# ALUMAG® GLOBAL FOUNDRY FORGING DATABASE

# **INTRODUCTION :**

ALUMAG<sup>®</sup> as a provider of automotive forecasting, studies, research, and databases offers a new tool that provides market intelligence on aluminum and magnesium casting companies from all over the world. The Foundry Forging Database [FDB] was created in 2014, causally for aluminum casting entities in NA. This local nucleus quickly developed into a global approach and implementation. Today, this is the only global comprehensive FDB. Over the recent years, ferro & iron have been added, forging & mold / die marking.

# DATABASE KEY FACTS :

- Entire database listing actual 1,500 facilities, and growing.
   1,360+ casting / 110+ forging / 170+ mold making entities
- 2. Format: Excel data sheet with multiple filtering options
- 3. Inhouse equipment, services & served markets.
- 4. Served automotive applications.
- 5. Multiple locations listed for each group incl. HQ and plants.
- 6. Group contact with direct email address [M&A module]

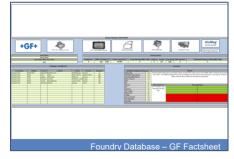
### **GLOBAL FOUNDRY BENEFITS :**

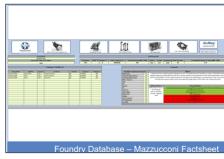
- 1. Casting supplier database incl. Mega-/ Giga-/ Hyper Castings
- 1. Research by individual & various filter settings
- 2. Search & validation for M&A targets [M&A module is optional]
- 3. Die / Tooling and Forging database user license is optional]
- 4. Daily actualization and extension of the database
- 5. One time buy, optional an individualized subscription.
- Competitor equipment analysis incl. Mega- [ >6,000 tons], Giga- [ >9,000 tons], Hyper- [ >12,000 tons] Presses

# **GLOBAL FOUNDRY DATABASE DESCRIPTION & CONTENT :**

- 1. Full address with allocated filter for region, country and states
- 2. Kind of location [plant or HQ]
- 3. Year of incorporation, number of employees, shareholders, ...
- 4. Share of cast aluminum and magnesium [rough indication]
- 5. Clamping force range [HPDC] up-to 20NM / 20,000 tons

Prevince / State		Country	v	Continent / Sub-Continent	•	minium Share [%]	gnesium Share [%]	e From [T]	e To [1]	HPDC/Forging 5 400	HPDC / Forging \$ 1000	<ul> <li>HPDC / Forgings 1500</li> </ul>	♦ HPDC / Forging ≤ 2000	HPDC / Forging 5 2500	HPDC / Forging > 2500	al No / Forging. HPDC I
	Israel			Asia (Without China)		100	0	440	1.400							
Indiana	USA			North America												
Dhio	USA			North America		100	0	400	1200	3	6	1	0	0	0	10
Distario	CAN			North America		100	0	600	2.000	0	12	0	2	0	0	ਸ
Distario	CAN			North America		100	0	600	2.000	0	12	0	2	0	0	и
Onterio	CAN			North America		100	0	500	2.000	0	12	0	2	0	0	- 14
New Jersey	USA			North America		50	50	30	1,800							
Dhih	MEX			North America		100	0	250	1.800	- 1	25		1	0	0	27
Coahuila	MEX			North America		100	0	600	1200	0	32		0	0	0	32
Minnesola	USA			North America		100	0	350	900	3	8	0	0	0	0	11
wt.	USA			North America		100	0	500	1,800	0	- 34		3	0	0	- 38
Arkansas	USA			North America		100	0	600	1.800	0	39		3	0	0	- 42
PA	USA			North America		100	0	600	1650	0	23		1	0	0	24
Massachusetts	USA			North America		100	0	250	1200	6	27		0	0	0	33
Minnesola	USA			North America		0	100	200	350	10	0	0	0	0	0	10
				Four	١d	ry (	Dat	ab	ase	e –	Fa	ac	ilit∖	/ L	ist	







- 6. Number of casting cells [mainly HPDC]
- 7. Number of casting cells by clamping force [HPDC & not possible for all plants]
- 8. In-house cast processes [SC, GDC, LPDC, CPC, HPDC, HOLLOW SECTION etc.]
- 9. Pre & post cast processes [In-house engineering, die / tool shop [build or repair], vacuum, heat treatment, CNC, leakage test, impregnating [sealing], assembly, ...]
- 10. Industries served [Aeronautics, Automotive, Energy, General Engineering, Marine, Medical, Military]
- 11. Cast applications and products in production [22+ predefined product groups like ICE, E-Motor, BiW, Mega-/ Giga-/ Hyper Castings, ..]
- 12. Reference customers
- 13. Certifications [ISO 9001, ISO 14001, IATF16949
- 14. Key figures [Number of employees, revenue [USD], capacity by units and/or tons

## GLOBAL FOUNDRY DATABASE PAGES/ VIEWS :

- 1. Facility List: 1,360+ facilities incl. the mentioned criteria by plant above
- 2. <u>Group Summary:</u> 710+ group figures are summarized and calculated automatically based on the facility inputs for the 1,360+ facilities. Information available are :
  - 2.1. Group Key figures [revenue, employees and capacity] in M&A module
  - 2.2. Group number of foundries by region [NA, SA, EU, Asia, China]
  - 2.3. Group casting processes [SC, GDC, LPDC, CPC, HPDC, SEMI SOLID, HOLLOW SECTION]
  - 2.4. Listed "Large Presses" as: Mega-, Giga-, Hyper-Presses
  - 2.5. Group clamping force range & number of cells [HPDC] incl. dynamic graphics.
  - 2.6. Group Pre & post cast processes [In-house engineering, tool shop [build or repair], assembly, heat treatment, CNC]
  - 2.7. Group cast applications & products in production [22 predefined product groups]
- 3. Fact sheet: An overview of each inserted group showing all information available

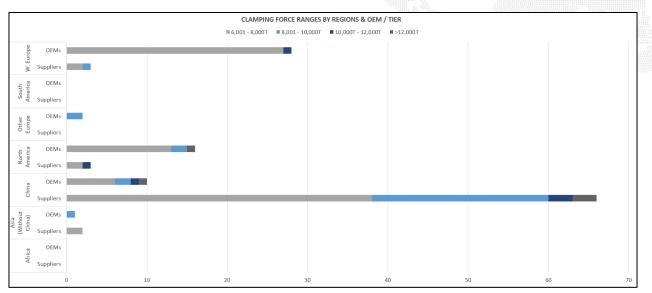
### GLOBAL FOUNDRY DATABASE - DATABASE FULFILLMENT RATE :

At this stage the foundry database including 1,360+ AL and/or MG facilities which equals 710+ foundry groups. The database is continuously being updated and expanded to include further facilities / companies and to increase the data fulfillment rate of the existing facilities. At present the fulfillment rate for the inserted 1,360+ facilities can be described as follows:

- 1. Low content [0 to 30%]: 50+ facilities [≈4%]
- 2. Moderate content: [30 to 70%] 390+ facilities [≈29%]
- 3. High content: [70 to 100%] 880+ facilities [≈66%]



### APPETIZER : SUMMARY CLAMPING FORCE RANGES BY REGION & OEM / TIER :



#### APPETIZER : FACT SHEET :

TESL				TISLA		Mc	odel Y Underbody				
	Group				1&A Priority						
		0	Employees		HPDC CF Range (T.)		Yearly Capacity [T.]				
	ELON N	NUSK				1690		2.000 - 12.000		1.059	
		Company / Fac				]			Refresh Cus		
Group Name	Facilities	Country	Locations	Continent	Employees		Group Production P	rocesses			
TESLA	Secondary	USA	Austin	North America	450		Engineering	Yes	TESLA IN-HOUSE		0
TESLA	Main (HQ)	USA	Fremont	North America	550		Tool Shop inhouse		HOUSE, TESLA IN		
TESLA	Secondary	Southeast China	Shanghai	China	350		Tool Shop Maint.	No	TESLA IN-HOUSE		
TESLA	Secondary	Germany	Gruenheide	W. Europe	340		HPDC	Yes	-		
							LPDC	Yes	-		
							GDC	No	-		
							Squeeze CPC	No	-		
								No No	4		0
							Sand Cast Cast Forging	NO	1		0
							Hollow Cast	No	1		0
							Vacuum	Yes	1		0
							Forging	No	Mega - Hype	rcasting	0
							Heat Treatment		Megacast	Yes	0
							CNC Machining	Yes	Gigacast	Yes	0
							Assembly	Yes	Hypercast	Potential	0

FDB WEB, GT&C, VIDEO



#### AUTOMOTIVE INTEL.





#### **PRICING** :

						and a state of					
PRICING IN USD											
1	L-TIME BU	JY & 1-USEF	2	5-YEARS SUBSCRIPTION & 1-USER / SUBSCRIPED REGION							
1-Time	FDB	CONTACTS	M&A	$1^{st}$ YEAR	FDB	CONTACTS	$2^{nd}$ - $5^{th}$	FDB	CONTACTS		
EU+	\$16.500	\$13.200	\$3.300	EU+	\$8.250	\$6.600	EU+	\$2.750	\$2.200		
NA	\$16.500	\$13.200		NA	\$8.250	\$6.600	NA	\$2.750	\$2.200		
EA	\$16.500	\$13.200		EA	\$8.250	\$6.600	EA	\$2.750	\$2.200		
ROW	\$16.500	\$13.200		ROW	\$8.250	\$6.600	ROW	\$2.750	\$2.200		
GLOBAL	\$49.500	\$39.600		GLOBAL	\$24.750	\$19.800	GLOBAL	\$8.250	\$6.600		

FDB detailed "Foundry Database" incl Fact sheet, Group sheet, Plant sheet.

- CONTACTS one management contact for each casting group
- REGIONS EU+ [European Union plus the countries: CHE, GBR, SRB, TUR] NA [CAN, MEX, USA] EA [East Asia with CHN, JAP, KOR, MNG, TWN] ROW [Rest of the World like, AUS, BRZ, IND, RUS, ..., ZAF] prepared but blanked/unloaded "M&A module" incl spider diagrams. [gathered and typed-in data by ALUMAG<sup>®</sup> on individual quoted clients demand]
  UPDATES 5-years subscribers will receive twice a year an update

### CLIENT CONTACT DETAILS :

- First name
- Family name :
- Job title
- Company
- Address
- City/Zip/State:
- Country
- Phone/e-mail:
- Order content:
- Amount in \$ :

Signature :

User license fee agreed to ALUMAG<sup>®</sup> General Terms & Conditions. Client will receive an invoice by : ALUMAG<sup>®</sup> Automotive GmbH, Kohlkamp 42, 58708 Menden, Germany Mr JOST GAERTNER, Managing Partner, j.gaertner@alumag.com, +49 172 6000569