

PUMP INSTALLATION

MOUNTING

Flojet 2100 is a self-priming pump. It may be located several feet from the tank, above or below the liquid level. (It is not a submersible pump.) For vertical pump mounting be sure that the motor is located on top. This will prevent water from entering the motor chamber in event of a leak. Pump head may be rotated in 90° increments to simplify plumbing.

PLUMBING

For best performance, flexible 3/8-inch minimum hose is recommended instead of rigid piping at the pump. *Use plastic fittings at the pump port. Brass fittings will break pump housing if over tightened.* Do not install pump such that plumbing causes excessive stress on either port.

It is essential that a 20 mesh strainer or filter be installed in the tank or in the pump inlet line to keep large foreign particles out of the system. The use of check valves in the plumbing system may interfere with the priming ability of the pump. Check valves, if used, must have a cracking (opening) pressure of no more than 2 psi.

ELECTRICAL

On 115 Volt AC pumps, the black wire lead is common, the white is neutral and green/yellow is ground. On 230 Volt AC pumps, the brown wire lead is common, the blue is neutral and the green/yellow is ground. Never connect the green (or green/yellow) wire to a live terminal. On 12 and 24 Volt DC pumps, match red (+) and black (-) power leads with red and black leads on motor or switch.

The bypass and standard pump (no bypass, no switch) must be started and stopped by an electrical (on-off) switch.

OPERATION

Allow pump to prime with discharge line (or spray valve) open, to avoid airlock. Built-in bypass will allow the pump to bypass internally when discharge is restricted or closed and will stop bypassing when the discharge valve is open.

When liquid supply to pump is depleted pump will continue to operate. Running dry will not damage the pump. Turn off manually.

When the bypass type pump is allowed to run against a closed valve the internal bypass will automatically recirculate the flow within the pump at the preset bypass pressure.

Caution: The standard series pump is not equipped with a bypass or pressure switch. Allowed to run against a closed valve the excessive pressure developed by the pump will cause system or pump damage.

TROUBLESHOOTING

Failure to Prime—

Motor operates, but no pump discharge

- Restricted intake or discharge line. Open all line valves, check for "jammed" check valve poppets and clean clogged lines.
- Air leak in intake line.
- Punctured pump diaphragm.
- Defective pump check valve.
- Crack in pump housing.
- Debris in check valves.

Motor Fails to Turn On

- Pump or equipment not plugged in electrically. Loose wiring connection.
- Defective motor or rectifier.
- Frozen cam/bearing.

Low Flow and Pressure

- Air leak at pump intake.
- Accumulation of debris inside pump and plumbing.
- Worn pump bearing (excessive noise).
- Punctured pump diaphragm.
- Defective rectifier or motor
- Insufficient voltage to pump

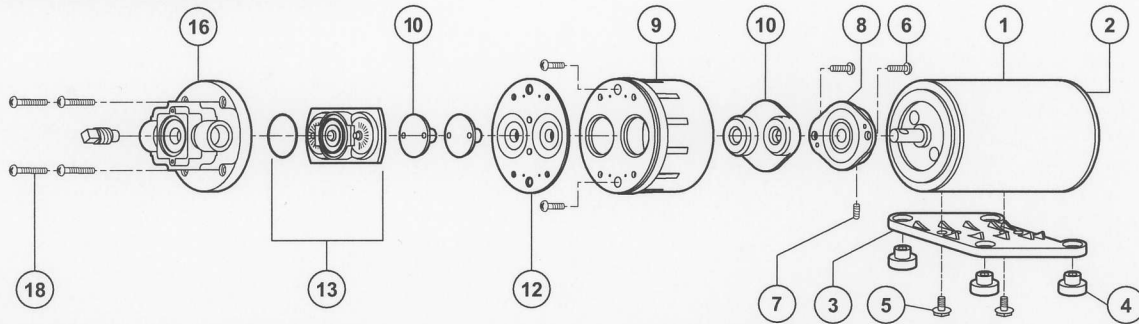
WARRANTY

FLOJET warrants this product to be free of defects in material and/or workmanship for a period of one year after purchase by the customer from FLOJET. During this one year warranty period, FLOJET will at its option, at no charge to the customer, repair or replace this product if found defective, with a new or reconditioned product, but not to include costs of removal or installation. No product will be accepted for return without a return material authorization number. All return goods must be shipped with transportation charges prepaid. This is only a summary of our Limited Warranty. For a copy of our complete warranty, please request Form No. 100-101.

RETURN PROCEDURE

Prior to returning any product to FLOJET, call customer service for an authorization number. This number must be written on the outside of the shipping package. Place a note inside the package with an explanation regarding the reason for return as well as the authorization number. Include your name, address and phone number.

2100 SERIES DEMAND PUMP



KEY	PART NO.	DESCRIPTION	QTY.
1	02029-000	Motor 115 Volt AC TENV	1
	02039-001	Motor 230 Volt AC TENV	
	02009-004	Motor 12 Volt DC TENV	
	02019-001	Motor 24 Volt DC TENV	
2	20115-111	Brush Endbell/Rect. Assy. (AC) TENV	1
	20115-219	Brush Endbell/Rect. Assy. (AC) TEFC N/BRG.	
	20115-116	Brush Endbell Assy. (DC) TENV	
	20115-213	Brush Endbell/Rect. Assy. (DC) TEFC N/BRG.	
	20252-500	Internal Rectifier w/Leads**	1
3	11028-101	Motor Base Plate Assy. (Plastic)	1
4	20132-000	Grommets	Set of 4
5	20131-002	Baseplate Screws	Set of 2

CAM BEARING / DIAPHRAGM KIT

	21004-100	#0 Cam, VITON ® Diaphragm	1
	21004-200	#0 Cam, BUNA Diaphragm	1
	21004-400	#0 Cam, SANTO Diaphragm	1
	21004-101	#1 Cam, VITON ® Diaphragm	1
Kit	21004-201	#1 Cam, BUNA Diaphragm	1
Incl.	21004-401	#1 Cam, SANTO Diaphragm	1
6	21004-102	#2 Cam, VITON ® Diaphragm	1
7	21004-202	#2 Cam, BUNA Diaphragm	1
8	21004-402	#2 Cam, SANTO Diaphragm	1
10	21004-104	#4 Cam, VITON ® Diaphragm	1
12	21004-204	#4 Cam, BUNA Diaphragm	1
	21004-404	#4 Cam, SANTO Diaphragm	1
	21004-105	#5 Cam, VITON ® Diaphragm	1
	21004-205	#5 Cam, BUNA Diaphragm	1
	21004-405	#5 Cam, SANTO Diaphragm	1

KEY	PART NO.	DESCRIPTION	QTY.
9	20428-100	Bearing Cover Poly Pro	1
*13		Check Valve Assy. (Single Bypass)	1
	20028-002	SANTOPRENE	
	20028-012	BUNA N/FAB	
	20028-045	VITON ®	
		Check Valve Assy (Double Bypass)	
	20028-003	SANTOPRENE	
	20028-022	BUNA N/FAB	
	20028-078	VITON ®	
		Check Valve Assy (Single Bypass Vented)	
	20028-048	SANTOPRENE	
	20028-079	VITON ®	
	20028-028	BUNA N/FAB	
*14		Bypass Springs & Poppet Kit	
*15	20378-000	For 30 PSI Bypass Nominal (Yellow)	Set of 2
	20378-001	For 50 PSI Bypass Nominal (Blue)	Set of 2
		Standard Bypass Springs shown above. For correct bypass spring part number for your model, request specific parts list, giving the complete pump model number.	
	20500-507	Pump Housing Poly Pro	1
16	21050**	Pump Head Ass'y. Use Pump Dash Number for Pumphead Number	
18	20131-001	Pump Screws	Set of 6
6-18		Brush Kit	Set of 2
	20097-000	For 115 & 230 Volt AC Motor	Set of 2
	20097-001	For 12 & 24 Volt DC Motor	Set of 2
	20132-005	Fan Shroud Kit	1

* Parts included In Pump Service Kit ** Not shown in diagram

® A registered trademark of E.I. duPont de Nemours & Co., Inc.

SERVICE TIPS

Refer to exploded view for key number. To disassemble, remove six pump head screws (18), rotate bearing cover (9) so drain notch is aligned with cam/bearing assembly set screw (7), loosen set screw (use 1/8" size Allen Wrench) and slide pump head off shaft. Pistons (10) should always be replaced when new diaphragm is installed. Replace worn parts and reassemble. Be sure raised side of diaphragm faces the motor and radiused corner of pistons face diaphragm. Hex stem of inner piston (10) must be aligned (free to enter) into Hex hole in outer piston set (10). Press pistons together by hand until pistons snap tight. Install flat head screws (6) through outer piston set and tighten screws partially, center pistons in diaphragm then tighten screws securely. Place cam bearing assembly over outer piston set, align locating pins in the holes in cam

bearing assembly. Install round head screws and tighten securely. (Torque to 18 inch pounds, coat motor shaft with grease prior to assembly.) Reassemble bearing and cam bearing assembly to motor and retighten the set screw securely. Set screw **MUST** be positioned in shaft indentation. Position of the screw is critical to avoid misalignment and subsequent diaphragm damage. Reassemble pump head parts, using care to properly seat "O" ring (13) in check valve assembly. With lower housing held vertically, place bypass poppet(s) (14) and spring(s) (15) on locating post(s) molded on diaphragm. Place pump head with check valve and "O" ring installed, over bypass poppet(s) making sure poppet(s) are aligned into bypass ports in check valve housing (13). Tighten pump head screws (18) evenly.

Flojet



U.S.A.
Flojet
20 Icon
Foothill Ranch, CA 92610-3000
Tel: (949) 859-4945
Fax: (949) 859-1153

UNITED KINGDOM
Jabsco/Flojet
Bingley Road, Hoddesdon
Hertfordshire EN11 0BU
Tel: +44 (0) 1992 450145
Fax: +44 (0) 1992 467132

CANADA
Fluid Products Canada
55 Royal Road
Guelph, Ontario N1H 1T1
Tel: (519) 821-1900
Fax: (519) 821-2569

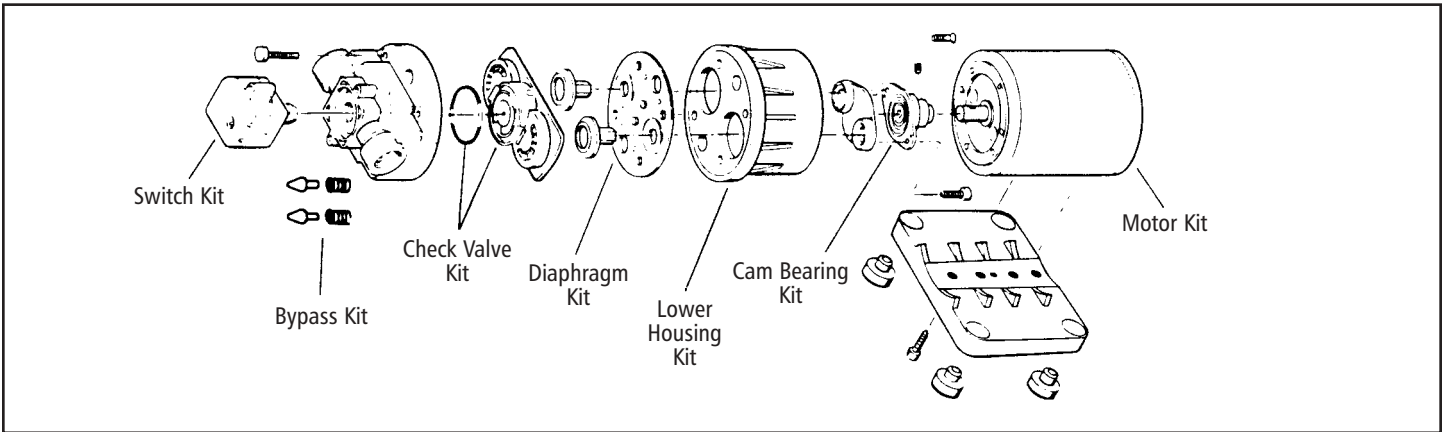
JAPAN
NHK Jabsco Company Ltd.
3-21-10, Shin-Yokohama
Kohoku-Ku, Yokohama, 222
Tel: 045-475-8906
Fax: 045-475-8908

GERMANY
Jabsco GmbH
Oststrasse 28
22844 Norderstedt
Tel: +49-40-53 53 73-0
Fax: +49-40-53 53 73-11

SERVICE PARTS KIT LIST

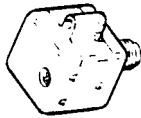
2100 SERIES

FLOJET®

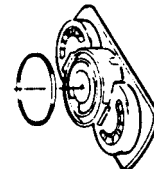


PARTS KIT DESCRIPTIONS

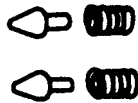
Switch Kit:
Complete pressure switch with wire leads.



Check Valve Kit:
Check valve assembly with "O" ring.



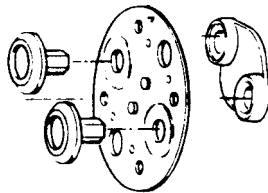
Bypass Kit:
Bypass poppets and springs, two each.



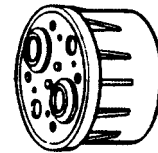
Cam/Bearing Kit:
Cam/bearing assembly with screw.



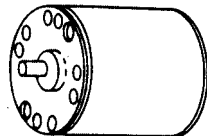
Diaphragm Kit:
Diaphragm with inner and outer pistons and screws.



Lower Housing Kit:
Lower housing with cam, diaphragm and piston assembly.




Motor Kit:
Complete motor assembly.



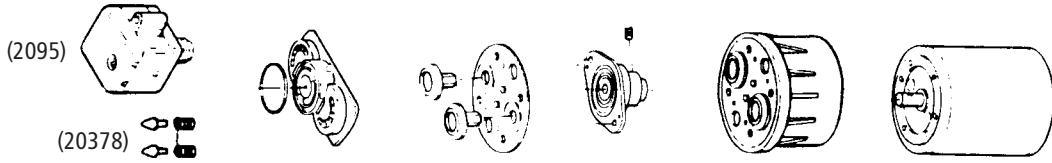
To find correct parts kits: Identify the pump model number in the left column and read across to the kit number required. If pump has a switch and bypass, both are shown in the second column. Complete service kits, available for some models, are shown in the right column. Service Kits include Bypass Kit (where used), Check Valve, Diaphragm and Cam/Bearing Kits.

For individual parts not included in this list, please refer to your installation, operation and service instruction sheet for the particular pump model.

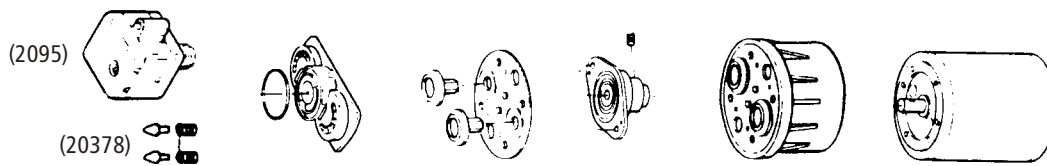


ITT
Engineered for life

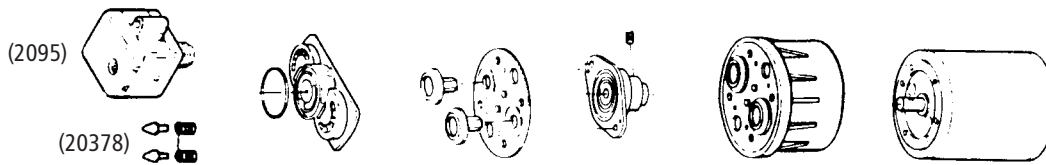
2100 SERIES PARTS KIT LIST



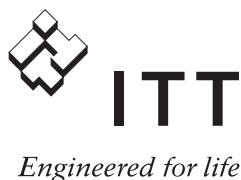
Model #	Switch Bypass Kit	Check Valve Assy Kit	Cam Bearing Diaphragm Kit	Lower Hsg Kit	Motor
2100-012	02090-100	20914-001A	21004-202	21022-012A	02029-000
2100-020	02090-100	20914-002A	21004-100	21022-020A	02029-000
2100-021	02090-100	20914-002A	21004-101	21022-021A	02029-000
2100-022	02090-100	20914-002A	21004-102	21022-022A	02029-000
2100-024	02090-100	20914-002A	21004-104	21022-024A	02029-000
2100-030	02090-100	20914-003A	21004-420	21022-040A	02029-000
2100-031	02090-100	20914-003A	21004-421	21022-041A	02029-000
2100-032	02090-100	20914-003A	21004-402	21022-042A	02029-000
2100-034	02090-100	20914-003A	21004-404	21022-044A	02029-000
2100-035	02090-100	20914-003A	21004-405	21022-045A	02029-026
2100-112	02090-100	20914-001A	21004-202	21022-012A	02009-004
2100-120	02090-100	20914-002A	21004-100	21022-020A	02009-004
2100-121	02090-100	20914-002A	21004-101	21022-021A	02009-004
2100-122	02090-100	20914-002A	21004-102	21022-022A	02009-004
2100-124	02090-100	20914-002A	21004-104	21022-024A	02009-004
2100-130	02090-100	20914-003A	21004-400	21022-040A	02009-004
2100-131	02090-100	20914-003A	21004-401	21022-041A	02009-004
2100-132	02090-100	20914-003A	21004-402	21022-042A	02009-004
2100-134	02090-100	20914-003A	21004-404	21022-044A	02009-004
2100-135	02090-100	20914-003A	21004-405	21022-045A	02009-015
2100-212	02090-100	20914-001A	21004-202	21022-012A	02039-001
2100-222	02090-100	20914-002A	21004-102	21022-022A	02039-001
2100-230	02090-100	20914-003A	21004-400	21022-040A	02039-001
2100-231	02090-100	20914-003A	21004-401	21022-041A	02039-001
2100-232	02090-100	20914-003A	21004-402	21022-042A	02039-001
2100-234	02090-100	20914-003A	21004-404	21022-044A	02039-001
2100-235	02090-100	20914-003A	21004-405	21022-045A	02039-031
2100-311	02090-100	20914-001A	21004-201	21022-011A	02019-001
2100-312	02090-100	20914-001A	21004-202	21022-112A	02019-001
2100-331	02090-100	20914-003A	21004-401	21022-041A	02019-001
2100-332	02090-100	20914-003A	21004-402	21022-042A	02019-001
2100-503	02090-100	20914-002A	21004-200	21022-040A	02029-000
2100-515	N/A	20914-003A	21004-402	21022-042A	02029-000
2100-535	N/A	20914-003A	21004-405	21022-045A	02029-015
2100-544	02090-100	20914-003A	21004-401	21022-041A	02039-005
2100-549	02378-001	20028-061	21004-300	21022-030A	02029-000
2100-551	02090-100	20914-003A	21004-400	21022-040A	02029-009
2100-553	20378-001	20028-001	21004-400	21022-041A	02039-008
2100-556	20378-001	20028-002	21004-400	21022-040A	02039-073
2100-561	N/A	20914-003A	21004-402	21022-042A	02039-023
2100-571	20373-003	20028-022	21004-205	21022-015A	02049-013
2100-573	N/A	20914-003A	21004-402	21022-042A	02009-004
2100-576	N/A	20914-003A	21004-404	21022-044A	02039-001
2100-579	20378-001	20028-002	21004-400	21022-040A	02009-004



Model #	Switch Bypass Kit	Check Valve Assy Kit	Cam Bearing Diaphragm Kit	Lower Hsg Kit	Motor
2100-591	02090-100	20914-003A	21004-400	21022-040A	02039-001
2100-592	20378-001	20028-012	21004-204	21022-014A	02029-000
2100-597	N/A	20914-002A	21004-221	21022-011A	02009-004
2100-598	02090-100	20914-002A	21004-220	21022-010A	02039-001
2100-599	02090-100	20914-002A	21004-400	21022-040A	02009-004
2100-609	20378-001	20028-048	21004-404	21022-044A	02009-004
2100-610	N/A	20914-001A	21004-202	21022-012A	02009-004
2100-615	N/A	20914-003A	21004-402	21022-042A	02009-004
2100-629	20378-001	20028-048	21004-404	21022-044A	02039-001
2100-636	N/A	20914-003A	21004-402	21022-042A	02009-025
2100-637	N/A	20914-003A	21004-402	21022-042A	02009-002
2100-773	02090-100	20914-002A	21004-101	21022-021A	02029-000
2100-777	02090-100	20914-002A	21004-400	21022-040A	02009-004
2100-779	02090-100	20914-002A	21004-404	21022-044A	02049-001
2100-780	02037-8001	20028-045	21004-300	21022-130A	02029-000
2100-782	N/A	201914-001A	21004-205	21022-015A	02029-096
2100-783	N/A	201914-003A	21004-404	21022-044A	02039-091
2100-789	02090-100	201914-002A	21004-402	21022-042A	02049-001
2100-790	N/A	201914-002A	21004-402	21022-042A	02029-000
2100-792	N/A	201914-002A	21004-100	21022-020A	02029-000
2100-802	02090-100	201914-002A	21004-104	21022-024A	02009-071
2100-803	N/A	201914-003A	21004-401	21022-041A	02009-004
2100-815	N/A	201914-001A	21004-220	21022-010A	02029-000
2100-822	02090-100	201914-002A	21004-102	21022-022A	02009-015
2100-825	20357-005	20028-080	21004-121	21022-021A	02039-008
2100-831	20378-001	20028-078	21004-402	21022-042A	02009-004
2100-835	20378-003	20028-078	21004-402	21022-042A	02009-015
2100-840	20378-012	20028-022	21004-202	21022-012A	02009-015
2100-848	N/A	20914-002A	21004-402	21022-042A	02009-015
2100-851	20378-002	20028-003	21004-401	21022-041A	02029-000
2100-855	20378-001	20028-078	21004-102	21022-022A	02029-000
2100-856	02090-104	20914-002A	21004-202	21022-012A	02029-000
2100-858	02090-100	20914-003A	21004-402	21022-042A	02029-000
2100-859	02090-103	20914-003A	21004-302	21022-032A	02039-001
2100-869	N/A	20914-001A	21004-202	21022-112A	02009-015
2100-871	N/A	20914-003A	21004-402	21022-042A	02029-000
2100-872	20378-003	20028-022	21004-202	21022-012A	02049-018
2100-877	20378-000	20028-028	21004-204	21022-014A	02039-001
2100-882	20378-003	20028-003	21004-400	21022-040A	02029-068
2100-883	20378-003	20028-003	21004-400	21022-040A	02039-001
2100-884	20378-001	20028-003	21004-402	21022-042A	02009-015
2100-888	20378-000	20028-022	21004-202	21022-012A	02009-015
2100-894	N/A	20028-078	21004-202	21022-012A	02009-004
2100-895	N/A	20194-003A	21004-400	21022-040A	02019-001
2100-899	N/A	20194-003A	21004-402	21022-042A	02029-031



Model #	Switch Bypass Kit	Check Valve Assy Kit	Cam Bearing Diaphragm Kit	Lower Hsg Kit	Motor
2100-901	20378-001	20028-078	21004-102	21022-022A	02009-004
2100-902	N/A	20194-001A	21004-204	21022-014A	02009-004
2100-904	N/A	20194-002A	21004-200	21022-010A	02009-004
2100-907	20378-001	20028-078	21004-202	21022-012A	02009-004
2100-910	N/A	20194-001A	21004-201	21022-011A	02009-015
2100-914	20378-002	20028-008	21004-202	21022-012A	02029-000
2100-929	20378-011	20028-011	21004-400	21022-042A	02029-013
2100-931	N/A	20194-001A	21004-202	21022-012A	02019-013
2100-942	02090-100	20194-003A	21004-405	21022-045A	02009-015
2100-943	02090-103	20194-004A	21004-301	21022-031A	02009-004
2100-945	02090-100	20194-003A	21004-402	21022-042A	02029-000
2100-947	N/A	20194-003A	21004-400	21022-040A	02039-001
2100-959	20378-003	20028-045	21004-400	21022-040A	02009-061
2100-971	02090-103	20194-003A	21004-402	21022-042A	02029-014
2100-972	20378-003	20028-078	21004-202	21022-112A	02009-063
2100-973	20378-004	20028-003	21004-402	21022-042A	02029-072
2100-974	20378-001	20028-002	21004-400	21022-040A	02029-031
2100-978	02090-100	20194-003A	21004-402	21022-042A	02039-001
2100-979	20378-003	20028-003	21004-400	21022-040A	02029-074
2100-983	20378-001	20028-022	21004-202	21022-012A	02009-068
2100-984	20378-002	20028-078	21004-402	21022-042A	02009-043
2100-987	02090-119	20194-002A	21004-201	21022-011A	02009-070
2100-996	02090-117	20194-002A	21004-122	21022-022A	02039-023



USA

Jabscos
Cape Ann Industrial Park
1 Kondelin Road
Gloucester, MA 01930
Tel: +1 976 281 0440
Fax: +1 976 283 2619

UK

Jabscos
Bingley Road, Hoddesdon
Hertfordshire EN 11 0BU
Tel: +44 1992 450145
Fax: +44 1992 467132

CANADA

Fluid Products Canada
55 Royal Road
Guelph, Ontario N1H 1T1
Tel: +1 519 821 1900
Fax: +1 519 821 5316

JAPAN

NHK Jabscos Co Ltd.
3-21-10, Shin-Yokohama
Kohoku-ku
Yokohama 222-0033
Tel: +81 045 475 8906
Fax: +81 045 477 1162

GERMANY

Jabscos GmbH
OststraBe 28
22844 Norderstedt
Tel: +49 40 5353 730
Fax: +49 40 5353 7311

ITALY

Jabscos Marine Italia
Via Tommaseo, 6
20059 Vimercate, Milano
Tel: +39 039 685 2323
Fax: +39 039 666 307

www.flojet.com