
getriebe

[agitator drives]

Ja  **Ke**
Spezialgetriebe vom
Getriebespezialisten

Profile

For decades, Jahnel(Kestermann has been an innovative company in the development and production of gear units for all industrial applications. Constructive intelligence, readiness to invest, close cooperation with scientific institutes as well as the high standard of production and quality assurance are the main reasons why Ja)(Ke is among one of the leading companies of the power transmission engineering in Germany. The company was founded in 1910 and with its 250 employees an annual turnover of approx. 35,5 million has been realized in 2006.

Besides gear units made to catalogue, Ja)(Ke specializes above all in the custom-made or small-lot production of special gear units (max. unit weight now approx. 225 t). Another speciality are gear wheels with a maximum outer diameter of 3000 mms in welded, casehardened and ground resp. hopped execution. Furtheron, gear wheels up to an outer diameter of 4500 mms, max. module 30 – also double helical gearing – and MAAG toothings up to a module 50 are part of the delivery program.

They are used in the following areas:

- mining (e. g. crushers, haulage-, plough- and conveyor systems)
- chemical industry (e. g. agitators, i. e. gear and agitator, mixers)
- materials handling technology / open-pit mining (e. g. bucket wheels,
- stockpile pick- ups, belt type spreaders, conveyor belts, hoisting gears, clamping winches,)
- rubber and plastics industry (e. g. extruders, mixers, calenders)
- metallurgical industry (e. g. converters)
- steel and iron industry (e. g. rolling mills, coilers, shears, saws)
- shipbuilding (e. g. dredging: cutter heads, - wheels, winches)
- cement industry (e. g. kilns, mills, levigating-, comminution-, briquetting plants)
- water engineering industry (e. g. locks, vertical lift gates)
- wind power industry
- sugar industry (e. g. presses, minglers)

A well-trained service team is always ready to assist the customers over the world.

Our philosophy is to offer the optimum solution to the special requirements of the customers

Agitators

For more than 50 years, Jahnel-Kestermann constructs agitator drives and drives for the chemical, pharmaceutical and food industry. Based on this long-time experience there is a standard programme for agitator drives having agitator shaft diameters from 80 to 220 mms that is composed of fix components and is used preferably for new machines. Furtheron, there are many innovative driving solutions for shaft diameters up to 380 mms and shaft torques up to 318 kNm. Especially the agitator drives for the Polypropylene production according to the BASF procedure are to be accentuated.

Irrespective of the shaft diameter, all drives have the same construction principles:

- flexible element between motor and gearbox (motor coupling, belt drive)
- gearbox with integrated fix bearing for the agitator shaft
- agitator support with fix coupling between gearbox and agitator shaft, loose bearing and shaft sealing (stuffing box, mechanical seal etc.)

If a mechanical seal is used as shaft sealing, it can be mounted and removed without dismantling the drive on all Jahnel-Kestermann drives. All necessary work steps are possible into an exactly defined removing direction. The advantage for the plant designer is that the space around and above the vessel bottom can be used in an optimal manner.

Due to the different weights of mechanical seals for shafts from 80 to 380 mms shaft diameter, there are mechanical and hydraulic change devices. In order to keep the stand-still time for a sealing change as low as possible for the end-user, Jahnel-Kestermann has developed a symbiosis between agitator support and agitator gearbox. Thus, even changing of mechanical seals having a single weight of 1200 kgs is possible within one day.

Individual requirements by our customers as top- and bottom-drives, small mounting height of drive with seal change guarantee, high vessel pressures and extreme loads on the gearboxes can be realised by Jahnel-Kestermann without any problems. In co-operation with the plant designer or end-user, we always try to find the most elegant solution.

Another achievement of Jahnel-Kestermann is the design of drives and agitator supports with regard to the axial and radial forces influencing the stirrer. For this, we use several calculation programmes and the FEM analysis. On this basis, construction with optimised material use is possible. For the user of drive, this results in a high functionality at a small weight.

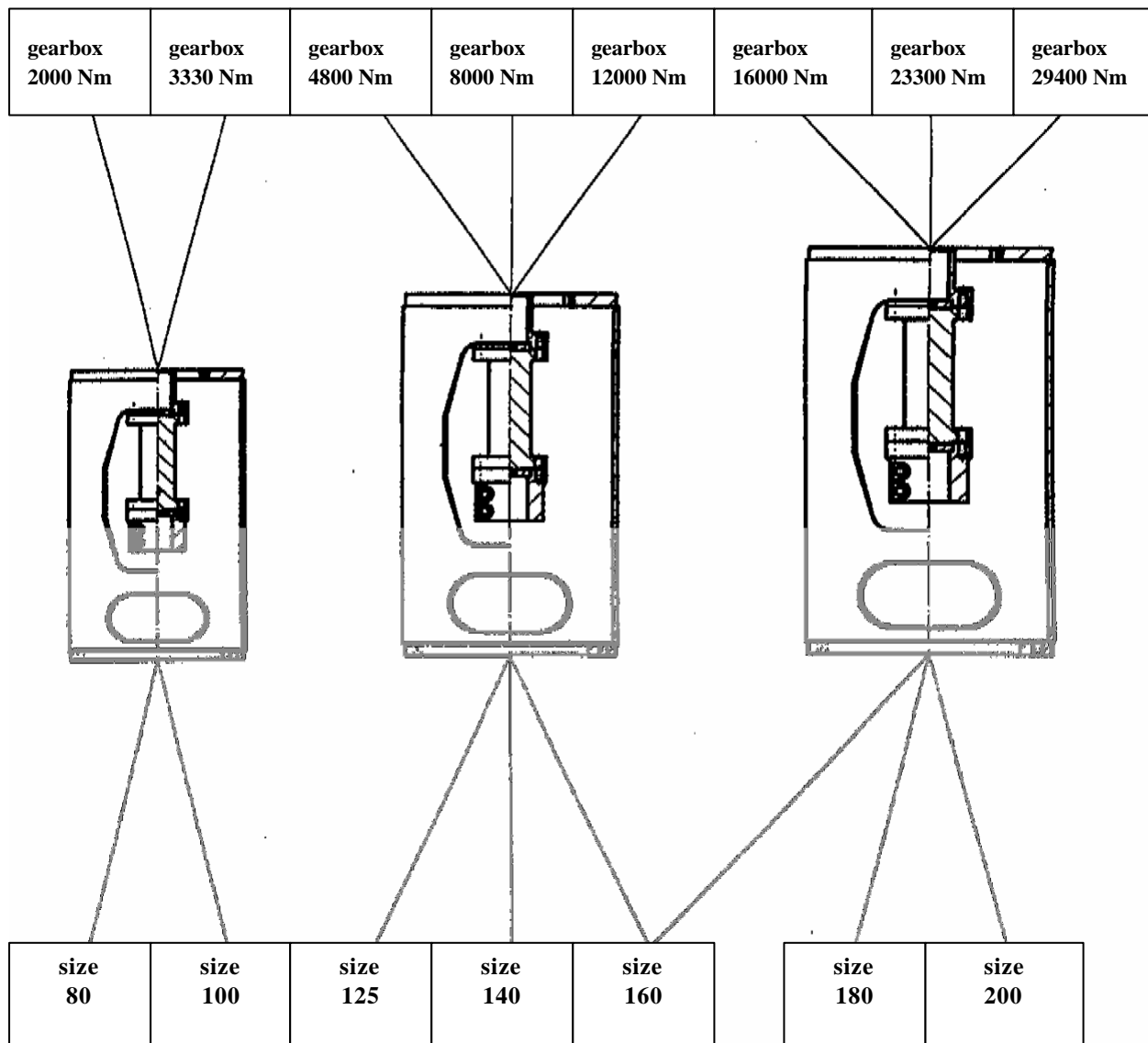
As the noise of a chemical plant is very relevant, the Jahnel-Kestermann drives are very silent. For fulfilling this statement, the gearing is optimised by calculations and manufactured on a high manufacturing level. The reached result is checked during a test run of gearbox under load on our test bench and documented by a test report.

We offer our knowledge of gearbox technology in connection with our mobile measuring technics as service for evaluation of existing plants or for the preventive maintenance of our own drives as well as those of other manufacturers. If damages at gearing or bearings of gearbox are found, we have the possibility to deliver a replacement. This is, of course, also true for agitator drives of the first generation.

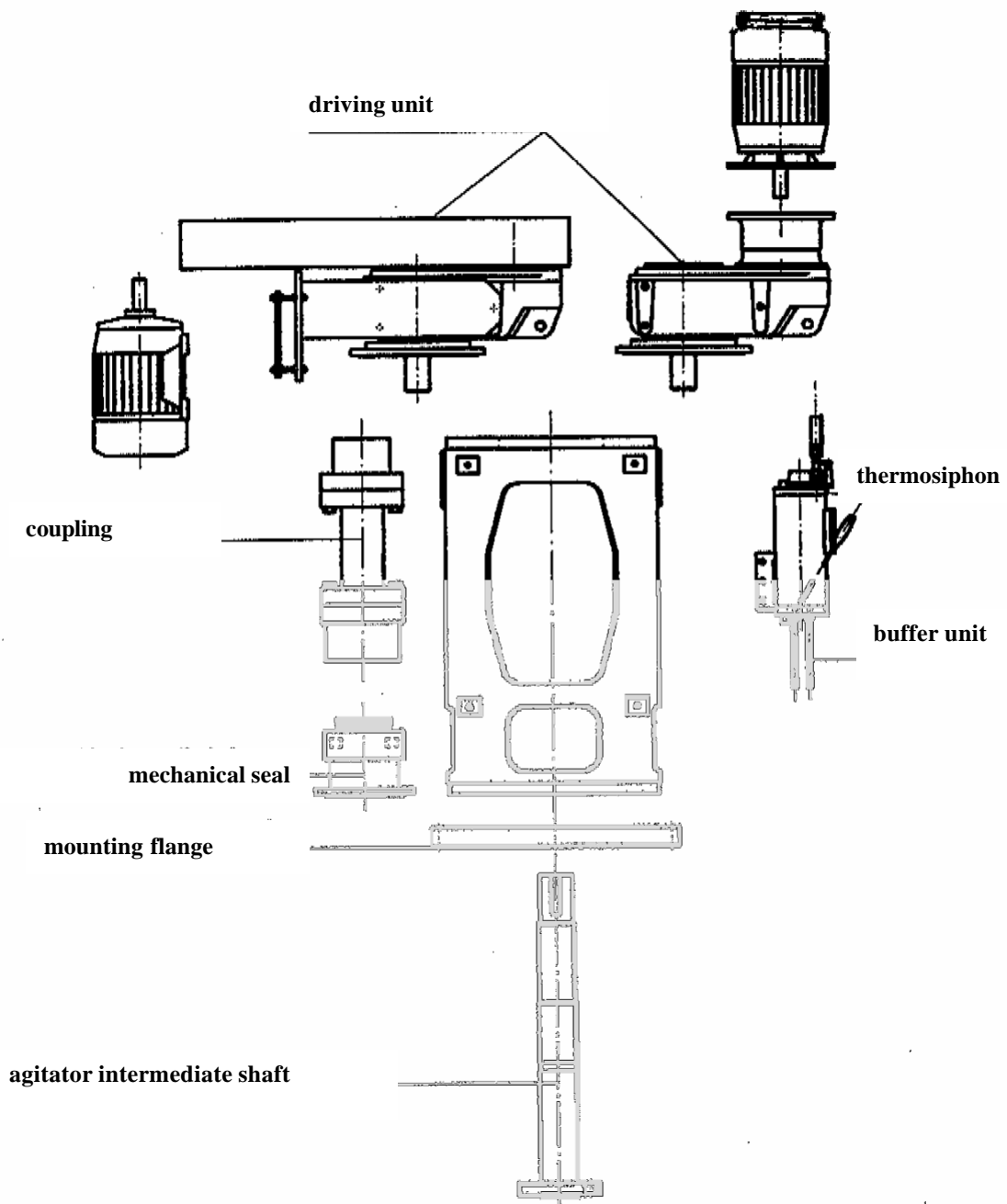




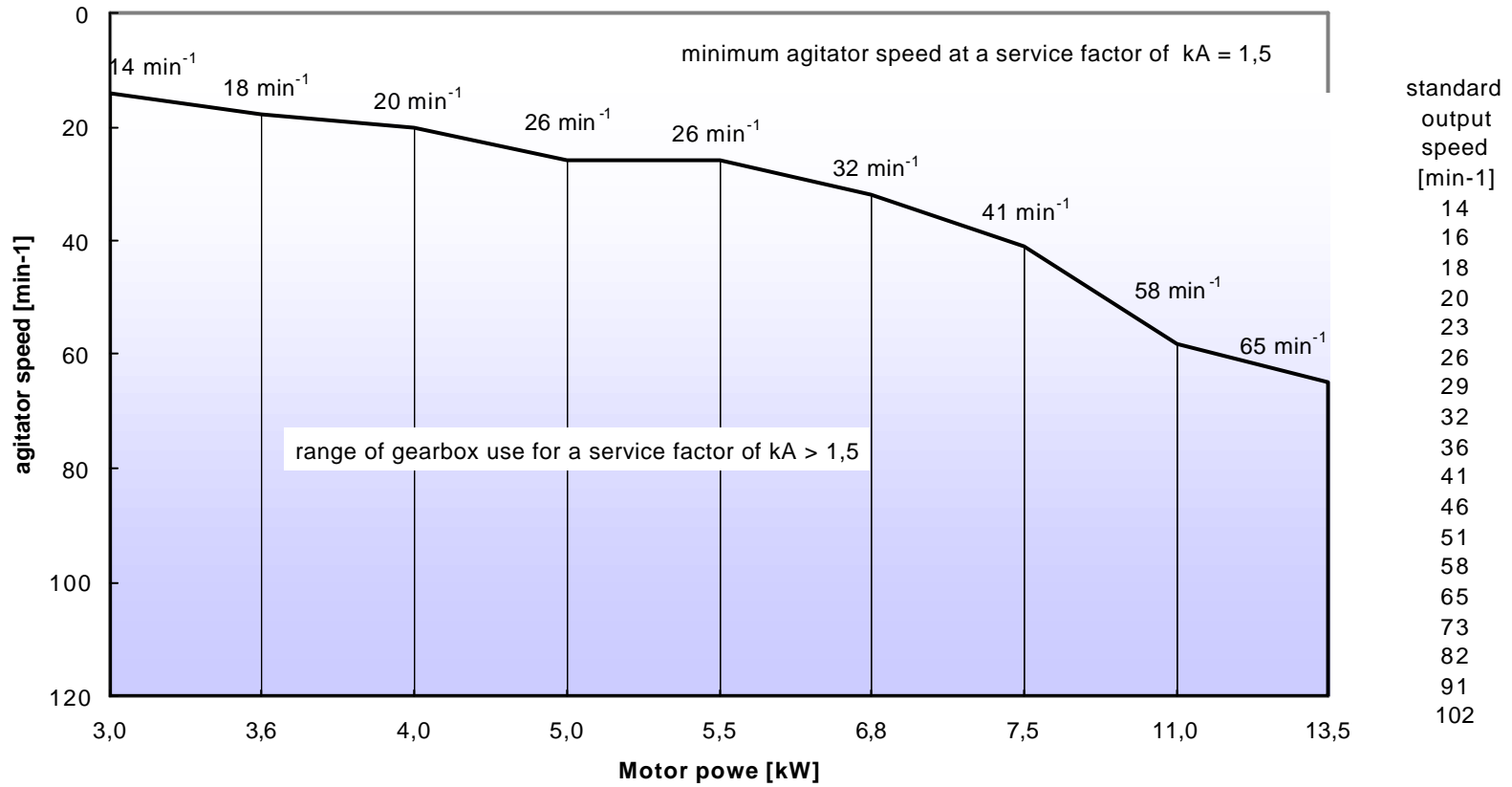
Modular construction of agitator drive



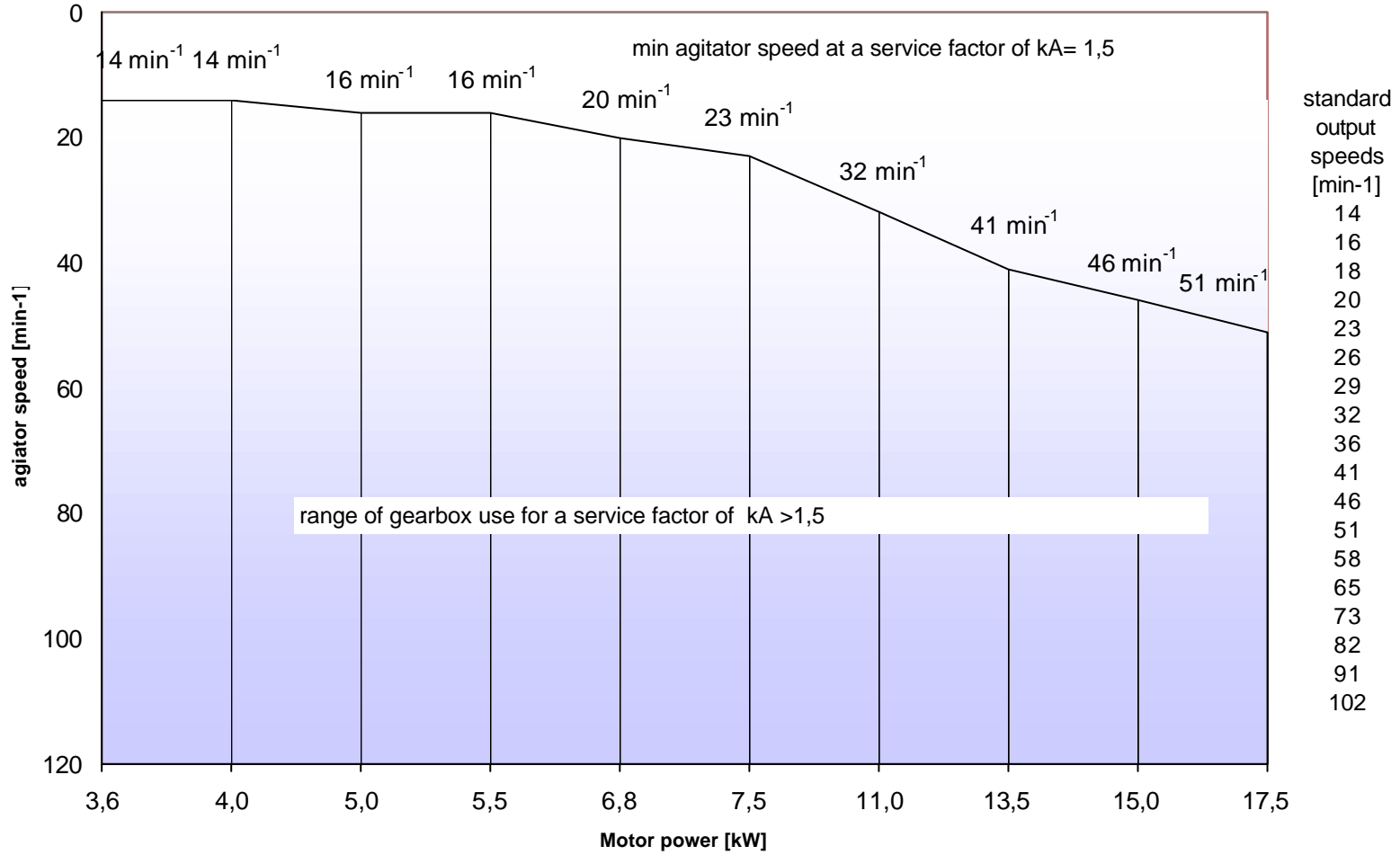
Presentation of Components



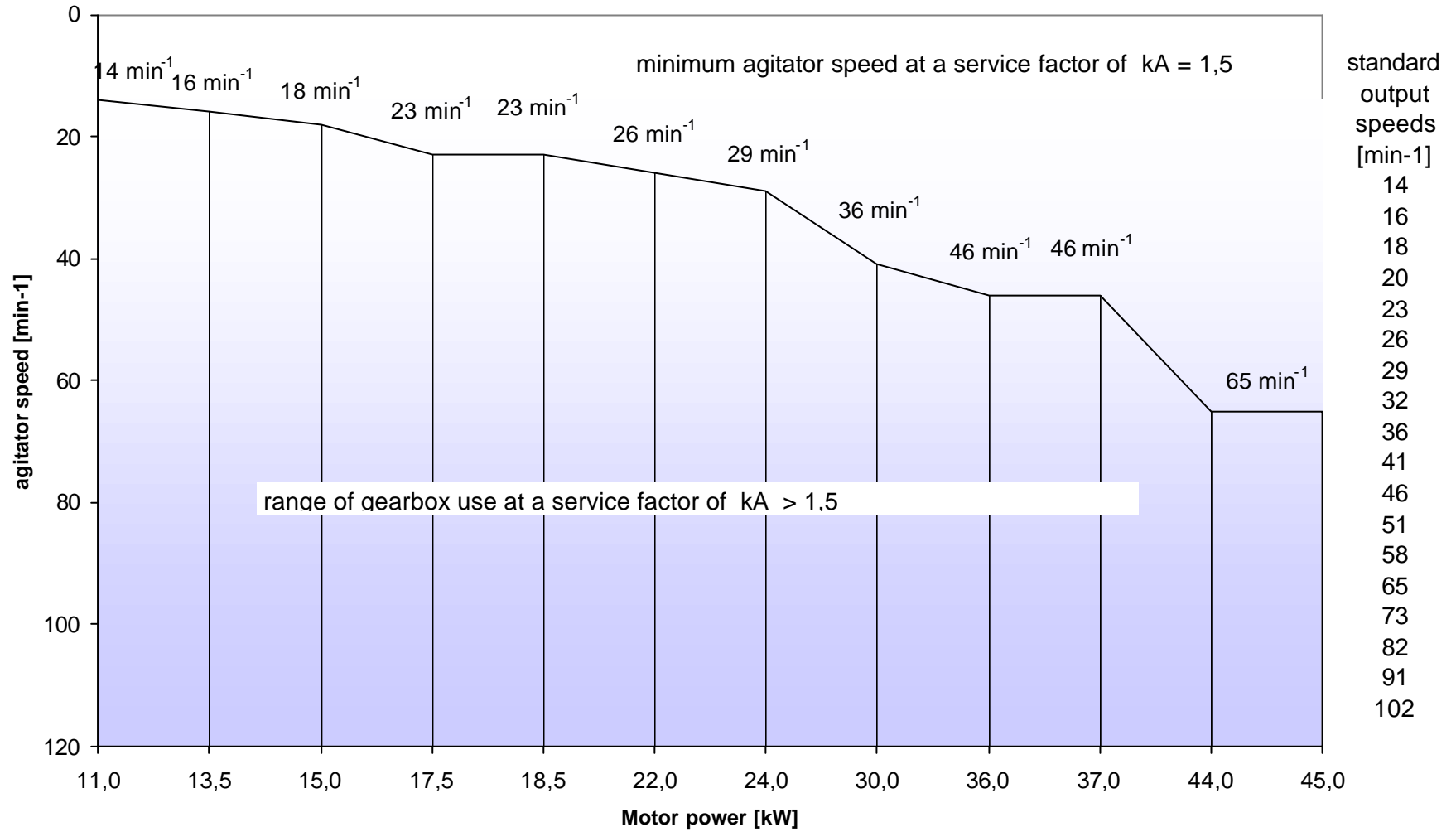
Range of gearbox use for 2000 Nm



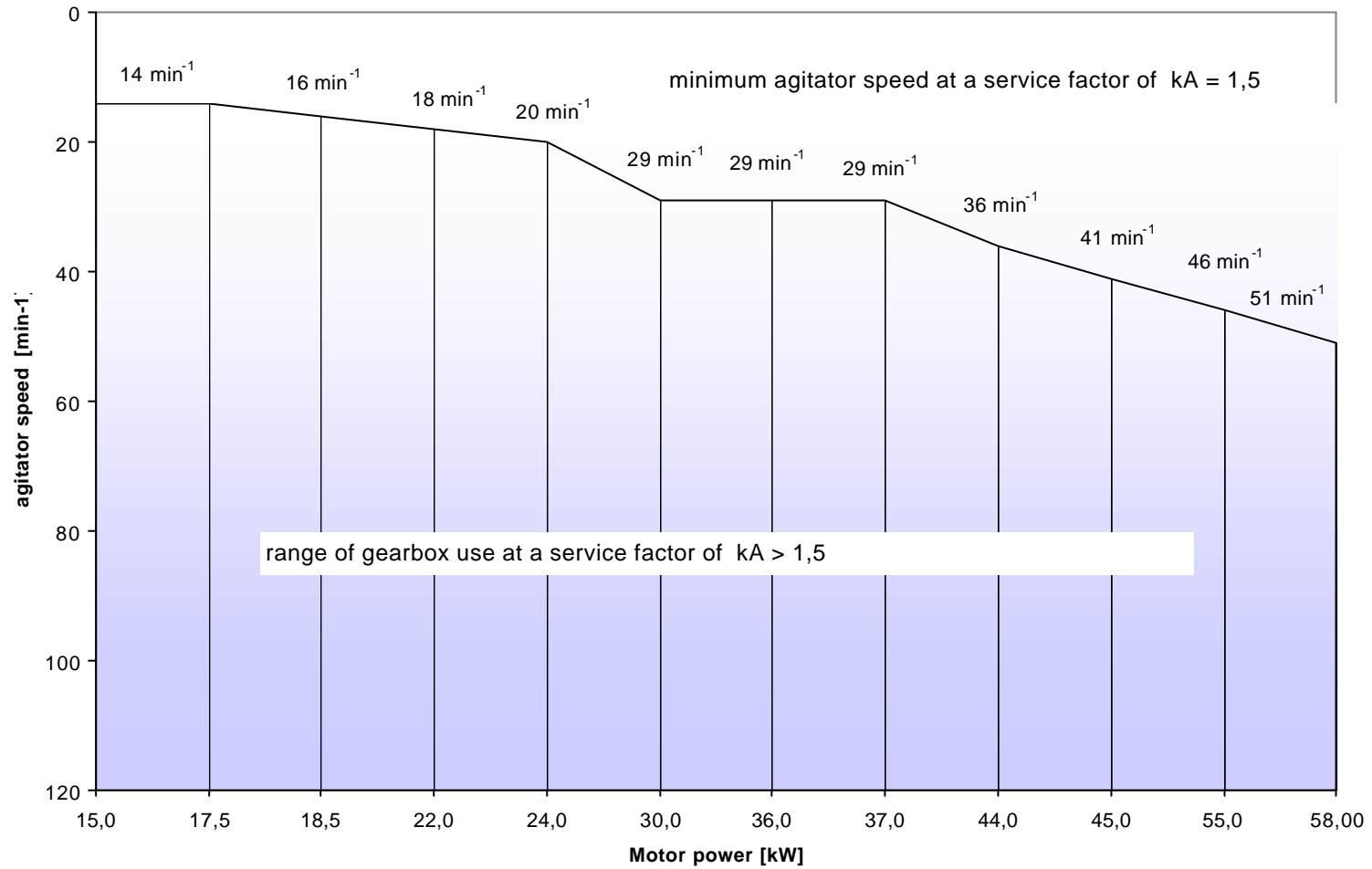
Range of gearbox use for 3300 Nm



Range of gearbox use for 8000 Nm

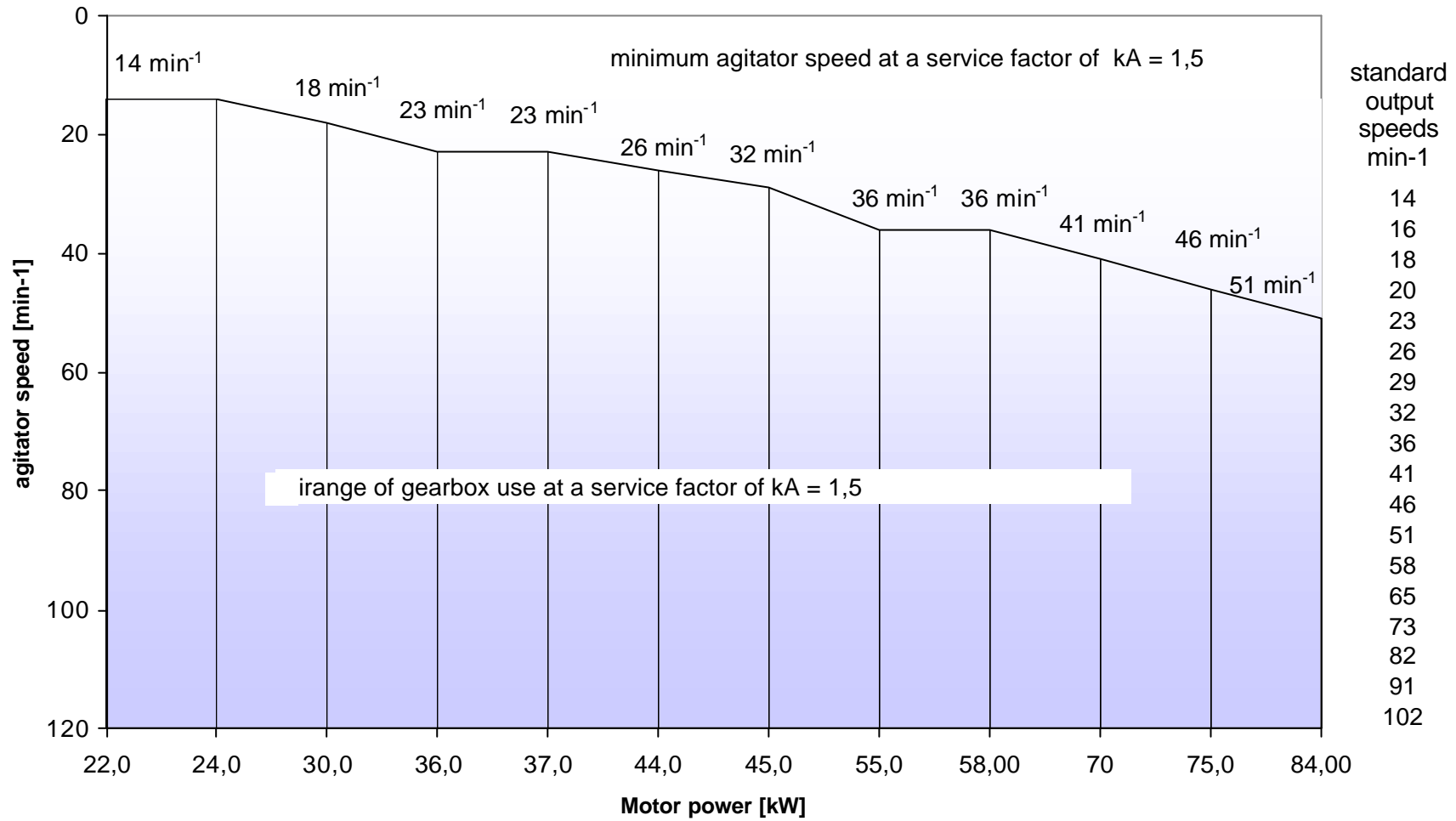


Range of gearbox use for 12000 Nm

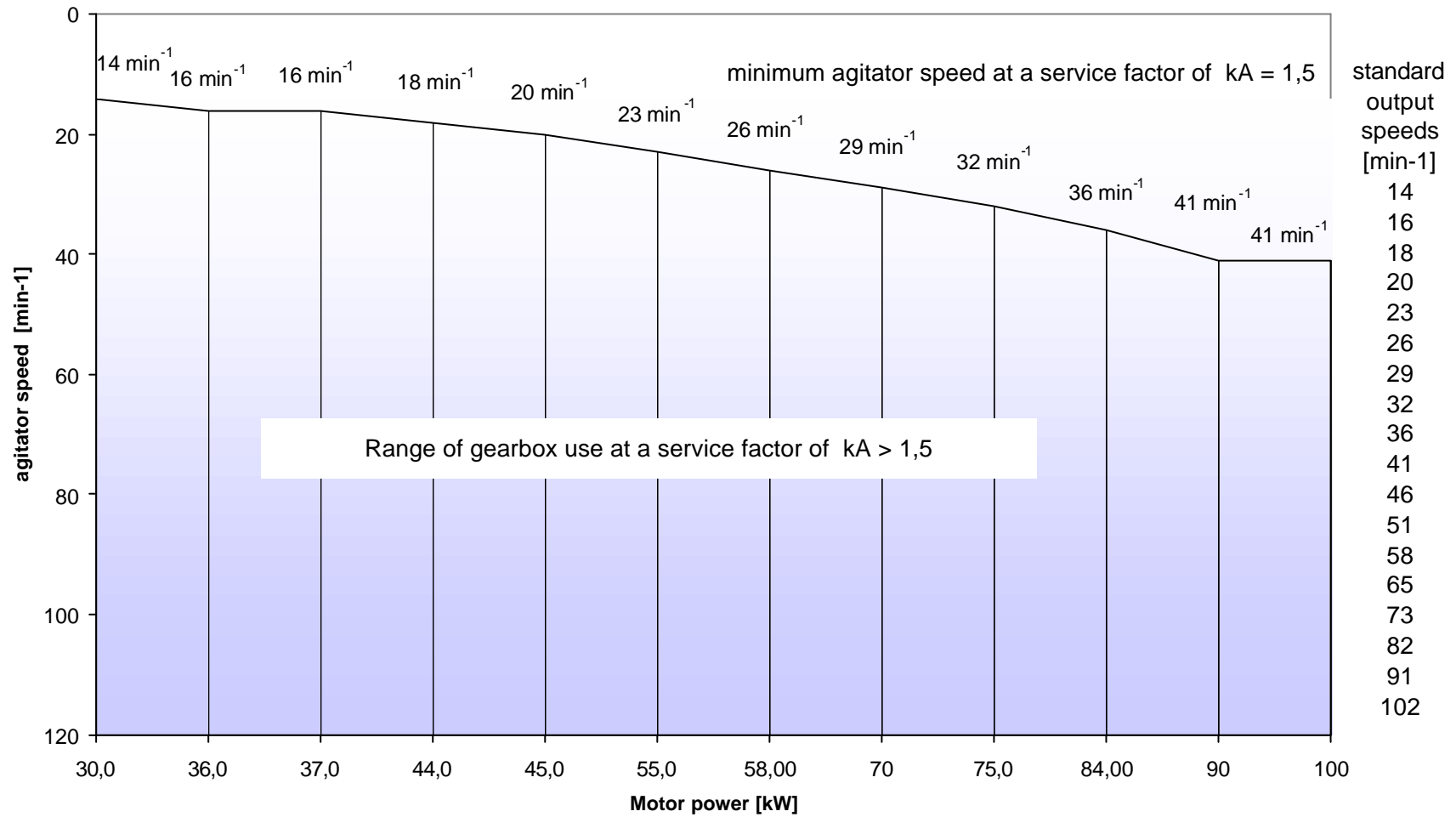


- standard output speeds [min-1]
- 14
 - 16
 - 18
 - 20
 - 23
 - 26
 - 29
 - 32
 - 36
 - 41
 - 46
 - 51
 - 58
 - 65
 - 73
 - 82
 - 91
 - 102

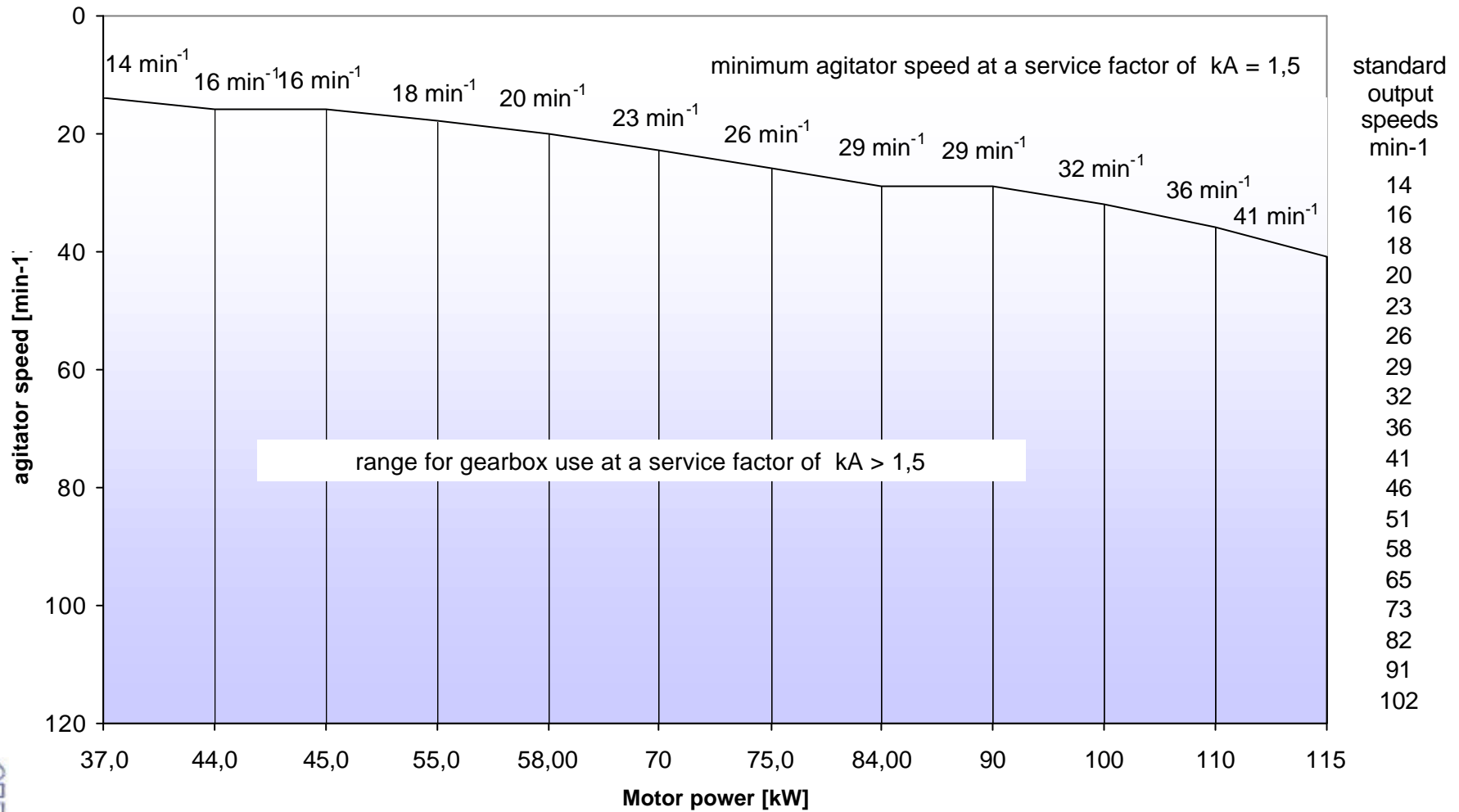
Range of gearbox use for 16000 Nm



Range of gearbox use for 23300 Nm



Range of gearbox use for 29400 Nm



That's service

At any time - In all places - Under guarantee

As specialists in special gears and transmission technology, we follow innovative methods, utilise latest technology, find solutions which are forward-looking, economical and safe.

Our most powerfull drive is our experience.



Ja)(Ke-drives are installed worldwide for use under the hardest of conditions such as in the

fields of mining, chemical industry, shipbuilding and general industry (steel and rolling mill construction, cement, wind, sugar, rubber and synthetic industries). In order to secure flawless operation at all times in all places and to prevent down-time, we have improved our already well-known service still further.

We offer you:

- 1. Preventive maintenance**
to ensure availability
- 2. Operation plan for our specialists**
Within 48 hours our service specialists are on the spot throughout Europe.
- 3. Spare part supply**
Supply of spare parts for both Ja)(Ke and other manufacturers' gears illustrates our broad spectrum.
- 4. 6-months minimum guarantee on repaired gears**
following guidelines given by us
- 5. Performance and quality guarantee**
We modernise your gears according to latest technology.

In case of any questions please contact



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Spezialgetriebe vom
Getriebespezialisten

getriebe

- [schiffbau]
- [windenergie]
- [steine/erden/zement]
- [nahrungsmittel/genuss]
- [fördertechnik/bergbau/tagebau]
- [gummi/kunststoff/rührwerkstechnik]
- [stahl/hütte/walzwerk/papier und andere industrien]