leitech

Breakthrough

Innovative gauging

Leitech Instruments

Side
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Leitech Instruments ApS

Leitech Instruments ApS is a Danish-owned company that produces and markets the patented and award-winning System Leitech worldwide.

System Leitech is a thread control system for internal threads, which measures the internal thread size and depth in one operation.
This instrument is the only thread gauge of its kind in the world that measures the thread size and depth in one operation. This gives the user an accurate and reliable measurement, and at the same time provides time-saving of up to 70%, compared to traditional thread gauges.

Today, the Leitech System is the standard tool for a number of leading companies worldwide. Therefore gauges are stocked in all international standards such as ISO, ANSI, JIS, STI etc. Available in dimensions from 2-22MM/2-56 - 7/8", with special tolerances and leads in accordance with your requirements and standards.

All gauges are available with a certificate.

In order to meet ever-increasing demands for quick delivery, we always have more than 2000 pieces in inventory.

The Leitech gauge has been awarded with the Danish Design Councils Prize.

www.leitech.dk · instruments@leitech.dk

System Leitech

The Hi-resolution Thread Gauge:

Is used in the same way as the Combi Gauge, but with 0.1mm or .005 resolution per division for depth. Also equipped with a locking device that allows the measuring sleeve to be locked at the depth reading, or at a preset depth. The placement of the thread hole to be measured is not always directly visible to the controller and the reading of the scale is therefor difficult.
The locking device on the Hi-res Thread Gauge makes it possible to read the scale after the measurement has been taken.

The Combi Thread Gauge:

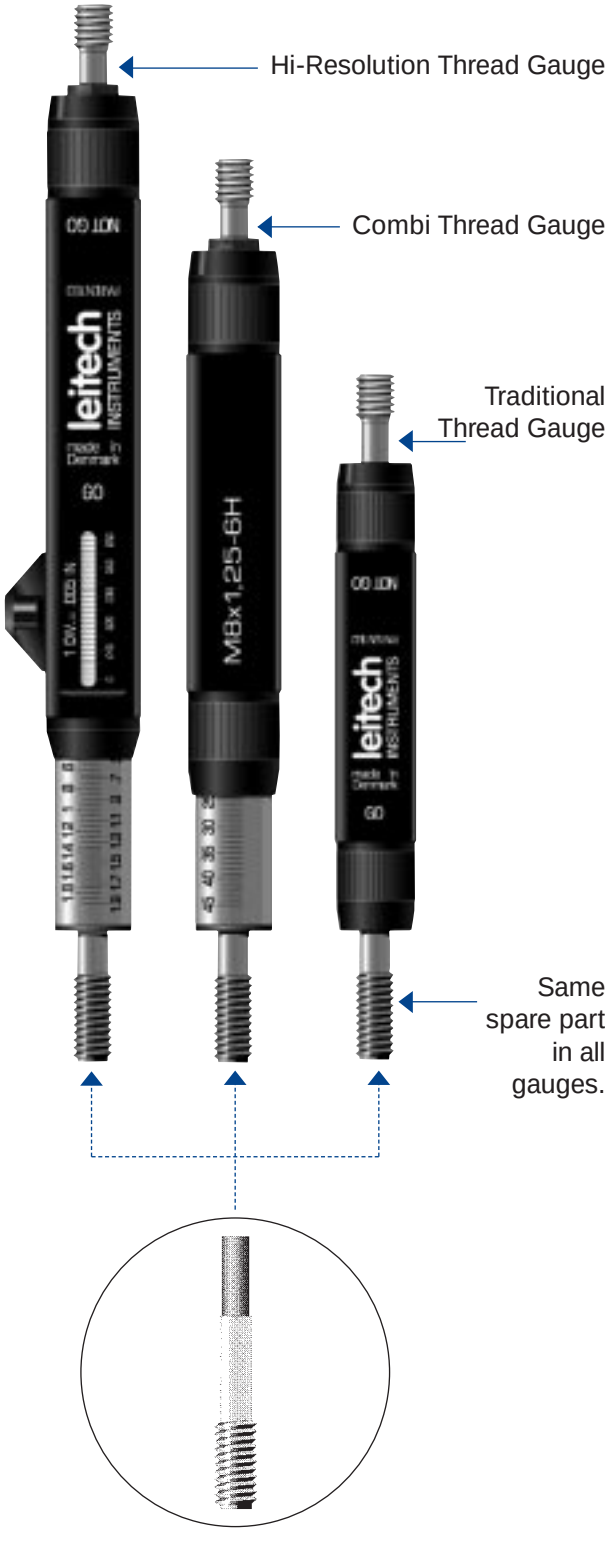
To control the thread tolerance, the Leitech Combi Thread Gauge is used in the same way as any normal double-ended thread gauge.
As the GO side is inserted into the thread hole, the telescoping measuring sleeve retreats into the aluminum body, providing the user with an accurate depth reading of 0.5mm or .025" resolution per division.
The NOT GO side is used in a conventional manner.

The Traditional Thread Gauge:

A normal double-ended thread gauge.

Thread Inserts:

Exchangeable on all gauges.



The gauge of the future

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Inserts

Side 4

5 advantages of the Leitech insert

1. The same insert is used in all our thread gauges.
2. Quick and easy replacement of a worn out insert.
3. The inserts are hardened and tempered to 62+/- 1HRc.
4. Our inserts are up to 100% longer, which gives a maximum wearability and the longest life at no extra cost. The control of pitch errors is also optimised.
5. All Leitech Gauges with a pitch diameter larger than 0,8 mm have the crest of the first full thread on Go according to Federal Standard H28/6. This means that the distance from the thread member from face to the crest of the first full thread is 0,5 pitch with a tolerance of 0,06 pitch.
This provides the user with an accurate depth reading, which is not possible without this. The use of traditional thread gauges will often provide the user with a wrong measuring of the depth.

Technical info

It is Leitechs objective to give our customers a maximum wearability on all our inserts.
Therefor our production always aims at the higher level of the tolerance area.
To ensure this objective, our production uses
Reishauser thread machines at 20°C ±0,5.
The Quality Section also works by 20°C ±0,5.

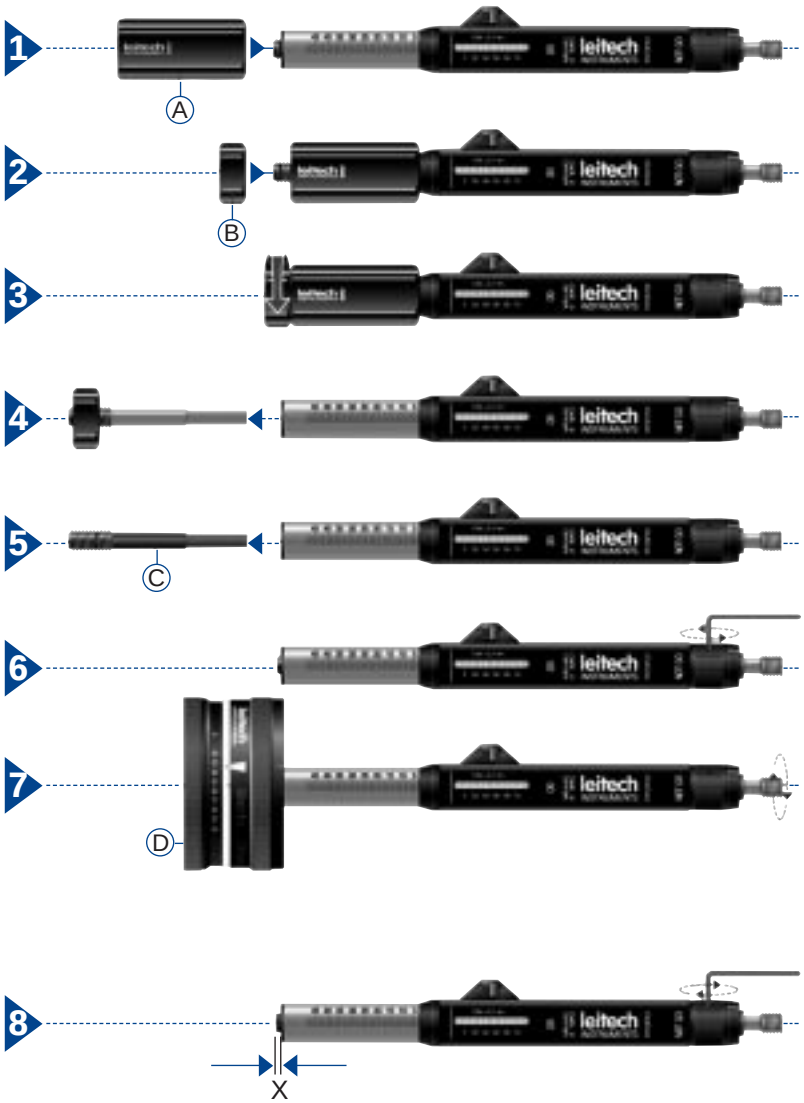
Instead of investing in a new complete gauge every time a gauge is worn out, the inserts on the Leitech gauge are of a special taperlock design, which can be easily replaced with a removal sleeve tool that can be delivered from Leitech.

Exchanging the inserts and calibration

A new gauge in approx. 2 min.!

Instead of investing in a new complete gauge every time a gauge is worn out, the Leitech advantage is that you merely replace the GO/NOT GO insert.

1. Slide the Member Removal Sleeve over the gauge member to be replaced (Green/Go & Red/Not Go).
2. Thread the nut on to the gauge member.
3. Tighten the nut against the Member Removal Sleeve.
4. Wrench the gauge member from the handle.
5. Insert the new gauge member. Tap against a soft surface to seat the gauge member into the handle.
6. Loosen the two locking screws on the handle with an Allen wrench.
7. Dial the pitch on the Calibration Master. Place the Go end of the gauge into the appropriate size hole. Grasp and turn the Not Go member and line up the Combi Gauge measuring scale at the .400" (inch) or 10mm (metric) line.
8. Re-tighten the locking screws finger-tight. The Combi Gauge is now set at the correct calibration length (X) for accurate functional thread depth measurement.



In connection with replacement and calibration you will need:

A: 1 Removal sleeve
B: 1 Nut
C: 1 Interchangeable GO insert
D: 1 Calibration Tool

Follow points 1-8.
At point 5 the GO insert is fitted into position with the use of a plastic hammer.

It is so simple - a new gauge - quickly and inexpensively.

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Delivery Program

ISO 1502 6H / Ansi 2B

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Metric Size	Handle Size	Measur. Depth
M2 x 0,25	200	10,0 MM
M2 x (0,4)	200	10,0 MM
M2.2 x 0,25	200	10,0 MM
M2.2 x 0,45	200	10,0 MM
M2.5 x (0,45)	200	10,0 MM
M3 x 0,35	200	10,0 MM
M3 x (0,5)	200	10,0 MM
M3.5 x 0,35	200	10,0 MM
M3.5 x (0,6)	200	10,0 MM
M4 x 0,50	300	19,0 MM
M4 x (0,7)	300	19,0 MM
M4.5 x 0,5	300	19,0 MM
M5 x 0,35	300	19,0 MM
M5 x 0,5	300	19,0 MM
M5 x (0,8)	300	19,0 MM
M6 x 0,75	300	20,0 MM
M6 x (1,0)	300	20,0 MM
M7 x 0,75	400	40,0 MM
M7 x (1,0)	400	40,0 MM
M8 x 0,75	400	40,0 MM
M8 x 1,0	400	40,0 MM
M8 x (1,25)	400	40,0 MM
M9 x 0,75	400	40,0 MM
M9 x 1,0	400	40,0 MM
M9 x (1,25)	400	40,0 MM
M10 x 0,75	400	40,0 MM
M10 x 1,0	400	40,0 MM
M10 x 1,25	400	40,0 MM
M10 x (1,5)	400	40,0 MM
M11 x 1,0	400	40,0 MM
M11 x 1,5	400	40,0 MM
M12 x 1,0	400	40,0 MM
M12 x 1,25	400	40,0 MM
M12 x 1,5	400	40,0 MM
M12 x (1,75)	400	40,0 MM
M14 x 1,0	500	50,0 MM
M14 x 1,25	500	50,0 MM
M14 x 1,5	500	50,0 MM
M14 x (2,0)	500	50,0 MM
M15 x 1,0	500	50,0 MM
M15 x 1,5	500	50,0 MM
M16 x 1,0	500	50,0 MM
M16 x 1,5	500	50,0 MM
M16 x (2,0)	500	50,0 MM
M18 x 1,0	600	80,0 MM
M18 x 1,5	600	80,0 MM
M18 x 2,0	600	80,0 MM
M18 x (2,5)	600	80,0 MM
M20 x 1,0	600	80,0 MM
M20 x 1,5	600	80,0 MM
M20 x 2,0	600	80,0 MM
M20 x (2,5)	600	80,0 MM
M22 x 1,0	600	80,0 MM
M22 x 1,5	600	80,0 MM
M22 x 2,0	600	80,0 MM
M22 x (2,5)	600	80,0 MM

Unc	Handle Size	Measur. Depth
2-56 Unc	200	10,0 MM
3-48 Unc	200	10,0 MM
4-40 Unc	200	10,0 MM
5-40 Unc	200	10,0 MM
6-32 Unc	200	10,0 MM
8-32 Unc	300	19,0 MM
10-24 Unc	300	19,0 MM
12-24 Unc	300	20,0 MM
1/4-20 Unc	300	20,0 MM
5/16-18 Unc	400	40,0 MM
3/8-16 Unc	400	40,0 MM
7/16-14 Unc	400	40,0 MM
1/2-13 Unc	500	50,0 MM
9/16-12 Unc	500	50,0 MM
5/8-11 Unc	500	50,0 MM
3/4-10 Unc	600	80,0 MM
7/8- 9 Unc	600	80,0 MM

Unf	Handle Size	Measur. Depth
2-64 Unf	200	10,0 MM
3-56 Unf	200	10,0 MM
4-48 Unf	200	10,0 MM
5-44 Unf	200	10,0 MM
6-40 Unf	200	10,0 MM
8-36 Unf	300	19,0 MM
10-32 Unf	300	19,0 MM
12-28 Unf	300	20,0 MM
1/4-28 Unf	300	20,0 MM
5/16-24 Unf	400	40,0 MM
3/8-24 Unf	400	40,0 MM
7/16-20 Unf	400	40,0 MM
1/2-20 Unf	500	50,0 MM
9/16-18 Unf	500	50,0 MM
5/8-18 Unf	500	50,0 MM
3/4-16 Unf	600	80,0 MM
7/8-14 Unf	600	80,0 MM

Unef	Handle Size	Measur. Depth
12-32 Unef	300	20,0 MM
1/4-32 Unef	300	20,0 MM
5/16-32 Unef	400	40,0 MM
3/8-32 Unef	400	40,0 MM
7/16-28 Unef	400	40,0 MM
1/2-28 Unef	500	50,0 MM
9/16-24 Unef	500	50,0 MM
5/8-24 Unef	500	50,0 MM
11/16-24 Unef	600	80,0 MM
3/4-20 Unef	600	80,0 MM
13/16-20 Unef	600	80,0 MM
7/8-20 Unef	600	80,0 MM

The above shown sizes are included in our standard inventory and the time of delivery is usually within 1 week.

G.-ISO 228	Handle Size	Measur. Depth
1/16-28 G.ISO	400	40,0 MM
1/8-28 G.ISO	400	40,0 MM
1/4-19 G.ISO	500	50,0 MM
3/8-19 G.ISO	600	80,0 MM
1/2-14 G.ISO	600	80,0 MM

Npt Ansi	Handle Size
1/8-27 Npt	400
1/4-18 Npt	500
3/8-18 Npt	600
1/2-14 Npt	600

Nptf - Ansi	Handle Size
1/8-27 Nptf L1	400
1/8-27 Nptf L3	400
1/4-18 Nptf L1	500
1/4-18 Nptf L3	500
3/8-18 Nptf L1	600
3/8-18 Nptf L3	600
1/2-14 Nptf L1	600
1/2-14 Nptf L3	600

For sizes not shown request a quotation, as we produce inserts up to M33 or 1-5/16 Inch.

Other deliveryprogram

System Leitech, of course can be delivered in all tolerances and spec. user-standards.

We have many of these in stock, so if you have a special need - do not hesitate to contact us.

Here is a selection of some of the standards and tolerances that we produce:

Int. standards:
ISO, ANSI, JIS, NPT/NPTF, DIN, BS, NF, PG, Australian Std.

Auto standards:
BMW, BOSCH, FIAT, FIAT Aero, ISO 228, Swedish Ind., SAAB, VF, VS, VW, W.

Helicoil standards:
Sti, Sti BS, Sti F, Sti Mil., Sti N, Sti W 4H, Sti W 5H, Sti X, Sti DIN.

Tolerances:
1B, 3B, 4E, 4G, 4H, 4H/5H, 5G, 5H, 6E, 6G, 6G/6H, 6H/4H, 6H/7H, 6H/8H, 7G, 7H, 8G, 8H.

Plain plug gauge:
Plain plug, Plain plug VW, Ring.

Covering:
Tin, Chrome.

Other spec:
Left thread, Long thread.
Our standard inventory goes from M2 to M22.

Although we also produce gauges from M1.6 to M33 / 1"5/16

Special gauges

Side
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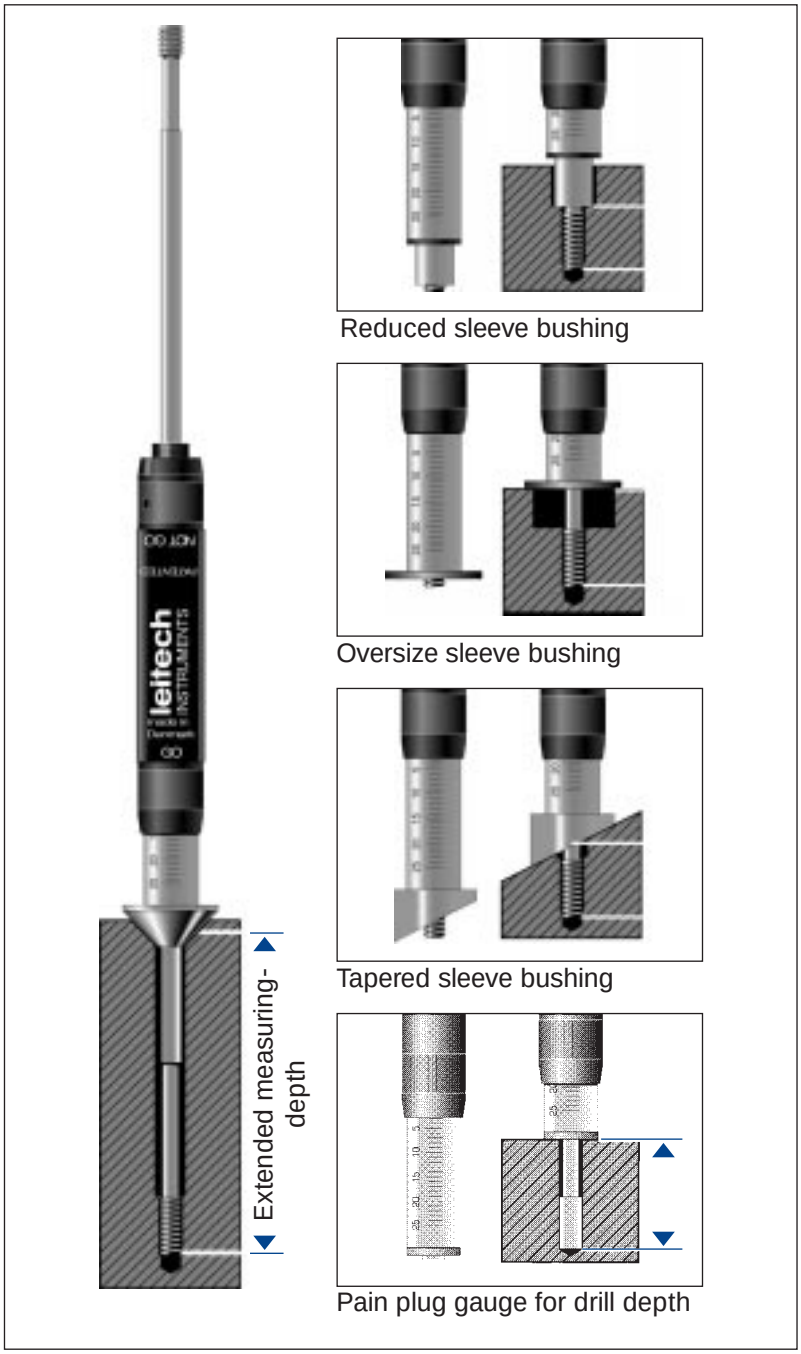

System Leitech

can be delivered in many special versions to solve almost any control problem of internal threads.
If you have a special need, do not hesitate to contact us.

The examples shown will give you an idea of the many possibilities you have by using System Leitech.

Quality

Zeiss Universal Length
Measuring Machine ULM 03-600

Zeiss 2 co-ordinate
Measuring Machine ZKM 01-250

The quality of the products produced at Leitech has obtained great credit around the world.
This is because of the extreme demands that are required from our production.

The thread grinding is carried out at 20˚C ± 0.5°. There is 100% control on all products, as our production always aims at the higher level of the tolerance area to provide the user with a maximum wearability.

The quality section also works at 20˚C ± 0.5° and our equipment is among the best on the market - traceable to international standards.

At Leitech we focus on the quality as we are convinced that high quality is good business for our customers.

Certification

Certificate of calibration

All Leitech gauges can be supplied with a certificate of calibration for a nominal charge.
On the certificate the measuring results reached for each thread member are stated, as well as tolerance limits for the standard and tolerance class employed. The thread member is marked with a serial number, shown in the certificate. A gauge with a Go and Not Go end will need certificates for each member.

A & B Certificate

A certificate of calibration provides the measured values for the thread member major diameter, pitch diameter, flank angle, minor diameter and pitch.
B certificate of conformance states only the measured pitch diameter.

All Leitech measuring equipment is traceable to the international length standard through British Calibration Service no.0068 and inch threads are traceable to the National Bureau of Standards, Washington D.C.

Why Leitech?

Save 17% on Machine Hours and Tool Consumption:

Companies that drill and tap large quantities of threaded holes that are 15% to 40% deeper than necessary to meet depth requirements are creating additional expense! Tool wear and breakage plus machine time increases dramatically.

If your company produces 1000 holes per day, and if - for good measure - they are just 1,7mm to deep, this means that in a year a surplus of 374 mtrs of thread is cut.
How much does 374 mtrs thread cost?

The Leitech Combi Gauge allows your machinist to adjust drilling and tapping depths precisely at set-up time. In addition the operator can monitor this depth as the parts are produced.

Reduce Quality Control Time by 45%:

The Leitech Combi Gauge allows you to qualify your minimum GO thread size and length - all in one operation. Fast, and very cost effective. The measuring sleeve allows direct reading of the length when the gauge is fully inserted into a thread hole.

Tests with an engine block with 99 threaded holes demonstrated how much time that System Leitech saves.

In a V12 engine block from one of Europe's leading car manufacturers 99 threaded holes in 4 thread sizes were measured and inspected for tolerance and length.

Using conventional gauges the inspection time was:
71 minutes.

Using the Leitech Combi Gauges the inspection time was:
39 minutes.

This represents a reduction of 45% of the original time. The precision of Leitech and the direct reading made it possible to meet increased quality demands.

Reduce your number of gauges by 72%:

7 Leitech Combi Gauges are all an American automotive plant needs for the overall control of a 4 cylinder, 16 valve engine with 103 threaded holes.

An industry that uses conventional gauges normally requires individual gauges for the inspection of each thread hole depth. This means that it is necessary to work with a large number of different gauges. However, many gauges mean unnecessary costs for the gauge stock and an increased risk of human error.

As one Leitech Combi Gauge can measure all thread lengths within its range, the number of gauges can be reduced considerably when Leitech is introduced.

Often a single Leitech Combi Gauge can replace several different conventional gauges with filed notches indicating minimum thread depth.
This results in less money tied up in gauges and fewer errors.

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Do you wish to:

**Reduce your tool consumption? - Reduce your machine hours? - Offer your customers fast and safe delivery?
Raise your level of quality? - Use special products for internal thread control?
Have a faultless measuring method? - Reduce your control time? - Reduce the numbers of thread gauges?
Have a faster set up of your CNC machines and production lines? - Contribute to a higher profit at your company?**

We can help you with all that!

More than 250.000 uses System Leitech today!

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