HYDRAULIC EFFICIENCY

EU 547/2012 REGULATION - MEI

GENERAL INFORMATION

The MEI index (Minimum Efficiency Index) was issued with the objective of defining a performance threshold value applicable to all the water pumps found on the market. The MEI index takes into account the size of the pump, its specific speed, and its speed of rotation.
The regulation applies to centrifugal pumps used for pumping clean waters included in the following categories:

- Axial suction pumps with support (ESOB)
- Horizontal monobloc axial suction pumps (ESCC)
- In-line monobloc axial suction pumps (ESCCI)
- Multistage vertical pumps (MS-V)
- Multistage submerged pumps (MSS)

MEI is a dimensionless indicator for hydraulic performance, and a measure of the quality of the sizing of the pump in relation to the performance.
The higher the MEI value, the better is the sizing of the pump in relation to the performance, and the lower is the annual energy consumption due to the use of the pump. In theory, the upper limit of the MEI values is open, and only depends on physical and technological limitations.

The minimum efficiency index (MEI) is based on the maximum diameter of the impeller.

The value of reference for the more efficient water pumps is MEI ≥ 0,70.

The efficiency of a pump with turned impeller is generally lower to that of a pump with full impeller diameter. The turning of the impeller adapts the pump to a fixed point of operation, resulting in lower energy consumption.

The operation of this water pump with variable operating points can be more efficient and economical if controlled, for example, by means of a variable speed motor adapting the operation of the pump to the system.

The information on the efficiency of reference can be found at the address: **www.dabpumps.com**. In alternative contact your local sales representatives.

The MEI=0,7 and MEI=0,4 efficiency charts for the different types of pumps can be found at the website: **www.europump.org/efficiencycharts**

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 40	2p	**KLP 40/1200 T**	Full	≥ 0,40	56,6	59,6	58,5
		KLP 40/1200 M	Full		56,6	59,5	58,5
		KLP 40/900 T	Turned		52,9	54,9	53,7
		KLP 40/900 M	Turned		51,3	54,6	53,3
		KLP 40/600 T	Turned		51,9	54,0	53,0
		KLP 40/600 M	Turned		48,2	51,2	50,6
	4p	**KLM 40/300 T**	Full	not applicable	-	-	-
		KLM 40/300 M	Full		-	-	-

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 50	2p	**KLP 50/1200 T**	Full	≥ 0,40	66,2	68,9	68,2
		KLP 50/1200 M	Full		62,8	65,4	64,8
		KLP 50/900 T	Turned		62,2	64,9	64,2
		KLP 50/900 M	Turned		58,8	61,4	60,8
	4p	**KLM 50/600 T**	Full	≥ 0,40	60,6	64,0	63,5
		KLM 50/600 M	Full		57,6	61,6	61,1
		KLM 50/300 T	Turned		45,4	48,7	48,1
		KLM 50/300 M	Turned		42,4	45,7	45,1

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 65	2p	**KLP 65/1200 T**	Full	≥ 0,40	64,5	69,2	68,1
		KLP 65/900 T	Turned		61,4	65,4	64,6
	4p	**KLM 65/600 T**	Full	≥ 0,40	65,9	68,6	67,9
		KLM 65/300 T	Turned		56,2	59,7	58,7

HYDRAULIC EFFICIENCY

EU 547/2012 REGULATION - MEI

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 80	2p	KLP 80/1200 T	Full	≥ 0,40	66,6	70,6	69,2
		KLP 80/900 T	Turned		65,5	69,2	68,9
	4p	KLM 80/600 T	Full	≥ 0,40	70,4	73,1	72,6
		KLM 80/300 T	Turned		66,3	67,9	66,3

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 40	2p	CP 40/6200 T	Full	≥ 0,40	51,6	54,1	53,6
		CP 40/5500 T	Turned		49,8	52,6	52,3
		CP 40/4700 T	Turned		53,0	54,2	54,1
		CP 40/3800 T	Full	≥ 0,40	51,0	53,5	53,1
		CP 40/3500 T	Full	≥ 0,60	53,5	56,6	56,3
		CP 40/2700 T	Turned		54,3	56,7	56,2
		CP 40/2300 T	Turned		52,1	54,7	54,0
		CP 40/1900 T	Turned		51,5	54,8	54,4
		DCP 40/2450 T	Full	≥ 0,40	57,3	60,8	60,4
		DCP 40/2050 T	Turned		57,9	60,8	60,4
		DCP 40/1650 T	Turned		51,0	53,1	52,6
		DCP 40/1250 T	Turned		49,9	52,6	52,2
	4p	CM 40-1450 T	Full	≥ 0,40	52,2	54,3	54,0
		CM 40-1300 T	Turned		48,1	50,5	50,0
		CM 40-870 T	Full	≥ 0,60	52,7	55,5	55,1
		CM 40-670 T	Turned		53,4	55,9	55,4
		CM 40-540 T	Turned		53,8	56,0	55,7
		CM 40-440 T	Turned		51,5	54,0	53,6
		DCM 40-620 T	Full	≥ 0,40	61,8	64,5	64,1
		DCM 40-460 T	Turned		58,9	61,7	61,2
		DCM 40-380 T	Turned		57,8	60,3	59,9

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 50	2p	CP 50/5650 T	Full	≥ 0,40	56,7	59,5	58,7
		CP 50/5100 T	Turned		55,1	58,2	57,6
		CP 50/4600 T	Turned		56,0	59,1	58,7
		CP 50/4100 T	Full	≥ 0,60	54,1	57,1	56,7
		CP 50/3100 T	Turned		49,6	51,8	51,2
		CP 50/2600 T	Turned		47,2	51,7	51,1
		CP 50/2200 T	Turned		46,2	49,4	49,0
		DCP 50/2450 T	Full	≥ 0,40	63,8	67,4	66,6
		DCP 50/1900 T	Turned		65,0	68,0	67,6
		DCP 50/1550 T	Turned		61,8	65,0	64,5
		DCP 50/3650 T	Full	≥ 0,40	61,8	67,1	64,0
		DCP 50/3000 T	Turned		60,8	63,8	63,4
	4p	CM 50-1420 T	Full	≥ 0,40	57,3	60,1	59,7
		CM 50-1270 T	Turned		56,8	59,2	58,8
		CM 50-1000 T	Full	≥ 0,60	50,0	52,8	52,3
		CM 50-780 T	Turned		42,3	45,6	45,0
		CM 50-630 T	Turned		38,3	41,0	40,4
		CM 50-510 T	Turned		35,0	37,7	37,1
		DCM 50-880 T	Full	≥ 0,40	57,2	60,2	59,6
		DCM 50-630 T	Full	≥ 0,40	62,7	65,8	65,2
		DCM 50-460 T	Turned		59,9	62,3	61,8

HYDRAULIC EFFICIENCY

EU 547/2012 REGULATION - MEI

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DN 65	2p	CP-G 65- 9250 T	Full	≥ 0,60	64,5	67,4	66,6
		CP-G 65- 7350 T	Turned		64,1	67,0	66,5
		CP-G 65- 6750 T	Turned		63,8	66,8	66,2
		CP-G 65- 6150 T	Turned		63,2	66,5	65,8
		CP-G 65- 5500 T	Turned		62,9	66,2	65,4
		CP-G 65- 4700 T	Turned		56,9	59,6	59,1
		CP-G 65- 4100 T	Full	≥ 0,60	67,9	71,2	70,7
		CP-G 65- 3400 T	Turned		66,6	71,0	70,0
		CP-G 65- 2640 T	Turned		66,3	69,5	69,5
		CP-G 65- 2280 T	Turned		65,6	68,5	68,5
		CP-G 65- 1900 T	Turned		64,6	67,8	67,5
		CP-G 65- 1470 T	Turned		63,5	67,3	66,7
	4p	CM-G 65- 2380 T	Full	≥ 0,60	70,6	71,9	71,7
		CM-G 65- 1680 T	Turned		68,5	70,6	70,2
		CM-G 65- 1530 T	Turned		60,7	63,1	62,6
		CM-G 65- 1200 T	Turned		58,8	61,5	61,0
		CM-G 65- 1080 T	Turned		58,0	61,5	60,4
		CM-G 65- 920 T	Full	≥ 0,60	68,8	72,2	71,5
		CM-G 65- 760 T	Turned		64,3	68,5	68,0
		CM-G 65- 660 T	Turned		64,0	67,0	66,0
		CM-G 65- 540 T	Turned		61,5	65,3	64,6
		CM-G 65- 420 T	Turned		56,4	60,6	59,8

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 80	2p	CP-G 80- 10200 T	Full	≥ 0,40	67,4	71,1	70,4
		CP-G 80- 9600 T	Full	≥ 0,40	67,2	71,8	70,7
		CP-G 80- 8600 T	Turned		64,2	67,7	67,1
		CP-G 80- 6850 T	Full	≥ 0,40	71,3	74,4	73,6
		CP-G 80- 5650 T	Turned		70,5	73,4	72,9
		CP-G 80- 5150 T	Turned		69,3	72,5	71,3
		CP-G 80- 4000 T	Full	≥ 0,60	74,7	79,2	78,3
		CP-G 80- 3250 T	Turned		72,3	76,7	75,8
		CP-G 80- 2770 T	Turned		71,2	75,3	74,5
		CP-G 80- 2400 T	Full	≥ 0,60	75,4	78,8	78,5
		CP-G 80- 2050 T	Turned		73,6	78,2	76,9
		CP-G 80- 1700 T	Turned		72,8	78,1	76,9
		CP-G 80- 1400 T	Turned		57,0	61,2	60,4
	4p	CM-G 80- 3420 T	Full	≥ 0,60	68,5	71,6	71,0
		CM-G 80- 2700 T	Turned		65,9	70,6	69,8
		CM-G 80- 2410 T	Full	≥ 0,40	65,8	69,4	68,8
		CM-G 80- 1700 T	Full	≥ 0,60	82,0	83,5	83,3
		CM-G 80- 1530 T	Turned		75,8	78,6	77,9
		CM-G 80- 1050 T	Full	≥ 0,60	75,2	79,0	78,3
		CM-G 80- 890 T	Turned		73,0	76,8	76,1
		CM-G 80- 740 T	Turned		61,4	65,8	65,0
		CM-G 80- 650 T	Full	≥ 0,60	72,9	75,7	75,1
		CM-G 80- 550 T	Turned		69,4	73,5	72,7

HYDRAULIC EFFICIENCY

EU 547/2012 REGULATION - MEI

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DN 100	2p	CP-G 100- 8300 T	Full	≥ 0,40	72,6	76,6	75,5
		CP-G 100- 6300 T	Full	≥ 0,40	72,1	75,9	74,9
		CP-G 100- 5600 T	Turned		69,5	72,8	72,3
		CP-G 100- 4800 T	Turned		68,5	70,0	69,1
		CP-G 100- 3850 T	Full	≥ 0,60	75,7	82,5	81,3
		CP-G 100- 3550 T	Turned		75,0	80,6	79,5
		CP-G 100- 3050 T	Turned		71,7	76,9	76,1
		CP-G 100- 2400 T	Turned		66,1	71,8	70,9
		CP-G 100- 2350 T	Full	≥ 0,50	71,2	76,3	75,5
		CP-G 100- 1950 T	Turned		68,7	73,2	72,4
		CP-G 100- 1600 T	Turned		64,6	67,1	66,5
	4p	CM-G 100- 4100 T	Full	≥ 0,40	70,8	75,1	74,1
		CM-G 100- 3680 T	Turned		69,2	74,0	73,2
		CM-G 100- 3290 T	Turned		68,0	73,0	72,5
		CM-G 100- 2550 T	Full	≥ 0,40	72,5	76,1	75,2
		CM-G 100- 2050 T	Turned		70,7	75,0	74,1
		CM-G 100- 1650 T	Full	≥ 0,60	71,7	76,3	75,5
		CM-G 100- 1320 T	Turned		69,0	74,3	72,5
		CM-G 100- 1020 T	Full	≥ 0,60	81,2	85,0	84,3
		CM-G 100- 865 T	Turned		71,5	73,9	73,9
		CM-G 100- 660 T	Turned		68,2	74,6	73,5
		CM-G 100- 650 T	Full	≥ 0,60	72,8	78,8	77,8
		CM-G 100- 510 T	Turned		65,1	70,9	69,9

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 125	2p	CP-G 125- 5800 T	Full	≥ 0,50	76,5	81,6	80,2
		CP-G 125- 5300 T	Turned		75,2	78,7	77,9
		CP-G 125- 4750 T	Turned		72,1	76,2	75,3
	4p	CM-G 125- 4022 T	Full	≥ 0,40	70,7	74,2	73,7
		CM-G 125- 3600 T	Turned		71,5	73,3	72,4
		CM-G 125- 3200 T	Turned		70,8	73,5	73,1
		CM-G 125- 2550 T	Full	≥ 0,40	69,9	73,2	72,2
		CM-G 125- 2100 T	Turned		66,8	69,4	69,1
		CM-G 125- 1560 T	Full	≥ 0,60	78,5	85,0	84,0
		CM-G 125- 1270 T	Turned		73,3	78,0	77,1
		CM-G 125- 1075 T	Turned		72,3	77,0	76,2

		PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
DN 150	4p	CM-G 150- 2405 T	Full	≥ 0,60	79,7	85,9	84,8
		CM-G 150- 2200 T	Turned		76,3	81,7	80,7
		CM-G 150- 1950 T	Turned		75,9	80,6	79,7
		CM-G 150- 1600 T	Turned		72,2	77,1	76,3
		CM-G 150- 1322 T	Turned		70,8	74,6	73,3
		CM-G 150- 955 T	Turned		63,7	66,9	66,4

PUMP MODEL	IMPELLER	MEI	η PL	η BEP	η OL
KC/KCV 300	Full	≥ 0,40	65,5	71,8	70,4
KC/KCV 250	Full	≥ 0,40	63,4	66,9	66,5
KC/KCV 200	Turned		59,3	63,9	62,9
KC/KCV 150	Turned		58,9	62,5	61,4