

SLIM
CURVY
Sexy

TURBO
BILLET
COMPRESSOR
WHEEL

We sell
EXCITEMENT

- Performance
- Technology
- Selection
- Delivery
- Lowest Risk

All Sizes All Model



MORE *Sexy*
MORE POWER



KTS TURBOBILLET X



www.ktsturbobilletx.com



feel the pulse
of a **racing superstar**
3D Scanning of a Compressor Wheel



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...They must be of
HIGH PERFORMANCE &
SUPERIOR in every aspect... 

— Promise Of «KTS

CEO's Message

“

It is an unbearable thought to me that someone using my performance impellers judge them as non-exciting or inferior.

Our impellers must stand any objective test: They must be of high performance & superior in every aspect.

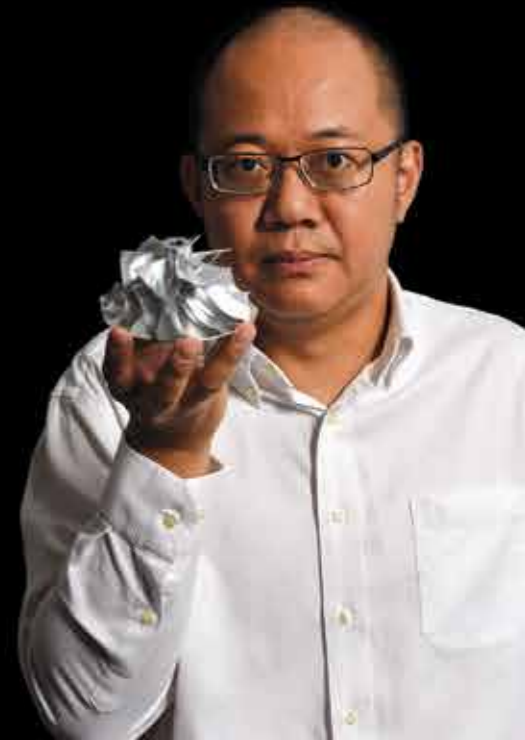
I have built the KTS business model on this principle: rather lose money than lose the trust of my customers.

The integrity of my promise & trust in the performance of my impellers always means more to me than temporary gain.

”

Mike Toh
Owner CEO | Chief eXcitement Officer
michael@ktsturbobilletx.com

Inspired by Robert Bosch 1861-1942



Introduction

KTS Turbobillet X (KTS) is a specialty manufacturer of high performance Machined-From-Solid (MFS) Compressor wheel, also known as Billet Impeller.

We take pride in our work. Our value proposition is eXcitement - all that we do revolves around offering you technology, performance, selection, delivery and lowest risk. KTS billets are proven around the world and insisted by a discerning customer base consisting over 600 turbo specialists, turbo manufacturers, tuners and race teams.

What they, and we, have in common is a dedication to building a high performance turbo on which eXcitement will be celebrated.

With close to 3000p/n, our aspiration today is to produce them on time and ahead of time, with the same consistent quality befitting the eXcitement proposal. KTS subscribes to Industry 4.0 and is investing significantly in technologies, robotics and processes to delight our customers.

Because our aspirations are here, so are our goals. For us, and for you, only the very best is good enough.



“ Earth’s **LARGEST** Operator of
5-Axis Machine & Robots for
Aftermarket Billet Wheel ”



**Industry 4.0
@ KTS**

Industry 4.0 requires the integration of all systems with the machine and the exchange of digital information exchange in manufacturing technologies, to create what has been called a "smart factory". It encompasses the concept of "The internet of things (IoT)" - a network of physical objects - devices, machines, robotics, buildings and other items - embedded with electronics, software, sensors, and network connectivity that enables these objects to collect and exchange data. The objective is to integrate the entire organisation and planning with the production.

KTS is gearing up to being this smart factory.





01

We sell

EXCITEMENT

PERFORMANCE

The soul of performance is now
UNLEASHED.

PERFORMANCE

We advocate Performance Design - a combination of SlimNose, SlimHub, SlimBack, thin blades, long blades, high blades, tapered tips and low weights - that will increase performance, rather than a similar OE geometry as a mere replacement for the same compressor housing.

Our MFS impellers with Performance Design are 'slim, curvy and sexy' and come with the most options: forward, reverse, threaded bore, boreless, 4+4, 5+5, 6+6, 7+7, 8+8, 9+9, 10+10, 7+0, 8+0, 9+0, 10+0, 11+0, 12+0,

tapered tips, cutback, blade heights, trailing angles, flank mill, point mill, racing applications, 400mm, etc.

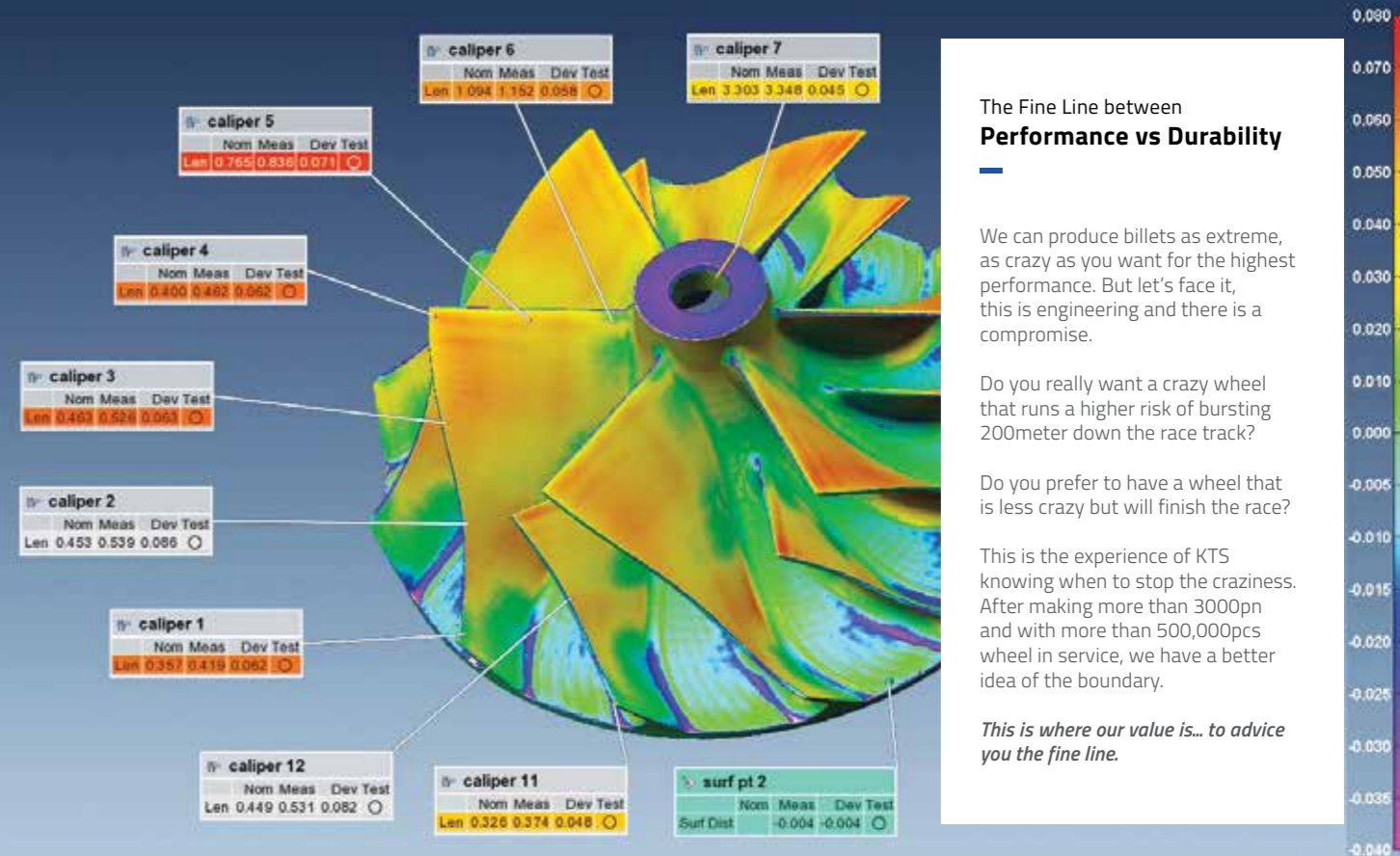
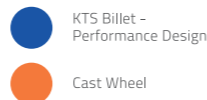
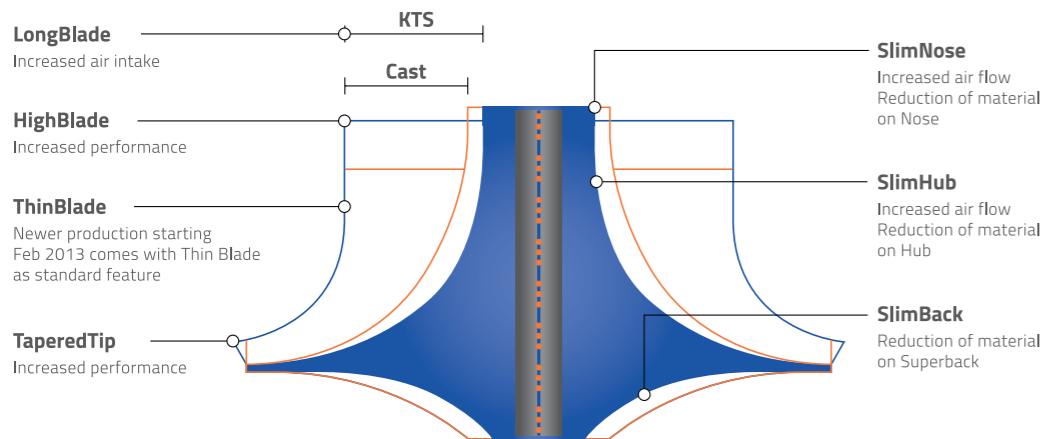
They are highly customisable and minimal order quantity (MOQ) for Performance Design starts from 1 piece.

The soul of performance is now unleashed.



Schematic

Billet Compressor Wheel



The Fine Line between Performance vs Durability

We can produce billets as extreme, as crazy as you want for the highest performance. But let's face it, this is engineering and there is a compromise.

Do you really want a crazy wheel that runs a higher risk of bursting 200meter down the race track?

Do you prefer to have a wheel that is less crazy but will finish the race?

This is the experience of KTS knowing when to stop the craziness. After making more than 3000pn and with more than 500,000pcs wheel in service, we have a better idea of the boundary.

This is where our value is... to advice you the fine line.

02

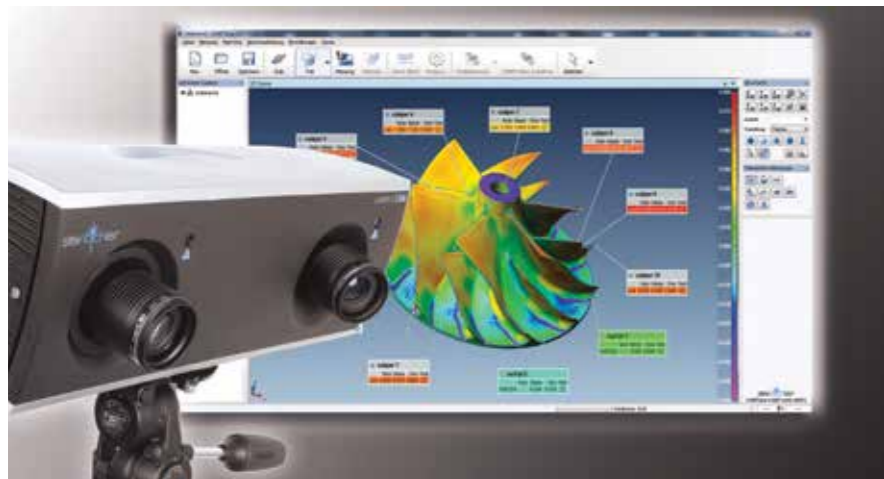
We sell

EXCITEMENT

TECHNOLOGY

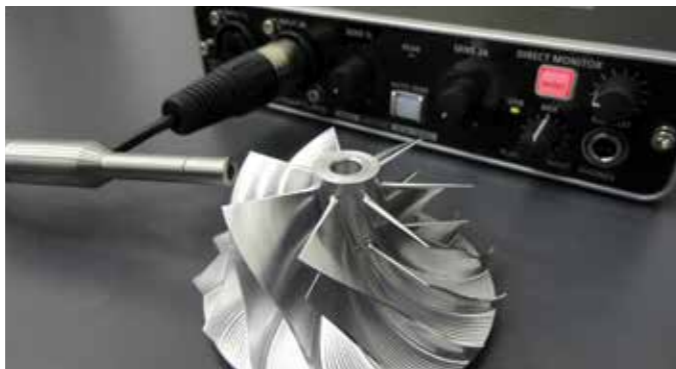
We count on a huge library of impeller,
to **SATISFY** your **WISHES AND DREAM.**





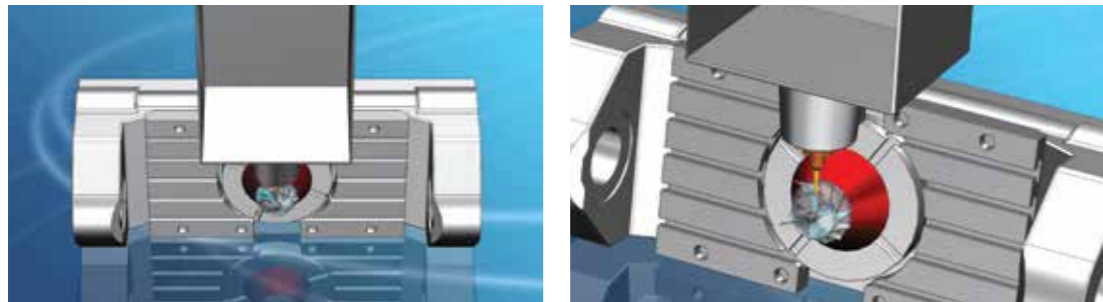
A. Development

KTS has vast experience with turbocharger design and the understanding of the functionality of the parts. Our development team makes measurements and calculations, analyses aerodynamics and natural frequencies, produces geometric and stacked-up tolerances, and specifies finishing to ensure KTS MFS impellers perform exactly to the design intention.



We count on a huge library of impeller to select, match and fine-tune to the requirement of our customers, satisfying your wishes and dreams.

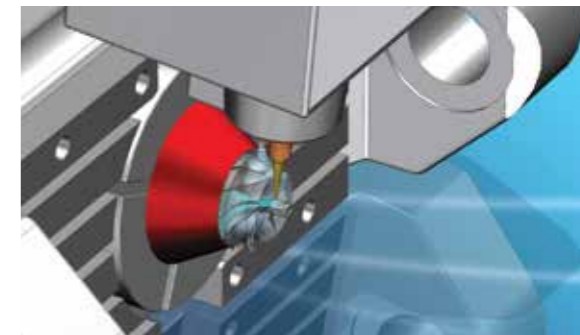
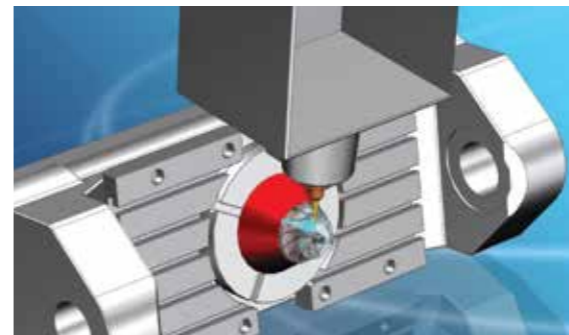
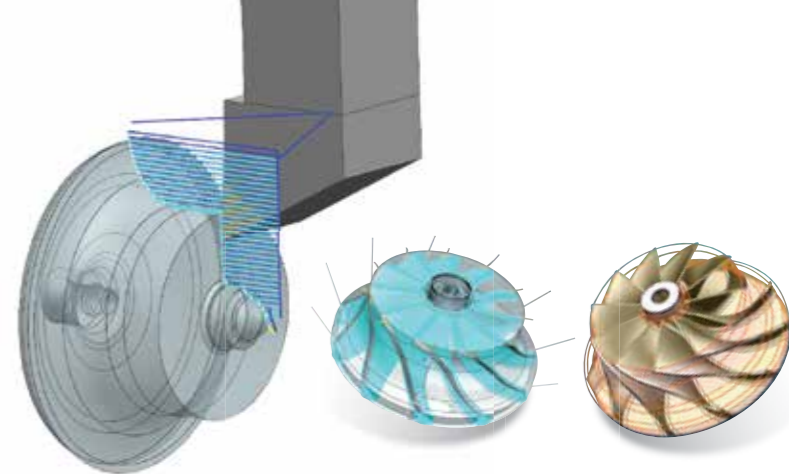




B. Software

Cutting-edge CAD/CAM software offers KTS engineers shorter design times, newer capabilities, advanced simulations and integrated machining operations, allowing design changes to be cascaded to manufacturing at the click of a button.

We are able to simulate the MFS 3D model, and their manufacturing strategy, even before we see the real MFS.

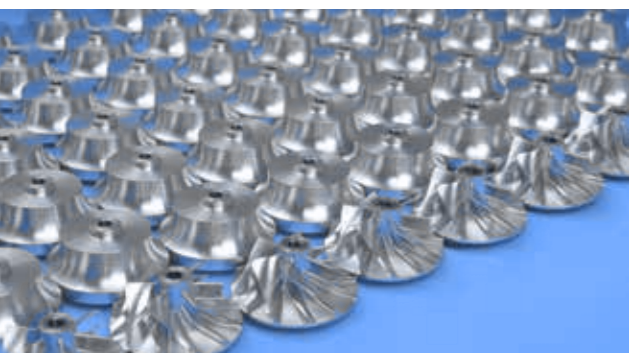


C. Material

KTS selects aluminum A2618 series high strength, low-weight aerospace grade material, made by Alcoa. We are confident of the mechanical properties of this grade and our MFS come with a 4-year limited warranty.

These alloys are mechanically processed, breaking down oxide defects (mainly silicon) that might be present and refines the grain structure of the alloy to improve the fatigue properties of the material, and improving MFS durability - meaning they are stronger than the traditional cast impellers.

KTS can also offer **Titanium** on selected part number. Other terms applies.



Alcoa Inc.
Aluminum Company of America

Alcoa Inc. (Aluminum Company of America) is global leader in lightweight metals technology, engineering and manufacturing, innovates multi-material solutions that advance our world. It is one of the world's largest lightweight metal manufacturers of products made of aluminum, titanium and nickel. Alcoa's products are used worldwide in aircraft, automobiles, commercial transportation, packaging, building and construction, oil and gas, defense, and industrial applications. Alcoa's products include fastening systems for the Airbus A380 jet, sheets for Ford's F-150 truck, and the first aluminum fan blade for Pratt & Whitney jet engines. Alcoa also supplies aerospace-grade aluminum produced in South

Korea to Samsung Electronics for its Galaxy S6 and Galaxy S7 model line-up. Alcoa is a major producer of primary aluminum, fabricated aluminum, and alumina combined, through its participation in all major aspects of the industry: technology, mining, refining, smelting, fabricating, and recycling.

Charles Martin Hall (6 Dec 1863 - 27 Dec, 1914) was an American inventor, businessman, and chemist. He is best known for his invention in 1886 of an inexpensive method for producing aluminum and he was one of the founders of ALCOA.

- AEROSPACE
- NAUTICAL
- AUTOMOTIVE
- ENERGY
- DEFENSE
- OIL & GAS
- INDUSTRIAL
- ELECTRONICS
- BUILDING & CONSTRUCTION
- COMMERCIAL TRANSPORTATION



“ KTS is committed to ensuring optimum centering of the wheel geometry during manufacturing. ”



D. Balancing

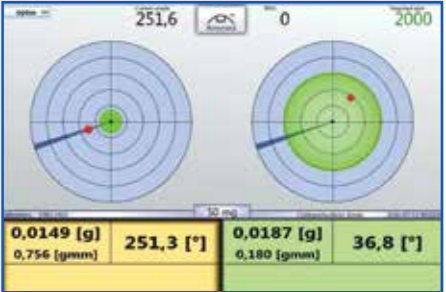
Since 3Q2014, KTS is using 2-plane balancing audit. We will conduct weights correction at the backdisc and nose.

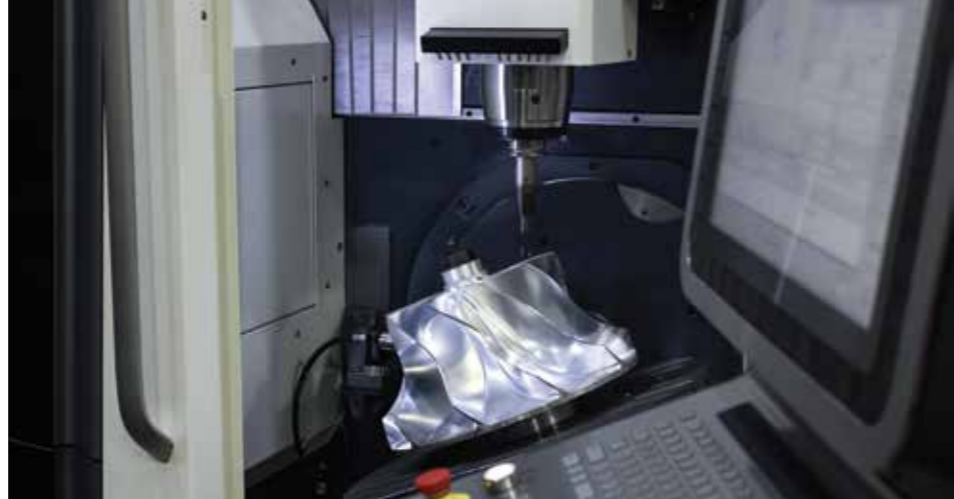
However, in many occasions, no correction is carried out at the nose, due to lack of material at the nose as the KTS performance wheels have high blades and slim nose.

Our balancing protocol accepts a limited amount of residual imbalance on the nose. This can be easily corrected during the subsequent process of rotor balancing and or VSR.

A colour paint dot on the nose indicate that balancing protocol is established, even if there are no correction.

We highly recommend to VSR especially for small wheels 60mm exducer and below.





E. Machining



KTS insists on top Japanese machine tools to deliver best performance, productivity and consistent tolerance, most critical to the demands of the MFS manufacturing. A fleet of Okuma LB3000 multi-tasking lathes machines is deployed for exceptional turning to tackle the greatest challenges posed by tight MFS tolerance on diameters, parallelism, perpendicularity, roundness, cylindricity and total runout. Such knowledge are privileged KTS know how.

MFS impellers are machined using high-speed 5-axis CNC operations, which is needed to achieve intricate aerodynamic impeller blade profile and finish required for optimal aerodynamic and mechanical performance.

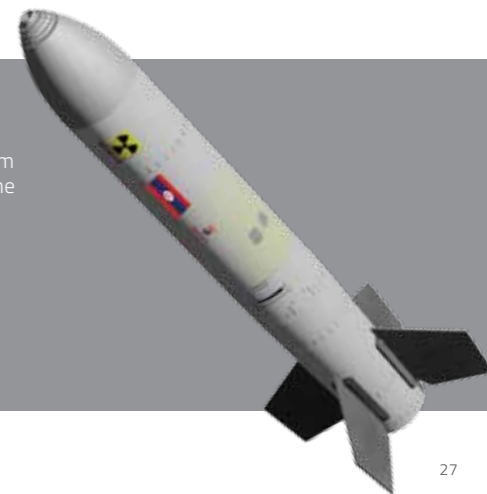


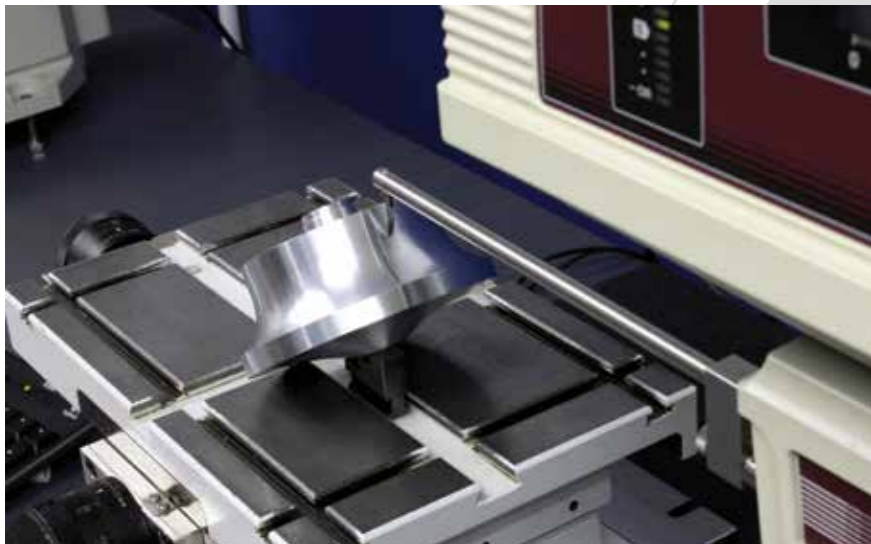
Interesting Fact

Made in Germany and Japan, KTS's 5 axis machines feature advanced manufacturing technologies, capable of making weapons of mass destruction such as nuclear bombs and missiles. The Government of Japan and Germany under Trade Control Act and BAFA respectively classified such machines as security controlled technologies and have imposed many stringent compliances on its usage and ownership.

KTS has sought and obtained permission from the Government of Japan and Germany for the sole usage on impeller machining.

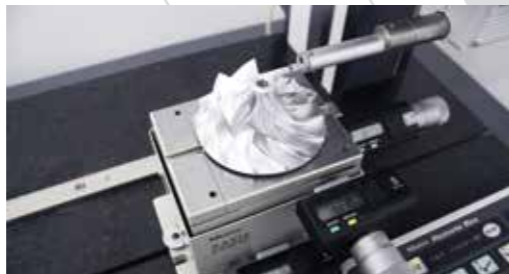
KTS fully support the non-proliferation of weapons of mass destruction and we will only use these machines for turbochargers manufacturing for civilian application.





F. Measurements

At KMC where all MFS impellers are produced, the best of measurement metrology technologies are deployed to inspect the tight geometric dimensioning and tolerance required in a KTS MFS impeller, complementing the demanding engineering specification of a modern day turbocharger.



“ Such technologies offer high productivity and precise measurements. ”



03

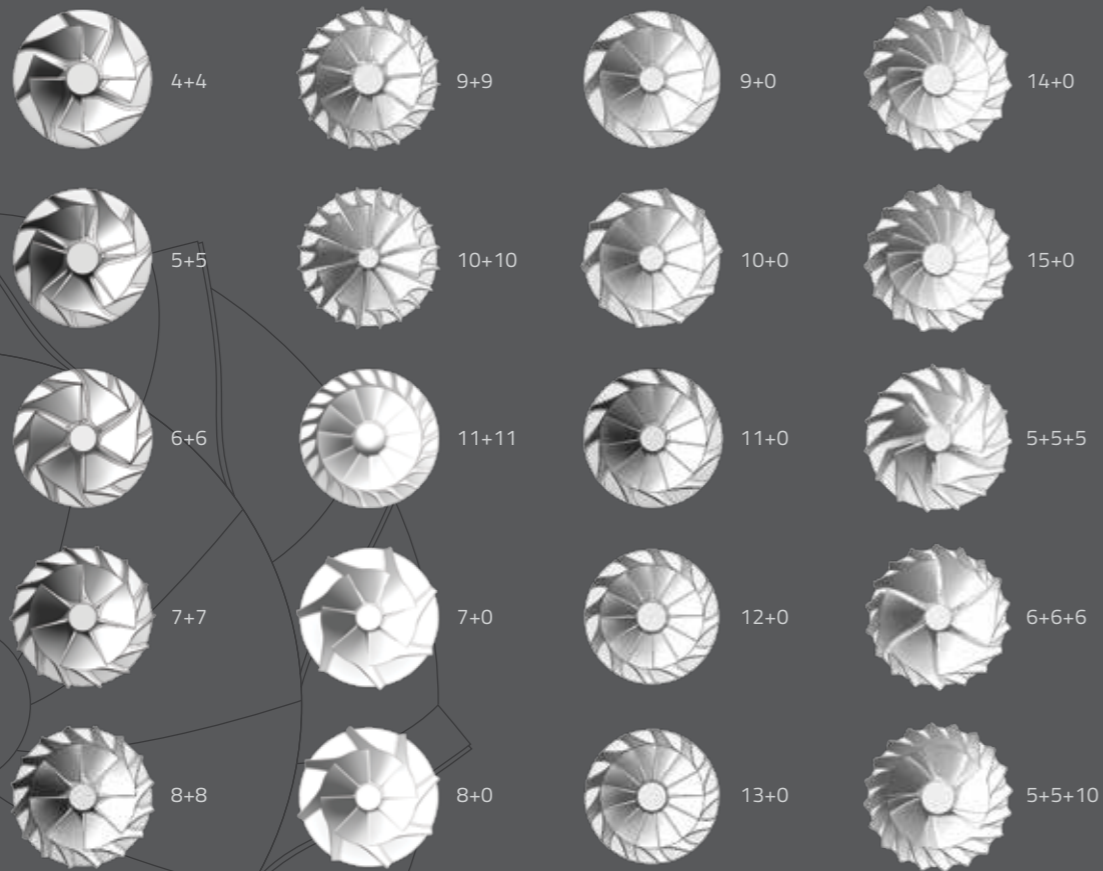
We sell

EXCITEMENT

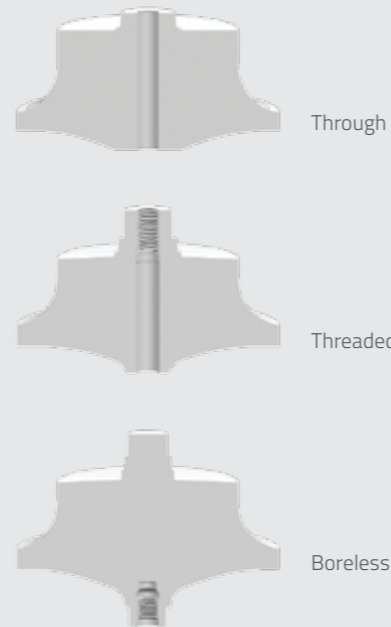
SELECTION

Earth's Largest **SELECTION** of billets in every unimaginable sizes, options and proportions.

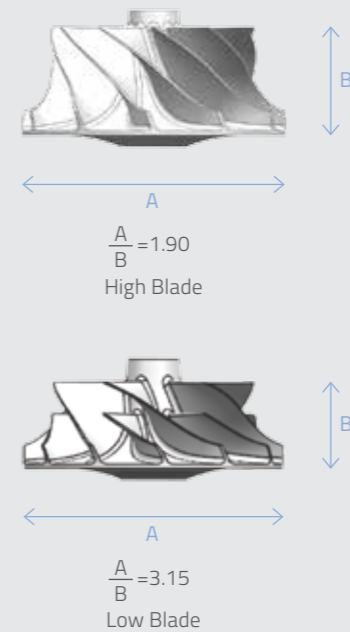
A. Number of Blades



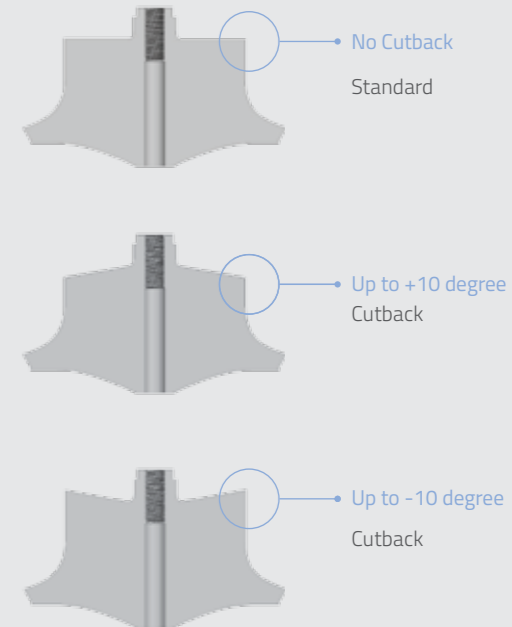
B. Type of Bore



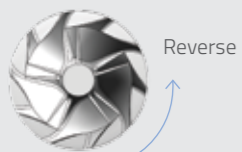
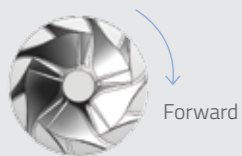
C. Height of Blades



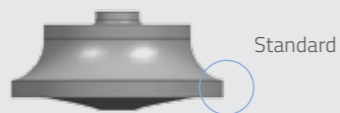
D. Inducer



E. Direction of Rotation



F. Exducer



Standard



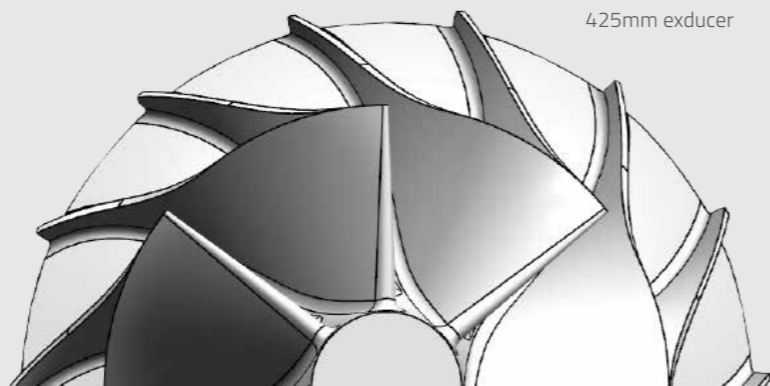
Tapered Tip

Up to 45 degree

G. Size of Impellers



13mm exducer



425mm exducer

H. Blade Surface

FLANK MILL

KTS specialise in Flank mill, where blade surfaces are milled in a single pass and this is economical, offers superior appearance and saves time. KTS adds in other performance feature that makes up for efficiency and power, eg taper tip, slim nose, slim hub, high pitch, high blade, etc.



Standard

POINT MILL

Point milling brings the tool over the blade using multiple passes and this increases machining time and cost. Point Mill allows for more complicated geometry and OE are claiming a 2% increase in efficiency. This option is available in KTS starting 2016, if customers insists.



Option with Cost

Summary:

Both Flank and Point mill are adopted by OEs. KTS recommends flank mill, it is proven to bring great eXcitement, yet economical.

I. Packaging

NEUTRAL WHITE BOX

- Neutrality, no design
- Easy rebranding
- Keeps confidentiality of the source of supply



Standard

KTS BLUE BOX

- Attractive designs
- For markets where end-customers wants assurance of the KTS brand



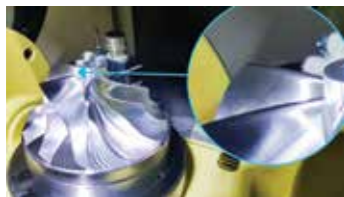
No cost option

CUSTOM BOX

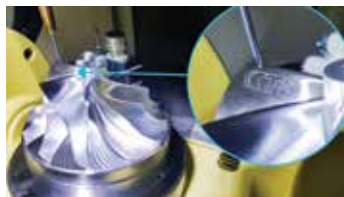
- KTS welcome custom packaging boxes request based on your design, subjected to MOQ.



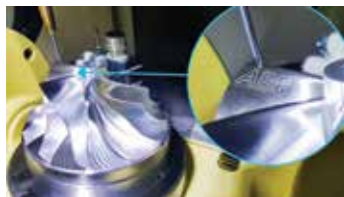
J. Machine Engraving



Standard

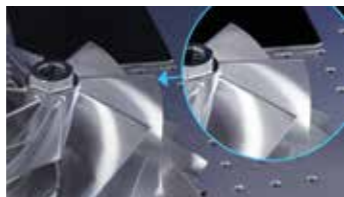


KTS Logo
MOQ 30

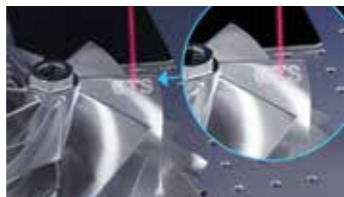


Custom Logo
MOQ 30

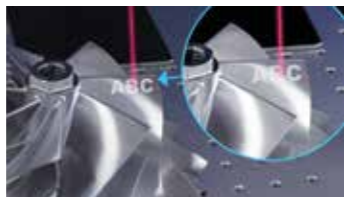
K. Laser Marking



Standard



KTS Logo
MOQ 10



Custom Logo
MOQ 10

L. Inkjet Marking



Standard

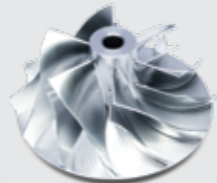


Neutral / Blank
MOQ 20

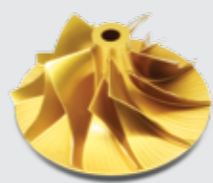


Custom Ink Print
MOQ 20

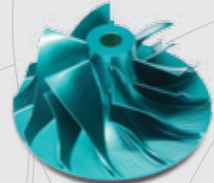
M. Anodizing



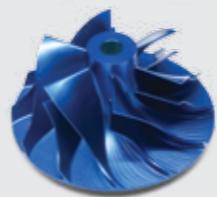
Standard



Anodized Gold



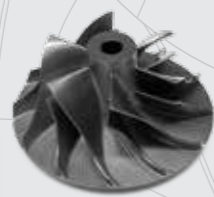
Anodized Turquoise



Anodized Blue



Anodized Purple



Anodized Dark Grey



Anodized Orange



Anodized Red



Anodized Black

...and more color choices available.
Color anodizing are subjected to MOQ50.

04

We sell

EXCITEMENT

DELIVERY

Exstock item can be shipped on the **SAME** or the **NEXT WORKING DAY**.



A. Production P/N

KTS can handle a large variety of small orders. MOQ1.

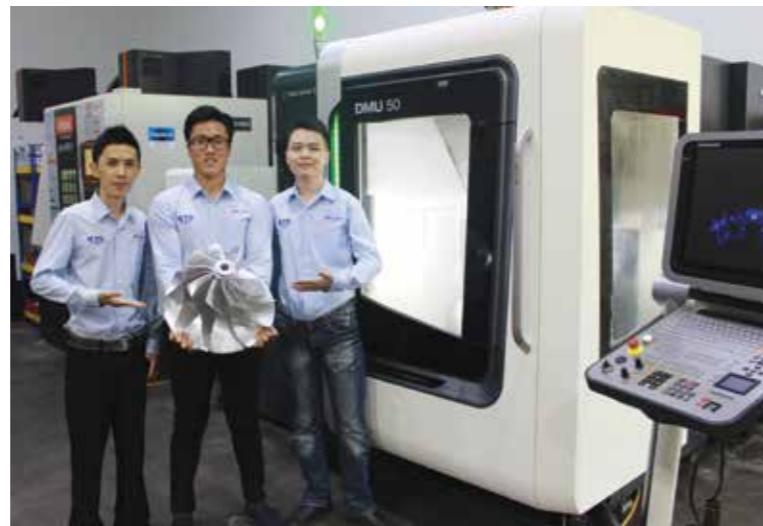
We aim to achieve optimum production run and inventory.

Exstock item can be shipped on the same or the next working day.

To replenish our stock, our usual production lead time is 2-4 weeks*. We have many machines at our disposal and the passion to make it happen.

Robots are enabling 24/7 production and are progressively installed in 2016.

*Exception:
Large quantity of orders spike within the same time period.*



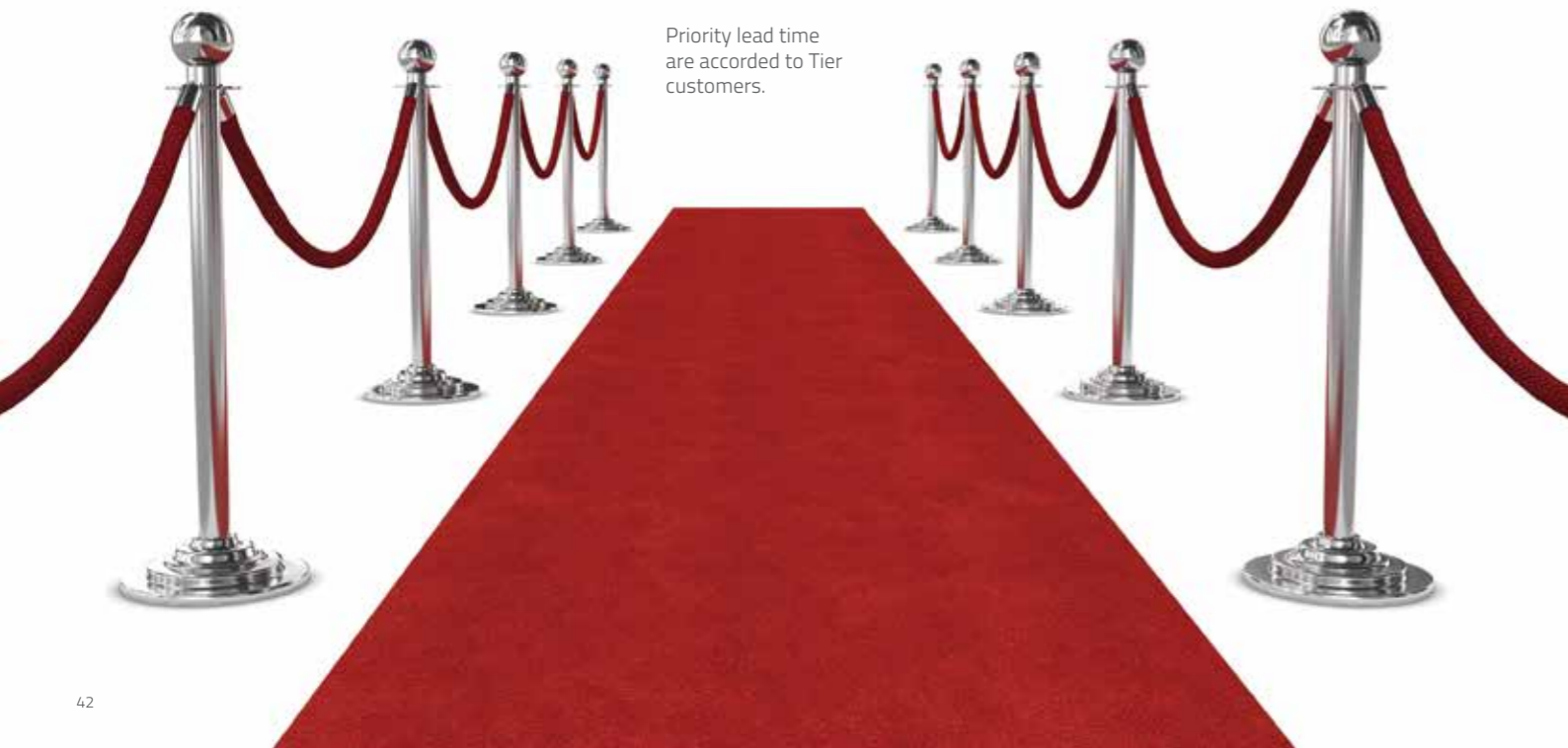
“ Earth’s
LARGEST Operator of
5-Axis Machine & Robots for
Aftermarket Billet Wheel ”



B. Priority Development

To develop a new wheel, our lead time is 3-6 weeks, excluding time for you to confirm your drawings.

Priority lead time are accorded to Tier customers.



C. Emergency Development (VOR)

At KTS, an 'Emergency Development' order can be activated when a vehicle is off the road or engine is down. This is a piece of equipment that is out of usage and non-revenue producing for your customer, and needing an urgent supply of compressor wheel.

We commit delivery for up to 10pcs per p/n, within 7 calendar days of receiving the sample and/or drawing and passing to your specified courier service. Terms Applies.

Other Terms:

- OE sample with p/n provided
- Made to performance design
- Made to KTS design recommendation to save time
- Calendar Day includes Saturday and Sunday, but excludes local public holidays and its spillover
- Not valid in event of force majeure, riots, civil disobedience, strikes, fire, act of god, power outage, internet disruption, or any event that are beyond KTS's control that prohibits the usual production of VOR items.





We sell
EXCITEMENT
LOWEST
RISK

We offer the most **BUSINESS-FRIENDLY**
and **ZERO-PAIN SOLUTION**
to our customers.

A. MOQ = 1 piece

We offer the most business-friendly, zero-pain solution order a KTS billet compressor wheel.

For production p/n, **MOQ = 1 piece**

For new development p/n, MOQ = 1 piece, provided all 4 easy conditions meet:

- Made to Performance Design
- OE Sample
- Known p/n or application
- Made to same fitment / blades number

In the absence of which, various classes of development surcharge and MOQ surcharge will apply.

Our MOQ policy discourages requested designs that do not significantly lead to eXcitement, or are too similar to what that has already been produced.

Minimum
Order
Quantity



B. Performance Guarantee

5X FREE CREDIT
IF POORER PERFORMANCE

KTS has accumulated good experience in designing performance wheels. Our billets are achieving 5- 10% power and torque gains with 90% success rate by only changing from cast stock wheel to specific KTS billets. No other changes were carried out.

We can make recommendation on design features, but are unable to provide a compressor map. It is more viable that you dyno the turbo setup at your site, and provide feedback to us for future design changes, if any required.

P/N classified as 'Performance Design' are guaranteed to perform better on dyno than stock wheel, otherwise **we will compensate you 5X the credit** of the originally supplied wheel per project.

SUBJECT TO:

- Submission of pre and post dyno chart
- No other modification done except a change of KTS wheel
- Proper workmanship of turbo/ manifold assembly/ disassembly, eg no air leakage, no filter blockage, correct wastegate setting

OTHER TERMS:

- Our administration of this program is on assumption of honesty by the customer. KTS cannot physically verify all information submitted to us and therefore if KTS have reasons to believe such claims are non-bona-fide, this guarantee is void for the p/n and/ or all other p/n customers may have purchased
- We reserve the right at our sole discretion without assigning the reasons and/ or without giving prior notice
- The credit is for you to utilise on new design of the wheel that KTS may repropose
- Some p/n are excluded from this Performance Guarantee
- No cash refunds

Dyno Results

KTS 3562 Billet vs OE Cast
Mitsubishi Lancer Evolution 8

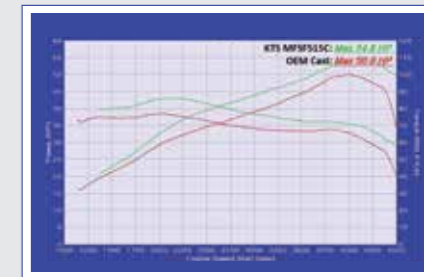
2.0 Petrol
GT35



Only change of wheels and boost from 1.0 to 1.3 bar, no further modification

KTS F515 Billet vs OE Cast
Isuzu Dmax 2.5 Turbodiesel

RHF4H



Only change of wheels, no further modification



Your Secret is
SAFE
with KTS

C. Confidentiality

General Policy:
KTS aims to be the most independent supplier of MFS and we do not wish to be restricted or to restrict supply to any customer.

Samples received and made as standard or customized are Non-exclusive, considering the competitive price and low/no MOQ. Wheel data will be published in our catalog, except the name of customer.

KTS is aware of your needs to protect your design/idea. We have the following possibilities:

- **Exclusivity**
We can offer you exclusivity for OE fitment wheel based on a non-OE blade number, subject to pre-agreed annual MOQ and terms.

Please consider that a slight tweak in design, geometry, dimensions, etc may defeat the purpose of any exclusivity.

- **Unpublished P/N**
No publishing of your p/n in our catalog. Please consider that we may receive a similar p/n and it becomes published with no refund offered.

Code of Conduct



We will not intentionally circumvent any exclusive agreement by indirect supply, making minor/ immaterial design change, to frustrate the very essence of that agreement.



We will not intentionally publish a list of our customers, to claim credibility in our marketing. Our customer has a secret and we are party to them.



We will not intentionally publish on social media pictures of our customers customs project and/ or divulge the kind of application and country of destination.

Q&A

with CEO on Confidentiality



Q: Why would negotiation with KTS on exclusivity a lengthy process?

A: Because KTS intent to honour the agreement. We go through possible scenario with customer, so that they are aware of the many possibility of frustrating an agreement via a slight tweak in design. Knowing that cheating is prevalence elsewhere, we want bring to customers back to reality.

Q: Why would you choose not to disclose your customers listing?

A: An issue of the goose that lay the golden eggs. Customers are entrusting their secret projects to us and treating KTS as their 'secret production base'. KTS is committed to a policy of non disclosure. We are lured by the attraction of quoting references of such prestigious projects to solicit for new customers. We refused.

Q: What is your last tip?

A: Beware of False Confidentiality. Especially if they offered to readily. It's too easy to cheat.

DISCLAIMER:

As a matter of company policy, KTS will take every reasonable care to protect the safety of any data deemed confidential by KTS. However, we may not be able to prevent data breaches due to criminal acts, or malicious intentions that are unknown to KTS and/or beyond KTS control. We do not assume any liability as a result of a breach of security.

D. Durability

In modern engines, the drive for greater horsepower and torque, plus the desire for high boost up to 5:1 pressure ratio, has led to the increase of rotational rotor speeds and temperatures going over the limits of the standard material used, where the traditional cast impellers are reaching their limits of durability.

In high duty cycle applications such as city buses, local delivery trucks, garbage trucks, excavators, and etc, where turbocharger speed is frequently changing, standard cast aluminum impellers cannot achieve the same durability as MFS billet impellers.

MFS billet impellers offer superior durability, effectively addressing the weakness of a cast impeller suffering from blade chipping and hub burst, mostly the result from Low Cycle Fatigue, traceable to casting defects such as oxides or other impurities, or inconsistent casting techniques.

The improvement in durability also means MFS impellers can run reliably at high speeds now demanded by many aftermarket customers.



E. Exchange 4 YEARS LIMITED

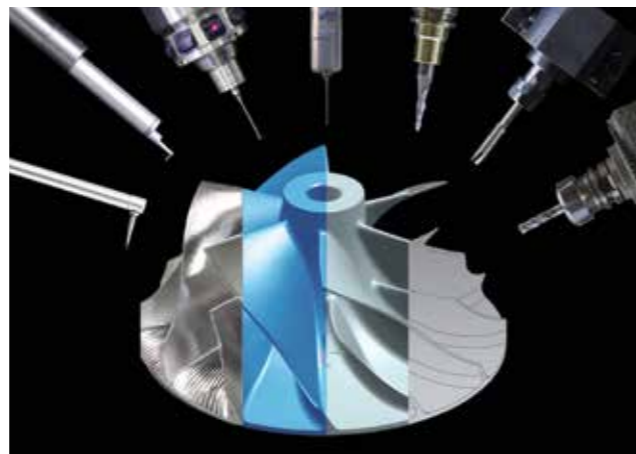
KTS guarantees the direct purchaser of our standard MFS products for full exchange privileges within 4 years of invoice. Up to 50pc per p/n of our MFS may be exchanged for full credit of original purchase price. We do not offer cash refunds. This excludes Custom designs. Exchange goods must be new, unused and uninstalled, and to be returned freight prepaid.

F. Warranty
4 YEARS LIMITED

KTS warrants that its MFS billet compressor wheels that are designed within our boundary conditions are free from defects within 48 months starting from date of invoice.

Our liability is only limited to the exworks replacement of a new product on an exchange basis by the direct purchaser, if judged by KTS to be defective by reason of improper design, engineering, machining, balancing or materials.

This warranty is waived upon instruction from customers that they require designs beyond KTS boundary conditions.



DISCLAIMER:

In no event shall KTS be liable for any direct or indirect or consequential or other loss or damage of any kind, whether arising out of the contract of sale or the manufacture or fitting or use of goods supplied by us, or howsoever caused, nor for any diminution in the value of other property or components howsoever arising consequent upon or resulting from the use of KTS MFS products.

This warranty does not cover any damage to this product that results from:

- Pre-events, eg foreign object damage, loss of balance due to bearing damage, shaft motion due to bearing damage
- Misuse & abuse eg wrong housings, lack of rotor balancing, lack of VSR
- Unauthorised modification eg bore resizing, backdisc reduction
- Incorrect application
- Mishandling eg incorrect weight correction that weakens wheel
- Accidents
- Acts Of Gods



G. Visit to KTS

KTS is the world's largest operator of 5 Axis machines and robots for aftermarket billet wheels. We welcome approved tier customers to visit our factory in Kuala Lumpur, Malaysia and witness the KTS technology.

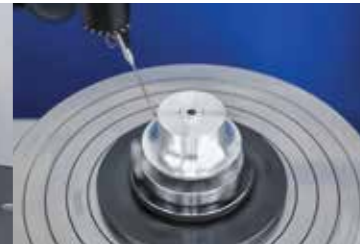
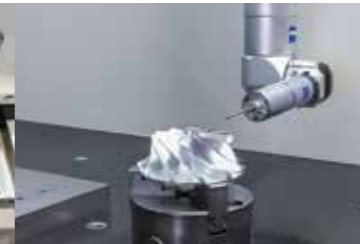
- 20x Five Axis Machines
- 10x Robots
- 12x Okuma Turning Centers
- 3x Takisawa Turning Centers with Robots
- 1x Mitutoyo Crystal Plus CMM
- 1x Mitutoyo Roundtest RA2200
- 1x Mitutoyo Surftest C3000
- 1x Mitutoyo Contracer C3000
- 1x 2D Scanner
- 1x Zeiss Contura G2 CMM
- 1x Steinbichler Comet 3D Scanner
- 8x Cimat Vertical Balancing Machines
- 2x German Vertical Balancing Machines



“ A visit to KMC will confirm the authenticity of all information, pictures, processes, technologies and equipment depicted by KTS in all our marketing to be true, ongoing and property of KTS. ”



PERFORMANCE

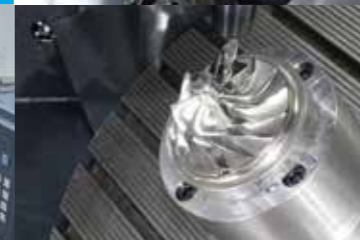


TECHNOLOGY



SELECTION

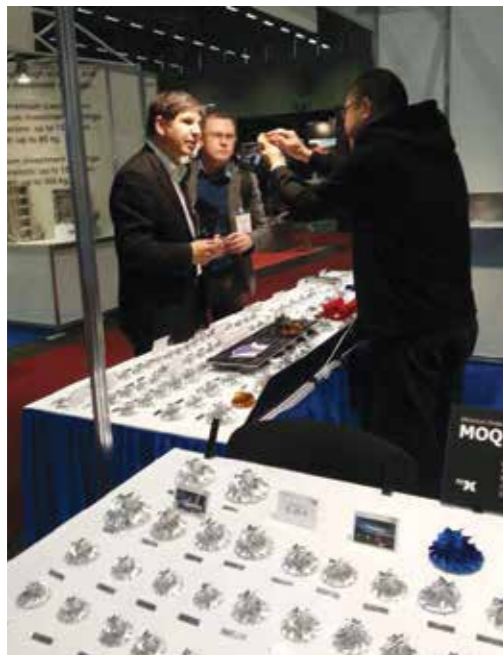
DELIVERY



LOWEST RISK



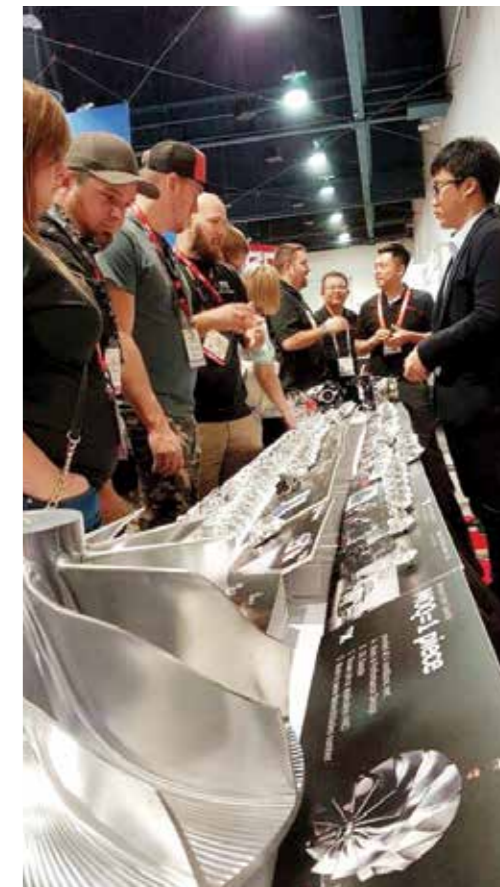
H. Tradeshow



KTS exhibits in major tradeshow around the world. You have the assurance knowing that we will meet you face to face, addressing any concerns you may have.

	2012	2013	2014	2015	2016	2017
Autosport International <i>Birmingham</i>		•	•	•	•	•
Tokyo Auto Saloon <i>Tokyo</i>			•			
Trucking Show <i>Louisville</i>		•				
Automec <i>Sao Paulo</i>			•			
Rematec <i>Amsterdam</i>		•		•		•
ADS <i>USA Cities</i>	•	•	•	•	•	•
Automechanika <i>Frankfurt</i>	•		•		•	
Equip Auto <i>Paris</i>		•		•		
Rematec Big R <i>Las Vegas</i>			•			
SEMA <i>Las Vegas</i>	•	•	•	•	•	•
PRI <i>Indianapolis</i>	•	•	•			
Good Wood Festival of Speed <i>Chichester</i>					•	
Jet Power <i>Bad Neuenahr</i>					•	
KOAA Show <i>Seoul</i>					•	
Professional MotorSport <i>Cologne</i>		•		•	•	
Automechanika <i>Moscow</i>					•	
Automechanika <i>Madrid</i>		•				•
Autopromotec <i>Bologna</i>						•

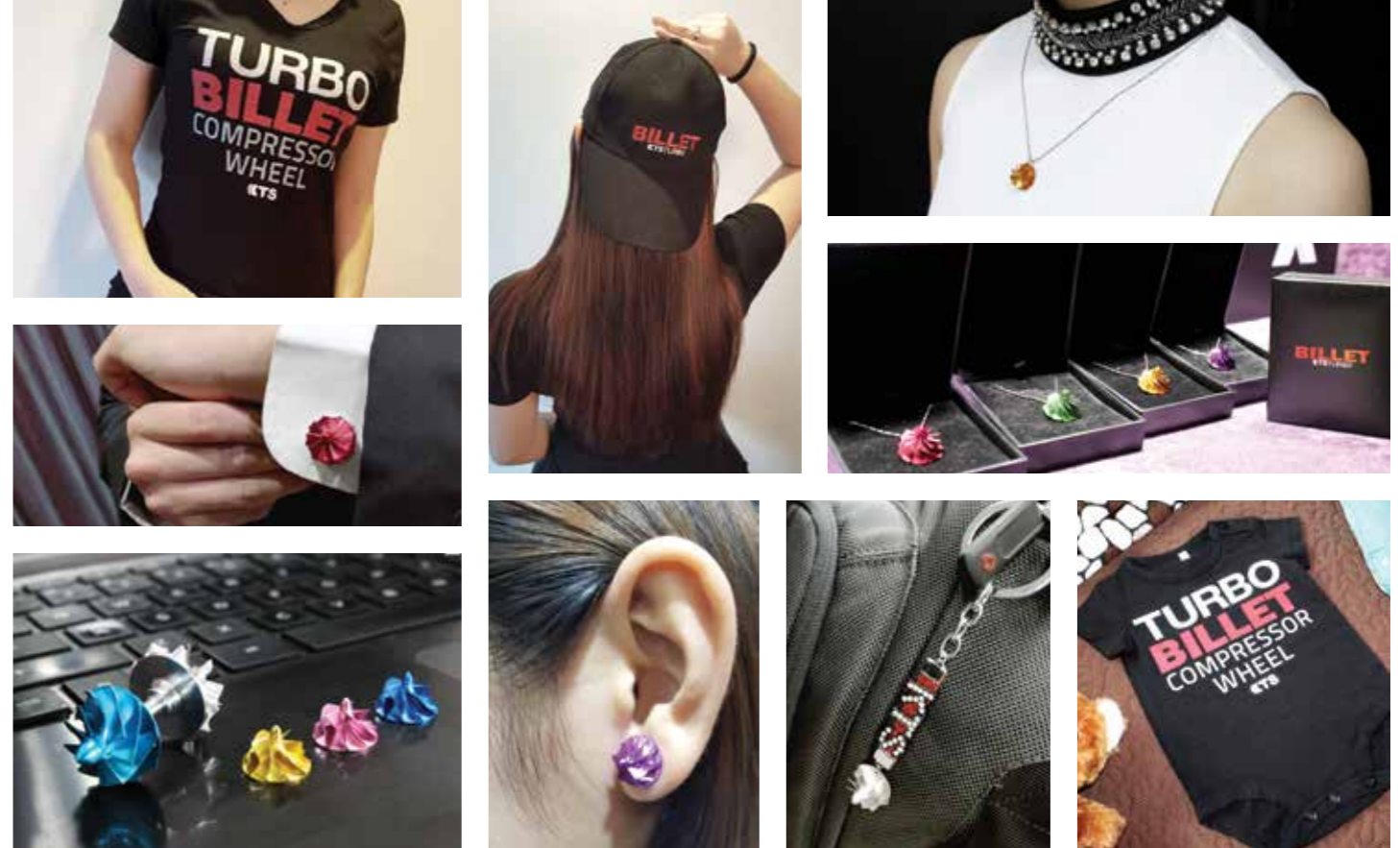
Tradeshow



Hercules of KTS Tradeshow



« KTS MERCHANDISE



How to use «TS Catalogue

8th Check for available KTS part number

1st Filter OE model in column D

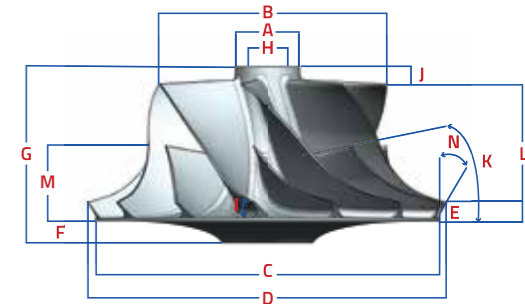
Situation 1: Looking for replacement wheel for model match to TD05H

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
KTS MFS P/N	Equivalent P/N	Status	OE Model	Replaces OE CW P/N	Alternate C/W P/N	Group/Model Short Spec	IHI Short Spec	Applied to engine/vehicle	Suitable for Turbo/Chra	Notes	OE Blades	KTS P/N	Wheel Style	Tapered Tip Angle°	Blades Number	BCCW Lead-time	Date of Release	BCCW List Price w/o	Design Surcharge	Discount	Net BCCW List Px	BCCW Warranty	BCCW Exchange
D697	D611	Active	TD05H			16G		Mitsubishi	49178-	Perfor-	6+6	D697	BCCW	30°	6+6	PRDTN	140301	USD 76.	10%	0%	USD 83.	4 Year	4 Year
D698	D611	Active	TD05H			16G		Mitsubishi	49178-	Perfor	6+6	D698	BCCW	30°	6+6	PRDTN	140301	USD 76.	10%	0%	USD 83.	4 Year	4 Year
D699	D699	Active	TD05H	49179-44300				Mitsubishi	Forklift	Perfor	6+6	D699	BCCW	30°	6+6	PRDTN	140301	USD 76.	0%	0%	USD 76.	4 Year	4 Year

7th Check for available KTS part number

Situation 2: Looking for 48/ 68 mm wheel

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
KTS MFS P/N	Equivalent P/N	Status	OE Model	Replaces OE CW P/N	Alternate C/W P/N	Group/Model Short Spec	IHI Short Spec	Applied to engine/vehicle	Suitable for Turbo/Chra	Notes	OE Blades	KTS P/N	Wheel Style	Tapered Tip Angle°	Blades Number	BCCW Lead-time	Date of Release	BCCW List Price w/o	Design Surcharge	Discount	Net BCCW List Px	BCCW Warranty	BCCW Exchange
D697	D611	Active	TD05H			16G		Mitsubishi	49178-	Perfor-	6+6	D697	BCCW	30°	6+6	PRDTN	140301	USD 76.	10%	0%	USD 83.	4 Year	4 Year
D698	D611	Active	TD05H			16G		Mitsubishi	49178-	Perfor	6+6	D698	BCCW	30°	6+6	PRDTN	140301	USD 76.	10%	0%	USD 83.	4 Year	4 Year
D699	D699	Active	TD05H	49179-44300				Mitsubishi	Forklift	Perfor	6+6	D699	BCCW	30°	6+6	PRDTN	140301	USD 76.	0%	0%	USD 76.	4 Year	4 Year



3rd Search for inducer size in column Z ranging within +/- 0.50mm

2nd Search for exducer size in column AA ranging within +/- 0.50mm

5th Confirm superback height in column AE

6th Check overall height in column AF

4th Confirm bore size in column AG

7th Check rotation in column AO

Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS
Nose Diameter	Inducer	Exducer	Tapered Tip Exducer	Tip Height	OE Exducer	Superback	Overall Height	Bore Size	Racing or Non-racing	Std Size or Customs	Trailing Angle	Bore Type	Fits OE Comp Hsg	Cutback	Splitter Height Angle	Rotation	Bar Size	Blade Height	Splitter Height	
A	B	C	D	E		F	G	H			I		J	K			L	M		
13.72	48.30	68.01	72.18	4.61		2.90	31.50	6.50	R	STD	60	Through	OE	0.0	Reverse	72.18	76.20	23.60		No
13.50	48.30	68.01	72.18	4.61		2.90	35.00	6.50	R	STD	60	Through	OE	0.0	Forward	72.18	76.20	29.20		No
13.78	48.30	68.00	72.16	4.60		4.80	31.50	6.53	NR	STD	60	Through	OE	0.0	Reverse	72.16	76.20	23.60		No

2nd Search for inducer size in column Z ranging within +/- 0.50mm

1st Search for exducer size in column AA ranging within +/- 0.50mm

4th Confirm superback height in column AE

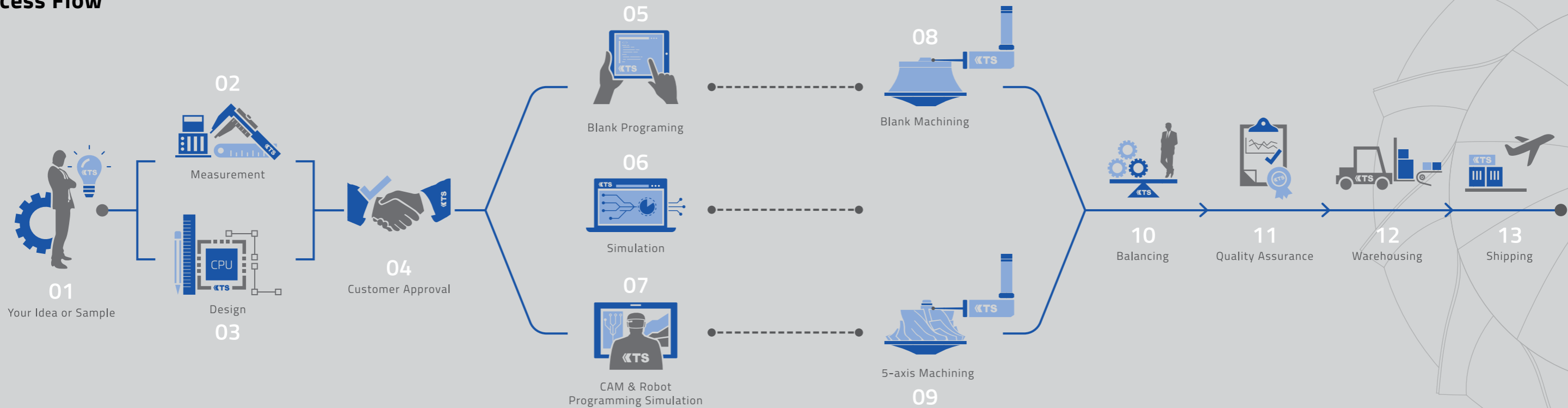
5th Check overall height in column AF

3rd Confirm bore size in column AG

6th Check rotation in column AO

Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS
Nose Diameter	Inducer	Exducer	Tapered Tip Exducer	Tip Height	OE Exducer	Superback	Overall Height	Bore Size	Racing or Non-racing	Std Size or Customs	Trailing Angle	Bore Type	Fits OE Comp Hsg	Cutback	Splitter Height Angle	Rotation	Bar Size	Blade Height	Splitter Height	
A	B	C	D	E		F	G	H			I		J	K			L	M		
13.72	48.30	68.01	72.18	4.61		2.90	31.50	6.50	R	STD	60	Through	OE	0.0	Reverse	72.18	76.20	23.60		No
13.50	48.30	68.01	72.18	4.61		2.90	35.00	6.50	R	STD	60	Through	OE	0.0	Forward	72.18	76.20	29.20		No
13.78	48.30	68.00	72.16	4.60		4.80	31.50	6.53	NR	STD	60	Through	OE	0.0	Reverse	72.16	76.20	23.60		No

Development Process Flow



Loan Us

Loan us an OE wheel with known p/n not available in KTS and made to Performance Design, you will receive an equivalent MFS credit from KTS for the same p/n.



OE Wheel with P/N not available in KTS

2x Double, if applied to any twin turbo or prestige engine.
Pre authorization required.

FREE MFS



OR



You will receive an equivalent MFS credit from KTS for any of our MFS products.

2X double. If applied to any twin turbo or prestige engine.

Genuine Pictures Statements

KTS hereby declares that all information, processes, technologies and equipments published in our communications are true and property of KTS. We do not copy nor plagiarise from other sources, including from subcontractor, to claim to be ours. Some equipment are progressively fitted.

Approved Tier customers are welcome to visit us at KTS to confirm such authenticity. Some picture may not show actual manufacturing processes, as they may be proprietary to KTS not giving too much ideas to the competition.

Disclaimer

KTS and its dealer disclaim any relationship with machine tool makers mentioned in this booklet, other than that of a seller of machine tool and user of the same.

Limitation Of Liability

In no event shall KTS and its distributors be liable for any direct or indirect or consequential or other loss or damage of any kind, whether arising out of the contract of sale or the manufacture or fitting or use of goods supplied by them, or howsoever caused, nor for any diminution in the value of other property or components howsoever arising consequent upon or resulting from the use of KTS products.



“

Every minute without a billet,
you lose

60 seconds

of eXcitement...

”



Customer

“

A customer is the most important visitor
on our premises.

He is not dependent on us.
We are dependent on him.

He is not an interruption in our work.
He is the purpose of it

He is not an outsider in our business.
He is part of it.

We are not doing him a favor by serving him.
He is doing us a favor by giving us an
opportunity to do so.

”

~ Mahatma Gandhi



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