

U.S. Census Bureau
Fluid Power Products for Motion Control, Including Aerospace - 2009
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Table 1. Value of Shipments of Fluid Power Products for Motion Control, Including Aerospace: 2009 to 2005
 [Value in thousands of dollars]

Product class code	Product description	Year		Value
3329125	Nonaerospace type hydraulic directional control valves	2009		466,143
		2008	r/	611,974
		2007		551,913
		2006		602,885
		2005		496,295
3329127	Nonaerospace type hydraulic valves (except directional control)	2009		550,152
		2008	r/	992,490
		2007		846,080
		2006		931,500
		2005		886,084
3329129	Nonaerospace type pneumatic directional control valves	2009		391,810
		2008		530,489
		2007	b/	532,967
		2006		603,169
		2005		561,514
332912B	Nonaerospace type pneumatic valves (except directional control)	2009	a/	91,236
		2008	r/	145,151
		2007	a/	160,891
		2006		220,175
		2005		196,851
3329121	Aerospace type hydraulic fluid power valves	2009	a/	746,037
		2008	a/	949,109
		2007	c/	453,061
		2006		481,291
		2005		426,091
3329123	Aerospace type pneumatic fluid power valves	2009	a/	657,382
		2008	a/r/	792,973
		2007	a/	429,702
		2006		334,458
		2005		361,590
332912D	Parts for fluid power valves	2009	a/	198,586
		2008	c/	270,663
		2007	a/	255,127
		2006		193,590
		2005		204,255
332912H	Nonaerospace type flared (metal) fittings and couplings for, and assemblies of, tubing used in fluid power transfer systems	2009	a/	349,488
		2008	a/r/	474,029
		2007	a/	514,776
		2006		490,776
		2005		414,790
332912J	Nonaerospace type flareless fittings and couplings, including nonmetal fittings, used in fluid power transfer systems	2009		436,494
		2008		563,444
		2007		549,383
		2006		561,373
		2005		493,404
332912L	Nonaerospace type hydraulic and pneumatic fittings and	2009		836,563

	couplings for hose, and manifolds	2008	b/r/	1,299,650
		2007		826,954
		2006		844,968
		2005		834,786
332912N	Nonaerospace type hydraulic and pneumatic assemblies of hose	2009		236,400
		2008	r/	396,113
		2007		394,878
		2006		400,736
		2005		390,852
332912F	Aerospace type hydraulic and pneumatic hose or tube end fittings and assemblies and manifolds	2009		710,658
		2008	a/	815,814
		2007	a/	857,601
		2006		727,274
		2005		876,761
3339993	Nonaerospace type filters for hydraulic fluid power systems	2009		372,899
		2008	a/r/	430,599
		2007	a/	441,584
		2006		390,422
		2005		334,952
3339994	Nonaerospace type filters for pneumatic fluid power systems	2009	b/	81,895
		2008	b/	69,426
		2007		112,067
		2006		96,907
		2005		112,074
3339996	Aerospace type hydraulic and pneumatic filters	2009		67,050
		2008	r/	97,580
		2007		99,956
		2006		111,838
		2005		98,314
3339998 pt.	Compressed air and gas dryers, and lubricators	2009		(S)
		2008		(S)
		2007	b/	55,130
		2006		63,807
		2005		70,441
3339951	Nonaerospace type hydraulic fluid power cylinders and actuators, linear and rotary	2009	b/	1,235,457
		2008	r/	2,061,816
		2007	a/	1,522,284
		2006		1,537,297
		2005		1,346,918
3339953	Nonaerospace type pneumatic fluid power cylinders and actuators, linear and rotary	2009	c/	606,875
		2008	r/	660,252
		2007		437,984
		2006		454,048
		2005		449,505
3339955	Parts for nonaerospace type hydraulic and pneumatic fluid power cylinders, actuators, and related items	2009		636,505
		2008	r/	752,993
		2007		584,867
		2006		562,771
		2005		495,123
3339957	Aerospace type fluid power cylinders and actuators, hydraulic and pneumatic	2009		1,397,961
		2008		1,488,235

		2007		1,427,862
		2006		1,366,067
		2005		1,246,400
3339961	Nonaerospace type reciprocating pumps	2009	a/	696,435
		2008		966,769
		2007	a/	899,968
		2006		804,142
		2005		853,220
3339963	Nonaerospace type rotary and other fluid power pumps	2009		441,847
		2008	r/	648,470
		2007	b/	544,660
		2006		698,929
		2005		642,871
3339965	Nonaerospace type fluid power motors	2009	a/	542,305
		2008	r/	757,714
		2007		677,708
		2006		566,193
		2005		634,195
3339967	Aerospace type fluid power pumps and motors	2009	a/	301,635
		2008		(S)
		2007	c/	384,510
		2006		329,487
		2005		276,251
3339969	Parts for fluid power pumps, motors, and hydrostatic transmissions	2009		343,106
		2008	r/	476,171
		2007	c/	288,341
		2006		331,751
		2005		290,852

Table 2. Manufacturers' Shipments of Fluid Power Products for Motion Control by Type, Including Aerospace: 2009 and 2008
 [Quantity in units. Value in thousands of dollars]

Product code	Product description	Year	No. of cos.	Quantity		Value
3329125	Nonaerospace type hydraulic directional control valves	2009	(X)	a/	7,068,057	466,143
		2008		a/r/	15,517,116	r/ 611,974
3329125110	Manual: 3- and 4-way monoblock	2009	20	a/	1,445,824	b/ 109,328
		2008			4,464,186	142,433
3329125120	Manual: 3- and 4-way sectional	2009	12		(D)	(D)
		2008			(D)	(D)
3329125130	Other manual	2009	12		(D)	(D)
		2008			(D)	(D)
3329125140	Solenoid: 2-way types	2009	11		(D)	(D)
		2008			(D)	(D)
3329125150	Solenoid: 3- and 4-way types	2009	21	a/	2,050,711	179,779
		2008		a/r/	3,646,660	163,593
3329125160	Other directional control	2009	19	c/	1,708,707	71,776
		2008		c/	2,975,149	a/r/ 124,307
3329127	Nonaerospace type hydraulic valves (except directional control)	2009	(X)		12,350,397	550,152
		2008		a/r/	21,561,802	r/ 992,490
3329127110	Pressure control: Relief valves	2009	23		(D)	(D)
		2008		a/r/	629,704	a/ 44,400
3329127120	Pressure control: Other, including load sensing and manual types	2009	12		(D)	(D)
		2008			(D)	(D)
3329127130	Flow control: Manual types	2009	12	a/	1,356,455	a/ 22,790
		2008		a/	1,301,397	a/ 23,989
3329127140	Flow control: Other types	2009	16	c/	1,038,622	c/ 36,602
		2008		c/r/	1,634,012	b/ 57,602
3329127155	Cartridge valves (except directional control)	2009	12		5,676,551	148,016
		2008		a/	13,469,872	305,244
3329127160	Electrohydraulic valves: Pilot-operated, torque motor servovalves	2009	3		(D)	(D)
		2008			(D)	(D)
3329127170	Electrohydraulic valves: Other types, including proportional	2009	8		549,026	66,325
		2008			(D)	(D)
3329127180	Other nonaerospace-type hydraulic valves, including stack and logic	2009	16		2,295,964	162,281
		2008		a/r/	2,504,665	r/ 355,598
3329129	Nonaerospace type pneumatic directional control valves	2009	(X)	a/	14,137,392	391,810
		2008		a/	19,024,450	530,489
3329129110	Manual	2009	20		(S)	c/ 37,282
		2008		c/	3,531,258	b/r/ 57,821
3329129120	Solenoid: Under 1/8 inch port diameter	2009	10		6,057,730	65,880
		2008		r/	8,113,426	r/ 82,689
3329129130	Solenoid: 1/8 inch up to and including 1/4 inch port diameter: 3-way types	2009	15		1,264,413	41,295
		2008		r/	1,714,722	r/ 57,186
3329129140	Solenoid: 1/8 inch up to and including 1/4 inch port diameter: 4-way types	2009	15		1,944,158	82,769
		2008		r/	2,492,524	r/ 106,106
3329129150	Solenoid: Over 1/4 inch port diameter: 3-way types	2009	13		388,564	39,424

					2008		(D)		(D)
3329129160	Solenoid: Over 1/4 inch port diameter: 4-way types	2009	13		1,091,526				61,339
		2008			1,121,036	r/			67,154
3329129170	All other solenoid types	2009	6	a/	250,973	c/			39,403
		2008			(D)				(D)
3329129180	Mechanical, remote pilot, and all other types	2009	16		602,527				24,418
		2008			(D)				(D)
332912B	Nonaerospace type pneumatic valves (except directional control) 1/	2009	(X)	a/	4,225,482	a/			91,236
		2008			7,365,686	r/			145,151
332912B110	Filter-regulator combination units, integral types	2009	7		(D)				(D)
		2008		r/	646,094	r/			20,008
332912B120	Other FRs and filter-regulator-lubricator combo units	2009	8	c/	68,549	c/			4,045
		2008			(D)				(D)
332912B130	Regulators, sold separately	2009	7		(D)				(D)
		2008		c/r/	743,161	r/			16,028
332912B140	Flow control valves	2009	16		(D)				(D)
		2008		r/	3,258,541	r/			37,586
332912B150	Check, shuttle, exhaust, needle, and all other types	2009	18		1,631,748	b/			41,568
		2008		r/	2,560,332	r/			61,828
332912C000	Nonaerospace-type pneumatic valves for non-motion control applications	2009	2		(D)				(D)
		2008			(D)				(D)
332912I	Aerospace type hydraulic fluid power valves	2009	(X)		(S)	a/			746,037
		2008		b/	2,172,630	a/			949,109
332912I110	2-, 3-, and 4-way directional control valves: Manually or mechanically operated	2009	13		(D)				(D)
		2008			(D)				(D)
332912I120	2-, 3-, and 4-way directional control valves: Solenoid operated	2009	16		(D)				(D)
		2008			(D)				(D)
332912I130	2-, 3-, and 4-way directional control valves: Motor operated	2009	6		(D)				(D)
		2008			(D)				(D)
332912I140	2-, 3-, and 4-way directional control valves: Electrohydraulic servovalves	2009	9		(D)				(D)
		2008			(D)				(D)
332912I150	2-, 3-, and 4-way directional control valves: Flow, pressure, and other types of hydraulic valves	2009	20		(S)				375,947
		2008			(S)	r/			558,579
332912J	Aerospace type pneumatic fluid power valves	2009	24	c/	708,756	a/			657,382
		2008		c/r/	894,077	a/r/			792,973
332912J110	Pneumatic valves (all types)	2009	24	c/	708,756	a/			657,382
		2008		c/r/	894,077	a/r/			792,973
332912D	Parts for fluid power valves	2009	(X)		(X)	a/			198,586
		2008			(X)	c/			270,663
332912D110	Parts for nonaerospace type hydraulic and pneumatic valves, sold separately	2009	28		(X)	a/			77,740
		2008			(X)	a/			124,381
332912D120	Parts for aerospace type hydraulic and pneumatic valves, sold separately	2009	12		(X)	a/			120,846
		2008			(X)	c/			146,282
332912H	Nonaerospace type flared (metal) fittings and couplings for, and assemblies of tubing used in, fluid power transfer systems	2009	(X)		(X)	a/			349,488
		2008			(X)	a/r/			474,029
332912H110	Flared fittings: Brass and bronze (SAE 45 degrees and 37 degrees)	2009	6		(X)				55,058
		2008			(X)				75,194

332912H120	Flared fittings: Carbon steel (JIC 37 degrees)	2009	6	(X)		90,057
		2008		(X)		121,824
332912H130	Flared fittings: Other, including alloy steel	2009	8	(X)		(S)
		2008		(X)		(S)
332912H140	Flared fittings: Assemblies of tubing	2009	7	(X)		(D)
		2008		(X)		(D)
332912H150	Flared fittings: Assemblies of tubing and hose	2009	5	(X)		(D)
		2008		(X)		(D)
332912J	Nonaerospace type flareless fittings and couplings, including nonmetal fittings, used in fluid power transfer systems	2009	(X)	(X)		436,494
		2008		(X)		563,444
332912J110	Metal types: Brass and bronze	2009	10	(X)		78,734
		2008		(X)	r/	107,618
332912J120	Metal types: Carbon steel	2009	5	(X)		(D)
		2008		(X)		(D)
332912J130	Metal types: Stainless steel	2009	8	(X)		(D)
		2008		(X)		(D)
332912J140	Metal types: Other, including alloy steel	2009	4	(X)		(D)
		2008		(X)		(D)
332912J150	Metal types: Nonmetal fittings, including plastic	2009	6	(X)		(D)
		2008		(X)		(D)
332912L	Nonaerospace type hydraulic and pneumatic fittings and couplings for hose, and manifolds	2009	(X)	(X)		836,563
		2008		(X)	b/tr/	1,299,650
332912L110	Permanent hose end fittings (crimped and swaged)	2009	14	(X)		340,143
		2008		(X)		(S)
332912L120	Hydraulic and pneumatic reusable end fittings.	2009	16	(X)		118,322
		2008		(X)	r/	144,765
332912L130	Hydraulic quick connect and disconnect couplings	2009	14	(X)	a/	124,002
		2008		(X)	r/	159,066
332912L140	Pneumatic quick connect and disconnect couplings	2009	13	(X)	a/	109,440
		2008		(X)		118,589
332912L150	Manifolds and manifold assemblies for fluid power systems	2009	15	(X)		82,679
		2008		(X)	a/tr/	164,376
332912L160	All other, including steel adaptor, swivel, rotating, and extension fittings	2009	14	(X)		61,977
		2008		(X)	r/	96,361
332912N	Nonaerospace type hydraulic and pneumatic assemblies of hose	2009	(X)	(X)		236,400
		2008		(X)	r/	396,113
332912N110	Nonaerospace type hydraulic and pneumatic assemblies with permanent end fittings	2009	16	(X)		182,476
		2008		(X)	r/	301,580
332912N120	Nonaerospace type hydraulic and pneumatic assemblies with reusable end fittings	2009	7	(X)		(D)
		2008		(X)		(D)
332912N130	Nonaerospace-type hydraulic and pneumatic bulk hose	2009	3	(X)		(D)
		2008		(X)		(D)
332912F	Aerospace-type hydraulic and pneumatic hose or tube end fittings and assemblies and mani-folds	2009	(X)	(X)		710,658
		2008		(X)	a/	815,814
332912F110	Assemblies of hose and/or tubing	2009	6	(X)		(D)
		2008		(X)		(D)

332912F125	Hose and/or tube fittings, all types	2009	11		(X)			496,251
		2008			(X)	b/tr/		446,749
332912F130	Manifolds for aerospace hydraulic systems	2009	4		(X)			(D)
		2008			(X)			(D)
3339993	Nonaerospace type filters for hydraulic fluid power systems	2009	(X)		(X)			372,899
		2008			(X)	a/tr/		430,599
3339993110	Hydraulic fluid filter assemblies, with or without filter element installed: Low pressure (below 301 psi)	2009	18			713,384		23,923
		2008		r/		725,018	a/tr/	34,084
3339993120	Hydraulic fluid filter assemblies, with or without filter element installed: Medium pressure (301 to 2,999 psi)	2009	10			(D)		(D)
		2008		r/		1,125,289		38,113
3339993130	Hydraulic fluid filter assemblies, with or without filter element installed: High pressure (3,000 psi and above)	2009	10			87,349		21,845
		2008		b/		95,849	c/	27,446
3339993140	Filter replacement elements: Reusable (cleanable) type	2009	7			(D)		(D)
		2008				732,138	a/	11,785
3339993150	Filter replacement elements: Nonreusable type	2009	16			12,803,846		245,111
		2008				15,273,896		268,976
3339993160	Filter replacement elements: Strainers and separators, filter parts, and accessories	2009	14			(X)		43,816
		2008				(X)	b/tr/	50,195
3339994	Nonaerospace type filters for pneumatic fluid power systems	2009	(X)			(X)	b/	81,895
		2008				(X)	b/	69,426
3339994110	Air supply filter assemblies and filter replacement elements, excluding those shipped as part of a FR or FRL combo unit: Coalescing types, including elements sold separately	2009	10			(X)		38,153
		2008				(X)		35,031
3339994120	Air supply filter assemblies and filter replacement elements, excluding those shipped as part of a FR or FRL combo unit: Other types, including elements sold separately	2009	8			(X)	a/	17,592
		2008				(X)		(D)
3339994130	Air supply filter assemblies and filter replacement elements, excluding those shipped as part of a FR or FRL combo unit: Air exhaust mufflers, diffusers, filter parts, and air preparation accessories	2009	9			(X)	c/	26,150
		2008				(X)		(D)
3339996	Aerospace type hydraulic and pneumatic filters	2009	(X)			(X)		67,050
		2008				(X)	r/	97,580
3339996110	Hydraulic	2009	4			(X)		(D)
		2008				(X)		(D)
3339996120	Pneumatic	2009	2			(X)		(D)
		2008				(X)		(D)
3339998 pt.	Compressed air and gas dryers, and lubricators	2009	(X)	b/		38,166		(S)
		2008		b/		68,499		(S)
3339998A00	Compressed air and gas dryers	2009	4			(D)		(D)
		2008				(D)		(D)
3339998880	Lubricators for pneumatic systems, sold separately	2009	4			(D)		(D)
		2008				(D)		(D)
3339951	Nonaerospace type hydraulic fluid power cylinders and actuators, linear and rotary	2009	(X)	b/		3,341,196	b/	1,235,457
		2008		b/tr/		5,437,006	r/	2,061,816
3339951110	Tie-rod types: Standard NFPA and JIC - Less than 1,500 psi	2009	15			120,568		70,189
		2008		a/tr/		193,322	r/	90,423
3339951120	Tie-rod types: Standard NFPA and JIC - 1,500 to 3,000 psi	2009	15	a/		144,769	a/	87,299
		2008		c/tr/		228,843	b/tr/	124,188
3339951130	Tie-rod types: Standard NFPA and JIC - Greater than 3,000 psi	2009	5			(D)		(D)

		2008			(S)		(S)
3339951140	Tie-rod types: Standard NFPA and JIC - Other tie-rod types	2009	14		(D)		(D)
		2008			(D)		(D)
3339951150	Tie-rod types: Standard NFPA and JIC - Threaded/weld fused combination	2009	38	b/	1,934,485	a/	528,631
		2008		b/	3,170,215		915,584
3339951160	Tie-rod types: Standard NFPA and JIC - Telescoping	2009	21		65,458		102,056
		2008		a/	106,953	c/	168,082
3339951170	Tie-rod types: Standard NFPA and JIC - Mill type	2009	10		(D)		(D)
		2008		a/	67,023	a/	54,130
3339951180	Tie-rod types: Standard NFPA and JIC - Other, including those threaded at both ends	2009	30		(S)		(S)
		2008			(S)		535,968
3339951190	Tie-rod types: Standard NFPA and JIC - Electrohydraulic types	2009	7		3,338		3,690
		2008			(D)		(D)
33399511A0	Tie-rod types: Standard NFPA and JIC - Hydraulic rotary actuators	2009	11		58,744		98,713
		2008			95,668		122,106
3339953	Nonaerospace type pneumatic fluid power cylinders and actuators, linear and rotary	2009	(X)	b/	4,825,632	c/	606,875
		2008		a/r/	5,963,913	r/	660,252
3339953110	NFPA interchangeable cylinders: Steel	2009	19		(S)		(S)
		2008			(S)	r/	291,449
3339953120	NFPA interchangeable cylinders: Aluminum: Less than 1-1/2 inch bore size	2009	5		(D)		(D)
		2008		r/	61,710	r/	2,349
3339953130	NFPA interchangeable cylinders: Aluminum: 1-1/2 inch bore size and over	2009	16		(D)		(D)
		2008			250,685		39,708
3339953140	NFPA interchangeable cylinders: Aluminum: Rodless cylinders	2009	9		(D)		(D)
		2008		r/	117,917	r/	40,811
3339953150	NFPA interchangeable cylinders: Other pneumatic cylinders: Less than 1-1/2 inch bore size	2009	22	a/	2,702,773	a/	129,025
		2008		r/	3,330,541	r/	145,295
3339953160	NFPA interchangeable cylinders: Other pneumatic cylinders: 1-1/2 inch bore size and over	2009	26	a/	960,862	a/	85,281
		2008		r/	1,250,240	r/	108,987
3339953170	NFPA interchangeable cylinders: Other pneumatic cylinders: Pneumatic rotary actuators	2009	14		(S)		82,053
		2008			146,651	r/	31,653
3339955	Parts for nonaerospace type hydraulic and pneumatic fluid power cylinders, actuators, and related items, n.e.c.	2009	(X)		(X)		636,505
		2008			(X)	r/	752,993
3339955110	Accumulators (bladder, piston, and other types)	2009	16		(S)	b/	103,293
		2008			294,400		122,789
3339955120	Shock absorbers, not for vehicle suspension, and cushions (hydraulic and pneumatic)	2009	10		3,205,820		144,523
		2008			(D)		(D)
3339955130	Reservoirs, intensifiers, and other devices for fluid energy absorption and/or storage	2009	12		(S)	c/	5,440
		2008			(D)		(D)
3339955140	Parts for nonaerospace type hydraulic and pneumatic cylinders, actuators, accumulators, cushions, and nonvehicular shock absorbers, sold separately	2009	48		(X)		383,249
		2008			(X)	r/	470,051
3339957	Aerospace type fluid power cylinders and actuators, hydraulic and pneumatic	2009	(X)		(X)		1,397,961
		2008			(X)		1,488,235
3339957110	Hydraulic servo-actuator assemblies (linear and rotary): Mechanical input	2009	8		114,880		634,375
		2008		b/r/	132,894		670,773
3339957120	Hydraulic servo-actuator assemblies (linear and rotary):	2009	4		24,698		319,726

	Electrical input	2008		c/	29,031		352,234	
3339957130	Hydraulic servo-actuator assemblies (linear and rotary): Combination input	2009 2008	3		(D) (D)		(D) (D)	
3339957140	Hydraulic utility actuators: Linear actuators (cylinders)	2009 2008	8		121,141 132,549	a/	95,608 94,307	
3339957150	Hydraulic utility actuators: Rotary actuators (limited rotation)	2009 2008	1		(D) (D)		(D) (D)	
3339957160	Hydraulic utility actuators: Shock absorbers, snubbers, and cushions, all types, excluding oleo strut assemblies	2009 2008	4		(D) (D)		(D) (D)	
3339957170	Hydraulic utility actuators: Pneumatic actuators (linear and rotary)	2009 2008	5		(D) (D)		(D) (D)	
3339957180	Hydraulic utility actuators: Accumulators (bladder, piston, and other types)	2009 2008	8		(S) (S)	a/	25,547 (S)	
3339957190	Hydraulic utility actuators: Reservoirs, intensifiers, and other devices for fluid energy absorption and/or storage	2009 2008	5		(D) (D)		(D) (D)	
33399571A0	Hydraulic utility actuators: Other aerospace type fluid power cylinders, rotary actuators, cushions, and related items, n.e.c.	2009 2008	4		(X) (X)		(D) (D)	
3339955150	Hydraulic utility actuators: Parts for aerospace type hydraulic and pneumatic cylinders, actuators, accumulators, cushions, and related items, sold separately	2009 2008	10		(X) (X)	r/	65,483 58,081	
3339961	Nonaerospace type reciprocating pumps	2009 2008	(X)		1,842,538 2,316,846	a/	696,435 966,769	
3339961110	Axial piston: Variable displacement types - Closed loop	2009 2008	12		1,611,122 1,952,019	a/ r/	532,772 723,092	
3339961120	Axial piston: Variable displacement types - Open loop	2009 2008	9		219,668 344,544	r/	156,114 233,517	
3339961130	Axial piston: Variable displacement types - Fixed displacement types	2009 2008	3		(D) (D)		(D) (D)	
3339961140	Axial piston: Variable displacement types - Radial piston types	2009 2008	2		(D) (D)		(D) (D)	
3339963	Nonaerospace type rotary and other fluid power pumps	2009 2008	(X)		a/ r/	3,159,472 4,136,490	r/	441,847 648,470
3339963110	Gear type: Internal gear type, including gerotors	2009 2008	11		(D) (D)		(D) (D)	
3339963120	Gear type: External gear type	2009 2008	10		b/ r/	1,701,651 1,731,688	r/	264,844 397,280
3339963150	Vane type: Fixed and variable displacement	2009 2008	5		(D) (D)		(D) (D)	
3339965	Nonaerospace type fluid power motors	2009 2008	(X)		(X) (X)	a/ r/	542,305 757,714	
3339965110	Pneumatic (air) motors	2009 2008	2		(D) (D)		(D) (D)	
3339965120	Hydraulic motors: Gear type - Internal types, excluding gerotors	2009 2008	7		(D) (D)		(D) (D)	
3339965130	Hydraulic motors: Gerotor types	2009 2008	6		c/ c/	1,504,319 2,479,800		247,469 328,669
3339965140	Hydraulic motors: External	2009	5		(D)		(D)	

		2008		r/	125,177		18,836
3339965150	Hydraulic motors: Vane types, fixed and variable	2009	6		15,608		16,157
		2008		c/	13,153	b/	11,202
3339965160	Hydraulic motors: Radial piston types, fixed and variable	2009	4		(D)		(D)
		2008			(D)		(D)
3339965170	Axial piston types: Fixed displacement	2009	7	a/	56,108	b/	37,098
		2008		a/	114,315	r/	57,257
3339965180	Axial piston types: Variable displacement	2009	5		106,452	b/	48,692
		2008		c/	223,892	r/	96,582
3339965190	Axial piston types: Prime movers shipped with pumps or sold separately	2009	3		(X)		(D)
		2008			(X)		(D)
3339967	Aerospace type fluid power pumps and motors	2009	(X)	a/	154,463	a/	301,635
		2008			(S)		(S)
3339967110	Hydraulic pumps: Fixed and variable displacement types	2009	6		46,224	a/	110,660
		2008			(S)		(S)
3339967120	Hydraulic pumps: Pump/electric motor assemblies, fixed and variable displacement types	2009	6	a/	58,336		123,600
		2008			(S)	c/	116,252
3339967130	Hydraulic pumps: Other pump packages, n.e.c.	2009	6		(D)		(D)
		2008			(D)		(D)
3339967170	Motors: Aerospace-type fluid power motors, all kinds	2009	5		(D)		(D)
		2008			(D)		(D)
3339969	Parts for fluid power pumps, motors, and hydrostatic transmissions	2009	(X)		(X)		343,106
		2008			(X)	r/	476,171
3339969110	Hydraulic: Nonaerospace	2009	22		(X)		(D)
		2008			(X)		(D)
3339969120	Hydraulic: Aerospace	2009	6		(X)		(D)
		2008			(X)		(D)
3339969130	Pneumatic: Nonaerospace	2009	1		(X)		(D)
		2008			(X)		(D)
3339969140	Pneumatic: Aerospace	2009	1		(X)		(D)
		2008			(X)		(D)
333996A000	Nonaerospace hydrostatic transmissions	2009	4		(D)		(D)
		2008			(D)		(D)
333996B000	Nonaerospace hydraulic power units	2009	8		(D)		(D)
		2008			(D)		(D)

Footnotes:

1/ This value includes 332912C000

Table 3. Shipments, Exports, and Imports of Fluid Power Products: 2009 and 2008
 [Quantity in units. Value in thousands of dollars]

Product code 1/	Product description	Year		Manufacturers' shipments quantity		Manufacturers' shipments (value f.o.b plant)	Export shipments 2/ (quantity)	Export shipments 2/ (value at port)	Imports for consumption 3/ (quantity)	Imports for consumption 3/ (value at port)
332912100T	Hydraulic fluid power valves	2009	a/	22,063,491	a/	1,762,332	2,789,479	394,706	27,934,269	354,273
		2008	a/r/	39,251,548	r/	2,553,573	3,971,454	538,456	50,739,532	570,386
332912300T	Pneumatic fluid power valves	2009	a/	19,071,630	a/	1,140,428	2,380,472	201,086	17,669,016	227,657
		2008	a/	27,284,213	a/r/	1,468,613	3,629,715	277,247	23,093,241	343,849
332912D00T	Parts for fluid power valves: hydraulic, pneumatic, all types	2009		(X)	a/	198,586	5,384,467	129,065	16,800,445	241,607
		2008		(X)	c/	270,663	7,036,625	172,507	23,466,944	307,157
333995100T	Hydraulic cylinders and hydraulic actuators (except electrohydraulic types)	2009		(D)		(D)	314,356	211,665	3,780,198	497,963
		2008		(D)		(D)	393,603	240,231	7,621,140	731,188
333995300T	Pneumatic cylinders (tie-rod types)	2009	c/	837,226		(S)	2,774	5,792	97,632	13,650
		2008	c/r/	1,118,564	r/	333,506	2,592	5,747	114,199	17,207
333995301T	Pneumatic cylinders (except tie-rod types)	2009		(D)		(D)	487,612	44,862	1,163,106	64,562
		2008		(D)		(D)	600,890	61,904	2,285,729	86,722
333995500T	Fluid power accumulators, hydraulic and pneumatic, and other hydraulic, pneumatic or combination devices for fluid energy absorption and/or storage, all types	2009		(X)	a/	266,543	161,294	207,239	422,486	176,626
		2008		(X)	b/	299,356	221,922	260,993	588,353	222,257
333996500T	Hydraulic motors, all types	2009	c/	1,852,506		431,374	148,275	75,667	271,340	204,708
		2008	c/	3,159,950		624,917	312,131	132,600	688,841	449,149
333996100T	Hydraulic pumps, all types	2009		(D)		(D)	2,555,130	549,062	7,018,989	606,168
		2008		(D)		(D)	3,347,048	749,004	7,465,376	819,639
333996900T	Parts for fluid power pumps and motors	2009		(X)		343,106	(X)	409,955	(X)	562,733
		2008		(X)	r/	476,171	(X)	505,517	(X)	870,850

Footnotes:

1/ For comparison of the North American Industry Classification System codes with Schedule B export codes and HTSUSA import codes, see Table 4

2/ Source: Census Bureau report, EM 545, U.S. Exports.

3/ Source: Census Bureau report, IM 145, U.S. Imports for Consumption.

Table 4. Comparison of combined North American Industry Classification System (NAICS)-Based Product Codes with Schedule B Export Codes, and HTSUSA Import Codes: 2009

Combined code	Product code	Product description	Export code 1/	Import code 2/	
332912100T	3329125110	Hydraulic fluid power valve	8481.10.0020	8481.10.0020	
	3329125120		8481.20.0010	8481.20.0010	
	3329125130		8481.20.0020	8481.20.0020	
	3329125140		8481.20.0030	8481.20.0030	
	3329125150		8481.20.0040	8481.20.0040	
	3329125160		8481.20.0050	8481.20.0050	
	3329127110				
	3329127120				
	3329127130				
	3329127140				
	3329127155				
	3329127160				
	3329127170				
	3329127180				
	3329121110				
	3329121120				
	3329121130				
	3329121140				
	3329121150				
	332912300T		3329129110	Pneumatic fluid power valves	8481.10.0040
3329129120		8481.10.0060	8481.10.0060		
3329129130		8481.20.0060	8481.20.0060		
3329129140		8481.20.0070	8481.20.0070		
3329129150		8481.20.0080	8481.20.0080		
3329129160					
3329129170					
3329129180					
332912B110					
332912B120					
332912B130					

	332912B140 332912B150 3329123110			
332912D00T	332912D110 332912D120	Parts for fluid power valves: hydraulic, pneumatic, all types	8481.90.9010	8481.90.9020 8481.90.9040
333995100T	3339951110 3339951120 3339951130 3339951140 3339951150 3339951160 3339951170 3339951180 33399511A0 3339957110 3339957120 3339957130 3339957140 3339957150	Hydraulic cylinders and hydraulic actuators (except electrohydraulic types)	8412.21.0015 8412.21.0030 8412.21.0045 8412.21.0060 8412.21.0075	8412.21.0015 8412.21.0030 8412.21.0045 8412.21.0060 8412.21.0075
333995300T	3339953110 3339953120 3339953130	Pneumatic cylinders (tie-rod types)	8412.31.0040	8412.31.0040
333995301T	3339953140 3339953150 3339953160 3339953170 3339957170	Pneumatic cylinders (except tie-rod types)	8412.31.0080	8412.31.0080
333995500T	3339955110 3339955130 3339957180 3339957190	Fluid power accumulators, hydraulic and pneumatic, and other hydraulic, pneumatic or combination devices for fluid energy absorption and/or storage, all types	8412.29.8075 8412.39.0080 8479.89.9865	8412.29.8075 8412.39.0080 8479.89.9865

	33399571A0			
	3339957160			
333996500T	3339965130	Hydraulic motors, all types	8412.29.8015	8412.29.8015
	3339965140		8412.29.8030	8412.29.8030
	3339965150		8412.29.8045	8412.29.8045
	3339965160		8412.29.8060	8412.29.8060
	3339965170			
	3339965180			
	3339965110			
333996100T	3339961110	Hydraulic pumps, all types	8413.50.0070	8413.50.0070
	3339961120		8413.50.0080	8413.50.0080
	3339961130		8413.60.0020	8413.60.0020
	3339961140		8413.60.0030	8413.60.0030
	3339963110		8413.60.0040	8413.60.0040
	3339963120			
	3339963150			
	3339967110			
	3339967120			
	3339967130			
333996900T	3339969110	Parts for fluid power pumps and motors	8412.90.9005	8412.90.9005
	3339969120		8412.90.9015	8412.90.9015
	3339969130		8412.90.9025	8412.90.9025
	3339969140		8412.90.9035	8412.90.9035
			8413.91.9050	8413.91.9050

Footnotes:

1/ Source: 2009 edition, Harmonized System-based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.

2/ Source: Harmonized Tariff Schedule of the United States, Annotated (2009).

Symbols:

- (D) - Withheld to avoid disclosing data of individual companies.
- (X) - Not applicable.
- (NA) - Not available.
- r/ - Revised by 5 percent or more from previously published data.
- (n.e.c.) - Not elsewhere classified.
- (n.s.k.) - Not specified by kind.
- (nehp) - Net engine horsepower
- (btuh) - British thermal units per hour
- (pt.) Part.
- Represents zero.

Estimation symbols - Percent of estimation for each item is indicated as follows:

- a/ - 10 to 19 percent of this item has been estimated.
- b/ - 20 to 29 percent of this item has been estimated.
- c/ - 30 to 49 percent of this item has been estimated.
- (S) - Withheld because estimates did not meet publication standards

HISTORICAL NOTE

The Census Bureau has collected data on fluid power products since 1981.

Historical Current Industrial Reports data may be obtained from a Federal Depository Library. To locate a Federal Depository Library in your area, please visit <http://www.gpoaccess.gov/libraries.html>.