

# High Pressure Pumps

## BFS2, FFS2

### Screw spindles



2-pole motor rotation speed 3500 RPM									4-pole motor rotation speed 1750 RPM						
Pressure max.	Flow at viscosity		Power consumption at viscosity		Motor immersion ver- sion			Weight	Flow at viscosity		Power consumption at viscosity		Motor		Weight
	1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	IE3 / NEMA	IE3	NEMA		IE3	1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	IE3	
Type / bar	l/min	l/min	kW	kW	kW	kW	kW	kg	l/min	l/min	kW	kW	kW	kW	kg
<b>BFS232/</b>	<b>Q<sub>Th</sub><sup>1)</sup> 31.5</b>		-	-	-	-	-	-	<b>Q<sub>Th</sub><sup>1)</sup> 15.8</b>		-	-	-	-	-
10	29.7	30.8	0.8	0.9	B 1.49	1.27	1.5	40	13.9	15.1	0.4	0.5	0.86	0.75	31
20	29	30.6	1.4	1.4	B 1.75	1.75	2.2	40	13.3	14.8	0.7	0.7	0.86	1.1	31
30	28.4	30.3	1.9	2.0	B 2.18	2.54	2.2	45	12.7	14.6	0.9	1.0	1.27	1.1	33
40	27.8	30	2.4	2.5	B 2.94	3.45	3.0	46	12.1	14.3	1.2	1.3	1.75	1.5	35
50	27.2	29.8	2.9	3.1	B 3.45	3.45	3.7	58	11.5	14	1.4	1.5	1.75	2.2	35
60	26.6	29.5	3.5	3.6	B 3.8	4.55	3.7	58	10.9	13.8	1.7	1.8	2.55	2.2	46
70	26	29.3	4.0	4.2	B 4.55	4.55	5.5	59	10.3	13.5	2.0	2.1	2.55	2.2	46
80	25.4	29	4.5	4.7	B 5.75	6.3	5.5	64	9.7	13.3	2.2	2.3	2.55	3.0	46
90	24.9	28.7	5.0	5.3	B 5.75	6.3	5.5	64	9.1	13	2.5	2.6	3.45	3.0	46
100	24.3	28.5	5.6	5.8	B 6.3	6.3	7.5	64	8.5	12.7	2.7	2.9	3.45	3.0	46
110	23.8	28.3	6.1	6.4	B 6.9	8.6	7.5	87	-	12.5	-	3.2	3.45	3.7	46
120	23.2	28	6.6	6.9	B 7.48	8.6	7.5	87	-	12.3	-	3.4	4.55	3.7	50
130	22.7	27.8	7.1	7.5	B 8.6	8.6	11.0	94	-	12	-	3.7	4.55	3.7	50
140	22.1	27.5	7.7	8.0	B 8.6	8.6	11.0	94	-	11.8	-	4.0	4.55	5.5	50
150	21.6	27.3	8.2	8.6	B 10.3	12.6	11.0	100	-	11.6	-	4.2	4.55	5.5	50
<b>BFS238/</b>	<b>Q<sub>Th</sub><sup>1)</sup> 37.4</b>		-	-	-	-	-	-	<b>Q<sub>Th</sub><sup>1)</sup> 18.7</b>		-	-	-	-	-
10	35.2	36.5	0.9	0.9	B 1.49	1.27	1.5	40	16.5	17.8	0.4	0.4	0.86	0.75	31
20	34.5	36.2	1.6	1.6	B 1.95	2.54	2.2	41	15.8	17.5	0.8	0.8	1.27	1.1	33
30	33.8	35.9	2.2	2.2	B 2.55	2.54	3.0	45	15.1	17.2	1.1	1.1	1.27	1.5	33
40	33.1	35.6	2.8	2.9	B 3.45	3.45	3.7	58	14.4	16.9	1.4	1.4	1.75	2.2	35
50	32.4	35.3	3.4	3.5	B 3.8	4.55	3.7	58	13.7	16.6	1.7	1.8	2.55	2.2	46
60	31.7	35.1	4.1	4.2	B 4.55	4.55	5.5	59	13	16.4	2.0	2.1	2.55	2.2	46
70	31	34.8	4.7	4.8	B 5.75	6.3	5.5	64	12.3	16.1	2.3	2.4	3.45	3.0	46
80	30.3	34.5	5.3	5.5	B 5.75	6.3	7.5	64	11.6	15.8	2.6	2.7	3.45	3.0	46
90	29.6	34.2	5.9	6.1	B 6.3	6.3	7.5	64	10.9	15.5	2.9	3.1	3.45	3.7	46
100	29	34	6.6	6.8	B 8.6	8.6	7.5	94	10.2	15.3	3.2	3.4	4.55	3.7	50
110	28.3	33.7	7.2	7.4	B 8.6	8.6	11.0	94	-	15	-	3.7	4.55	3.7	50
120	27.6	33.4	7.8	8.1	B 8.6	8.6	11.0	94	-	14.7	-	4.1	4.55	5.5	50
130	27	33.1	8.4	8.8	B 10.3	12.6	11.0	100	-	14.4	-	4.4	6.3	5.5	82
140	26.3	32.9	9.0	9.4	B 10.3	12.6	11.0	100	-	14.2	-	4.7	6.3	5.5	82
150	25.7	32.6	9.7	10.1	B 12.6	12.6	11.0	122	-	13.9	-	5.0	6.3	5.5	82

<sup>1)</sup> Q<sub>Th</sub>: Theoretical flow rate

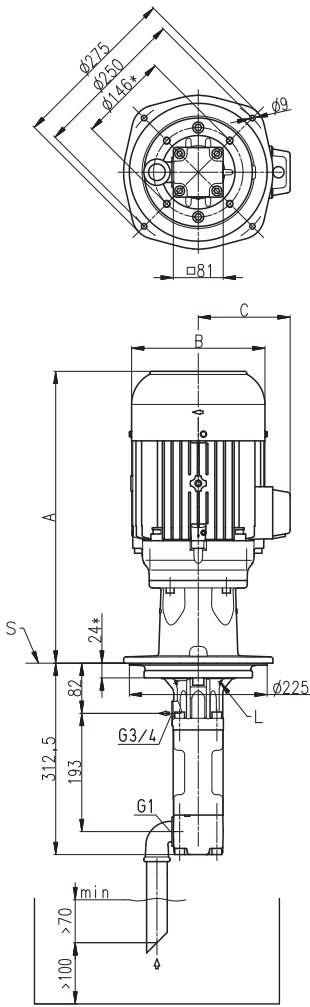
Higher pressures (up to 200 bar) upon request.

Viscosity > 20 mm<sup>2</sup>/s more power consumption.

# Characteristics and dimensions

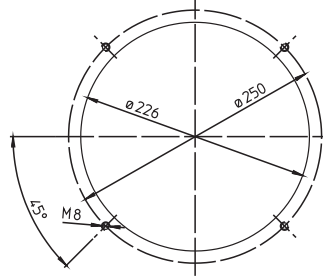
## BFS2, FFS2

60 Hz

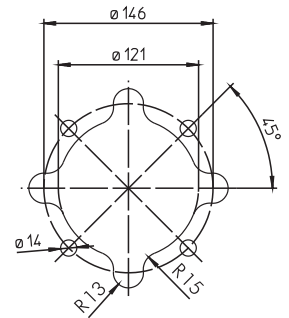


### Mounting hole patterns

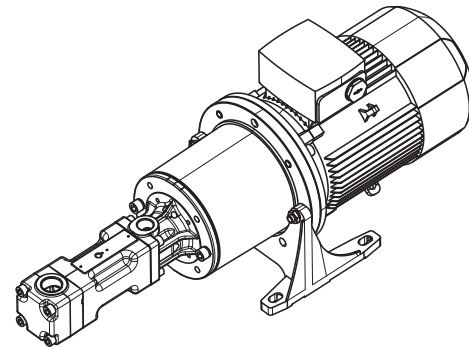
#### BFS1 / BFS2



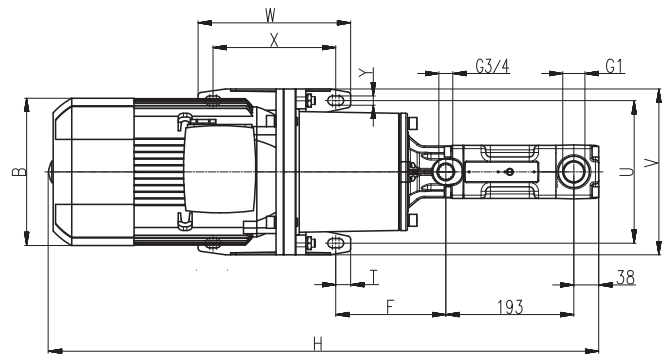
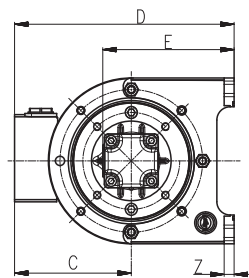
#### TFS1 / TFS2



All corners must be deburred!  
According to ISO 2768-m



\*) Dimensions for 4-pole standard motor upon request  
L = Leakage hole  
S = Mounting plate, please refer to the cut-out of mounting hole



Power 2-poles kW	A mm	B mm	C mm
B 1.49 / 1.75	415	176	130
B 1.95	441	176	130
B 2.18 / 2.55 / 2.94	474	176	130
B 3.45 / 3.8 / 4.55	513	218	150
B 5.75 / 6.3	543	218	150
B 6.9 / 7.48	584	258	193
B 8.6 / 10.3	622	258	193
B 12.6	630	310	240

Power 2-poles kW	Power 4-poles kW	B mm	C mm	D mm	E mm	F mm	H mm	T mm	U mm	V mm	W mm	X mm	Y mm	Z mm
-	0.75 / 0.86	159	121	233	155	138	776	15	180	210	90	60	11	12
1.5 / 1.75	1.1 / 1.27 / 1.5 / 1.75	178	126	238	155	138	746	15	180	210	90	60	11	12
1.27	-	159	121	233	155	138	736	15	180	210	90	60	11	12
2.2 / 2.54	-	178	126	238	155	138	786	15	180	210	90	60	11	12
3.0 / 3.45	2.2 / 2.55 / 3.0 / 3.45	198	166	321	198	166	846	22.5	215	250	230	185	14	15
3.7 / 4.55	3.7 / 4.55	222	177	332	198	166	830	22.5	215	250	230	185	14	15
5.5 / 6.3	-	262	202	387	228	171	882	22.5	265	300	270	225	14	18
7.5 / 8.6	5.5 / 6.3	262	202	387	228	171	932	22.5	265	300	270	225	14	18
11.0 / 12.6	-	314	237	472	278	210	1051	20	300	350	305	265	18	18

# High Pressure Pumps

## BFS2, FFS2

### Screw spindles



Pressure max.		2-pole motor rotation speed 3500 RPM							4-pole motor rotation speed 1750 RPM						
		Flow at viscosity		Power consumption at viscosity		Motor immersion version		Weight	Flow at viscosity		Power consumption at viscosity		Motor		Weight
		1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	IE3 / NEMA	IE3		NEMA	IE3	1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	1 mm <sup>2</sup> /s	20 mm <sup>2</sup> /s	
Type / bar	l/min	l/min	kW	kW	kW	kW	kW	kg	l/min	l/min	kW	kW	kW	kW	kg
<b>BFS250/</b>	<b>Q<sub>Th</sub><sup>1)</sup> 49.2</b>		-	-	-	-	-	-	<b>Q<sub>Th</sub><sup>1)</sup> 24.6</b>		-	-	-	-	-
10	46.4	48	1.1	1.2	B 1.75	1.75	2.2	40	21.8	23.4	0.5	0.6	0.86	0.75	31
20	45.4	47.7	2.0	2.0	B 2.55	2.54	3.0	45	20.8	23	1.0	1.0	1.27	1.5	33
30	44.5	47.3	2.8	2.9	B 3.45	3.45	3.7	58	19.9	22.7	1.4	1.4	1.75	2.2	35
40	43.6	46.9	3.6	3.8	B 4.55	4.55	5.5	59	19	22.3	1.8	1.9	2.55	2.2	46
50	42.7	46.6	4.4	4.6	B 5.75	6.3	5.5	64	18.1	21.9	2.2	2.3	2.55	3.0	46
60	41.9	46.2	5.2	5.5	B 5.75	6.3	7.5	64	17.3	21.6	2.6	2.7	3.45	3.0	46
70	41.1	45.8	6.1	6.3	B 8.6	8.6	7.5	94	16.5	21.2	3.0	3.2	3.45	3.7	46
80	40.3	45.4	6.9	7.2	B 8.6	8.6	11.0	94	15.7	20.8	3.4	3.6	4.55	3.7	50
90	39.6	45.1	7.7	8.1	B 8.6	8.6	11.0	94	14.9	20.4	3.8	4.0	4.55	5.5	50
100	38.9	44.7	8.5	8.9	B 10.3	12.6	11.0	100	14	20.1	4.2	4.5	6.3	5.5	82
110	37.6	44.3	9.3	9.8	B 10.3	12.6	11.0	100	-	19.7	-	4.9	6.3	5.5	82
120	36.3	43.9	10.2	10.5	B 12.6	12.6	11.0	122	-	19.3	-	5.3	6.3	5.5	82
130	35.1	43.5	11.0	11.5	B 12.6	12.6	15.0	122	-	18.9	-	5.8	6.3	7.5	82
140	33.8	43.1	11.8	12.3	B 15.0	17.3	15.0	122	-	18.5	-	6.2	8.6	7.5	82
150	32.6	42.7	12.6	13.2	B 15.0	17.3	15.0	122	-	18.1	-	6.6	8.6	7.5	82
<b>BFS260/</b>	<b>Q<sub>Th</sub><sup>1)</sup> 59</b>		-	-	-	-	-	-	<b>Q<sub>Th</sub><sup>1)</sup> 29.5</b>		-	-	-	-	-
10	55.6	57.6	1.3	1.5	B 2.18	2.54	2.2	45	26.1	28	0.6	0.7	1.27	1.1	33
20	54.4	57	2.3	2.5	B 3.45	3.45	3.0	58	24.9	27.5	1.1	1.3	1.75	1.5	35
30	53.3	56.4	3.3	3.6	B 4.55	4.55	5.5	59	23.8	26.9	1.6	1.8	2.55	2.2	46
40	52.1	55.8	4.3	4.6	B 5.75	6.3	5.5	64	22.6	26.3	2.1	2.3	2.55	3.0	46
50	51	55.2	5.2	5.7	B 6.3	6.3	7.5	64	21.5	25.7	2.6	2.9	3.45	3.0	46
60	49.8	54.6	6.2	6.7	B 8.6	8.6	7.5	94	20.3	25.1	3.1	3.4	4.55	3.7	50
70	48.6	54	7.2	7.8	B 8.6	8.6	11.0	94	19.1	24.5	3.6	3.9	4.55	5.5	50
80	47.5	53.4	8.2	8.8	B 10.3	12.6	11.0	100	18	23.9	4.1	4.4	6.3	5.5	82
90	46.3	52.8	9.2	9.9	B 12.6	12.6	11.0	122	16.8	23.2	4.6	5.0	6.3	5.5	82
100	45.1	52.1	10.2	11.0	B 12.6	12.6	15.0	122	15.7	22.6	5.1	5.5	6.3	5.5	82
110	43.5	51.5	11.2	12.1	B 12.6	12.6	15.0	122	-	22	-	6.0	6.3	7.5	82
120	41.9	50.8	12.1	13.1	B 15.0	17.3	15.0	122	-	21.3	-	6.6	8.6	7.5	82
130	40.2	49.6	13.1	14.2	B 15.0	17.3	15.0	122	-	-	-	-	-	-	-
140	38.6	48.3	14.1	15.2	-	17.3	18.5	103	-	-	-	-	-	-	-
150	37	47.1	15.1	16.3	-	17.3	18.5	103	-	-	-	-	-	-	-

<sup>1)</sup> Q<sub>Th</sub>: Theoretical flow rate

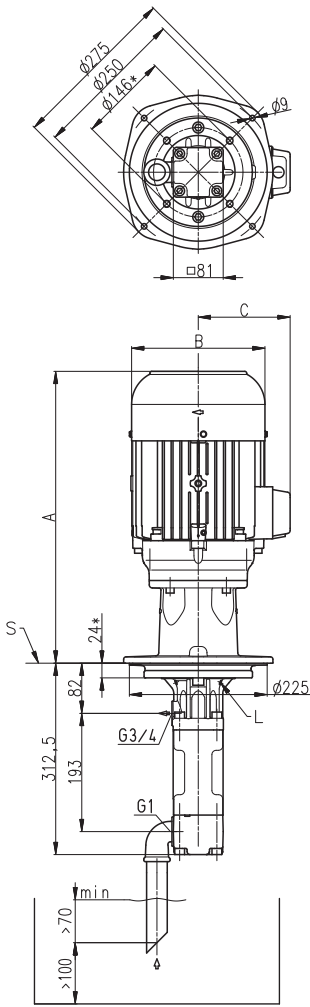
Higher pressures (up to 200 bar) upon request.

Viscosity > 20 mm<sup>2</sup>/s more power consumption.

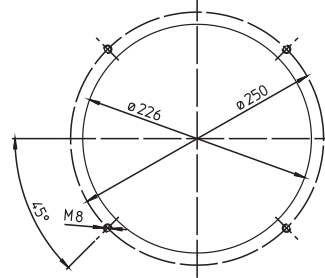
# Characteristics and dimensions

## BFS2, FFS2

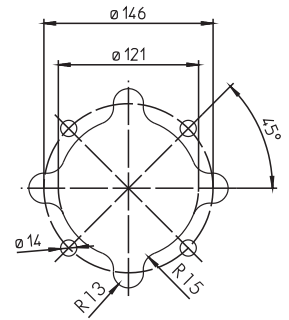
60 Hz



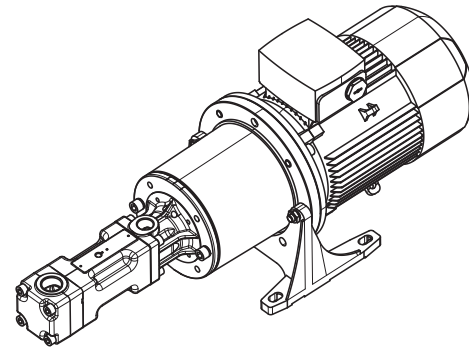
Mounting hole patterns  
BFS1 / BFS2



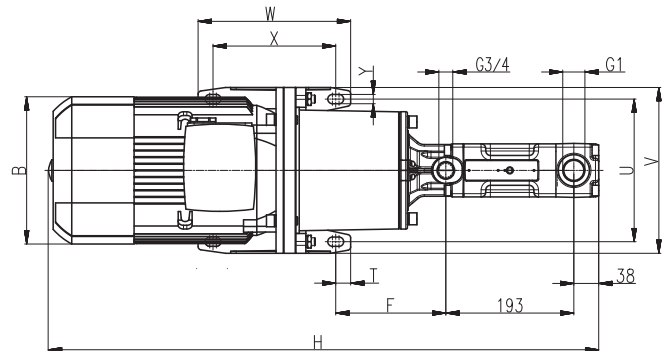
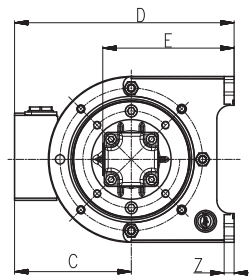
TFS1 / TFS2



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According to ISO 2768-m



\*) Dimensions for 4-pole standard motor upon request  
L = Leakage hole  
S = Mounting plate, please refer to the cut-out of mounting hole



Power 2-poles kW	A mm	B mm	C mm
B 1.75	415	176	130
B 2.18 / 2.55	474	176	130
B 3.45 / 4.55	513	218	150
B 5.75 / 6.3	543	218	150
B 8.6 / 10.3	622	258	193
B 12.6 / 15.0	630	310	240

Power 2-poles kW	Power 4-poles kW	B mm	C mm	D mm	E mm	F mm	H mm	T mm	U mm	V mm	W mm	X mm	Y mm	Z mm
-	0.75 / 0.86	159	121	233	155	138	776	15	180	210	90	60	11	12
1.75	1.1 / 1.27 / 1.5 / 1.75	178	126	238	155	138	746	15	180	210	90	60	11	12
2.2 / 2.54	-	178	126	238	155	138	786	15	180	210	90	60	11	12
3.0 / 3.45	2.2 / 2.55 / 3.0 / 3.45	198	166	321	198	166	846	22.5	215	250	230	185	14	15
3.7 / 4.55	3.7 / 4.55	222	177	332	198	166	830	22.5	215	250	230	185	14	15
5.5 / 6.3	-	262	202	387	228	171	882	22.5	265	300	270	225	14	18
7.5 / 8.6	5.5 / 6.3	262	202	387	228	171	932	22.5	265	300	270	225	14	18
-	7.5 / 8.6	262	202	387	228	171	940	22.5	265	300	270	225	14	18
11.0 / 12.6 / 15.0 / 17.3	-	314	237	472	278	210	1051	20	300	350	305	265	18	18
18.5	-	314	237	472	278	210	1111	20	300	350	305	265	18	18