

# POMPE A PISTONI AD ASSE INCLINATO DOPPIA MANDATA

**CODICE FAMIGLIA**  
FAMILY CODE

**604001**

**DOUBLE DELIVERY BENT  
AXIS PISTON PUMPS**

**"TWIN FLOW"**

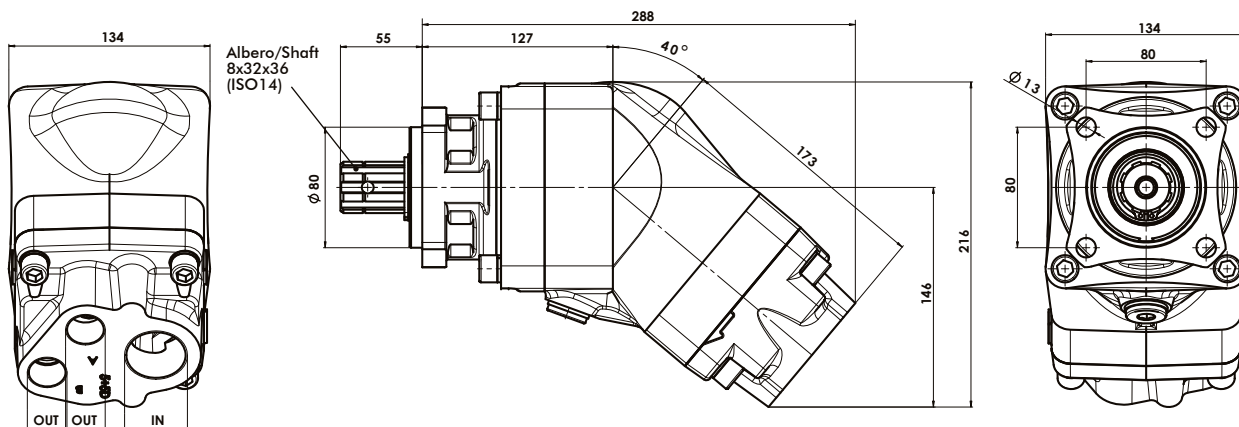
Flangia/Flange  
Albero/Shaft  
Cilin./Displ.

**ISO  
ISO14 8x32x36  
see table**



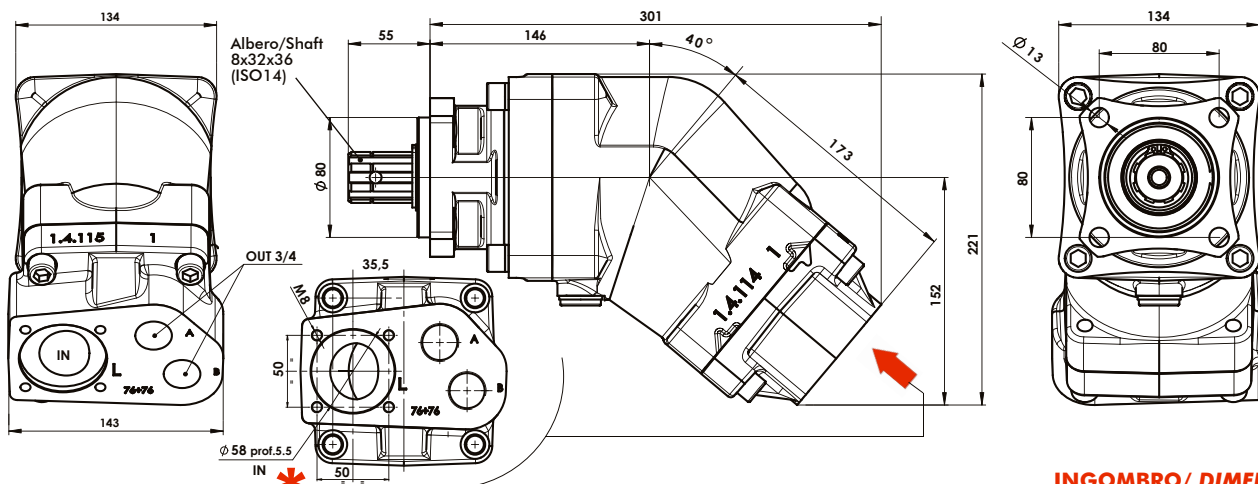
Fluido idraulico / Fluid	Minerale o sintetico compatibile con guarnizioni: Mineral or synthetic compatible with the following seals: FKM, FPM, HNBR				
Viscosità cinematica consigliata Kinematic viscosity suggested	T media ambiente (°C) Average ambient temp. (°C)	< -40	-40÷10	10÷35	> 35
	VG (cSt = mm <sup>2</sup> /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.					

99740060010



Pompa destra/Right pump

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



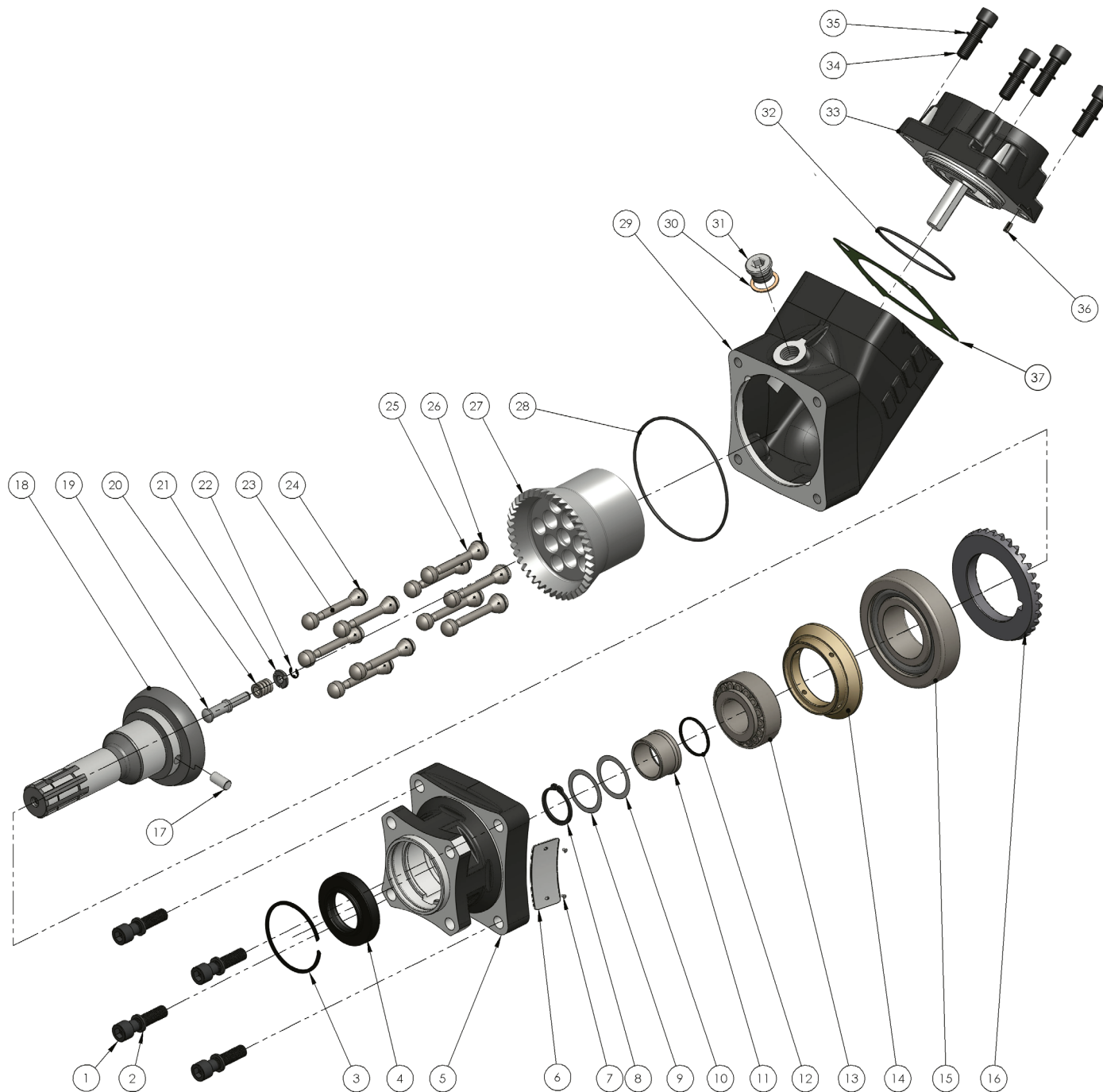
Pompa sinistra/Left pump

**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	60400115053	50002995307	G 1 1/4"	G 3/4"	21,5 kg
	Sinistra / Left	60400115059	50002995405			
<b>TWIN FLOW 70+35</b>	Destra / Right	60400117033	50002997001	G 1 1/4"		21,5 kg
	Sinistra / Left	60400117039	50002997109			
<b>TWIN FLOW 70+53</b>	Destra / Right	60400117053	50002997403	G 1 1/2"	22,1 kg	
	Sinistra / Left	60400117059	50002997501			
<b>TWIN FLOW 76+76</b>	Destra / Right	60400117673	50002997618	Ø58 *		24,4 kg
	Sinistra / Left	60400117679	50002997609			

\* Per modificare il senso di rotazione della pompa, da rotazione DESTRA IN SINISTRA, O VICEVERSA, è necessario sostituire il corpo posteriore.  
\* To change the pump rotation, the rear body must be replaced.

99760401540 Rev. AF



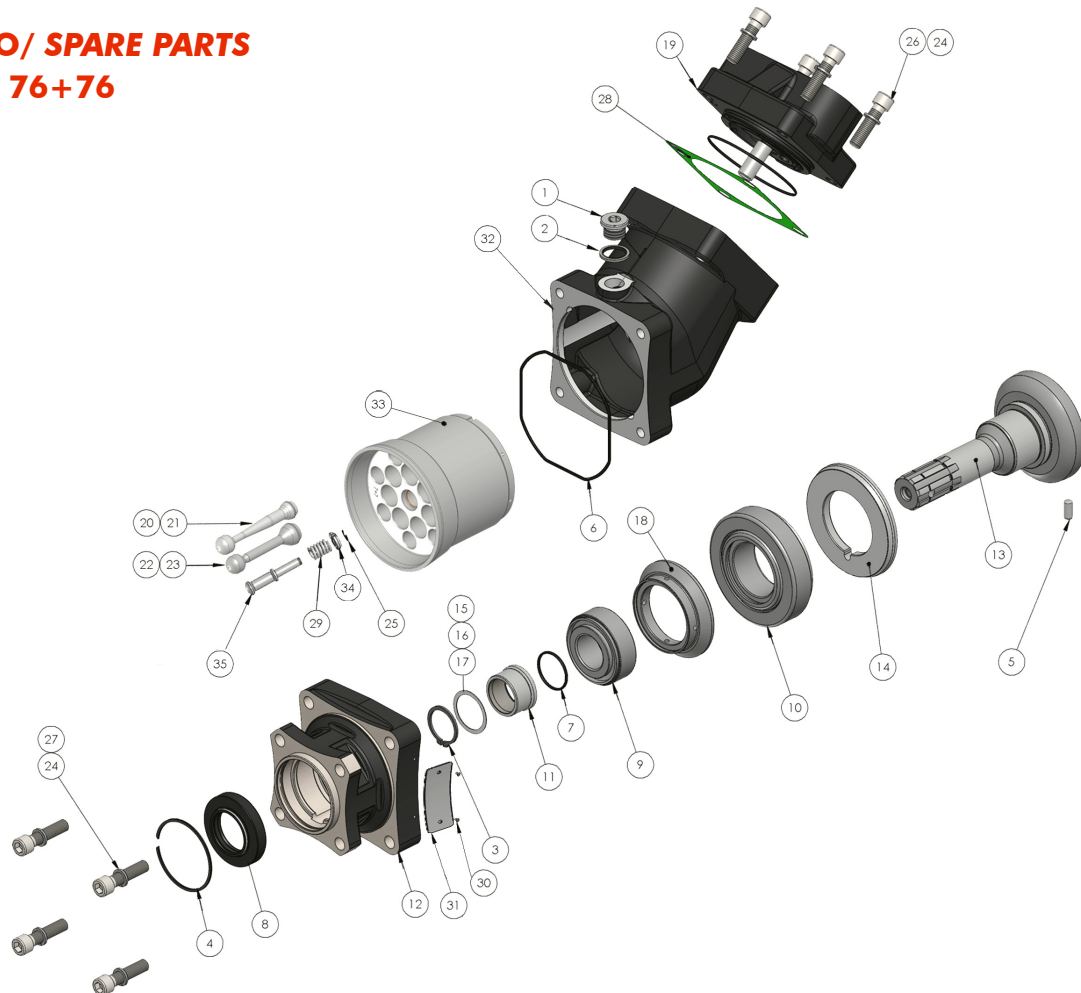
**ESPLOSO / SPARE PARTS**  
**53+53 70+35**  
**70+53**

N°	TWIN FLOW 53+53	TWIN FLOW 70+35	TWIN FLOW 70+53	Codice P. Number	Descrizione Description	Q.	
1	.	.	.	50200500582	Vite TCE M 12x50 UNI 5931	Socket head capscrew M12x50 UNI 5931	4
2	.	.	.	50100800063	Rosetta elastica x M12 DIN 7980	Washer x M12 DIN 7980	4
3	.	.	.	50100002729	Anello elastico E-SB 72x2	Circlip E-SB 72x2	1
4	.	.	.	50600024272	Paraolio HNBR	Oil seal HNBR	1
5	.	.	.	51700201047	Corpo anteriore	Front housing	1
6	.	.	.	513	Targhetta completa	Plate	1
7	.	.	.	51300000011	Chiodino fissaggio targhetta	Plate nail	2
8	.	.	.	50100001355	Anello seeger rinforzato AS 35x2.5 E.UNI 7436	Retaining ring AS 35x2.5 E.UNI 7436	1
9	.	.	.	52900700217	Rondella 45X35X0.1	Washer 45X35X0.1	1
10	.	.	.	52900700226	Rondella 45X35X0.2	Washer 45X35X0.2	1
11	.	.	.	51100200200	Bussola Øi 35	Bushing Øi 35	1
12	.	.	.	50600013137	Guarnizione OR 3137 HNBR	O-Ring 3137 HNBR	1
13	.	.	.	51000200364	Cuscinetto a rulli conici 35x72x28 EUR 33207	Tapered roller bearing 35x72x28 EUR 33207	1
14	.	.	.	53000400271	Anello distanziale cuscinetti	Bearing spacer ring	1
15	.	.	.	51000255115	Cuscinetto a rulli conici 55x115x34 EUR. T7FC055	Tapered roller bearing 55x115x34 EUR. T7FC055	1
16	.	.	.	52501100291	Corona dentata	Crown	1
17	.	.	.	50100308202	Spina UNI 6364-A Ø8x20	Pin UNI 6364-A Ø8x20	1
18	.	.	.	52200500571	Albero	Shaft	1
19	.	.	.	52200500599			
20	.	.	.	52200500580			
21	.	.	.	54200100304	Perno guida molla	Shaft guide pin	1
22	.	.	.	51200500812	Molla di carico corpo cilindri	Spring	1
23	.	.	.	54200100171	Anello guida molla	Spring guide ring	1
24	.	.	.	50101500028	Anello seeger RS 6 DIN6799	Retaining ring RS 6 DIN6799	1
25	.	.	.	53200500123	Pistone sferico	Piston	5
26	.	.	.	53200500258			
27	.	.	.	53200500132			
28	.	.	.	50102300126	Fasce elastiche	Spring rings	15
29	.	.	.	50102300019			
30	.	.	.	50102300037			
31	.	.	.	53200500132	Pistone sferico	Piston	5
32	.	.	.	53200500034			
33	.	.	.	50102300037	Fasce elastiche	Spring rings	15
34	.	.	.	50102300126			
35	.	.	.	50002916505	Gruppo cilindri sede pistoni	Piston barrel assembly	1
36	.	.	.	50002916703			
37	.	.	.	50002916705			
38	.	.	.	50600012425	Guarnizione ORM 1240-25 HNBR	OR M 1240-25 HNBR	1
39	.	.	.	51700201930	Corpo intermedio	Int. housing	1
40	.	.	.	11600910129	Rondella acciaio/gomma 1/2"	Copper washer 1/2"	1
41	.	.	.	11500600135	Tappo cieco 1/2" DIN 908	Blank plug 1/2" DIN 908	1
42	.	.	.	50600018525	Guarnizione ORM 850-25 HNBR	OR M 850-25 HNBR	1
43	.	.	.	50002995307 DX (R)			
44	.	.	.	50002995405 SX (L)			
45	.	.	.	50002997001 DX (R)			
46	.	.	.	50002997109 SX (L)			
47	.	.	.	50002997403 DX (R)			
48	.	.	.	50002997501 SX (L)			
49	.	.	.	50200500573	Vite TCE M 12x45 UNI 5931	Socket head capscrew M12x45 UNI 5931	4
50	.	.	.	50100800063	Rosetta elastica x M12 DIN 7980	Washer x M12 DIN 7980	4
51	.	.	.	50100480123	Spina Ø 5X10 UNI 6873	Pin Ø 5X10 UNI 6873	1
52	A	A	A	50700000283	Guarnizione piatta 0,3mm	Gasket 0,3mm	1
53	A	A	A	50700000407	Guarnizione piatta 0,5mm	Gasket 0,5mm	1

A = alternative

ESPLOSO/ SPARE PARTS

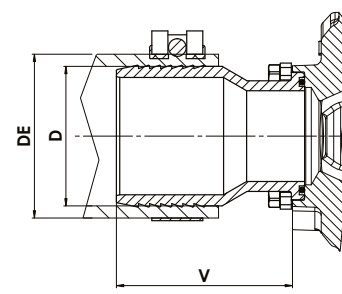
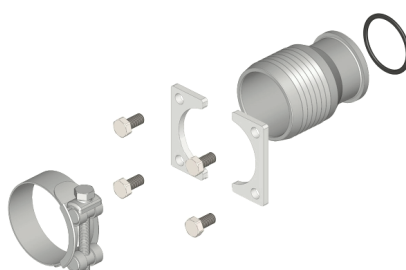
76+76



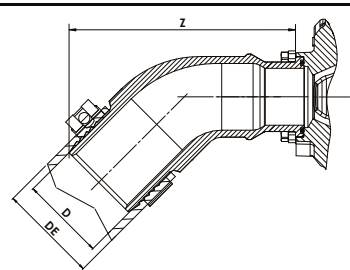
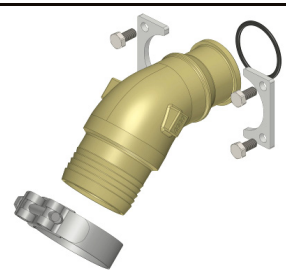
TWIN FLOW 76+76				
N°	Codice / P. Number	Descrizione / Description		Q.
1	11500600135	Tappo cieco 1/2" DIN 908	Blank plug 1/2" DIN 908	1
2	11600910129	Rondella acciaio/gomma 1/2"	Copper washer 1/2"	1
3	50100001355	Anello seeger rinforzato AS 35x2.5 E.UNI 7436	Retaining ring AS 35x2.5 E.UNI 7436	1
4	50100002729	Anello elastico E-SB 72x2	Circlip E-SB 72x2	1
5	50100308202	Spina UNI 6364-A Ø8x20	Pin UNI 6364-A Ø8x20	1
6	50600012425	Guarnizione ORM 1240-25 HNBR	OR M 1240-25 HNBR	1
7	50600013137	Guarnizione OR 3137 HNBR	O-Ring 3137 HNBR	1
8	50600024272	Paraolio HNBR	Oil seal HNBR	1
9	51000200364	Cuscinetto a rulli conici 35x72x28 EUR 33207	Tapered roller bearing 35x72x28 EUR 33207	1
10	51000255115	Cuscinetto a rulli conici 55x115x34 EUR. T7FC055	Tapered roller bearing 55x115x34 EUR. T7FC055	1
11	51100200200	Bussola Øi 35	Bushing Øi 35	1
12	51700201047	Corpo anteriore	Front housing	1
13	52200500839	Albero	Shaft	1
14	52501100291	Corona dentata	Crown	1
15	52900700217	Rondella 45X35X0.1	Washer 45X35X0.1	1
16	52900700226	Rondella 45X35X0.2	Washer 45X35X0.2	1
17	52900701449	Rondella speciale	Special washer	1
18	53000400271	Anello distanziale cuscinetti	Bearing spacer ring	1
19	50002997609	Gruppo posteriore BENT AXIS SX. TWINFLOW	LEFT Piston barrel assembly	1
	50002997618	Gruppo posteriore BENT AXIS DX. TWINFLOW	RIGHT Piston barrel assembly	
20	50102300037	Fasce elastiche	Spring rings	21
21	53200500132	Pistone sferico Ø19	Piston	7
22	50102300046	Fasce elastiche	Spring rings	21
23	53200500310	Pistone sferico Ø15,5	Piston	7
24	50100800063	Rosetta elastica x M12 DIN 7980	Washer x M12 DIN 7980	8
25	50101500028	Anello seeger RS 6 DIN6799	Retaining ring RS 6 DIN6799	1
26	50200500573	Vite TCE M 12x45 UNI 5931	Socket head capscrew M12x45 UNI 5931	4
27	50200500582	Vite TCE M 12x50 UNI 5931	Socket head capscrew M12x50 UNI 5931	4
28	50700000612	Guarnizione corpo	Gasket	1
29	51200500812	Molla di carico corpo cilindri	Spring	1
30	51300000011	Chiodino fissaggio targhetta	Plate nail	2
	513	Targhetta completa	Plate	1
32	51700201958	Corpo intermedio	Int. housing	1
33	50002916767	Gruppo cilindri sede pistoni	Piston barrel assembly	1
34	54200100171	Anello guida molla	Spring guide ring	1
35	54200100304	Perno guida molla	Shaft guide pin	1

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

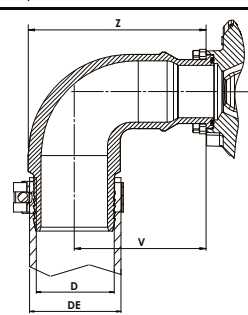
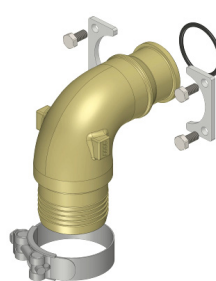
Codice Code	D	DE	V	Peso Weigth
	mm	mm	mm	Kg
15511200507	50	60-63	59	0,59
15511200516	50	64-67	59	0,6
15511200605	60	68-73	79	0,77
15511200632	63	74-79	79	0,8
15511200767	76	86-91	94	1



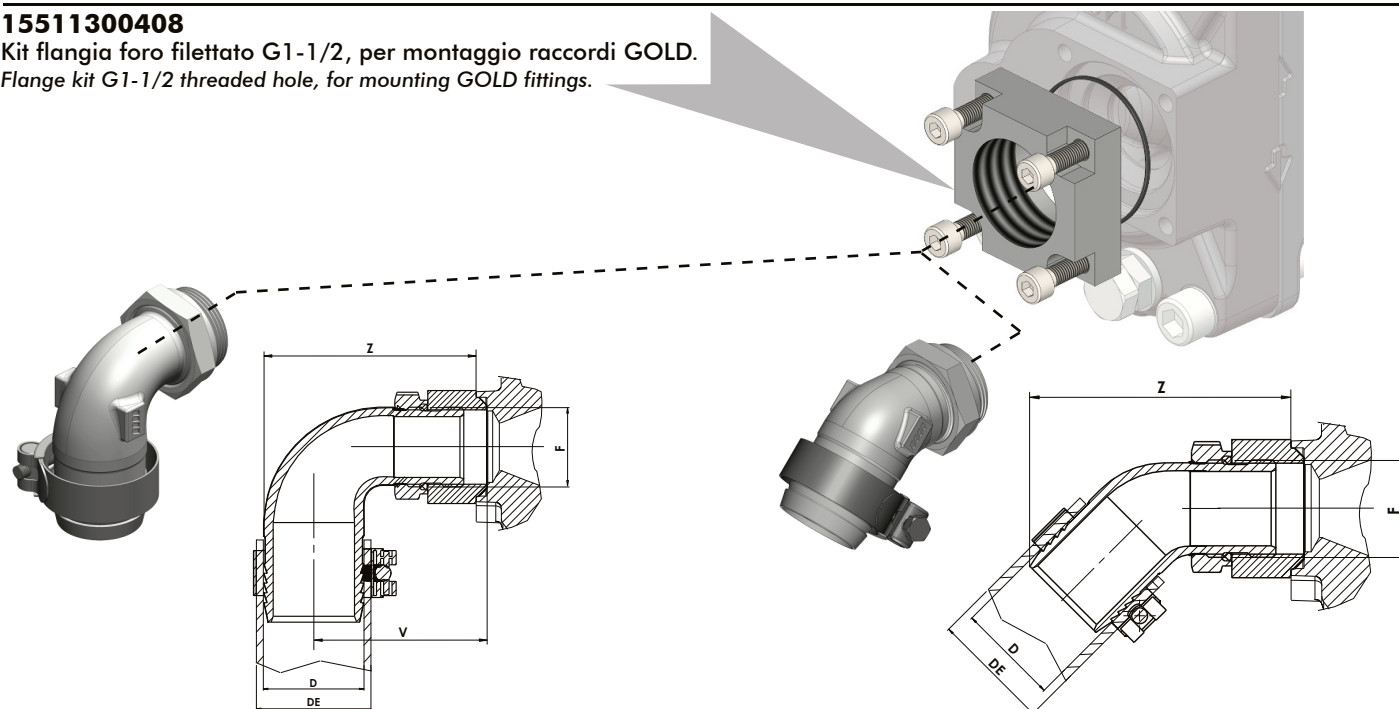
Codice Code	D	DE	Z	Peso Weigth
	mm	mm	mm	Kg
15511245639	63	74-79	163	1,75
15511245764	76	86-91	167	2,1



Codice Code	D	DE	V	Z	Peso Weigth
	mm	mm	mm	mm	Kg
15511290634	63	74-79	103	139	1,9
15511290769	76	86-91	103	140	2,3



**15511300408**  
 Kit flangia foro filettato G1-1/2, per montaggio raccordi GOLD.  
 Flange kit G1-1/2 threaded hole, for mounting GOLD fittings.



Codice Code	F	D	DE	V	Z	Peso Weigth
	ISO 228	mm	mm	mm	mm	Kg
15510000592	G1-1/2	50	60-63	85	114	0,99
15510000609			64-67			1
15510000654		60	68-73	88	123	1,06

Codice Code	F	D	DE	Z	Peso Weigth
	ISO 228	mm	mm	mm	Kg
15509000540	G1-1/2	50	60-63	133	0,79
15509000559			64-67		0,82
15509000611		60	68-73	153	1

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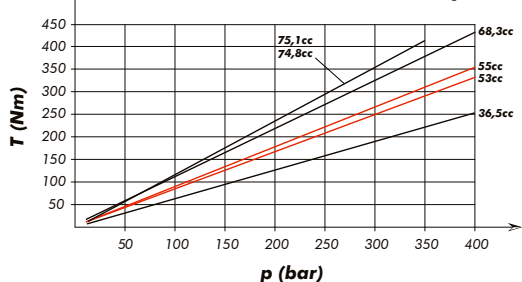
99760401540 Rev: AF

<b>CARATTERISTICHE TECNICHE FUNZIONAMENTO</b> <b>TECHNICAL FEATURES</b>	<b>53+53</b>	<b>70+35</b>	<b>70+53</b>	<b>76+76</b>
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.

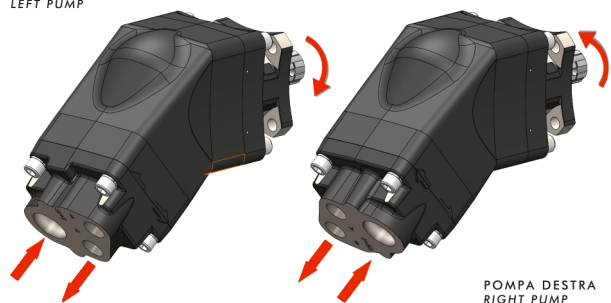
### POTENZA TEORICA ASSORBITA THEORETICAL POWER INPUT

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.

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

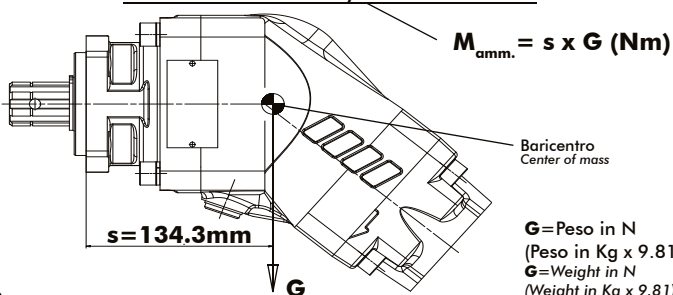
P [kW]  
Q [l/min]  
p [bar]

POMPA SINISTRA  
LEFT PUMP



POMPA DESTRA  
RIGHT PUMP

### MOMENTO PESO / MASS MOMENT



Алматы (7273)495-231  
Ангарск (3955)60-70-56  
Архангельск (8182)63-90-72  
Астрахань (8512)99-46-04  
Барнаул (3852)73-04-60  
Белгород (4722)40-23-64  
Благовещенск (4162)22-76-07  
Брянск (4832)59-03-52  
Владивосток (423)249-28-31  
Владикавказ (8672)28-90-48  
Владимир (4922)49-43-18  
Волгоград (844)278-03-48  
Вологда (8172)26-41-59  
Воронеж (473)204-51-73  
Екатеринбург (343)384-55-89

Россия +7(495)268-04-70

Иваново (4932)77-34-06  
Ижевск (3412)26-03-58  
Иркутск (395)279-98-46  
Казань (843)206-01-48  
Калининград (4012)72-03-81  
Калуга (4842)92-23-67  
Кемерово (3842)65-04-62  
Киров (8332)68-02-04  
Коломна (4962)23-41-49  
Кострома (4942)77-07-48  
Краснодар (861)203-40-90  
Красноярск (391)204-63-61  
Курск (4712)77-13-04  
Курган (3522)50-90-47  
Липецк (4742)52-20-81

Магнитогорск (3519)55-03-13  
Москва (495)268-04-70  
Мурманск (8152)59-64-93  
Набережные Челны (8552)20-53-41  
Нижний Новгород (831)429-08-12  
Новокузнецк (3843)20-46-81  
Новый Уренгой (3496)41-32-12  
Новосибирск (383)227-86-73  
Омск (3812)21-46-40  
Орел (4862)44-53-42  
Оренбург (3532)37-68-04  
Пенза (8412)22-31-16  
Петрозаводск (8142)55-98-37  
Псков (8112)59-10-37  
Пермь (342)205-81-47

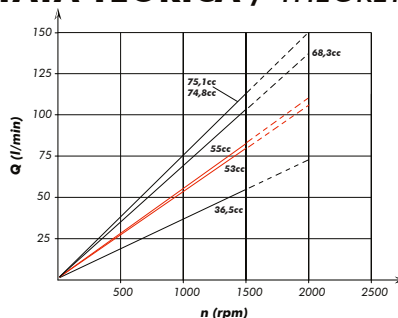
Казахстан +7(7172)727-132

Ростов-на-Дону (863)308-18-15  
Рязань (4912)46-61-64  
Самара (846)206-03-16  
Санкт-Петербург (812)309-46-40  
Саратов (845)249-38-78  
Севастополь (8692)22-31-93  
Саранск (8342)22-96-24  
Симферополь (3652)67-13-56  
Смоленск (4812)29-41-54  
Сочи (4862)225-72-31  
Ставрополь (8652)20-65-13  
Сургут (3462)77-98-35  
Сыктывкар (8212)25-95-17  
Тамбов (4752)50-40-97  
Тверь (4822)63-31-35

Киргизия +996(312)96-26-47

Тольятти (8482)63-91-07  
Томск (3822)98-41-53  
Тула (4872)33-79-87  
Тюмень (3452)66-21-18  
Ульяновск (8422)24-23-59  
Улан-Удэ (3012)59-97-51  
Уфа (347)229-48-12  
Хабаровск (4212)92-98-04  
Чебоксары (8352)28-53-07  
Челябинск (351)202-03-61  
Череповец (8202)49-02-64  
Чита (3022)38-34-83  
Якутск (4112)23-90-97  
Ярославль (4852)69-52-93

### 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.		Velocità flusso Flow speed (m/s)
	mm	inch	
30	32	1" 1/4	0,62
40	32	1" 1/4	0,83
50	38	1" 1/2	0,74
60	38	1" 1/2	0,88
70	40	1" 9/16	0,93
80	45	1" 3/4	0,84
90	45	1" 3/4	0,94
100	50	2"	0,85
110	50	2"	0,93
120	60	2" 3/8	0,71
130	60	2" 3/8	0,77
140	60	2" 3/8	0,83
160	63	2" 1/2	0,86
170	63	2" 1/2	0,91
180	63	2" 1/2	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 10890353533