Date: Dec 19, 2012

Technical Newsletter

No: 46

Subject:

Mega H improvements

grindex

www.grindex.com

Dear Distributor,

During the autumn, Grindex technical team has worked with two major improvements on the Mega H. This has resulted in a more efficient performance and increased design reliability in the hydraulic end.

New impellers

The casting tools for the H-impellers used in Mega are at the end of their lifecycle and have been replaced. Using modern CFD-methods, the efficiency of the new impellers have increased resulting in an improved performance curve without changing the power rating of the pump. Updated performance curves can be found in Appendix. The new impellers are delivered with new pumps from November 13, 2012.

Spare part orders on the old part numbers will be directed to the new numbers when the stock is out. The new impellers are fully replacing the old ones, see table 1 below for new part numbers.

Old part number	New part number	Freq. [Hz]
5123100	5164500	50
5122800	5164510	60

Table 1. *New impellers for Mega H.*

Update of curves in data sheets, pump handbooks and other marketing material will be implemented as soon as possible.

Modified wear ring

A new improved fastening of wear ring 517370X will be attached in Mega H. A groove is introduced in the wear ring, where a spring ring is mounted. The diffuser, pos. 3, is machined with a corresponding groove locking the wear ring, pos. 2, mechanically with the spring ring, pos. 1. See figure 1 on next page.

Date: Dec 19, 2012

Technical Newsletter

No: 46

Subject:

Mega H improvements

grindex

www.grindex.com

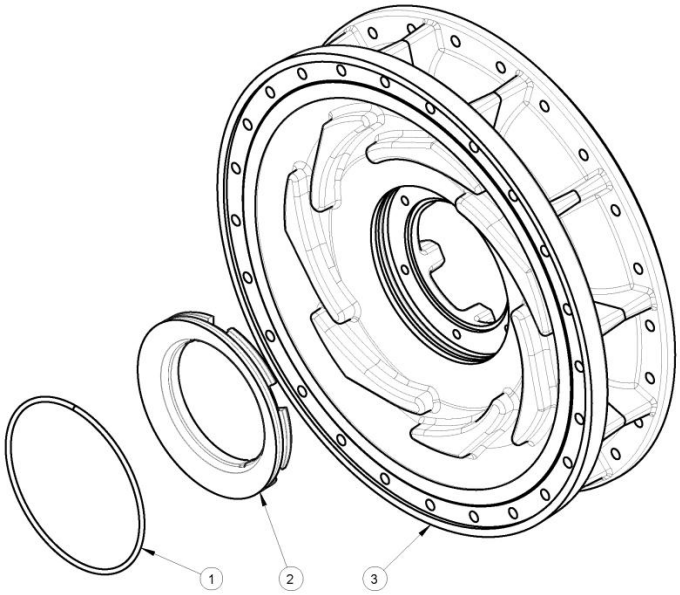


Figure 1. *New wear ring and spring ring.*

The change is affective from production cycle 2013-2 (February 14, 2013) for both PU- and NBR-version.

The recommendation is to first mount the spring ring in the wear ring. Before pushing the wear ring into place using a rubber hammer, the surfaces should be lubricated using vaseline or similar to avoid damage.

Spare part orders for wear rings on old part numbers will be re-directed to a kit including wear ring, spring ring and an assembly instruction. The old diffusers will be replaced by the new ones at the same time. See table 2 for replacement parts.

Part description	Old part number	New part number
Wear ring (Nitrile)	5124200	5173700
Wear ring (Polyurethan)	5124201	5173701
Diffuser (Nitrile)	5124400	5173800
Diffuser (Polyurethan)	5124401	5173801

Table 2. *Replacement rings and diffusers.*

Date:	Technical Newsletter	No:
Dec 19, 2012		46

Subject:

Mega H improvements

grindex

www.grindex.com

Machining instructions for the groove in diffuser (for adaption of old diffuser in local workshop) can be found in Appendix.

Feel free to contact technicalsupport@grindex.com if you have any further questions or input.

Yours sincerely,

Carl Nilsson

Technical Support

Date:	Technical Newsletter	No:
Dec 19, 2012		46

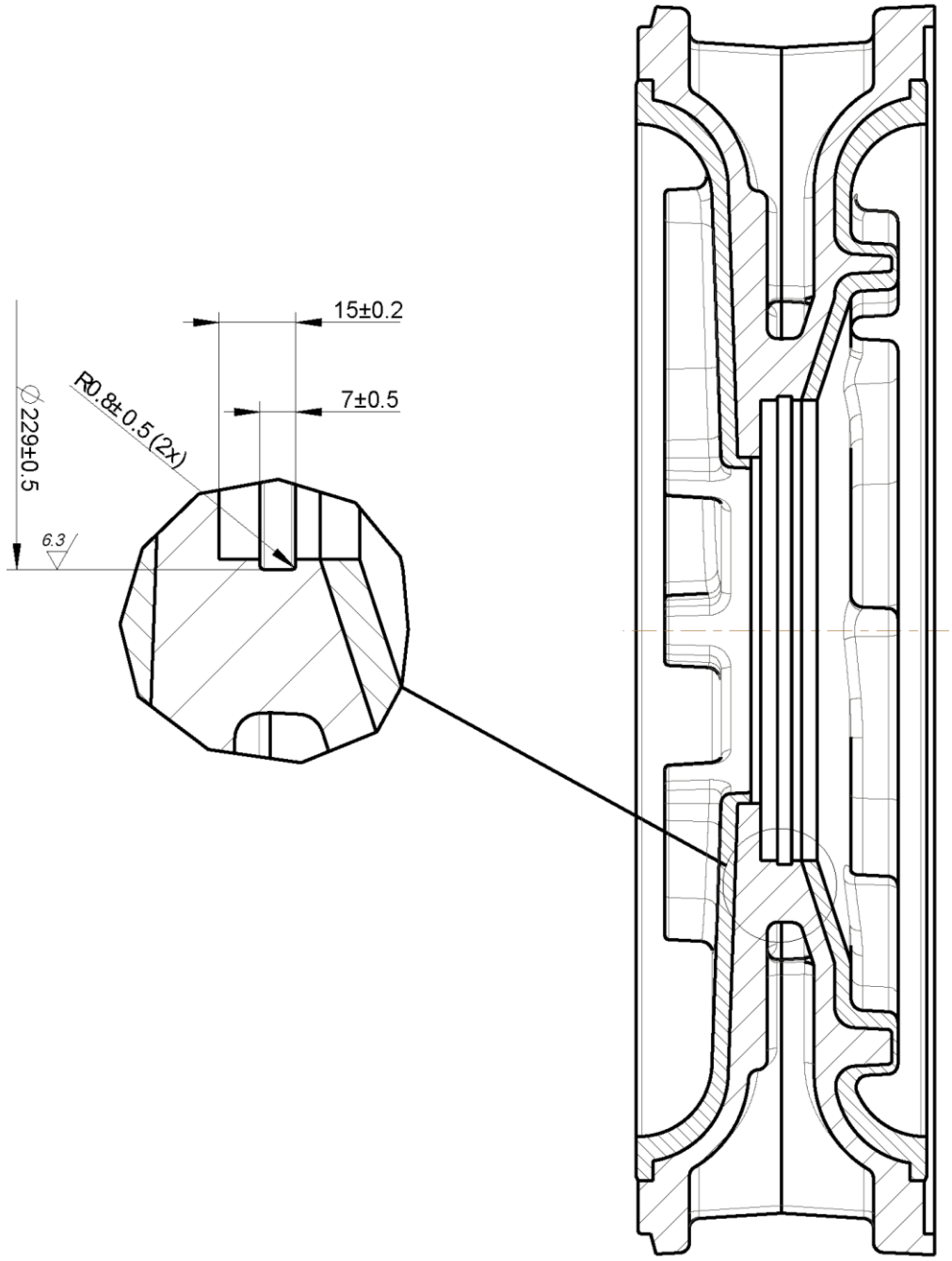
Subject:

Mega H improvements

grindex

www.grindex.com

Appendix



Machining instructions

grindex

Performance Curve

Product	Type
BS8124.400	H

Date	Project	Curve No	Issue
2012-10-09		53-243-00-1951	5

	1/1-Load	3/4-Load	1/2-Load
Power Factor	0.93	0.90	0.84
Efficiency	94.5 %	94.0 %	93.5 %
Motor Data	---	---	---

Rated Power ...	90	kW
Starting Current ...	1245	A
Rated Current ...	148	A
Rated Speed ...	2965	rpm
Tot. Mom. of Inertia ...	1.1	kgm2
No. of Blades	3	

Impeller Diameter: 282 mm

Motor #	Stator	Rev
42-26-2FF	38D	11

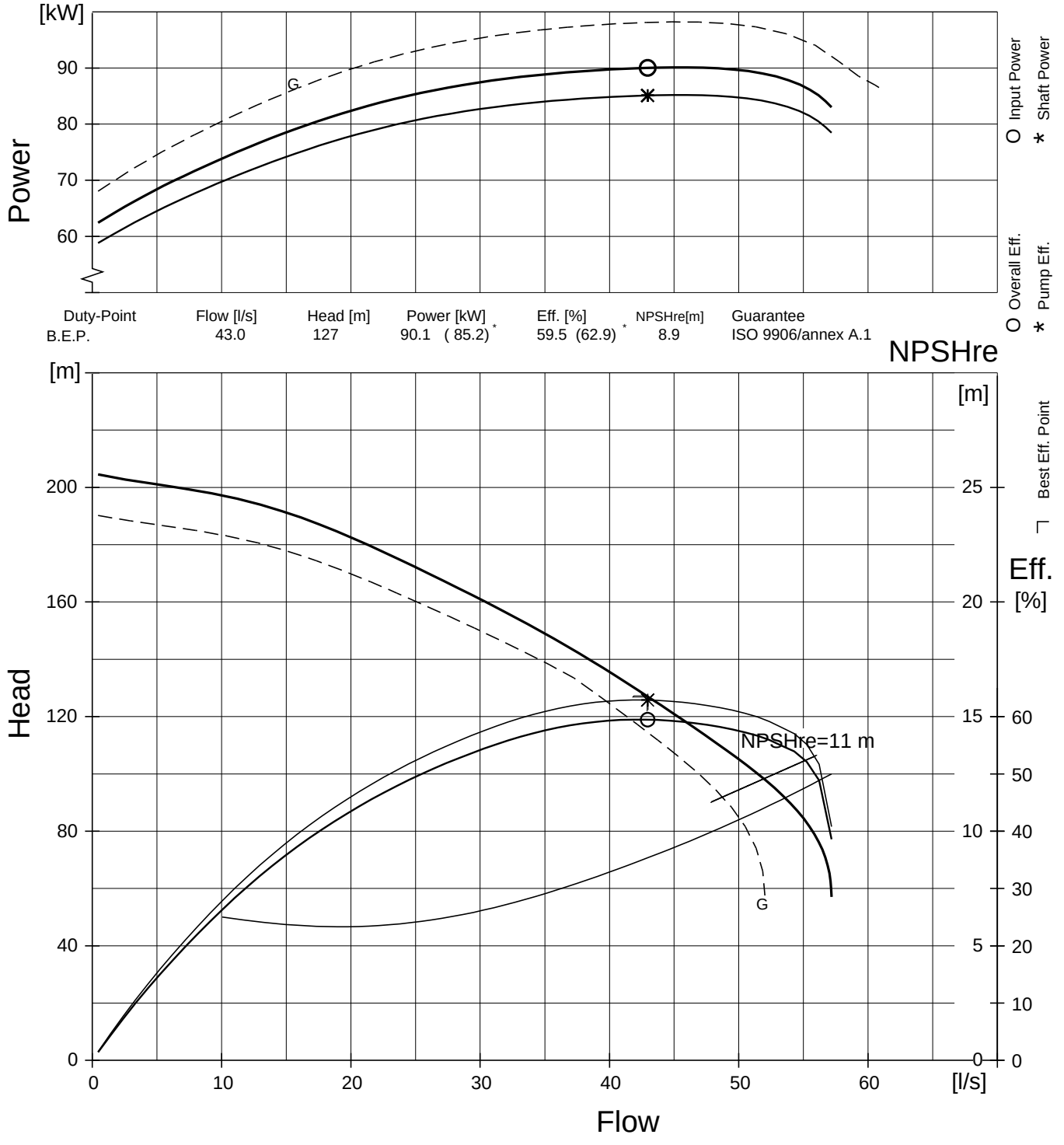
Freq.	Phases	Voltage	Poles
50 Hz	3	400 V	2

Geartype	Ratio
---	---

Comments

Inlet/Outlet: -/100 mm

Imp. Throughlet: ---



Duty-Point	Flow [l/s]	Head [m]	Power [kW]	Eff. [%]	NPSHre[m]	Guarantee
B.E.P.	43.0	127	90.1 (85.2) *	59.5 (62.9) *	8.9	ISO 9906/annex A.1

NPSHre = NPSH3% + min. operational margin

CURVES SHOW PERFORMANCE WITH CLEAR COLD WATER

Guarantee between limits (G) acc. to

ISO 9906/annex A.1

unix AUTHOR: GPWEB1 SACU (rev:7.49)

grindex

Performance Curve

Product	Type
BS8124.400	H

Date	Project	Curve No	Issue
2012-12-11		63-244-00-1955	2

	1/1-Load	3/4-Load	1/2-Load
Power Factor	0.93	0.91	0.86
Efficiency	95.0 %	94.5 %	94.0 %
Motor Data	---	---	---

Rated Power ...	140 hp (104.40 kW)	
Starting Current ...	1210 A	
Rated Current ...	148 A	
Rated Speed ...	3560 rpm	
Tot. Mom. of Inertia ...	1.1 kgm2	
No. of Blades	3	

Impeller Diameter: 254 mm

Motor #	Stator	Rev
42-26-2FF	38D	11

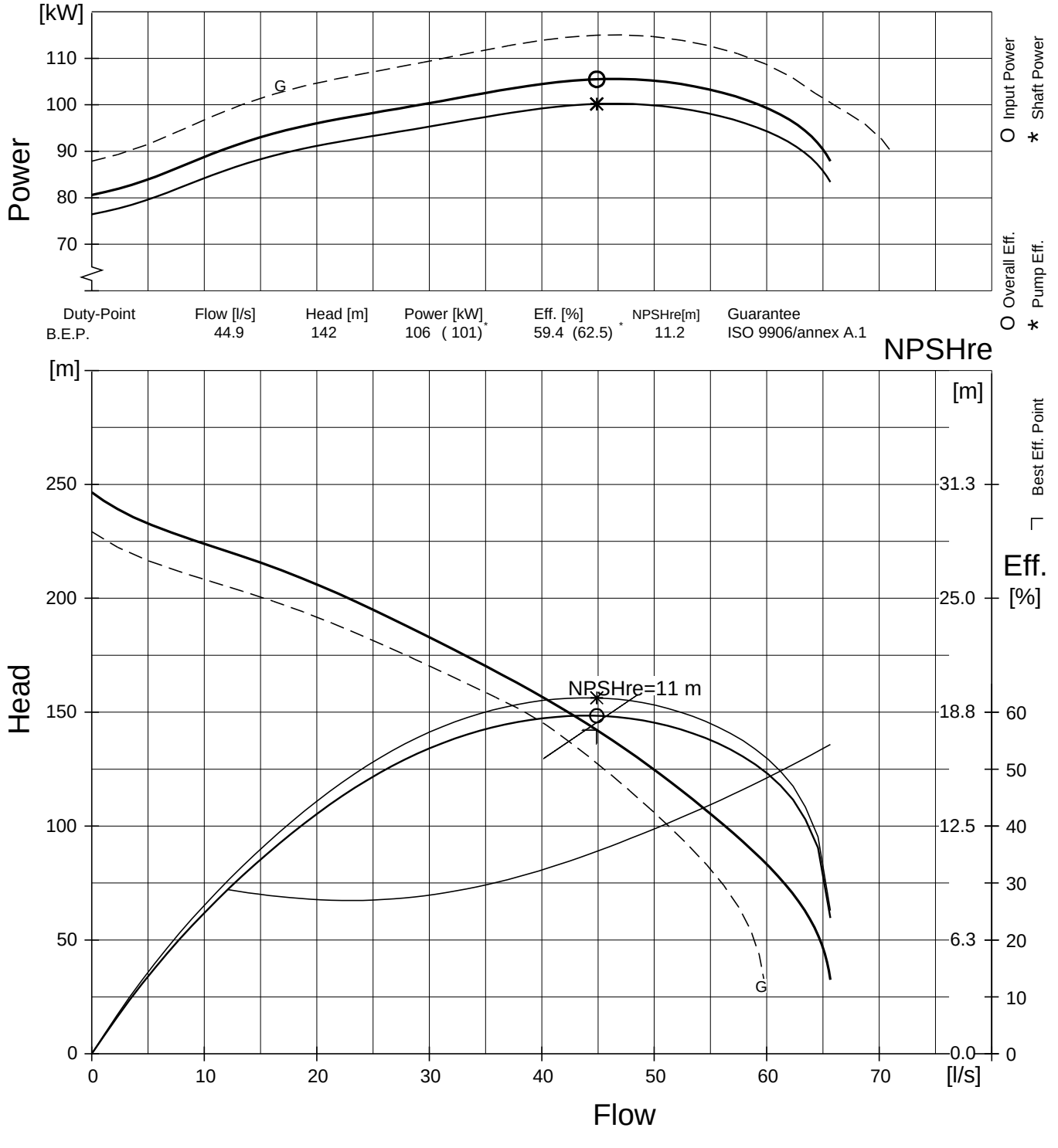
Freq.	Phases	Voltage	Poles
60 Hz	3	460 V	2

Geartype	Ratio
---	---

Comments

Inlet/Outlet: -/100 mm

Imp. Throughlet: ---



Duty-Point	Flow [l/s]	Head [m]	Power [kW]	Eff. [%]	NPSHre[m]	Guarantee
B.E.P.	44.9	142	106 (101)*	59.4 (62.5)*	11.2	ISO 9906/annex A.1

NPSHre = NPSH3% + min. operational margin

CURVES SHOW PERFORMANCE WITH CLEAR COLD WATER

Guarantee between limits (G) acc. to

ISO 9906/annex A.1

unix AUTHOR: GPWEB1 SACU (rev:7.50)