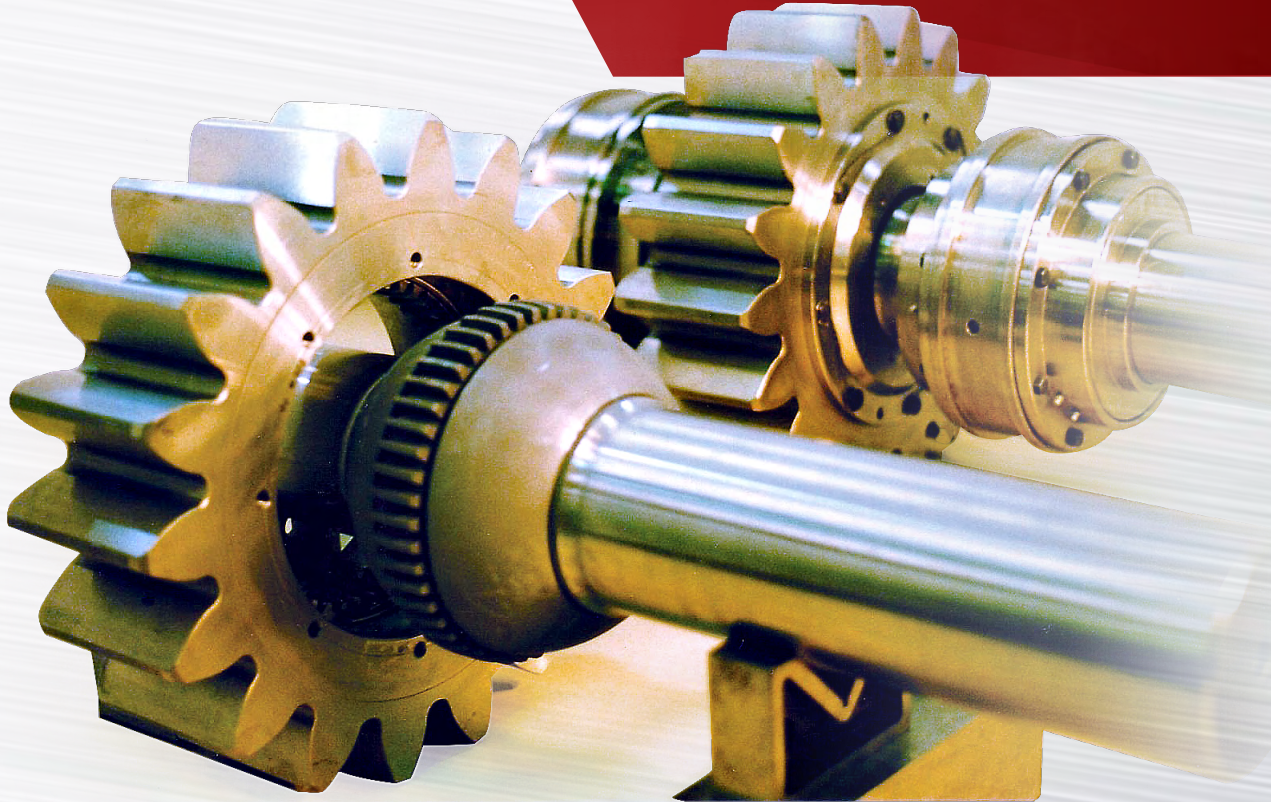


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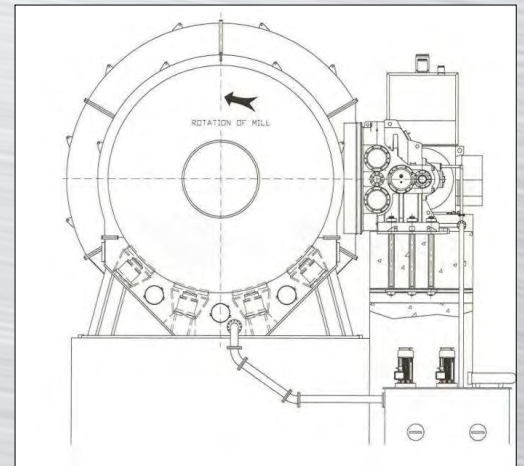
HOFFLEX

SELF-ALIGNING GEARBOX RANGE



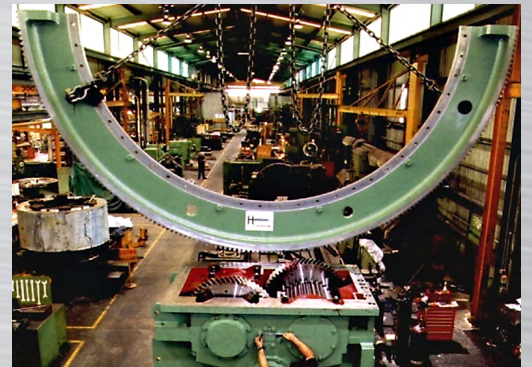
HOFFLEX SELF-ALIGNING DRIVES

- Automatically maintains 100% gear contact regardless of movement in foundation and / or driven component under all operating conditions.
- No shimming required on installation.
- **Case Hardened ground Gearing Material:** 18CrNiMo7-6
- **Hardness:** 58 - 62 HRC
- **Quality:** \leq DIN 5 (\geq AGMA12)

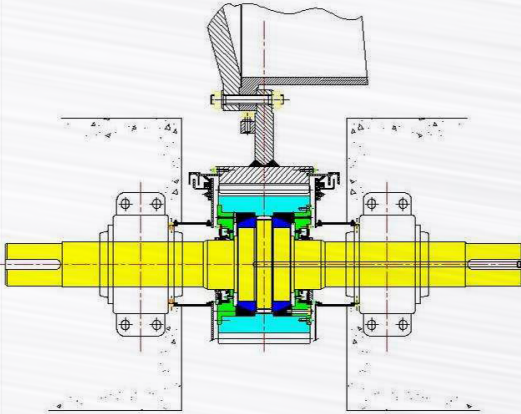


FORGED STEEL GIRTH GEAR WITHOUT T-SECTION GUSSETS

- Using forged steel rims eliminates cracking problems associated with castings.
- Forged rim is connected to the web by a full penetration submerged arc weld to ensure it is free from fatigue crack initiation sites.
- **Material:** HofAlloy
- **Hardness:** \geq 320 HB
- **Quality:** \leq DIN 7 (\geq AGMA 10)
- **Face width:** 10 mm less than pinion.



1. HOFFLEX SAP

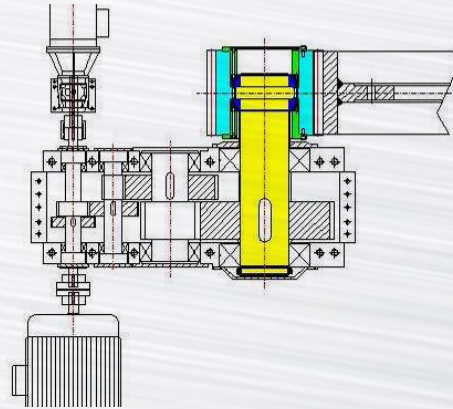


SELF-ALIGNING PINION

Conventional Self-Aligning Pinion with plummer block bearings.

- Retrofit to existing mills and drives.
- Pinion shaft is reversible
- Can be custom designed to suit the application
- Ideal for rail car dumpers where the load is varying,

2. HOFFLEX SAOP

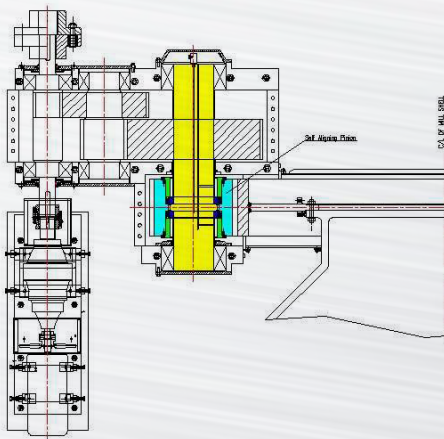


SELF-ALIGNING OVERHUNG PINION DRIVE

Self-Aligning overhung pinion mounts directly to output shaft main gearbox.

- Lowest foundation and installation costs.
- No low speed coupling or plummer bearings.
- Split lube system between gearbox and open gearing is now possible

3. HOFFLEX SASP

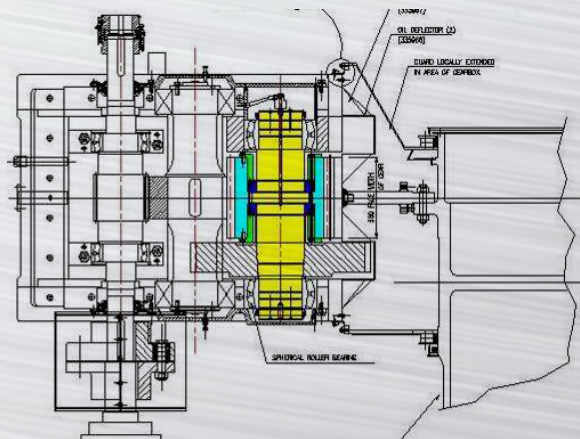


SELF-ALIGNING SINGLE PINION DRIVE

Self-aligning pinion mounts directly to the output shaft and is integral with the main gearbox.

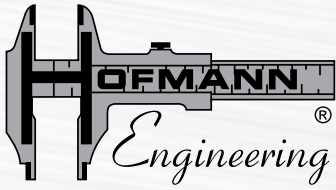
- Reduced foundation and installation costs.
- No low speed coupling or plummer bearings.
- Split lube system between gearbox and open gearing is now possible.

4. HOFFLEX SATP



SELF-ALIGNING TWIN PINION DRIVE

- Five standard gearbox sizes that cover the complete range to 10,000 kW per gearbox: 18Mn; 22Mn; 25.4Mn; 25.4Mn [HP]; and 30Mn.
- The number of teeth on the output pinions is 31.
- The Service Factors range from 1.5 to 2.4 depending on the gearbox size.
- A single motor runs two self-aligning, torque splitting pinions which are direct meshed with the forged steel girth gear.

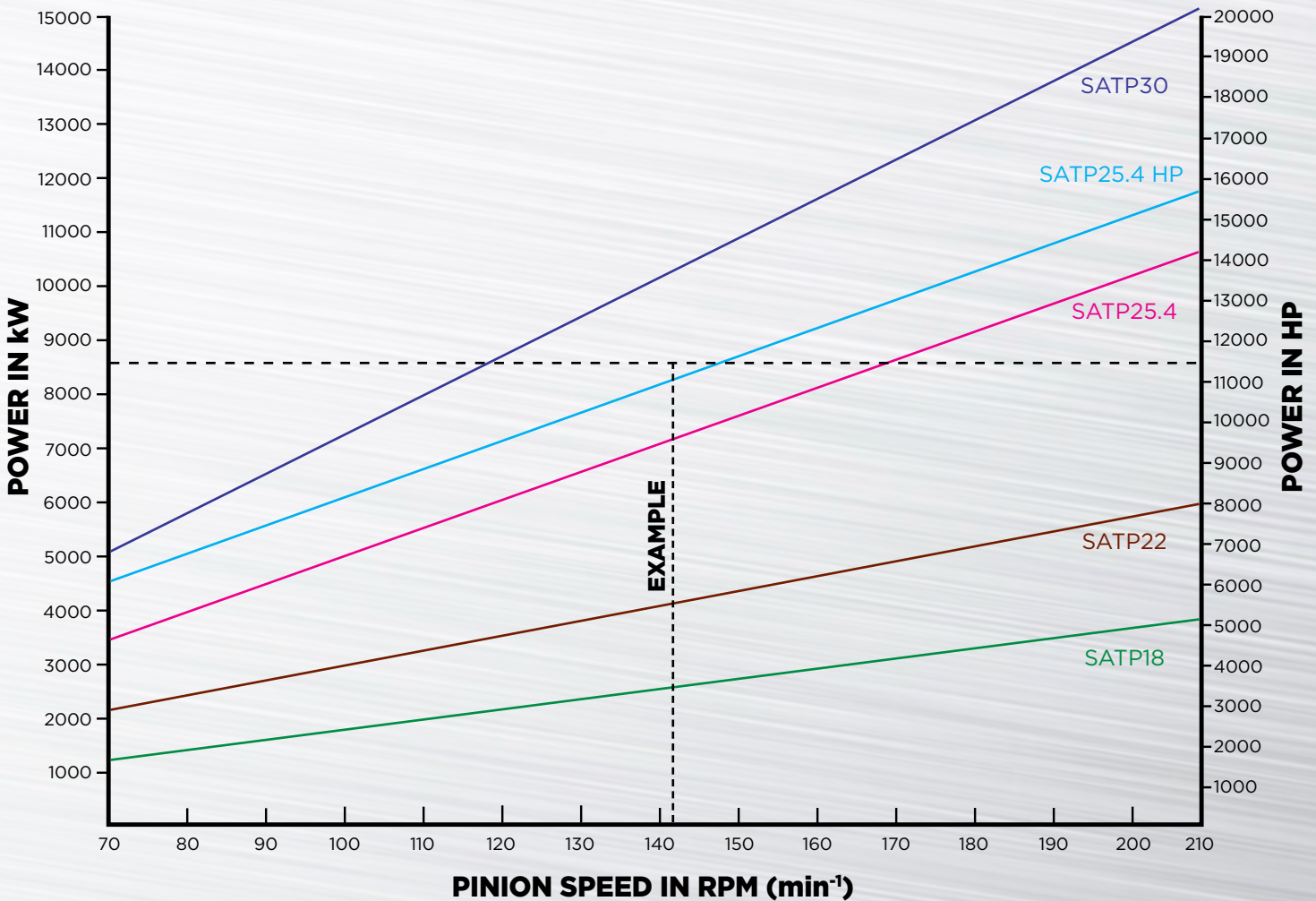


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SELF-ALIGNING TWIN PINION (SATP) GEARBOX RANGE

SELECT THE SATP SIZE FOR YOUR APPLICATION BELOW
(REQUIRED SERVICE FACTORS ARE INCLUDED).



EXAMPLE

| | |
|---|------------------------|
| Mill Power [P] | 8,500 kW (11,399 HP) |
| Motor Output Speed [n_1] | 992 min ⁻¹ |
| Required Mill Speed [n_3] | 14.5 min ⁻¹ |
| Number of teeth Output Pinion [z_2] | 31 |
| Number of teeth Girth Gear [z_3] | 305 |

CALCULATION:

Output SATP Speed:

$$n_2 = z_3/z_2 \times n_3$$

$$n_2 = 305/31 \times 14.5 \text{ min}^{-1}$$

$$n_2 = 142.5 \text{ min}^{-1}$$

Refer to graph for required SATP Gearbox

Nominal Transmission Ratio of the SATP Gearbox

$$i_N = n_1/n_2$$

$$i_N = 992 \text{ min}^{-1}/142.5 \text{ min}^{-1}$$

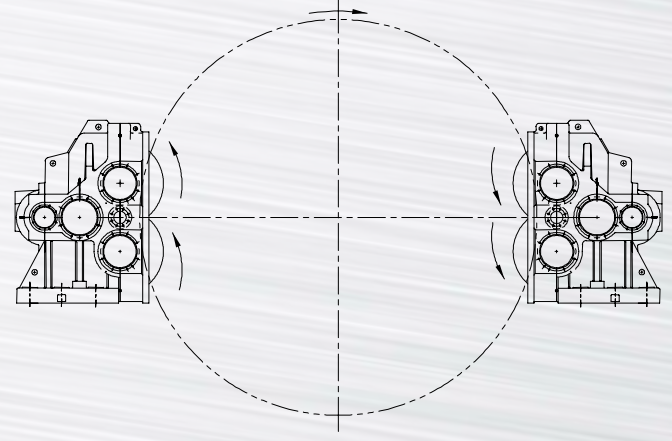
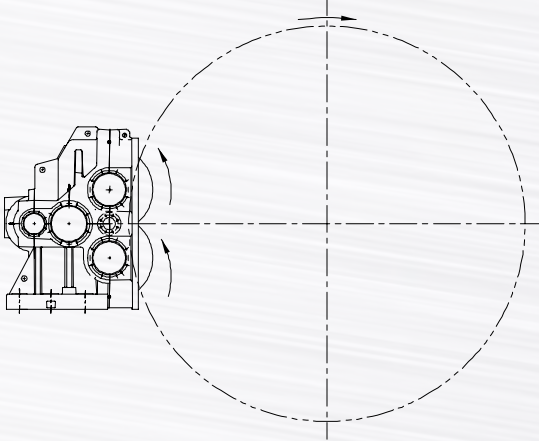
$$i_N = 6.96$$

RESULT

Required SATP Gearbox: 25.4mn HP Series with an internal ratio of 6.96:1

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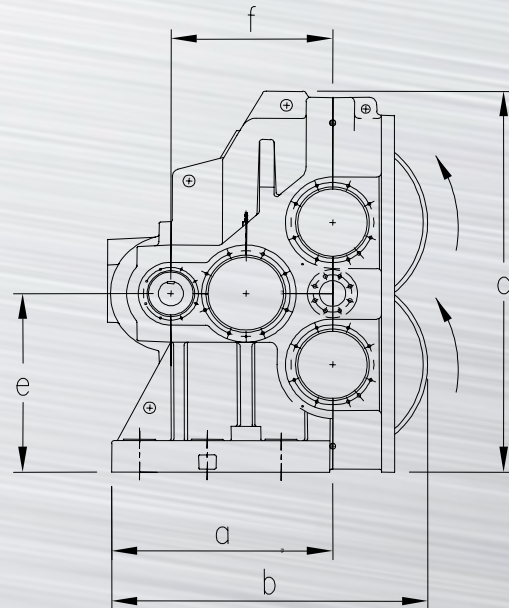
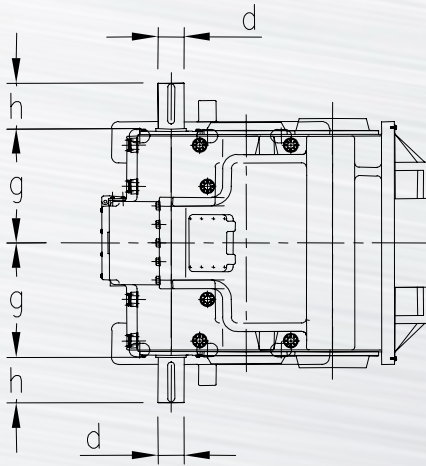
SELF-ALIGNING TWIN PINION (SATP) GEARBOX RANGE



SINGLE DRIVE WITH TWO PINIONS

DOUBLE DRIVE WITH FOUR PINIONS

- A Girth gear can have one or two gearboxes mounted in every position.
- The preferable position for the gearbox is to be turning up so that the gearbox is pushing down onto the base plate.



- Shaft ends with keys to DIN 6885, sheet 1, shape A
- Shaft centerings to DIN 322, shape DS (tapped).
- Tolerance range for shaft ends ISO fit p6

| HOFFLEX SATP Series | Gearbox Ratio i_N | Output Pinion | | | Dimensions in mm | | | | | | | | Average Weight in kg | HofParts |
|---------------------|---------------------|---------------|--------------|--------------------|------------------|-------|-------|-----|-------|-------|-------|-----|----------------------|-----------------------------------|
| | | Face width | Module m_n | No. of teeth z_2 | a | b | c | d | e | f | g | h | | |
| 18Mn | 5.5 - 12.4 | 460 | 18 | 31 | 1,300 | 1,710 | 2,215 | 150 | 1,040 | 910 | 665 | 265 | 18,000 | HOFFLEX 18Mn |
| 22Mn | 5.5 - 12.4 | 560 | 22 | 31 | 1,500 | 2,145 | 2,595 | 180 | 1,200 | 1,097 | 800 | 320 | 26,000 | HOFFLEX 22Mn |
| 25.4Mn | 5.5 - 12.4 | 640 | 25.4 | 31 | 1,665 | 2,395 | 3,050 | 200 | 1,450 | 1,224 | 915 | 365 | 36,000 | HOFFLEX 25.4Mn |
| 25.4Mn HP | 5.5 - 12.4 | 640 | 25.4 | 31 | 1,665 | 2,450 | 3,100 | 200 | 1,450 | 1,555 | 915 | 365 | 39,000 | HOFFLEX 25.4Mn HP |
| 30Mn | 5.5 - 12.4 | 760 | 30 | 31 | 2,160 | 3,050 | 3,640 | 240 | 1,705 | 1,500 | 1,090 | 435 | 68,100 | HOFFLEX 30Mn |

Table data may be subject to change. Please contact Hofmann Engineering to confirm the Hofflex SATP Gearbox size required for your application. Data in the table is based on a Motor Output Speed $[n_n] = 990 \text{ min}^{-1}$

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