# Die Track LLC

We Bring Solutions to All your Die Stamping Sourcing

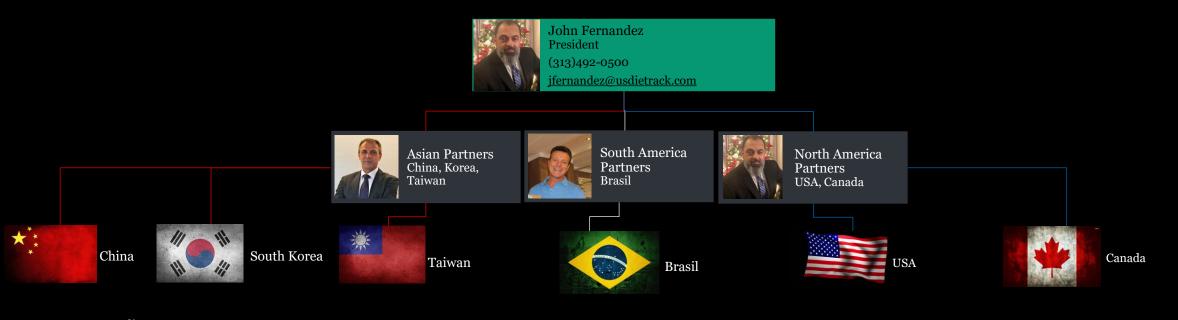
## From Product Kick Off to Launch in Homeline

- Engineering
- Simulations
- Pattern
- Die Construction
- Die Tryout
- Quality Loops
- Die Ship
- Homeline Launch Support (Staffing)

# This is Die Track, llc

- Organizational Chart
- Overview
- Partners
- > Appendix

# Organizational Chart



- GZ Tooling
- FAW Tooling

#### **Metal Stamping:**

- Goitech
- Plastic Injection:
- Raymold
- NPC Moltek

- S-Tooling
- Ejee
- Van Guard
- GeoHo
- Sunbird

- Aethra Automotive TEC
- Injetaq

- Hercules Tool
- Atlas Tool
- Multimatic

- Classic Tool & Die
- Manor Tool & Die

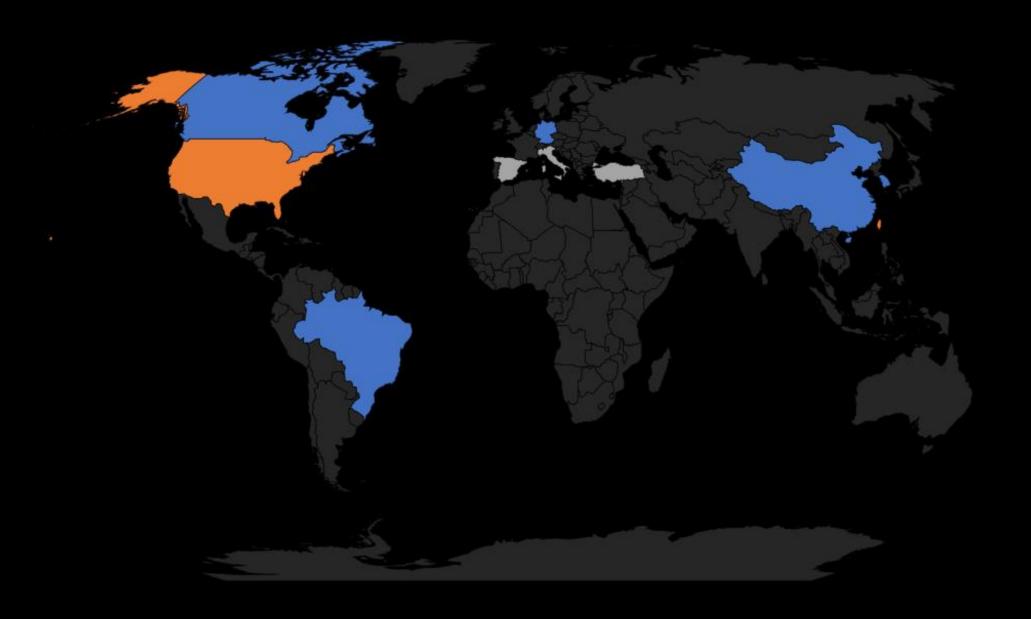
#### Overview

Die Track, llc was founded in 2015 from a joint venture with a German company that specialized in Stamping Services. After years of operating together, and witnessing "Poor Quality" Die Manufacturing, Die Track decided to spin off, and focus on Die Construction Management, with an effort to increase the Quality of the tools built, and minimize the need of months of external support in Homeline.

Today Die Track operates in 7 different Countries, and employs Die Specialists in 13 different nationalities, speaking literally just about every language in the planet.

Our <u>Partnership Cooperation Agreement</u> allows us to maximize "Time to Market", giving us logistic flexibility, Placement of Specific Parts where the specialists are, substantially improving Quality, Delivery & Cost, not to mention the ability to deliver parts for Build events during Die Manufacturing, analyzing feedback immediately, and starting quality loops as needed, for next events, prior to Die Ship. We know how to play. We are prior managers for the most prestigious OEMs Globally. We lived it everyday. We understand the pressure to deliver, and the consequences of delays. We are on your side. We can give you the ability to be present on the shop floor when you can't be there. We are your point of contact, following the progress daily, and available 24/7.

# Global Presence



• GZ Tooling Group

#### **Group Affiliates**



#### **Stamping Die Manufacturing**

GZ Tooling Group Co., Ltd.



#### Casting

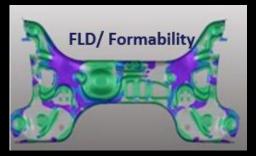
Chengding Foundry Co. Ltd.

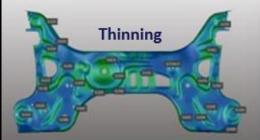
Plant construction to be finished by Oct. 2019



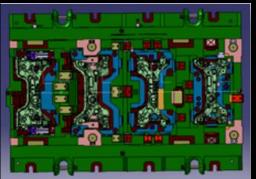
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GZ Tooling Group







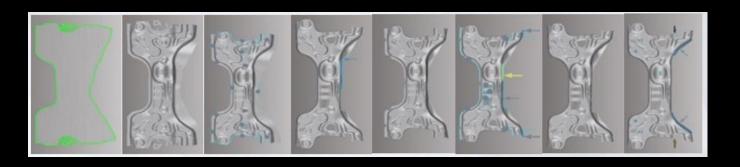




- GZ Tooling Group
  - ✓ Liaoyuan City, Jilin Province
  - ✓ 700 Employees
  - ✓ 100% Private Owned
  - ✓ Casting Foundry on Site
  - Engineering Office in Germany
  - ✓ Sales Office in USA, Mexico, Germany, and Shanghai.
  - ✓ Tryout Center in Germany
  - ✓ Blue Light Scanning
  - ✓ ATOS Technology
  - ✓ In House Heat Treat
  - ✓ Client Care Department

#### Some of Our Main Clients:





• GZ Tooling Group: **Machining** 

CNC Machine (Big size > 3000)			
Bed size	Quantity		
5000*2800	4		
5000*2000	1		
5000*3800	1		
5000*2600	1		
4000*2400	6		
4000*2100	1		
4000*2000	2		
3000*2000	2		
3000*1600	3		
3000*1500	2		
Total	23		

CNC Machine (Small size <2000)		
Bed size	Quantity	
1300*600	1	
1300*650	1	
2000*1600	2	
1100*630	16	
1100*600	1	
800*630	2	
Total	23	

Other Equipment			
Equipment	Quantity		
Wire cut	27		
Sawing	4		
Milling	7		
Lathe	1		
Grinding	6		
Drilling	5		
Laser cut	2		
Total	52		







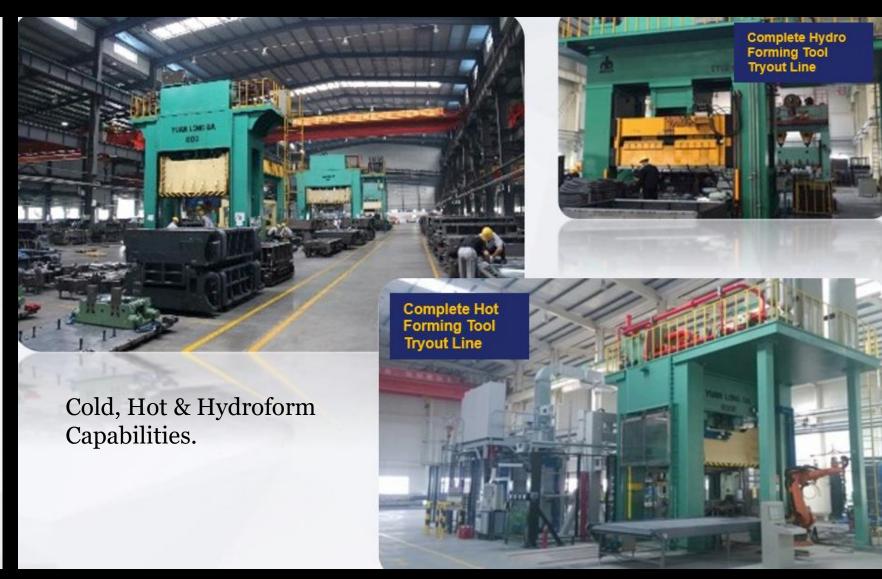






• GZ Tooling Group: <u>Tryout</u>

Press list			
Press Type	Press Tonnage	Bed size	Qty.
Hydraulic	4000T	4600*2500	1
Hydraulic	3000T	4600*2500	1
Hydraulic	2000T	4600*2500	1
Hydraulic	1200T	4600*2500	1
Hydraulic	800T	4500*1800	1
Hydraulic	800T	3000*2000	1
Hydraulic	800T	3000*2000	1
Hydraulic	600T	3000*2000	1
Hydraulic	400T	4000*2490	1
Hydraulic	300T	3000*2000	1
Hydraulic	300T	3000*2000	1
Hydraulic	150T	2200*1200	1
Hydraulic	100T	3000*2000	1
Mechanical	1600T	4600*2500	1
Mechanical	1200T	4000*2400	1
Mechanical	800T	4500*1800	1
Mechanical	400T	2700*1000	1
Total			17



• GZ Tooling Group: <u>Tryout</u>







Datas	Press 800T	Press 400T	Press 1600T
Drive Mode	Mechanic	Mechanic	
Nominal force	8000 KN	4000 KN	
Max die set height	1200 mm	650 mm	
Die Height Adjustment	300 mm	120 mm	
Bolster dimensions	4500*1800 mm	2700*1000 mm	To be continued with
Material Width	50-1300 mm	50-800 mm	To be equipped with new coil feeder by Mar.
Material Thickness	0.5-6 mm	0.8-4.5 mm	2018
Coil Weight	15 T	10 T	
Coil Inner Diameter	508-610 mm	450-530 mm	
Coil Outer Diameter	1500 mm	1400 mm	
Feed Height	750±100 mm	350±100 mm	

Mechanical Presses with Coil Feeders

• GZ Tooling Group: Quality & Measurment

Machine	Bed size	Qty.	Manufacturer	System
CMM 1	4000*2000	1	Italy	Metrolog XG
CMM 2	3000*1500	1	Hexagon	PC-Dmis
CMM 3	1000*800	1	Hexagon	PC-Dmis
Blue light scanner	4000*1500	1	Germany	





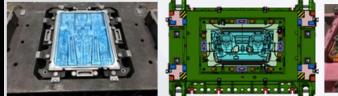


• GZ Tooling Group: <u>Portfolio</u>













- GZ Tooling Group
  - ✓ Outer & Inner Parts
  - ✓ HHS Structure Dies
  - ✓ Structure Dies
  - ✓ Chassis Part Dies
  - ✓ Progressive Dies
  - ✓ Hot Stamping Dies
  - Hydroform Dies
  - ✓ Blanking Dies
  - Checking Fixtures



Contact: John Fernandez 313-492-0500 jfernandez@usdietrack.com

- FAW Tooling Manufacturing
- Establishment Date: 1954
- Enterprise Type: State-owned
- ➤ Main Product: Die, BIW, Jig, Stamping parts, Weld Assy.
- Fixed Assets: 804 million RMB
- ➤ Registered Capital: 436 million RMB Annual Turnover: 2 billion RMB
- > Employee : 1967
- ➤ Location : Changchun, 1,5 hour flight to Peking



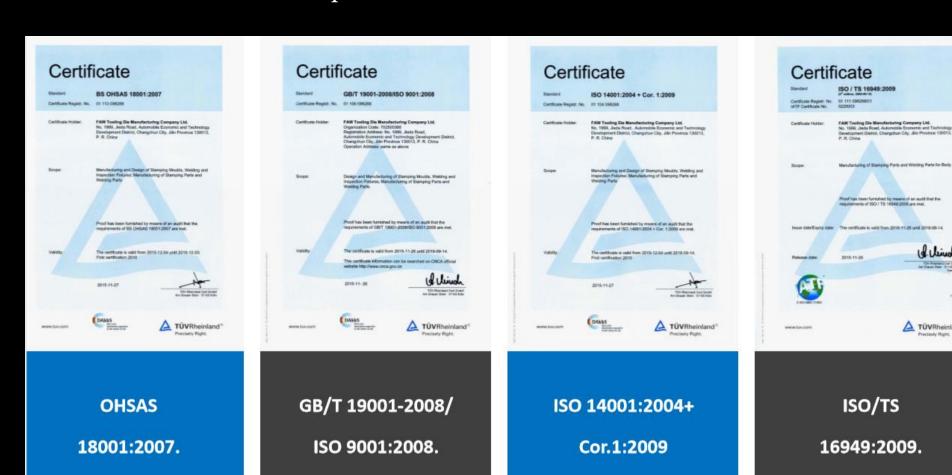


• FAW Tooling Manufacturing

Floor area: 280,000m2, construction area: 160,000m2



- FAW Tooling Manufacturing
- ➤ All OEM certification Requirements



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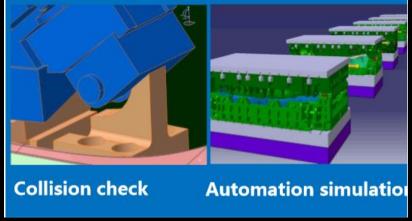
▲ TÜVRheinland\*

• FAW Tooling Manufacturing



- FAW Tooling Manufacturing
  - ✓ Outer & Inner Parts
  - ✓ HHS Structure Dies
  - ✓ Structure Dies
  - ✓ Chassis Part Dies
  - ✓ Progressive Dies
  - ✓ Blanking Dies
  - ✓ Checking Fixtures
  - ✓ Aluminum Parts

- FAW Tooling Manufacturing
  - ✓ 140 Die Designers
  - ✓ 225 Machinists
  - ✓ 232 Die Makers
  - ✓ 340 Work Stations
  - ✓ CATIA V5
  - ✓ AutoCad
  - ✓ Virtual Reality Suite





• FAW Tooling Manufacturing

• Die Manufacturing Capacity



NCshop	Tryout &	Assembly	shop	Pressing	shop	
33 large gantry machining centers		2 large co	ordinate me	asuring machines		1
21 small NC machining centers		3 optical s	canning DA	<b>E</b> s		
2 Agie Charmilles low-speed wire cu	itting machines	67 presses	S			
2 five axis laser cutting machines		5 tryout p	resses			
2 NC grinders		6 large au	tomatic pre	ss lines		
2 laser quenching machines		3 large ma	anual press	lines		

• FAW Tooling Manufacturing

#### NC Machining

5—Axis machine	DC—5ASM	2500*5000	SNK	1
5—Axis machine	PV—4001/NC	2000*5000	RAMBAUDI	1
5—Axis machine	HQ25M	2500*5000	HNK	1
5—Axis machine	DC—5ASM	2500*5000	SNK	7
5—Axis machine	JOMACH156	2500*6000	JOBS	1
3—Axis machine	OKUMA—BYJC	1000*460	OKUMA	5
3—Axis machine	OKUMA—BYJC	1300*560	OKUMA	4
3—Axis machine	TONTEC	1200*550	Nan Tong	2
5—Axis machine	FPT	3000*1300	Italy	1
3—Axis machine	大力	1900*1000	Taiwan	1
3—Axis machine	МСР	2500*1000	BYJC	1
3—Axis machine	桂林	2000*1000	Guilin	1
3—Axis machine	桂林	1430*500	Guilin	1

• FAW Tooling Manufacturing

#### NC Machining

名称	쪂号	主要规格	制造者	数量
5—Axis machine	MCR—A	1500*3000	OKUMA	1
5—Axis machine	MCR—BIII	1500*3000	OKUMA	1
5—Axis machine	MCR—BIII	2000*4000	OKUMA	1
5—Axis machine	MPH—2640S	2000*4000	TOSHIBA	1
5—Axis machine	DC—4ASM	2000*4000	SNK	2
3—Axis machine	HF—4NCPKO	2000*4000	SNK	1
3—Axis machine	DC—4ASM	2000*4000	SNK	7
3—Axis machine	MVS25/20	2000*4000	MITSUBISHI	1
3—Axis machine	TK42160A	1600*2500	China	1
3—Axis machine	SERAMILL240	2000*4000	AVIC	3
3—Axis machine	MPF—2640S	2000*4000	TOSHIBA	1
3—Axis machine	SERAMILL240	2000*4000	AVIC	1
3—Axis machine	HQ20M	2000*4000	HNK	1

• FAW Tooling Manufacturing

Presses



• FAW Tooling Manufacturing

#### Presses

Name	Туре	Specification	Manufacturer	Quan tity
mechanical press	JF39—800E	2500*4600	JIER	2
mechanical press	LS4A—1600	2500*4600	JIER	1
mechanical press	YX28—1700/2500	2500*5000	XuZhou Pressure Machinery Co., LTD	1
hydraulic press	YT27—2000D	2500*5000	天津市天锻压力机有限公司	1
mechanical press	JA39—1000/1	2500*4600	JIER	1
mechanical press	J36—800B	1800*4000	JIER	1
mechanical press	JD36—400/2	1400*3500	JIER	2
hydraulic press	YT27—1000AW	2500*4600	TianJin Tianduan Press Co., LTD	2
hydraulic press	YT27—1000AG	2500*4600	TianJin Tianduan Press Co., LTD	1
hydraulic press	YX27—1000C	2500*4600	XuZhou Pressure Machinery Co., LTD	2
hydraulic press	YT27—2100	2500*4600	TianJin Tianduan Press Co., LTD	1

• FAW Tooling Manufacturing

#### Presses

Name	Туре	Specification	Manufacturer	Quantity
hydraulic press	YT27—1200R	2500*4600	TianJin Tianduan Press Co., LTD	1
hydraulic press	YT27—1000AX	2500*4600	TianJin Tianduan Press Co., LTD	3
hydraulic press	SHP98—500	2500*4600	Hefei Haide Hydraulic Press Co., LTD	2
mechanical press	L4S2000—MB	4600*2500	QIQIHAR No.2 Machine Tool Co., LTD	1
mechanical press	E4S1000—MB	4600*2500	QIQIHAR No.2 Machine Tool Co., LTD	2
mechanical press	E4S800—MB	4600*2500	QIQIHAR No.2 Machine Tool Co., LTD	3
mechanical press	J47—1250/2000	4600*2500	JIER	1
mechanical press	JA39—1000	4600*2500	JIER	3
mechanical press	J39—800	4600*2500	JIER	2
mechanical press	J47—800/1300	4200*2200	JIER	1
mechanical press	JD36—400A	3800*1400	JIER	5

• FAW Tooling Manufacturing



Scanning



Large Scale 3D CMM



• Portable 3 CMM



• 6Axix Laser Cutter



Laser Hardening



Vacuum Quenching Furnace

- FAW Tooling Manufacturing
- Die Manufacturing Projects & Homeline Support last 5 years

Contact:	John Fernandez
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Jaguar Land Rover Automotive PLC	JAGUAR	L538, L405, L494, LWB, X760, L538C Structural Parts
Mercedes-Benz	(1)	R231 Hood Inner and Outer
Fiat Chrysler Automobile	FCA	MP551 Front and Rear Door Inner , B-Pillar
Thyssenkrupp	ThyssenKrupp	CF16 Inner of Four Doors, Hood and Tailgate
SKODA(Czech, Shanghai)	SICODA (III)	SK251, SK371, SK260, SK262 Body Side, Inner and Outer of 4 Doors, Tailgate
MARE Automobile	<del>တွေတို့စ</del>	X61F, Delta    Structural Parts
DATUM Automobile	DATUM Tooling Your Future	C-520, E- II , CD-4, K2XX, BGM, Structural Parts
Toyota Motor Corporation (Japan, Tianjin, Chengdu, Changhcun)	TOYOTA	969N107L, 965N, 502N, 238L, 438L, 506L, 613L, 518A, Structural Parts
GM Automobile(USA, Shanghai)	<u>GM</u>	Epsilon II T520, Hood, Structural Parts
Audi Automobile	Audi	Audi A6L, Audi A3, Audi Q3, Audi A4L, Fender, Structural Parts
VW Automobile (German, Shanghai, Changchun)		Passat B6, Caddy Jetta, Bora GP, Bora A5, New Bora, Golf A6, Magotan CC, Jetta FL3, New Magotan, New Sagitar, New Bora FL, Jetta NF, Magotan CCFL Golf A7, Model Y, Model F, Passat, Model S, New Bora NF Skin Panel

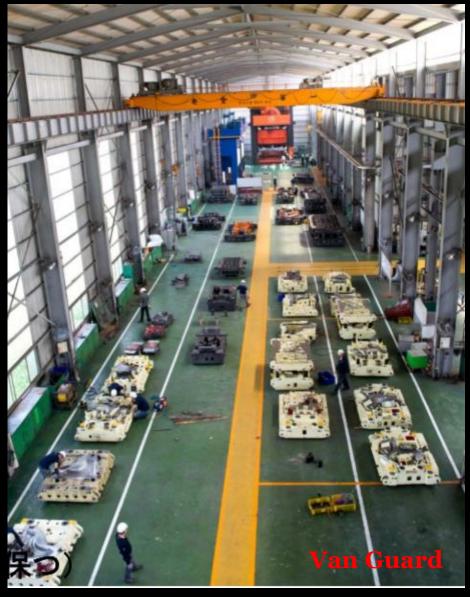
Customer		Dies Project		
Faw Car		M6,C301,C131,J44,J61,A501,A130,B70F,D003 A130 Hatchback,C303,J31,B90,D021,Skin Panel		
Faw Xiali		ViZi,X210,X220,N3,X121,X123,X111,092F,R008 Skin Panel		
Faw Jim Steam		V60,V80,D82A,T80,V70 Skin Panel		
Faw Jie Fang		J6,MV3 Skin Panel		
Faw Green Gas		J5,JL01,JH06,J6 Skin Panel		
Haima Automobile	0	H13 Fender		
MITSUBISHI Automobile	<b>企</b> 東南辺市	AS,GS,C1,V5 Body Side,Fender,Door		
Chery Automobile	CHERY	S11,B14,S12,B21,B23,H13 Skin Panel		
Lifan Automobile	#) 13#12#	LF06,X40 Skin Panel		
Youngman Automobile	S VVVII	007B/E Doors and Tailgate		
Geely Automobile				
CAMC Automobile	<b>◎</b>	H08 Cab		
Jiangling Motors	ima	V362,N330 Body Side,Inner and Outer of Doors and Hood, Roof, Trunk Lid Inner and Outer		

- Ejee Pressing Dies
- Van Guard Mold Enterprise
- S-Tooling
- Sunbird Mold Ind.









- Ejee Pressing Dies
- Van Guard Mold Enterprise
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2. Hydraulic Press

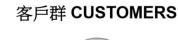
		1500T	1000 T	1000T	600T	600T	350T	250T
1	MAKER	TWN HLS	TWN LCM	TWN HLS	TWN FengYu	TWN FengYu	TWN FengYu	TWN HLS
2	NORM. MODEL HEIGHT	2300	1600	2100	1800	1600	1700	2300
3	BOLSTER SIZE	4.6*2.4	5.0*2.5	3.6*2.4	3.0*2.0	2.5*2.0	3.0*2.0	2.5*2.0
4	SLIDER STROKE	1900	1600	1800	1600	1400	1500	1700
5	SLIDER ADJUSTMENT	1900	X	18000	1600	1400	1500	1700
6	CUSHION ABILITY (KGF/	400	X	400	250	200	NONE	NONE
7	CUSHION STROKE	400	X	400	285	400	NONE	NONE
8	OPEN HEIGHT	2300	2200	2100	1800	1600	1700	2300



- **Ejee Pressing Dies** 
  - Established in 1988
  - ✓ Capital: US\$ 3,300.000
  - 150 employees





























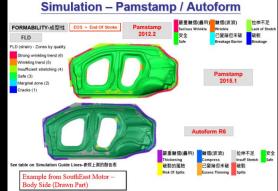




#### 油壓式沖壓機台 HYDRAULIC PRESS







#### [2], EJEE Plant Introduction

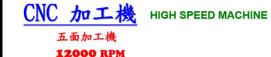
#### Press Introduction

1. Mechanical Press

MAKER	TWN LCM	TWN HLS	JPN KOMATSU	
NORM. MODEL HEIGHT	1600	1460	1100	
BOLSTER SIZE	5000°2500	4600*2500	3000*2000	
SLIDER STROKE	800	800	600	
SLIDER ADJUSTMENT	600	600	600	
SPM	300	18	20	
CUSHION STROKE	300	280	300	
LP4CR1-2400				MAN
	NORM. MODEL HEIGHT BOLSTER SIZE SLIDER STROKE SLIDER ADJUSTMENT SPM	NORM MODEL HEICHT	MORM MODEL HEIGHT	MORAN MODEL HEIGHT

2400 Ton 1200 Ton 500 Ton

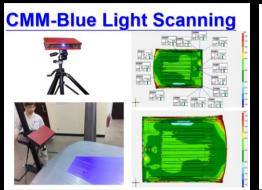




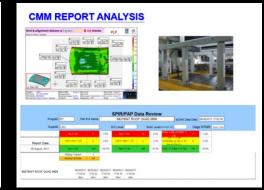


D/P	QTY	TABLE SIZE
WELE MG 530Z2	2	5000*2800
WELE LB 325Z	1	3000*2400
WELE MG 530	1	5000*2800
WELE AA 965	2	1100°650
AWEA LG5030	1	5000*3000
AWEA LG4030	1	4000*3000
AWEA SP3016	1	3000*1600
AWEA LP3021	1	3000*2100
SEKI 11	1	4000*2000
AWEA LG4630	1	4600*3000

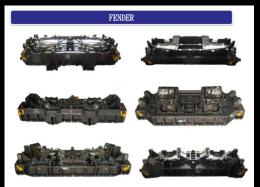
- Ejee Pressing Dies
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- Ejee Pressing Dies
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設備名 Name	規格 SPEC(mm)	廠牌 Maker	台數 Q'ty	設備名 Name	規格 SPEC(mm)	<b>廠牌</b> Maker	台數 Q'ty
CNC AA1880	FANUC 18iMB 1800x800x1100	WELE	1	Spotting Press	2000X3000X1500	YUNG THE	
CNC LP4021	FANUC 0iMD 4000x2100x760	AWEA	1	合模機 合わせ用ブレス	(Die Hight)		1
CNC LP4025	5A Universal head FANUC 18MC 4000x3200x1000	AWEA	1	300ton Hydraulic	2000X3000X1500	FENGYU	
CNC LB432Z	5A Universal head FANUC 31iMB 4060x3200x400-1400	WELE	1	油圧プレス 6ooton	(Die Hight)		1
CNC LG5030	FANUC 18iMB 5000x3000x1000	AWEA	1	Hydraulic 油圧プレス	2500x4600x1700 (Die Hight)	YUNG THE	1
CNC MG530	5A Universal head	WELE	1	1000ton	, , ,		
	FANUC 311MB 5000x3000x400-1400			Hydraulic 油圧プレス	2500X4600X1700 (Die Hight)	YUNG THE	1
	<b>维拉/************************************</b>			1000ton			
	铣床(Milling machine)		1		2500X4600X1500 (Die Hight)	CENTRO LINE	
	懸臂鑽床(Radial Drills)		3				1
	萬向戀臂鑽床(Universal Radial Drills)	句戀臂鑽床(Universal Radial Drills)					
	平面研磨機(surface grinding machine) 平面抛光機(Flat-surface polishing machine)		1	Quality and Reliability			
			1	CMM MCT NT 50-25-	5000X2500X1800 MCT NT 50-25-	COORD3	1
Other	補焊機(spotter)		6	測定器機	18DR		·
machine	威應淬火設備(induction hardening)		1	Compact Scan/	5M Digitizing	ATOS	1
	天車Crane	3oton/1ot on	2		System 波測厚計 / Portable		
	天車Crane	20ton/10t on	3	Tester	hickness Gauges		1
	天車Crane	10ton/5to	3	攜帶式硬度計/ Por Tester	table Hardness		2
				攜帶式表面粗度測 surface Rou	定機 / Portable ghness Tester		1

















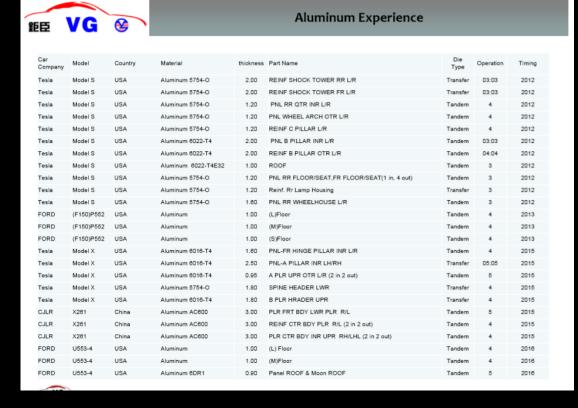
- Van Guard Mold Enterprise
  - ✓ Established in 1992
  - ✓ Capital: US\$ 2,900.000
  - ✓ Annual: US\$10,000.000
  - ✓ 75 employees

- Ejee Pressing Dies
- Van Guard Mold Enterprise
- S-Tooling
- Sunbird Mold Ind









- Ejee Pressing Dies
- Van Guard Mold Enterprise
- S-Tooling

◆プレス工業株式会社

• Sunbird Mold Ind

#### **Direct Clients** トヨワ車体 警覧 TOYOTA AUTO BODY **COC Tooling Indirect Clients** - 奇瑞·捷豹路膚-Volkswagen National Electric Vehicle Sweden PHN INDUSTRY SDN. BHD. (Company No. 206963-V) MARUTI SUZUKI PRESS KOGYO

Mahindra

& Mahindra

Count on us

•	S-Tooling
---	-----------

- ✓ Established in 1990
- ✓ Capital: US\$ 3,200.000
- ✓ Annual: US\$9,400.000
- ✓ 30 employees

Equipment name	Specifications Model	Make
1600 Ton Mechanical Press	Bolster Area:3930 x 2230 mm Die Cushion Capacity:200 Ton Die Cushion Stroke:175 mm	MVN
1200Ton Hydraulic Press	Bolster Area:3600 x 2400 mm Die Cushion Capacity:180 Ton Die Cushion Stroke:0 ~ 450 mm	HOMRING
800 Ton Hydraulic Press	Bolster Area:4700 x 2400 mm	HOMRING
600 Ton	Bolster Area:3000 x 2200 mm Die Cushion Capacity:75 Ton Die Cushion Stroke:0 ~ 330 mm	JAAN YEE
2000 Ton & 1600 Ton	Bolster Area: 2000 Ton = 5000 x 2500mm / 1600 Ton = 4600 x 2500mm Die Cushion Capacity: 300 Ton Die Cushion Stroke: 400mm	FONYU
Production Bridge Milling	LP4025Z X: 4000 Y: 2500 Z: 1000 Spindle speed / feed speed : 5000 rpm / 10 m/min Ancillary equipment Side milling head+Universal head(5°/Rotate)+Extended head	AWEA
Production Bridge Milling	MG530 X: 5000 Y: 3000 Z: 1200 Spindle speed / feed speed : 12000 rpm / 10 m/min Ancillary equipment Side milling head+Universal head(5°/Rotate)+Extended head	WELE
Coordinate Measuring	MCT Starlight 30.20.15 Measuring Range: X: 3000  Y: 2000  Z: 1500 Accuracy Requircment:5+5L/1000 (μm)	Coord3 Industries
3D Scanner	ATOS Compact Scan 5M System	RAT
F	LPM-48 SIZE∶ 2800 x 1600 x 2500 mm Lap plate speed∶ 0~60 rpm	SECULAR
Crane	7.5 / 4+3.5 / 3+2 TONS	LIFAN
Crane	20 + 7.5 TONS	Cheng Chang

- Ejee Pressing Dies
- Van Guard Mold Enterprise
- S-Tooling
- Sunbird Mold Ind



Contact: John Fernandez 313-492-0500 jfernandez@usdietrack.com

#### High Strength Steel



Rail-2 Lwr Outer R/L SCGA440-45 1.6t



Rein Fr Side Mbr Rr R/L SPC590DU 2.0t



UP FRAME D R/L RR HCT 600X+ZF 1.8t

#### Aluminum



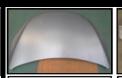
REAR QTR OTR LWR 6016-T4 0.95t



Extn. Rr Qtr Upr 6016-T4 0.95t



Rein Fr Bdy Ler Plr R/L AC600 T4 2.5t



**Hood Outer** H 220 B/+ZE 0.7t



Trunk Lid Outer H 220 B/+ZE 0.7t

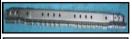


Steel



Tail Gate Outer





Strength, Side Sill Outer ISC590RN 1.6t



**CROSS MEMBER RH** ISH780Y 1.2t



FR DR INR SUPPORT DP780 1.0t



6016-T4 2.0t



TL091 1.7t



Floor Rear RR DC 05/+ZE 0.8t



**Hood Inner** DX 53 D+ZF 0.6t



Verstaerkung\_Gasfeder\_li / re CR4 1.5t



DX 53 D+Z 0.8t

- Ejee Pressing Dies
- Van Guard Mold Enterprise
- S-Tooling
- Sunbird Mold Ind







- Sunbird Mold Industry
  - ✓ Establishment: 1987
  - ✓ Capital : YS\$930,000
  - ✓ Average annual turnover : US\$3,500,000
  - Current number of employee: 50
  - ✓ Shop floor: 10,578 m²



#### Shop A- Rough – Medium machining, 5 axis machining, Rotary CAM unit machining.

#### Crane capacity 20t x2

- Horizontal NC machine UHM 800T
- AWEA 5025 X 2
- AWEA 5 FACE NC machine
- AWEA 3016 X 3
- AWEA 2012 X 2
- AWEA 8040
- ullet 800T hydraulic press, 200t mechanical press x 2 , 110t mechanical press x 2
- SANCO SVM 1100 NC machine















Shop C – Fine machining
Crane capacity 20t x2

• SANCO 5228L NC machines x 7







- Ejee Pressing Dies
- Van Guard Mold Enterprise
- S-Tooling
- Sunbird Mold Ind

- Automotive body inner parts tooling manufacture
- Automotive body outer parts tooling manufacture
- Automotive chassis parts tooling manufacture
- High tensile part tooling manufacturing





- ✓ Tryout Press: 1. 1600t Mechanical press 2. 800t Hydraulic press 3. 600t Hydraulic press 4. 400y Hydraulic press
- ✓ Fast-responding NC center machine: 1.
  AQ1050 (1000 X 500 X 600) 2. LG4025Z (4000 X 2500 X 1000) 3. MG530 (5000 X 3000 X 1200)
- ✓ CMM: X 3000 / Y 2000 / Z – 1500
- ✓ Blue light scanner: ATOS GOM system
- ✓ Crane: 1. 15t 2. 25t

Contact: John Fernandez 313-492-0500 jfernandez@usdietrack.com

## Our Partners: Korea

- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)











OKUMA MDB-A1 1,500 x 3,000



OKUMA MCV-A1 1,500 x 3,000



OKUMA MCR-A5CII (5 Axis) 1,500 x 3,000



OKUMA MCR-A 2,000 x 4,000



OKUMA MCR-A5C 2,000 x 4,000



OKUMA MCR-A **(5 Axis)** 2,000 x 4,000



OKUMA MCR-A5CII **(5 Axis)** 2,500 x 5,000



OKUMA MCR-A5CII (5 Axis) 2,500 x 5,000

Machine Tools	NAME	CAPACITY	QTY′
	HIGH SPEED MILL'G (5 AXIS)	2,500 x 5,000 x 1,000 (,1650)	2
	HIGH SPEED MILL'G (One 5 AXIS)	2,000 x 4,000 x 1,000 (,1650)	3
	HIGH SPEED MILL'G	1,500 x 3,000 x 750 (,1530)	2
	HIGH SPEED MILL'G (5 AXIS)	1,500 x 3,000 x 750 (,1530)	1
MACHINE	MILLING MACHINE	850 x 350 x 450	1
	NC MACHINE CENTER	2,100 x 850 x 750	3
	RADIAL DRILLING M/C	800 x 910 x 2,000	6
	UNIVERSAL MILLING M/C	1,600 x 720 x 750	1
	CNC 3D MEASURING MACHINE	4,000 × 1,600 × 2,000	1
	LASER SCANNING (LEICA AT960)	249 x 148 x 59	1
DRECC	MECHANICAL PRESS	2,400T 2,000T 1,500T 1,000T	4
PRESS	HYDRAULIC PRESS	800T 300T 200T 50T	4
CRANE	HOIST OVERHEAD CRANE	50T (Sub 30T)	2
CIVAINE	HOIST OVERHEAD CRANE	30T (Sub 15T)	6

#### Our Partners: Korea

- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)

#### - MECHANICAL



2400T 5,000 x 2,600



2000T 5,000 x 2,800



**1500T** 4,000 x 2,500



**1000T** 4,000 x 2,500

#### - HYDRAULIC



**800T** 3,500 x 2,500



**300T** 5,000 x 2,600



**200T** 4,200 x 2,400



**50T** 3,000 x 2,000

# • LASER SCANNER (LEICA AT960)

249 x 148 x 59

## COIL FEEDER (ANLF - 1600) Blank & Progressive



Width: 1600 Thickness: Max 3.2 Weight: 10 ton

#### 3D MEASURING MACHINE (PC DIMS)



Brand Name : Hexagon 4,000 x 2,000 x 1,600



Brand Name : DEA (Germany) 4,000 x 2,500 x 1,600

- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)











FRT DOOR INF



FCA JL(AL)





KIA QM RR DOOR OTR



KIA QM RR DOOR INR



RR DOOR INR



KIA JA RR DOOR OTR



**HYUNDAI IG** 



HYUNDAI IG





F-46 HOOD OTR



F-46 HOOD INR







AVTOVAZ 2180 FRT DOOR OTR



AVTOVAZ 2180 HOOD OTR PNL



AVTOVAZ 2180



LFD RR DOOR INR



HZG HOOD OTR

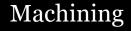


HZG HOOD INR



- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)
  - ✓ Capital: \$2.5M(USD)
  - ✓ Date of establishment: 1994. 3.1
  - ✓ Employee: 50
  - ✓ Revenue: \$18M(USD
  - ✓ Head quarter: National Moltek in Korea
  - ✓ Subsidiary company: NPC SIAM in Thailand
  - ✓ Mass product of:
    - ✓ Pallets & Boxes
    - ✓ Produce Mold

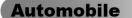






Assembly







**Pallet** 



Container



Electronic



Others



- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)

- > Know-how
  - ➤ For the last 48 years, National Moltek has accumulated cutting-edge mold technology while producing various kinds of mold ranging from auto parts to industrial product
- > Top-notch resources
  - > Operates R&D center consisted of top-class engineers
  - ➤ Supports R&D center with state-of-the-art class CAD/CAM/CAE systems

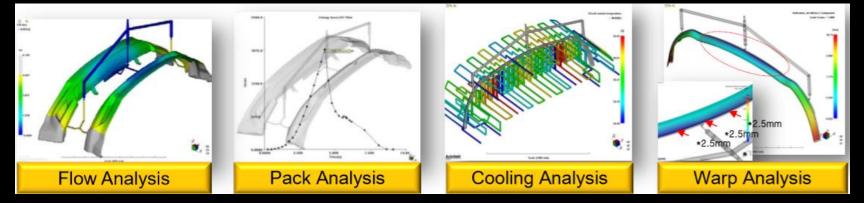
### Equipment

NAME	MODEL	Q'TY	MAKER/COUNTRY	STROKE	LOAD
	HNC2213-A30	1	MAKINO/J	2,200 ×1,300 × 1,000	10
	KBT-13E.A	1	KURAKI	3,000 x 2,000 x 1,300	15
	SIRIUS-2500	1	HWACHEON/K	4,000 × 2,300 × 900	10
Machining	SIRIUS-1250	1	HWACHEON/K	2,500 × 1,250 × 750	5
Center	SIRIUS-850	2	HWACHEON/K	2,000 × 850 × 750	4
	SIRIUS-UL+	1	HWACHEON/K	1,050 × 600 × 550	0.8
	ECOMIL-A24	1	HWACHEON/K	2,150 × 850 × 750	5
	CH-400N-CNC	1	DONGYANG/K	1,450 × 950 × 600	
E.D.M	EDNC-65S	1	MAKINO	650 x 450 x 350	
E.D.M	EDNC 64	1	MAKINO	600 x 400 x 250	
	MAKINO(156)	1	MAKINO/J	2,500 × 1,300 × 1,500	
Milling Machine	DMTH-2	2	HWACHEON/K	750 × 300 × 450	0.5
Lathe	HL580×1500G	2	HWACHEON/K	580 × 1500	
Radial DR.	DRD-1100	2	HWACHEON/DOOSAN/K	600 × 840 × 1,280	
FOR, GRD.	YGS-46	1	UIL/K	300 × 130	
FOR. GRD.	SFG-200MB	1	SAMSUNG/K	200 × 140	
Die Smet	KSRP-400	1	KUKDONGENG/K	3,000 × 2,000 × 2,700	
Die Spot	DSP2000	1	ASAI/J	2,000×1,500×1,600	20
3D Coordinate Measuring Machine	Epsolute 7530	1	DELCAM/U	3,000 × 2,000	
	30 +15 TON	1	BANDO/K		
	30 TON	1	BANDO/K		
Hoist	20 + 10 TON	2	BANDO/K		
	15 TON	1	BANDO/K		
	10 TON	5	BANDO/K		

CLASS	DESCRITION	VERSION	Q'TY
	UG	NX7.5	6
CAD	CADKYE	19	3
CAD	AUTOCAD	2012	5
	CATIA	V5	1
CAM	UG	NX7.5	2
CAIVI	MS	10	2
CAE	AUTODESK MOLD FLOW IN SIGHT	2014	2
Production	UG	NX7.5	1
Dep.	UG	VIEW	3
	NC BRAIN	PLUS	7
DNC	DATA SERVER		1

- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)





- > CAE Simulation and Analysis
  - ➤ Mold flow system prevents deformation after injection and increases production efficiency by reducing injection cycle time
  - ➤ National Moltek continuously builds database by comparing final trial result with initial simulation and analysis

- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)
- Founded: 1981
- Capital: US\$ 5 M
- > Employees:

113 (2017) -Suwon factory 75 -kunpo factory: 38

> Sales:

US\$ 23M (2016)

Suwon factory: USD 12.5M Kunpo factory: USD 10.5M

> Location:

Suwon: Saneop-ro Gyeonggi-do, Korea Kunpo: Beon-gil, Gyeonggi-do, Korea

> Products:

Automotive (Plastic, interior & exterior)
Precision & optical (Headlamp, Ambient Light)
Electronics (TV, Home Audio, Printer, Mobile Phone)





- Goitech (Stamping)
- NPC Moltek (Plastic Injection Mold)
- Raymold (Plastic Injection Mold)



MODEL	QTY	MAKER	Tie bar distance
100 ton	3	FANUC	410 x 410
130 ton(2K)	1	SUMITOMO	860 x 830
140 ton	1	FCS	860 x 830
220 ton	1	ENGEL	700 x 710
220 ton(2K)	1	Woojin	700 x 710
450 ton	8	JSW/NIGATA	810 x 810
650 ton	2	JSW/TOSHIBA	960 x 960
1,300 ton	1	JSW	1,400 x 1,400



900 x 700 5 μm	1
5 µm	5
50 x 300 10 μm	4
700 x 500 10 μm	2
00 x 400 10 μm	4
֡	00 × 500 00 × 500 50 × 300 10 μm 700 × 500 10 μm











### Develop micro pattern and optical parts

Machine	Range	RPM	Precision	Qty	
нѕм	1,300 × 900 × 700	00 x 700 24,000		1	
нѕм	800 x 600 x 500	42,000	5 <i>µ</i> m	3	
HSM	700 x 600 x 500	42,000	5 <i>µ</i> m	2	
CNC	2,500 x 1,250 x 750	12,000	10 <i>µ</i> m	2	
CNC	1,500 x 750 x 650	12,000	10 <i>µ</i> m	2	
CNC	2,000 x 960 x 800	12,000	10 <i>µ</i> m	1	
CNC	1,200 x 680 x 600	12,000	10 <i>µ</i> m	2	
		4	·A		

- Goitech (Stamping)
- NPC Moltek (<u>Plastic Injection Mold</u>)
- Raymold (Plastic Injection Mold)







Machine	QTY	Range	Precision
Non-contact 3D	2	700 x 1,000 x 600	1 <i>µ</i> m
Contact 3D	2	600 x 600 x 150	1 <i>μ</i> m





- TEC Tooling\_Aethra
- Injetaq\_TAQ



ltem	Nbr People	Comments
TOTAL EMPLOYEES	230	
ENGENEERING	18	Project Managing, Feasibility, Process Enginneering, Die Design Engineering
MANUFACTURING	157	Machinning Shop, Tooling Shop, Try-out Shop
SUPPORT AREAS	55	PCP, Metrology, Quality, Accounting, Warehouse, Maintenance, etc.
CURRENT CAPACITY (hours/year)	255.000	Considering 230 employees
INSTALLED CAPACITY (hours/year)	430.000	Considering 330 employees
CURRENT CAPACITY (hours/year)	255.000	Considering 230 employees
INSTALLED CAPACITY (hours/year)	430.000	Considering 330 employees

























Our Clients

























- TEC Tooling\_Aethra
- Injetaq\_TAQ

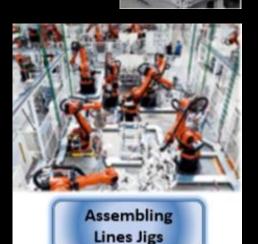


**Devices** 

**Master Cubing** 

Devices

Portfolio



**Stamping Dies** 



### SOFTWARES (CAD / CAE)



CAD

UNIGRAPHICS NX 9 **CATIA V5 6R.2016 SOLIDEDGE AUTOCAD POWERSCKET POWERSHAPE OMNICAD** 



CAM

**POWERMILL** 



**FEASIBILITY** 

**PAMSTAMP 2017.0 AUTOMFORM R7** 



SCANNING

GEOMAGIC STUDIO GEOMAGIC QUALIFY



**METROLOGY** 

**PCDMIS** CAM2 **METROLOG** 



VISUALIZATION

3D TEAMCENTER VISUALIZATION



Checking **Fixtures** 









- TEC Tooling\_Aethra
- Injetaq\_TAQ

Class	Model	X axis (mm)	Y axis (mm)	Z axis (mm)	Spin (RPM)	Speed rate (mm/min)	Capacity (Ton)	Comand	Power
BIG	OKUMA 1	5000	3700	800	10000	10000	33 T	OSP700M	84 Kva.
BIG	OKUMA 2	5000	3700	800	6000	10000	33 T	OSP - U 100	54 Kva.
BIG	OKUMA 3	4000	2000	450	6000	15000	12 T	OSP - E100L	34 Kva.
BIG	OKUMA 4	5000	3700	800	20000	20000	33 T	OSP - E100M	64 Kva.
BIG	ZAYER 1	4700	1500	2000	6000	25000	10 T	FIDIA C20	37 Kw.
BIG	ZAYER 2	3700	1500	2000	10000	25000	10 T	FIDIA C20	37 Kw.
BIG	ZAYER 3	3700	1500	2000	10000	25000	10 T	FIDIA C20	37 Kw.
BIG	AWEA	5000	2800	800	3800	10000	15 T	FANUC Series 18í – MB	80 Kva.
BIG	WALDRICH	13500	4750	1000	2000	8000	40 T	SIEMENS - 840D	55 Kw.
BIG	CMM	9000	2825	1000	2200	5000	30 T	SIEMENS - 840D	50 Kw.
BIG	KELLER	3000	1480	480	1800	3000	15 T	SIEMENS – 802	49 HP
MED	U60 - ROMI	2300	1250	960	1600	4000	15 T	SIEMENS – 802	10 HP
MED	DEBER	3450	1000	1300	2000	5000	4 T	FIDIA COPY MILL	18 HP
MED	G&LEWIS	2200	1440	1280	1050	5000	4 T	FIDIA COPY MILL	20 HP
MED	SVERTILOVA	2045	1450	300	2500	1800	3 T	CONVENTIONAL	18 HP
MED	LUCAS	2210	1350	850	1200	5000	4 T	FIDIA COPY MILL	20 HP
MED	WOTAN	1800	1350	1000	3000	1600	3,5 T	CONVENTIONAL	15 HP
MED	UNION	2750	1930	1000	4000	1000	8 T	SIEMENS-840D	18 HP
SML	GAMBIM 1	1700	590	700	1600	3500	1,2 T	Z32	6 Kw.
SML	GAMBIM 2	1700	590	700	1600	3500	1,2 T	FIDIA COPY MILL	4 Kw.
SML	TRAUB	450	450	480	4000	1800	0,8 T	HENTENHAI TNC 175	1,8 Kw.
SML	PC 60	1365	636	520	2144	9000	3 T	ECS 2401	-
SML	UC60	1710	350	795	2700	9000	3 T	ECS 2401	-

#### **TOOLING SHOP**



**ASSEMBLY** 

**FINISHING** 

SHOP

40 BOXES

16 BOXES











1x Crain 10x Rotating Arm Drilling Machine

50.ton 20.ton







#### 3D MACHINING (Capacity VS RPM)



BIG SISE Machining (11x)

OKUMA#01 33 ton - 10k rpm OKUMA#03 15 ton - 6k rpm OKUMA#04 33 ton - 20k rpm ZAYER#01 10 ton - 10k rpm ZAYER#02 10 ton - 10k rpm ZAYER#03 10 ton - 10k rpm 15 ton - 3.8k rpm WALDRICH 40 ton - 2.0k rpm 30 ton - 2.2k rpm KELLER 15 ton - 1.8k rpm



MEDIUM Machining (7x)

U60 - ROMI 15 ton - 1.6k rpm DEBER 4 ton - 2.0k rpm **G&LEWIS** 4 ton - 1.0k rpm SVERTILOWA 3 ton - 2.5k rpm 4 ton - 1.2k rpm WOTAN 3.5 ton - 3.0k rpm UNION 8 ton - 4.0k rpm



SMALL SIZE Machining

GAMBIM#01 1.2 ton - 1.6k rpm GAMBIM#02 1.2 ton - 1.6k rpm 0.8 ton - 4k rpm 3 ton - 2.1k rpm UC 60 3 ton - 2.7k rpm

























- TEC Tooling\_Aethra
- Injetaq\_TAQ



### **Try-out Presses Specs**

Class	Brand	Sort	BOLSTER Dimensions	SLIDER STROKE (Max / Min)	RAM STROK (Max/Min)
BIG	SIMPAC 2000	SINGLE ACTION UPR/LWR Cushion	2500X5000mm	Máx. 1650mm / Min. 1100mm	N/A
BIG	<b>DANLY 2000</b>	DOUBLE ACTION	2400X3960mm	Máx. 1955mm / Min. 1700mm	Máx. 1830mm / Min. 1565mm
BIG	VERSON 2000	DOUBLE ACTION	2400X4570mm	Máx. 1815mm / Min. 1605mm	Máx. 1670mm / Min. 1450mm
MED	LUXOR 1000	SINGLE ACTION LWR Cushion	1840X3965mm	Máx. 1345mm / Min. 890mm	N/A
MED	DANLY 950	DOUBLE ACTION	2135X3345mm	Máx. 1540mm / Min. 1185mm	Máx. 1440mm / Min. 1085mm
MED	SCHULER 800	DOUBLE ACTION	1676X2743mm	Máx. 1545mm / Min. 1050mm	Máx. 1470mm / Min. 980mm
MED	RIO NEGRO 250	SINGLE ACTION	2450X3000mm	Máx. 1770mm / Min. 1055mm	N/A
SML	DANLY 400	SINGLE ACTION	1524X2743mm	Máx. 940mm / Min. 655mm	N/A
SML	PIRATININGA 400	HIDRAULIC	1600X2470mm	Máx. 1540mm / Min. 520mm	N/A
SML	HIMECA 250	HIDRAULIC	1500X2000mm	Máx. 500mm / Min. 200mm	N/A
SML	LUXOR 400	HIDRAULIC	1300X1500mm	Máx. 1290mm / Min. 400mm	N/A
SML	LUXOR 400	HIDRAULIC	1300X1500mm	Máx. 1290mm / Min. 400mm	N/A

#### QUALITY RESOURCES



CNC CMM - DEA BETA (pcdims)
MANUAL STIEFELMAYER (pcdims)









Accessories

Braço FARO #01 (geomagic) Braço FARO #02 (geomagic) 01x LASER SCAN device









ISO 9001:2015 ISO TS 16949:2009 ISO 14001:2004 VDA6 - part3 QSB EAQF (ASES)

(ABS) (ABS) (ABS) (MBB & VW) (FIAT & GM) (RENAULT)







#### TRY-OUT PRESSES (tonage)



**BIG SIZE PRESS** 

SIMPAC S/A 2000.ton (upr+ lwr cushion) DANLY D/A 2000.ton VERSON D/A 2000.ton











1000.ton (lwr cushion) PIRATININGA 400.ton HIDRAULIC











RIO NEGRO 250.ton HIDRAULIC 250.ton HIDRAULIC 400.ton HIDRAULIC 400.ton HIDRAULIC









- TEC Tooling\_Aethra
- Injetaq\_TAQ





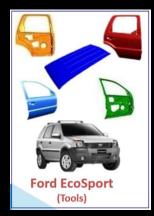
























- TEC Tooling\_Aethra
- Injetaq\_TAQ

- Founded: 1991
- Capital: US\$ 25 M
- Employees: 121
- > Sales: US\$ 19 M (2018)
- ➤ Location: Santo Andre, SP Brasil
- ➤ Products: Automotive Panels (small/medium):
  - Semi-Exposed
  - Closures
  - Brackets
  - Underbody







- TEC Tooling\_Aethra
- Injetaq\_TAQ

### Clients























































- TEC Tooling\_Aethra
- Injetaq\_TAQ

For more information on Injetaq capacities, equipment, current projects, etc. please contact me at the Number and Email below.



# Summary

We support our customers from Kick Off in product development to mass production. Because of our years of expertise, we are able to coordinate complex tool engineering projects. For major projects, we support our customers in implementing complex technical systems in the field of component development with experts in Stamping (Cold & Hot), sheet metal forming & plastic Injection







- Supervision and acceptance from drawing simulations, 3D methods, tool designs and die cast models.
- ➤ Validation of tool quotes or modification costs
- > Technical documentation and project reporting
- Supervision of external tool and part suppliers
- Quality assurance and determination of componentchanging actions and change or corrective action
- Surface audit and coordination of sampling
- ➤ Tool pre-acceptance for tool manufacturers and approvals on production presses up to the point of process reliability, PPAP.
- ➤ Coordination of Tool Relocations/Shipment
- Insurance and achievement of project targets (costs, quality, deadlines
- Escalation management

President: John Fernandez

My name is John Fernandez and I am the owner of Die Track, LLC. Having completed my apprenticeship in Brazil at 18 y/o, I have been in the Tool & Die world for over 30 years.

Some of my experience contains a 13 year journey at Ford Motor Co, as a member of management at Dearborn Tool & Die, 4 years at Toyota Texas, where I was a member of the Launch team, launching the Plant, 3 different Tundra versions, and a vehicle transfer, FCA as the Plant manager at Mount Elliott Tool and Die, and latest as a Global Program manager, responsible for all Die Related Projects for Jeep, The Ram truck, the Compass Brazil, Compass Mexico (Toluca), and the China Cherokee (7 passenger China vehicle only).

As the owner of Die Track, I personally oversee every project, regardless of size, complexity, or location.

Die Tack has been able to form a team of experts, globally, and is a major presence in the Automotive World.

With members in the biggest automotive market in the world, as in USA, China, South America, Europe, we speak every language. Period. Our strength is in stamping, but we're definitely not limited to it. We have permanent representatives in China, Taiwan, Korea, Germany, Italy, Brazil, and of course the United States of America, Canada and Mexico.

I speak Fluent Spanish, Native Portuguese, and Native English, (and some Italian without bragging rights)..

