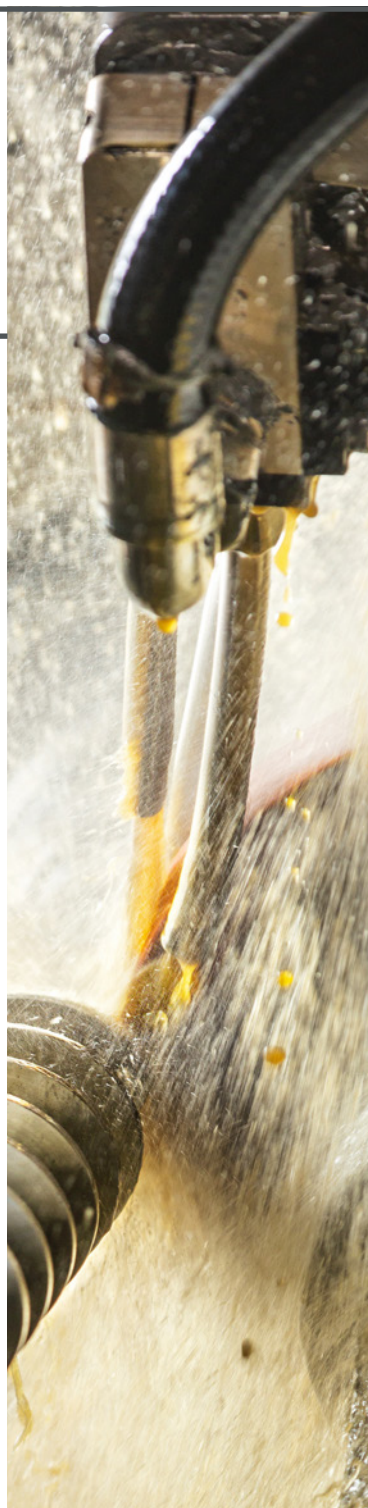


PW Series



MADE IN ITALY



www.seim.it

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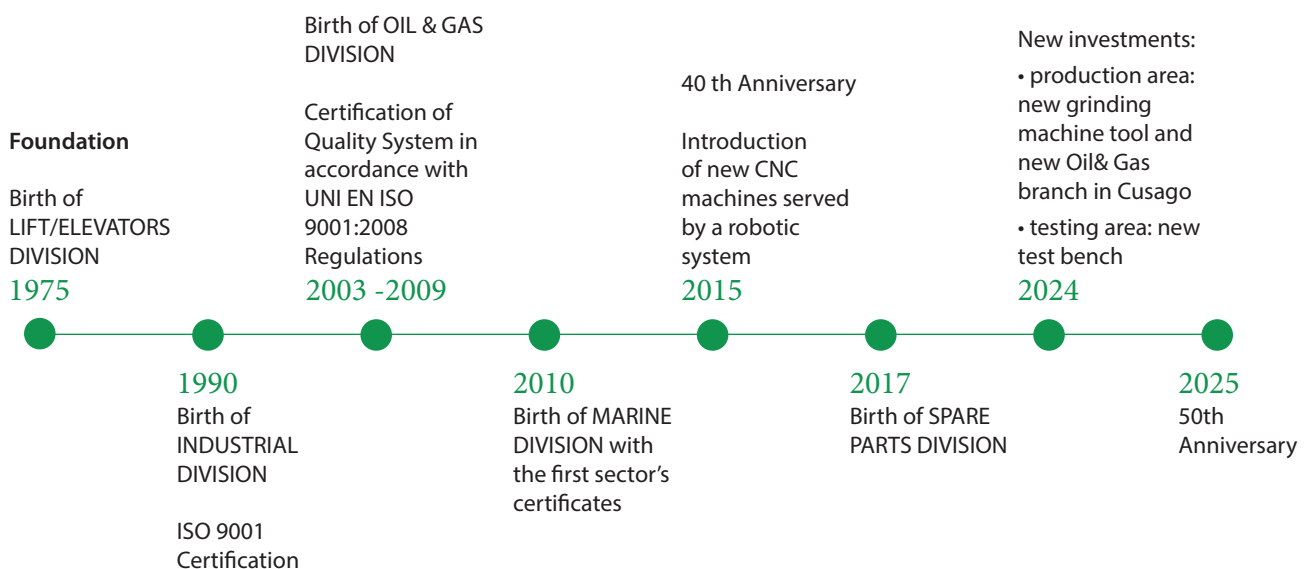
About Us

SEIM is a Made in Italy company which produces Screw Pumps and operates in the market for 50 years, reaching a position of leadership.

SEIM installed World-Wide over three million of screw pumps, heat exchangers and safety valves, developed entirely in-house and based on the know-how gained over the decades, for numerous industrial sectors, such as Energy, Marine, Petrochemical, Oil and Gas, Industrial (Machine Tools, Lubrication and Hydraulics, Mining, Iron and Steel).

Thanks to its high-tech systems and the synergetic collaboration with customers and distributors, the R&D department develops new standard and customized products aimed at satisfying requests for new applications of use.

Milestones

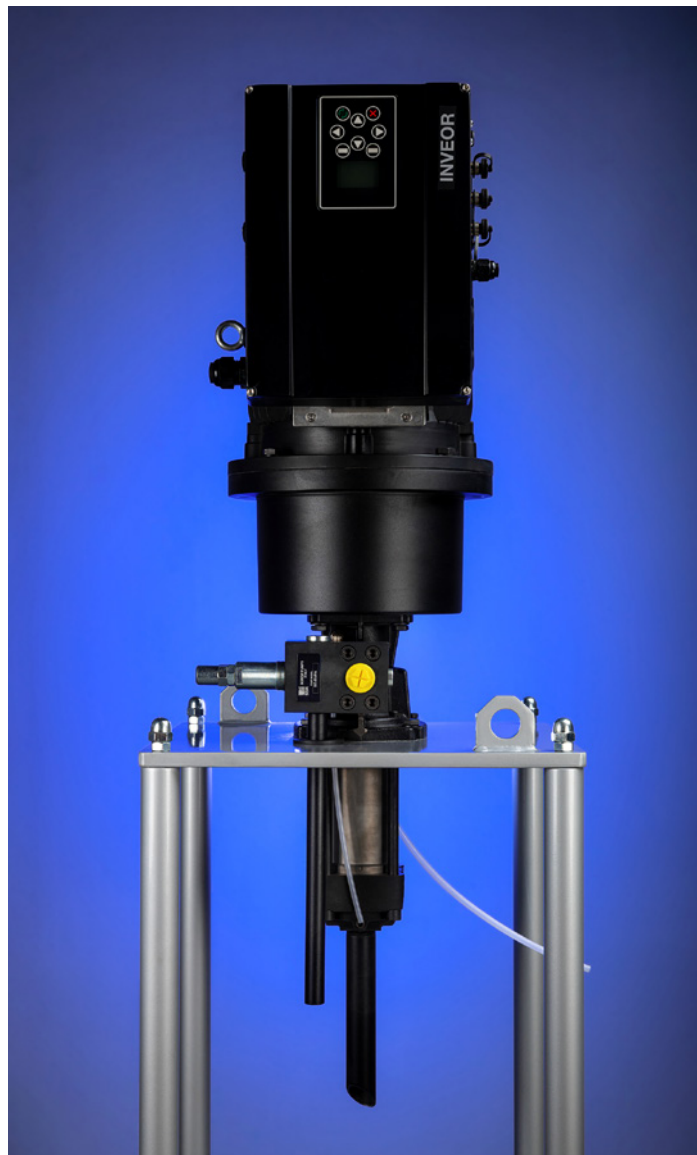


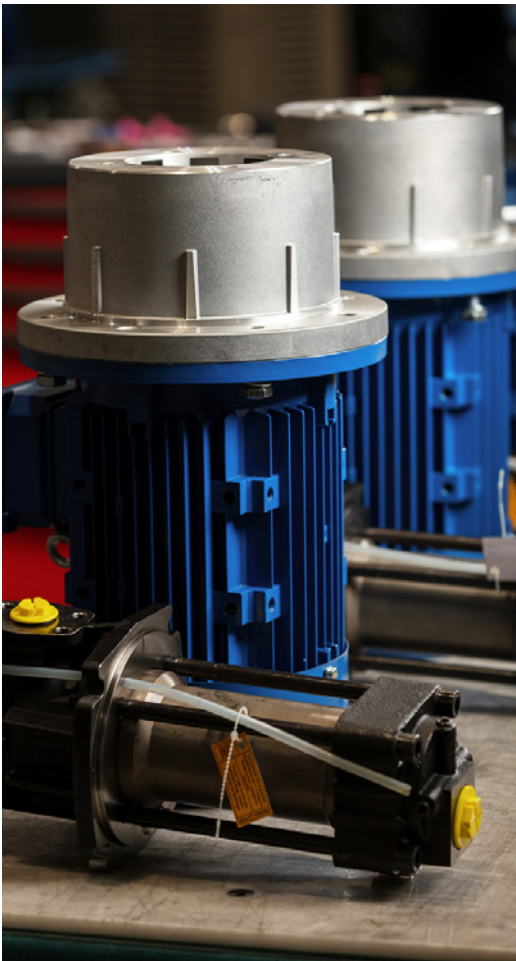
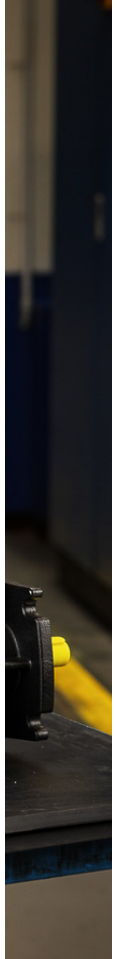
Applications

SEIM PWO/E are three-spindle screw pumps designed to convey cooling lubricants (emulsions and cutting oils) for high pressures in machine tools / filtration systems applications.

Other typical applications: automotive, aerospace industry, deep drilling, light fuel oils pumping.

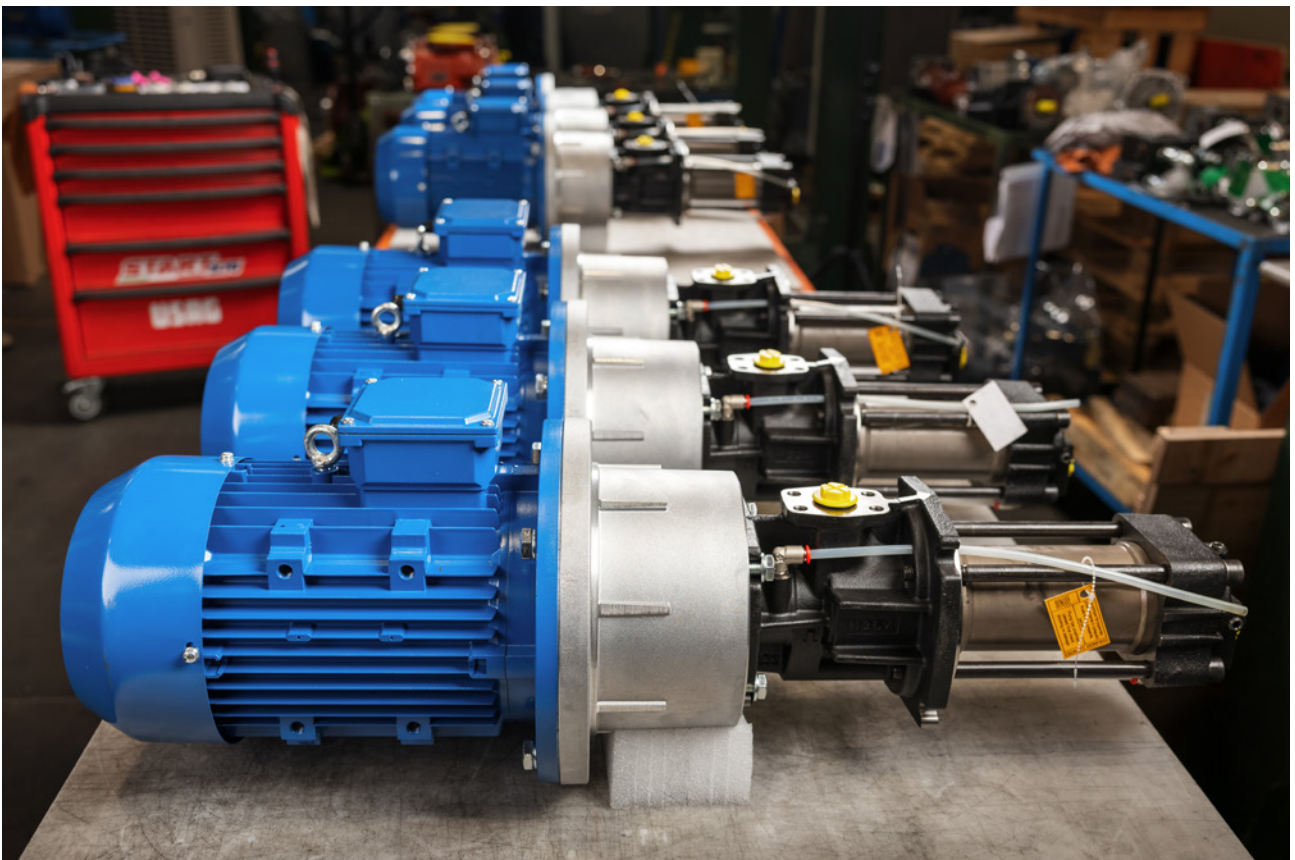
Typical configuration for vertical mounting on tank with pump immersed and delivery port above the tank.





Main Features & Benefits

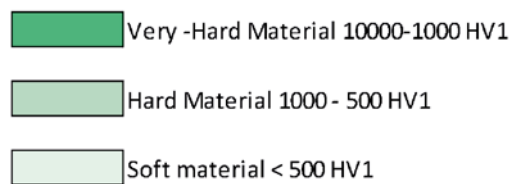
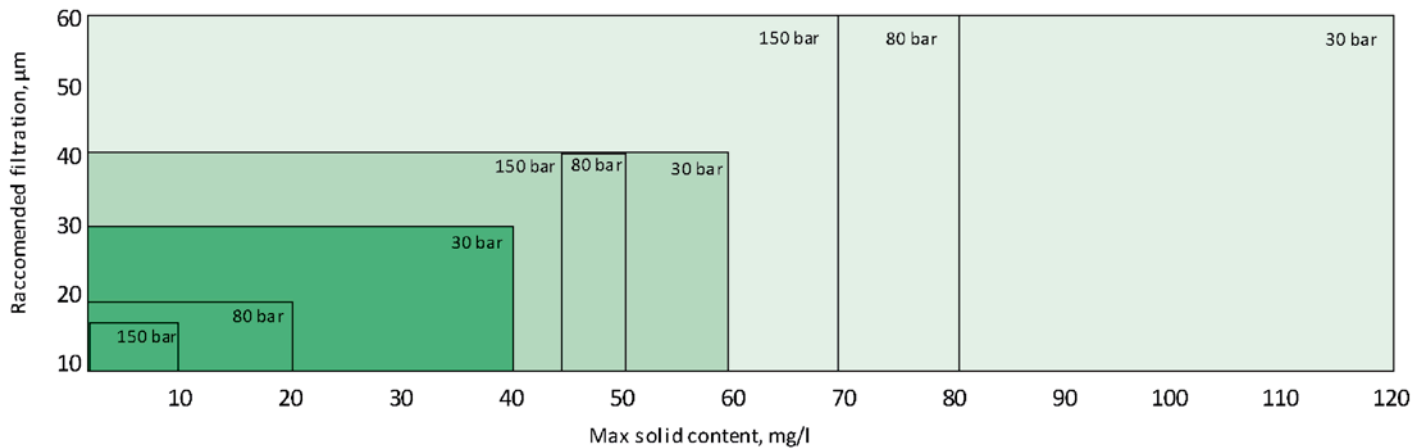
- Pump housing and screw set specially hardened ensure optimal service life
- Hydrostatic thrust compensation to minimize frictional effects and thus wear and tear
- Axial and radial bearings to minimize rotational stiffness and thus running noise
- Suitable both for installation immersed on the tank and for external dry installation
- Shaft sealing with lip seal or mechanical seal with leakage monitoring system
- Version available with pressure relief valve with direct discharge into the tank
- Motor-pumps available with integrated or remote drive control to save energy based on the need of each specific working condition



Sections and Components

	PWO	PWE
Installation	vertical immersed / dry external	
Handled fluid	cooling lubricants, cutting oils, light fuorl oils, vegetable oils, biodiesel	
Minimum oil content in emulsion	4%	
Viscosity range	1 - 20 cSt (for higher values ask SEIM)	
Rotation (viewed from coupling end)	clockwise	
Delivery pressure	up to 150 bar	
Suction pressure	0 to 1 bar	from 0,5 to 10 bar with mechanical seal
Operating temperature range	0 - 100 °C	
Seal type	lip seal (standard), mechanical seal	mechanical seal
Bearing type	self greased bearing	
Material & hardness - screw set	nitrided steel 1000 HV1	nitrided steel 1500 HV1 + special treatment
Material & hardness - flanges	cast iron 190/210 HB	cast iron 190/210 HB + SiC insert for wearing parts
Material & hardness – casing	cast iron 500 HV1	cast iron 500 HV1

Recommended Filtration



Very hard materials:

SIC, hardened steel
(thermal or stellited)

Hard materials:

steels, aluminum, abrasive
materials
(CBN, diamond)

"Soft" materials:

mildsteels, non ferrous
metals, cast iron

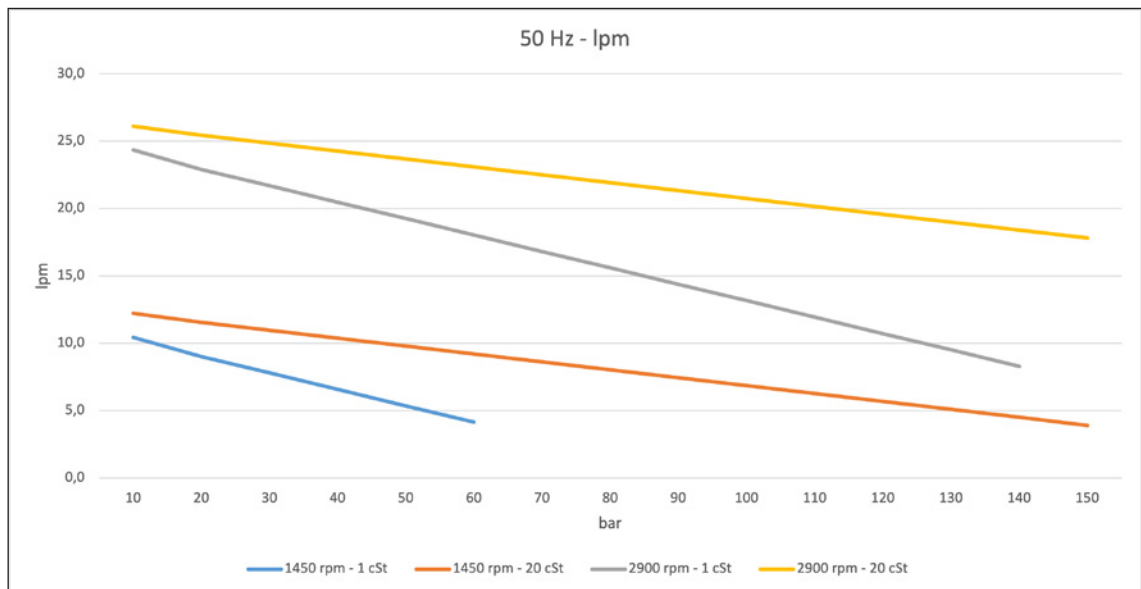
The type of pump to be installed depends on the combination between worked material and operating pressure.

PWE models are preferred in all applications that require maximum resistance to wearing, like hardened steels – either thermal or stellited – machining.

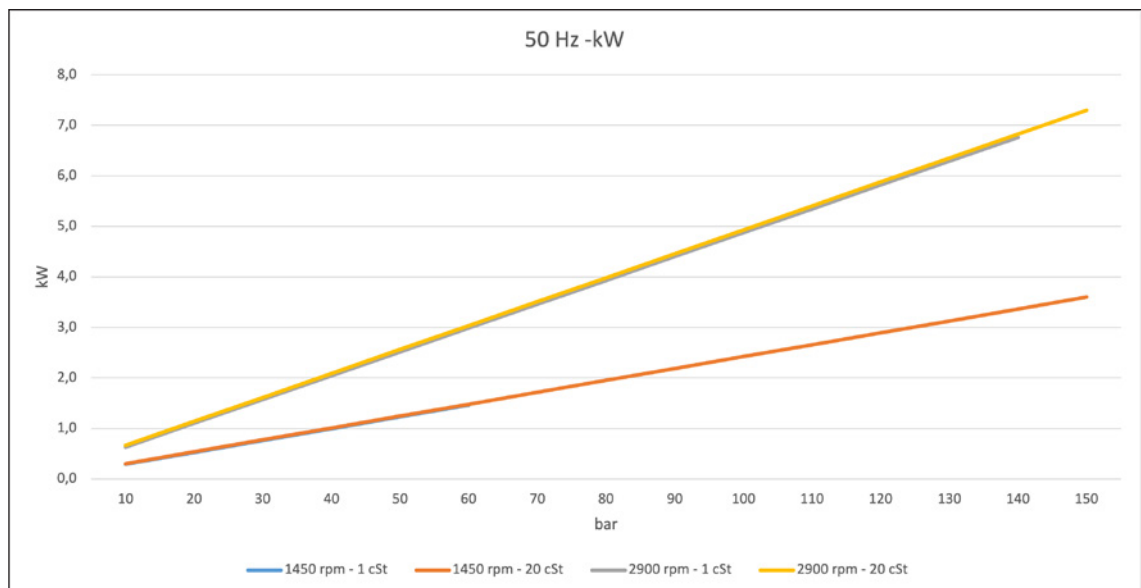
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0025#6A	10	10,4	0,3	12,2	0,3	24,3	0,6	26,1	0,7
PW0025#6A	20	9,0	0,5	11,5	0,5	22,9	1,1	25,4	1,1
PW0025#6A	30	7,8	0,8	11,0	0,8	21,7	1,6	24,8	1,6
PW0025#6A	40	6,6	1,0	10,4	1,0	20,5	2,0	24,3	2,1
PW0025#6A	50	5,4	1,2	9,8	1,2	19,2	2,5	23,7	2,6
PW0025#6A	60	4,1	1,5	9,2	1,5	18,0	3,0	23,1	3,0
PW0025#6A	70			8,6	1,7	16,8	3,5	22,5	3,5
PW0025#6A	80			8,0	2,0	15,6	3,9	21,9	4,0
PW0025#6A	90			7,4	2,2	14,4	4,4	21,3	4,5
PW0025#6A	100			6,8	2,4	13,2	4,9	20,7	4,9
PW0025#6A	110			6,3	2,7	11,9	5,3	20,1	5,4
PW0025#6A	120			5,7	2,9	10,7	5,8	19,6	5,9
PW0025#6A	130			5,1	3,1	9,5	6,3	19,0	6,4
PW0025#6A	140			4,5	3,4	8,3	6,8	18,4	6,8
PW0025#6A	150			3,9	3,6			17,8	7,3

1450



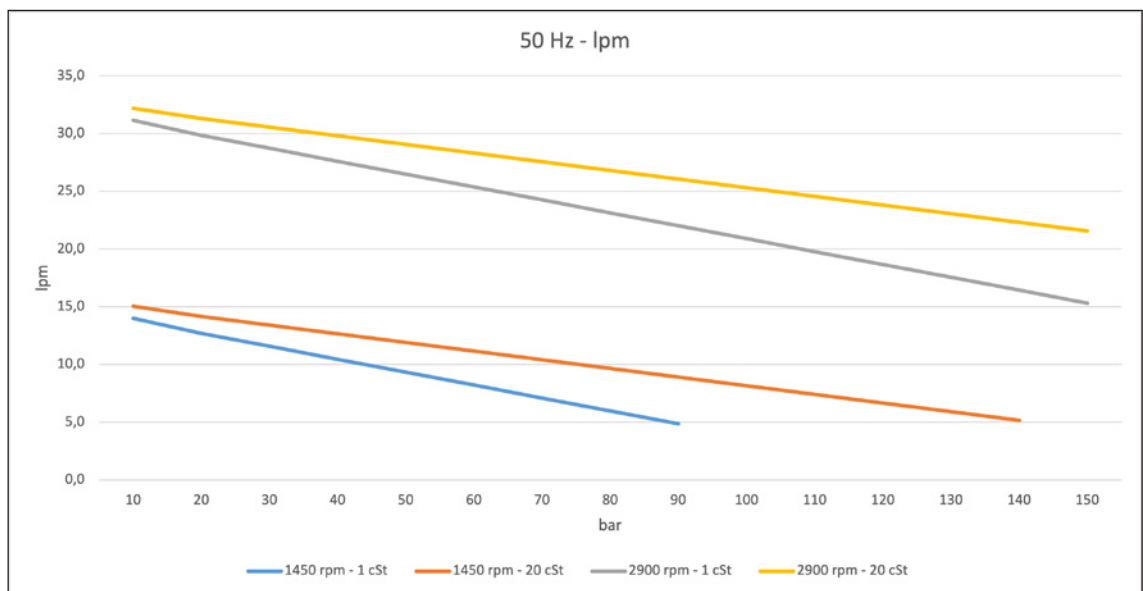
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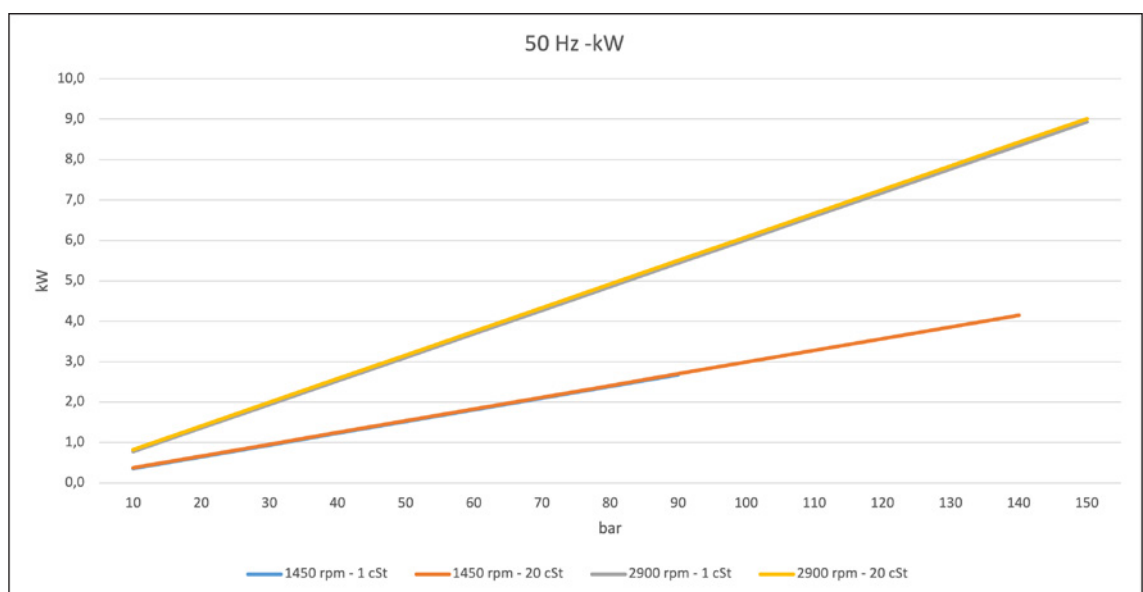
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0025#6B	10	14,0	0,4	15,0	0,4	31,1	0,8	32,2	0,8
PW0025#6B	20	12,7	0,6	14,2	0,7	29,8	1,4	31,3	1,4
PW0025#6B	30	11,6	0,9	13,4	1,0	28,7	1,9	30,6	2,0
PW0025#6B	40	10,4	1,2	12,7	1,2	27,6	2,5	29,8	2,6
PW0025#6B	50	9,3	1,5	11,9	1,5	26,5	3,1	29,1	3,2
PW0025#6B	60	8,2	1,8	11,2	1,8	25,4	3,7	28,3	3,7
PW0025#6B	70	7,1	2,1	10,4	2,1	24,2	4,3	27,6	4,3
PW0025#6B	80	6,0	2,4	9,7	2,4	23,1	4,9	26,8	4,9
PW0025#6B	90	4,9	2,7	8,9	2,7	22,0	5,4	26,1	5,5
PW0025#6B	100			8,2	3,0	20,9	6,0	25,3	6,1
PW0025#6B	110			7,4	3,3	19,8	6,6	24,6	6,7
PW0025#6B	120			6,7	3,6	18,7	7,2	23,8	7,3
PW0025#6B	130			5,9	3,9	17,5	7,8	23,1	7,8
PW0025#6B	140			5,2	4,2	16,4	8,4	22,3	8,4
PW0025#6B	150					15,3	8,9	21,6	9,0

1450



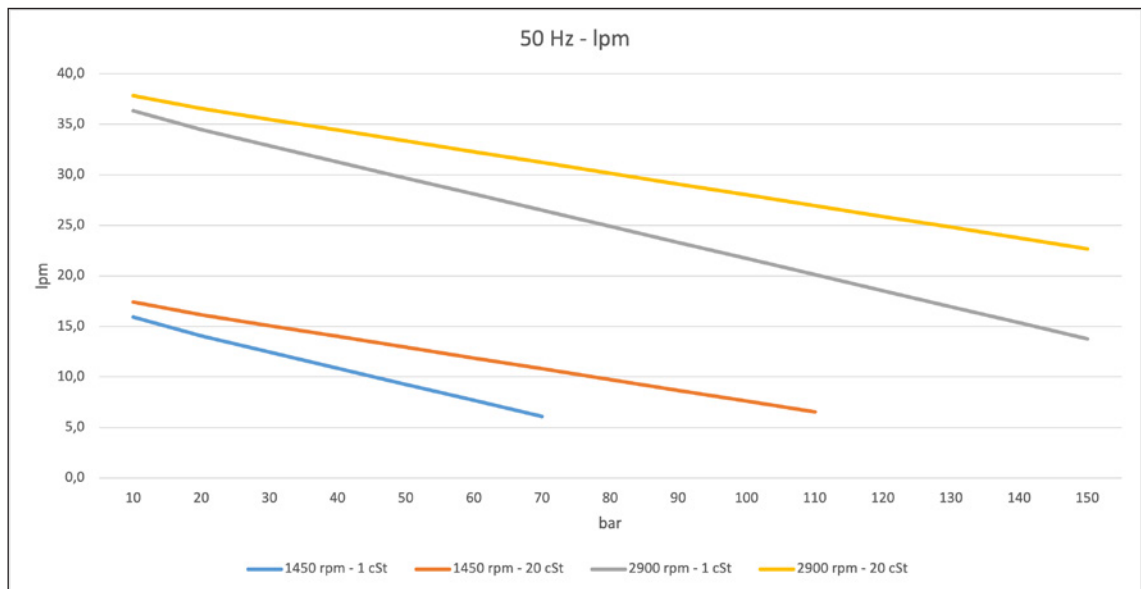
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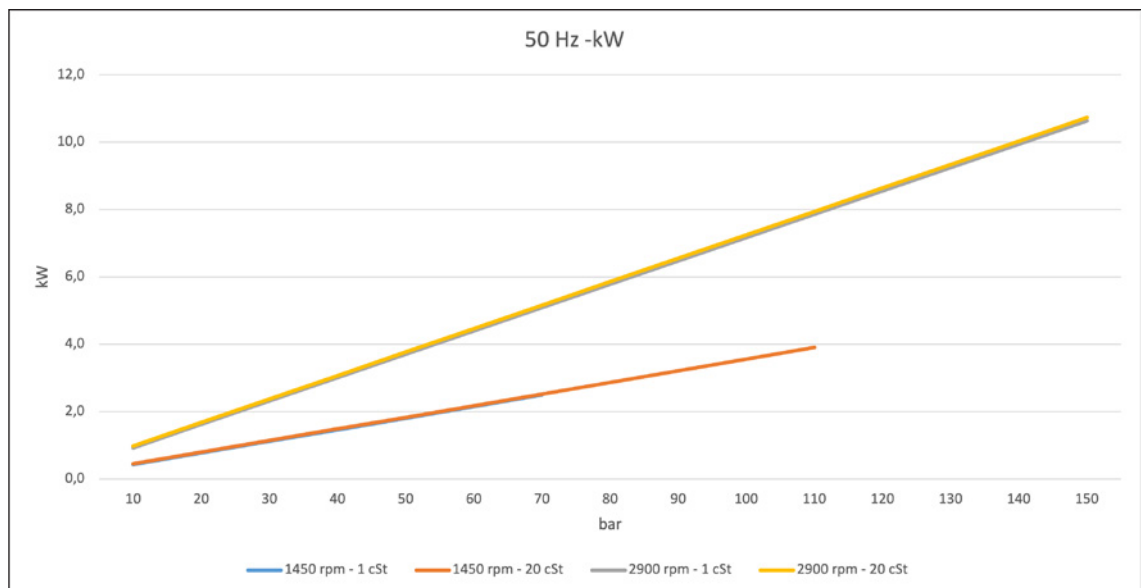
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0025#6C	10	15,9	0,4	17,4	0,4	36,3	0,9	37,8	1,0
PW0025#6C	20	14,0	0,8	16,1	0,8	34,5	1,6	36,6	1,7
PW0025#6C	30	12,5	1,1	15,1	1,1	32,9	2,3	35,5	2,4
PW0025#6C	40	10,9	1,5	14,0	1,5	31,3	3,0	34,4	3,1
PW0025#6C	50	9,3	1,8	12,9	1,8	29,7	3,7	33,4	3,8
PW0025#6C	60	7,7	2,2	11,9	2,2	28,1	4,4	32,3	4,5
PW0025#6C	70	6,1	2,5	10,8	2,5	26,5	5,1	31,2	5,2
PW0025#6C	80			9,7	2,9	24,9	5,8	30,1	5,9
PW0025#6C	90			8,7	3,2	23,3	6,5	29,1	6,6
PW0025#6C	100			7,6	3,6	21,7	7,2	28,0	7,2
PW0025#6C	110			6,5	3,9	20,1	7,9	26,9	7,9
PW0025#6C	120					18,5	8,6	25,9	8,6
PW0025#6C	130					16,9	9,2	24,8	9,3
PW0025#6C	140					15,3	9,9	23,7	10,0
PW0025#6C	150					13,7	10,6	22,7	10,7

1450



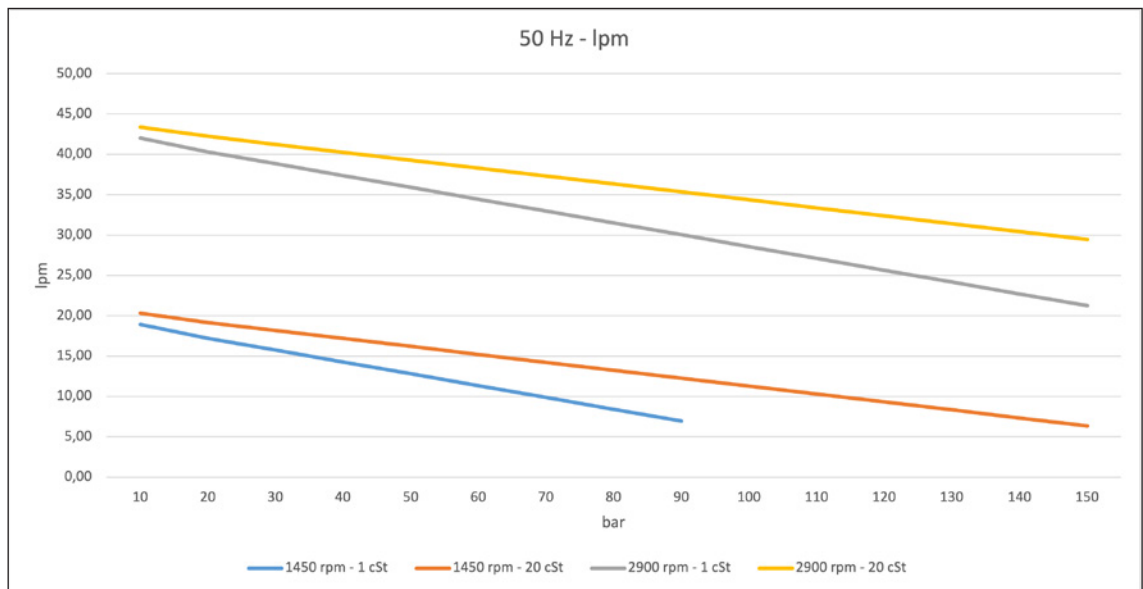
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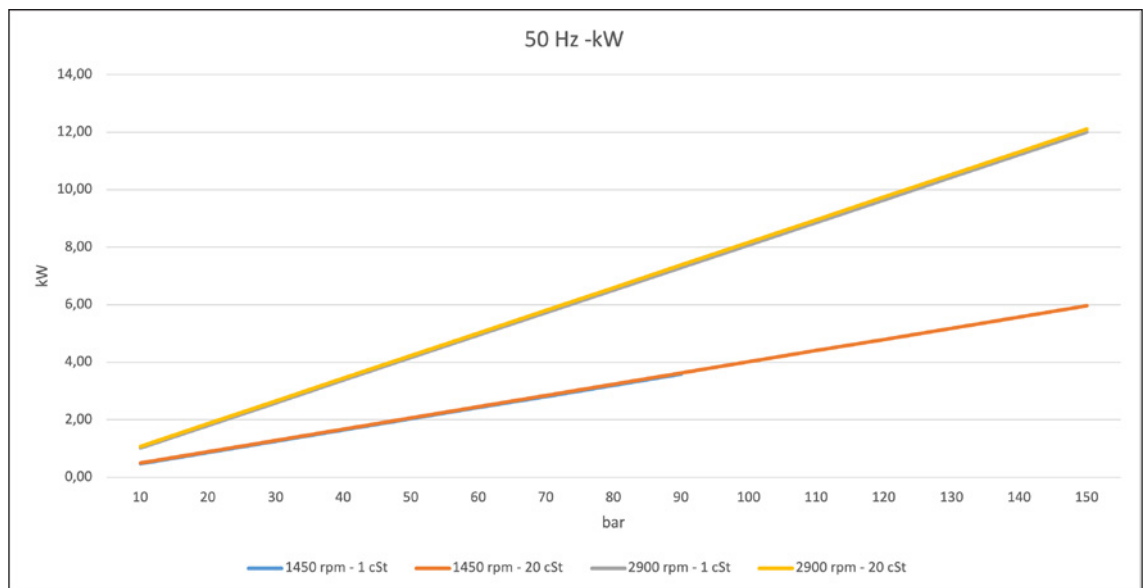
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0029#6A	10	18,94	0,47	20,30	0,49	42,02	1,02	43,39	1,08
PW0029#6A	20	17,22	0,86	19,15	0,89	40,30	1,81	42,23	1,87
PW0029#6A	30	15,75	1,25	18,17	1,28	38,83	2,59	41,25	2,65
PW0029#6A	40	14,28	1,64	17,18	1,67	37,37	3,37	40,27	3,44
PW0029#6A	50	12,82	2,03	16,20	2,06	35,90	4,16	39,28	4,23
PW0029#6A	60	11,35	2,42	15,21	2,45	34,43	4,94	38,30	5,02
PW0029#6A	70	9,88	2,81	14,23	2,84	32,97	5,73	37,31	5,80
PW0029#6A	80	8,42	3,20	13,25	3,23	31,50	6,51	36,33	6,59
PW0029#6A	90	6,95	3,59	12,26	3,62	30,03	7,29	35,35	7,38
PW0029#6A	100			11,28	4,01	28,57	8,08	34,36	8,17
PW0029#6A	110			10,30	4,40	27,10	8,86	33,38	8,95
PW0029#6A	120			9,31	4,80	25,63	9,65	32,40	9,74
PW0029#6A	130			8,33	5,19	24,17	10,43	31,41	10,53
PW0029#6A	140			7,34	5,58	22,70	11,21	30,43	11,31
PW0029#6A	150			6,36	5,97	21,23	12,00	29,44	12,10

1450



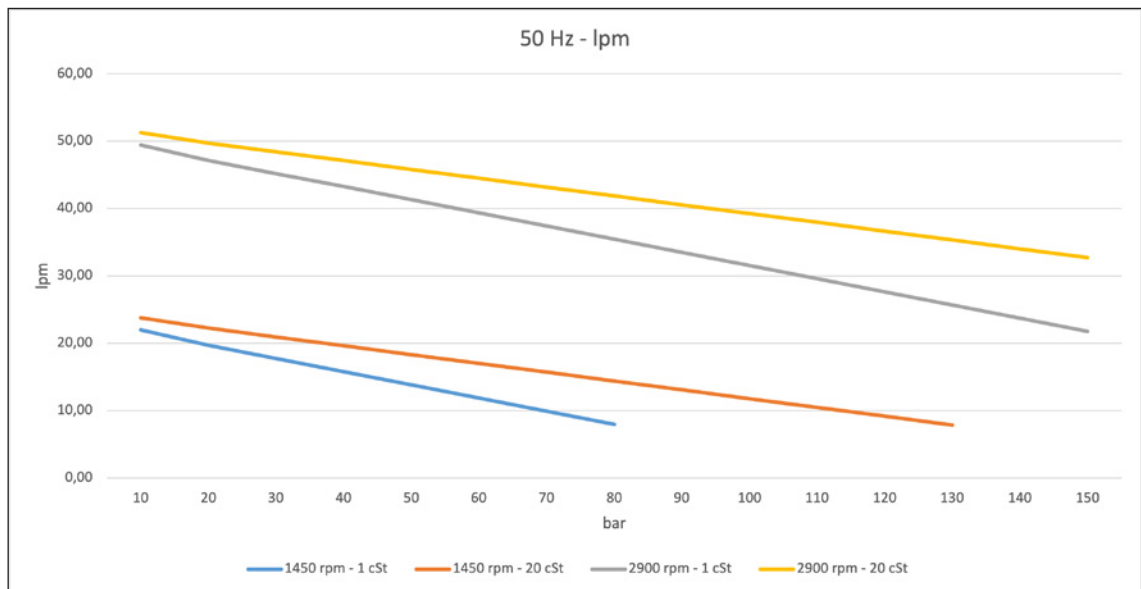
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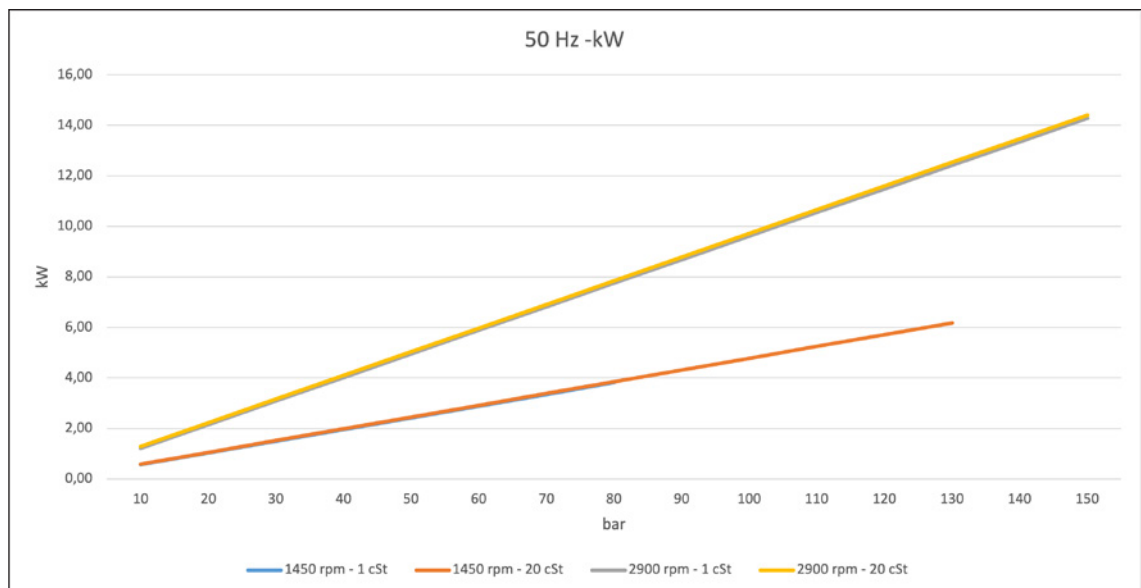
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0029#6B	10	21,96	0,56	23,78	0,59	49,44	1,22	51,25	1,29
PW0029#6B	20	19,67	1,03	22,24	1,05	47,15	2,15	49,72	2,22
PW0029#6B	30	17,72	1,49	20,93	1,52	45,20	3,08	48,41	3,16
PW0029#6B	40	15,77	1,96	19,62	1,99	43,25	4,02	47,10	4,10
PW0029#6B	50	13,82	2,42	18,32	2,45	41,29	4,95	45,79	5,03
PW0029#6B	60	11,87	2,88	17,01	2,92	39,34	5,88	44,48	5,97
PW0029#6B	70	9,91	3,35	15,70	3,38	37,39	6,82	43,17	6,91
PW0029#6B	80	7,96	3,81	14,39	3,85	35,44	7,75	41,87	7,85
PW0029#6B	90			13,08	4,31	33,49	8,68	40,56	8,78
PW0029#6B	100			11,77	4,78	31,54	9,62	39,25	9,72
PW0029#6B	110			10,46	5,24	29,58	10,55	37,94	10,66
PW0029#6B	120			9,15	5,71	27,63	11,48	36,63	11,59
PW0029#6B	130			7,84	6,17	25,68	12,41	35,32	12,53
PW0029#6B	140					23,73	13,35	34,01	13,47
PW0029#6B	150					21,78	14,28	32,70	14,40

1450



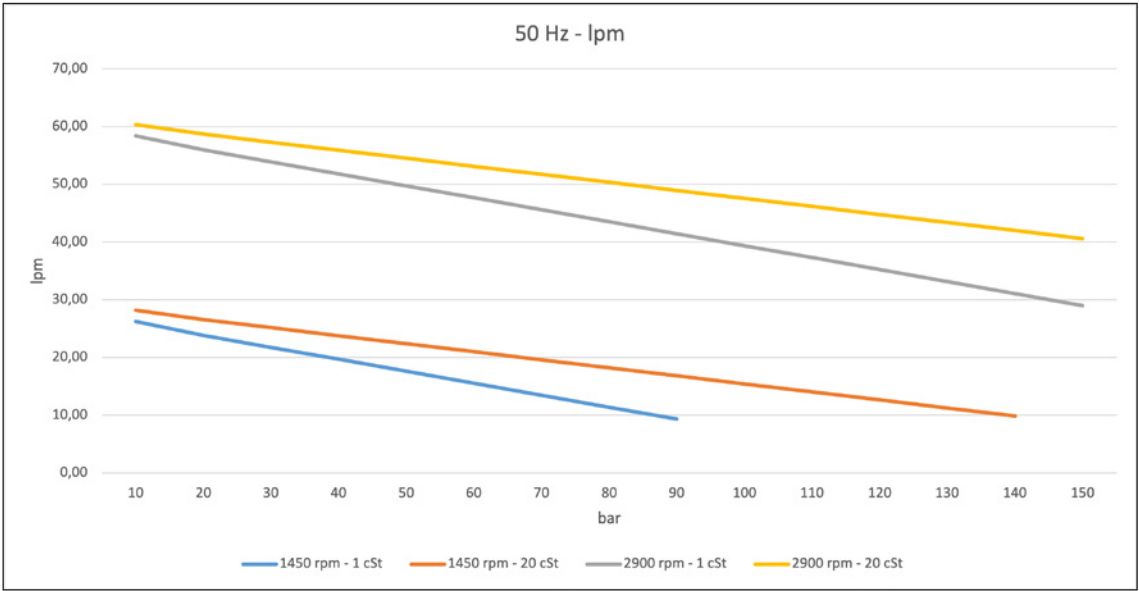
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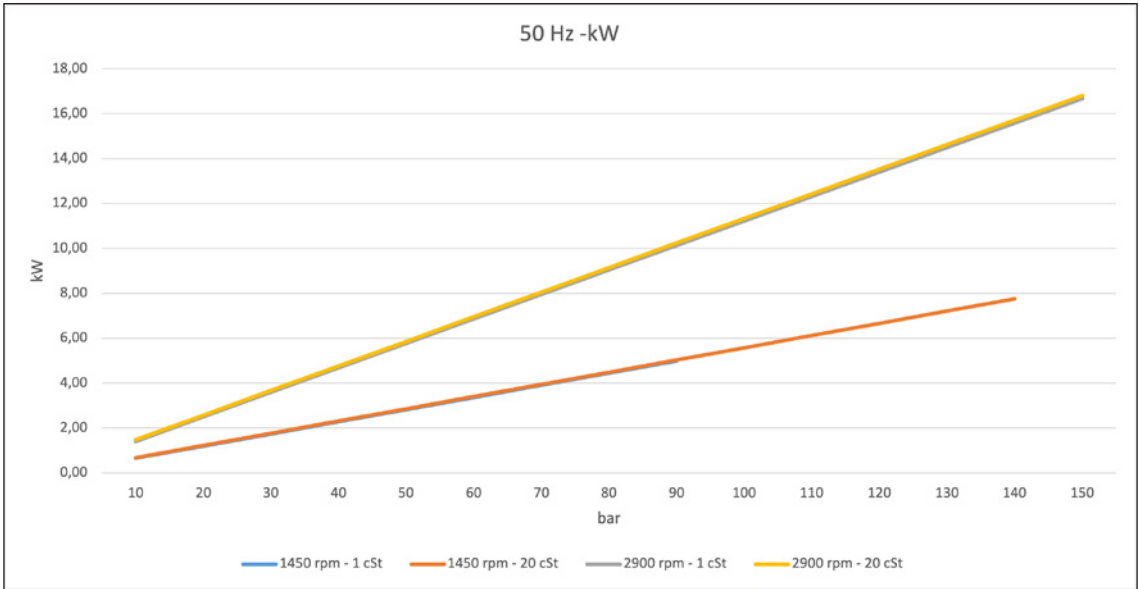
Performances 50 Hz

		1450				2900			
	bar	1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0032#6A	10	26,25	0,65	28,19	0,68	58,37	1,40	60,30	1,48
PW0032#6A	20	23,83	1,20	26,56	1,22	55,94	2,49	58,67	2,57
PW0032#6A	30	21,75	1,74	25,17	1,77	53,87	3,59	57,28	3,67
PW0032#6A	40	19,68	2,28	23,78	2,31	51,80	4,68	55,89	4,76
PW0032#6A	50	17,61	2,82	22,39	2,86	49,73	5,77	54,50	5,86
PW0032#6A	60	15,54	3,37	21,00	3,40	47,65	6,86	53,11	6,96
PW0032#6A	70	13,46	3,91	19,61	3,94	45,58	7,95	51,72	8,05
PW0032#6A	80	11,39	4,45	18,22	4,49	43,51	9,04	50,33	9,15
PW0032#6A	90	9,32	4,99	16,82	5,03	41,43	10,13	48,94	10,24
PW0032#6A	100			15,43	5,58	39,36	11,22	47,55	11,34
PW0032#6A	110			14,04	6,12	37,29	12,31	46,16	12,43
PW0032#6A	120			12,65	6,66	35,22	13,40	44,77	13,53
PW0032#6A	130			11,26	7,21	33,14	14,49	43,38	14,62
PW0032#6A	140			9,87	7,75	31,07	15,58	41,99	15,72
PW0032#6A	150					29,00	16,67	40,60	16,81

1450



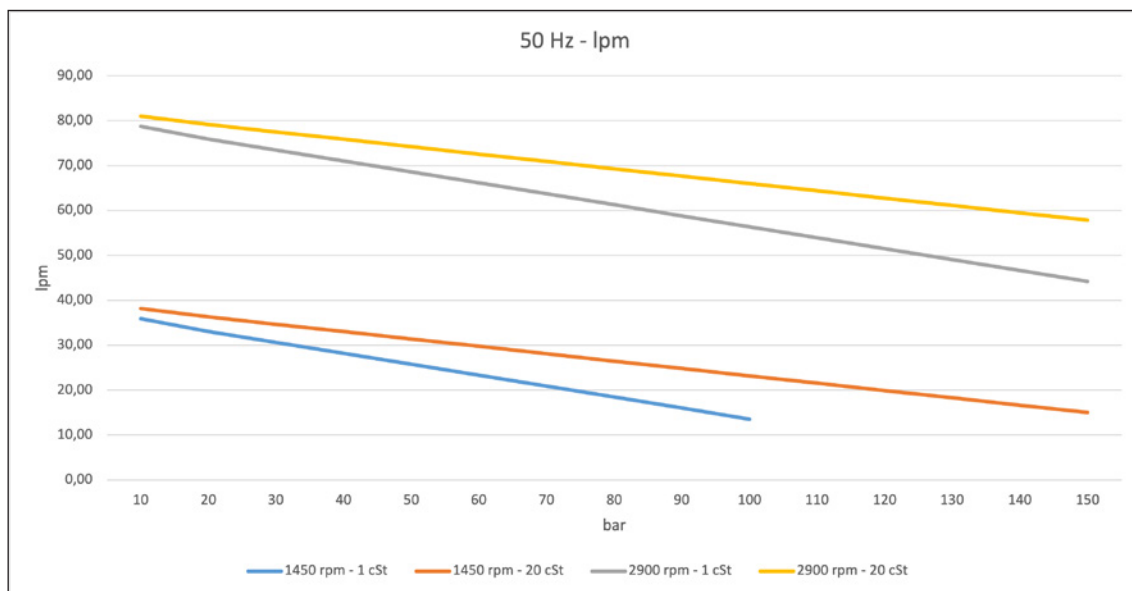
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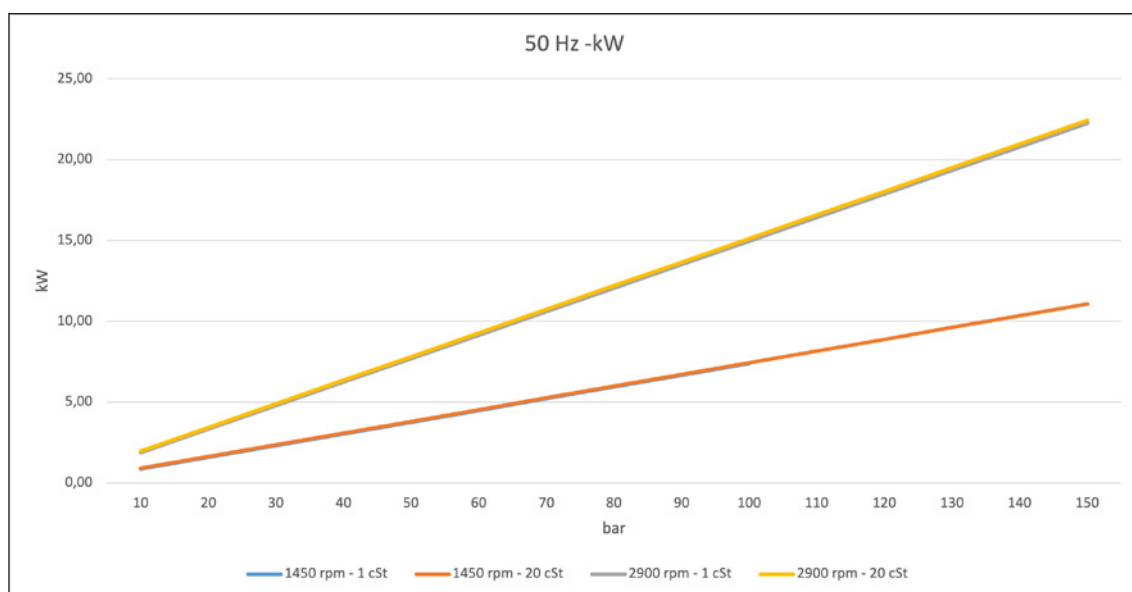
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0032#6B	10	35,93	0,87	38,20	0,91	78,76	1,87	81,04	1,97
PW0032#6B	20	33,07	1,59	36,29	1,63	75,91	3,33	79,12	3,43
PW0032#6B	30	30,63	2,32	34,65	2,36	73,47	4,78	77,48	4,89
PW0032#6B	40	28,19	3,04	33,01	3,08	71,03	6,24	75,85	6,35
PW0032#6B	50	25,75	3,76	31,38	3,81	68,59	7,69	74,21	7,82
PW0032#6B	60	23,31	4,49	29,74	4,53	66,15	9,14	72,57	9,28
PW0032#6B	70	20,87	5,21	28,10	5,26	63,71	10,60	70,94	10,74
PW0032#6B	80	18,43	5,93	26,47	5,99	61,27	12,05	69,30	12,20
PW0032#6B	90	15,99	6,66	24,83	6,71	58,83	13,51	67,66	13,66
PW0032#6B	100	13,55	7,38	23,19	7,44	56,39	14,96	66,03	15,12
PW0032#6B	110			21,56	8,16	53,95	16,42	64,39	16,58
PW0032#6B	120			19,92	8,89	51,51	17,87	62,75	18,04
PW0032#6B	130			18,28	9,61	49,07	19,33	61,12	19,50
PW0032#6B	140			16,65	10,34	46,63	20,78	59,48	20,96
PW0032#6B	150			15,01	11,06	44,19	22,24	57,84	22,42

1450



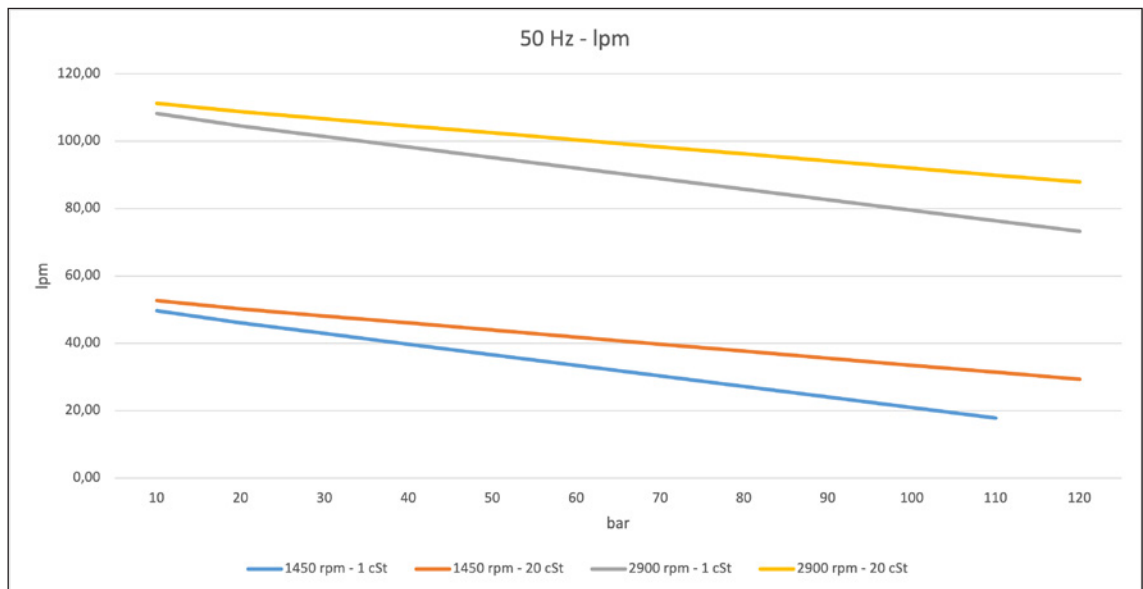
2900



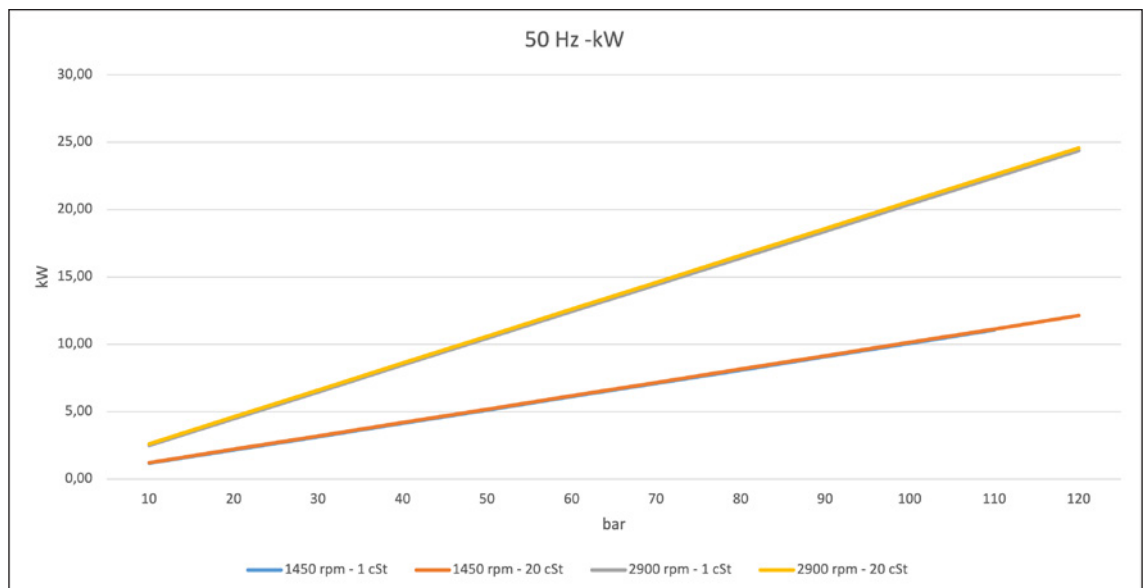
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO040#6A	10	49,68	1,17	52,63	1,21	108,23	2,49	111,18	2,61
PWO040#6A	20	46,01	2,16	50,18	2,20	104,56	4,48	108,73	4,61
PWO040#6A	30	42,87	3,14	48,09	3,19	101,42	6,47	106,64	6,61
PWO040#6A	40	39,73	4,13	46,00	4,18	98,29	8,46	104,55	8,60
PWO040#6A	50	36,60	5,12	43,91	5,18	95,15	10,44	102,46	10,60
PWO040#6A	60	33,46	6,11	41,81	6,17	92,01	12,43	100,37	12,60
PWO040#6A	70	30,33	7,10	39,72	7,16	88,88	14,42	98,27	14,59
PWO040#6A	80	27,19	8,09	37,63	8,15	85,74	16,41	96,18	16,59
PWO040#6A	90	24,05	9,08	35,54	9,14	82,61	18,40	94,09	18,59
PWO040#6A	100	20,92	10,07	33,45	10,14	79,47	20,39	92,00	20,58
PWO040#6A	110	17,78	11,05	31,35	11,13	76,33	22,37	89,91	22,58
PWO040#6A	120			29,26	12,12	73,20	24,36	87,81	24,58

1450



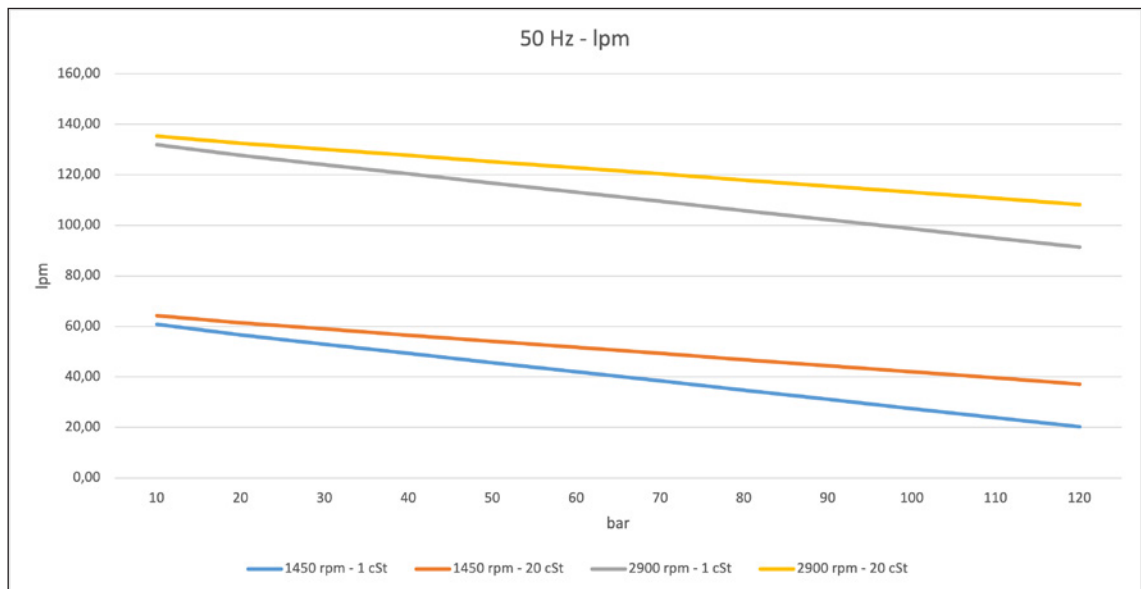
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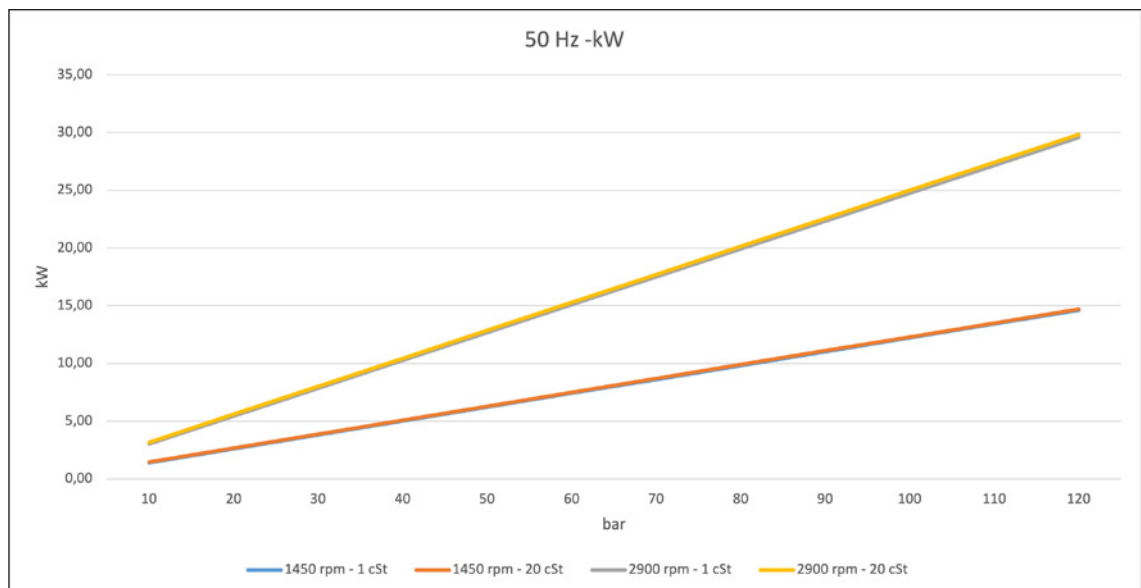
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0040#6B	10	60,82	1,42	64,24	1,47	131,91	3,02	135,33	3,17
PW0040#6B	20	56,56	2,62	61,40	2,67	127,66	5,44	132,49	5,60
PW0040#6B	30	52,93	3,82	58,98	3,88	124,02	7,85	130,07	8,02
PW0040#6B	40	49,30	5,02	56,55	5,08	120,39	10,27	127,65	10,45
PW0040#6B	50	45,66	6,22	54,13	6,29	116,76	12,68	125,22	12,87
PW0040#6B	60	42,03	7,42	51,71	7,49	113,12	15,10	122,80	15,29
PW0040#6B	70	38,40	8,62	49,28	8,69	109,49	17,51	120,38	17,72
PW0040#6B	80	34,76	9,82	46,86	9,90	105,86	19,92	117,95	20,14
PW0040#6B	90	31,13	11,02	44,43	11,10	102,22	22,34	115,53	22,57
PW0040#6B	100	27,50	12,22	42,01	12,31	98,59	24,75	113,10	24,99
PW0040#6B	110	23,87	13,42	39,59	13,51	94,96	27,17	110,68	27,42
PW0040#6B	120	20,23	14,62	37,16	14,71	91,33	29,58	108,26	29,84

1450



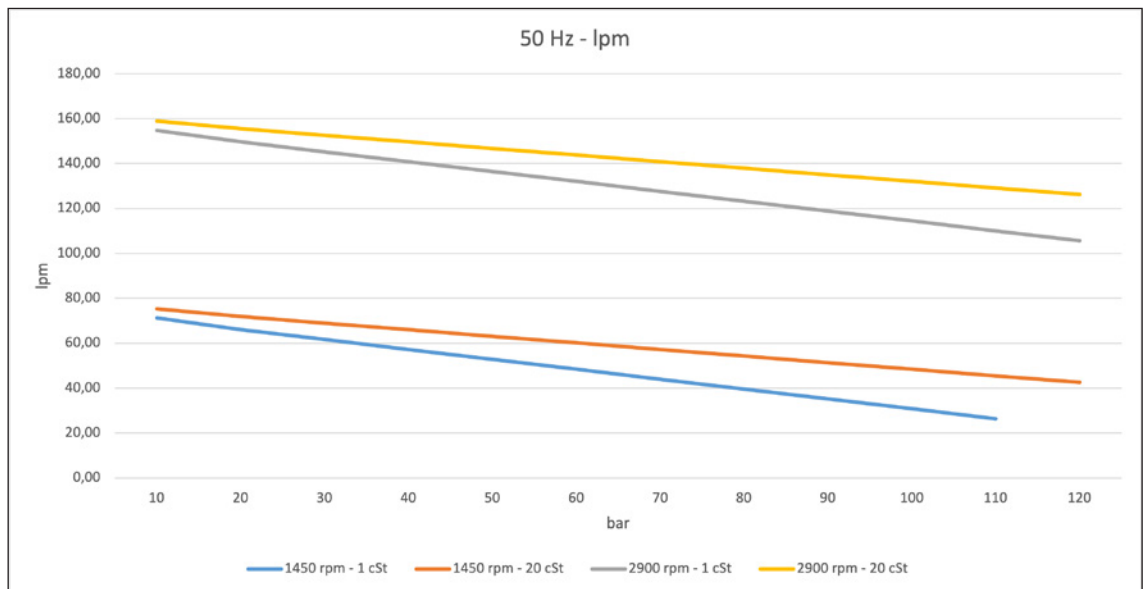
2900



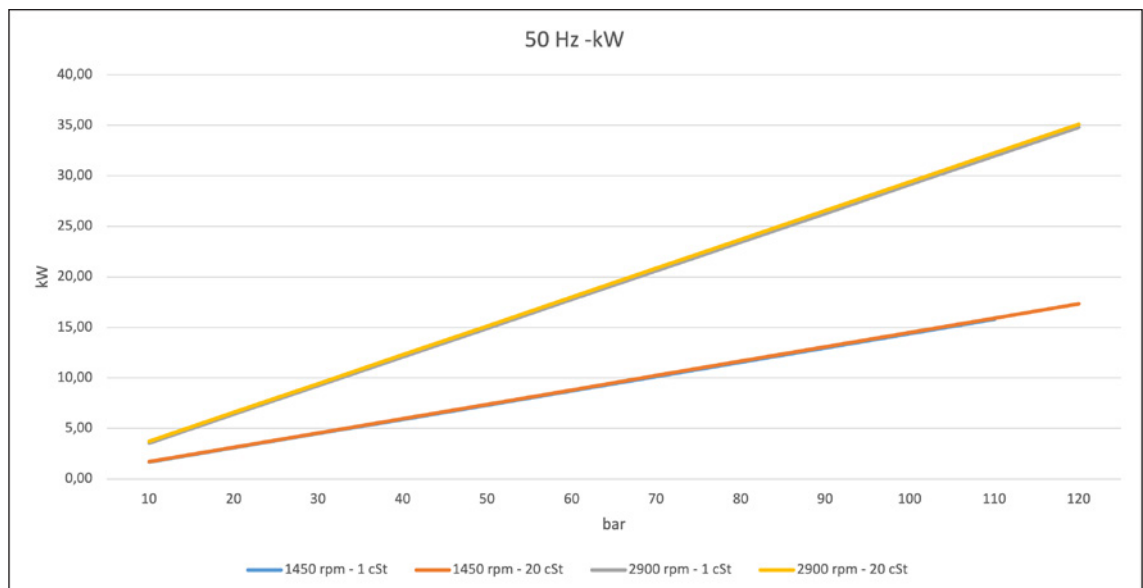
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO040#6C	10	71,19	1,67	75,35	1,73	154,84	3,56	159,00	3,73
PWO040#6C	20	66,03	3,08	71,91	3,14	149,68	6,40	155,56	6,58
PWO040#6C	30	61,62	4,49	68,97	4,56	145,27	9,24	152,62	9,44
PWO040#6C	40	57,22	5,90	66,04	5,98	140,87	12,08	149,69	12,29
PWO040#6C	50	52,81	7,32	63,10	7,40	136,46	14,92	146,75	15,14
PWO040#6C	60	48,40	8,73	60,16	8,81	132,05	17,76	143,81	18,00
PWO040#6C	70	44,00	10,14	57,23	10,23	127,65	20,60	140,88	20,85
PWO040#6C	80	39,59	11,56	54,29	11,65	123,24	23,44	137,94	23,70
PWO040#6C	90	35,19	12,97	51,36	13,06	118,84	26,28	135,01	26,55
PWO040#6C	100	30,78	14,38	48,42	14,48	114,43	29,12	132,07	29,41
PWO040#6C	110	26,37	15,79	45,48	15,90	110,03	31,96	129,13	32,26
PWO040#6C	120			42,55	17,31	105,62	34,81	126,20	35,11

1450



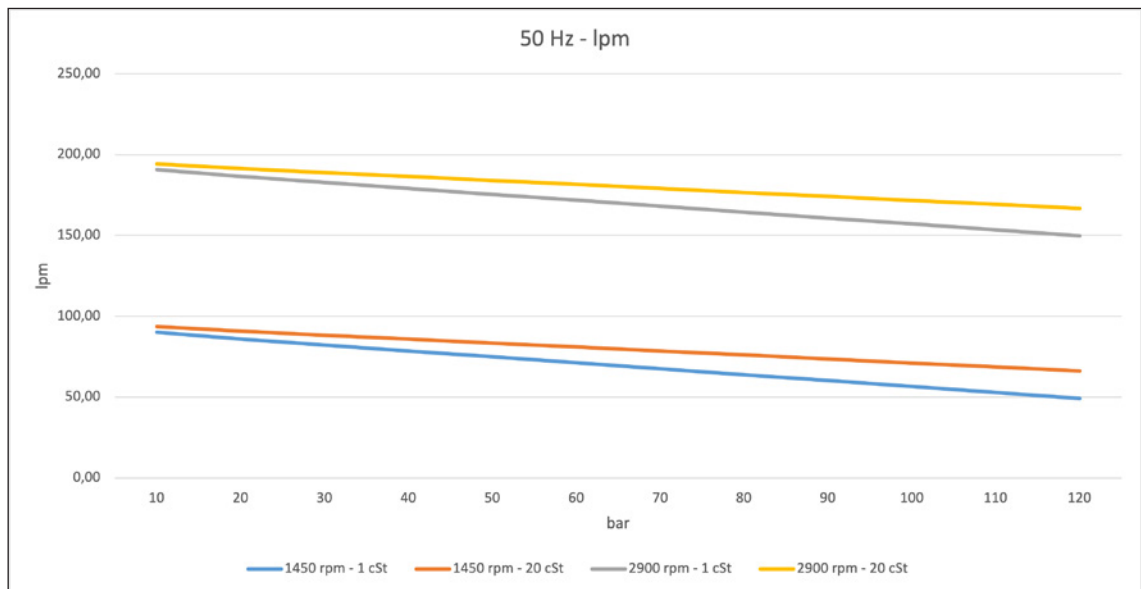
2900



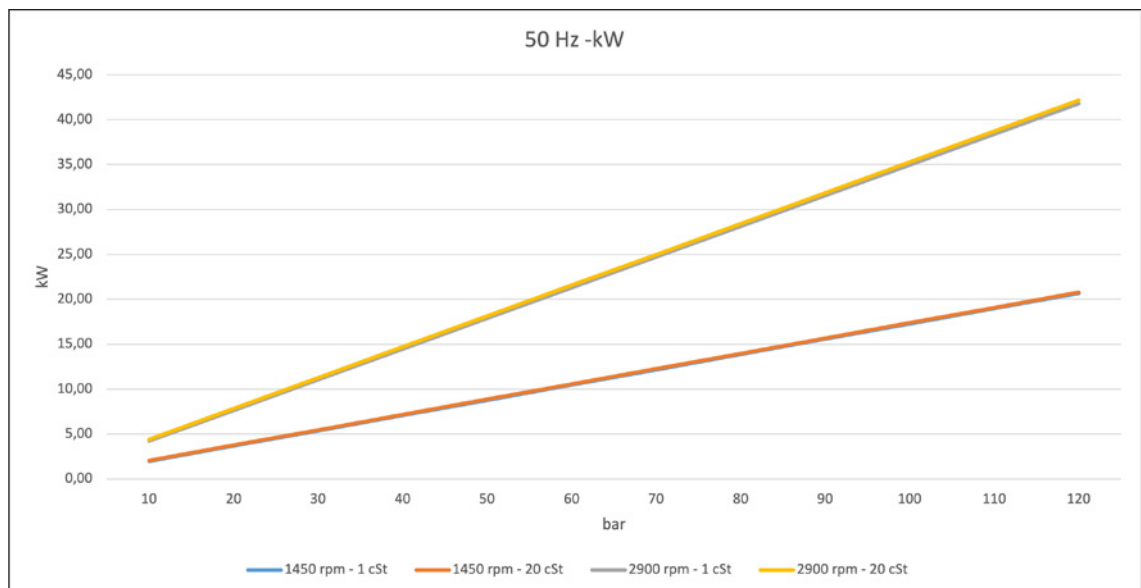
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO045#6A	10	90,19	1,98	93,63	2,05	190,77	4,23	194,21	4,42
PWO045#6A	20	85,89	3,68	90,76	3,76	186,47	7,64	191,33	7,85
PWO045#6A	30	82,22	5,38	88,31	5,46	182,80	11,06	188,88	11,28
PWO045#6A	40	78,56	7,08	85,85	7,17	179,13	14,47	186,43	14,71
PWO045#6A	50	74,89	8,78	83,40	8,87	175,46	17,89	183,97	18,14
PWO045#6A	60	71,22	10,48	80,95	10,57	171,79	21,30	181,52	21,57
PWO045#6A	70	67,55	12,18	78,49	12,28	168,12	24,72	179,07	25,00
PWO045#6A	80	63,88	13,87	76,04	13,98	164,45	28,13	176,61	28,43
PWO045#6A	90	60,21	15,57	73,59	15,68	160,78	31,55	174,16	31,86
PWO045#6A	100	56,54	17,27	71,13	17,39	157,11	34,96	171,71	35,29
PWO045#6A	110	52,87	18,97	68,68	19,09	153,44	38,38	169,25	38,72
PWO045#6A	120	49,20	20,67	66,23	20,79	149,77	41,79	166,80	42,15

1450

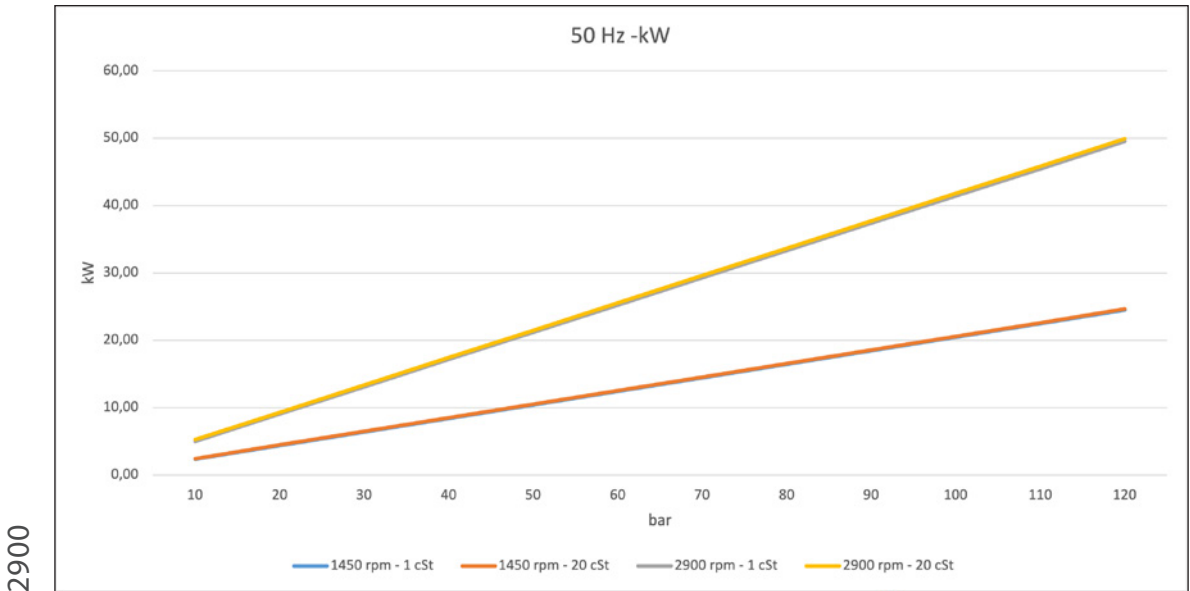
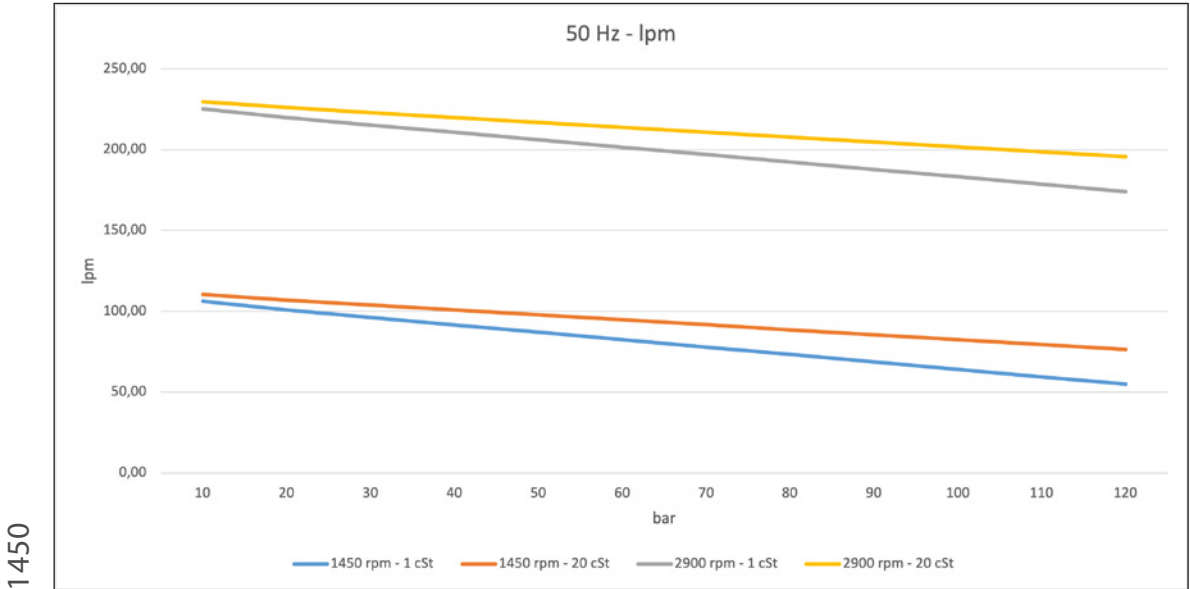


2900



Performances 50 Hz

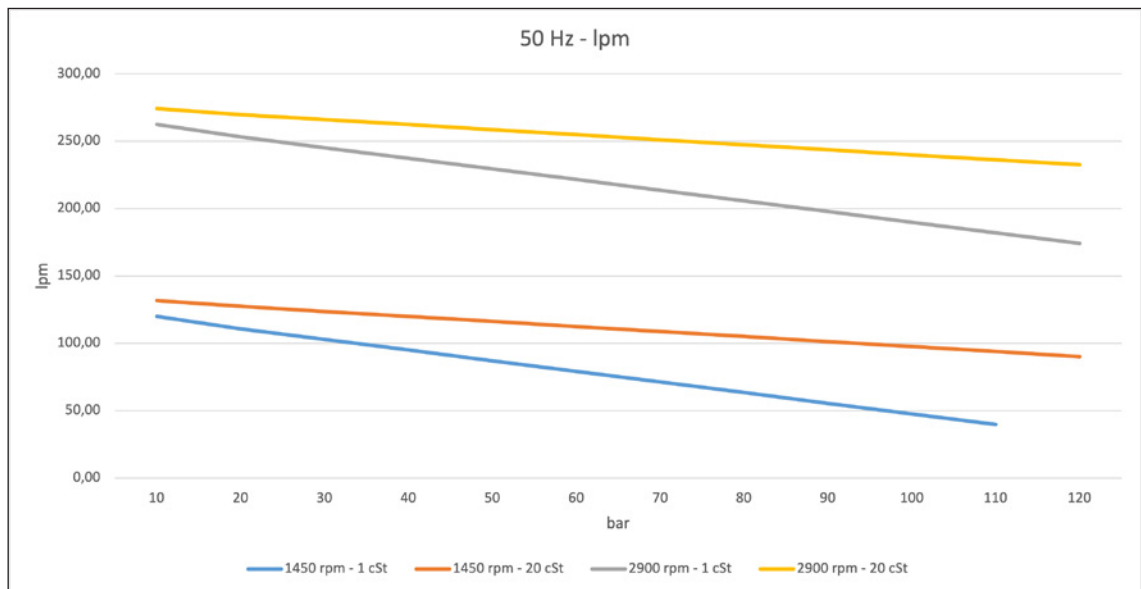
	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO045#6B	10	106,13	2,35	110,48	2,43	225,24	5,00	229,58	5,24
PWO045#6B	20	100,76	4,36	106,90	4,45	219,86	9,05	226,00	9,30
PWO045#6B	30	96,18	6,37	103,85	6,47	215,28	13,09	222,95	13,36
PWO045#6B	40	91,59	8,38	100,80	8,49	210,69	17,14	219,90	17,42
PWO045#6B	50	87,01	10,40	97,75	10,50	206,11	21,18	216,85	21,48
PWO045#6B	60	82,42	12,41	94,70	12,52	201,52	25,23	213,80	25,55
PWO045#6B	70	77,84	14,42	91,65	14,54	196,94	29,27	210,75	29,61
PWO045#6B	80	73,25	16,43	88,60	16,55	192,35	33,32	207,70	33,67
PWO045#6B	90	68,66	18,44	85,55	18,57	187,77	37,36	204,65	37,73
PWO045#6B	100	64,08	20,45	82,50	20,59	183,18	41,41	201,60	41,79
PWO045#6B	110	59,49	22,46	79,45	22,61	178,60	45,45	198,55	45,85
PWO045#6B	120	54,91	24,48	76,40	24,62	174,01	49,49	195,50	49,91



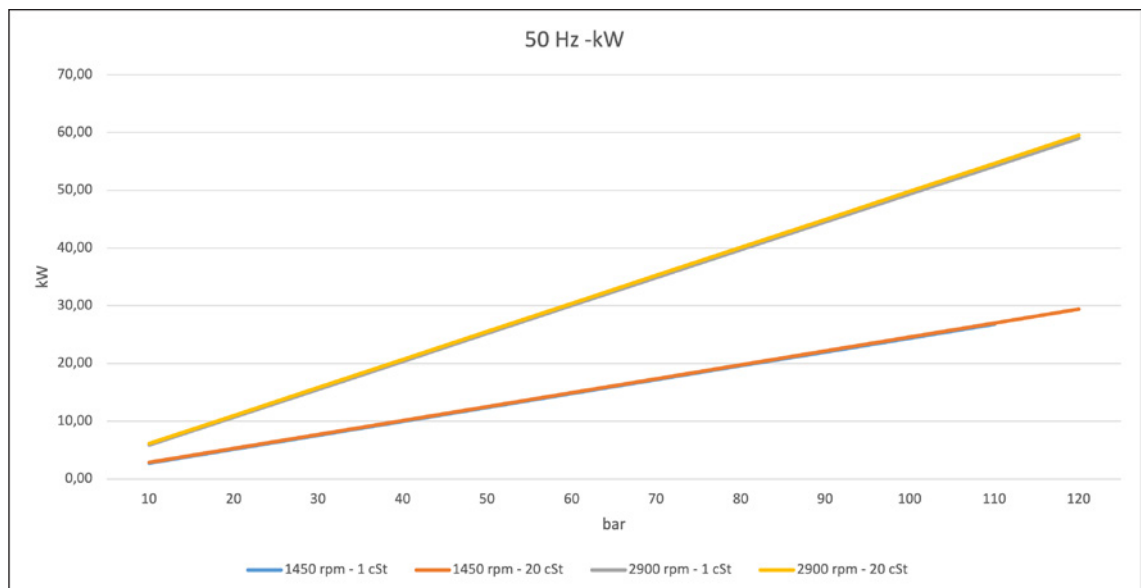
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO055#6A	10	119,99	2,77	131,77	2,86	262,32	5,87	274,10	6,13
PWO055#6A	20	110,73	5,17	127,39	5,27	253,06	10,71	269,72	10,98
PWO055#6A	30	102,83	7,58	123,65	7,68	245,16	15,54	265,99	15,83
PWO055#6A	40	94,93	9,98	119,92	10,09	237,26	20,37	262,25	20,69
PWO055#6A	50	87,03	12,39	116,18	12,50	229,36	25,21	258,51	25,54
PWO055#6A	60	79,13	14,79	112,45	14,92	221,46	30,04	254,78	30,40
PWO055#6A	70	71,23	17,19	108,71	17,33	213,56	34,87	251,04	35,25
PWO055#6A	80	63,33	19,60	104,97	19,74	205,66	39,71	247,31	40,10
PWO055#6A	90	55,43	22,00	101,24	22,15	197,76	44,54	243,57	44,96
PWO055#6A	100	47,53	24,40	97,50	24,56	189,86	49,37	239,84	49,81
PWO055#6A	110	39,63	26,81	93,77	26,97	181,96	54,21	236,10	54,66
PWO055#6A	120	0,00	0,00	90,03	29,38	174,06	59,04	232,36	59,52

1450



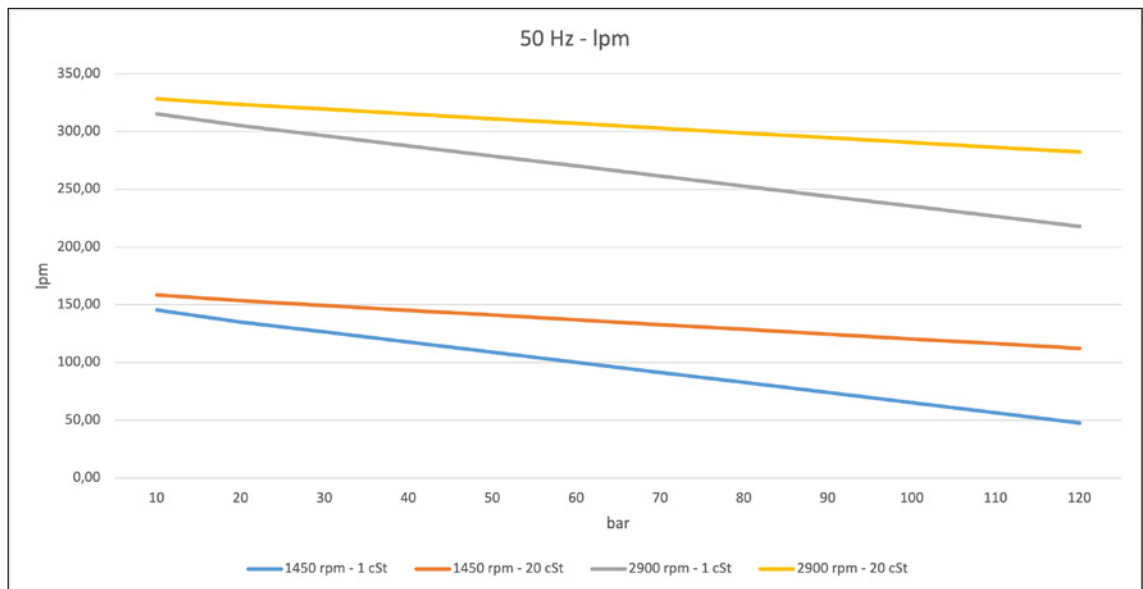
2900



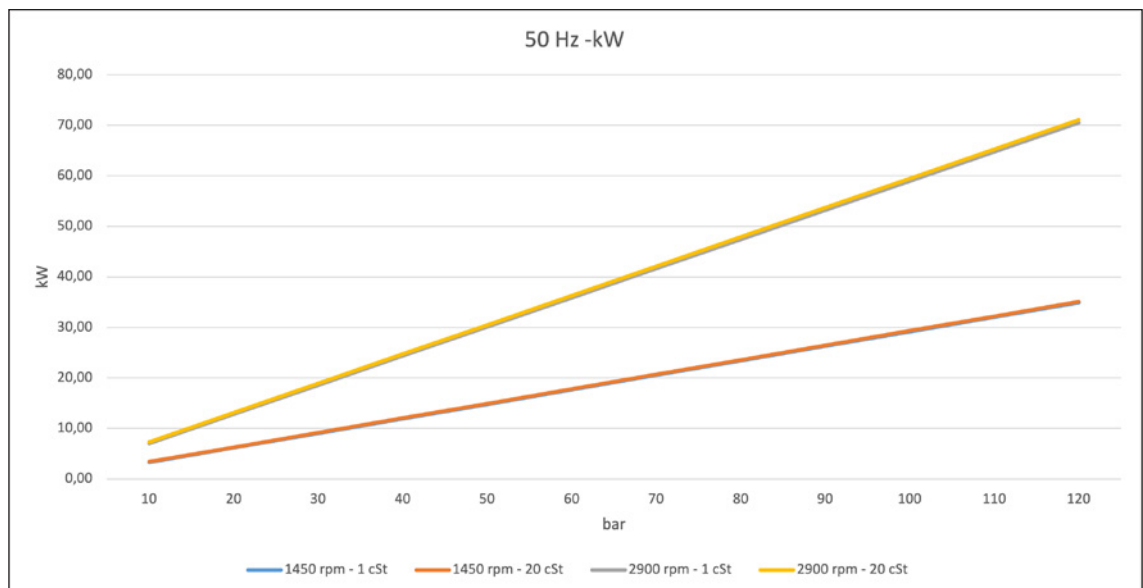
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO055#6B	10	145,31	3,31	158,32	3,42	315,30	7,01	328,32	7,32
PWO055#6B	20	135,08	6,18	153,49	6,30	305,08	12,79	323,48	13,12
PWO055#6B	30	126,35	9,05	149,36	9,18	296,35	18,56	319,36	18,91
PWO055#6B	40	117,62	11,92	145,23	12,06	287,62	24,33	315,23	24,71
PWO055#6B	50	108,89	14,79	141,10	14,93	278,89	30,10	311,10	30,51
PWO055#6B	60	100,16	17,66	136,97	17,81	270,16	35,88	306,97	36,30
PWO055#6B	70	91,43	20,53	132,84	20,69	261,43	41,65	302,84	42,10
PWO055#6B	80	82,70	23,41	128,72	23,57	252,70	47,42	298,71	47,90
PWO055#6B	90	73,97	26,28	124,59	26,45	243,97	53,20	294,59	53,69
PWO055#6B	100	65,24	29,15	120,46	29,33	235,24	58,97	290,46	59,49
PWO055#6B	110	56,51	32,02	116,33	32,21	226,51	64,74	286,33	65,29
PWO055#6B	120	47,78	34,89	112,20	35,09	217,78	70,52	282,20	71,09

1450



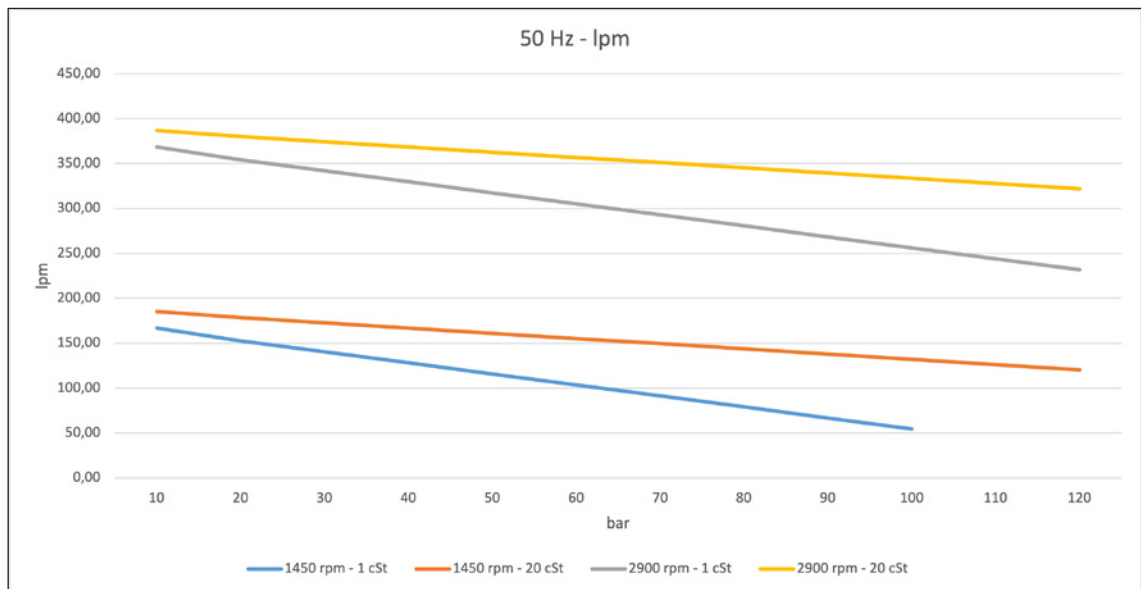
2900



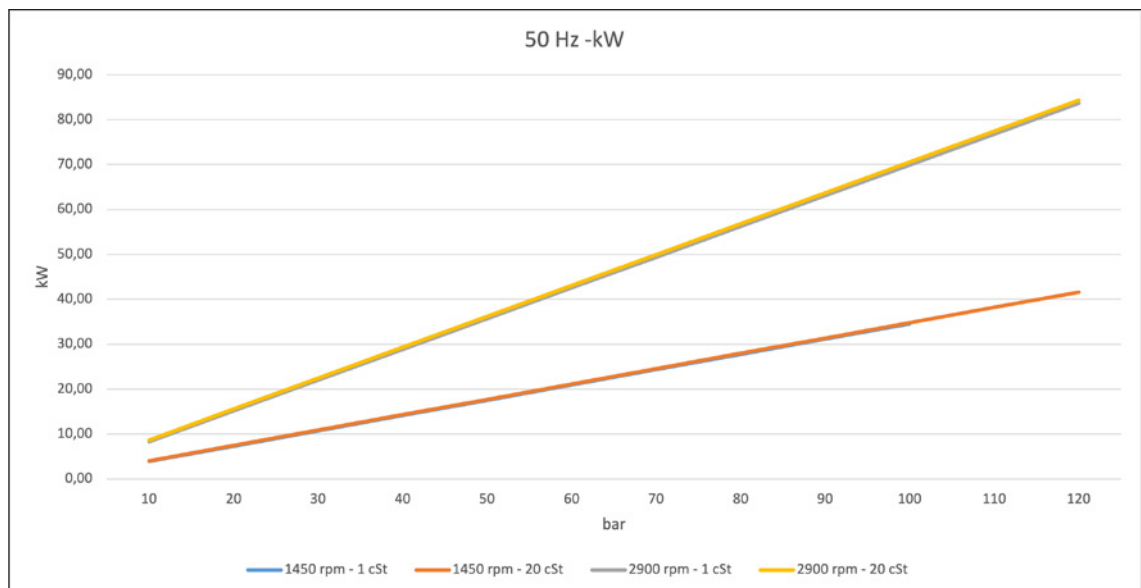
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO055#6C	10	166,97	3,93	185,24	4,05	368,61	8,32	386,88	8,68
PWO055#6C	20	152,61	7,33	178,45	7,47	354,25	15,17	380,09	15,56
PWO055#6C	30	140,35	10,74	172,66	10,88	341,99	22,01	374,29	22,43
PWO055#6C	40	128,10	14,14	166,86	14,30	329,73	28,86	368,50	29,31
PWO055#6C	50	115,84	17,55	161,07	17,71	317,48	35,71	362,70	36,18
PWO055#6C	60	103,58	20,95	155,27	21,13	305,22	42,56	356,91	43,06
PWO055#6C	70	91,32	24,36	149,47	24,55	292,96	49,40	351,11	49,94
PWO055#6C	80	79,07	27,76	143,68	27,96	280,70	56,25	345,31	56,81
PWO055#6C	90	66,81	31,17	137,88	31,38	268,45	63,10	339,52	63,69
PWO055#6C	100	54,55	34,57	132,09	34,79	256,19	69,94	333,72	70,56
PWO055#6C	110			126,29	38,21	243,93	76,79	327,93	77,44
PWO055#6C	120			120,49	41,62	231,68	83,64	322,13	84,32

1450



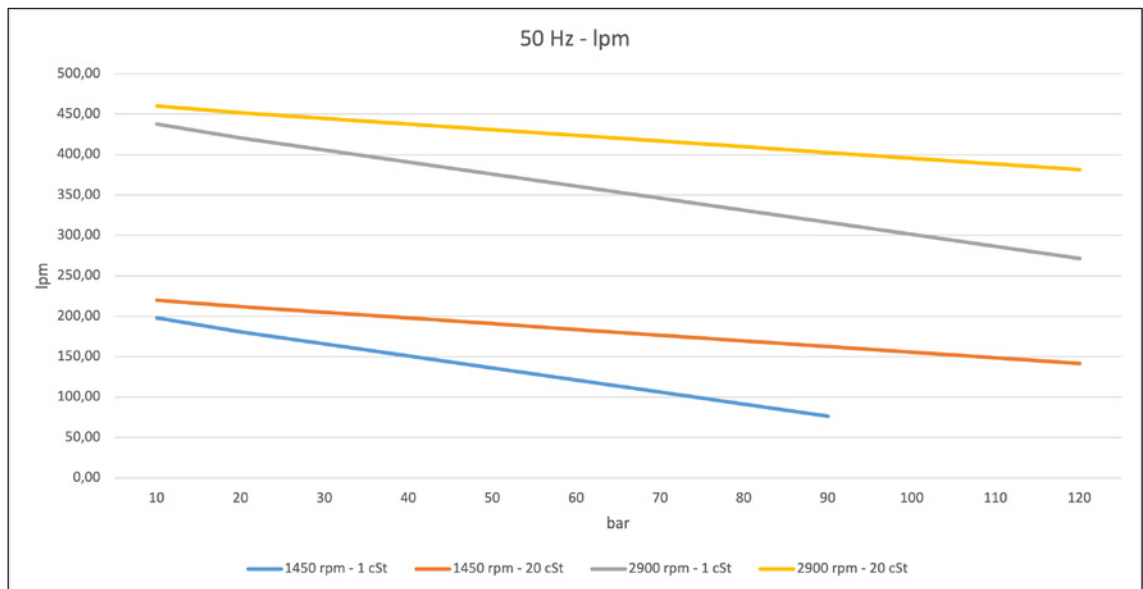
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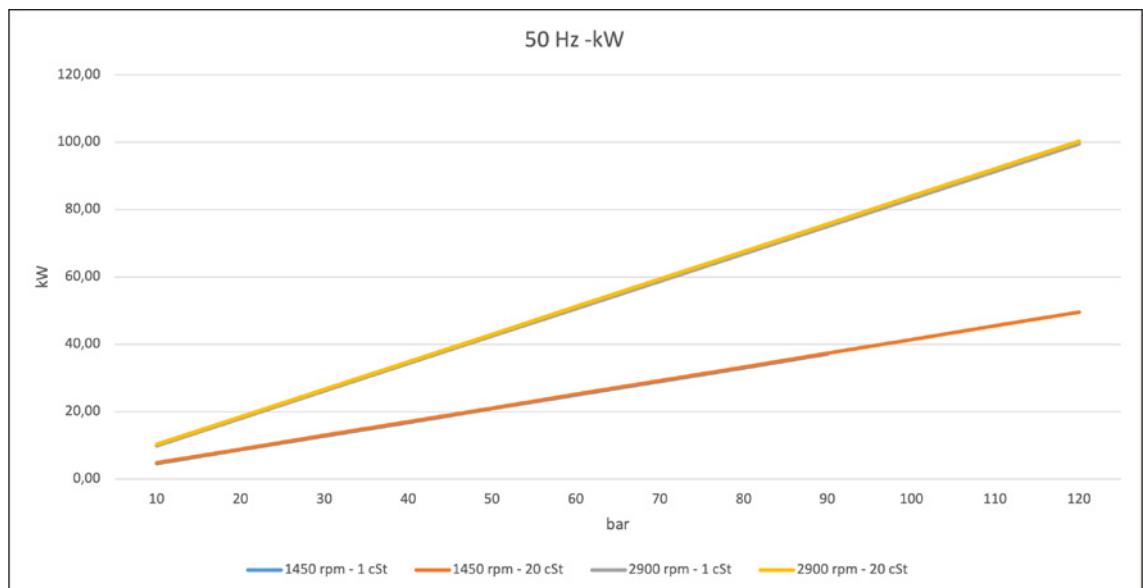
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO060#6A	10	197,90	4,65	220,07	4,79	437,86	9,83	460,03	10,25
PWO060#6A	20	180,48	8,70	211,83	8,86	420,44	17,98	451,79	18,43
PWO060#6A	30	165,61	12,75	204,80	12,92	405,57	26,13	444,76	26,61
PWO060#6A	40	150,74	16,80	197,77	16,99	390,70	34,28	437,73	34,79
PWO060#6A	50	135,87	20,86	190,74	21,05	375,83	42,43	430,70	42,98
PWO060#6A	60	121,00	24,91	183,71	25,12	360,96	50,58	423,67	51,16
PWO060#6A	70	106,13	28,96	176,67	29,18	346,09	58,72	416,63	59,34
PWO060#6A	80	91,26	33,01	169,64	33,25	331,22	66,87	409,60	67,53
PWO060#6A	90	76,39	37,07	162,61	37,31	316,35	75,02	402,57	75,71
PWO060#6A	100			155,58	41,37	301,48	83,17	395,54	83,89
PWO060#6A	110			148,55	45,44	286,61	91,32	388,51	92,08
PWO060#6A	120			141,52	49,50	271,74	99,47	381,48	100,26

1450



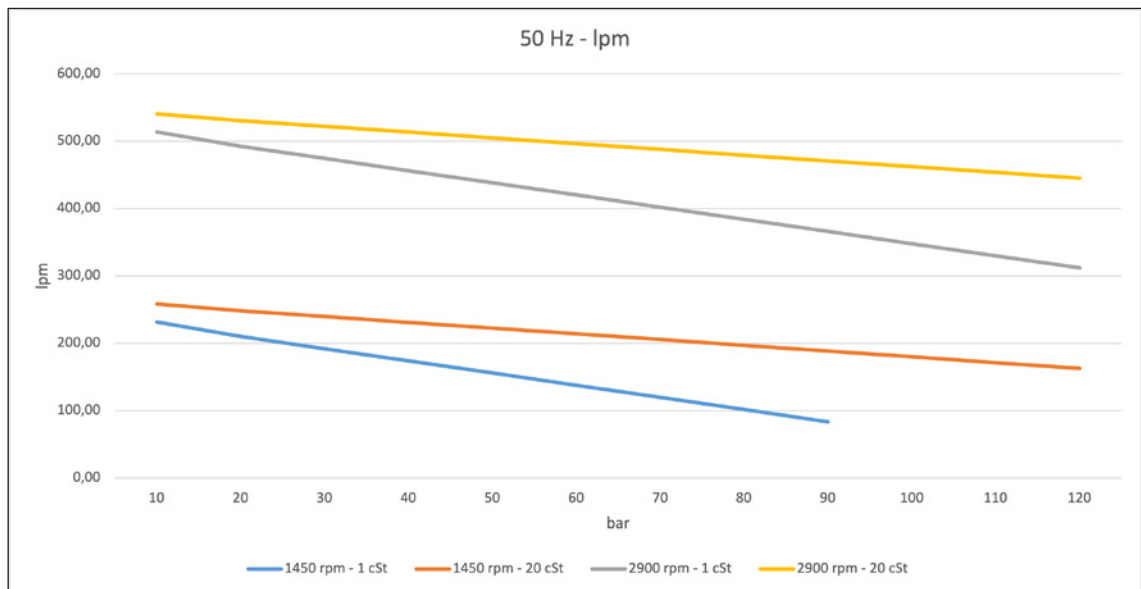
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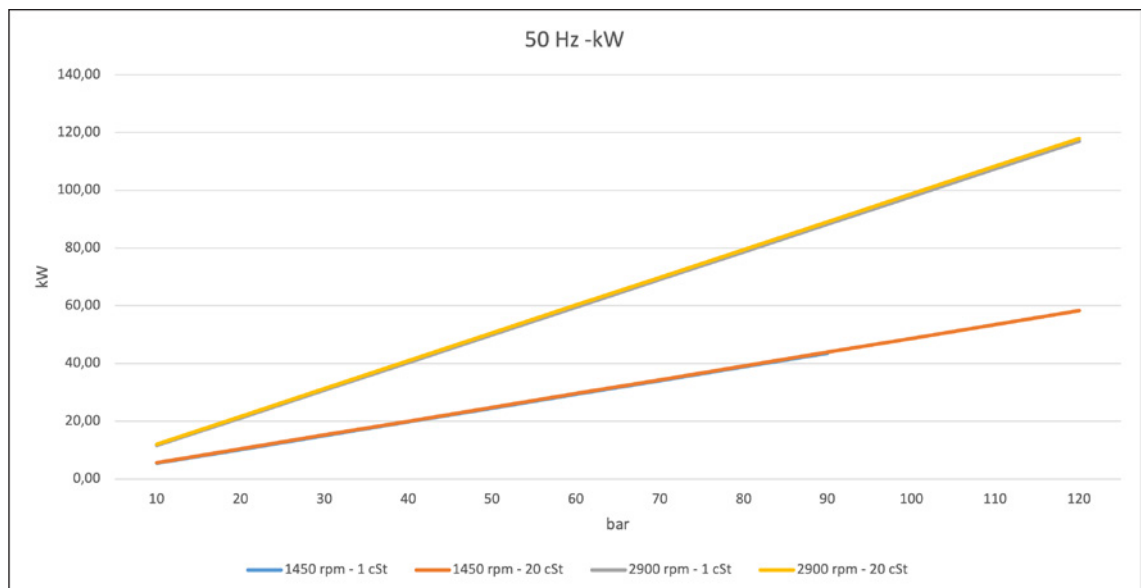
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO060#6B	10	231,19	5,47	258,13	5,64	513,50	11,57	540,43	12,05
PWO060#6B	20	210,03	10,23	248,12	10,42	492,33	21,15	530,42	21,68
PWO060#6B	30	191,96	15,00	239,58	15,20	474,26	30,74	521,88	31,31
PWO060#6B	40	173,89	19,77	231,04	19,98	456,19	40,33	513,34	40,93
PWO060#6B	50	155,82	24,54	222,49	24,77	438,12	49,91	504,79	50,56
PWO060#6B	60	137,75	29,30	213,95	29,55	420,05	59,50	496,25	60,19
PWO060#6B	70	119,68	34,07	205,40	34,33	401,98	69,09	487,70	69,81
PWO060#6B	80	101,61	38,84	196,86	39,11	383,92	78,67	479,16	79,44
PWO060#6B	90	83,55	43,61	188,32	43,89	365,85	88,26	470,62	89,07
PWO060#6B	100			179,77	48,67	347,78	97,85	462,07	98,69
PWO060#6B	110			171,23	53,46	329,71	107,43	453,53	108,32
PWO060#6B	120			162,68	58,24	311,64	117,02	444,98	117,95

1450

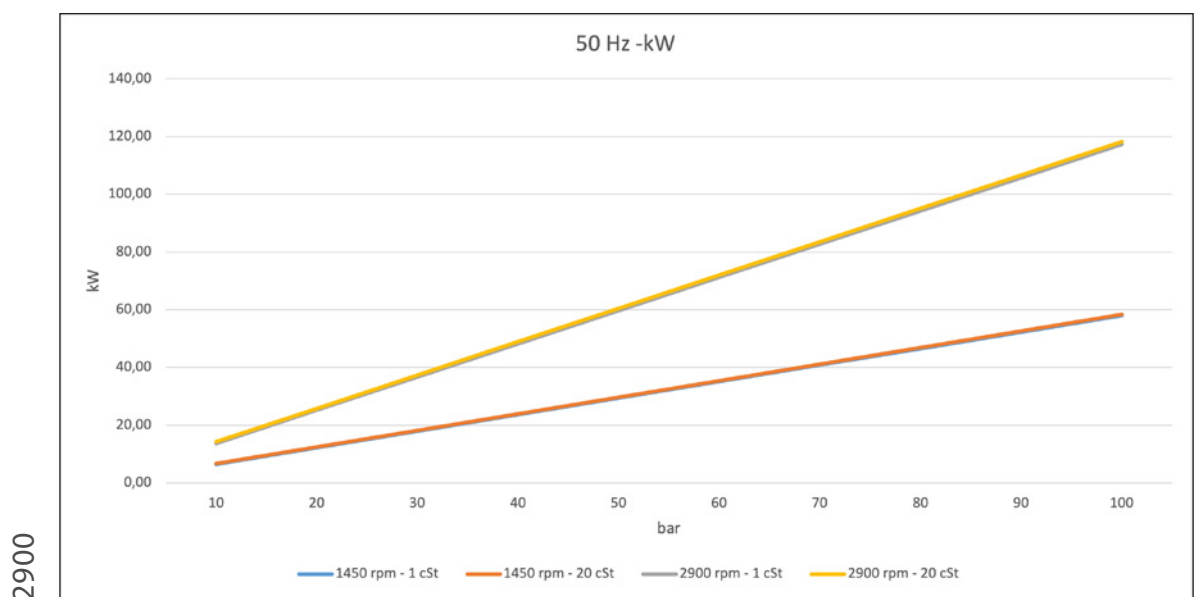
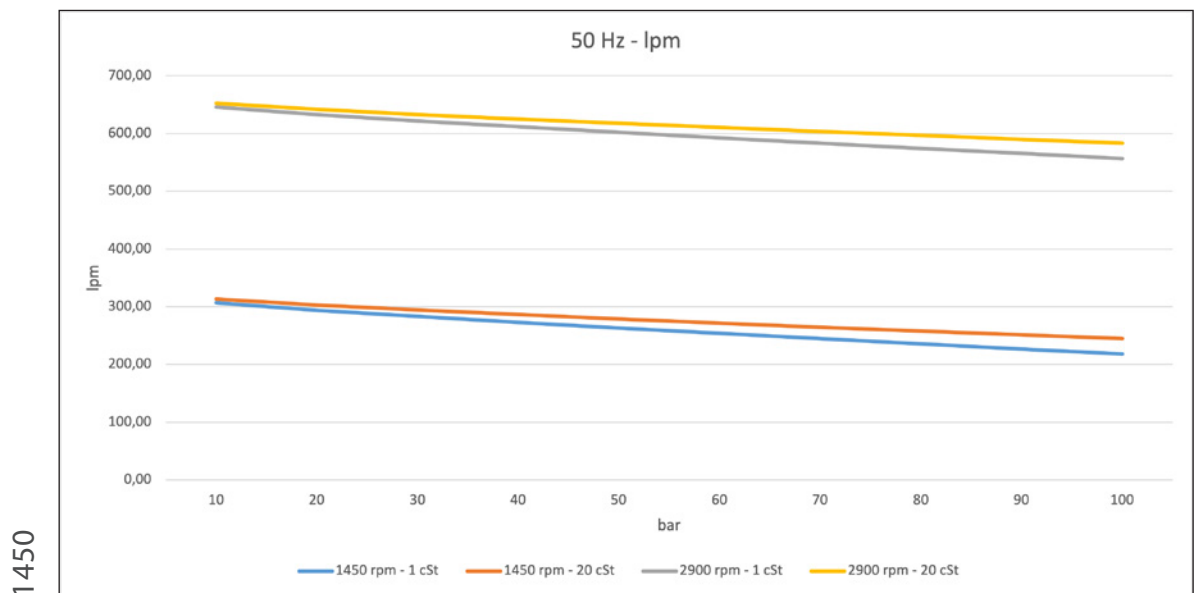


2900



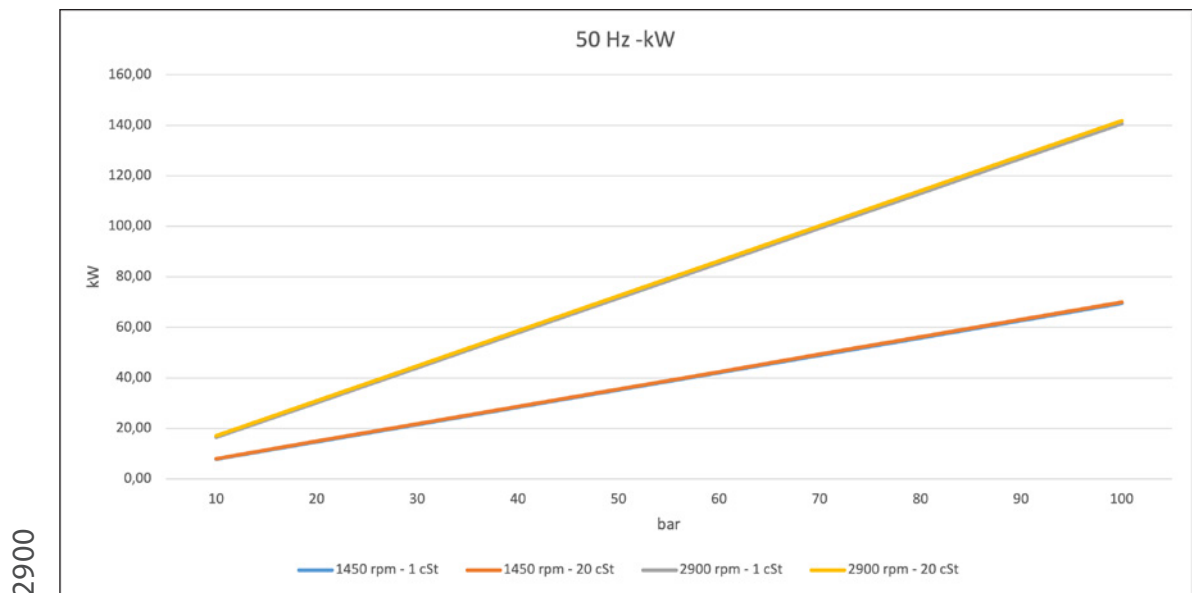
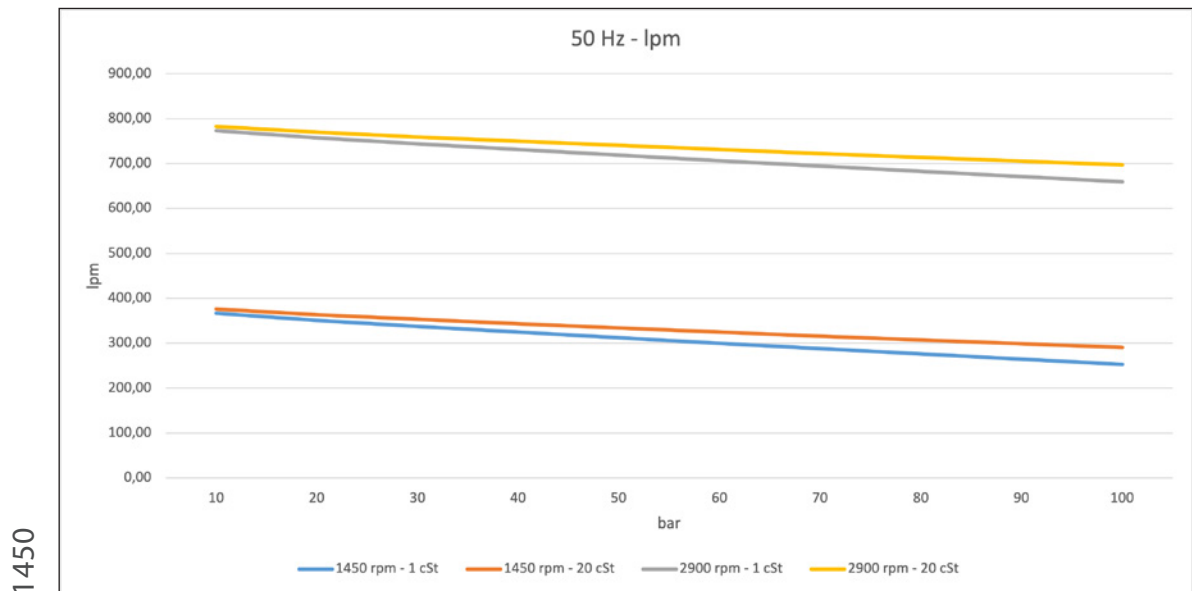
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0072#6A	10	307,07	6,50	313,38	6,69	645,84	13,70	652,14	14,25
PW0072#6A	20	293,95	12,22	302,86	12,43	632,71	25,21	641,63	25,80
PW0072#6A	30	283,19	17,94	294,34	18,17	621,96	36,71	633,10	37,35
PW0072#6A	40	273,06	23,66	286,44	23,91	611,83	48,21	625,20	48,90
PW0072#6A	50	263,33	29,38	278,94	29,64	602,10	59,72	617,70	60,46
PW0072#6A	60	253,89	35,10	271,72	35,38	592,65	71,22	610,48	72,01
PW0072#6A	70	244,66	40,82	264,72	41,12	583,42	82,73	603,48	83,56
PW0072#6A	80	235,60	46,55	257,89	46,86	574,36	94,23	596,65	95,11
PW0072#6A	90	226,68	52,27	251,19	52,60	565,44	105,73	589,96	106,67
PW0072#6A	100	217,87	57,99	244,62	58,33	556,64	117,24	583,38	118,22



Performances 50 Hz

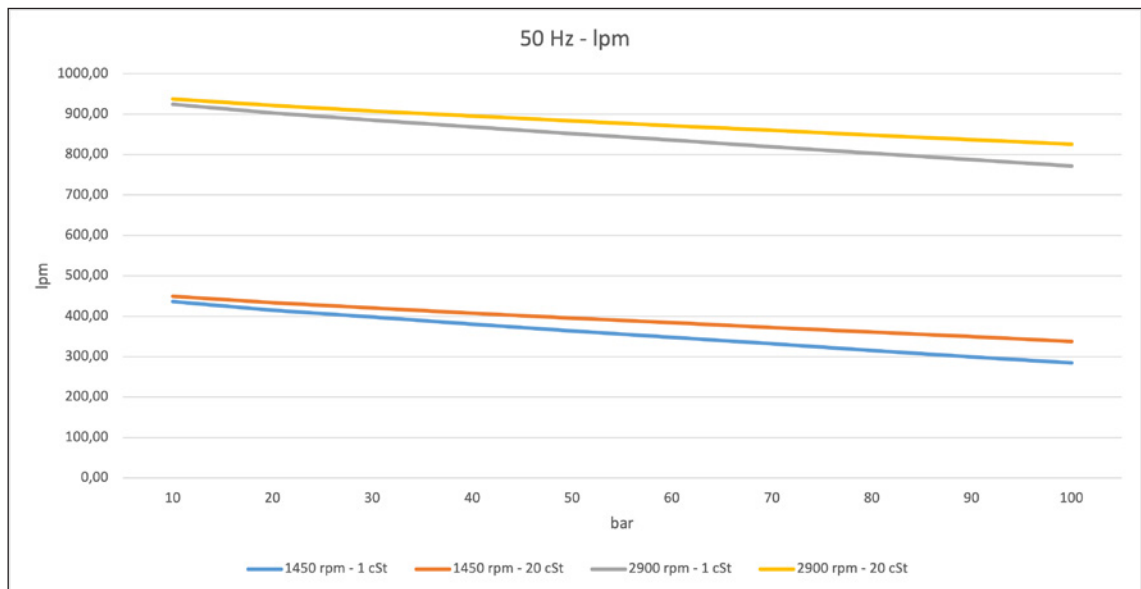
	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0072#6B	10	367,14	7,80	375,98	8,03	773,66	16,44	782,50	17,10
PW0072#6B	20	350,83	14,66	363,33	14,92	757,35	30,25	769,85	30,96
PW0072#6B	30	337,35	21,53	352,97	21,80	743,87	44,05	759,50	44,82
PW0072#6B	40	324,50	28,39	343,25	28,69	731,02	57,86	749,77	58,69
PW0072#6B	50	312,05	35,26	333,92	35,57	718,57	71,66	740,45	72,55
PW0072#6B	60	299,89	42,12	324,88	42,46	706,41	85,47	731,40	86,41
PW0072#6B	70	287,94	48,99	316,06	49,34	694,46	99,27	722,58	100,28
PW0072#6B	80	276,16	55,85	307,40	56,23	682,68	113,08	713,92	114,14
PW0072#6B	90	264,51	62,72	298,88	63,12	671,04	126,88	705,41	128,00
PW0072#6B	100	252,99	69,59	290,48	70,00	659,51	140,69	697,01	141,86



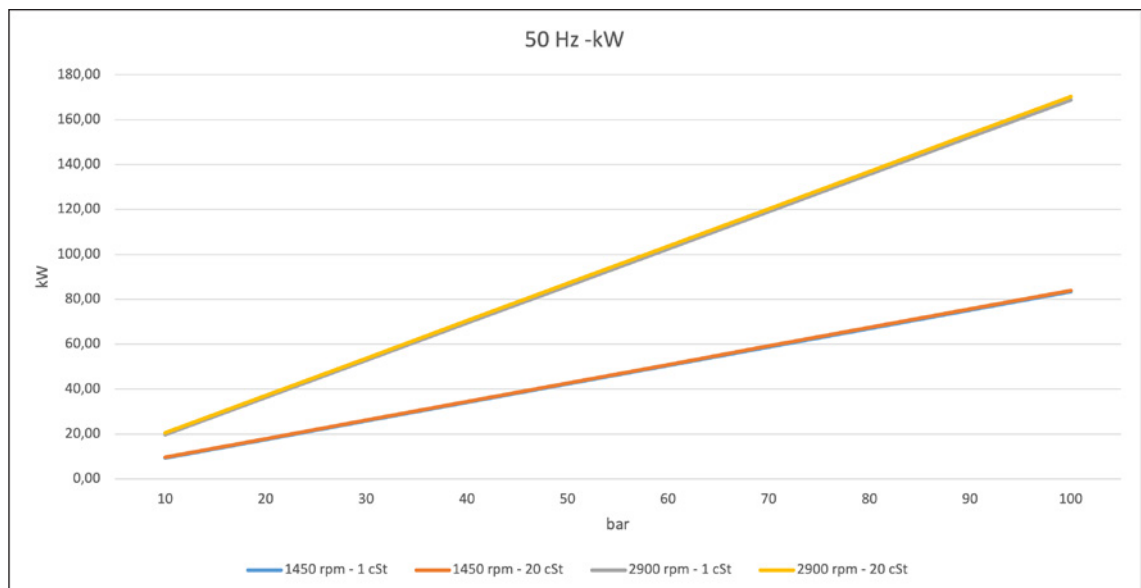
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0072#6C	10	436,63	9,36	449,36	9,64	924,46	19,73	937,18	20,52
PW0072#6C	20	415,43	17,60	433,43	17,90	903,25	36,30	921,25	37,15
PW0072#6C	30	397,78	25,83	420,27	26,16	885,60	52,86	908,10	53,79
PW0072#6C	40	380,75	34,07	407,75	34,42	868,58	69,43	895,57	70,42
PW0072#6C	50	364,13	42,31	395,62	42,69	851,95	86,00	883,45	87,06
PW0072#6C	60	347,79	50,55	383,78	50,95	835,61	102,56	871,61	103,69
PW0072#6C	70	331,66	58,79	372,16	59,21	819,49	119,13	859,98	120,33
PW0072#6C	80	315,71	67,03	360,70	67,47	803,53	135,69	848,52	136,96
PW0072#6C	90	299,89	75,26	349,38	75,74	787,71	152,26	837,21	153,60
PW0072#6C	100	284,19	83,50	338,18	84,00	772,02	168,83	826,01	170,24

1450

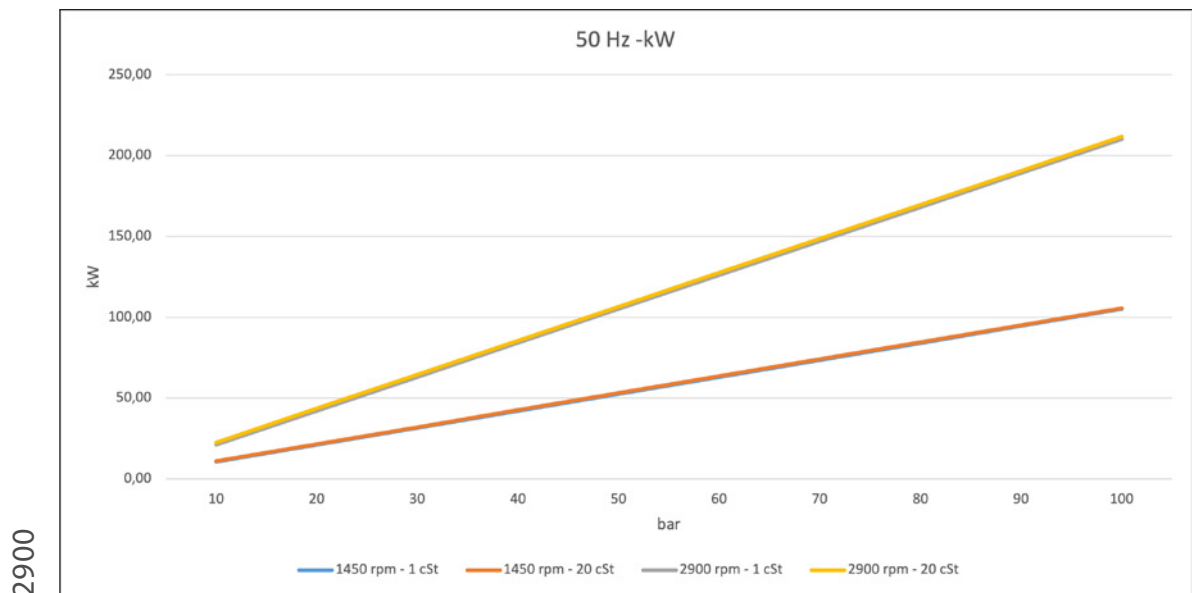
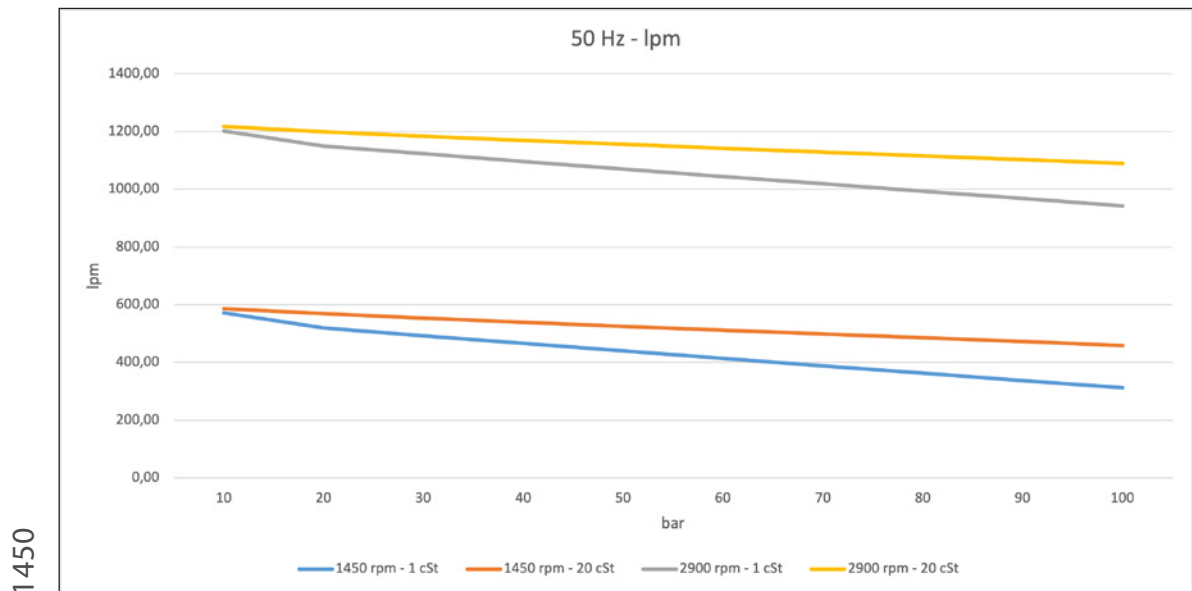


2900



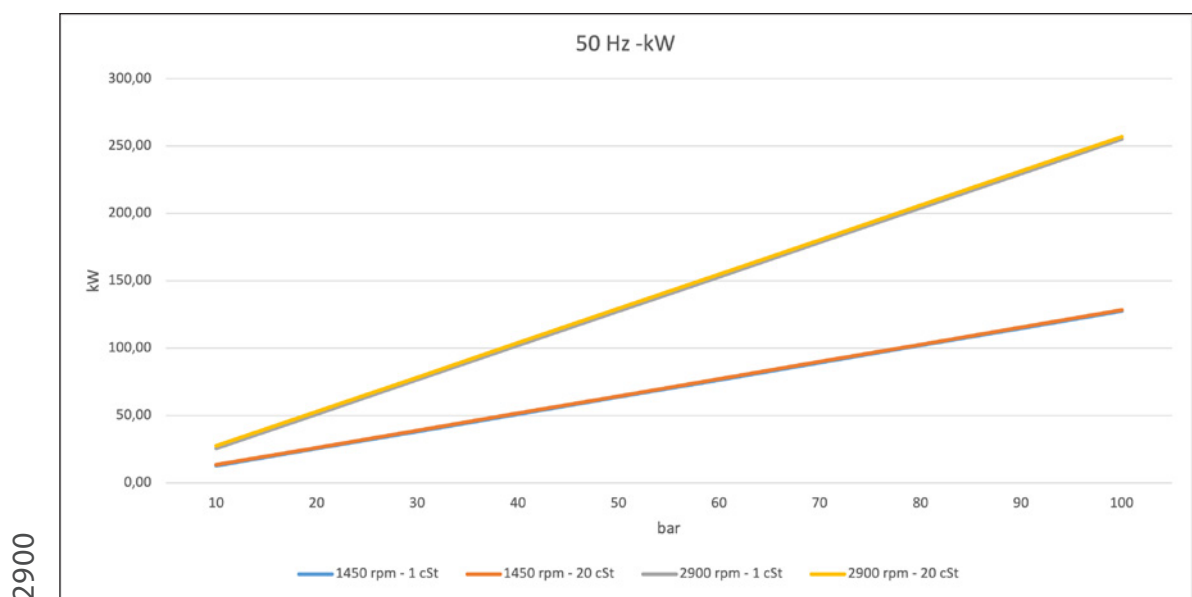
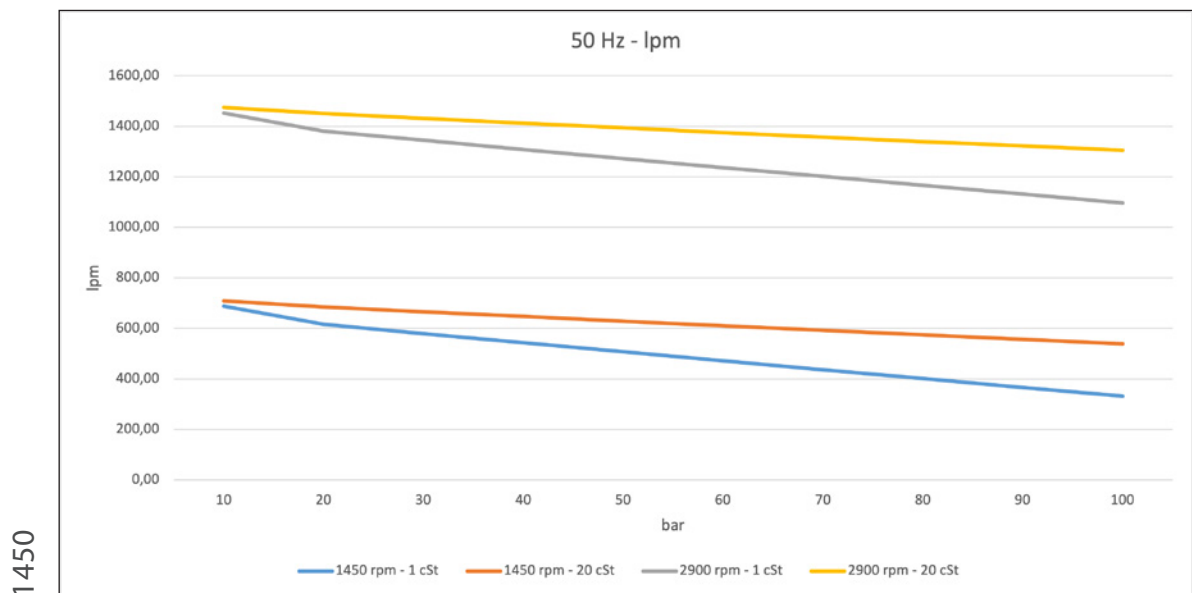
Performances 50 Hz

	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0083#6A	10	571,51	10,52	586,72	11,13	1201,77	21,05	1216,98	22,61
PW0083#6A	20	519,84	21,03	568,69	21,63	1150,09	42,06	1198,95	43,61
PW0083#6A	30	492,68	31,53	553,75	32,14	1122,94	63,07	1184,00	64,62
PW0083#6A	40	466,15	42,04	539,43	42,64	1096,41	84,08	1169,69	85,63
PW0083#6A	50	440,02	52,54	525,51	53,14	1070,27	105,08	1155,77	106,64
PW0083#6A	60	414,17	63,05	511,88	63,65	1044,43	126,09	1142,14	127,65
PW0083#6A	70	388,54	73,55	498,46	74,15	1018,80	147,10	1128,72	148,66
PW0083#6A	80	363,08	84,05	485,21	84,66	993,33	168,11	1115,47	169,66
PW0083#6A	90	337,75	94,56	472,10	95,16	968,01	189,12	1102,36	190,67
PW0083#6A	100	312,55	105,06	459,11	105,67	942,81	210,13	1089,37	211,68



Performances 50 Hz

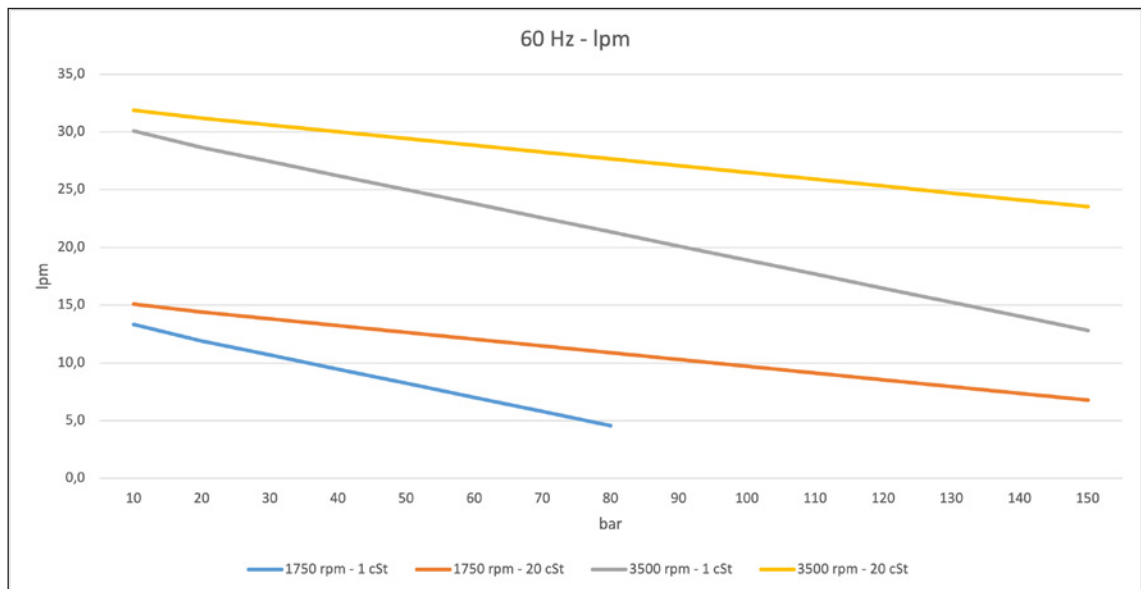
	bar	1450				2900			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0083#6B	10	687,22	12,78	708,81	13,51	1452,53	25,56	1474,12	27,45
PW0083#6B	20	616,10	25,54	685,40	26,27	1381,41	51,07	1450,71	52,96
PW0083#6B	30	579,24	38,29	665,87	39,02	1344,55	76,58	1431,18	78,47
PW0083#6B	40	543,01	51,05	646,97	51,78	1308,32	102,09	1412,28	103,98
PW0083#6B	50	507,18	63,80	628,46	64,53	1272,49	127,60	1393,77	129,49
PW0083#6B	60	471,64	76,56	610,24	77,29	1236,95	153,11	1375,55	155,00
PW0083#6B	70	436,31	89,31	592,24	90,04	1201,62	178,62	1357,55	180,51
PW0083#6B	80	401,15	102,07	574,41	102,80	1166,46	204,13	1339,72	206,02
PW0083#6B	90	366,13	114,82	556,71	115,55	1131,44	229,64	1322,02	231,53
PW0083#6B	100	331,23	127,58	539,13	128,31	1096,54	255,15	1304,44	257,04



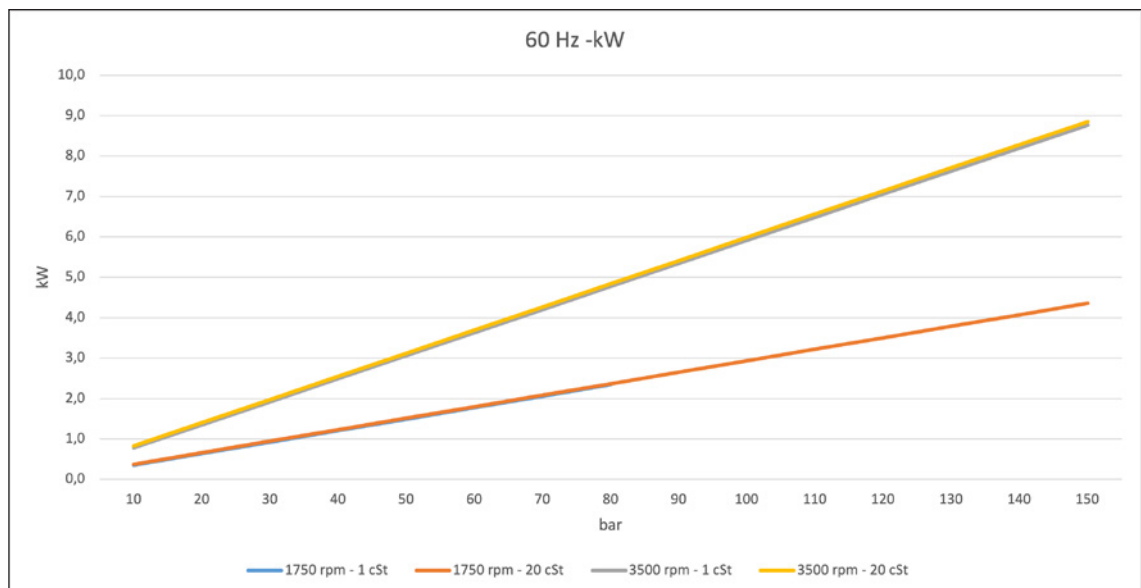
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0025#6A	10	13,3	0,4	15,1	0,4	30,1	0,8	31,9	0,8
PW0025#6A	20	11,9	0,6	14,4	0,7	28,7	1,4	31,2	1,4
PW0025#6A	30	10,7	0,9	13,8	0,9	27,4	1,9	30,6	2,0
PW0025#6A	40	9,5	1,2	13,2	1,2	26,2	2,5	30,0	2,5
PW0025#6A	50	8,2	1,5	12,7	1,5	25,0	3,1	29,4	3,1
PW0025#6A	60	7,0	1,8	12,1	1,8	23,8	3,6	28,8	3,7
PW0025#6A	70	5,8	2,1	11,5	2,1	22,6	4,2	28,2	4,3
PW0025#6A	80	4,6	2,3	10,9	2,4	21,3	4,8	27,7	4,8
PW0025#6A	90			10,3	2,7	20,1	5,3	27,1	5,4
PW0025#6A	100			9,7	2,9	18,9	5,9	26,5	6,0
PW0025#6A	110			9,1	3,2	17,7	6,5	25,9	6,6
PW0025#6A	120			8,5	3,5	16,5	7,1	25,3	7,1
PW0025#6A	130			8,0	3,8	15,2	7,6	24,7	7,7
PW0025#6A	140			7,4	4,1	14,0	8,2	24,1	8,3
PW0025#6A	150			6,8	4,4	12,8	8,8	23,5	8,9

1750



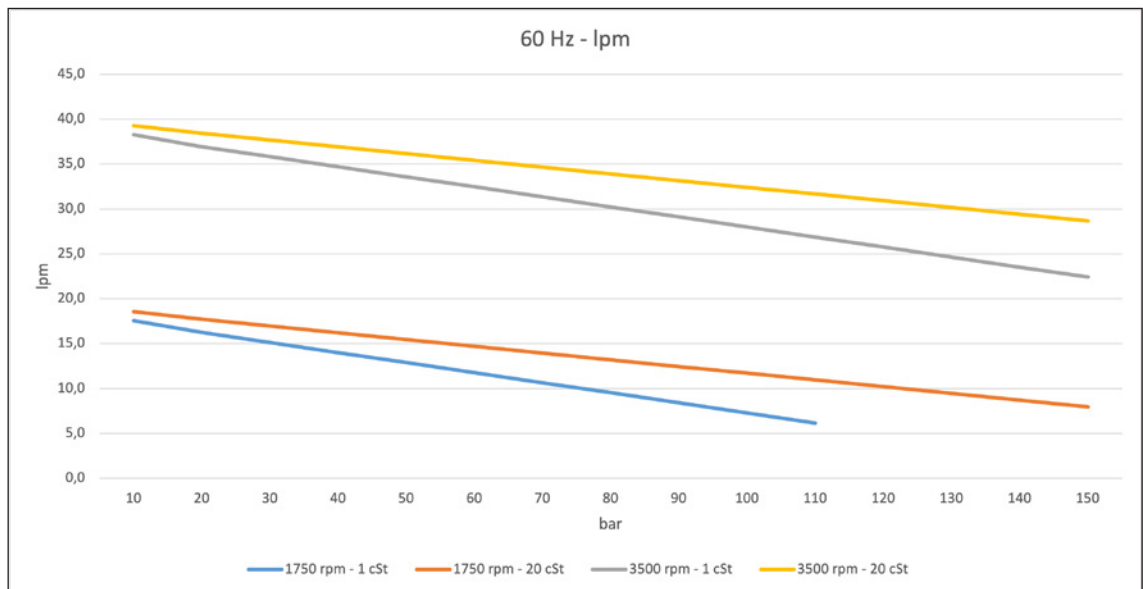
3500



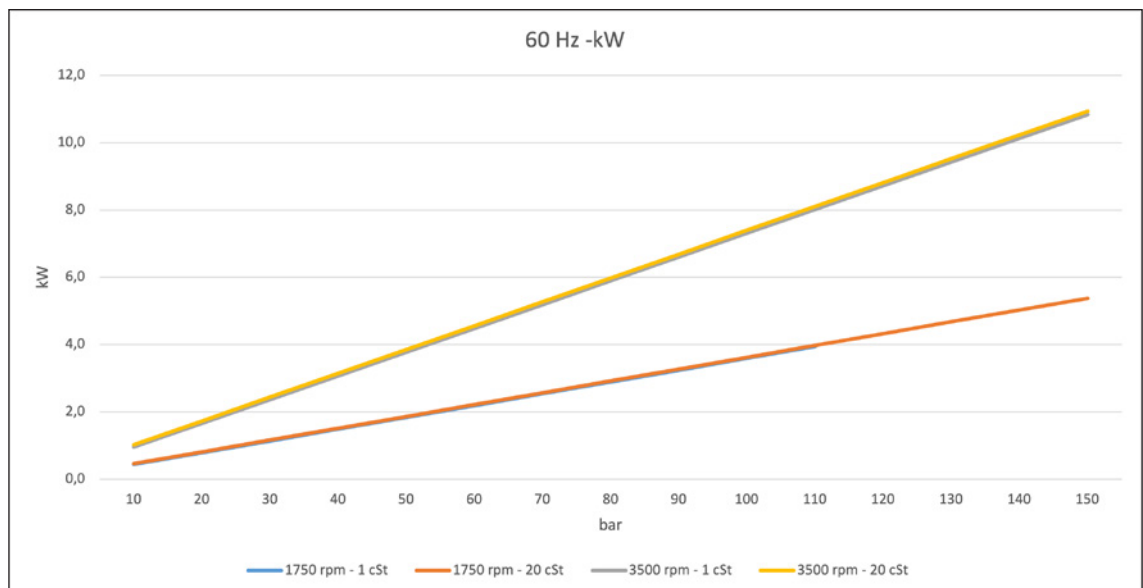
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0025#6B	10	17,5	0,4	18,6	0,5	38,2	1,0	39,3	1,0
PW0025#6B	20	16,2	0,8	17,7	0,8	36,9	1,7	38,4	1,7
PW0025#6B	30	15,1	1,1	17,0	1,2	35,8	2,4	37,7	2,4
PW0025#6B	40	14,0	1,5	16,2	1,5	34,7	3,1	36,9	3,1
PW0025#6B	50	12,9	1,8	15,5	1,9	33,6	3,8	36,2	3,9
PW0025#6B	60	11,8	2,2	14,7	2,2	32,5	4,5	35,4	4,6
PW0025#6B	70	10,6	2,5	14,0	2,6	31,3	5,2	34,7	5,3
PW0025#6B	80	9,5	2,9	13,2	2,9	30,2	5,9	33,9	6,0
PW0025#6B	90	8,4	3,2	12,5	3,3	29,1	6,6	33,2	6,7
PW0025#6B	100	7,3	3,6	11,7	3,6	28,0	7,3	32,4	7,4
PW0025#6B	110	6,2	3,9	11,0	4,0	26,9	8,0	31,7	8,1
PW0025#6B	120			10,2	4,3	25,8	8,7	30,9	8,8
PW0025#6B	130			9,5	4,7	24,6	9,4	30,2	9,5
PW0025#6B	140			8,7	5,0	23,5	10,1	29,4	10,2
PW0025#6B	150			8,0	5,4	22,4	10,8	28,7	10,9

1750



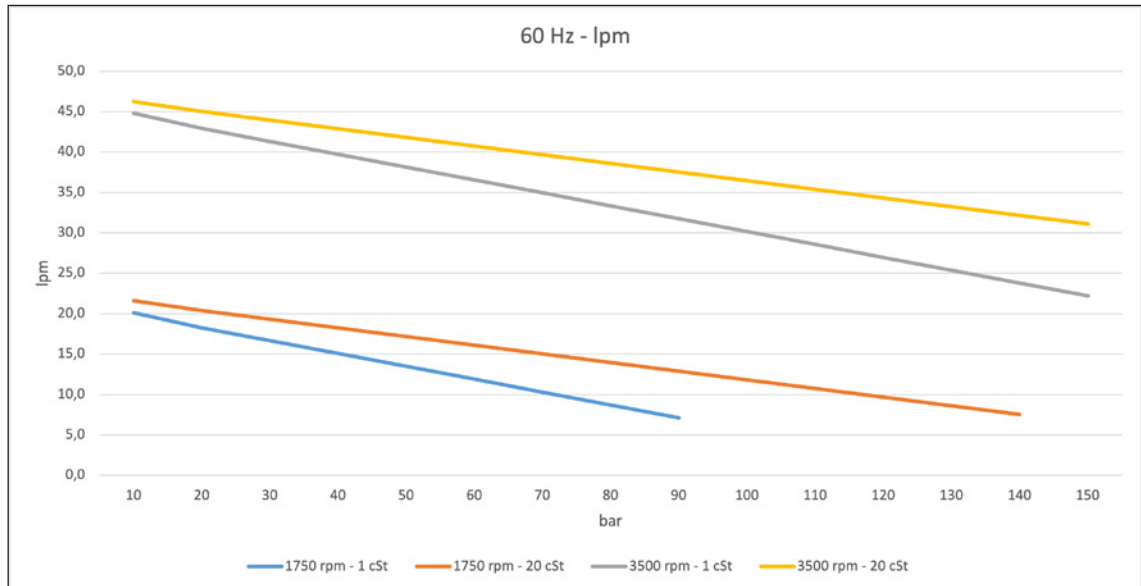
3500



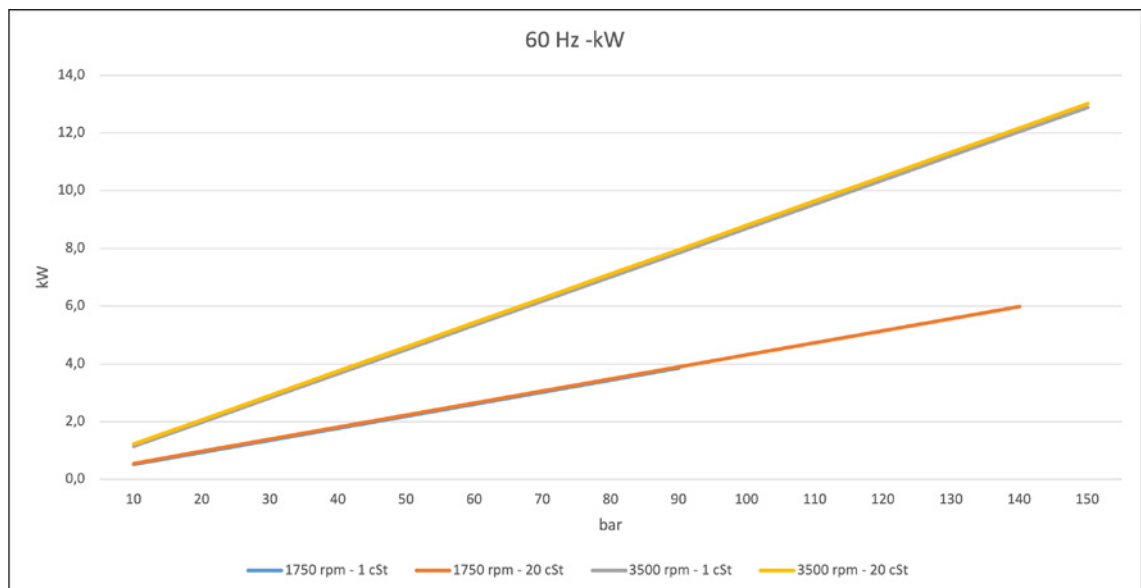
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0025#6C	10	20,1	0,5	21,6	0,6	44,8	1,1	46,3	1,2
PW0025#6C	20	18,3	0,9	20,4	1,0	42,9	2,0	45,0	2,1
PW0025#6C	30	16,7	1,4	19,3	1,4	41,3	2,8	43,9	2,9
PW0025#6C	40	15,1	1,8	18,2	1,8	39,7	3,7	42,9	3,7
PW0025#6C	50	13,5	2,2	17,2	2,2	38,1	4,5	41,8	4,6
PW0025#6C	60	11,9	2,6	16,1	2,6	36,5	5,3	40,7	5,4
PW0025#6C	70	10,3	3,0	15,0	3,1	34,9	6,2	39,7	6,3
PW0025#6C	80	8,7	3,4	14,0	3,5	33,3	7,0	38,6	7,1
PW0025#6C	90	7,1	3,9	12,9	3,9	31,8	7,9	37,5	8,0
PW0025#6C	100			11,8	4,3	30,2	8,7	36,5	8,8
PW0025#6C	110			10,7	4,7	28,6	9,5	35,4	9,6
PW0025#6C	120			9,7	5,1	27,0	10,4	34,3	10,5
PW0025#6C	130			8,6	5,6	25,4	11,2	33,3	11,3
PW0025#6C	140			7,5	6,0	23,8	12,0	32,2	12,2
PW0025#6C	150					22,2	12,9	31,1	13,0

1750



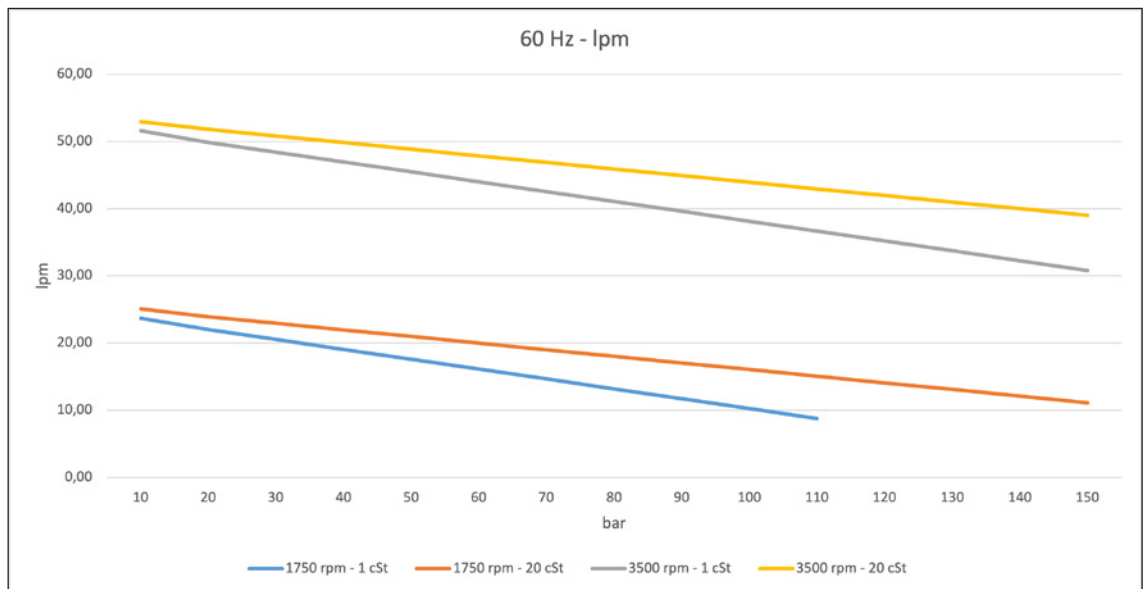
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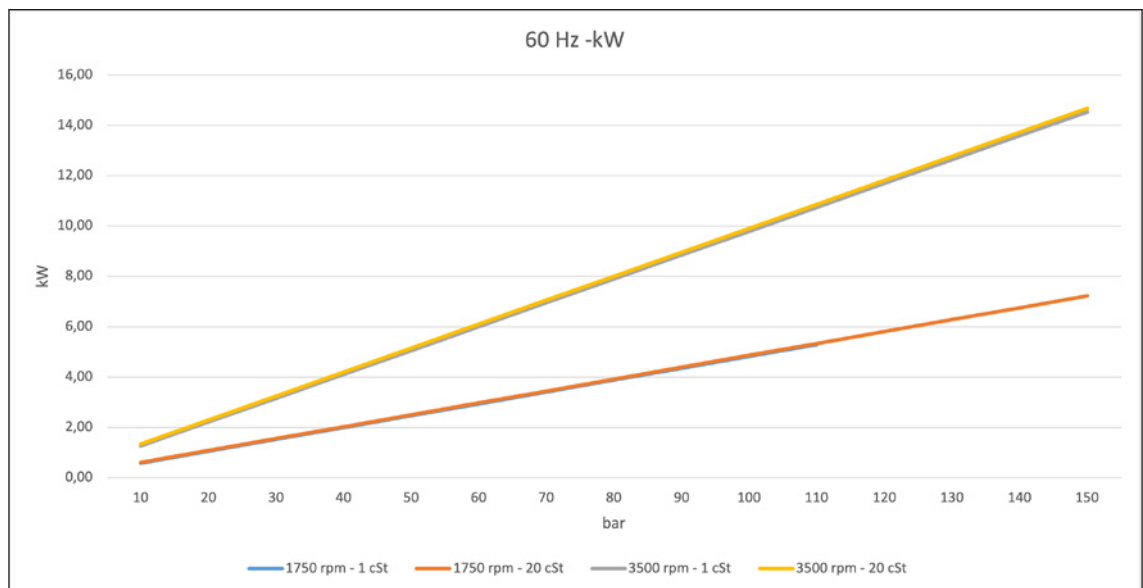
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0029#6A	10	23,71	0,58	25,08	0,61	51,57	1,26	52,94	1,34
PW0029#6A	20	21,99	1,05	23,92	1,08	49,85	2,21	51,78	2,29
PW0029#6A	30	20,53	1,53	22,94	1,56	48,39	3,16	50,80	3,25
PW0029#6A	40	19,06	2,00	21,96	2,03	46,92	4,11	49,82	4,20
PW0029#6A	50	17,59	2,47	20,97	2,50	45,45	5,06	48,83	5,15
PW0029#6A	60	16,13	2,94	19,99	2,97	43,99	6,00	47,85	6,10
PW0029#6A	70	14,66	3,41	19,01	3,45	42,52	6,95	46,87	7,05
PW0029#6A	80	13,19	3,88	18,02	3,92	41,05	7,90	45,88	8,01
PW0029#6A	90	11,73	4,35	17,04	4,39	39,59	8,85	44,90	8,96
PW0029#6A	100	10,26	4,82	16,05	4,86	38,12	9,80	43,91	9,91
PW0029#6A	110	8,79	5,29	15,07	5,34	36,65	10,74	42,93	10,86
PW0029#6A	120			14,09	5,81	35,19	11,69	41,95	11,81
PW0029#6A	130			13,10	6,28	33,72	12,64	40,96	12,77
PW0029#6A	140			12,12	6,75	32,25	13,59	39,98	13,72
PW0029#6A	150			11,14	7,23	30,79	14,53	39,00	14,67

1750



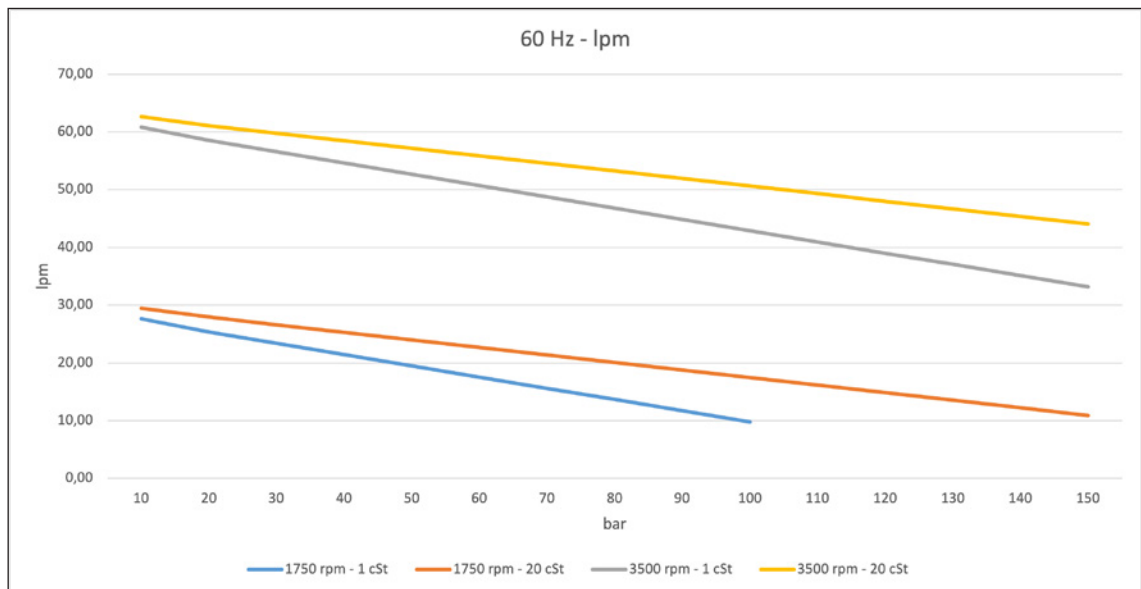
3500



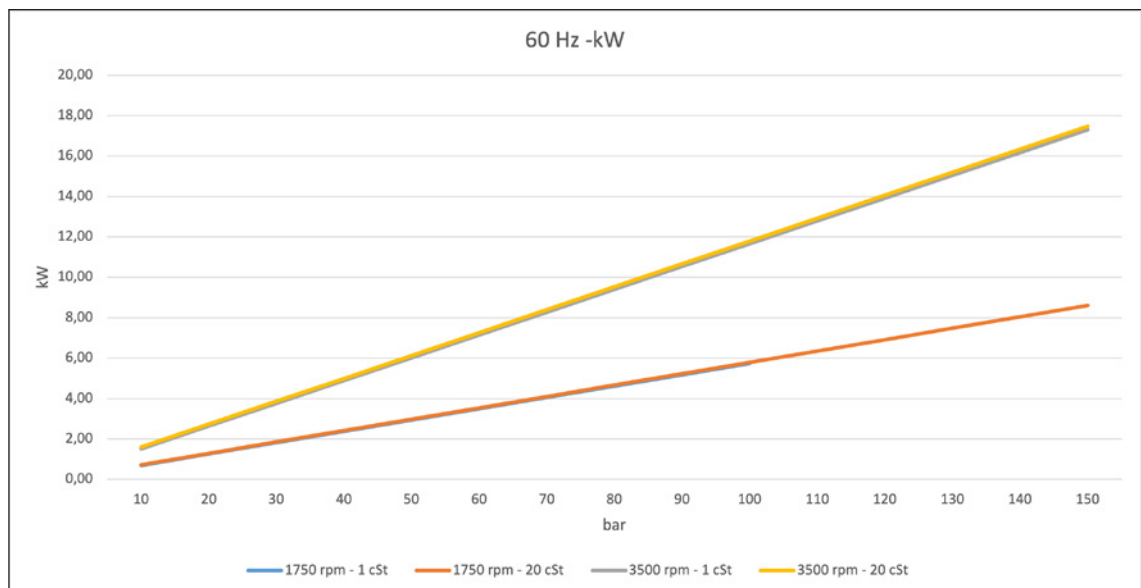
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0029#6B	10	27,64	0,69	29,46	0,73	60,81	1,51	62,62	1,60
PW0029#6B	20	25,36	1,25	27,93	1,29	58,52	2,63	61,09	2,73
PW0029#6B	30	23,40	1,82	26,62	1,85	56,57	3,76	59,78	3,86
PW0029#6B	40	21,45	2,38	25,31	2,41	54,62	4,89	58,47	5,00
PW0029#6B	50	19,50	2,94	24,00	2,98	52,66	6,02	57,16	6,13
PW0029#6B	60	17,55	3,50	22,69	3,54	50,71	7,15	55,85	7,26
PW0029#6B	70	15,60	4,06	21,38	4,10	48,76	8,27	54,54	8,40
PW0029#6B	80	13,65	4,62	20,07	4,66	46,81	9,40	53,24	9,53
PW0029#6B	90	11,70	5,18	18,76	5,23	44,86	10,53	51,93	10,66
PW0029#6B	100	9,74	5,74	17,46	5,79	42,91	11,66	50,62	11,80
PW0029#6B	110			16,15	6,35	40,95	12,79	49,31	12,93
PW0029#6B	120			14,84	6,91	39,00	13,92	48,00	14,06
PW0029#6B	130			13,53	7,48	37,05	15,04	46,69	15,20
PW0029#6B	140			12,22	8,04	35,10	16,17	45,38	16,33
PW0029#6B	150			10,91	8,60	33,15	17,30	44,07	17,46

1750



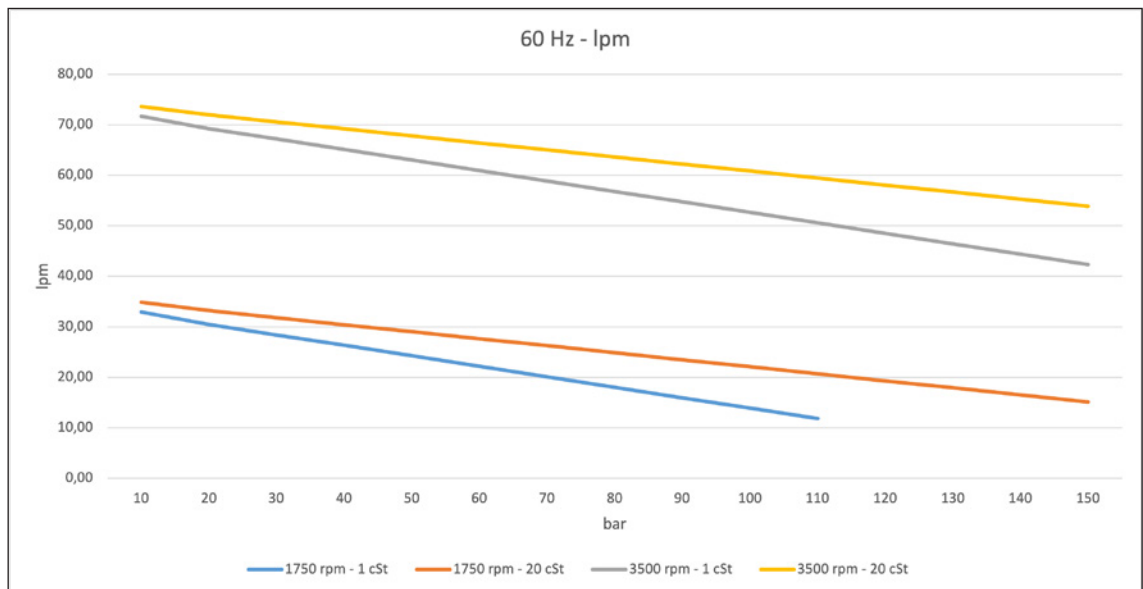
3500



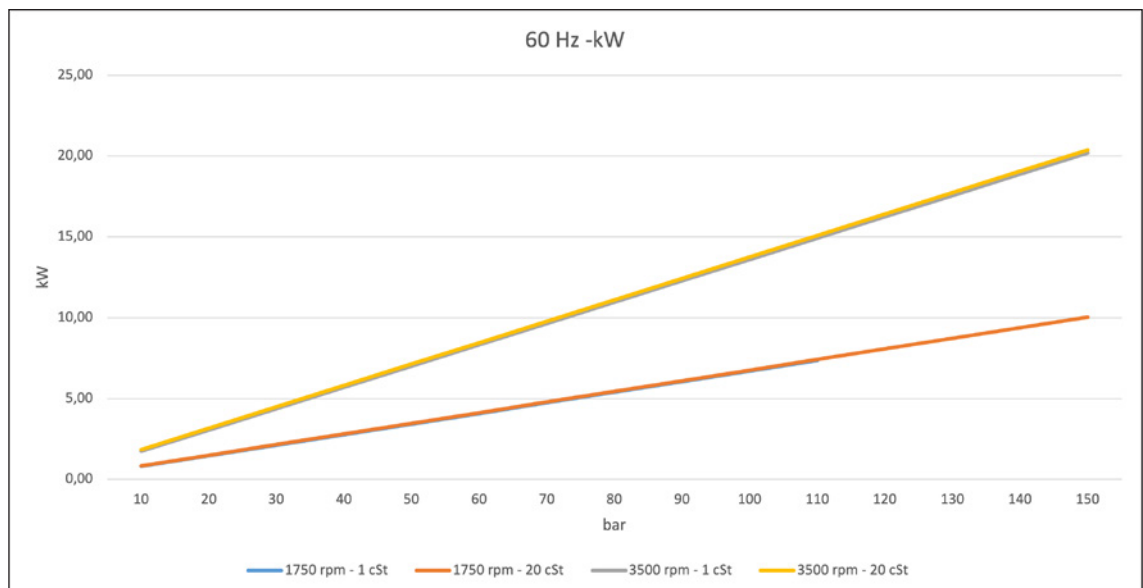
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0032#6A	10	32,90	0,80	34,83	0,84	71,66	1,73	73,59	1,83
PW0032#6A	20	30,47	1,46	33,20	1,50	69,23	3,05	71,96	3,16
PW0032#6A	30	28,40	2,11	31,81	2,15	67,16	4,37	70,57	4,48
PW0032#6A	40	26,33	2,77	30,42	2,81	65,09	5,69	69,18	5,81
PW0032#6A	50	24,25	3,42	29,03	3,47	63,02	7,01	67,79	7,13
PW0032#6A	60	22,18	4,08	27,64	4,13	60,94	8,33	66,40	8,46
PW0032#6A	70	20,11	4,74	26,25	4,78	58,87	9,65	65,01	9,78
PW0032#6A	80	18,03	5,39	24,86	5,44	56,80	10,96	63,62	11,11
PW0032#6A	90	15,96	6,05	23,47	6,10	54,72	12,28	62,23	12,43
PW0032#6A	100	13,89	6,70	22,08	6,76	52,65	13,60	60,84	13,76
PW0032#6A	110	11,82	7,36	20,69	7,41	50,58	14,92	59,45	15,08
PW0032#6A	120			19,30	8,07	48,51	16,24	58,06	16,41
PW0032#6A	130			17,91	8,73	46,43	17,56	56,67	17,73
PW0032#6A	140			16,52	9,39	44,36	18,88	55,28	19,06
PW0032#6A	150			15,13	10,04	42,29	20,20	53,89	20,38

1750



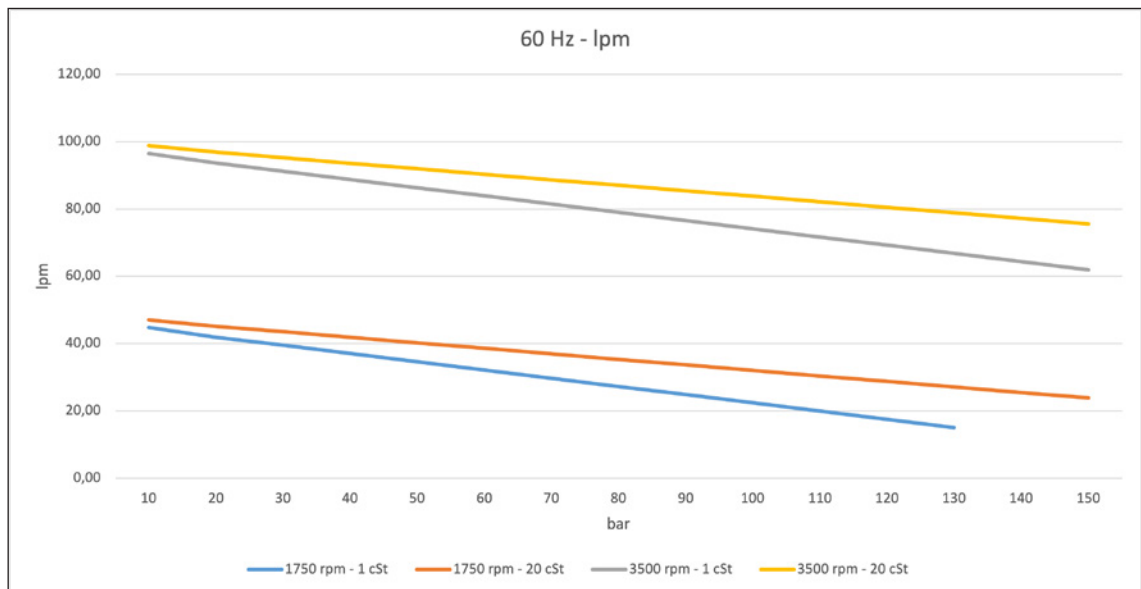
3500



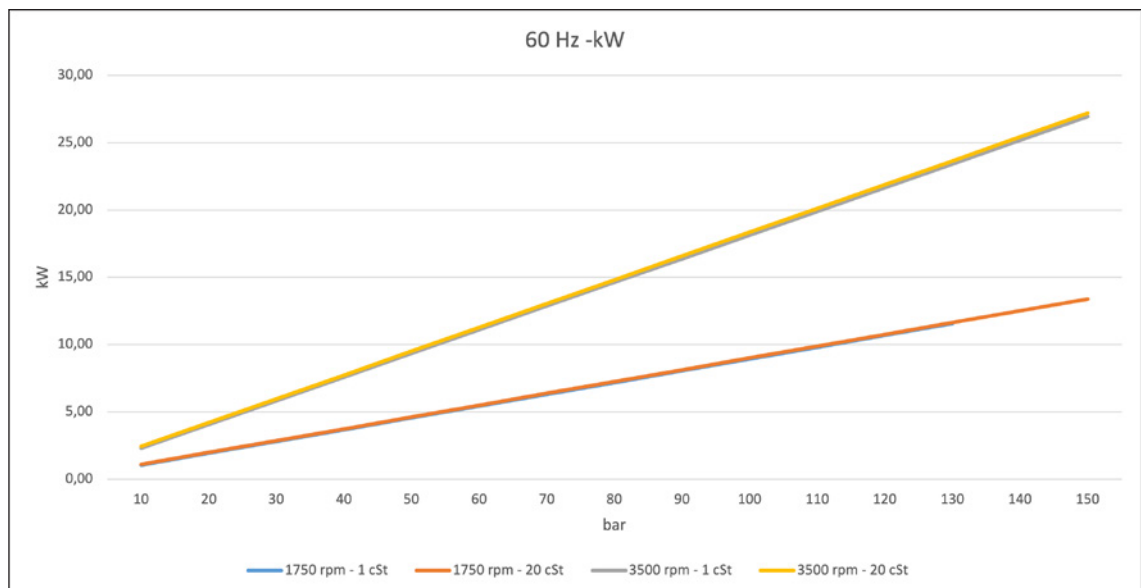
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0032#6B	10	44,79	1,07	47,07	1,12	96,49	2,31	98,76	2,45
PW0032#6B	20	41,93	1,94	45,15	1,99	93,63	4,07	96,84	4,21
PW0032#6B	30	39,49	2,82	43,51	2,87	91,19	5,83	95,21	5,98
PW0032#6B	40	37,05	3,69	41,88	3,75	88,75	7,59	93,57	7,75
PW0032#6B	50	34,61	4,57	40,24	4,63	86,31	9,35	91,93	9,51
PW0032#6B	60	32,17	5,44	38,60	5,50	83,87	11,11	90,30	11,28
PW0032#6B	70	29,73	6,31	36,97	6,38	81,43	12,86	88,66	13,05
PW0032#6B	80	27,29	7,19	35,33	7,26	78,99	14,62	87,02	14,81
PW0032#6B	90	24,85	8,06	33,69	8,13	76,55	16,38	85,39	16,58
PW0032#6B	100	22,41	8,94	32,06	9,01	74,11	18,14	83,75	18,35
PW0032#6B	110	19,97	9,81	30,42	9,89	71,67	19,90	82,11	20,11
PW0032#6B	120	17,53	10,69	28,78	10,76	69,23	21,66	80,48	21,88
PW0032#6B	130	15,09	11,56	27,15	11,64	66,79	23,42	78,84	23,65
PW0032#6B	140			25,51	12,52	64,35	25,18	77,21	25,41
PW0032#6B	150			23,87	13,40	61,91	26,93	75,57	27,18

1750

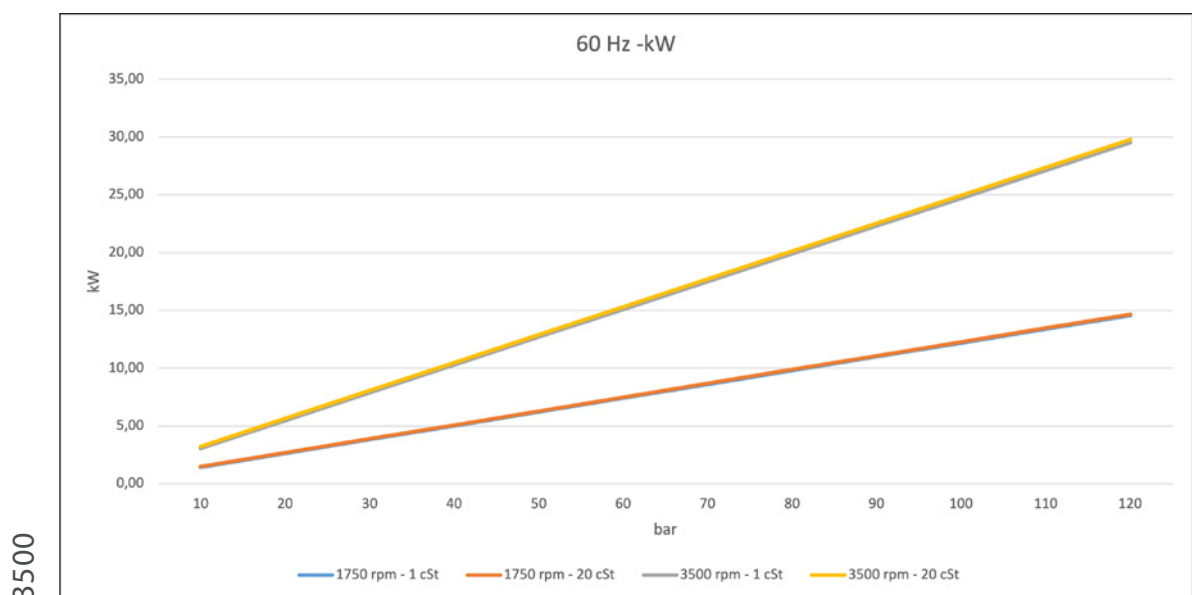
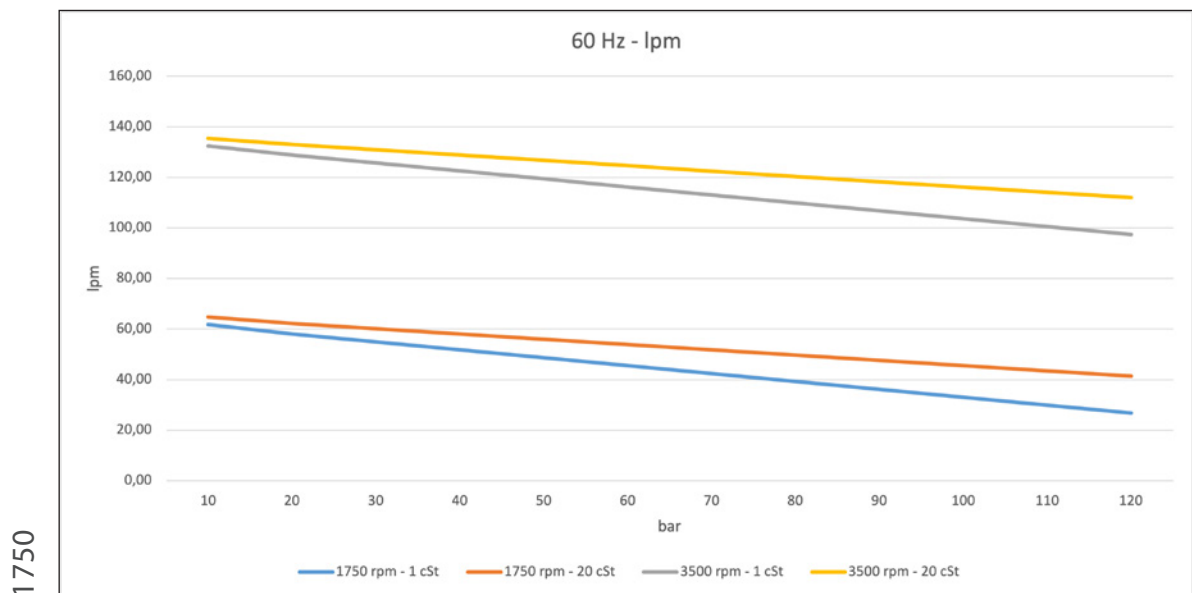


3500



Performances 60 Hz

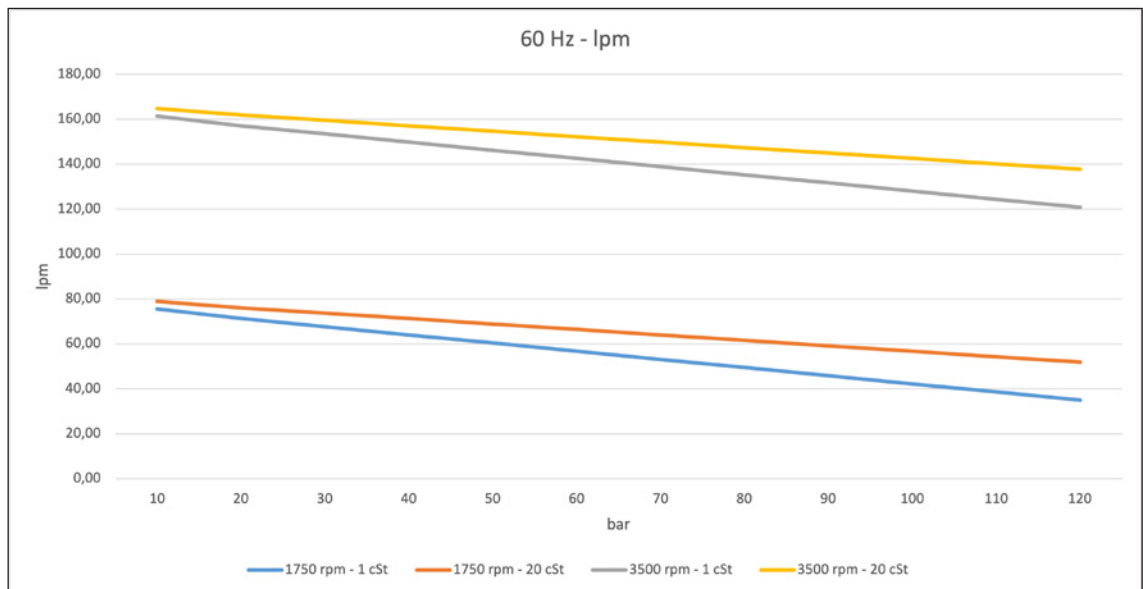
	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO040#6A	10	61,80	1,43	64,75	1,49	132,46	3,07	135,41	3,23
PWO040#6A	20	58,12	2,63	62,30	2,69	128,79	5,47	132,96	5,65
PWO040#6A	30	54,98	3,82	60,20	3,89	125,65	7,88	130,87	8,06
PWO040#6A	40	51,85	5,02	58,11	5,08	122,51	10,28	128,78	10,48
PWO040#6A	50	48,71	6,21	56,02	6,28	119,38	12,69	126,69	12,89
PWO040#6A	60	45,58	7,40	53,93	7,48	116,24	15,09	124,59	15,31
PWO040#6A	70	42,44	8,60	51,84	8,68	113,11	17,49	122,50	17,72
PWO040#6A	80	39,30	9,79	49,74	9,88	109,97	19,90	120,41	20,14
PWO040#6A	90	36,17	10,99	47,65	11,08	106,83	22,30	118,32	22,55
PWO040#6A	100	33,03	12,18	45,56	12,28	103,70	24,71	116,23	24,97
PWO040#6A	110	29,90	13,38	43,47	13,48	100,56	27,11	114,13	27,38
PWO040#6A	120	26,76	14,57	41,38	14,67	97,43	29,51	112,04	29,80



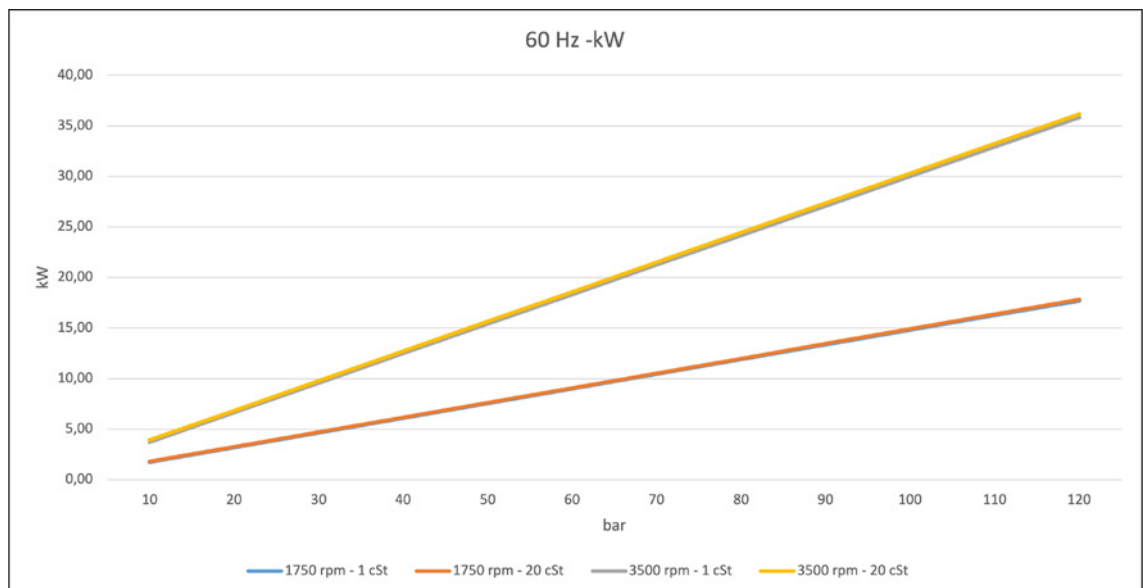
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO040#6B	10	75,53	1,74	78,95	1,81	161,33	3,73	164,75	3,92
PWO040#6B	20	71,27	3,19	76,11	3,26	157,07	6,65	161,91	6,86
PWO040#6B	30	67,64	4,64	73,68	4,72	153,44	9,57	159,49	9,79
PWO040#6B	40	64,00	6,09	71,26	6,17	149,81	12,48	157,06	12,72
PWO040#6B	50	60,37	7,54	68,84	7,63	146,17	15,40	154,64	15,65
PWO040#6B	60	56,74	8,99	66,41	9,08	142,54	18,32	152,22	18,59
PWO040#6B	70	53,11	10,44	63,99	10,54	138,91	21,24	149,79	21,52
PWO040#6B	80	49,47	11,89	61,57	12,00	135,28	24,16	147,37	24,45
PWO040#6B	90	45,84	13,34	59,14	13,45	131,64	27,08	144,95	27,38
PWO040#6B	100	42,21	14,79	56,72	14,91	128,01	30,00	142,52	30,32
PWO040#6B	110	38,57	16,25	54,30	16,36	124,38	32,92	140,10	33,25
PWO040#6B	120	34,94	17,70	51,87	17,82	120,74	35,84	137,68	36,18

1750

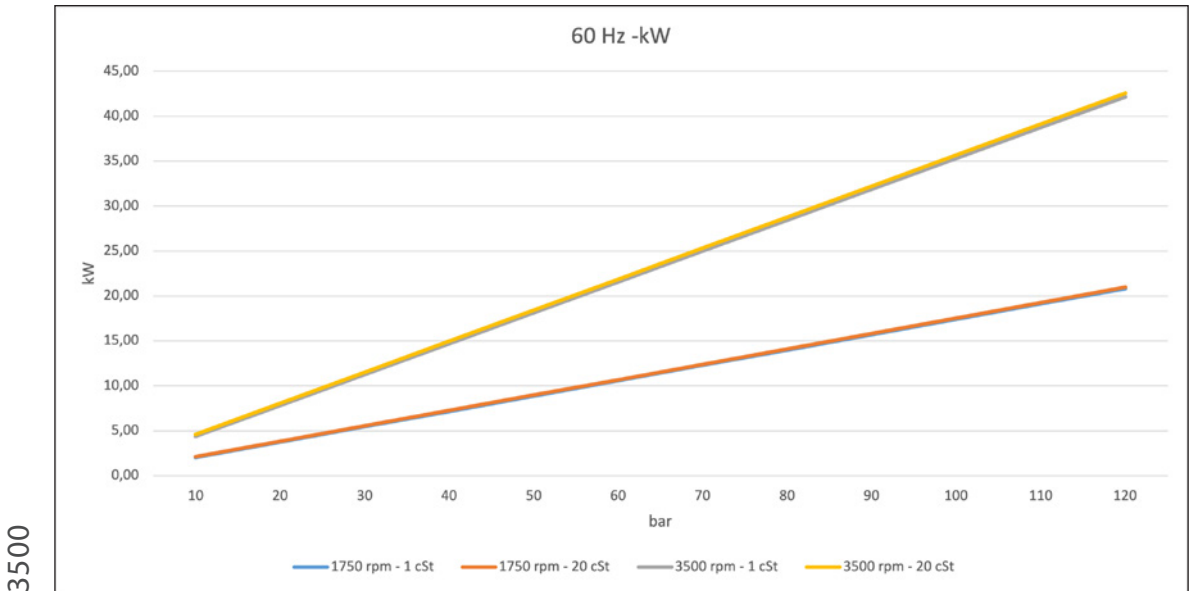
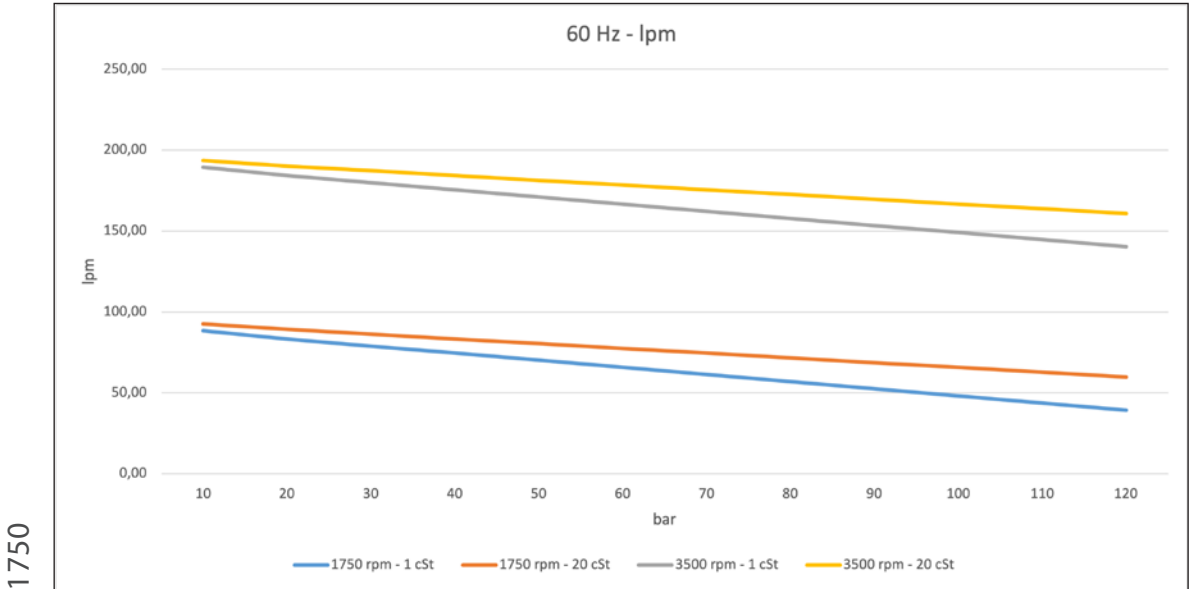


3500



Performances 60 Hz

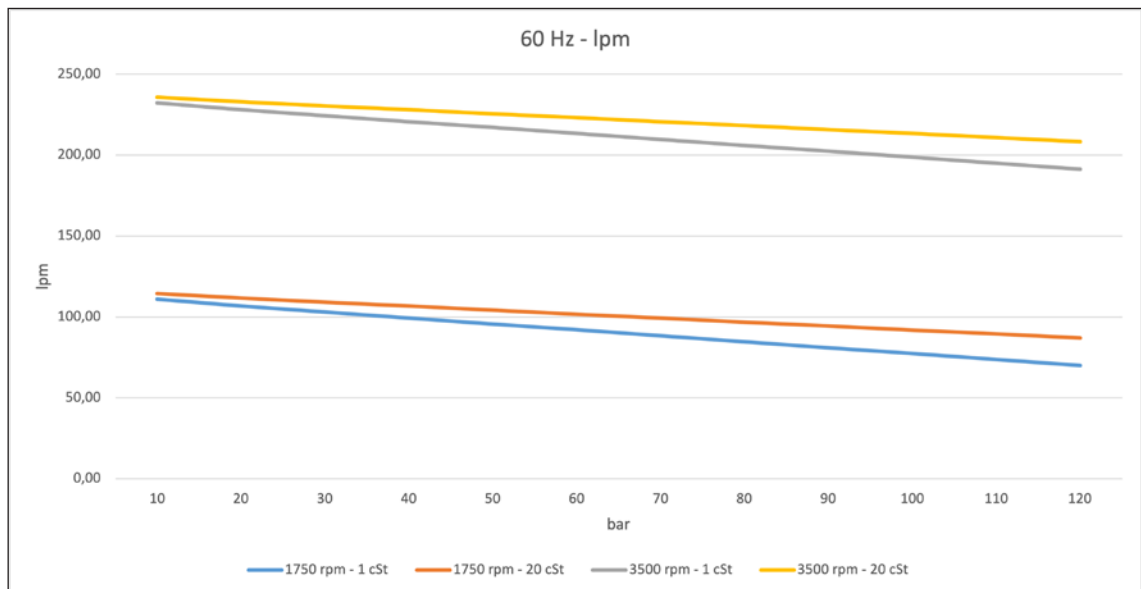
	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO040#6C	10	88,50	2,04	92,65	2,13	189,45	4,39	193,61	4,62
PWO040#6C	20	83,33	3,75	89,21	3,84	184,29	7,82	190,17	8,07
PWO040#6C	30	78,93	5,46	86,28	5,55	179,89	11,25	187,24	11,52
PWO040#6C	40	74,52	7,16	83,34	7,26	175,48	14,69	184,30	14,97
PWO040#6C	50	70,12	8,87	80,41	8,98	171,07	18,12	181,36	18,42
PWO040#6C	60	65,71	10,58	77,47	10,69	166,67	21,56	178,43	21,87
PWO040#6C	70	61,31	12,29	74,53	12,40	162,26	24,99	175,49	25,32
PWO040#6C	80	56,90	13,99	71,60	14,11	157,86	28,43	172,56	28,77
PWO040#6C	90	52,49	15,70	68,66	15,83	153,45	31,86	169,62	32,22
PWO040#6C	100	48,09	17,41	65,73	17,54	149,05	35,30	166,68	35,67
PWO040#6C	110	43,68	19,12	62,79	19,25	144,64	38,73	163,75	39,12
PWO040#6C	120	39,28	20,82	59,86	20,97	140,23	42,17	160,81	42,57



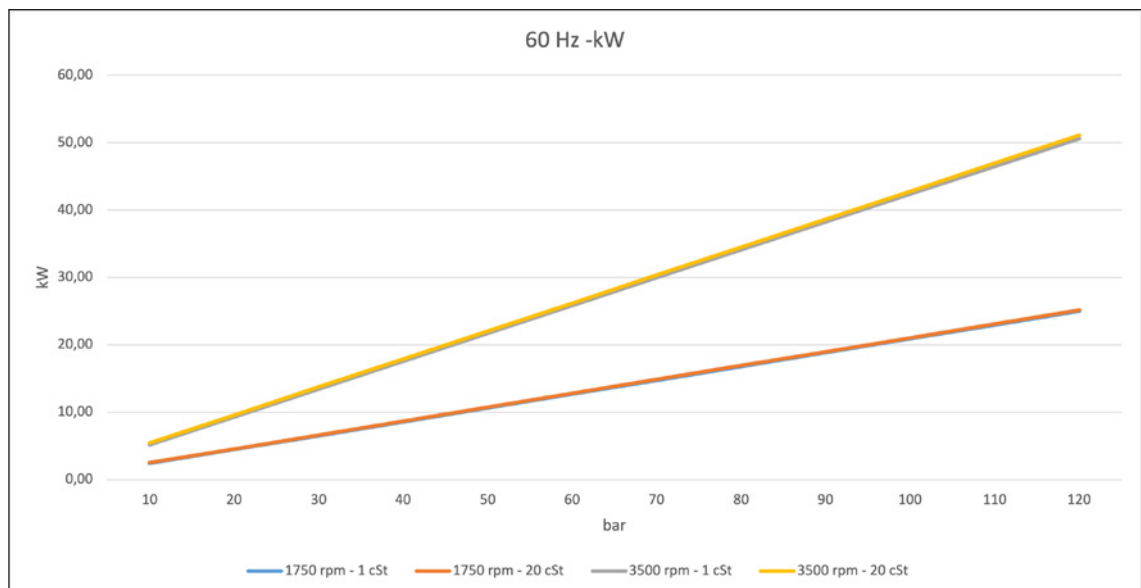
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO045#6A	10	111,00	2,43	114,44	2,52	232,38	5,20	235,82	5,47
PWO045#6A	20	106,70	4,48	111,57	4,58	228,08	9,33	232,95	9,61
PWO045#6A	30	103,03	6,54	109,11	6,64	224,41	13,46	230,49	13,76
PWO045#6A	40	99,36	8,59	106,66	8,70	220,74	17,59	228,04	17,91
PWO045#6A	50	95,69	10,64	104,21	10,76	217,07	21,72	225,59	22,06
PWO045#6A	60	92,02	12,69	101,75	12,82	213,40	25,85	223,13	26,21
PWO045#6A	70	88,36	14,75	99,30	14,88	209,74	29,98	220,68	30,36
PWO045#6A	80	84,69	16,80	96,85	16,94	206,07	34,11	218,23	34,50
PWO045#6A	90	81,02	18,85	94,40	19,00	202,40	38,24	215,78	38,65
PWO045#6A	100	77,35	20,90	91,94	21,06	198,73	42,37	213,32	42,80
PWO045#6A	110	73,68	22,96	89,49	23,12	195,06	46,50	210,87	46,95
PWO045#6A	120	70,01	25,01	87,04	25,18	191,39	50,63	208,42	51,10

1750

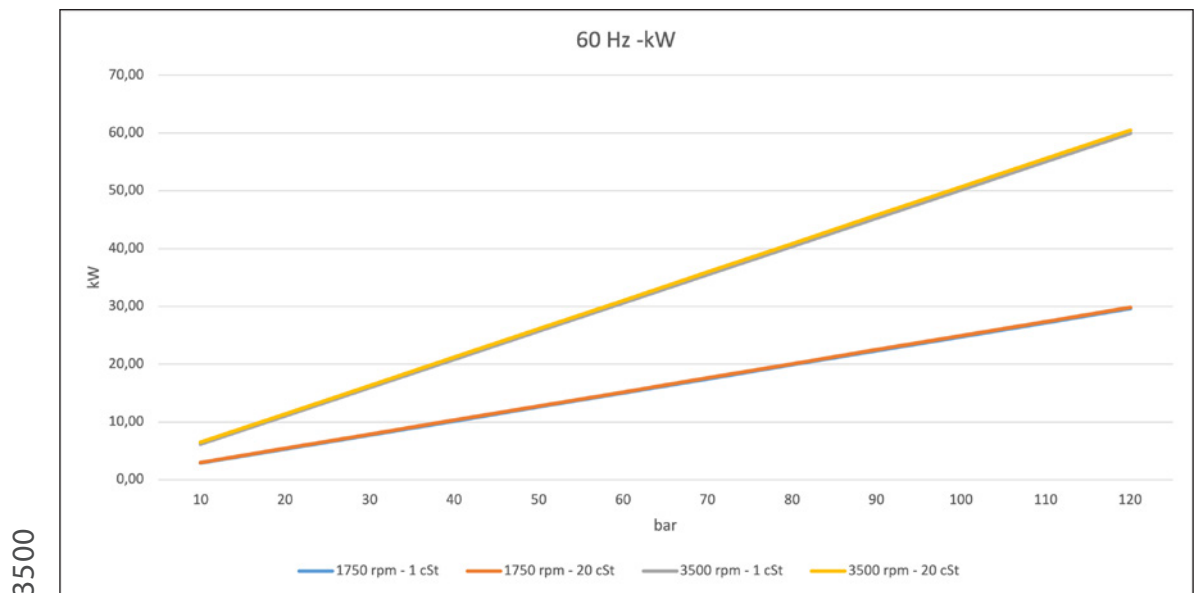
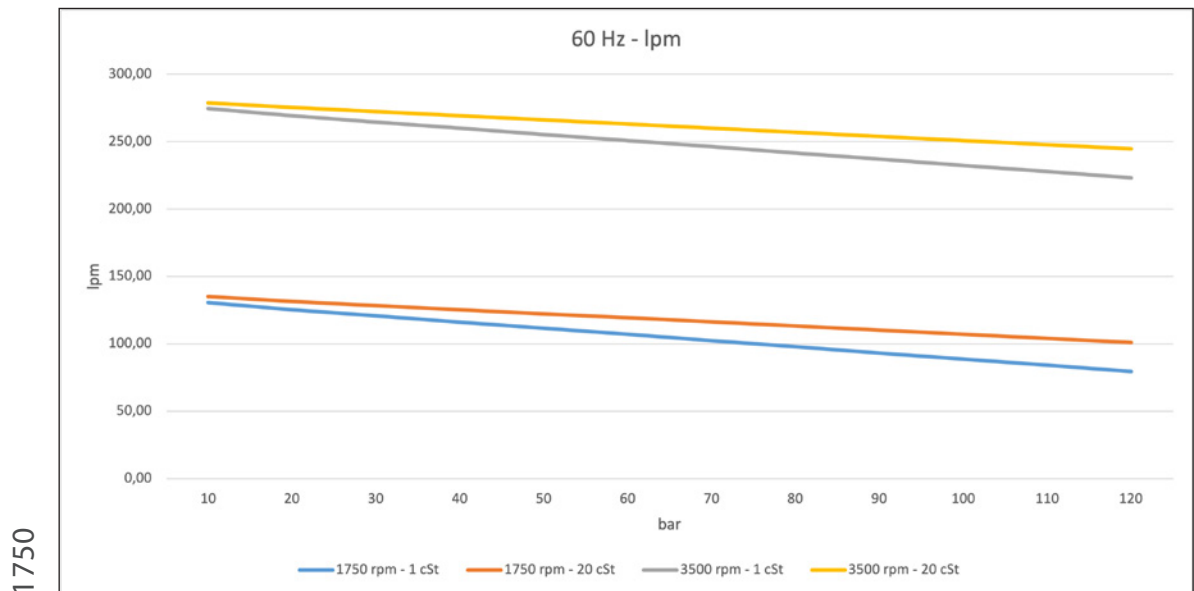


3500



Performances 60 Hz

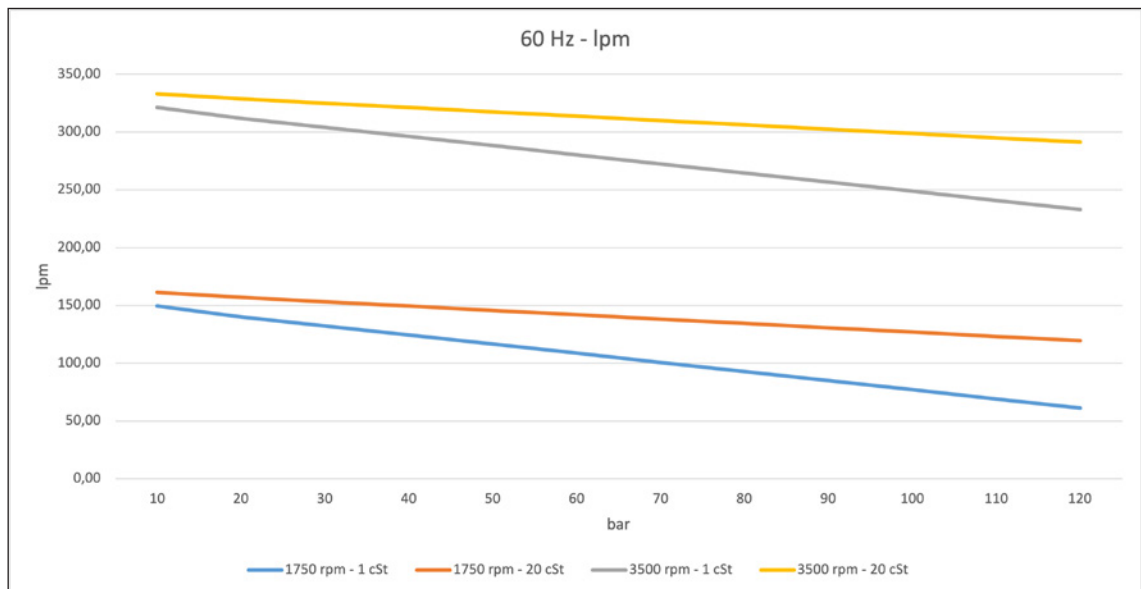
	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO045#6B	10	130,78	2,88	135,12	2,99	274,52	6,16	278,86	6,47
PWO045#6B	20	125,40	5,31	131,54	5,43	269,15	11,05	275,29	11,39
PWO045#6B	30	120,82	7,74	128,49	7,87	264,56	15,94	272,24	16,30
PWO045#6B	40	116,23	10,17	125,44	10,31	259,98	20,83	269,19	21,21
PWO045#6B	50	111,65	12,60	122,39	12,74	255,39	25,72	266,14	26,12
PWO045#6B	60	107,06	15,03	119,34	15,18	250,81	30,61	263,09	31,04
PWO045#6B	70	102,48	17,46	116,29	17,62	246,22	35,50	260,04	35,95
PWO045#6B	80	97,89	19,90	113,24	20,06	241,64	40,39	256,99	40,86
PWO045#6B	90	93,31	22,33	110,19	22,50	237,05	45,28	253,94	45,77
PWO045#6B	100	88,72	24,76	107,14	24,94	232,47	50,17	250,89	50,69
PWO045#6B	110	84,14	27,19	104,09	27,38	227,88	55,07	247,83	55,60
PWO045#6B	120	79,55	29,62	101,04	29,81	223,30	59,96	244,78	60,51



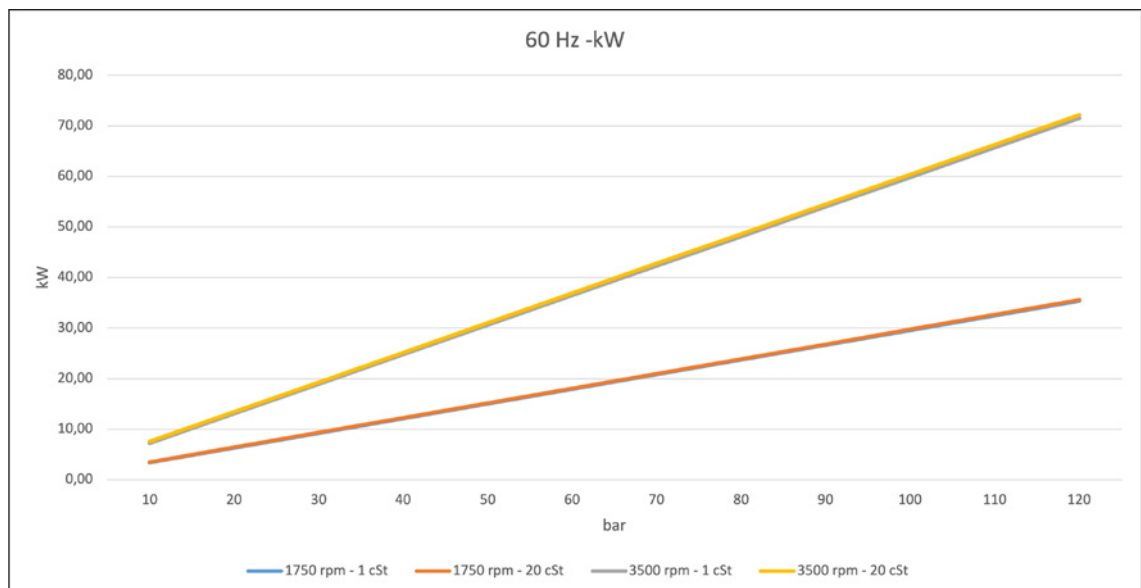
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO055#6A	10	149,44	3,39	161,21	3,51	321,22	7,22	332,99	7,56
PWO055#6A	20	140,18	6,30	156,84	6,43	311,96	13,06	328,62	13,43
PWO055#6A	30	132,28	9,20	153,10	9,34	304,06	18,91	324,88	19,30
PWO055#6A	40	124,38	12,11	149,37	12,25	296,16	24,75	321,15	25,17
PWO055#6A	50	116,48	15,01	145,63	15,17	288,26	30,60	317,41	31,04
PWO055#6A	60	108,58	17,92	141,89	18,08	280,36	36,44	313,67	36,91
PWO055#6A	70	100,68	20,82	138,16	21,00	272,46	42,29	309,94	42,78
PWO055#6A	80	92,78	23,72	134,42	23,91	264,56	48,13	306,20	48,66
PWO055#6A	90	84,88	26,63	130,69	26,82	256,66	53,97	302,47	54,53
PWO055#6A	100	76,98	29,53	126,95	29,74	248,76	59,82	298,73	60,40
PWO055#6A	110	69,08	32,44	123,22	32,65	240,86	65,66	295,00	66,27
PWO055#6A	120	61,18	35,34	119,48	35,57	232,96	71,51	291,26	72,14

1750

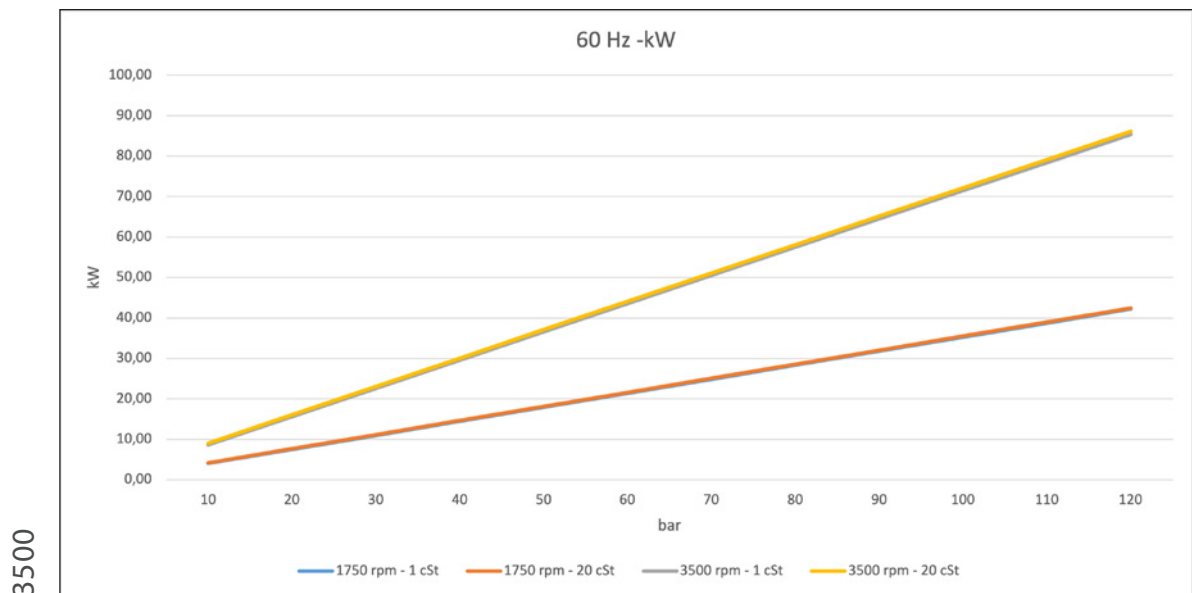
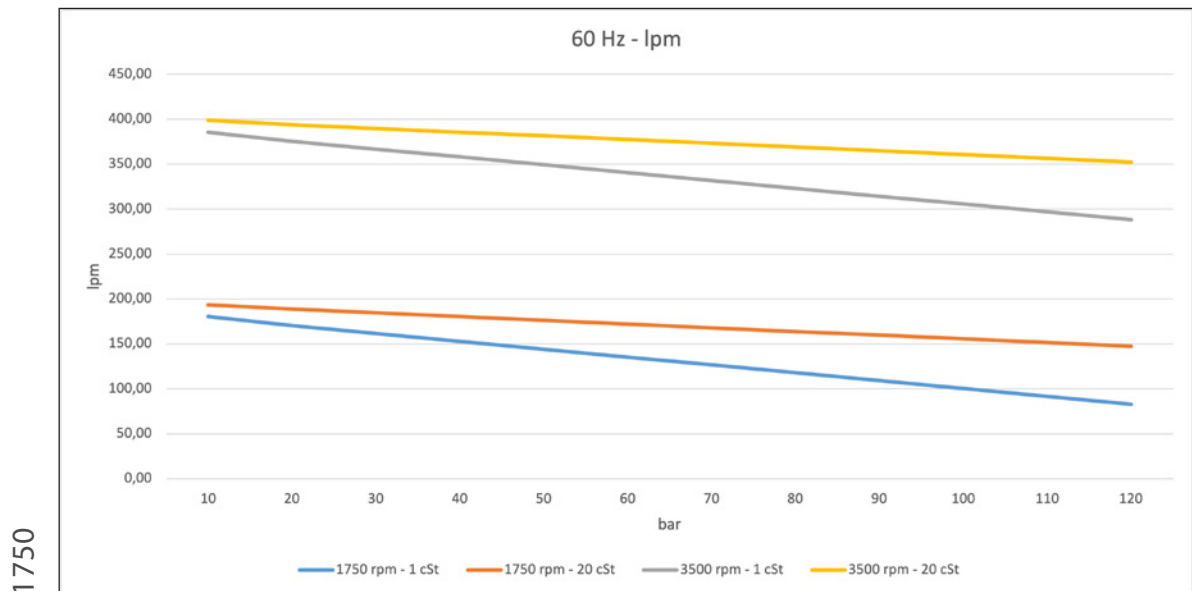


3500



Performances 60 Hz

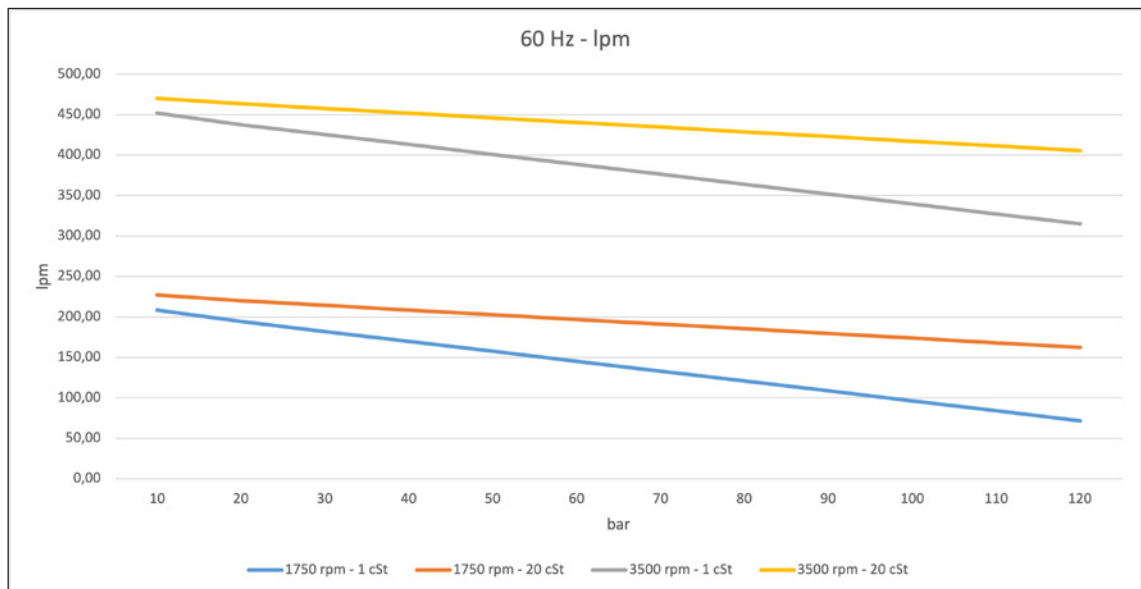
	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO055#6B	10	180,48	4,05	193,49	4,19	385,65	8,62	398,66	9,03
PWO055#6B	20	170,25	7,52	188,66	7,67	375,42	15,60	393,83	16,04
PWO055#6B	30	161,52	10,99	184,53	11,16	366,69	22,58	389,70	23,05
PWO055#6B	40	152,79	14,46	180,40	14,64	357,96	29,56	385,57	30,06
PWO055#6B	50	144,06	17,93	176,27	18,12	349,23	36,54	381,44	37,08
PWO055#6B	60	135,33	21,40	172,15	21,60	340,50	43,52	377,32	44,09
PWO055#6B	70	126,60	24,87	168,02	25,08	331,77	50,50	373,19	51,10
PWO055#6B	80	117,87	28,34	163,89	28,56	323,04	57,48	369,06	58,11
PWO055#6B	90	109,14	31,81	159,76	32,04	314,31	64,46	364,93	65,12
PWO055#6B	100	100,41	35,27	155,63	35,52	305,58	71,44	360,80	72,14
PWO055#6B	110	91,68	38,74	151,50	39,00	296,85	78,42	356,67	79,15
PWO055#6B	120	82,95	42,21	147,38	42,48	288,12	85,40	352,55	86,16



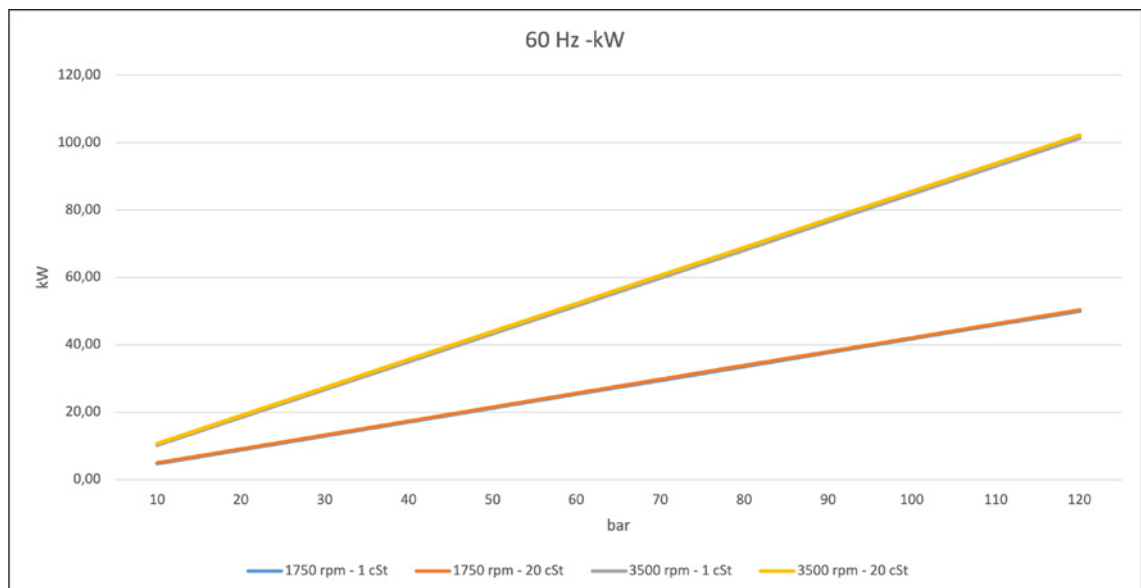
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO055#6C	10	208,69	4,80	226,96	4,97	452,04	10,23	470,32	10,71
PWO055#6C	20	194,33	8,92	220,17	9,10	437,68	18,51	463,53	19,03
PWO055#6C	30	182,07	13,03	214,38	13,23	425,43	26,79	457,73	27,34
PWO055#6C	40	169,81	17,15	208,58	17,36	413,17	35,07	451,93	35,66
PWO055#6C	50	157,56	21,26	202,78	21,49	400,91	43,35	446,14	43,98
PWO055#6C	60	145,30	25,38	196,99	25,62	388,65	51,62	440,34	52,29
PWO055#6C	70	133,04	29,49	191,19	29,75	376,40	59,90	434,55	60,61
PWO055#6C	80	120,79	33,61	185,40	33,87	364,14	68,18	428,75	68,93
PWO055#6C	90	108,53	37,73	179,60	38,00	351,88	76,46	422,95	77,25
PWO055#6C	100	96,27	41,84	173,80	42,13	339,63	84,74	417,16	85,56
PWO055#6C	110	84,02	45,96	168,01	46,26	327,37	93,02	411,36	93,88
PWO055#6C	120	71,76	50,07	162,21	50,39	315,11	101,30	405,57	102,20

1750

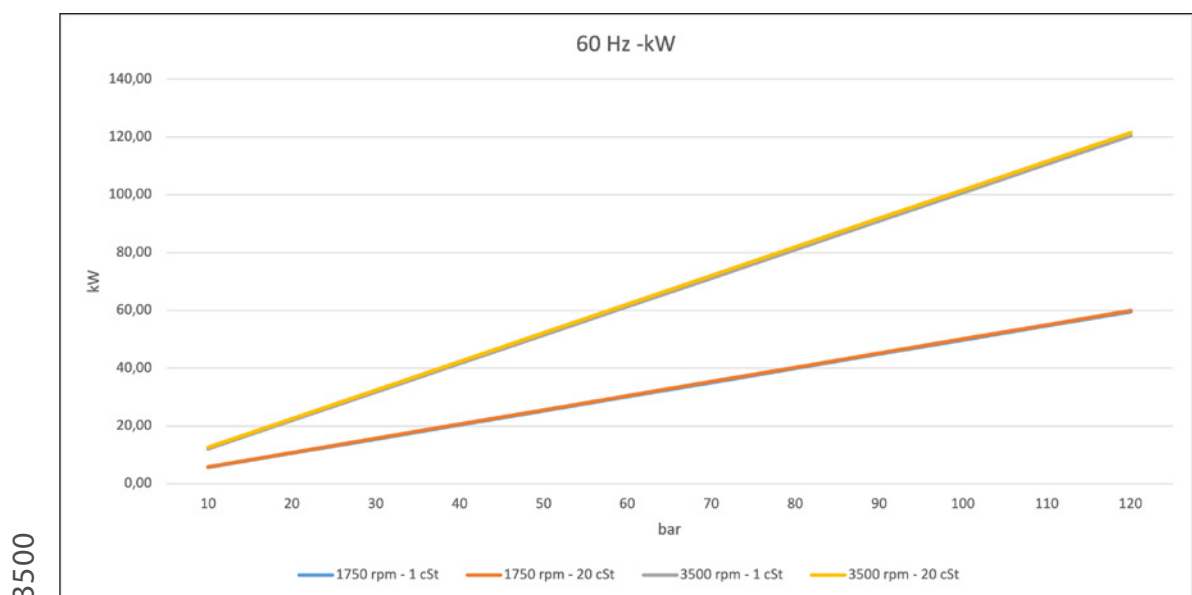
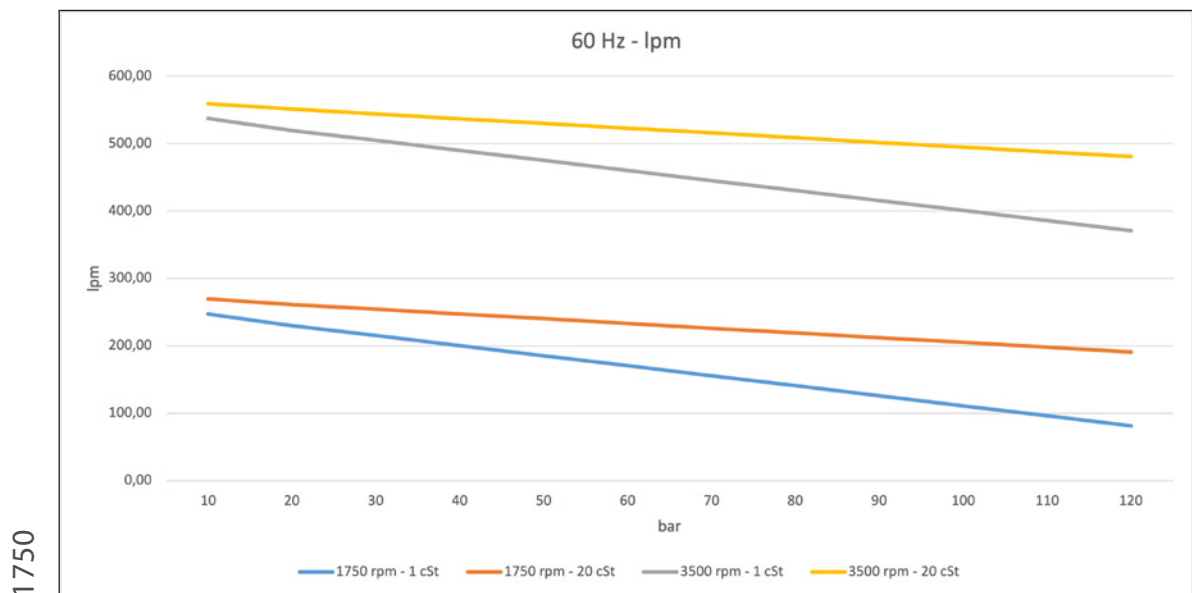


3500



Performances 60 Hz

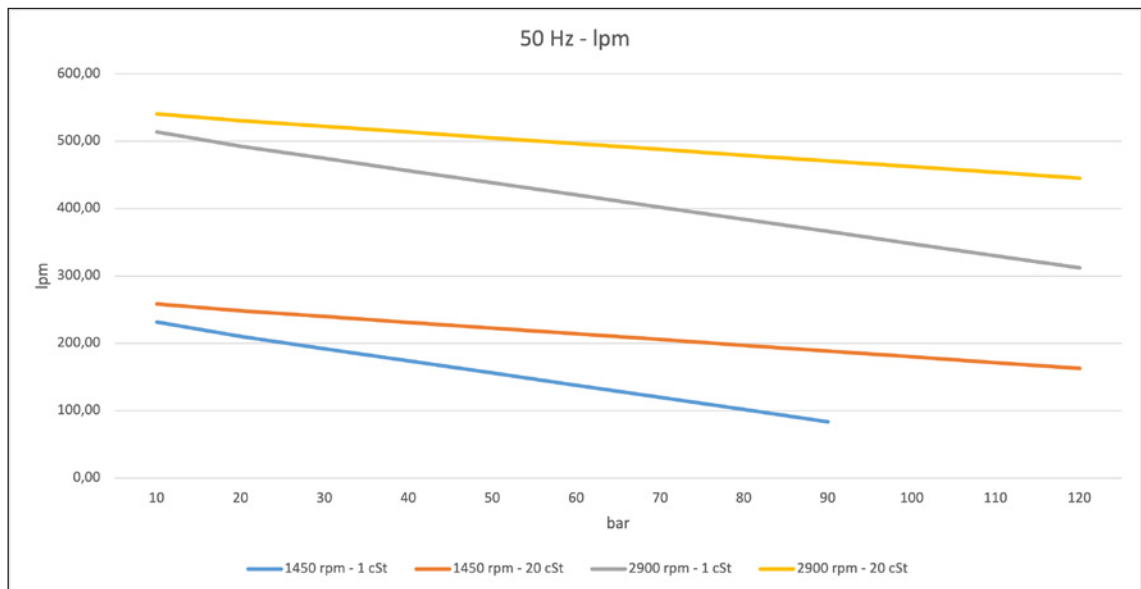
	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO060#6A	10	247,55	5,69	269,72	5,88	537,16	12,08	559,33	12,63
PWO060#6A	20	230,13	10,58	261,48	10,79	519,73	21,94	551,09	22,53
PWO060#6A	30	215,26	15,48	254,45	15,71	504,86	31,79	544,06	32,43
PWO060#6A	40	200,38	20,38	247,42	20,62	489,99	41,64	537,02	42,33
PWO060#6A	50	185,51	25,27	240,38	25,53	475,12	51,49	529,99	52,22
PWO060#6A	60	170,64	30,17	233,35	30,45	460,25	61,35	522,96	62,12
PWO060#6A	70	155,77	35,07	226,32	35,36	445,38	71,20	515,93	72,02
PWO060#6A	80	140,90	39,97	219,29	40,27	430,51	81,05	508,90	81,92
PWO060#6A	90	126,03	44,86	212,26	45,19	415,64	90,90	501,87	91,82
PWO060#6A	100	111,16	49,76	205,23	50,10	400,77	100,76	494,83	101,71
PWO060#6A	110	96,29	54,66	198,19	55,01	385,90	110,61	487,80	111,61
PWO060#6A	120	81,42	59,55	191,16	59,92	371,03	120,46	480,77	121,51



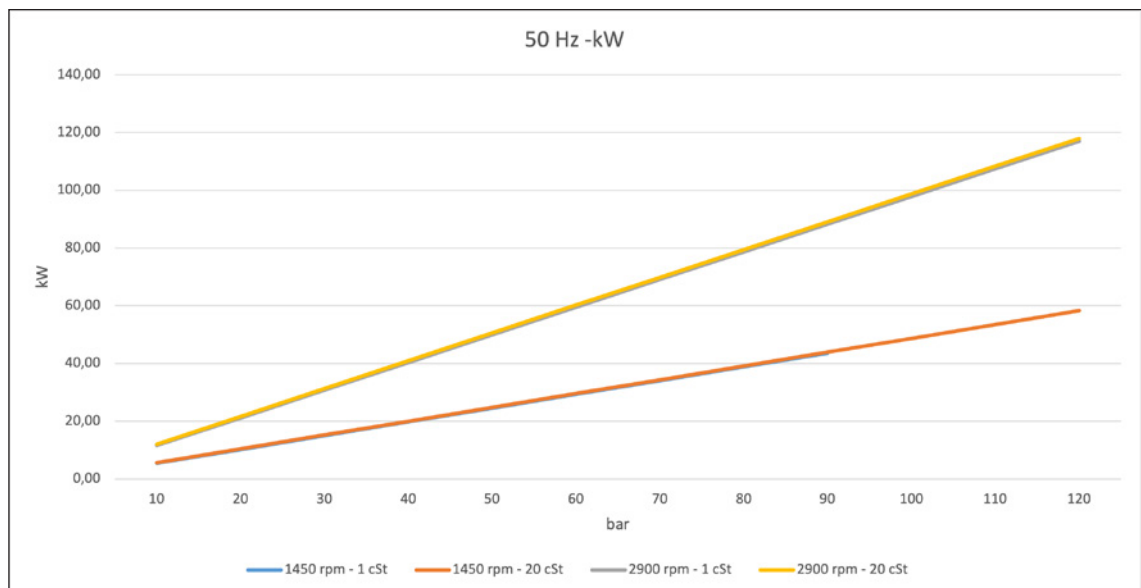
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PWO060#6B	10	289,60	6,69	316,54	6,92	630,31	14,21	657,25	14,86
PWO060#6B	20	268,43	12,45	306,53	12,70	609,14	25,81	647,24	26,51
PWO060#6B	30	250,36	18,21	297,99	18,48	591,07	37,40	638,69	38,15
PWO060#6B	40	232,30	23,97	289,44	24,26	573,00	48,99	630,15	49,80
PWO060#6B	50	214,23	29,73	280,90	30,04	554,93	60,58	621,61	61,44
PWO060#6B	60	196,16	35,50	272,35	35,82	536,87	72,17	613,06	73,08
PWO060#6B	70	178,09	41,26	263,81	41,60	518,80	83,76	604,52	84,73
PWO060#6B	80	160,02	47,02	255,27	47,38	500,73	95,35	595,97	96,37
PWO060#6B	90	141,95	52,78	246,72	53,16	482,66	106,94	587,43	108,02
PWO060#6B	100	123,88	58,54	238,18	58,94	464,59	118,54	578,89	119,66
PWO060#6B	110	105,82	64,30	229,63	64,72	446,52	130,13	570,34	131,31
PWO060#6B	120	0,00	0,00	221,09	70,50	428,45	141,72	561,80	142,95

1750

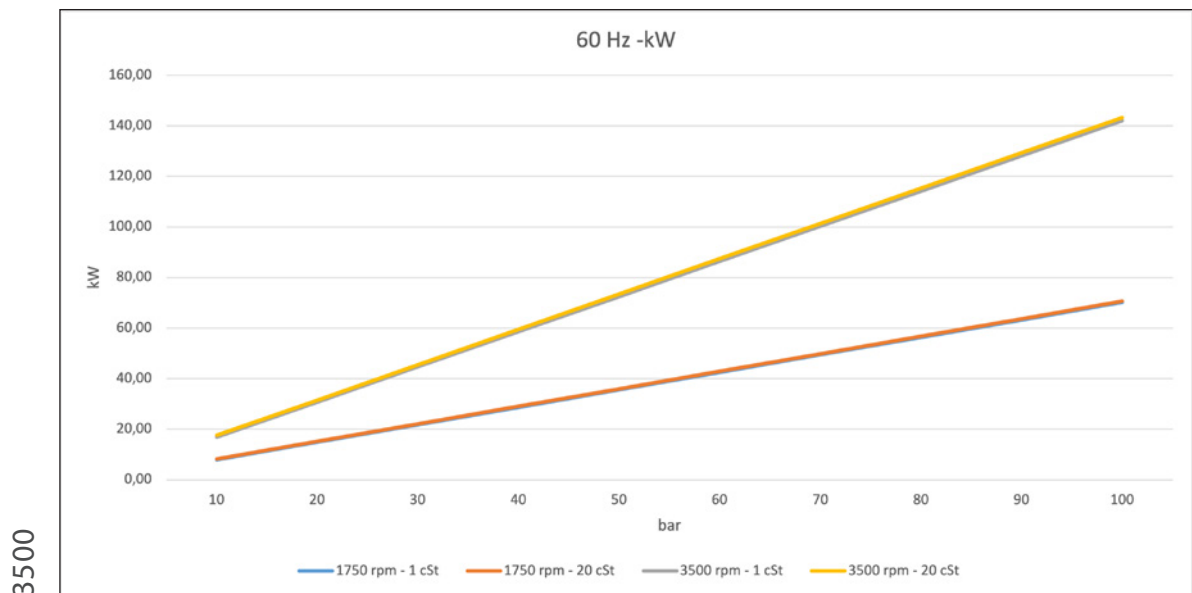
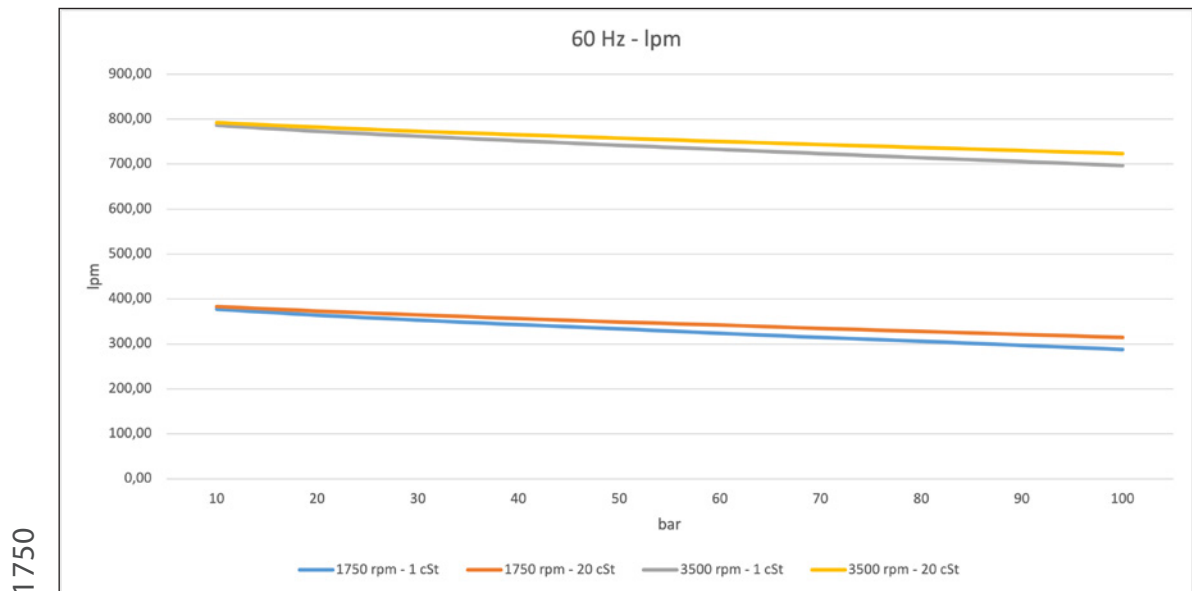


3500



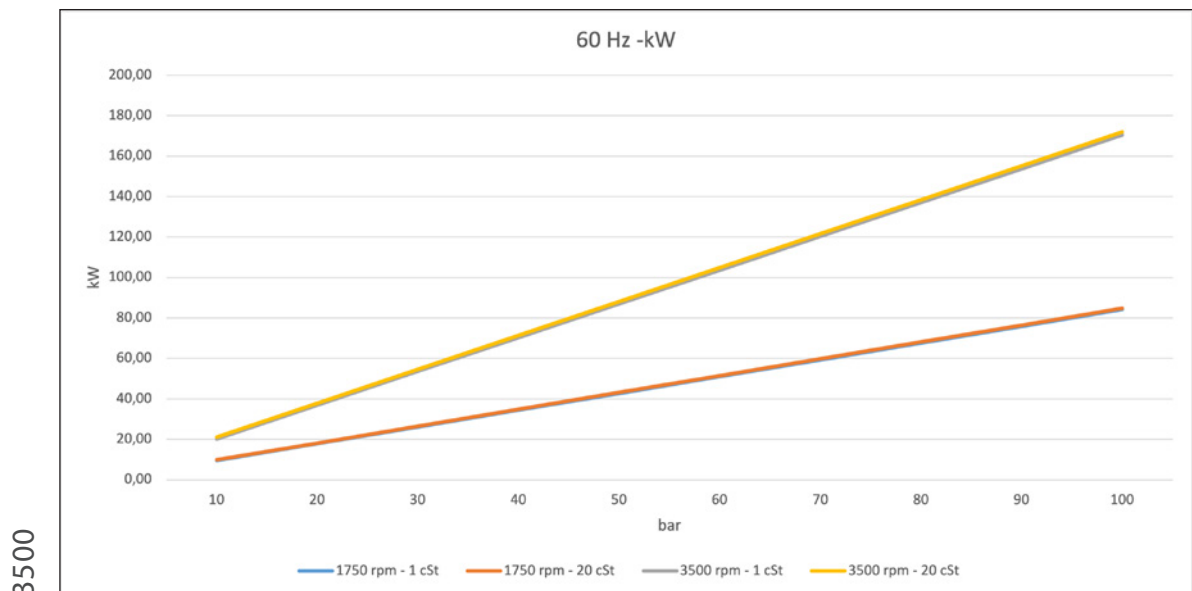
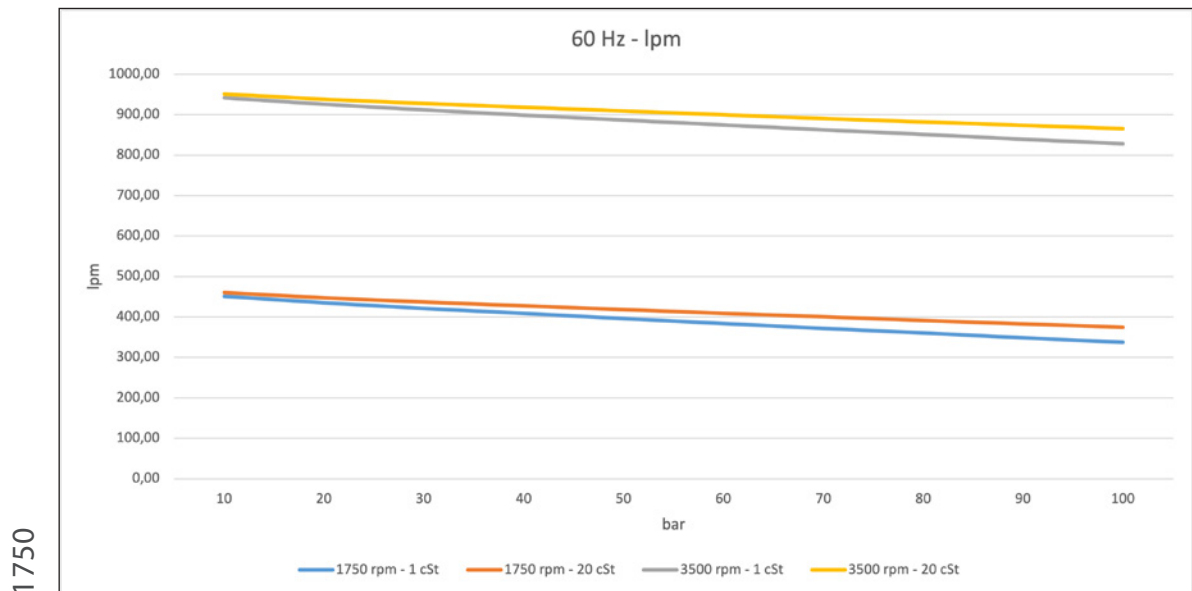
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0072#6A	10	377,16	7,94	383,47	8,20	786,02	16,82	792,32	17,55
PW0072#6A	20	364,04	14,86	372,95	15,14	772,89	30,73	781,81	31,52
PW0072#6A	30	353,28	21,77	364,43	22,07	762,13	44,64	773,28	45,49
PW0072#6A	40	343,15	28,68	356,53	29,01	752,00	58,55	765,38	59,47
PW0072#6A	50	333,42	35,60	349,02	35,94	742,27	72,46	757,88	73,44
PW0072#6A	60	323,98	42,51	341,81	42,88	732,83	86,37	750,66	87,41
PW0072#6A	70	314,75	49,43	334,81	49,82	723,60	100,28	743,66	101,39
PW0072#6A	80	305,69	56,34	327,97	56,75	714,54	114,19	736,83	115,36
PW0072#6A	90	296,77	63,25	321,28	63,69	705,62	128,10	730,13	129,33
PW0072#6A	100	287,96	70,17	314,71	70,63	696,81	142,01	723,56	143,31



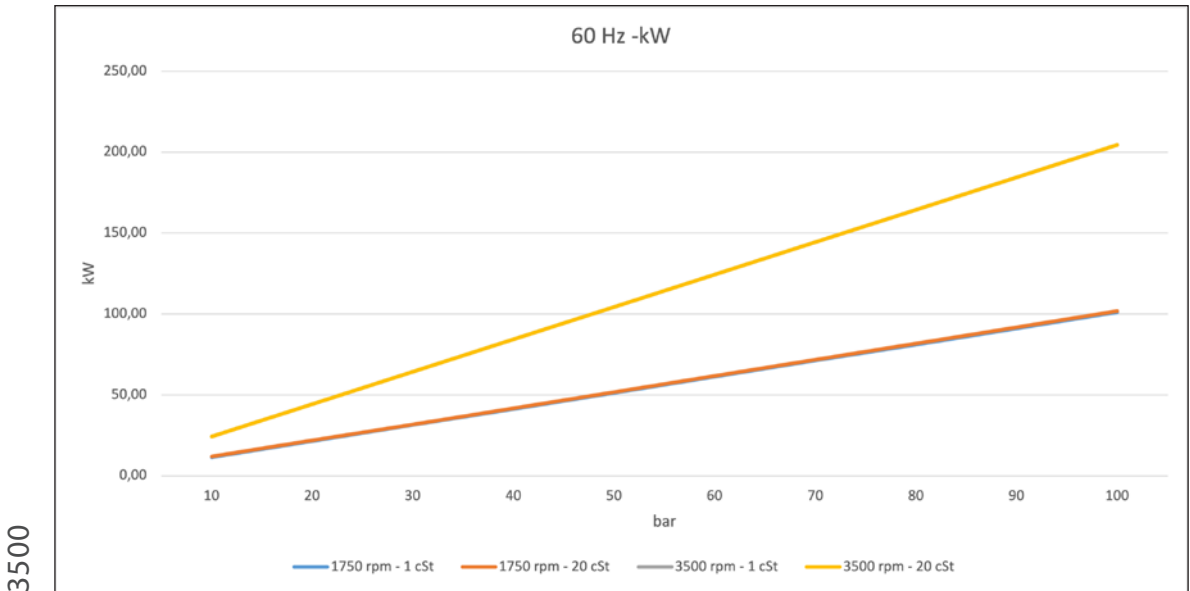
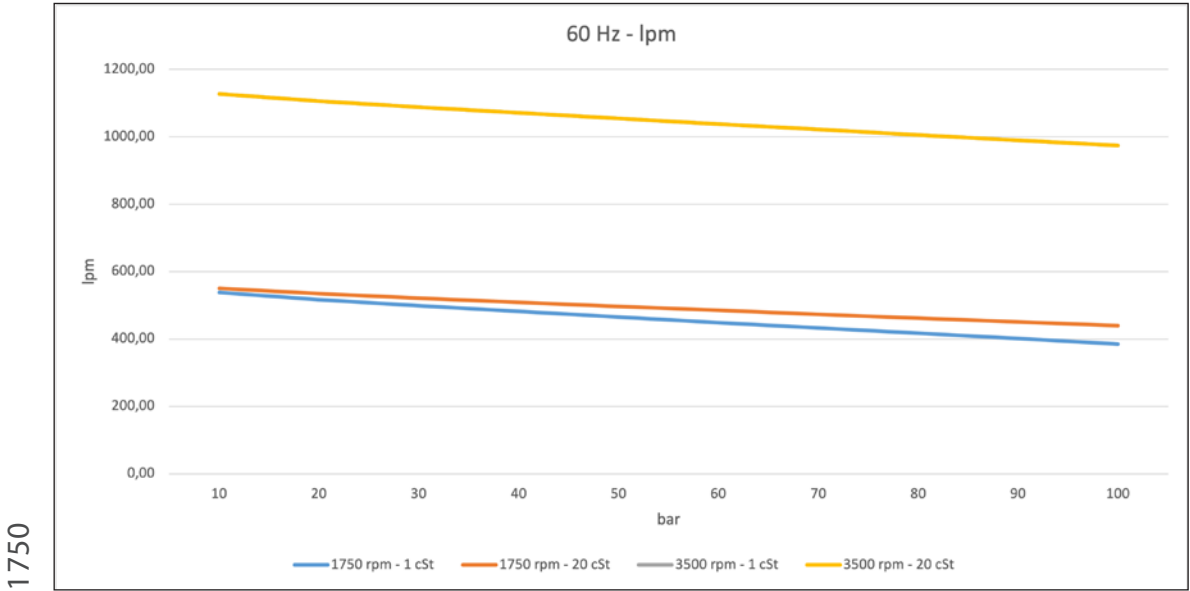
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0072#6B	10	451,25	9,53	460,09	9,84	941,88	20,19	950,72	21,06
PW0072#6B	20	434,94	17,83	447,43	18,16	925,57	36,88	938,06	37,83
PW0072#6B	30	421,46	26,13	437,08	26,49	912,09	53,57	927,71	54,59
PW0072#6B	40	408,61	34,42	427,36	34,81	899,24	70,26	917,99	71,36
PW0072#6B	50	396,16	42,72	418,03	43,13	886,79	86,96	908,66	88,13
PW0072#6B	60	383,99	51,01	408,99	51,46	874,62	103,65	899,62	104,90
PW0072#6B	70	372,04	59,31	400,16	59,78	862,67	120,34	890,79	121,67
PW0072#6B	80	360,26	67,61	391,51	68,10	850,89	137,03	882,14	138,43
PW0072#6B	90	348,62	75,90	382,99	76,43	839,25	153,72	873,62	155,20
PW0072#6B	100	337,10	84,20	374,59	84,75	827,73	170,41	865,22	171,97



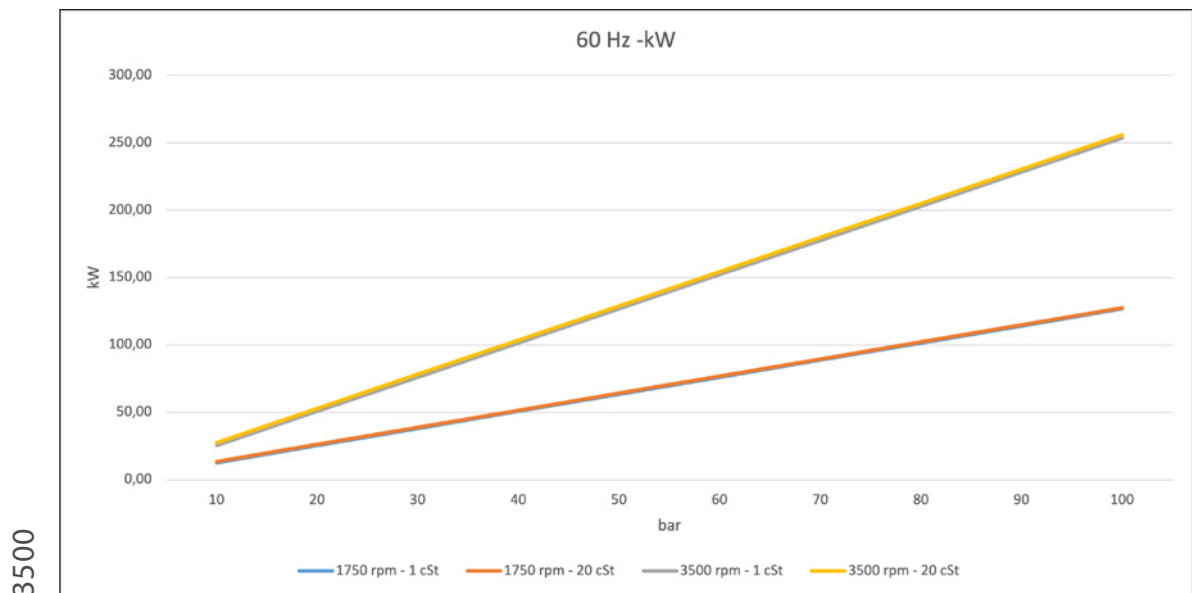
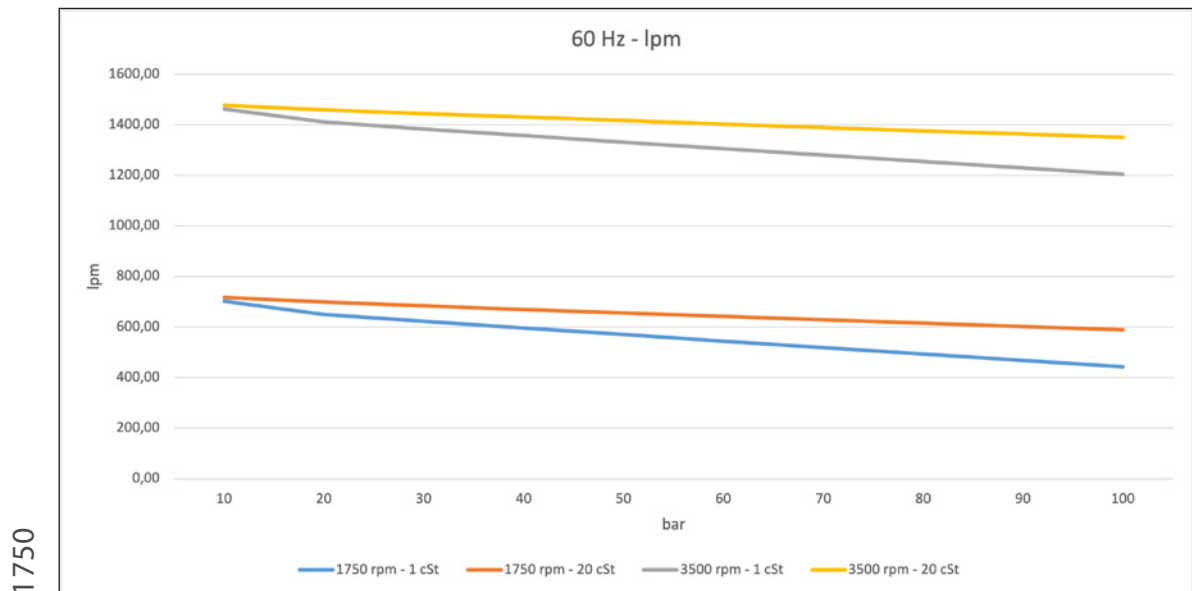
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0072#6C	10	537,56	11,44	550,29	11,81	1126,31	24,23	1126,31	24,23
PW0072#6C	20	516,36	21,39	534,36	21,80	1105,11	44,26	1105,11	44,26
PW0072#6C	30	498,71	31,35	521,20	31,78	1087,46	64,29	1087,46	64,29
PW0072#6C	40	481,68	41,31	508,68	41,77	1070,43	84,32	1070,43	84,32
PW0072#6C	50	465,06	51,26	496,55	51,76	1053,81	104,35	1053,81	104,35
PW0072#6C	60	448,72	61,22	484,71	61,75	1037,47	124,38	1037,47	124,38
PW0072#6C	70	432,59	71,17	473,09	71,74	1021,34	144,41	1021,34	144,41
PW0072#6C	80	416,64	81,13	461,63	81,72	1005,39	164,44	1005,39	164,44
PW0072#6C	90	400,82	91,08	450,31	91,71	989,57	184,46	989,57	184,46
PW0072#6C	100	385,12	101,04	439,11	101,70	973,87	204,49	973,87	204,49



Performances 60 Hz

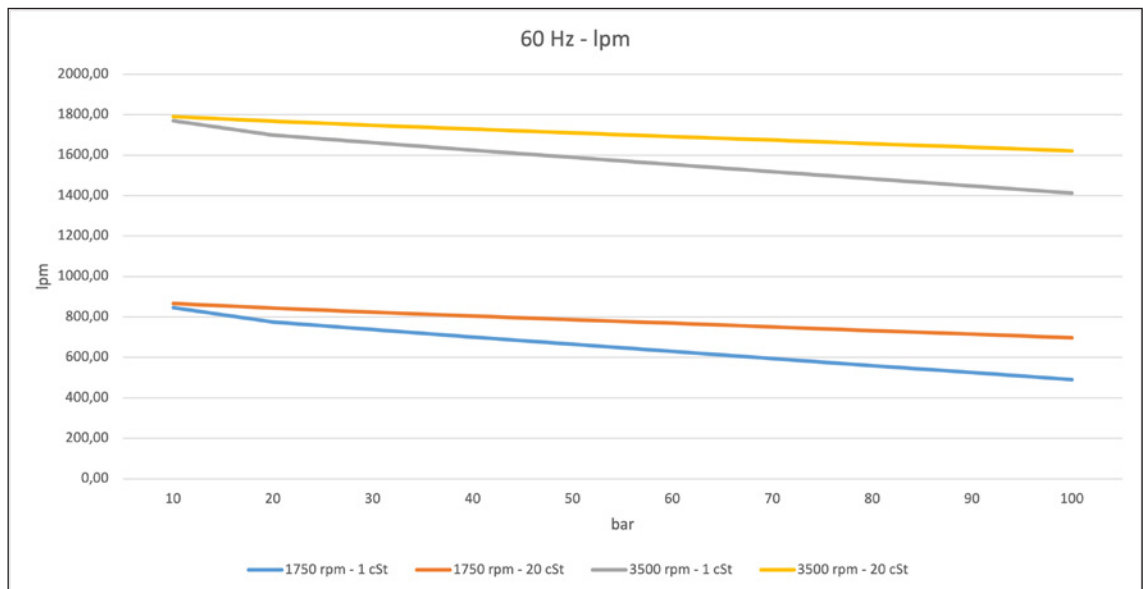
	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0083#6A	10	701,91	12,70	717,12	13,48	1462,56	25,40	1477,78	27,42
PW0083#6A	20	650,23	25,38	699,09	26,16	1410,89	50,76	1459,74	52,77
PW0083#6A	30	623,08	38,06	684,15	38,84	1383,73	76,11	1444,80	78,13
PW0083#6A	40	596,55	50,73	669,83	51,51	1357,20	101,47	1430,48	103,48
PW0083#6A	50	570,42	63,41	655,91	64,19	1331,07	126,83	1416,56	128,84
PW0083#6A	60	544,57	76,09	642,28	76,87	1305,22	152,18	1402,93	154,19
PW0083#6A	70	518,94	88,77	628,86	89,55	1279,59	177,54	1389,51	179,55
PW0083#6A	80	493,47	101,45	615,61	102,23	1254,13	202,89	1376,26	204,90
PW0083#6A	90	468,15	114,12	602,50	114,90	1228,81	228,25	1363,16	230,26
PW0083#6A	100	442,95	126,80	589,51	127,58	1203,60	253,60	1350,16	255,61



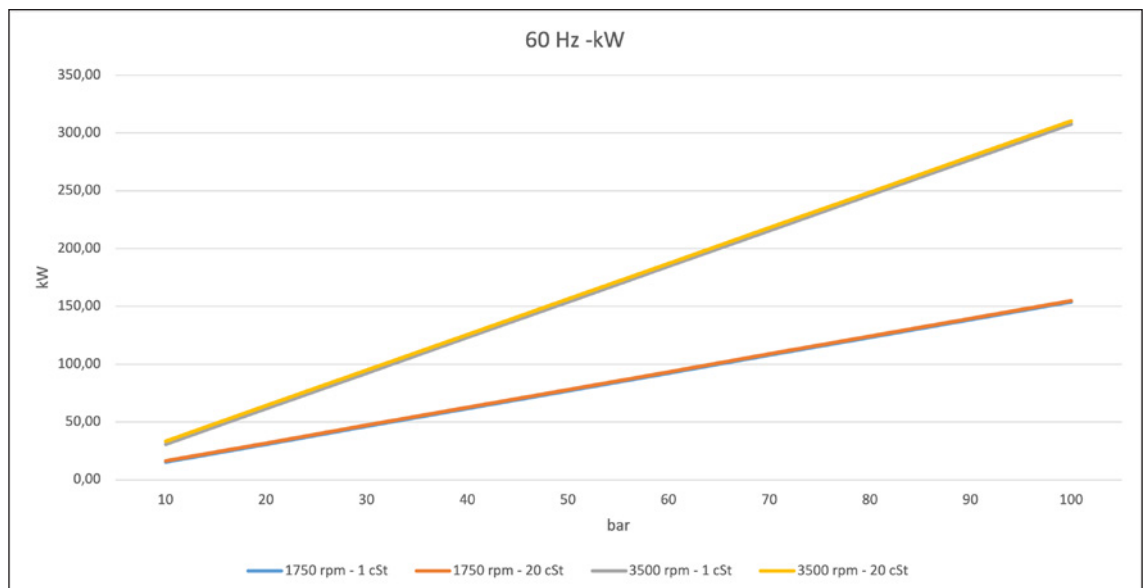
Performances 60 Hz

	bar	1750				3500			
		1 cSt		20 cSt		1 cSt		20 cSt	
		lpm	kW	lpm	kW	lpm	kW	lpm	kW
PW0083#6B	10	845,56	15,42	867,15	16,37	1769,21	30,85	1790,80	33,29
PW0083#6B	20	774,44	30,82	843,74	31,77	1698,09	61,64	1767,39	64,08
PW0083#6B	30	737,58	46,21	824,21	47,16	1661,23	92,42	1747,86	94,87
PW0083#6B	40	701,35	61,61	805,31	62,55	1625,00	123,21	1728,96	125,66
PW0083#6B	50	665,52	77,00	786,80	77,95	1589,17	154,00	1710,45	156,44
PW0083#6B	60	629,98	92,39	768,58	93,34	1553,63	184,79	1692,23	187,23
PW0083#6B	70	594,65	107,79	750,58	108,74	1518,30	215,58	1674,23	218,02
PW0083#6B	80	559,49	123,18	732,75	124,13	1483,14	246,37	1656,40	248,81
PW0083#6B	90	524,47	138,58	715,05	139,52	1448,12	277,15	1638,70	279,60
PW0083#6B	100	489,57	153,97	697,47	154,92	1413,22	307,94	1621,12	310,39

1750

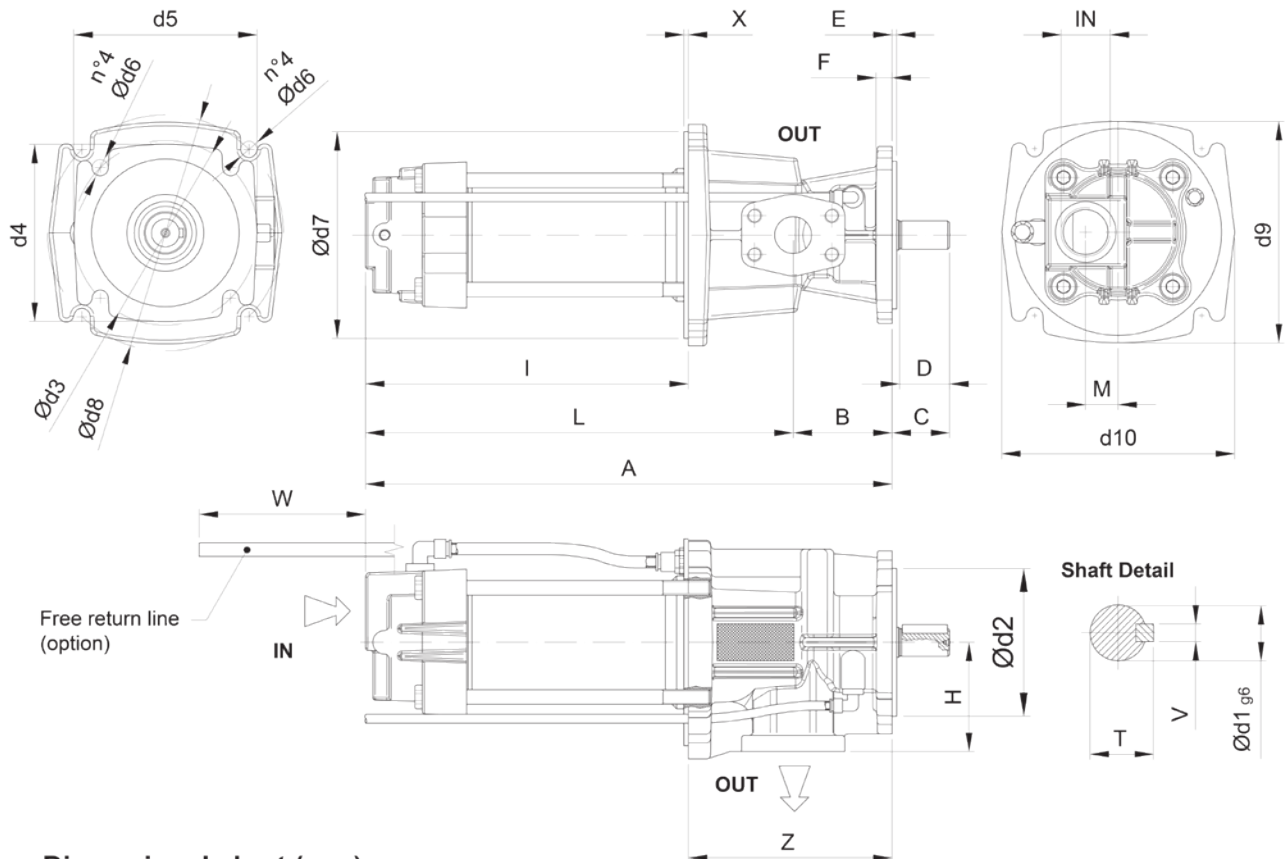


3500



Overall Dimensions and Weight

Screw pumps PWO and PWE

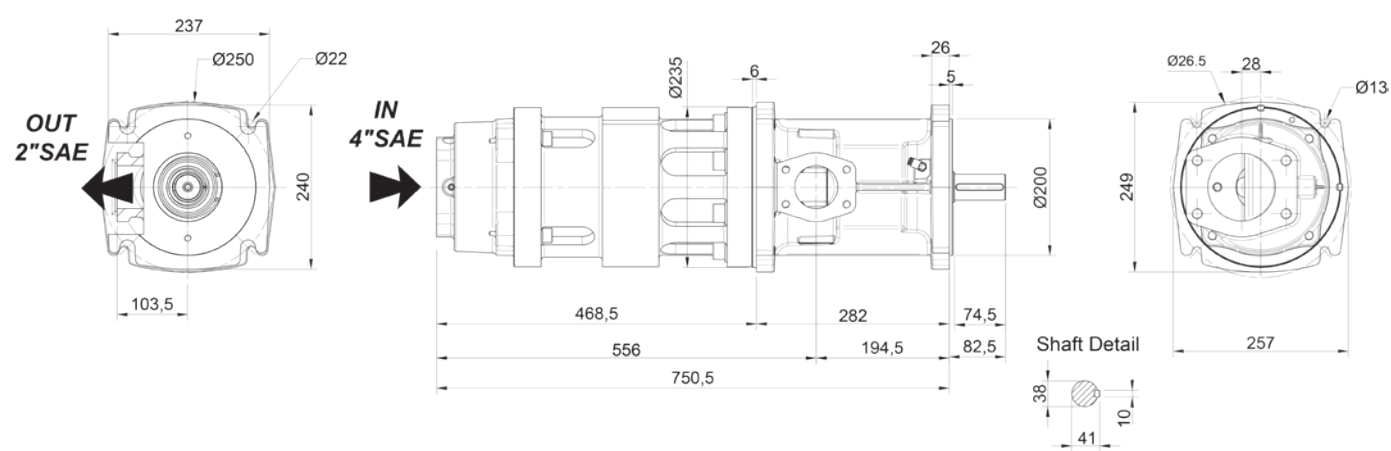


Dimensional chart (mm)

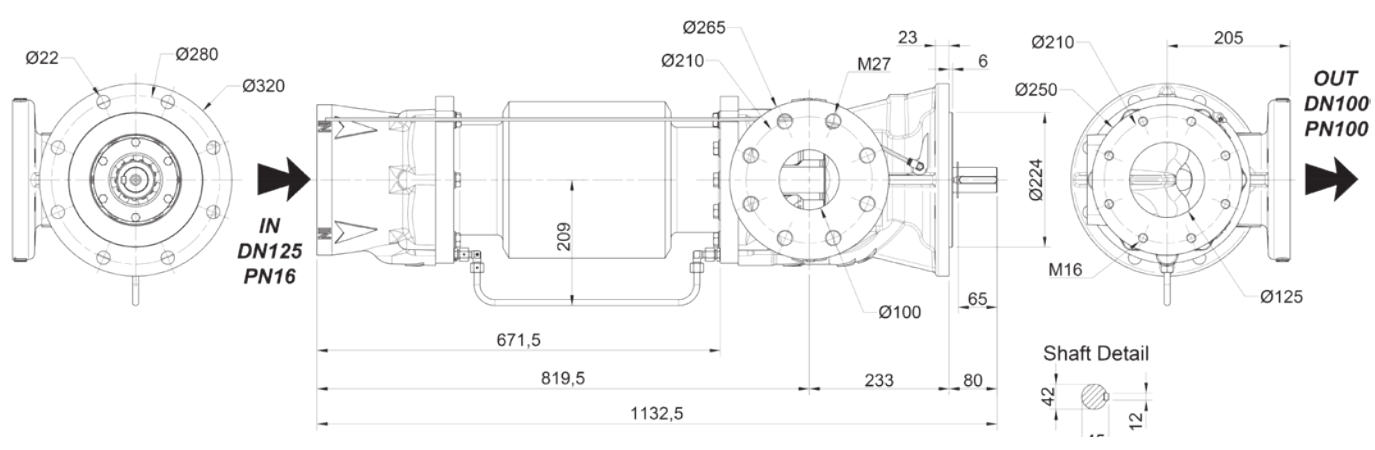
MODEL	A	B	C	D	E	F	H	I	L	M	IN	OUT	T	V	d1	d2	d3	d4	d5	d6	d7	X	d8	d9	d10	Z	W
PWO025	357	67	39	34	3	13	74	219	290	22	1" GAS	1" SAE ¾ GAS	21,5	6	19	100	125	120	124	12	140	4.8	160	150	158	138	191
PWO029	357	67	39	34	3	13	74	219	290	22	1" GAS	1" SAE ¾ GAS	21,5	6	19	100	125	120	124	12	140	4.8	160	150	158	138	192
PWO032	401	67	39	34	3	13	74	263	337	22	1" GAS	1" SAE ¾ GAS	21,5	6	19	100	125	120	124	12	140	4.8	160	150	158	138	-
PWO040	483.5	102	49	40	7	15	81	310.5	381.5	42	1 1/2" GAS	1 1/2" SAE	24.5	6	22	125	160	154	158	14	180	6	215	203	211	173	-
PWO045	534	102	49	40	7	15	81	362	433	42	1 1/2" GAS	1 1/2" SAE	27	8	24	125	160	154	158	14	180	6	215	203	211	173	-
PWO055	613	161.5	64	55	8	15	100	380	451	72	3" GAS	2" SAE	35	10	32	125	160	173	175	14	235	6	265	249	257	232.5	-
	624							391	462		3" SAE																
PWO060	667	161.5	64	55	8	15	100	434	505	72	3" GAS	2" SAE	35	10	32	125	160	173	175	14	235	6	265	249	257	232.5	-
	679							446	517		3" SAE																
PWO072	Dimensions on next page																										
PWO083	Dimensions on next page																										

SEIM reserves the right to introduce dimensional changes or variation to the products of these technical data

Screw pumps PWO 072



Screw pumps PWO 083

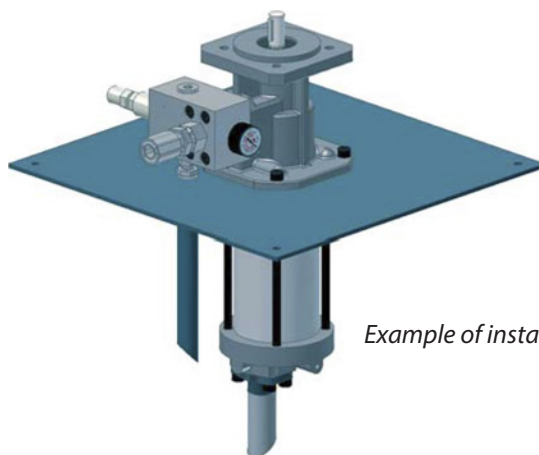
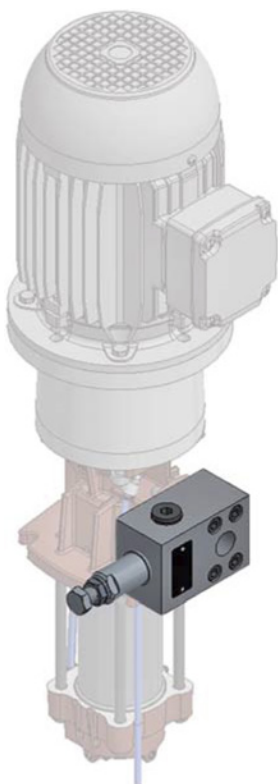


Valves - BVPA Series

BVPA Series – Pressure relief block valve

SEIM three screw pumps PWO and PWE (from size 025 to 045 included) can be equipped with valve block BVPA, designed as pressure relief valve to protect pump from overpressures.

When BVPA reaches the setting value it starts to discharge flow directly into the tank.

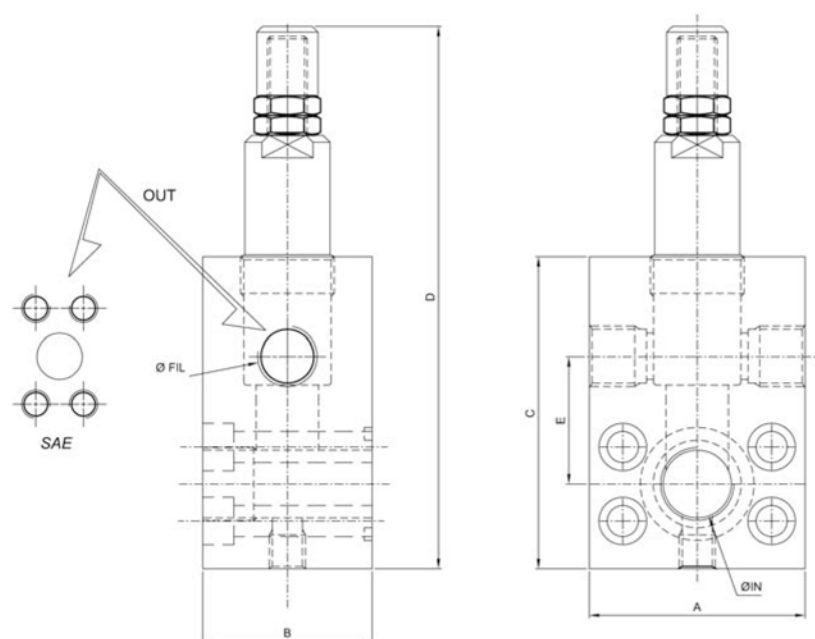


Example of installation

Complete valve:	BVPA03	BVPA05
Mates with PWO pump size:	PWO025/029/032	PWO 040 / 045*
Line pump OUT:	G 3/4" (connection with pump outlet SAE 1" 3000 psi)	G 1 1/4" (connection with pump outlet SAE 1 1/2" 3000 psi)
Delivery flow:	80 l/min	250 l/min *
Kinematics viscosity:	1÷100cSt.	
Fluid temperature:	30÷80°C 86 °F ÷ 176°F	
Recommended filtration:	See filtration page 7	
Minimum pressure setting allowed:	Minimum setting value depends by the flow through the valve	
Pressure port 1/4" BSP	Available, std supplied plugged	

**max BVPA05 flow rate depends by the valve setpoint / (*) For different values contact SEIM*

BVPA Series Overall Dimension



DIMENSIONAL CHART (mm)

SIZE	A	B	C	D	E	IN	OUT
BVPA 031/2G	76	59,7	110	191,5	45	SAE 1"	GAS
BVPA05 SAE	98	79,5	170	235	79,5	SAE 1 1/2"	SAE 1 1/2"



Control valve – VCP

For hydraulic oils, lubricating oils, fuel oils and cooling lubricants emulsions.

- Electro-pneumatic proportional control (optional).

Control is with pneumatic circuit:

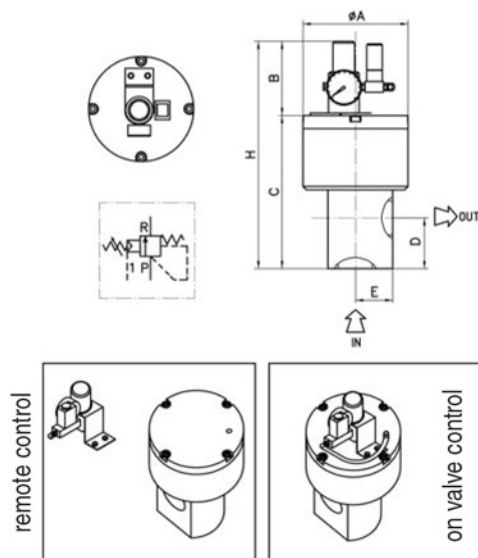
- ON/OFF function changes from free discharge to regulated pressure.
- Max pressure is controlled setting the pneumatic pressure.
- Pneumatic control-setting group can be also remote mounted from valve (suggested max 1 m tube).



STANDARD PERFORMANCES FOR STANDARD VERSIONS

SIZE	VCP22	VCP32
Delivery flow	120 l/min	250 l/min
Maximum pressure	5 a 100 bar	5 a 80 bar
Ratio regulated pressure / air pressure	20/1 (5 bar air = 100 bar regulation)	10/1 (8 bar air = 80 bar regulation)
Electrovalve specs	24 V DC (or 48 AC), duty 100%, normally open (no supply = valve in discharge), power 2 W DC, IP 65, Actuator port G1/8"	
Fluid temperature	0 – 60 °C	
Ambient temperature	0 – 50 °C	
Weight	4.5 Kg	5.0 Kg

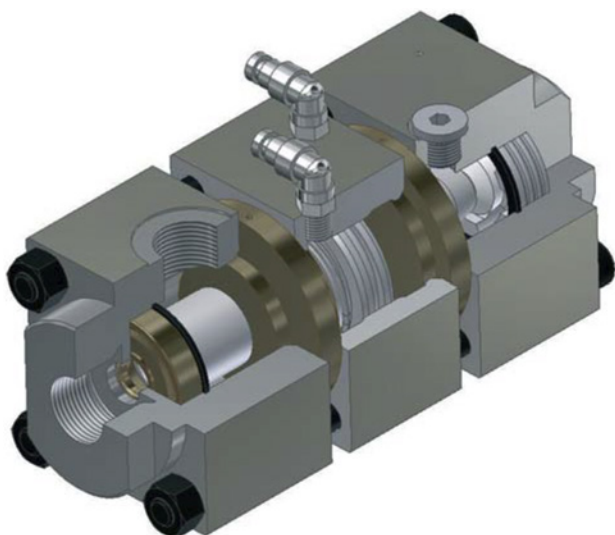
** Reduced pressure limits apply due to fluid viscosity and driving speed - Consult the performance charts for the individual pump size.
For different functional characteristics, please contact our sales department.*



DIMENSIONAL CHART (mm)

SIZE	A	B	IN gas	OUT gas	C	D	E	H
VCP #022	120	95	1"	1"	175	60	40	270
VCP #032	120	95	1 1/4"	1 1/4"	180	63	40	275

Valves - EV3 Series



EV3: 3 way valve with pressure control

For hydraulic oils, lubricating oils, fuel oils and cooling lubricants emulsions.

Control is with pneumatic circuit:

- ON / OFF function changes from free discharge to regulated pressure.
- Max pressure is controlled setting the pneumatic pressure.
- Pneumatic control-setting group can be also remote mounted from valve (suggested max 1 m tube).
- Option: proportional control valve pressure and on-off functions controlled by PLC or external control with seat for position sensor (of the pneumatic switch).

STANDARD PERFORMANCES FOR STANDARD VERSIONS

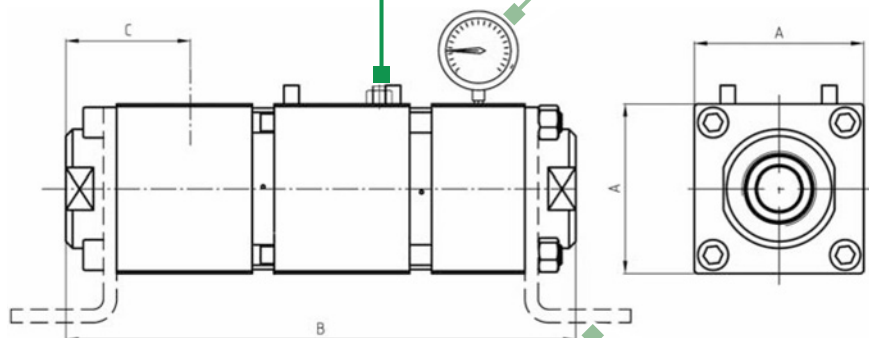
SIZE	EV3 - 3/4"	EV3 - 1"1/4	EV3 - 2"	EV3 - 3"
Oil flow (3-20 cSt) **	120 l/min	250 l/min	700 l/min	1500 l/min
Emulsion flow **	170 l/min	350 l/min	1000 l/min	2000 l/min
Pressure setting	from 5 to 100 bar	from 5 to 100 bar	from 0 to 40 bar	from 5 to 30 bar
Ratio regulated pressure / air pressure	15/1 (6.6 bar air 100 bar regulation)	15/1 (6.6 bar air 100 bar regulation)	7/1 (5 bar air 35 bar regulation)	7/1 (2 bar air 14 bar regulation)
Electrovalve specs	24 V DC (or 48 AC), duty 100%, normally open (no supply = valve in discharge), power 2 W DC, IP 65, Actuator port G1/8"			
Fluid temperature	0 – 60 °C			
Ambient temperature	0 – 50 °C			
Weight	4 Kg	9 Kg	20 Kg	50Kg

Emulsion oil min 5%

**** ΔP IN-OUT 1-1,5 bar. - For different functional characteristics, please contact our sales department.**

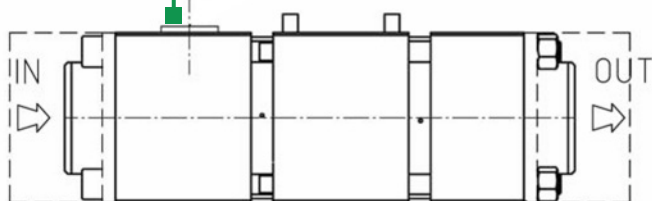
**POSITION TRANSDUCER
ON/OFF (OPTION)**

OPTION



PLUG

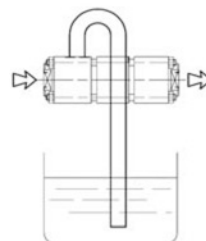
OPTION



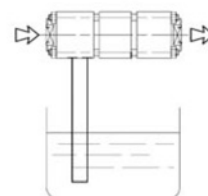
2 Way (on-off without pressure control)

Installation

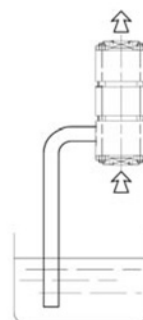
YES



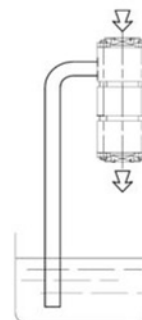
NO



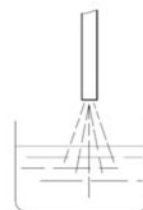
YES



YES



NO



YES

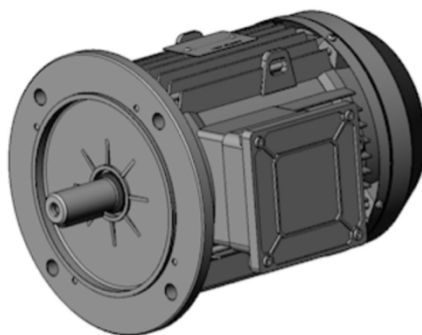


DIMENSIONAL CHART (mm)

SIZE	A	B	IN GAS	out discharge GAS	OUT GAS	c
EV3#3/4	80	210	3/4"	3/4"	3/4"	48
EV3#1 1/4	100	310	1 1/4"	1 1/4"	1 1/4"	75
EV3#2	130	390	2"	2"	2"	100
EV3#3	180	540	3"	3"	3"	135

SEIM reserves the right to introduce dimensional changes or variation to the products of these technical data

Standard Electrical Features



- Efficiency IE3 (EN 60034)
- 2 poles / 4 poles
- Insulation class F
- Protection IP 55
- Voltage with SEIM STD motors:

STANDARD VOLTAGES				
50 Hz		60 Hz		
230 V (D)	400 V (Y)	280 V (D)	480 V (Y)	440 V (Y)
400 V (D)	690 V (Y)	480 V (D)	830 V (Y)	400 V (D)

Different voltages will be available on request

Frequency Converter - MAIN CHARACTERISTIC

Feature	Specification / Characteristics			
Power supply	3 ph., AC 200 V -10%, 480 V +10%			
Nominal frequency	50/60 Hz			
VFD power Up to:	1,5 kW	2,2 -4 kW	5,5-7,5 kW	11-22 kW
Enclosure classification	IP65			IP55
Enclosure type (motor socket connection)	A	B	C	D
Ambient temperature (min/max)	-25°C / +50 °C			
Max allowed power overrange	1,5 times nominal O/P current			
O/P frequency range	Depending by factory setting			
Digital I/P, no.	4			
Digital O/P, no.	2			
Factory preset frequencies, no.	7			
Analog I/P, no.	2, 0/2-10V; 0/4-20 mA			
Converter settings	PID			
SPST O/P	2 x NO, 250 V ac, 2 A			
USB connection	USB M12 (RS485RS232)			
Options	MMI via cable connection, BUS module support (EtherCAT, CANopen, Profibus, Profinet, Sercos III)			
Certifications and approvals	CE, UL			

Pump Speed Drive Control

Nowadays power consumption is a priority issue also in designing and manufacturing and electro-hydraulic system.

Energy management with SEIM motor-pumps is possible using a variable frequency drive within the control loop of the screw pump. In the context of machine tools, this approach guarantees:

- Optimized hydraulic performances
- Energy saving
- Coolant saving
- Avoiding motor frequent stops which effect the motor durability
- Rapid return on investment for installation of frequency converter, provided by global leader in electric driver equipments

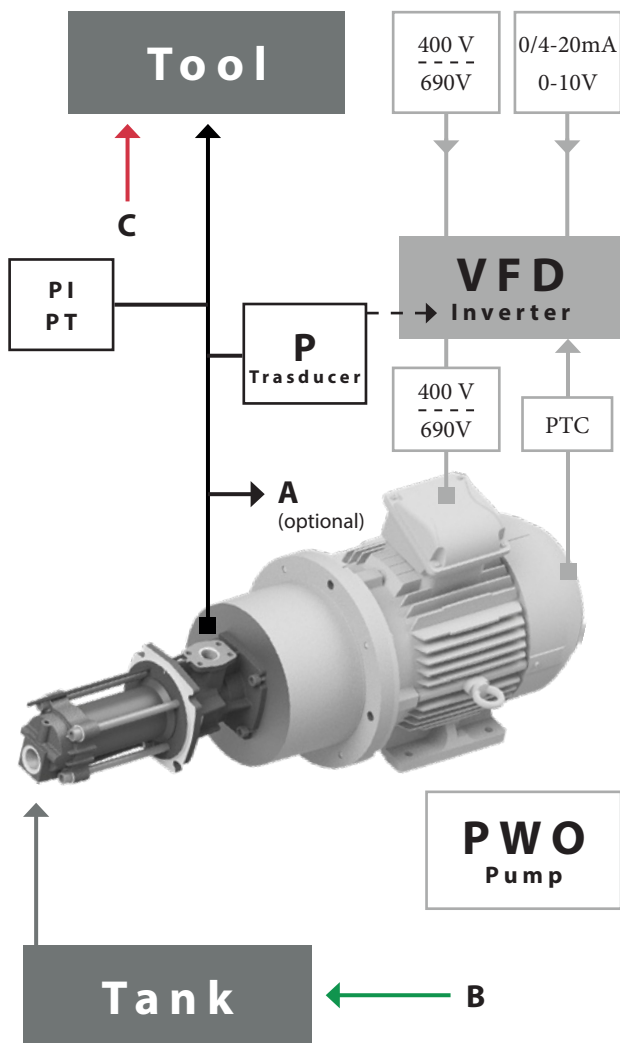
UP TO **70%** IN
ENERGY SAVINGS



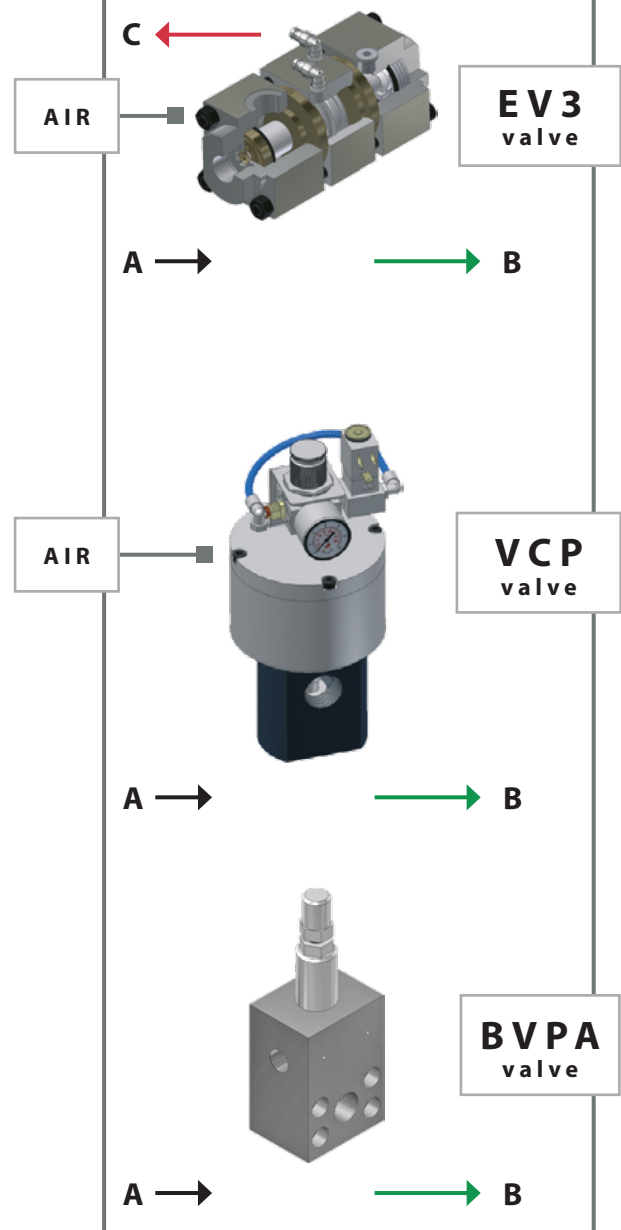
The variable frequency drive applies where are required:

- Constant flow delivery – by adjusting motor speed and pressure
- Constant pressure delivery – by setting pressure and adjusting motor speed

An example of possible control via motor drive adjustment:



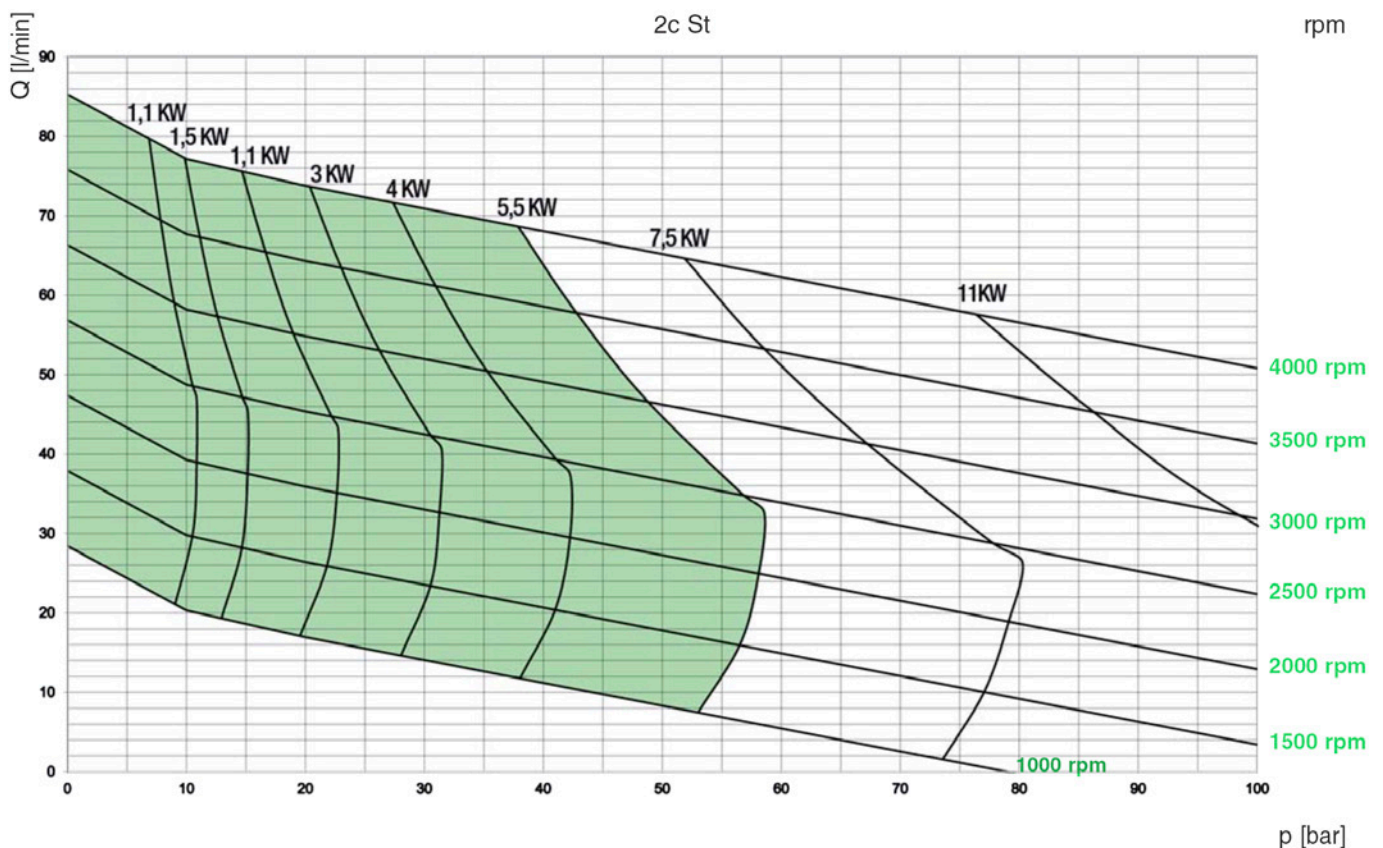
different types of SEIM valves



Example system above involves the installation of valves which are part of SEIM product range (either two or three –ways, like SEIM EV3 and VCP series) which allow flow discharge avoiding the repeated unwanted motor starts and stops.

High-quality machining achieved by PWO and PWE series, together with its high hydraulic efficiency, allows it to be used within a wide range of driving speeds – typically 1400 to 4000 rpm. Speed lower than 1400 rpm will require that maximum pressure achievable by the pump will be limited - Ask SEIM for accurate calculation.

Example of performance chart of a PWO029#6B: different pressure and speed conditions, with reference to IEC standard electric motor sizes.



The green area in the diagram above shows all possible combinations of pressure and flow rate achievable. When multiple working points occur within the green area, the motor selection is optimized consequently.



LIFT
DIVISION



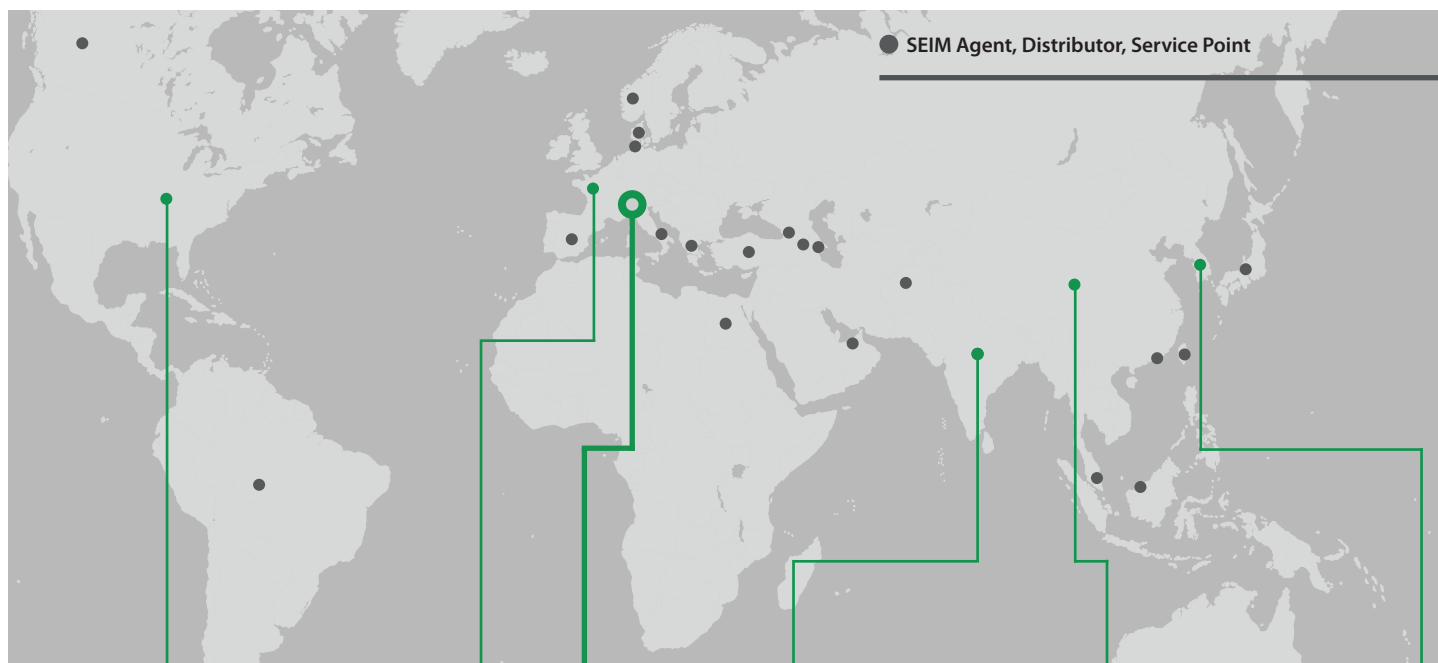
INDUSTRIAL
DIVISION



OIL & GAS
DIVISION



MARINE
DIVISION



● SEIM Agent, Distributor, Service Point



in USA
Sales
After Sales
Warehouse
Local Test Bench



in France
Sales
After Sales
Warehouse
Local Test Bench



in India
Sales
After Sales
Warehouse
Local Test Bench



in China
Sales
After Sales
Warehouse
Local Test Bench



in Korea
Sales
After Sales
Warehouse
Local Test Bench



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