4.5-16 VDC

Frequenza 0 - 20.000 Hz

Campo di temperatura -40°C +110°C

Grado di protezione IP67

Sensore connettore Deutsch DT04-4P

Compatibilità elettromagnetica in accordo con EN 60947-5-2

Resistenza agli shock e vibrazioni in accordo con IEC 68-2-17 IEC 68-2-6

**TZ**

Principio di funzionamento a effetto HALL 2 canali

Sensore con due canali di uscita a 90°

Tensione nominale 8-32 VDC

Frequenza 0-20.000 Hz

Campo di temperatura -40°C +125°C

**TW**

2-Channel differential-hall effect operating principle (1 square wave -1 digital for direction of rotation)

Output signal PNP

Power supply 4.5-16 VDC

Frequency 0 - 20.000 Hz

Operating temperature -40°C - +110°C

Degree of protection IP67

Sensor connector Deutsch DT04-4P

Electromagnetic compatibility according to EN 60947-5-2

Resistance to shock and vibration in accordance with IEC 68-2-17 IEC 68-2-6

**TZ**

2-Channel differential-hall effect operating principle

Sensor with dual-channel output (90°)

Power supply 8-32 VDC

Frequency 0-20.000 Hz

Operating temperature -40°C +125°C

	<b>SH7V 075</b>	<b>SH7V 108</b>	<b>SH7V 160</b>	<b>SH7V 200</b>
Numero di impulsi per giro Number of pulses per revolution	58	67	75	80

