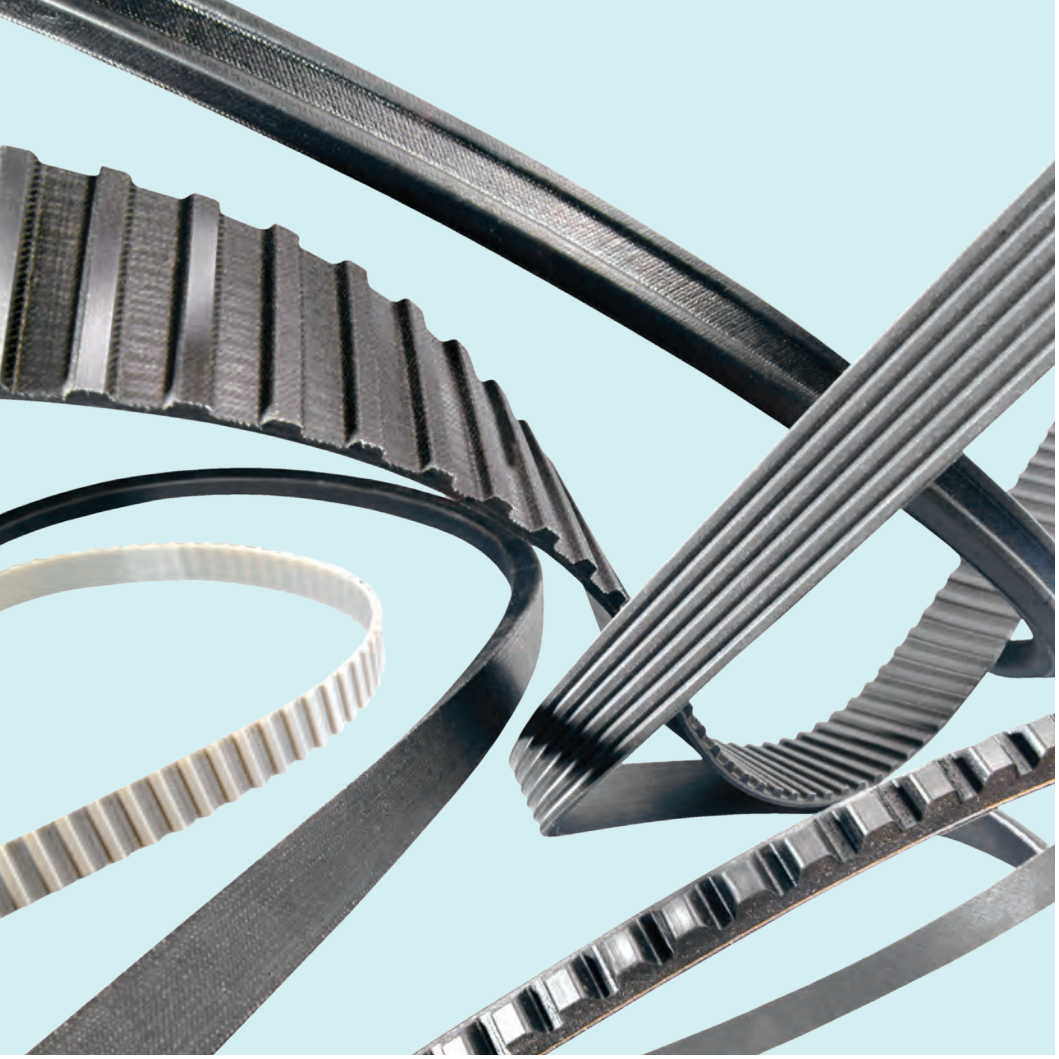
SKF Power Transmission Products




SKF

Power Transmission Products from the brand you trust.

SKF has been a leading global technology provider since 1907. Our fundamental strength is the ability to continuously develop new technologies – then use them to create products that offer competitive advantages to our customers. We achieve this by combining hands-on experience in over 40 industries with our knowledge across the SKF technology platforms: bearings and units, seals, linear motion, services and lubrication systems. Our success is based on this knowledge, our people, and our commitment to SKF Care principles.

While SKF maintains its leadership as a high-quality bearing manufacturer throughout the world, new dimensions in technical advances, product support and services have evolved SKF into a truly solutions-oriented supplier, creating greater value for customers.

SKF Power Transmission is a product line that provides a complete range of components including high quality belts, chains, couplings, pulleys, sprockets, bushings and hubs. Required in virtually every industry, our Power Transmission solutions enable processes to run by connecting moving parts in machinery. Regardless of whether the challenge lies in designing equipment that increases plant efficiency or to improve overall profitability, SKF's experience and expertise can help you meet your goals.

At SKF, we are dedicated to helping your business reduce the total cost of ownership in the long-run.

By choosing SKF Power Transmission products, you are investing in high quality, high performance solutions that enable your machinery to run more efficiently and increase its Mean Time Between Failure / Repair (MTBF/R).

SKF is a one stop shop for all your Power Transmission Products.

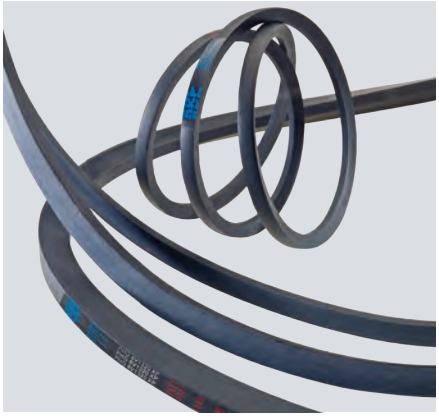
V-belts

Wide range of V-belts conforming to international standards. The range includes classical wrapped (FHP, Z, A, B, C, D and E sections), classical raw edge cogged (AX, BX, CX), wedge wrapped (SPZ, SPA, SPB, SPC), wrapped narrow wedge (3V, 5V, 8V), cogged raw edge narrow wedge (3VX, 5VX), variable speed belts, banded belts, hex belts (double classical – AA, BB, CC), ribbed belts (PH, PJ, PK, PL, PM).

Key features:

SKF V-belts are manufactured to a "worldwide" specification, PTP-0299 (February 2000), which is compatible with all commonly used standards.
Wrapped and cogged belts are manufactured according to GB 1171 and BS 3790
SKF belts are manufactured to be anti-static and as such comply with ATEX directive requirements (static conductivity testing is done in accordance with ISO 1813)
Belts could be stored for 7 years without affecting expected working life if the storage is done in optimum recommended conditions.
Superior quality of raw material that meets stringent specifications, electronically mixed rubber and additives along with pre-stretched polyester cords ensure reliable performance.
V-belts conforming to international standards from the brand you trust.
Pre-stretched high class polyester cords ensure minimal elongation during run-in period.
Local SKF technical support in drive audit and maintenance support (optimizing existing drives) to help you get maximum service life out of the installed belts.

Xtra power belts



SKF Xtra power belts have been designed to deliver up to 30% more power. These belts will not only reduce costs but more importantly, extend the service life of your existing applications. When replacing existing belts with SKF Xtra power belts, the service factors go by up to 35-40%. Tension members for the Xtra power belts are polyester cords, to accommodate heavy tension loads with minimal elongation. A fibre filled compound above and below the tension members allows the belts to carry higher dynamic loads without compromising flexibility. The cover fabric provides excellent wear and abrasion resistance while providing excellent bending strength.

Key features:

Reduced pulley groove wear due to optimized cover fabric.
Up to 97% drive efficiency can be achieved.
One-shot tensioning, no need to re-tension the belts after initial run-in period of 48 hours, helps to improve uptime of the equipment.
Improved smooth running behavior and low vibration levels.
Good resistance to shock loads, most suitable for applications like cushers.
Available wedge and narrow wedge profiles (SPZ, SPA, SPB, SPC , 3V, 5V, 8V).

NOTE: To change the drive from classical V-belts to Xtra power V-belts, please contact your nearest SKF representative or SKF Authorized Industrial Distributors.

V-belt pulleys

All SKF V-belt pulleys are manufactured to the standards ISO 4183, DIN 2211, ANSI Narrow V-belt pulley IP-22 and the ANSI Classical V-belt pulley IP-20. All standard SKF pulleys are made from cast iron G3000 (GG) to American standard “SAEJ431AVG96”.

Key features:

Conforming to global standards, SKF pulleys are supported with detailed catalogue for the ease of selection.
After machining, SKF pulleys are phosphatized and treated with rustproof oil before packing in individual boxes, resulting in long shelf life without any fear of rust.
All SKF pulleys are statically balanced to 6.3 according to ISO 1940 and are suitable to be used for linear speeds up to 33m/s. This helps to reduce in vibrations and improve bearing fatigue life.
All standard pulleys are taper-bushed for easy shaft locking. Plain/Pilot bores are available on request.
Taper bushings provided are “finished bore and key way”, helps to reduce down time.
Easy ordering procedure due to clear and distinct designation.

Timing belts

SKF timing belts are made to comply quality standards GB/T13487-1992 and GB/T11616-1989. The length and tolerance control of MXL, XL, L, H, XH, XXH profiles are done in accordance with ISO 5296-1. Measurement tolerance testing is done in accordance with ISO 4184.

Key features:

Superior quality timing belts with local technical support from network of distributors.
Complete range of popular timing belt profiles: Classical profile– MXL, XL, L, H, XH, XXH, HiTD profile – 2M, 3M, 5M, 8M, 14M, STS profile – S2M, S3M, S4.5M, S5M, S8M, S14M, Metric profile – T2.5, T5, T10, T20, AT5, AT10, metric polyurethane – T5, T10, T20, AT5, AT10
Supported with compatible pulleys for each tooth profile.

Timing pulleys

A good timing pulley will help to extend service life of timing belt and improve uptime of the machine. SKF timing pulleys are made to acceptable industry standards (ISO 5294, DIN 7721).

Key features:

Wide range and supported with detailed catalogue for all clear dimensions.
Tooth profile that is made precisely to match the timing belts.
Available in both pilot bore and taper bushed versions.

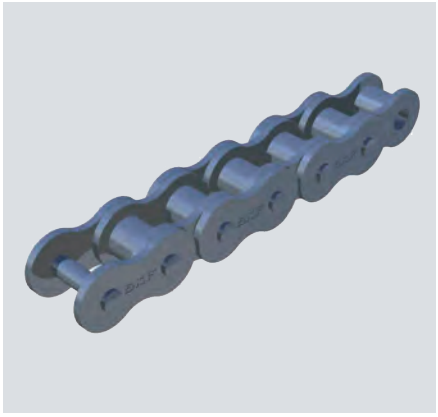
Roller chains

Standard SKF roller chains are manufactured in state of the art facilities with tight quality controls. All products conform to ISO standards and other industrial standards like ANSI, BS, DIN and JIS. These chains can accommodate temperatures from –20 to 150 °C. Made from steel that meets stringent quality specifications, these chains offer higher fatigue life. Special chains to meet demanding applications like corrosive environment.

Key features:

Chains that meet international standards and 100% interchangeable.
Special chains for corrosive environment – stainless steel chains, zinc plated chains, nickel plated chains.
Self-lubricating chains where lubrication is undesirable.
Range of SKF Xtra strength chains – H, BH, SH, SPH and SHH series to handle applications that need higher tensile strengths and / or capabilities to absorb shock loads.

Xtra strength chains



While tensile strength is important to use in calculating the maximum chain pull, useful in lifting calculations, this does not always represent the fatigue life and performance of the chain. The pattern of the work load is particularly complex in heavy drive environments where significant shock loads are present. This can lead to rapid elongation and chain failure. Therefore the SKF Xtra strength chain design includes, optimized hardness of the material, precision fit of the components as well as an overall size increase of the parts. This will in turn provide a much longer service life for the chain in demanding drive conditions.

Key features:

The H and BH series Xtra strength chains can accommodate approximately 10% higher shock loads, operating speeds are lower or there are other severe operating conditions.
SKF Xtra strength SH chains have a 25–35% greater ultimate tensile strength than ANSI heavy duty roller chains. These chains can accommodate higher shock loads and provide longer service life.
SKF Xtra strength SPH chains have specially designed, close tolerance link plates and pitch holes. Their special design can improve load carrying capacity by 25–32%. The dimensions of these chains are the same as ANSI standard roller chains.
SKF Xtra strength SHH chains use higher grade materials and thicker plates resulting in greater ultimate tensile strength and higher allowable load.

NOTE: Xtra strength chains may require new and compatible sprockets, please contact SKF before changing existing drive to SKF Xtra strength drive.

Conveyor chains

The conveyor chain is used to pull (or elevate) a load, usually in a straight line, at relatively slow speeds. As a result, the conveyor chain is rated in terms of its allowable working loads and not by power or speed. For all the different types of conveyors and chain applications, there is an equally large number of chain configurations and materials available. The SKF range of conveyor chains covers a wide variety of chains and chain materials.

Key features:

Wide range of conveyor chains, includes standard as well as alternative chains with pitches ranging from 12,7 to 1 000 mm. Tensile strengths (UTS) up to 900 kN. With modification, higher tensile strengths are possible.
All SKF conveyor chains are manufactured to extremely close tolerances, and use high quality material combinations, to provide long service life, excellent plate / pin / bush integrity and uniform pitch lengths.
The use of different grades and hardness of steel to manufacture various chain components provide the best combinations to increase strength and improve wear resistance.
Low to medium carbon and alloy steels, in conjunction with various heat treatment methods, result in good mechanical properties, wear resistance and hardness.
SKF conveyor chains are made from alloy steels or cast iron depending on the chain series and type.
Stainless steel is also available for corrosive environments or applications where there are frequent wash-downs e.g. food, beverage and pharmaceutical applications.
The correct material and hardness of pins, bushings, rollers and side bars provide high quality, long lasting chains.
Customized chains with special attachments can also be offered.

Sprockets

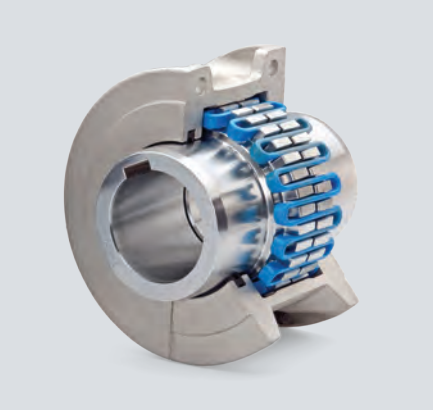
SKF sprockets are made from high quality steel. Stringent manufacturing control ensures that every sprocket stands up to critical design specifications and meets the highest standards. The result is long service life and reliable performance. Standard SKF sprocket up-to 25 teeth are manufactured with hardened teeth (heat treatment) to offer long wear life, resist abrasion, and withstand heavy shock loads. Heat treatment of sprocket tooth provides high hardness at the wear areas and improves the ability of the tooth to absorb shock loads.

Key features:

All SKF sprockets are manufactured to DIN 8187/DIN 8188, ISO 606 and ASME B29.1M standards – helps to improve service life of chain.
All standard SKF sprockets are made from high quality C45 Steel.
SKF sprocket tooth profile is accurately and precisely crafted on modern machines and tolerances are maintained according to DIN 8196 standards.
The SKF sprockets are supported by detailed catalogue. This also eliminates requirement of drawings for standard sprockets.
SKF sprockets are identified with a clear and distinct part number. This makes easy for the maintenance and purchase to order.
Standardization using SKF sprockets can help in inventory optimization.
Each individual sprocket is completely de-burred and protected with rustproof oil applied with rust-preventive oil and packed in boxes.
SKF sprockets are easy to store and identify.

Couplings

Flexible couplings are devices used to mechanically connect two shafts to transmit power from one shaft to the other. They are also able to compensate for shaft misalignment. Misalignment can be angular, parallel or a combination of both, in some cases. This is particularly important for applications where misalignment could affect the velocity and acceleration of the driven shaft. The performance of the coupling depends largely upon how it is installed, aligned and maintained. In response to industry's ultimate need to produce more with less, SKF has combined its knowledge and experience with the latest technology to develop solutions for a variety of applications and operating conditions. Whether the goal is to design equipment that provides more customer value, or to improve overall profitability, SKF's experience and expertise can help you meet your goals. SKF offers a wide range of standard and customised coupling products. SKF couplings cover a wide range of coupling types, sizes and capacity ratings for many applications and factory environments. For large, heavy duty applications, SKF has large size couplings. These couplings, can accommodate high torque, while reducing power loss and minimizing the effects of misalignment.



Grid couplings:

In high output (kW) and high torque applications where vibration, shock loads and misalignment occur, SKF grid couplings are an excellent choice. The unique design of the grid and hub teeth enable these couplings to accommodate movement and stresses from all three planes, which can reduce vibration levels by as much as 30%.

Key features:

- The tapered grid element is manufactured from a high strength alloy steel.
- Available in both vertically and horizontally split cover options.
- Grid couplings with spacer can be offered.
- Available in both pilot bore and taper bush options.

Gear couplings:

Very high-torque ratings, along with unparalleled bore capacities, give this coupling a great advantage over other types of couplings.

Key features:

- SKF standard gear couplings are rated up to 1 310 kNm with a maximum bore of 525 mm.
- Higher torque capacities in excess of 2 000 kNm are possible using special alloy materials.
- The unique design of the gear couplings tooth crowning dramatically reduces backlash and radial clearance.
- Higher capacities are possible using alloy materials.
- The hub bore capacities are the largest in the industry, allowing for low cost and long service life.
- Available in both pilot bore and taper bush options.
- Available in double engagement and single engagement
- Couplings with ISO or Customised spacer can be offered
- Special couplings for vertical, sliding and floating shaft requirements also available.
- SKF gear couplings conform to AGMA and are interchangeable dimensionally with other makes conforming to AGMA.

Disc coupling:

The SKF disc coupling is the ideal solution in medium to high torque applications that require torsional rigidity, offer some allowance for misalignment, and do not require lubrication. These applications typically have a capacity range up to 178 kNm in a range of configurations including single disc, double disc, and spacer for both horizontal and vertical mounting. Standard shaft capacities are up to 289 mm.

The SKF disc coupling offers the following benefits:

Key features:

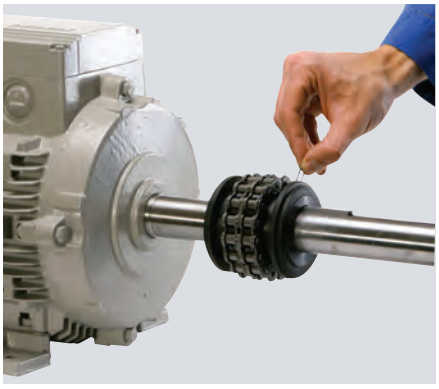
- Medium to high torque capability.
- Torsionally rigid.
- Cost effective (w.r.t torque and size).
- No lubrication required.
- No frictional or energy losses.
- Quiet in operation (no meshing).
- Zero backlash.
- High speed capability (may require dynamic balancing over 50 m/s).
- Temperature-tolerant (generally up to 250 °C).
- Various hub designs, including short or reverse hub.
- Standard spacer lengths to ANSI and ISO standards generally available.
- Available with longer tubular spacers (steel or composite in some instances).
- SKF disc coupling is available in 2 basic configurations: Single disc and double disc.
- Coupling for floating shaft arrangement available.

Flex couplings:

SKF flex couplings are designed to accommodate misalignment and shock loads and dampen vibration levels.

Key features:

- Superior quality of tyre / element better design of flange offers high service life and much higher power ratings.
- These easy to install, maintenance-free couplings are available with either a pilot bore or tapered bore.
- Couplings with a tapered bore can be face (F) mounted or hub (H) mounted.
- Can be offered along with spacer.
- Tyres available in both natural rubber and F.R.A.S.



Chain couplings:

These couplings are able to transmit higher torque than their shafts, making them ideal for high torque applications and can accommodate up to 2° of misalignment.

Key features:

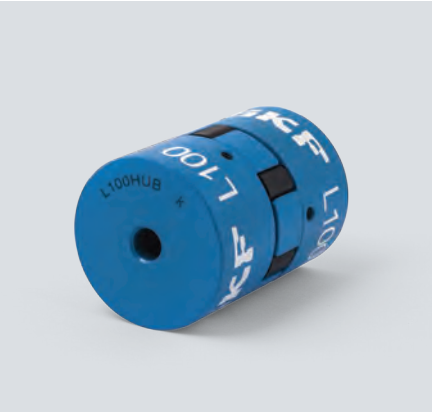
- Available with a pilot bore or taper bushing (face or hub) options.
- Cover also available and is recommended particularly for high speed applications.

FRC couplings:

With a higher load capacity than jaw couplings and maintenance-free operation, FRC couplings are designed as a general purpose coupling. They are able to cushion moderate shock loads, dampen low levels of vibration and accommodate incidental misalignment.

Key features:

- FRC couplings are phosphate coated for improved corrosion resistance.
- Available with fire-resistant and anti-static elements (F.R.A.S.).
- FRC couplings are available with a pilot bore or taper bushing (face or hub) to make installation quick and simple.
- Fully machined outside surfaces allow alignment with a simple straight edge.
- Shaft connections are “fail safe” due to their interlocking jaw design.



Jaw couplings:

Jaw couplings provide a cost-effective solution for standard power applications, cushioning moderate shock loads and dampening low vibration levels. These jaw couplings are maintenance-free and easy to install.

Key features:

- Available with a “snap wrap” element allowing element replacement without disturbing the hubs.
- Nitrile element for standard applications.
- Urethane and Hytrel elements are available for applications where a compact, high torque solution is required. (Note: Hytrel is a registered trademark of DuPont)
- Can be offered with spacer.

Universal joints:

These are also known as pin and block couplings, are commonly used for low to medium torque industrial, off-road and agricultural applications. These couplings offer an economical solution for applications up to 1 800 r/min.

Key features:

- Working angles of up to 25° or 35° for manual drives.
- SKF offers these couplings with a solid bore and square, hexagonal and round bores on request.
- The couplings are available in either a single (UJMA) or double (UJMB) configuration.

Keyless bushing:

SKF keyless bushings provide innovative high performance alternatives over traditional component to shaft connections. This design offers a true zero backlash installation with none of the problems associated with keyways and splines.

The principle of operation is based on a simple taper-wedge system. By tightening a series of high capacity setscrews, two rings are pulled over the inner and outer rings expanding the diameters onto both the shaft and the internal bore of the hub, with the resulting radial forces giving exceptional capacity.

Key features:

- Provide complete axial and radial adjustment
- Simple installation and removal
- Designed to create an equivalent interference fit with uniform pressure distribution
- High resistance to alternating torques
- Zero backlash
- Re-usable
- No wearing parts
- Wide range of series available for most applications

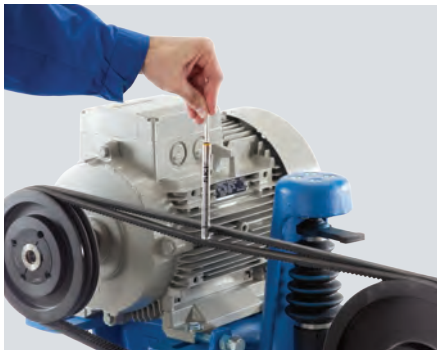
Power transmission tools

PHL FM10/400

Belt frequency meter:

The SKF Belt Frequency Meter is an interactive tool. It provides both visual and audible communication with the operator.

- Infrared beam based optical sensor ensures readings are unaffected by noisy environment.
- Most precise way to check belt tension.
- Quick and reliable tension checks, especially if multiple belt drives are concerned.
- Accuracy of repeated measurements.
- Elimination of human error.
- Capable of measuring belt vibration frequencies from 10 to 400 Hz for most of the following belt types: V-belts (wrapped, cogged raw edge and ribbed belts), banded V-belts, timing belts.



PHG PT/C1 007

Belt tension tester:

Easy to operate mechanical too that can help in improving belt service life and drive performance. Comes with tension table and operating instructions.

PHP PT/C1 006

Pulley wear gauge:

The pulley profile gauge is used to check the pulley profile against ISO recommended profiles. The use of non ISO standard pulleys or worn pulleys can impact severely the service life of V-belt and hence the drive.

PHC PT/C1 013

Chain wear gauge:

For standard roller chains, the most popular way to check chain wear is by measuring elongation. The easy to use SKF Chain wear has two sides, one for drives with Fixed center distance and other for movable center distance. This simple tool helps to plan shut downs so that the chain can be changed without unplanned stoppages.

PHC PT/C1 011 and PHC PT/C1 012

Chain beaker tool:

Often we are required to break the chain into required number of links/lengths. Using a punch with hammer may damage or deform the bush resulting in poor chain service life. This simple SKF tool helps to remove the pin from the chain (after grinding off the pin head from one end) without the use of hammer.

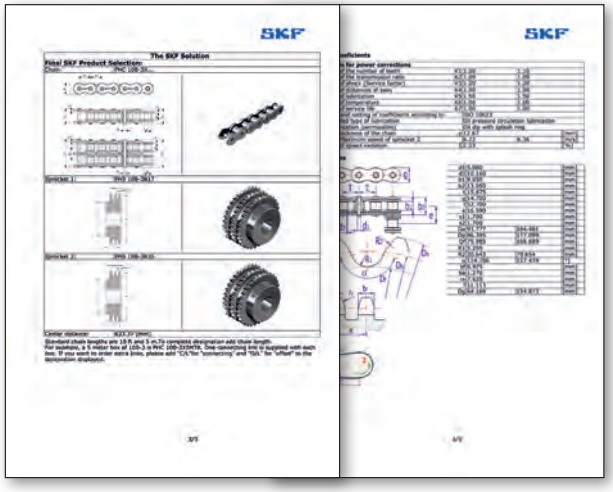
Two variants based on size of chain:

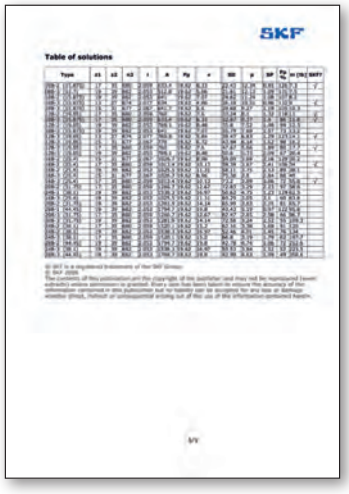
Chain size	Chain breaker designation
ANSI 25-60 / BS 04B-12B	PHC PT/C1 011
ANSI 60-80 / BS 12B-16B	PHC PT/C1 012

Chain drive design optimization

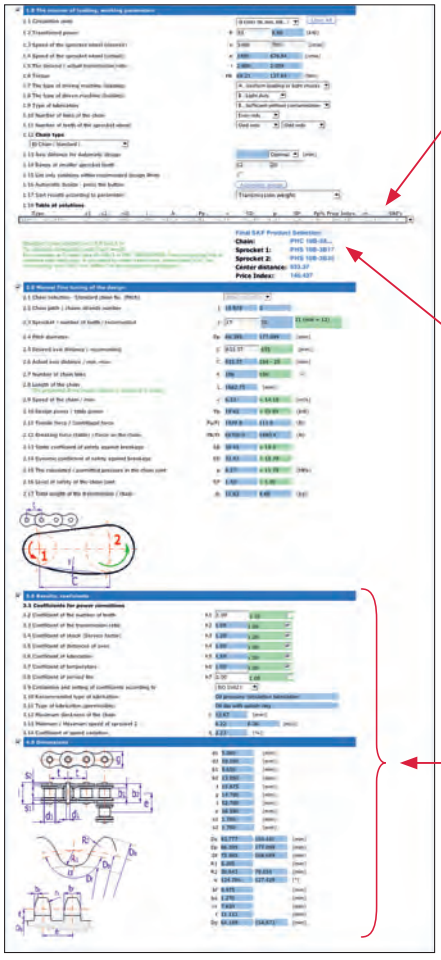
Chain drive calculation program

SKF has a calculation program to help optimize your chain drive system. Using your data, the program will select the most efficient and economical solution for your application. The program can be found at www.skfptp.com, under chain drives.





Chain drives



The system will show you a list of possible solutions for your drive which can be ranked in various ways (e.g. relative price)

The solution of your choice will be prompted in this area; if not satisfied, you can go back and choose an alternative

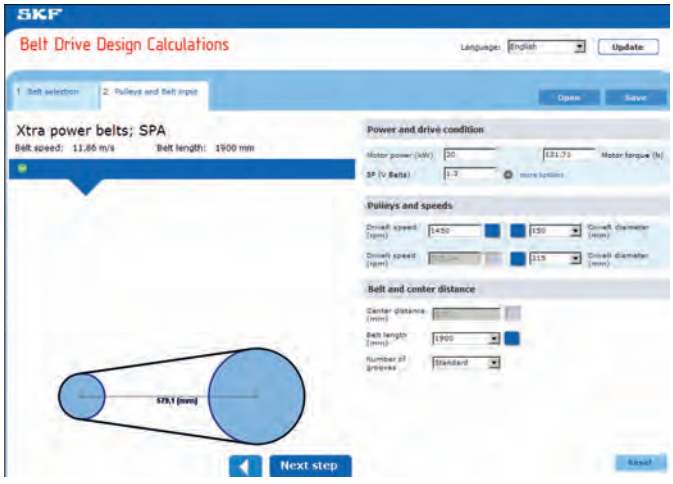
More specific details will be displayed in this area (e.g. dimensional data)

Belt drive design optimization

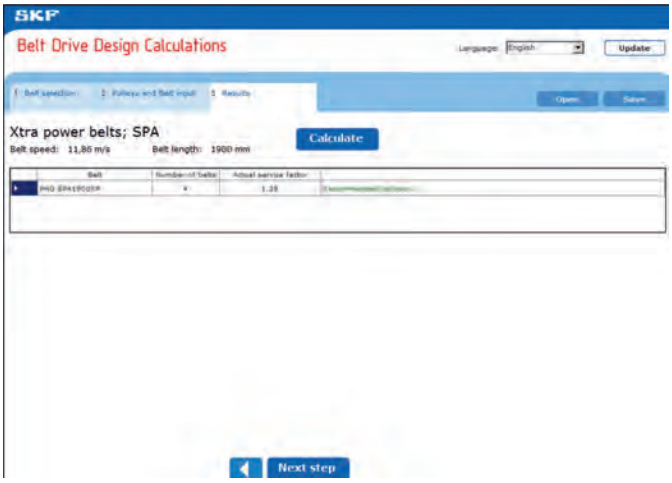
Belt drive calculation program

SKF has a calculation tool to help optimize your belt drive system. Using your data, the program will select the most efficient and economical solution for your application. The program can be found at www.skfptp.com, under belt drives.

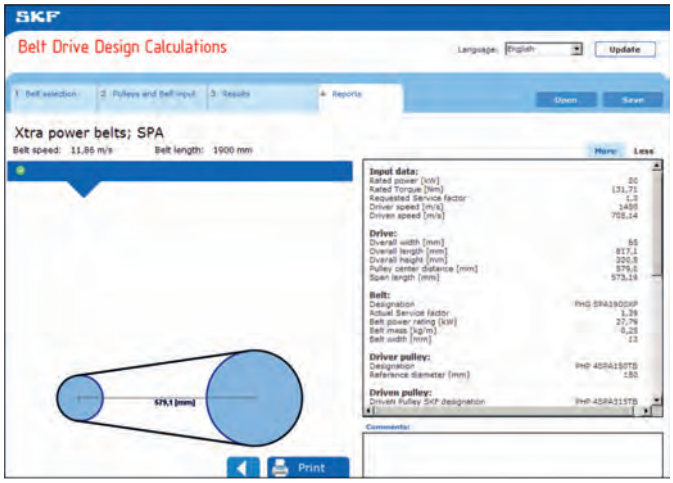
Step 1. Choose your preferred belt type out of a comprehensive list of belt profiles to start the calculation.



Step 2. Fill in basic application data, such as:
- *Power and drive conditions*
- *Pulleys and speeds*
- *Belt and center distance*



Based on your input, the system will provide recommendations for your application.



The program will provide a full report about your selection, that you can print and save as documentation.

Do you know?

SKF can serve you with Transmission Chains, Conveyor Chains, Sprockets, V-belts, Timing belts, Pulleys, Couplings, Taper Bushings, Bolt-On and Weld-On Hubs, FX keyless bushings through the same Authorized Industrial Distributor who serves you SKF Bearings

All SKF Power Transmission Products conform to International standards

A properly designed and well maintained V-belt drive can help you save energy and reduce maintenance costs

How to check V-belt tension and why is it so important?

Is there a V-Belt that does not require frequent tension checks and adjustments?

An un-balanced pulley can reduce bearing service life and can result in bearing failure

How a taper bushed pulley can help you in reducing downtime?

Why sometimes sprocket teeth wear out faster?

Is there a transmission chain for corrosive environment?

Why chains elongate and how elongation can be minimised?

How can elongation in a chain be measured?

All couplings are not alike, there can be substantial differences in their torque capabilities and characteristics

SKF can help you save on maintenance cost, increase uptime of the machine and partner you in improving efficiency. Please contact an SKF Industrial Distributor or SKF representative near you.

For more details write to: enquiry@skf.com

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