The **KEENAN**® name is enduring.

Our products are **STRONG** and **RELIABLE.** We are **RESPONSIVE** and **GLOBAL** in order to meet changing market conditions. We are **SERIOUS** and **PROFESSIONAL** about our business, highly **INNOVATIVE** and **DEDICATED** to our customer success. KEENAN machines are of the **HIGHEST QUALITY,** keeping us competitive industry **LEADERS.**

KEENAN®
an **Alltech** company

KEENAN and Alltech

driving on-farm feed efficiency and profitability gains globally

Established in 1978, KEENAN is a respected leader pioneering profitable farming solutions, focused on maximising feed efficiency. Over the course of nearly four decades in business, we have earned a particularly strong reputation for manufacturing quality mixer wagons with cutting-edge designs. In 2016 KEENAN joined the Alltech family of companies.

At KEENAN we interpret data for more than 1,000,000 cows from close to 10,000 farms across 26 countries, representing one of the world's largest field databases on dairy feed efficiency.

A keen advocate for environmental sustainability, we have developed a range of solutions to enable farmers to overcome agricultural production challenges, improve rumen health, feed efficiency and ultimately make feeding their herds a simple, consistent and successful task each day.

The introduction of our self self propelled range of KEENAN machines marks a new venture for the company. We have spent a great deal of time researching the loading/chopping mechanisms available on the market and in Storti have identified a partner who can deliver self-loading technology that supports the core KEENAN ethos of retaining forage structure.

KEENAN®
an **Alltech** company

Founded in 1980 by Irish entrepreneur and scientist Dr. Pearse Lyons, Alltech improves the health and performance of people, animals and plants through nutrition and scientific innovation. With nearly 100 manufacturing sites globally, Alltech is the leading producer and processor of yeast and organic trace minerals, and its flagship algae production facility in Kentucky is one of only two of its kind in the world.

The company's guiding ACE principle seeks to develop solutions that are safe for the Animal, Consumer and the Environment and is actively supported by close to 5,000 team members worldwide.

Headquartered just outside of Lexington, Kentucky, USA, Alltech has a strong presence in all regions of the world. For further information, visit www.alltech.com

Global Spread of KEENAN Machines

IRELAND	JAPAN
FRANCE	MALAYSIA
UK	INDONESIA
DENMARK	AUSTRALIA
NORWAY	NEW ZEALAND
SWEDEN	SOUTH AFRICA
GERMANY	ZIMBABWE
NETHERLANDS	BOTSWANA
BELGIUM	KENYA
SPAIN	TURKEY
PORTUGAL	RUSSIA
ROMANIA	ICELAND
BULGARIA	ZAMBIA
HUNGARY	LITUANIA
CZECH REPUBLIC	MALTA
SWITZERLAND	CYPRUS
SLOVENIA	GREECE
POLAND	FINLAND
ESTONIA	SRI LANKA
LATVIA	PHILIPPINES
MOROCCO	SAUDI ARABIA
CANADA	UAE
USA	OMAN
MEXICO	YEMEN
VENEZUELA	COLOMBIA
PERU	MAURITIUS
CHILE	SENEGAL
ARGENTINA	SURINAME
BRAZIL	PAKISTAN
CHINA	NAMIBIA
INDIA	THAILAND

Map labels:

NORWAY
FINLAND
SWEDEN
ESTONIA
DENMARK
LATVIA
LITHUANIA
IRELAND
UK
NETHERLANDS
POLAND
GERMANY
BELGIUM
CZECH REPUBLIC
FRANCE
HUNGARY
SWITZERLAND
ROMANIA
SLOVENIA
BULGARIA
SPAIN
PORTUGAL
GREECE
MALTA

The MechFiber Difference

KEENAN machines are unique in the proven nutritional benefits they deliver. Each KEENAN is engineered to use a gentle mixing action to produce evenly, thoroughly mixed, light, fluffy feed which is never over or under mixed. We call this optimal mix 'MechFiber'. Using our InTouch technology and support all feed ingredients are consistently added in the same order and ratios.
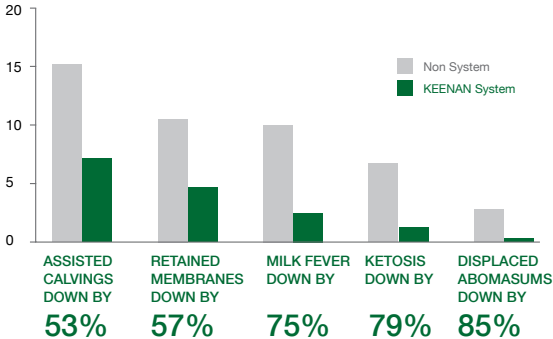
Independent trials have consistently shown that MechFiber retains the fibre structure to stimulate rumination, allows greater absorption of energy and maximised feed conversion efficiency.

Scientific Results - MechFiber Research

Numerous scientific studies* have corroborated what KEENAN has known for decades - the MechFiber fed rumen is healthier and as a result animals are more productive.

RESEARCH MONITORING 24,450 DRY COWS ACROSS 277 FARMS SHOWED THE FOLLOWING:

33% reduction in time the MechFiber-fed rumen is below pH 6.0

Non System
KEENAN System

ASSISTED CALVINGS DOWN BY	RETAINED MEMBRANES DOWN BY	MILK FEVER DOWN BY	KETOSIS DOWN BY	DISPLACED ABOMASUMS DOWN BY
53%	57%	75%	79%	85%

THE MECHFIBER MIX - FORAGE WITH STRUCTURE AS NATURE INTENDED

Professor Drackley of University of Illinois also found **"Substantial gains in animal health"** in the form of:

- More consistent intakes
- Less fluctuation in body condition
- Increased lactation persistency
- Less liver fat accumulation

16% More Milk/kg Feed

"Subtle changes in rumen conditions had major effects on feed efficiency"
Professor Jim Drackley

KEENAN InTouch

KEENAN INTOUCH IS A LIVE REVIEW AND SUPPORT SERVICE FEATURING ADVICE FROM SKILLED NUTRITIONISTS TO ENSURE ANIMALS MEET THEIR PERFORMANCE POTENTIAL EVERY DAY.

Working together with Intel®, our unique KEENAN InTouch technology:

- Automates data sharing
- Enhances nutritional analysis
- Improves analytics
- Develops business models that provide solutions to farmers around the world

Cloud computing connecting 2,000+ customers globally.

Feeding 200,000+ animals.

30,000+ advice & nutrition support calls globally in 2016. Average wait time is less than 14 seconds.

Real-time automated cloud analytics monitored by nutritionists.

Global presence - Call centres in Ireland,France and New Zealand.

Providing the farmer with control, accuracy and real-time feed advice.

How does InTouch Technology work on Farm?

- Provides feed advice and ration formulation
- Delivers consistency in both feed and mixing
- Improves milk yields and milk solids
- Cattle finish quicker
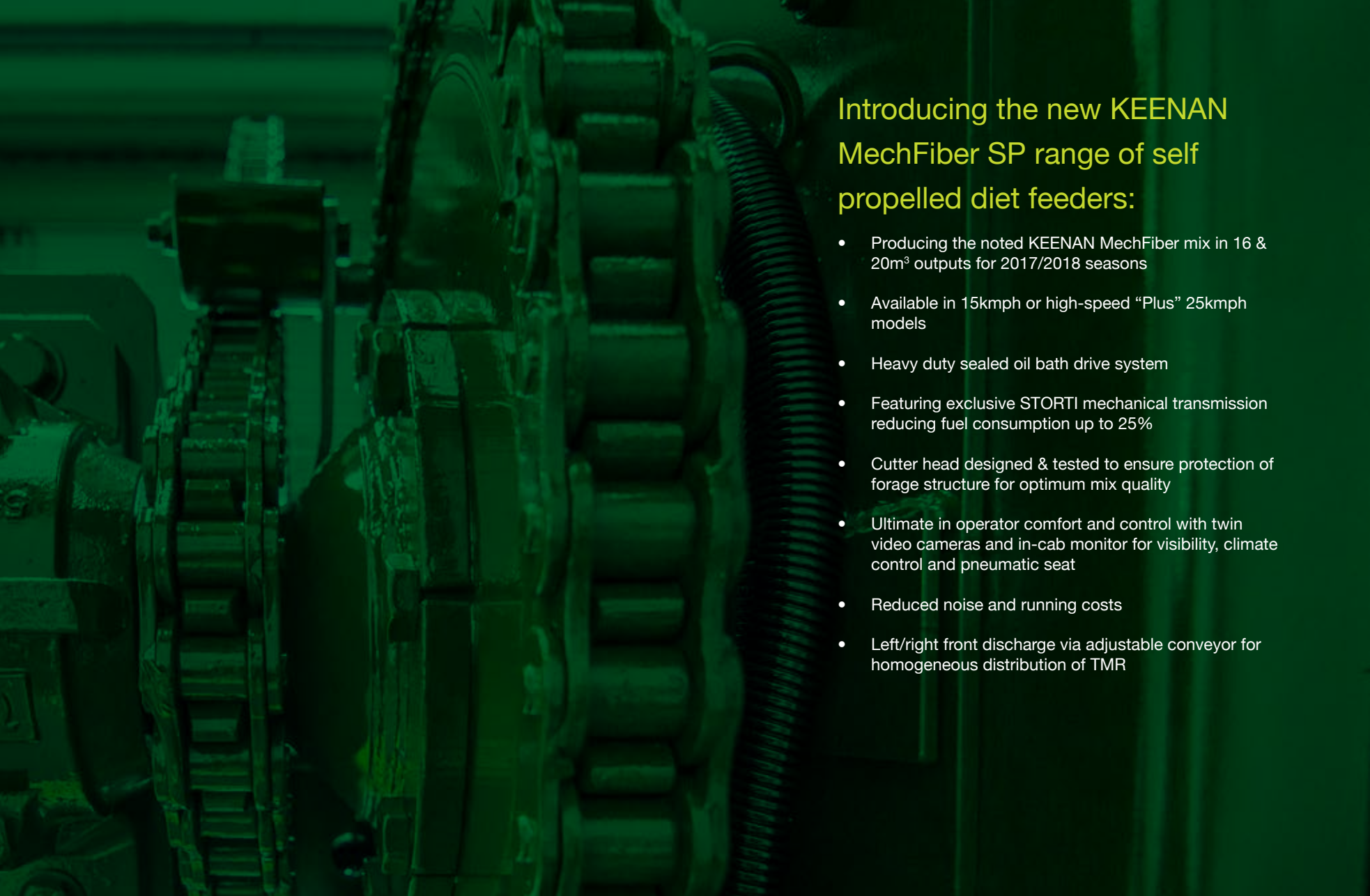- Improves herd health
- Monitors and controls feed costs

CLOUD TECHNOLOGY THAT IS CHANGING THE AGRICULTURAL INDUSTRY

DESIGN.
INNOVATION.
PERFORMANCE.

KEENAN

KEENAN MechFiber345SP

FPS
Fiber Pick Up System
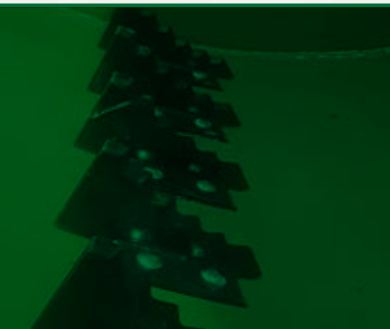
Introducing the new KEENAN MechFiber SP range of self propelled diet feeders:

- Producing the noted KEENAN MechFiber mix in 16 & 20m^3 outputs for 2017/2018 seasons

- Available in 15kmph or high-speed "Plus" 25kmph models

- Heavy duty sealed oil bath drive system

- Featuring exclusive STORTI mechanical transmission reducing fuel consumption up to 25%

- Cutter head designed & tested to ensure protection of forage structure for optimum mix quality

- Ultimate in operator comfort and control with twin video cameras and in-cab monitor for visibility, climate control and pneumatic seat

- Reduced noise and running costs

- Left/right front discharge via adjustable conveyor for homogeneous distribution of TMR

CLASS-LEADING CUTTER HEAD TECHNOLOGY

The cutter head used in the KEENAN MechFiber SP range has been engineered to deliver rapid loading of a vast number of products (grass silage, hay, waxy maize, pulp, pellets, flour, square or round bales of straw or hay, etc.) leaving a clean, uniform face for optimum pit face management.
The tungsten-coated blades feature a unique crossed arrangement, performing clean cuts without damaging the structure of the fibre, even with very compact silages.

SPEED. PRECISION. VERSATILITY.

The unique placement of the blades and configuration of the loading channel allows the cutter to load in both directions & easily run in reverse if needed. High speed loading belt drastically reduces mix preparation time.

PROVEN PERFORMANCE BENEFITS

KEENAN®
an **Alltech** company

Extensive testing at INRA in France has shown the Storti design of cutter head and loading arm out-performed the competition

| Brand | Silage fiber destruction | | | Loading hay (large bale format) | | | | |
	Average length from the silo (mm)	Average length from the inlet belt (mm)	Destruction (mm)	Destruction (%)	Load (400kg)	Time in "sec"	Flow t/min	Engine Rpm
Mutti	9	8.01	0.71	8.14%	415	7'33	55	2500
Faresin	9.3	8.2	1.1	11.83%	410	3'39	112	2000
Kuhn	9.74	8.67	1.07	10.99%	400	2'01	198	2500
Siloking/ Kverneland	8.89	8.08	0.81	9.11%	400	4'08	97	2000
Sgariboldi	9.4	8.7	0.7	7.45%	410	7'28	55	1800
Rmh	9.23	7.92	1.31	14.19%	410	1'50	224	1750
Storti	9.14	8.76	0.38	4.16%	420	1'15	336	1800

- 50- 200% less silage fibre destruction
- Up to 6 times faster loading
- Highly efficient engine RPM

OUR ENGINEERING DIFFERENCE

The KEENAN mixer has a unique two-chamber system
- both a mixing chamber and a separate discharge
chamber.

The two-chamber system, together with the 6-paddle reel
and our patented fixed knives system
is how we produce MechFiber - the open fluffy mix
that is unique to KEENAN.

A QUALITY OF MIX THAT BENEFITS BOTH
YOU AND YOUR ANIMALS.

DISCHARGE CHAMBER

MIXING CHAMBER

6 PADDLE SYSTEM

AUGER

FEED OUT COVER

PERMANENTLY
FIXED KNIVES
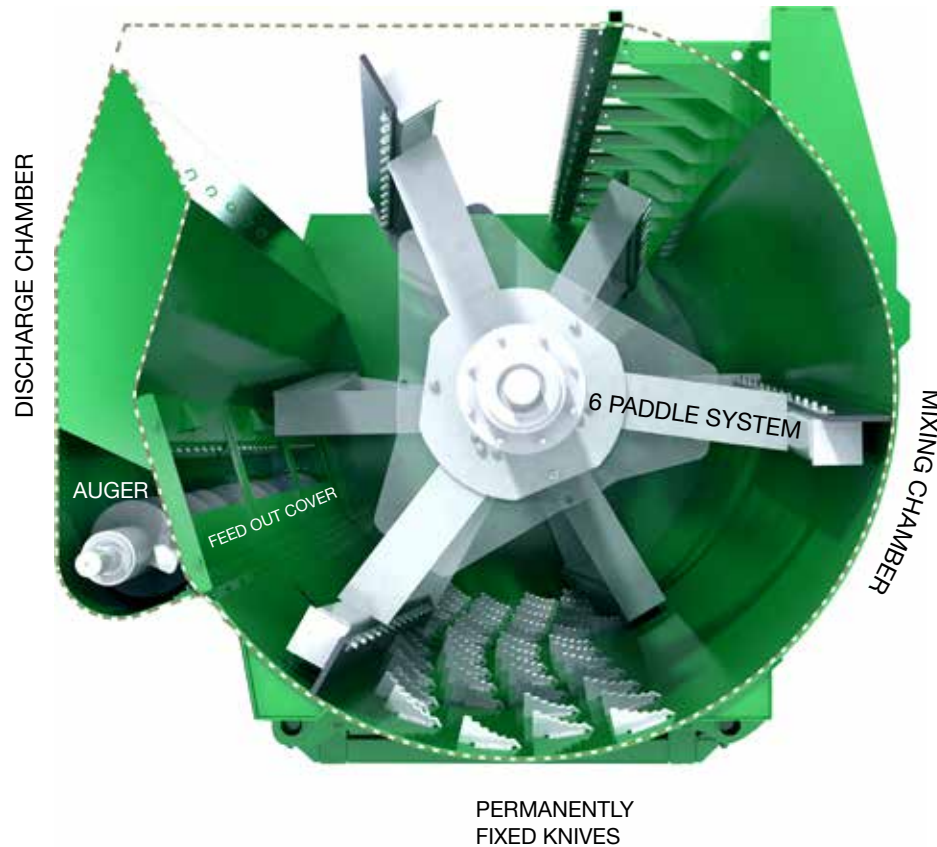
- Mixing chamber containing 6-paddle reel with fixed mounted knives at the bottom

- The paddles gently lift and tumble the added materials across the blades ensuring feedstuff is cut to an optimal length without destroying the quality of the fibre. This is to create a mix with the correct chop length and structure for optimum rumen health

- The two chambers are separated by an exit door which opens when the feed is mixed and ready to be fed out through the discharge chamber

- The auger is housed in the discharge chamber to evenly dispense feed to the animals. Traditional feed mixers house the auger inside the mixing chamber, which can lead to physical damage to the feed, compromising the mix quality

- InTouch Controller is connected via the Internet to our InTouch monitoring software. This records and communicates ingredient weights, diets, rotations, mixing speed and mixing accuracy. Our advisors monitor this information daily to safeguard against problems on-farm

FUEL EFFICIENCY & ENGINE PERFORMANCE

The KEENAN MechFiber SP range of machines are powered by the high-performance Iveco FPT engine (4 cylinder FPT, N45 Tier4b 125 kw @2200rpm. Torque 712 Nm @ 1500rpm)

- Engine: + 25% Power
            + 25% Torque

- Adblue + DOC

- Number Cylinders: 4

- Engine Size: 4.5 L

- Turbocharged Charge Air Cooled

- Fuel System: Bosch HPCR

- Power: 125 kW @ 2200 rpm

- Low idle speed (rpm) ± 750

- DEF[**]/AdBlue consumption at peak torque and rated power (% of fuel cons.) 8-7,2

- Minimum starting temperature without auxiliaries (°C) -15 °

- Oil and oil filter maintenance interval for replacement [***] (hours) 500

- Double disk Stromag clutch for maximum torque
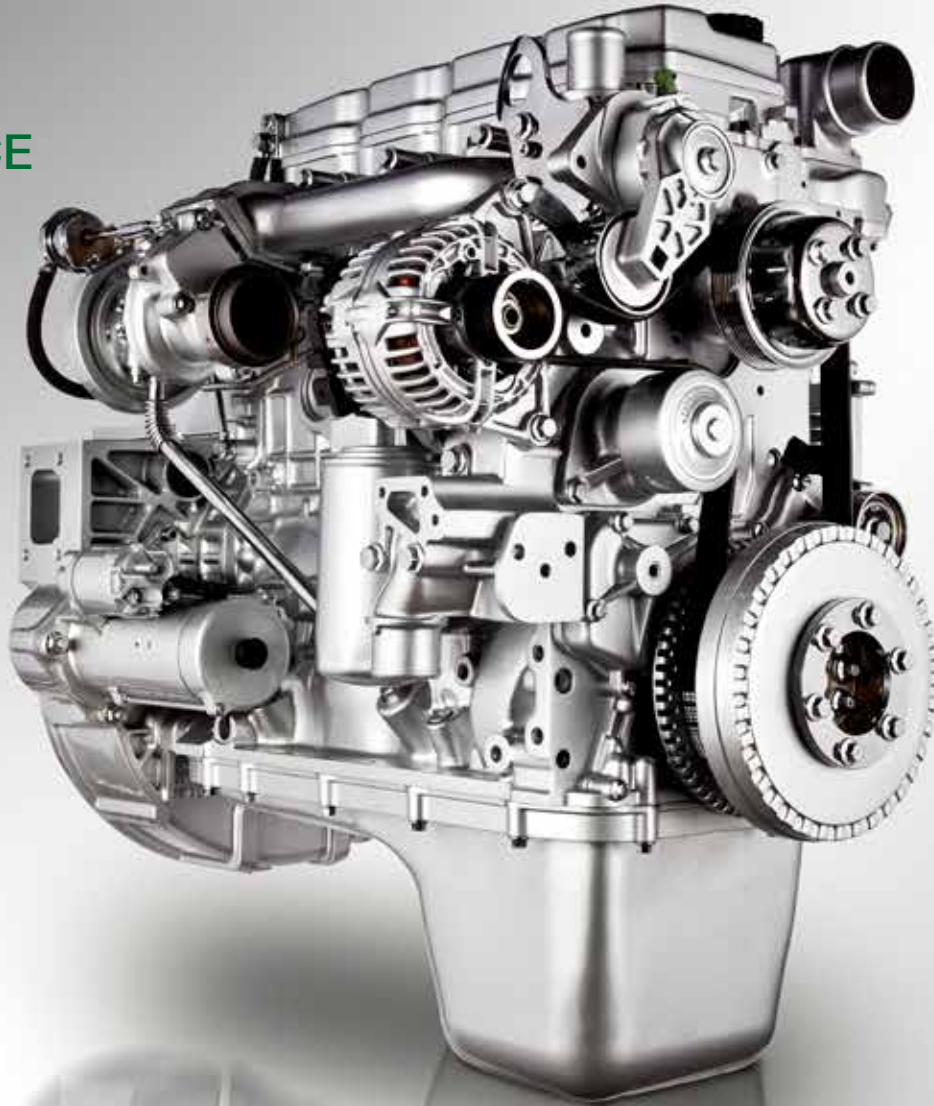
OPERATING SYSTEM – CLEVER DESIGN & EASE OF MAINTENANCE

Features mechanical drive to the 6-paddle reel. This exclusive engineering system, by means of a specially designed gearbox and PTO shaft, transfers all the power from the engine to the mixing system, thus reducing fuel consumption (by up to 25%) as well as reducing maintenance costs.

Since there is no hydraulic pump and motor, the risk of expensive replacements and/or downtime is reduced.

The drive to the mixer paddle is performed by means of a specially designed hydraulic clutch activated by an electric button situated in the cabin.

The operator is free to start and stop the mixing system at any time.

The clutch is equipped with a mechanical wear control system.

Double rocking foot pedals for seamless control of cutter head loading – eliminating the need for stopping, reversing & excessive braking.

Automatic Greasing unit

Heavy duty sealed oil bath drive system

MACHINE HANDLING & ROAD PERFORMANCE

Chassis, braking system, suspension system and weight distribution have been developed based on the latest technology used in the automotive industry

The chassis is composed of rigid horizontal beams. The front disks have a wide diameter and the braking system is hydraulically operated, while the rear wheels are equipped with drum brakes.

Front tyres are R 19.5 type and rear wheels are of R 22.5 type. The rear tyres have a mixed profile suitable for road and off-road applications.

Independent hydro pneumatic suspension system on each wheel.

DRIVER COMFORT & CONTROL

- Twin video cameras and in-cab display monitor for ultimate driver visibility
- Slim-line steering column further optimising window surface exposure & view
- Safim pump brakes
- Double rocking foot pedals
- Climate control
- Comfort pneumatic seat
- 4.5" digital performance display
- Additional external light
- InTouch Controller for Diet optimisation in each and every mix

KEENAN MechFiber345 SP

		SP	SP+
Max speed	Km/H	25	40
Engine power	kW/HP	125/170	125/170
Nett weight	kg	13900	14150
Max gross weight	kg	17500* °	16350
		mm	mm
Length (driving)	a	9640	9640
Length (parked)	b	9410	9410
Wheelbase	c	3980	3980
Track width	d	2365	2365
Overall width	e	2563	2563
Cab height	f	2475	2475
Overall height	g	3040	3120
Discharge height	h	1020	1100
Max milling head height	i	5250	5250

- Tank Weight 7500 kg

* 25 km/h ° 15km/h 20050 kg

1020mm (Feedout Height)

9640mm (Length)

3040 m (Height)

2365mm (Track Width)

2550mm (Machine Width)