

# POMPE A PISTONI AD ASSE INCLINATO DOPPIA MANDATA

## DOUBLE DELIVERY BENT AXIS PISTON PUMPS

### "TWIN FLOW"

**CODICE FAMIGLIA**  
FAMILY CODE

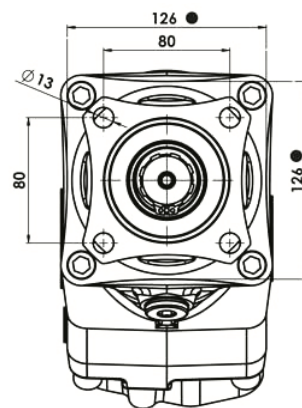
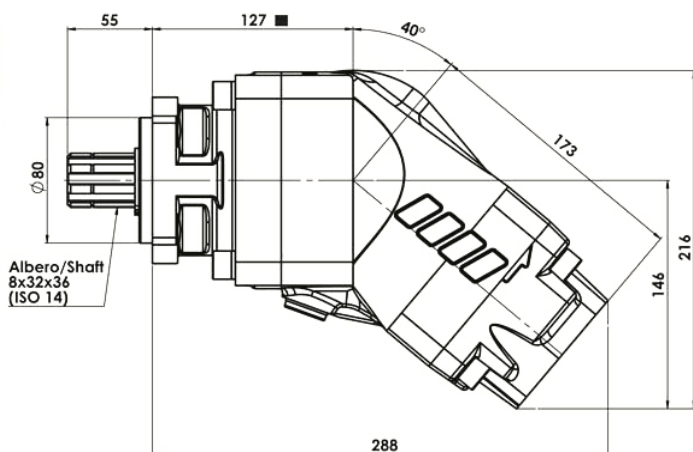
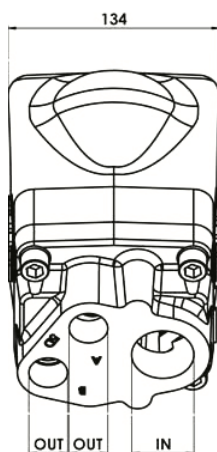
# 604-001

Flangia/Flange  
Albero/Shaft  
Cilin./Displ.

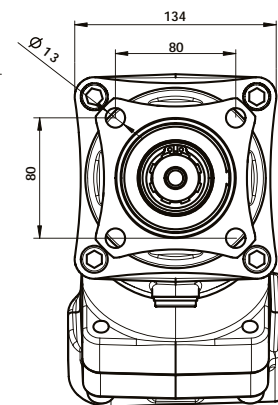
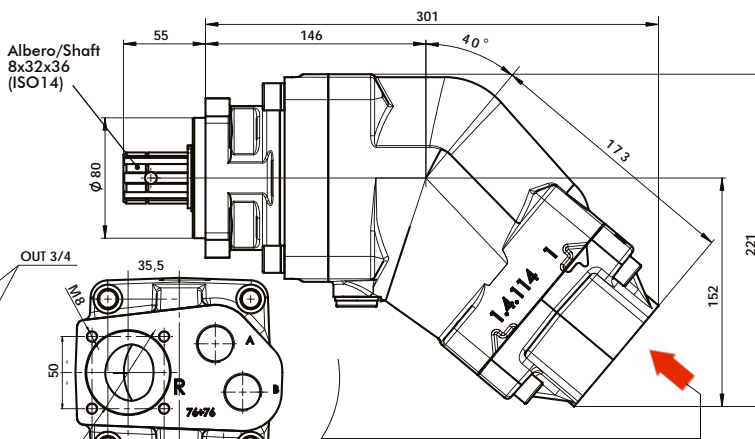
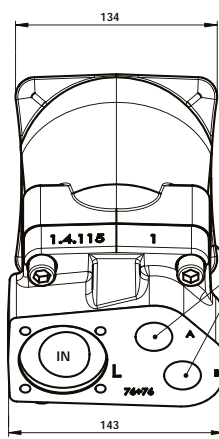
**ISO**  
**ISO14 8x32x36**  
see table



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 / Unidirectional			
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.					



**INGOMBRO/ DIMENSIONS**  
53+53 70+35  
70+53



**INGOMBRO/ DIMENSIONS**  
76+76

Tipo pompa / Pump type	Rotazione Rotation	Codice / Code	Corpo posteriore* Rear cover*	IN ISO 228	OUT ISO 228	Peso Weight
<b>TWIN FLOW 53+53</b>	Destra / Right	<b>604-001-15053</b>	500-029-95307	G 1 1/4"	G 3/4"	21,5 kg
	Sinistra / Left	<b>604-001-15059</b>	500-029-95405			
<b>TWIN FLOW 70+35</b>	Destra / Right	<b>604-001-17033</b>	500-029-97001	G 1 1/4"		21,5 kg
	Sinistra / Left	<b>604-001-17039</b>	500-029-97109			
<b>TWIN FLOW 70+53</b>	Destra / Right	<b>604-001-17053</b>	500-029-97403	G 1 1/2"	21,7 kg	
	Sinistra / Left	<b>604-001-17059</b>	500-029-97501			
<b>TWIN FLOW 76+76</b>	Destra / Right	<b>604-001-17673</b>	500-029-97618	Ø58 *	21,5 kg	
	Sinistra / Left	<b>604-001-17679</b>	500-029-97609			

\* 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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O.M.F.B. S.p.A. Hydraulic Components  
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Fax: +39.030.9839207-208 Internet:www.omfb.it e-mail:contatti@omfb.it

**COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= IATF 16949 =**

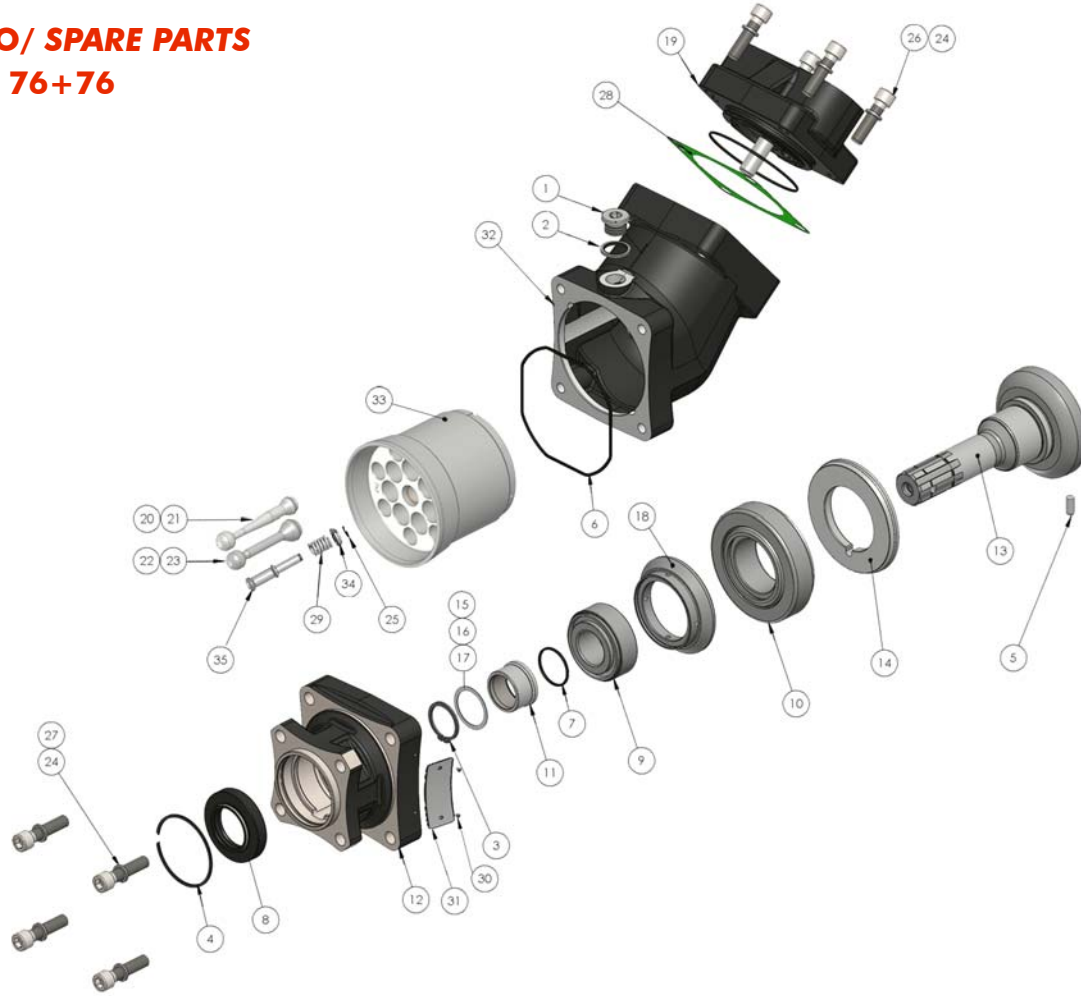


N°	TWIN FLOW 53+53	TWIN FLOW 70+35	TWIN FLOW 70+53	Codice P. Number	Descrizione Description	Q.	
1	.	.	.	502-005-00582	Vite TCE M 12x50 UNI 5931	Socket head capscrew M12x50 UNI 5931	4
2	.	.	.	501-008-00063	Rosetta elastica x M12 DIN 7980	Washer x M12 DIN 7980	4
3	.	.	.	501-000-02729	Anello elastico E-SB 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
	.	.	.	532-005-00123			
23	.	.	.	532-005-00258	Pistone sferico	Piston	5
	.	.	.	532-005-00132			
	.	.	.	501-023-00126			
24	.	.	.	501-023-00019	Fasce elastiche	Spring rings	15
	.	.	.	501-023-00037			
	.	.	.	532-005-00132			
25	.	.	.	532-005-00123	Pistone sferico	Piston	5
	.	.	.	532-005-00034			
	.	.	.	501-023-00037			
	.	.	.	501-023-00126			
26	.	.	.	501-023-00037	Fasce elastiche	Spring rings	15
	.	.	.	501-023-00126			
27	.	.	.	500-029-16505	Gruppo cilindri sede pistoni	Piston barrel assembly	1
	.	.	.	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
	.	.	.	500-029-95307 DX (R)			
	.	.	.	500-029-95405 SX (L)			
33	.	.	.	500-029-97001 DX (R)	Gruppo corpo posteriore	Rear cover assembly	1
	.	.	.	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	507-000-00283	Guarnizione piatta	Gasket	1
	A	A	A	507-000-00407			

A = alternative

ESPLOSO/ SPARE PARTS

76+76



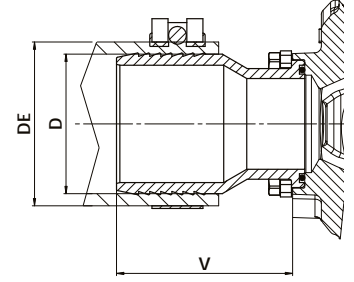
TWIN FLOW 76+76				
N°	Codice / P. Number	Descrizione / Description		Q.
1	115-006-00135	Tappo cieco 1/2" DIN 908	Blank plug 1/2" DIN 908	1
2	116-009-10129	Rondella acciaio/gomma 1/2"	Copper washer 1/2"	1
3	501-000-01355	Anello seeger rinforzato AS 35x2.5 E.UNI 7436	Retaining ring AS 35x2.5 E.UNI 7436	1
4	501-000-02729	Anello elastico E-SB 72x2	Circlip E-SB 72x2	1
5	501-003-08202	Spina UNI 6364-A Ø8x20	Pin UNI 6364-A Ø8x20	1
6	506-000-12425	Guarnizione ORM 1240-25 HNBR	OR M 1240-25 HNBR	1
7	506-000-13137	Guarnizione OR 3137 HNBR	O-Ring 3137 HNBR	1
8	506-000-24272	Paraolio HNBR	Oil seal HNBR	1
9	510-002-00364	Cuscinetto a rulli conici 35x72x28 EUR 33207	Tapered roller bearing 35x72x28 EUR 33207	1
10	510-002-55115	Cuscinetto a rulli conici 55x115x34 EUR. T7FC055	Tapered roller bearing 55x115x34 EUR. T7FC055	1
11	511-002-00200	Bussola Øi 35	Bushing Øi 35	1
12	517-002-01047	Corpo anteriore	Front housing	1
13	522-005-00839	Albero	Shaft	1
14	525-011-00291	Corona dentata	Crown	1
15	529-007-00217	Rondella 45X35X0.1	Washer 45X35X0.1	1
16	529-007-00226	Rondella 45X35X0.2	Washer 45X35X0.2	1
17	529-007-01449	Rondella speciale	Special washer	1
18	530-004-00271	Anello distanziale cuscinetti	Bearing spacer ring	1
19	500-029-97609	Gruppo posteriore BENT AXIS SX. TWINFLOW	LEFT Piston barrel assembly	1
	500-029-97618	Gruppo posteriore BENT AXIS DX. TWINFLOW	RIGHT Piston barrel assembly	
20	501-023-00037	Fasce elastiche	Spring rings	21
21	532-005-00132	Pistone sferico Ø19	Piston	7
22	501-023-00046	Fasce elastiche	Spring rings	21
23	532-005-00310	Pistone sferico Ø15,5	Piston	7
24	501-008-00063	Rosetta elastica x M12 DIN 7980	Washer x M12 DIN 7980	8
25	501-015-00028	Anello seeger RS 6 DIN6799	Retaining ring RS 6 DIN6799	1
26	502-005-00573	Vite TCE M 12x45 UNI 5931	Socket head capscrew M12x45 UNI 5931	4
27	502-005-00582	Vite TCE M 12x50 UNI 5931	Socket head capscrew M12x50 UNI 5931	4
28	507-000-00612	Guarnizione corpo	Gasket	1
29	512-005-00812	Molla di carico corpo cilindri	Spring	1
30	513-000-00011	Chiodino fissaggio targhetta	Plate nail	2
31	513	Targhetta completa	Plate	1
32	517-002-01958	Corpo intermedio	Int. housing	1
33	500-029-16767	Gruppo cilindri sede pistoni	Piston barrel assembly	1
34	542-001-00171	Anello guida molla	Spring guide ring	1
35	542-001-00304	Perno guida molla	Shaft guide pin	1



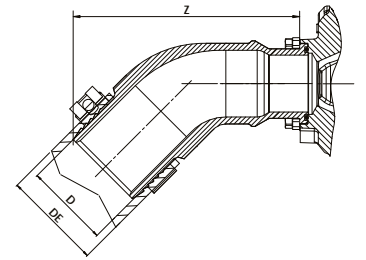
Raccordi validi **SOLO** per TWINFLOW 76+76 / Fittings suitable for TWINFLOW 76+76 **ONLY**

Codice fascicolo:997-400-60010 Rev: AL

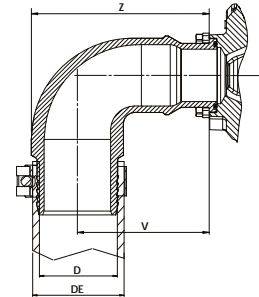
Codice Code	D	DE	V	Peso Weight
	mm	mm	mm	Kg
155-112-00507	50	60-63	59	0,59
155-112-00516	50	64-67	59	0,6
155-112-00605	60	68-73	79	0,77
155-112-00632	63	74-79	79	0,8
155-112-00767	76	86-91	94	1



Codice Code	D	DE	Z	Peso Weight
	mm	mm	mm	Kg
155-112-45639	63	74-79	163	1,75
155-112-45764	76	86-91	167	2,1



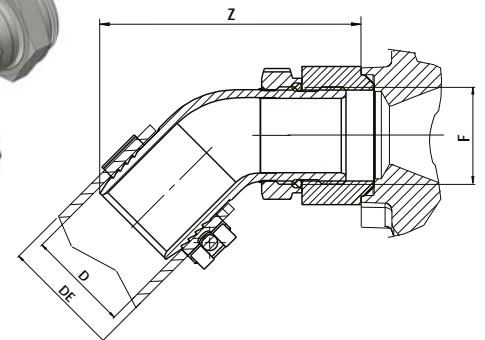
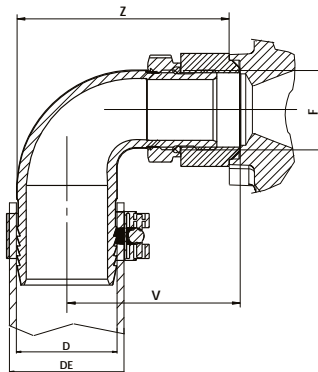
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	mm	mm	mm	mm	Kg
155-112-90634	63	74-79	103	139	1,9
155-112-90769	76	86-91	103	140	2,3



Data: Lunedì 08 ottobre 2018

**155-113-00408**

Kit flangia foro filettato G1-1/2, per montaggio raccordi GOLD.  
Flange kit G1-1/2 threaded hole, for mounting GOLD fittings.



Codice foglio:997-604-01540 Rev: AD

Codice Code	F	D	DE	V	Z	Peso Weight
	ISO 228	mm	mm	mm	mm	Kg
155-100-00592	G1-1/2	50	60-63	85	114	0,99
155-100-00609			64-67			1
155-100-00654		60	68-73	88	123	1,06

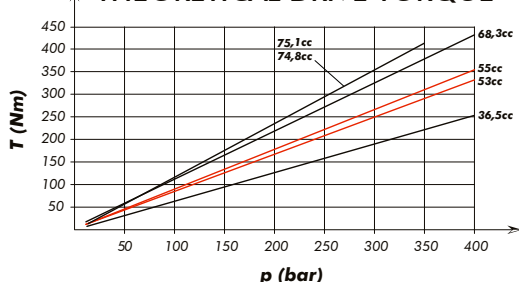
Codice Code	F	D	DE	Z	Peso Weight
	ISO 228	mm	mm	mm	Kg
155-090-00540	G1-1/2	50	60-63	133	0,79
155-090-00559			64-67		0,82
155-090-00611		60	68-73	153	1

CARATTERISTICHE TECNICHE FUNZIONAMENTO TECHNICAL FEATURES	53+53	70+35	70+53	76+76
Cilindrata A / Displacement (cc/rev)	53	36.5	53	75.1
Cilindrata B / Displacement (cc/rev)	55	68.3	66.2	74.8
Pressione massima continua / Max. continuous pressure (bar)	350	350	300	300
Pressione massima picco / Max. peak pressure (bar)	400	400	350	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	1800	1650	1500
Velocità massima con 1 porta in press. Max. speed with load on 1 output only (*)	2100	2100	2100	2100
Potenza massima continua / Max. continuous power (kW)	111	108	98	110
Potenza massima intermittente / Max. intermittent power (kW)	127	123	114	129

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.

**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.

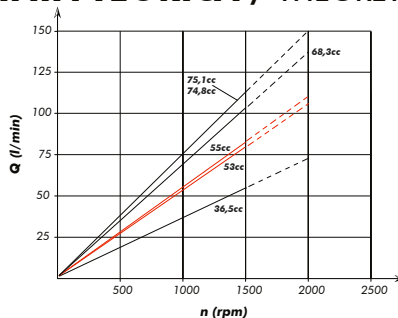
$$P_{TOT} = P_A + P_B = \frac{(p_A \cdot Q_A + p_B \cdot Q_B)}{612}$$

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

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

**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	Ø 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	2" 1/2	0,83
160	63		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 1m/sec.

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



**MOMENTO PESO / MASS MOMENT**

