



8 SERVICE FACTOR

Service factors listed here under are empirical values based on AGMA and ISO specifications as well as our experience for use in common applications. They apply for state of the art-designed driven machines and normal operating conditions.

| Application | ≤ 10 hours/day | > 10 hours/day |
|------------------------------------|-------------------|-------------------|
| AGITATORS, MIXERS | | |
| Pure liquids | 1.25 | 1.50 |
| Liquids and solids | 1.25 | 1.50 |
| Liquids - variable density | 1.50 | 1.75 |
| BLOWERS | | |
| Centrifugal | 1.00 | 1.25 |
| Lobe | 1.25 | 1.50 |
| Vane | 1.25 | 1.50 |
| CLARIFIERS | 1.00 | 1.25 |
| CLAY WORKING MACHINERY | | |
| Brick press | 1.75 | 2.00 |
| Briquette machine | 1.75 | 2.00 |
| Pug mill | 1.25 | 1.50 |
| COMPACTORS | 2.00 | 2.00 |
| COMPRESSORS | | |
| Centrifugal | 1.25 | 1.50 |
| Lobe | 1.25 | 1.50 |
| Reciprocating, multi-cylinder | 1.50 | 1.75 |
| Reciprocating, single-cylinder | 1.75 | 2.00 |
| CONVEYORS - GENERAL PURPOSE | | |
| Uniformly loaded or fed | 1.15 | 1.25 |
| - Heavy duty | | |
| Not uniformly fed | 1.25 | 1.50 |
| - Reciprocating or shaker | 1.75 | 2.00 |
| CRANES (*) | | |
| Dry dock | | |
| Main hoist | 2.50 | 2.50 |
| Auxiliary hoist | 2.50 | 3.00 |
| Boom hoist | 2.50 | 3.00 |
| Slewing Drive | 2.50 | 3.00 |
| Traction Drive | 3.00 | 3.00 |

| Application | ≤ 10 hours/day | > 10 hours/day |
|------------------------------|-------------------|-------------------|
| Trolley Drive | | |
| Gantry Drive | 3.00 | 3.00 |
| Traction Drive | 2.00 | 2.00 |
| Industrial duty | | |
| Main hoist | 2.50 | 3.00 |
| Auxiliary hoist | 2.50 | 3.00 |
| Bridge and | 3.00 | 3.00 |
| Trolley travel | 3.00 | 3.00 |
| CRUSHER | | |
| Stone or ore | 2.00 | 2.00 |
| DREDGES | | |
| Conveyors | 1.25 | 1.50 |
| Cutter head drives | 2.00 | 2.00 |
| Screen drives | 1.75 | 2.00 |
| Stackers | 1.25 | 1.50 |
| Winches | 1.25 | 1.50 |
| ELEVATORS | | |
| Bucket | 1.25 | 1.50 |
| Centrifugal discharge | 1.15 | 1.25 |
| Escalators | 1.15 | 1.25 |
| Freight | 1.25 | 1.50 |
| Gravity discharge | 1.15 | 1.25 |
| EXTRUDERS | | |
| General | 1.50 | 1.50 |
| Plastics | | |
| Variable speed drive | 1.50 | 1.50 |
| Fixed speed drive | 1.75 | 1.75 |
| Rubber | | |
| Continuous screw operation | 1.75 | 1.75 |
| Intermittent screw operation | 1.75 | 1.75 |
| FANS | | |
| Centrifugal | 1.00 | 1.25 |
| Cooling towers | 2.00 | 2.00 |

(*) - Indication of service factor based on FEM 1.001 classification available upon request. Consult factory.

- Hoists for passengers lift: charted **values not applicable**. Consult factory.



| Application | ≤ 10 hours/day | > 10 hours/day |
|--------------------------------|-------------------|-------------------|
| Forced draft | 1.25 | 1.25 |
| Induced draft | 1.50 | 1.50 |
| Industrial and mine | 1.50 | 1.50 |
| FEEDERS | | |
| Apron | 1.25 | 1.50 |
| Belt | 1.15 | 1.50 |
| Disc | 1.00 | 1.25 |
| Reciprocating | 1.75 | 2.00 |
| Screw | 1.25 | 1.50 |
| FOOD INDUSTRY | | |
| Dough mixer | 1.25 | 1.50 |
| Meat grinders | 1.25 | 1.50 |
| Slicers | 1.25 | 1.50 |
| GENERATORS AND EXCITERS | | |
| | 1.00 | 1.25 |
| HAMMER MILLS | | |
| | 1.75 | 2.00 |
| HOISTS (*) | | |
| Heavy duty | 1.75 | 2.00 |
| Medium duty | 1.25 | 1.50 |
| Skip hoist | 1.25 | 1.50 |
| LUMBER INDUSTRY | | |
| Barkers - spindle feed | 1.25 | 1.50 |
| Main drive | 1.75 | 1.75 |
| Conveyors - burner | 1.25 | 1.50 |
| Main or heavy duty | 1.50 | 1.50 |
| Main log | 1.75 | 2.00 |
| Re-saw, merry-go-round | 1.25 | 1.50 |
| Conveyors | | |
| Slab | 1.75 | 2.00 |
| Transfer | 1.25 | 1.50 |
| Chains | | |
| Floor | 1.50 | 1.50 |
| Green | 1.50 | 1.75 |
| Cut-off saws | | |
| Chain | 1.50 | 1.75 |
| Drag | 1.50 | 1.75 |
| Debarking drums | 1.75 | 2.00 |
| Feeds | | |
| Edger | 1.25 | 1.50 |
| Gang | 1.75 | 1.75 |
| Trimmer | 1.25 | 1.50 |
| Log deck | 1.75 | 1.75 |

| Application | ≤ 10 hours/day | > 10 hours/day |
|---------------------------------------|-------------------|-------------------|
| Log hauls - incline - weel type | 1.75 | 1.75 |
| Log turning devices | 1.75 | 1.75 |
| Planer feed | 1.25 | 1.50 |
| Planer tilting hoists | 1.50 | 1.50 |
| Rolls - live-off brg. - roll cases | 1.75 | 1.75 |
| Sorting table | 1.25 | 1.50 |
| Tipple hoist | 1.25 | 1.50 |
| Transfers | | |
| Chain | 1.50 | 1.75 |
| Craneways | 1.50 | 1.75 |
| Tray drives | 1.25 | 1.50 |
| Veneer lathe drives | 1.25 | 1.50 |
| METAL MILLS | | |
| Slab pushers | 1.50 | 1.50 |
| Shears | 2.00 | 2.00 |
| Wire drawing | 1.25 | 1.50 |
| Wire winding machine | 1.50 | 1.50 |
| MILLS, ROTARY TYPE | | |
| Ball and rod | 2.00 | 2.00 |
| Spur ring gear | 2.00 | 2.00 |
| Helical ring gear | 1.50 | 1.50 |
| Direct connected | 2.00 | 2.00 |
| Cement kilns | 1.50 | 1.50 |
| Dryers and coolers | 1.50 | 1.50 |
| MIXERS | | |
| Concrete | 1.50 | 1.75 |
| PAPER MILLS | | |
| Agitator (mixer) | 1.50 | 1.50 |
| Agitator for pure liquors | 1.25 | 1.25 |
| Barking drums | 2.00 | 2.00 |
| Barkers - mechanical | 2.00 | 2.00 |
| Beater | 1.50 | 1.50 |
| Breaker stack | 1.25 | 1.25 |
| Calendar | 1.25 | 1.25 |
| Chipper | 2.00 | 2.00 |
| Chip feeder | 1.50 | 1.50 |
| Coating rolls | 1.25 | 1.25 |
| Conveyors | | |
| Chip, bark, chemical | 1.25 | 1.25 |
| Log (including slab) | 2.00 | 2.00 |

(*) - Indication of service factor based on FEM 1.001 classification available upon request. Consult factory.

- Hoists for passengers lift: charted **values not applicable**. Consult factory.



| Application | ≤ 10 hours/day | > 10 hours/day |
|-----------------------------|-------------------|-------------------|
| Couch rolls | 1.25 | 1.25 |
| Cutter | 2.00 | 2.00 |
| Cylinder molds | 1.25 | 1.25 |
| Dryers | | |
| Paper machine | 1.25 | 1.25 |
| Conveyors type | 1.25 | 1.25 |
| Embossers | 1.25 | 1.25 |
| Extruder | 1.50 | 1.50 |
| Jordan | 1.50 | 1.50 |
| Kiln drive | 1.50 | 1.50 |
| Paper rolls | 1.25 | 1.25 |
| Platter | 1.50 | 1.50 |
| Presses - felt and suction | 1.25 | 1.25 |
| Pulper | 2.00 | 2.00 |
| Pumps - vacuum | 1.50 | 1.50 |
| Reel (surface type) | 1.25 | 1.25 |
| Screens | | |
| Chip | 1.50 | 1.50 |
| Rotary | 1.50 | 1.50 |
| Vibrating | 2.00 | 2.00 |
| Size press | 1.25 | 1.25 |
| Super calendar | 1.25 | 1.25 |
| Thickener (AC motor) | 1.50 | 1.50 |
| Thickener (DC motor) | 1.25 | 1.25 |
| Washer (AC motor) | 1.50 | 1.50 |
| Washer (DC motor) | 1.25 | 1.25 |
| Wind and unwind stand | 1.25 | 1.50 |
| Winders (surface type) | 1.25 | 1.25 |
| Yankee dryers | 1.25 | 1.25 |
| PLASTICS INDUSTRY | | |
| Batch mixers | 1.75 | 1.75 |
| Continuous mixers | 1.50 | 1.50 |
| Compounding mill | 1.25 | 1.25 |
| Calendars | 1.50 | 1.50 |
| Secondary processing | | |
| Blow molders | 1.50 | 1.50 |
| Coating | 1.25 | 1.25 |
| Film | 1.25 | 1.25 |
| Pre-plasticizers | 1.50 | 1.50 |
| Rods | 1.25 | 1.25 |

| Application | ≤ 10 hours/day | > 10 hours/day |
|---|-------------------|-------------------|
| Sheet | 1.25 | 1.25 |
| Tubing | 1.25 | 1.50 |
| PUMPS | | |
| Centrifugal | 1.15 | 1.25 |
| Reciprocating | | |
| Single acting, three or more cylinders | 1.25 | 1.50 |
| Double acting, two or more cylinders | 1.25 | 1.50 |
| Rotary | | |
| Gear type | 1.15 | 1.25 |
| Lobe | 1.15 | 1.25 |
| Vane | 1.15 | 1.25 |
| RUBBER INDUSTRY | | |
| Intensive internal mixer | | |
| Batch mixers | 1.75 | 1.75 |
| Continuous mixers | 1.50 | 1.50 |
| Refiner - two rolls | 1.50 | 1.50 |
| Calendars | 1.50 | 1.50 |
| SAND MULLER | 1.25 | 1.50 |
| SEWAGE DISPOSAL EQUIPMENT | | |
| Aerators | 2.00 | 2.00 |
| Chemical feeders | 1.25 | 1.25 |
| Dewatering screens | 1.50 | 1.50 |
| Scum breakers | 1.50 | 1.50 |
| Slow or rapid mixers | 1.50 | 1.50 |
| Sludge collectors | 1.25 | 1.25 |
| Thickeners | 1.50 | 1.50 |
| Vacuum filters | 1.50 | 1.50 |
| SCREENS | | |
| Air washing | 1.00 | 1.25 |
| Rotary - stone or gravel | 1.25 | 1.50 |
| Travelling water intake | 1.00 | 1.25 |
| SUGAR INDUSTRY | | |
| Beet slicer | 2.00 | 2.00 |
| Cane knives | 1.50 | 1.50 |
| Crushers | 1.50 | 1.50 |
| Mills (low speed end) | 1.75 | 1.75 |
| TEXTILE MACHINERY | 1.25 | 1.50 |