Pompe a pistoni ad asse inclinato doppia mandata
Double delivery bent axis piston pumps
"TWIN FLOW"

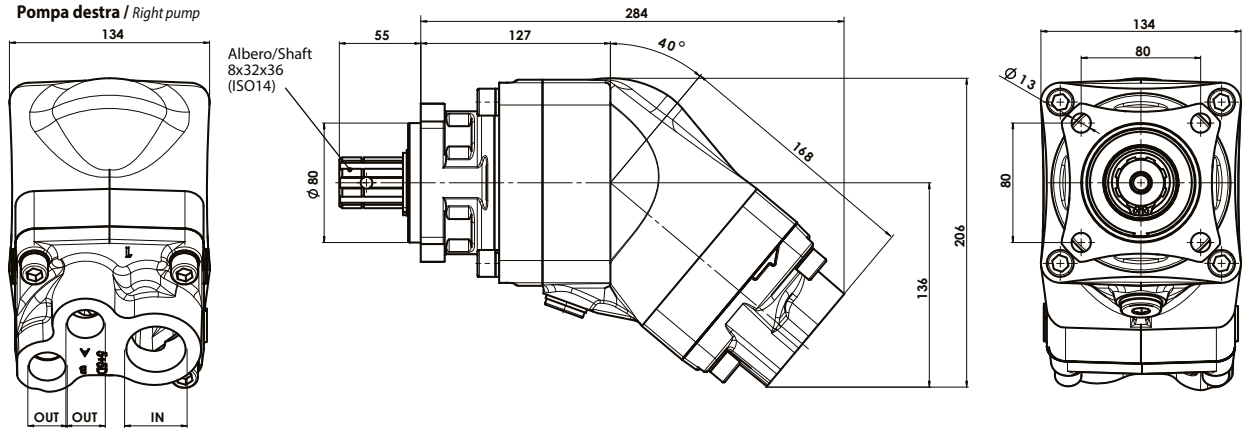
Fam. **604001**

Flangia/*Flange* **ISO**
Albero/*Shaft* **ISO14 8x32x36**
Cilindrata/*Displacement* **vedi tabella/*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.*					

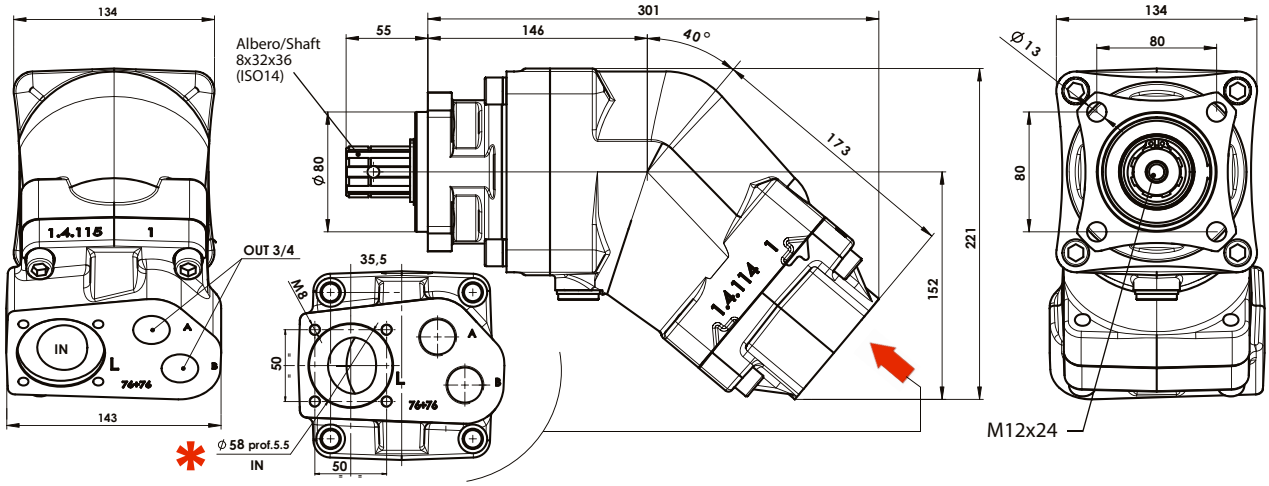
Ingombro / *Dimension* 53+35 53+53 70+35 70+53

Pompa destra / *Right pump*



Ingombro / *Dimension* 76+76

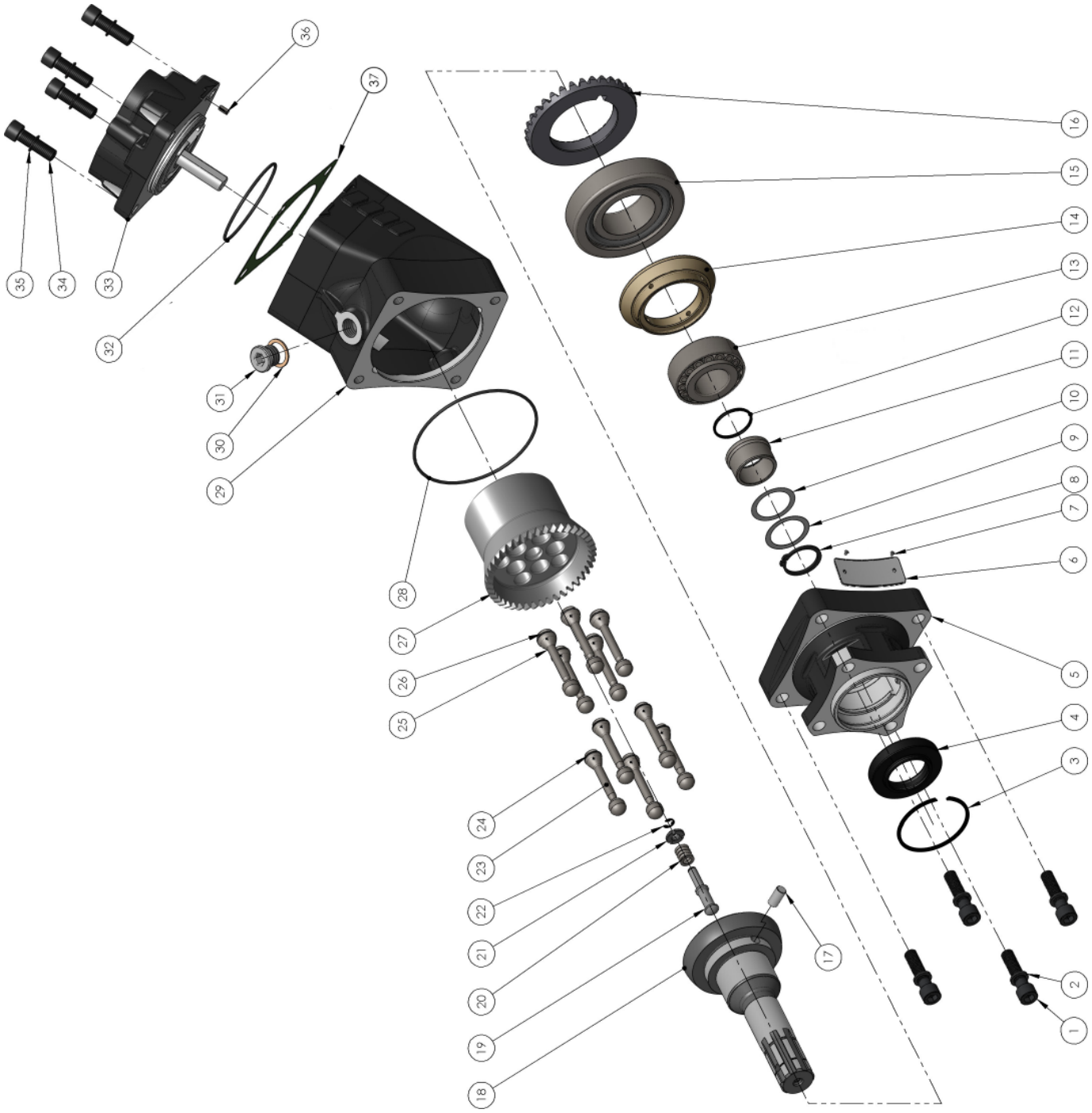
Pompa sinistra / *Left pump*



Tipo pompa *Pump type*	Rotazione *Rotation*	Codice *Code*	Gruppo corpo posteriore* *Rear cover assembly**	IN *ISO 228*	OUT *ISO 228*	Peso *Weight*
TWIN FLOW 53+35	Destra / *Right*	60400115033	50002995101	G 1 1/4"	G 3/4"	19,5 kg
	Sinistra / *Left*	60400115039	50002995209			
TWIN FLOW 53+53	Destra / *Right*	60400115053	50002995307	G 1 1/4"		20 kg
	Sinistra / *Left*	60400115059	50002995405			
TWIN FLOW 70+35	Destra / *Right*	60400117033	50002997001	G 1 1/4"		20,5 kg
	Sinistra / *Left*	60400117039	50002997109			
TWIN FLOW 70+53	Destra / *Right*	60400117053	50002997403	G 1 1/2"		21 kg
	Sinistra / *Left*	60400117059	50002997501			
TWIN FLOW 76+76	Destra / *Right*	60400117673	50002997618	Ø58 *		24,5 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.*

Esploso / *Spare parts* **53+53 70+35 70+53**



OMFB HYDRAULIC COMPONENTS

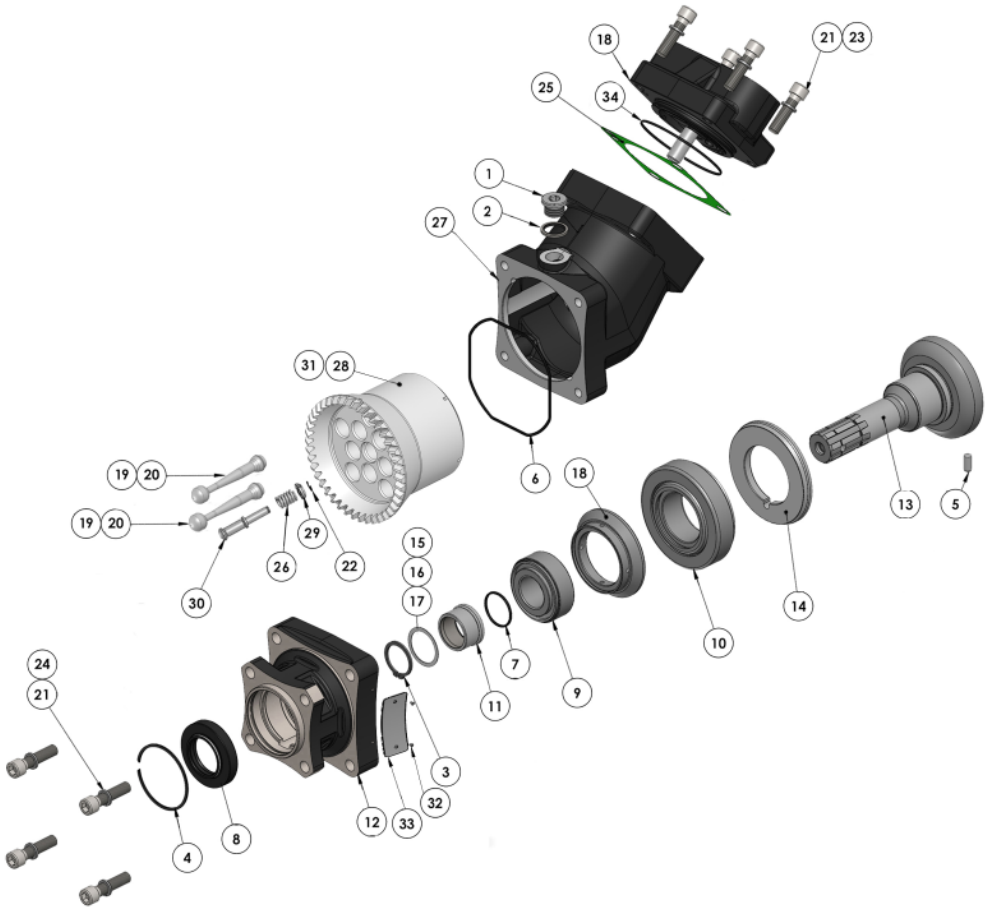
Pompe a pistoni ad asse inclinato doppia mandata
Double delivery bent axis piston pumps
"TWIN FLOW"

Fam. **604001**

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
			•	52200500599			
		•		52200500580			
19	•	•	•	54200100304	Perno guida molla	*Shaft guide pin*	1
20	•	•	•	51200500812	Molla di carico corpo cilindri	*Spring*	1
21	•	•	•	54200100171	Anello guida molla	*Spring guide ring*	1
22	•	•	•	50101500028	Anello seeger RS 6 DIN6799	*Retaining ring RS 6 DIN6799*	1
23	•			53200500123	Pistone sferico	*Piston*	5
			•	53200500258			
		•		53200500132			
24	•			50102300126	Fasce elastiche	*Spring rings*	15
			•	50102300019			
		•		50102300037			
25	•			53200500132	Pistone sferico	*Piston*	5
		•		53200500123			
			•	53200500034			
26	•		•	50102300037	Fasce elastiche	*Spring rings*	15
		•		50102300126			
27	•			50002916505	Gruppo cilindri sede pistoni	*Piston barrel assembly*	1
		•		50002916703			
			•	50002916705			
28	•	•	•	50600012425	Guarnizione ORM 1240-25 HNBR	*OR M 1240-25 HNBR*	1
29	•	•	•	51700201930	Corpo intermedio	*Int. housing*	1
30	•	•	•	11600910129	Rondella acciaio/gomma 1/2"	*Copper washer 1/2"*	1
31	•	•	•	11500600135	Tappo cieco 1/2" DIN 908	*Blank plug 1/2" DIN 908*	1
32	•	•	•	50600018525	Guarnizione ORM 850-25 HNBR	*OR M 850-25 HNBR*	1
33	•			50002995307 DX (Right)	Gruppo corpo posteriore	*Rear cover assembly*	1
	•			50002995405 SX (Left)			
		•		50002997001 DX (Right)			
		•		50002997109 SX (Left)			
			•	50002997403 DX (Right)			
			•	50002997501 SX (Left)			
34	•	•	•	50200500573	Vite TCE M 12x45 UNI 5931	*Socket head capscrew M12x45 UNI 5931*	4
35	•	•	•	50100800063	Rosetta elastica x M12 DIN 7980	*Washer x M12 DIN 7980*	4
36	•	•	•	50100480123	Spina Ø 5X10 UNI 6873	*Pin Ø 5X10 UNI 6873*	1
37	A	A	A	50700000283	Guarnizione piatta 0,3mm	*Gasket 0,3mm*	1
	A	A	A	50700000407	Guarnizione piatta 0,5mm	*Gasket 0,5mm*	

A = alternative

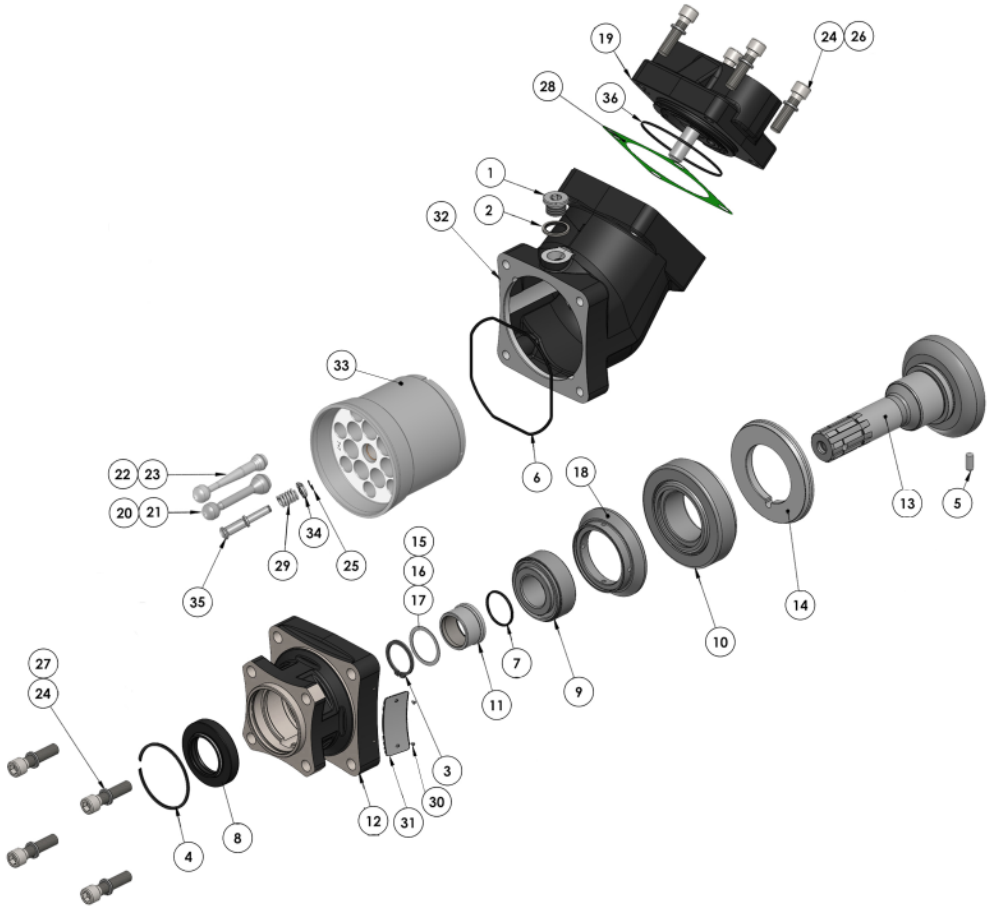
Esploso / *Spare parts* 53+35



TWIN FLOW 53+35				
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	52200500580	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	53000400271	Anello distanziale cuscinetti	*Bearing spacer ring*	1
18	50002995209	Gruppo corpo posteriore SX.	*LEFT rear cover assembly*	1
	50002995101	Gruppo corpo posteriore DX.	*RIGHT rear cover assembly*	
19	50102300126	Fasce elastiche	*Spring rings*	30
20	52300500123	Pistone sferico Ø17	*Piston*	10
21	50100800063	Rosetta elastica x M12 DIN 7980	*Washer x M12 DIN 7980*	8
22	50101500028	Anello seeger RS 6 DIN6799	*Retaining ring RS 6 DIN6799*	1
23	50200500573	Vite TCE M 12x45 UNI 5931	*Socket head capscrew M12x45 UNI 5931*	4
24	50200500582	Vite TCE M 12x50 UNI 5931	*Socket head capscrew M12x50 UNI 5931*	4
25	A 50700000283	Guarnizione corpo 0.3mm	*Gasket 0.3mm*	1
	A 50700000407	Guarnizione corpo 0.5mm	*Gasket 0.5mm*	1
26	51200500812	Molla di carico corpo cilindri	*Spring*	1
27	51700201930	Corpo intermedio	*Int. housing*	1
28	51700300887	Gruppo cilindri sede pistoni	*Piston barrel assembly*	1
29	54200100171	Anello guida molla	*Spring guide ring*	1
30	54200100304	Perno guida molla	*Shaft guide pin*	1
31	53300400337	Boccola DU 16x18x25	*Bushing 16x18x25*	2
32	51300000011	Chiodino fissaggio targhetta	*Plate nail*	2
33	513	Targhetta completa	*Plate*	1
34	50600018525	Guarnizione ORM 850-25 HNBR	*OR M 850-25 HNBR*	1

A = alternative

Esploso / *Spare parts* 76+76

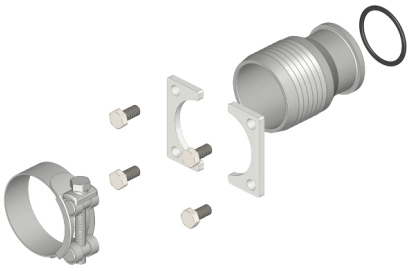


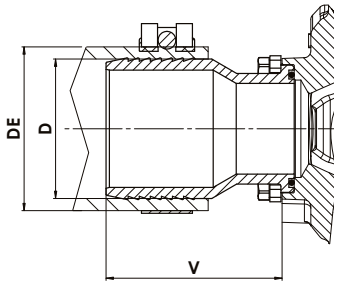
TWIN FLOW 76+76				
N°	**Codice** / *P. Number*	**Descrizione** / *Description*		**Q.**
1	11500600135	Tappo cieco 1/2" DIN 908	*Blank plug 1/2" DIN 908*	1
2	11600910129	Rondella acciaio/gomma 1/2"	*Copper washer 1/2"*	1
3	50100001355	Anello seeger rinforzato AS 35x2.5 E.UNI 7436	*Retaining ring AS 35x2.5 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 corpo posteriore SX.	*LEFT rear cover assembly*	1
	50002997618	Gruppo corpo posteriore DX.	*RIGHT rear cover 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	A 50700000612	Guarnizione corpo 0.3mm	*Gasket 0.3mm*	1
	A 50700000621	Guarnizione corpo 0.5mm	*Gasket 0.5mm*	1
29	51200500812	Molla di carico corpo cilindri	*Spring*	1
30	51300000011	Chiodino fissaggio targhetta	*Plate nail*	2
31	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
36	50600019622	Guarnizione ORM 0960-20 HNBR	*OR M 0960-20 HNBR*	1

A = alternative

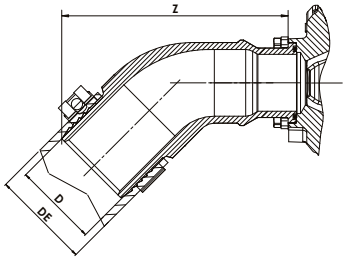
Raccordi validi SOLO per Twinflow 76+76 / *Fittings suitable for Twinflow 76+76 ONLY*

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

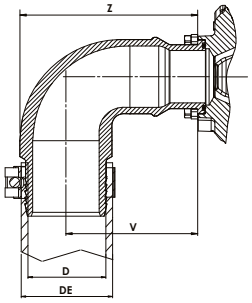




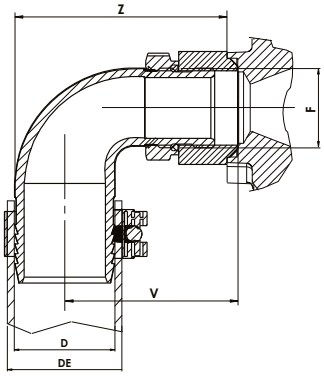
Codice *Code*	D	DE	Z	Peso *Weigth*
	mm	*mm*	*mm*	*Kg*
15511245639	63	74-79	163	1,75
15511245764	76	86-91	167	2,1

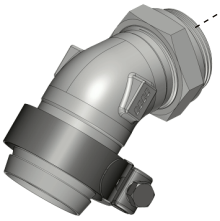


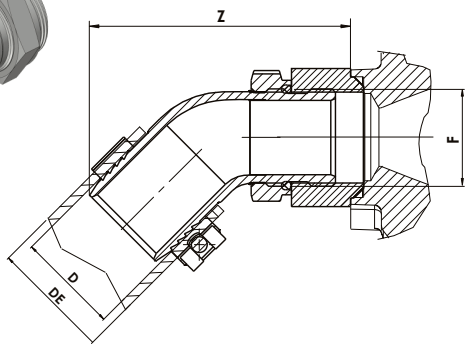
Codice *Code*	D	DE	V	Z	Peso *Weigth*
	mm	*mm*	*mm*	*mm*	*Kg*
15511290634	63	74-79	103	139	1,9
15511290769	76	86-91	103	140	2,3



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

Pompe a pistoni ad asse inclinato doppia mandata
Double delivery bent axis piston pumps
"TWIN FLOW"

Fam. **604001**

Caratteristiche tecniche funzionamento *Technical features*		**53+35**	**53+53**	**70+35**	**70+53**	**76+76**
Cilindrata A / *Displacement*	*(cc/rev)*	36,5	53	36,5	53	75,1
Cilindrata B / *Displacement*	*(cc/rev)*	55	55	68.3	66,2	74,8
Pressione massima continua / *Max. continuous pressure*	*(bar)*	350	350	350	300	300
Pressione massima picco / *Max. peak pressure*	*(bar)*	400	400	400	350	350
Velocità massima a vuoto / *Max. speed without load*	*(rpm)*	2550	2550	2550	2550	2550
Velocità massima con uscita A e B in press. *Max. speed with load on A and B outputs* (*)		1800	1800	1800	1650	1500
Velocità massima con 1 porta in press. *Max. speed with load on 1 output only* (*)		2100	2100	2100	2100	2100
Potenza massima continua / *Max. continuous power*	*(kW)*	94	111	108	98	110
Potenza massima intermittente / *Max. intermittent power*	*(kW)*	107	127	123	114	129

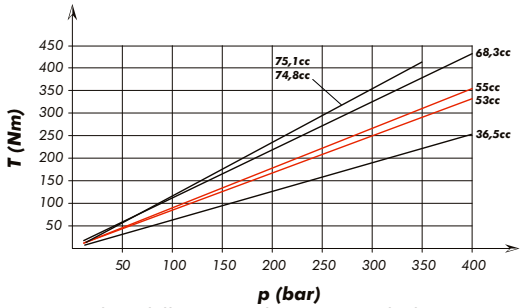
Pressione massima continua *Max. continuous pressure* (100%)
Pressione massima di punta *Max. peak pressure* (6 sec.max)

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

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.

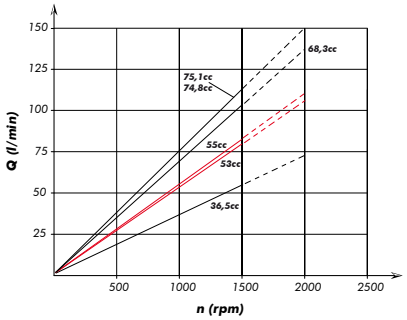
Pompa 70+53: solo con tubo diam. interno 63mm (2"1/2).
Pump 70+53: only with pipe internal diamater 63mm (2"1/2).

Coppia teorica assorbita / *Theortical 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.

Portata teorica / *Theoretical flow*



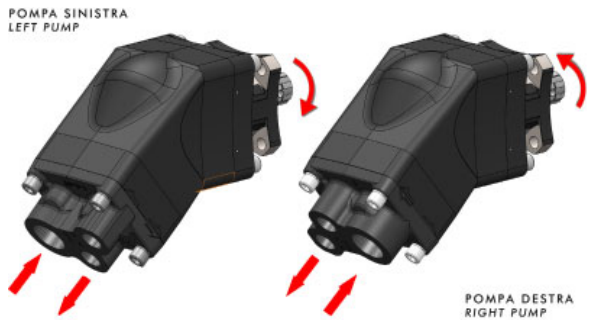
La portata della pompa è pari alla somma delle portate delle 2 mandate.
The total pump flow is given by the sum of the flow of each pressure port.

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.

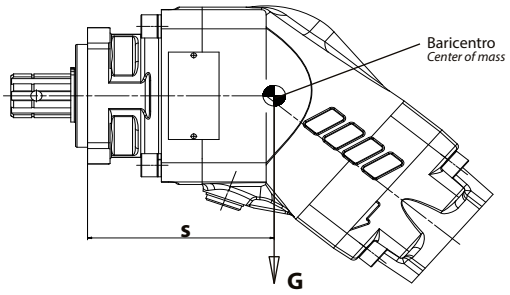
$$P_{TOT} = P_A + P_B = \frac{(p_A \cdot Q_A + p_B \cdot Q_B)}{612}$$

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



Momento peso / *Mass moment*

$M_{amm.} = s \times G$ (Nm)



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

	s
53+35	126,2
53+53	125,9
70+35	126
70+53	127,1
76+76	143

Scelta del tubo di aspirazione
How to choose the suction pipe size

Q Portata *Flow*	Ø interno min. tubo *Minimum pipe diameter*		Velocità flusso *Flow speed*
l/min	*mm*	*inch*	*(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 1m/sec.
To ensure the proper suction pipe size the flow speed should not exceed 1mt/sec.

Kit guarnizioni / *Seal Kit*

53+35 / 53+53 / 70+35 / 70+53	10890353533
76+76	10890376769