SEMI - ULTRA HIGH PURITY CHEMICAL PUMPS FOR SEMICONDUCTOR INDUSTRY

GENERAL INFORMATION

The pumps from SEMI DMS series have been designed especially for the purpose of semiconductor industry. The whole assembly process of these unique products is completed in a **CLASS 100 CLEAN ROOM**, involving a double cleaning of the parts, their testing with deionized water, and finally sealing in plastic foils.

All parts of the SEMI T and SEMI H pumps coming in touch with liquids are made of PTFE and TFM. The housing parts of the SEMI E pump coming in contact with liquids are made of UPPE (ultra pure polyethylene). Therefore it must be checked that any liquid to be used in the pump comply with the construction materials.

In case of the SEMI E pump, it is an absolute must to obey the limits set to operating pressure (max. 6 bar) and the temperature of a liquid (max. 70°C). In case of the SEMI H, T and S pumps, the temperature limits and dependable driving pressure are different. The chart below presents maximum permissible values.

Driving air pressure	6 bar	5 bar	4 bar	3 bar	2 bar
SEMI T : max. permissible temperature	100°C	110°C	120°C	130°C	130°C
SEMI H : max. permissible temperature	100°C	130°C	150°C	180°C	200°C
SEMI E : max. permissible temperature	70°C	70°C	70°C	70°C	70°C
SEMI S : max. permissible temperature	130°C	130°C	130°C	130°C	130°C

FEATURES

- no metal parts at all
- no elastomer o-ring seals
- no lubrication in air valve
- class 100 clean-room assembled, tested with de-ionized water and double packaged
- TFM diaphragms for extended flex life
- four materials for different applications with max temp. 200°C
- machined from solid material on a very highly advanced CNC Machining and Turning Centre
- pulsation dampers, leak detection, electronic/pneumatic controls and monitoring available for all sizes
- very easy repairing, just 40% spares comparing to other competitors!

SEMI PUMPS SUMMARY

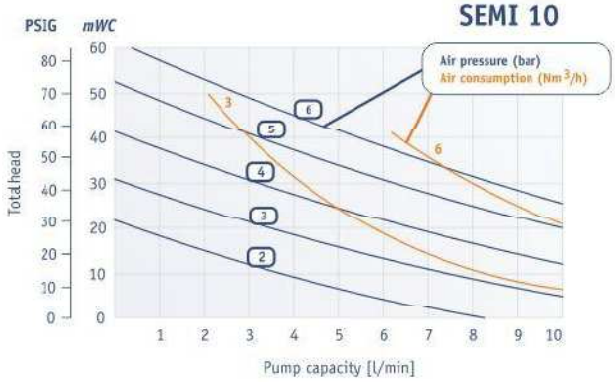
Model: **SEMI T**
Materials: center housing TFM/PTFE; side housings UPPE
Pump sizes: 10, 20, 50, 100
Products: acids and caustics

Model: **SEMI H**
Materials: center housing TFM/PTFE; side housings PTFE
Pump sizes: 10, 20
Products: hot applications with acids and caustics

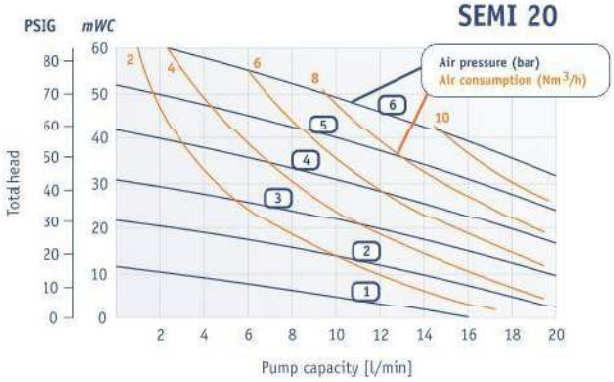
Model: **Semi E**
Materials: center housing UPPE; side housings UPPE
Pump sizes: 10, 20, 50, 100
Products: slurries

Model: **SEMI S**
Materials: center housing SS 316 L; side housings SS 316 L
Pump sizes: 20, 50
Products: solvents

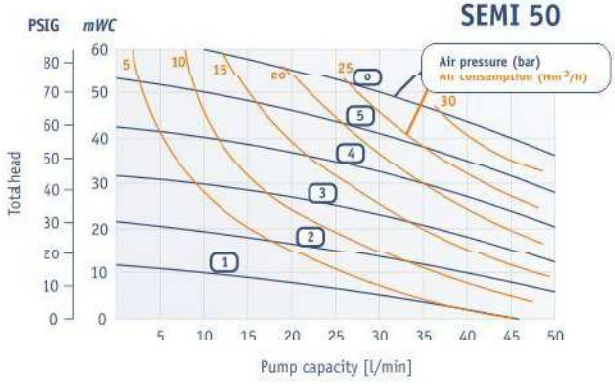
SEMI 10



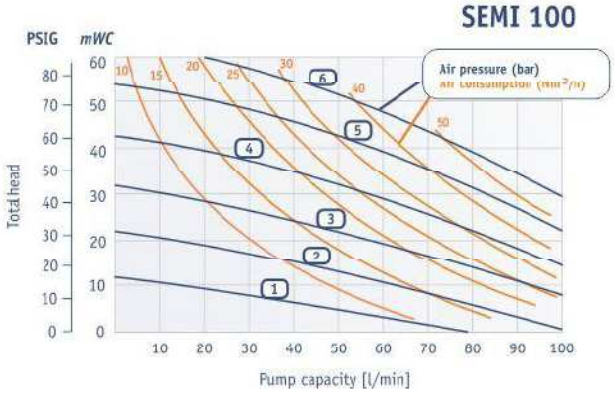
SEMI 20



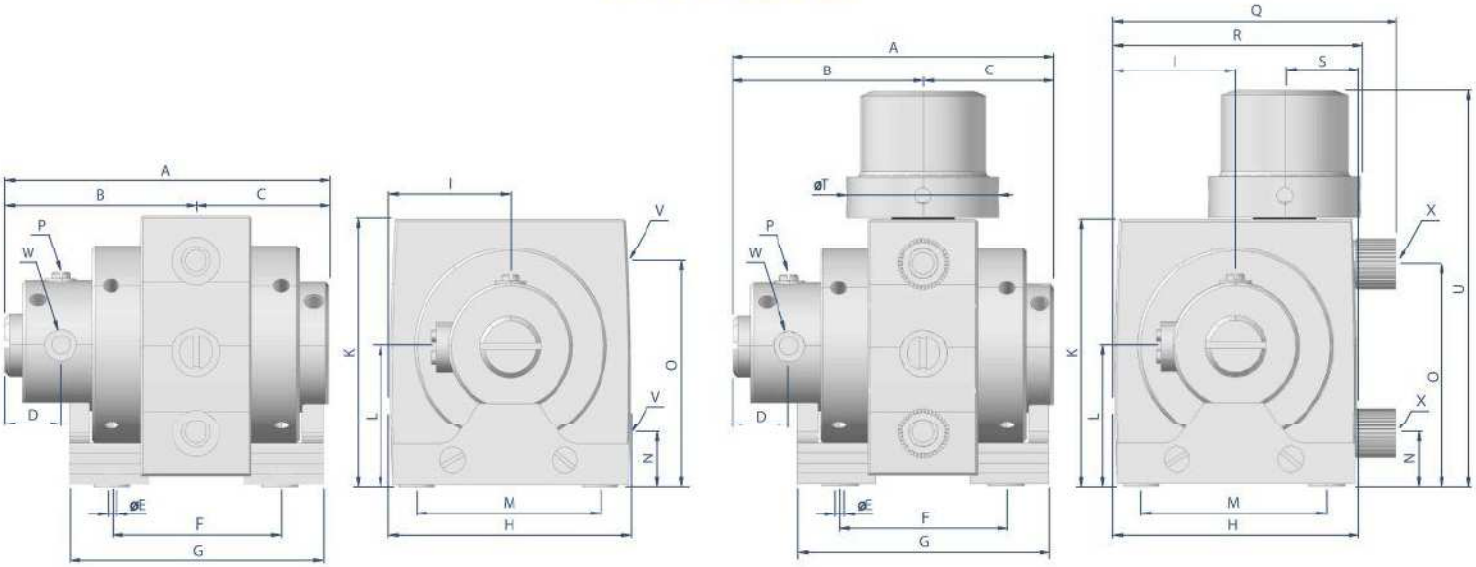
SEMI 50



SEMI 100



MAIN DIMENSIONS



mm	A	B	C	D	E	F	G	H	I	K	L	M	N	O	Q	R	S	T	U	V	W	X
SEMI 10	184,0	112,0	72,0	28,0	10,5	95,0	145,0	114,0	57,0	133,0	68,0	79,5	37,0	105,0	155,0	155,0	36,0	110,0	245,0	3/8" NPT	1/4" NPT	3/8"
SEMI 20	207,0	109,0	98,0	35,0	10,5	109,0	163,0	154,0	75,0	172,0	91,0	115,0	32,0	139,0	200,0	163,0	46,0	110,0	287,0	1/2" NPT	1/4" NPT	1/2"
SEMI 50	255,0	157,0	98,0	46,0	19,0	113,0	195,0	207,0	104,0	215,0	110,0	165,0	33,0	177,0	258,0	224,0	59,0	150,0	346,0	1" NPT	1/4" NPT	1"
SEMI 100	315,0	196,0	119,0	57,0	19,0	138,0	238,0	269,0	135,0	267,0	138,0	225,0	39,0	223,0	322,0	298,0	80,0	213,0	428,0	1 1/4" NPT	1/4" NPT	1 1/4"

in	A	B	C	D	E	F	G	H	I	K	L	M	N	O	Q	R	S	T	U	V	W	X
SEMI 10	7,2	4,4	2,8	1,1	0,4	3,7	5,7	4,5	2,2	5,2	2,7	3,1	1,5	4,1	6,1	6,1	1,4	4,3	9,6	3/8" NPT	1/4" NPT	3/8"
SEMI 20	8,1	4,3	3,9	1,4	0,4	4,3	6,4	6,1	3,0	6,8	3,6	4,5	1,3	5,5	7,9	6,4	1,8	4,3	11,3	1/2" NPT	1/4" NPT	1/2"
SEMI 50	10,0	6,2	3,9	1,8	0,7	4,4	7,7	8,1	4,1	8,5	4,3	6,5	1,3	7,0	10,2	8,8	2,3	5,9	13,6	1" NPT	1/4" NPT	1"
SEMI 100	12.4	7.7	4.7	2.2	0.7	5.4	9.4	10.6	5.3	10.5	5.4	8.9	1.5	8.8	12.7	11.7	3.1	8.4	16.9	1" NPT	1/4" NPT	1 1/4"

W - air supply P = 1/4" NPT air supply for pneumatic stroke counting X = pipe-outer diameter special equipment FLARETEK©