POMPE A PISTONI AD ASSE INCLINATO DOPPIA MANDATA

DOUBLE DELIVERY BENT AXIS PISTON PUMPS

"TWIN FLOW"

CODICE FAMIGLIA *FAMILY CODE* **604-001**

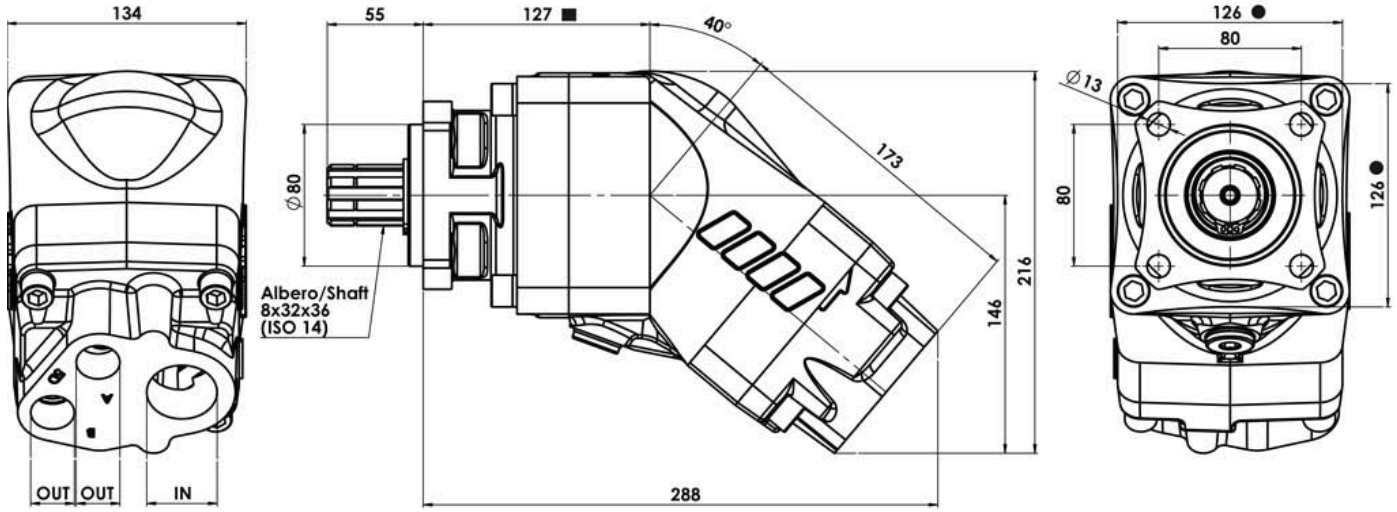
Flangia/*Flange* **ISO**
Albero/*Shaft* **ISO14 8x32x36**
Cilin./*Displ.* **see table**

Codice fascicolo:997-400-60010 Rev: AC
Data: Venerdì 25 novembre 2016
Codice foglio:997-604-01540 Rev: AA

Fluido idraulico *Fluid*	Minerale o sintetico compatibile con guarnizioni: *Mineral or synthetic compatible with the following seals:* FKM, FPM, HNBR				
Viscosità cinematica consigliata *Kinematic viscosity suggested*	T media ambiente (°C) *Average ambient temp. (°C)*	< -40	-40÷10	10÷35	> 35
	VG (cSt = mm²/s)	16	22	32	46
Viscosità cinematica ottimale di esercizio *Optimale kinematic viscosity*			VG= 10 cSt ÷ 100 cSt		
Viscosità cinematica max consentita all'avviamento *Max kinematic viscosity suggested at the start-up*			VG= 750 cSt		
Indice di viscosità consigliato *Viscosity index suggested* VI > 100	Temperatura di esercizio *Working temperature* -40°C ÷ 140°C				
Grado di filtrazione *Oil filtering*	> 200 bar: 10 µm < 200 bar: 25 µm				
Pres. di aspirazione *Inlet pressure*	0,85 ÷ 2 bar assoluti/absolut				
Senso di rotazione *Pump rotation*	Unidirezionale (Dx o Sx) *Unidirectional (Right or Left)*				

Verificare che la pompa sia posizionata almeno 100 mm sotto il livello minimo del serbatoio olio. Prima di avviare la pompa effettuare spurgo aria.
Verify that pump is, at least, 100 mm under the minimum level of the tank. Before starting the pump bleed the air.

Dimensions in mm



● Larghezza minima corpo a quota indicata ■
Minimum bodywidth at indicated measurement

Tipo pompa *Pump type*	Rotazione *Rotation*	Codice *Code*	Corpo posteriore* *Rear cover**	IN ISO 228	OUT ISO 228	Peso *Weight* kg
TWIN FLOW 53+53	Destra / *Right*	**604-001-15053**	500-029-95307	G 1 1/4"	G 3/4"	21,7
	Sinistra / *Left*	**604-001-15059**	500-029-95405			
TWIN FLOW 70+70	Destra / *Right*	**604-001-17073**	500-029-96806	G 1 1/2"		22
	Sinistra / *Left*	**604-001-17079**	500-029-96904			
TWIN FLOW 70+35	Destra / *Right*	**604-001-17033**	500-029-97001	G 1 1/4"		21,7
	Sinistra / *Left*	**604-001-17039**	500-029-97109			
TWIN FLOW 70+53	Destra / *Right*	**604-001-17053**	500-029-97403	G 1 1/2"		22
	Sinistra / *Left*	**604-001-17059**	500-029-97501			

*** Per trasformare la pompa da DESTRA a SINISTRA, sostituire il corpo posteriore.**
**** To change the pump rotation, the rear body must be replaced.***

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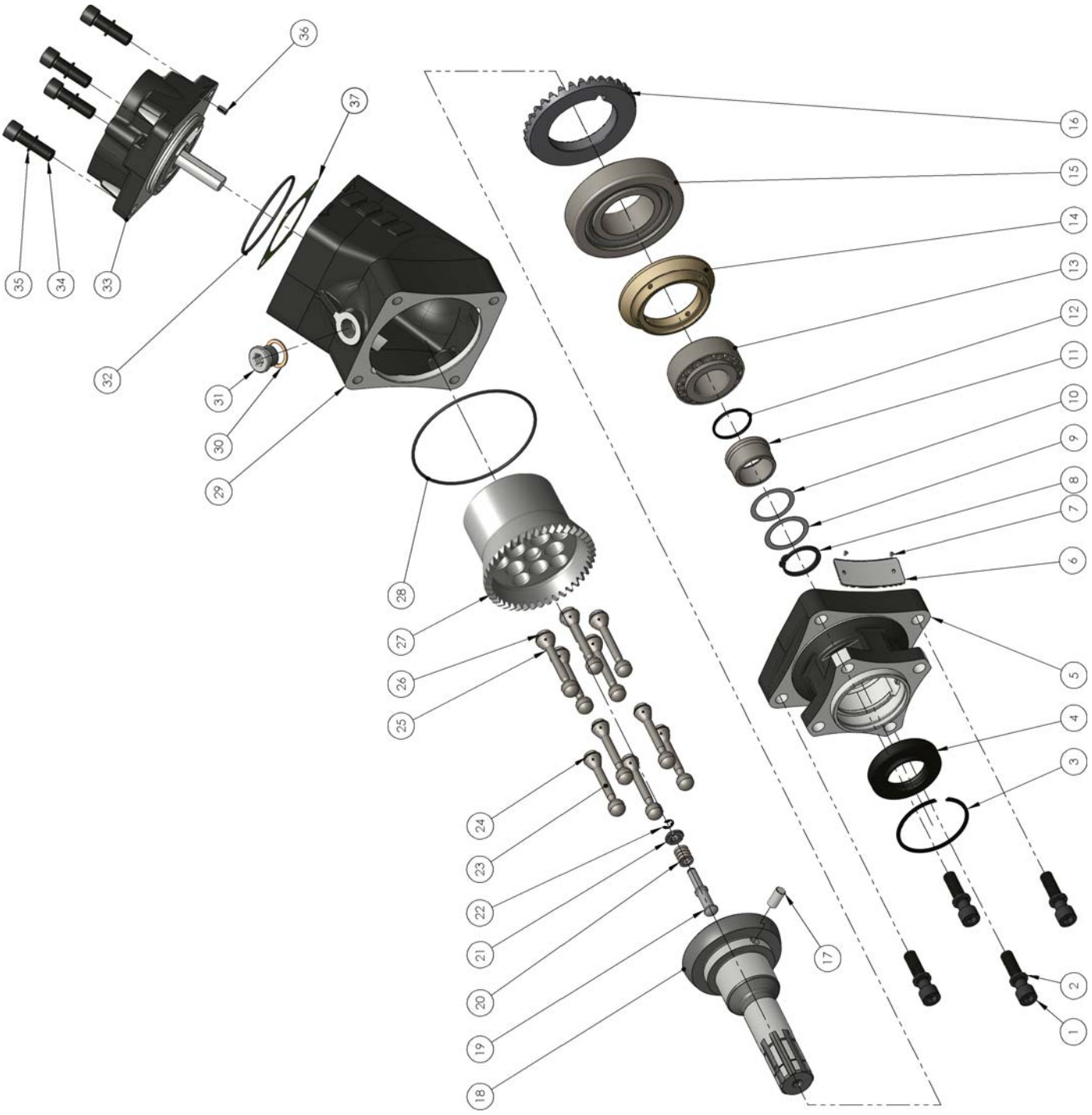

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OMFB HYDRAULIC COMPONENTS

N°	TWIN FLOW 53+53	TWIN FLOW 70+70	TWIN FLOW 70+35	TWIN FLOW 70+53	Codice *P. Number*	Descrizione *Description*		Q.tà *Q.ty*
1	•	•	•	•	*502-005-00582*	Vite TCE M 12x50 UNI 5931	*Socket head capscrew M12x50 UNI 5931*	4
2	•	•	•	•	*501-008-00063*	Rosetta elastica x M12 DIN 7980	*Washer x M12 DIN 7980*	4
3	•	•	•	•	*501-000-02729*	Anello elastico E-SB 72x2	*Circlip E-SB 72x2*	1
4	•	•	•	•	*506-000-24272*	Paraolio HNBR	*Oil seal HNBR*	1
5	•	•	•	•	*517-002-01047*	Corpo anteriore	*Front housing*	1
6	•	•	•	•	*513*	Targhetta completa	*Plate*	1
7	•	•	•	•	*513-000-00011*	Chiodino fissaggio targhetta	*Plate nail*	2
8	•	•	•	•	*501-000-01355*	Anello seeger rinforzato AS 35x2.5 E.UNI 7436	*Retaining ring AS 35x2.5 E.UNI 7436*	1
9	•	•	•	•	*529-007-00217*	Rondella 45X35X0.1	*Washer 45X35X0.1*	1
10	•	•	•	•	*529-007-00226*	Rondella 45X35X0.2	*Washer 45X35X0.2*	1
11	•	•	•	•	*511-002-00200*	Bussola Øi 35	*Bushing Øi 35*	1
12	•	•	•	•	*506-000-13137*	Guarnizione OR 3137 HNBR	*O-Ring 3137 HNBR*	1
13	•	•	•	•	*510-002-00364*	Cuscinetto a rulli conici 35x72x28 EUR 33207	*Tapered roller bearing 35x72x28 EUR 33207*	1
14	•	•	•	•	*530-004-00271*	Anello distanziale cuscinetti	*Bearing spacer ring*	1
15	•	•	•	•	*510-002-55115*	Cuscinetto a rulli conici 55x115x34 EUR. T7FC055	*Tapered roller bearing 55x115x34 EUR. T7FC055*	1
16	•	•	•	•	*525-011-00291*	Corona dentata	*Crown*	1
17	•	•	•	•	*501-003-08202*	Spina UNI 6364-A Ø8x20	*Pin UNI 6364-A Ø8x20*	1
18	•				*522-005-00571*	Albero	*Shaft*	1
		•		•	*522-005-00599*			
			•		*522-005-00580*			
19	•	•	•	•	*542-001-00304*	Perno guida molla	*Shaft guide pin*	1
20	•	•	•	•	*512-005-00812*	Molla di carico corpo cilindri	*Spring*	1
21	•	•	•	•	*542-001-00171*	Anello guida molla	*Spring guide ring*	1
22	•	•	•	•	*501-015-00028*	Anello seeger RS 6 DIN6799	*Retaining ring RS 6 DIN6799*	1
23	•				*532-005-00123*	Pistone sferico	*Piston*	5
		•		•	*532-005-00258*			
			•		*532-005-00132*			
24	•				*501-023-00126*	Fasce elastiche	*Spring rings*	15
		•		•	*501-023-00019*			
			•		*501-023-00037*			
25	•				*532-005-00132*	Pistone sferico	*Piston*	5
		•			*532-005-00070*			
			•		*532-005-00123*			
				•	*532-005-00034*			
26	•			•	*501-023-00037*	Fasce elastiche	*Spring rings*	15
		•			*501-023-00055*			
			•		*501-023-00126*			
27	•				*500-029-16505*	Gruppo cilindri sede pistoni	*Piston barrel assembly*	1
		•			*500-029-16707*			
			•		*500-029-16703*			
				•	*500-029-16705*			
28	•	•	•	•	*506-000-12425*	Guarnizione ORM 1240-25 HNBR	*OR M 1240-25 HNBR*	1
29	•	•	•	•	*517-002-01930*	Corpo intermedio	*Int. housing*	1
30	•	•	•	•	*116-009-10129*	Rondella acciaio/gomma 1/2"	*Copper washer 1/2"*	1
31	•	•	•	•	*115-006-00135*	Tappo cieco 1/2" DIN 908	*Blank plug 1/2" DIN 908*	1
32	•	•	•	•	*506-000-18525*	Guarnizione ORM 850-25 HNBR	*OR M 850-25 HNBR*	1
33	•				*500-029-95307 DX (R)*	Gruppo corpo posteriore	*Rear cover assembly*	1
	•				*500-029-95405 SX (L)*			
		•			*500-029-96806 DX (R)*			
		•			*500-029-96904 SX (L)*			
			•		*500-029-97001 DX (R)*			
			•		*500-029-97109 SX (L)*			
				•	*500-029-97403 DX (R)*			
				•	*500-029-97501 SX (L)*			
34	•	•	•	•	*502-005-00573*	Vite TCE M 12x45 UNI 5931	*Socket head capscrew M12x45 UNI 5931*	4
35	•	•	•	•	*501-008-00063*	Rosetta elastica x M12 DIN 7980	*Washer x M12 DIN 7980*	4
36	•	•	•	•	*501-004-80123*	Spina Ø 5X10 UNI 6873	*Pin Ø 5X10 UNI 6873*	1
37	A	A	A	A	*507-000-00283*	Guarnizione piatta	Gasket	1
	A	A	A	A	*507-000-00407*			

A = alternative

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CARATTERISTICHE TECNICHE DI FUNZIONAMENTO *TECHNICAL FEATURES*	**53+53**	**70+70**	**70+35**	**70+53**
Cilindrata A / *Displacement* (cc/rev)	53 curva curve 1	67.7 curva curve 5	36.5 curva curve 3	53 curva curve 1
Cilindrata B / *Displacement* (cc/rev)	55 curva curve 2	66.2 curva curve 6	68.3 curva curve 4	66.2 curva curve 6
Pressione massima continua / *Max. continuous pressure* (bar)	350	300	350	300
Pressione massima picco / *Max. peak pressure* (bar)	400	350	400	350
Velocità massima a vuoto / *Max. speed without load* (rpm)	2550	2550	2550	2550
Velocità massima con uscita A e B in press. *Max. speed with load on A and B outputs* (*)	1800	1400	1800	1650
Velocità massima con 1 porta in press. *Max. speed with load on 1 output only* (*)	2100	1400	2100	2100
Potenza massima continua / *Max. continuous power* (kW)	111	108	108	98
Potenza massima intermittente / *Max. intermittent power* (kW)	127	123	123	114

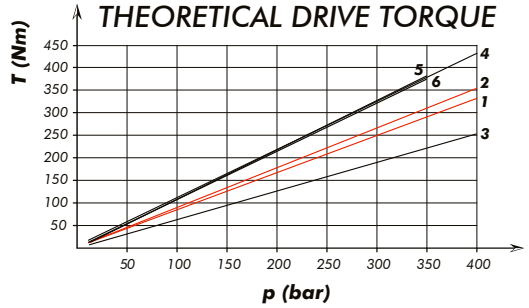
Pressione massima continua *Max. continuous pressure* (100%)
Pressione massima di punta *Max. peak pressure* (6 sec.max)

(*) Velocità con tubo diam. interno 63mm (2"1/2) minimo.
Speed with pipe internal diameter 63mm (2"1/2) minimum.

Pompa 53+53 e 70+35: con tubo diam. interno 50mm (2")
velocità max. 1200rpm.
Pump 53+53 and 70+35: with pipe internal diameter 50mm (2")
max. speed 1200rpm.

Pompa 70+70 e 70+53: solo con tubo diam. interno 63mm (2"1/2).
Pump 70+70 and 70+53: only with pipe internal diamater 63mm (2"1/2).

COPPIA TEORICA ASSORBITA
THEORETICAL DRIVE TORQUE



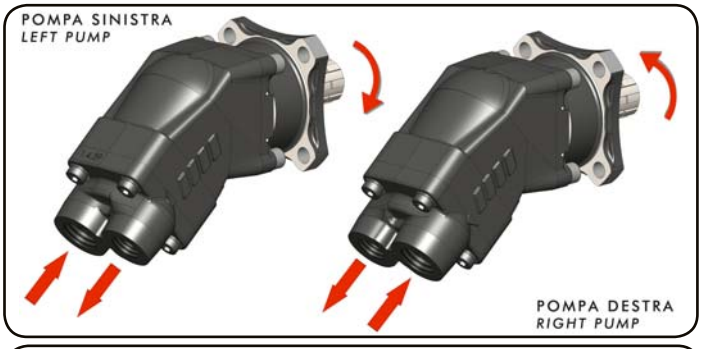
La coppia assorbita dalla pompa deve essere calcolata come somma delle coppie necessarie per mandare in pressione le 2 mandate.
The total torque absorbed by the pump is given by the sum of the torques necessary to give pressure to the pressure ports.

POTENZA TEORICA ASSORBITA
THEORETICAL POWER INPUT

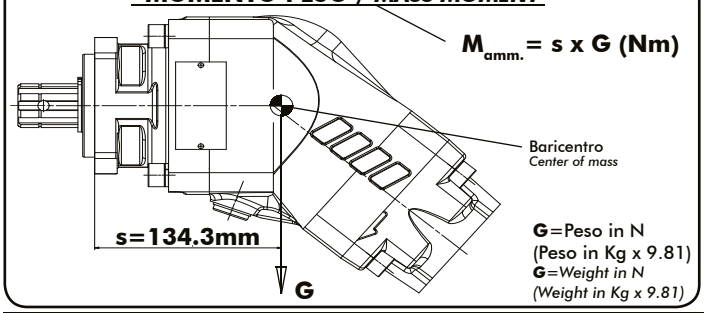
La potenza totale è pari alla somma delle potenze richieste dai singoli utilizzi sulle 2 mandate.
The total power absorbed by the pump is given by the sum of the power required by the two pressure ports.

$$P_{TOT} = P_A + P_B = \frac{(p_A \cdot Q_A + p_B \cdot Q_B)}{612}$$

P [kW]
Q [l/min]
p [bar]

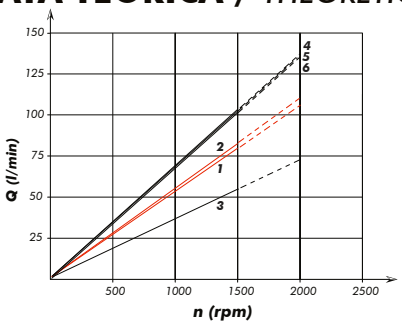


MOMENTO PESO / *MASS MOMENT*



G=Peso in N
(Peso in Kg x 9.81)
G=*Weight in N*
(Weight in Kg x 9.81)

PORTATA TEORICA / *THEORETICAL FLOW*



La portata della pompa è pari alla somma delle portate delle 2 mandate.
The total pump flow is given by the sum of the flow of each pressure port.

SCELTA DEL TUBO DI ASPIRAZIONE
HOW TO CHOOSE THE SUCTION PIPE SIZE

Q Portata ***Flow*** l/min	**∅ interno min. tubo** ***Min pipe diam.*** mm	inch	**Velocità flusso** ***Flow speed*** (m/s)
30	32	1" 1/4	0,62
40	32		0,83
50	38	1" 1/2	0,74
60	38		0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45		0,94
100	50	2"	0,85
110	50		0,93
120	60	2" 3/8	0,71
130	60		0,77
140	60		0,83
160	63	2" 1/2	0,86
170	63		0,91
180	63		0,96

Per garantire corrette condizioni di aspirazione la velocità del flusso non deve superare 1 m/sec.
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

Kit guarnizioni / *Seal Kit*
108-903-53533

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