



SYGMATM
PORTABLE MACHINES & BOLTING SOLUTIONS

CATALOG 2026

WWW.SYGMAMACHINES.COM



BELGIAN ENGINEERING.

BUILT FOR THE WORLD'S TOUGHEST ENVIRONMENTS.

OUR STORY



1996

Industrial Company
Founded.



2008

First Portable
Machine developed.



TODAY

Global OEM manufacturer
and trusted partner
worldwide.

WHO WE ARE

Sygma is a Belgium-based engineering company specialized in on-site machining, bolting solutions, and high-performance industrial tooling.

What began in **1996** as a small industrial service organization has evolved into a global OEM with a clear and focused mission. In **2008**, we developed our first product, a significant milestone that marked our transition from service provider to manufacturer.

Our equipment is used every day in the **oil & gas sector**, **power generation**, **petrochemical plants**, **offshore projects**, and **heavy industry**.

Today, we are dedicated to **reducing downtime**, **increasing safety**, and **supporting** our customers in the **most demanding industrial environments** worldwide.

OUR MISSION



ENGINEERED TO PERFORM

We build machines that perform when it matters most, combining Belgian engineering with international field expertise.



PARTNERS IN INNOVATION

Innovation is at the heart of our designs, driven by long-term partnerships with clients and distributors.



COMPLETE SOLUTIONS

We create complete solutions, not just tools. With one clear ambition: to become the most trusted global brand for portable machining and bolting equipment.

OUR VISION



SMART MODULARITY

We believe the future of on-site machining lies in smart modularity, global accessibility, and user-focused design.



A TRUSTED PARTNER

Our vision is to become the most dependable partner in portable machining and bolting by combining exceptional machines with service, support, training, and continuous improvement.



BUILT TO LAST

We create solutions that evolve with industries and build lasting value worldwide

INDUSTRIES WE SERVE



Oil & Gas
Industry



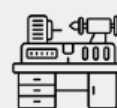
Maritime
Industry



Energy
Industry



Mining
Industry



Heavy
Industry



1 PORTABLE FLANGE FACING MACHINES

Alpha-I Series	6-17
Alpha-I 1-16	7
Alpha-I 4-30	8
Alpha-I 8-40	10
Alpha-I 15-60.....	12
Alpha-I 30-80.....	14
Alpha-I 50-160.....	16
Applications Alpha-I Flange Facers	17
Alpha-E Series	18-19



2 ORBITAL MILLING MACHINES

Alpha-OM Large Machines	20-21
Alpha-OM 10.000	21



3 MANUAL FLANGE FACING MACHINES

MiniFacer Series	22-27
MiniFacer ONE	23
MiniFacer SB	24
MiniFacer EVO.....	25
MiniFacer OD	26
Durable Case & Applications	27



4 PORTABLE & HEAVY-DUTY GRINDING MACHINES

Xtreme Series	28-31
Xtreme 750	29
Xtreme 1000	30
Optional Configuration.....	31



ON-SITE MILLING & DRILLING MACHINES

Legacy Series	32-37
Legacy PPM	33
Legacy MM	34
Legacy HDM	35
Legacy EOS	36
Legacy Milling Head	37



PIPE CUTTING & BEVELING MACHINES

Cube Series	38-39
Delta Series	40-41



BOLT TORQUE & TENSIONERS SOLUTIONS

Xtens Series	42-45
Xtens TSR	43
Xtens HN	45



HYDRAULIC TORQUE WRENCH

SQT & LT Series	46-49
SQD Series	47
LP-Series	48



TURNTABLES HEAVY LIFTING

HTT Series	50-51
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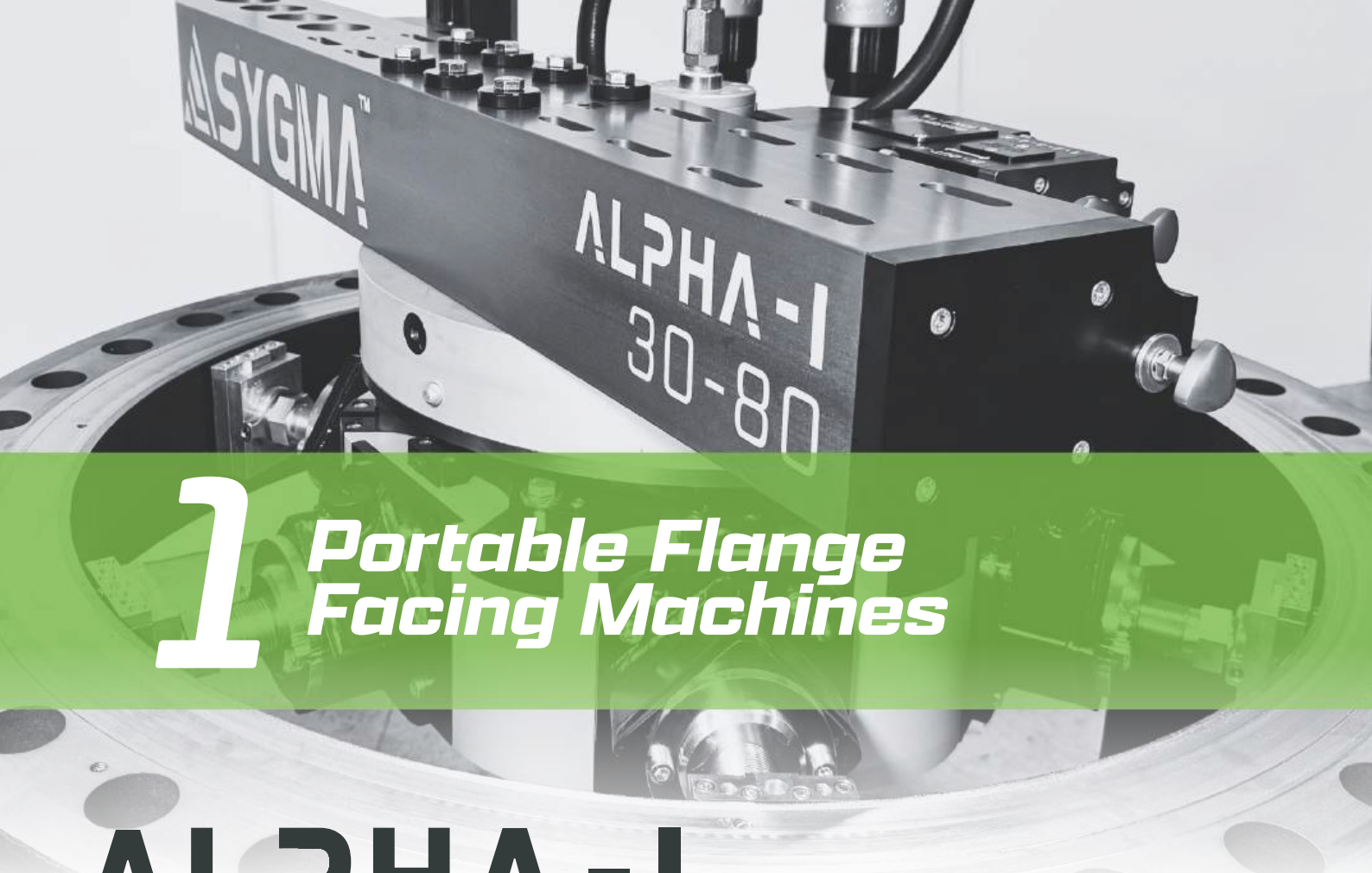
MASTER PIN PRESS TOOL

MPP Series	52-53
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HYDRAULIC PUMPS & CYLINDERS

Hydraulic Pumps - Cylinders	54-57
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1 *Portable Flange Facing Machines*

ALPHA-1 - SERIES -

INTERNAL MOUNTING FLANGE FACERS

Available Models

- 1-16
- 4-30
- 8-40
- 15-60
- 30-80
- 50-160/200

Machining Capacity

From 1 inch to 200 inches

Positions

- Horizontal Flange Facing
- Vertical Flange Facing
- Inverted Flange Facing



ALPHA-I

1-16

Alpha-I 1-16 revolutionizes flange facing with its innovative features including an integrated gearbox and motor, enabling easy setup and operation for achieving multiple surface finishes with precision.

FEATURES

- Multiple Surface Finishes
- Easy Setup & Operations
- Integrated Gearbox & Motor
- Axial Feed Stop
- Rotating Toolpost



TECHNICAL SPECIFICATIONS

Clamping capacity	Min	Max
Collet	Ø 25,4 mm	Ø 223 mm
	Ø 1"	Ø 8,78"
Base	Ø 146 mm	Ø 410 mm
	Ø 5,75"	Ø 16,14"

Machining capacity	
Min	Max
Ø 25,4 mm	Ø 406,4 mm
* Ø 1"	* Ø 16"

* based on neutral cutting tool

Motor Data - Pneumatic

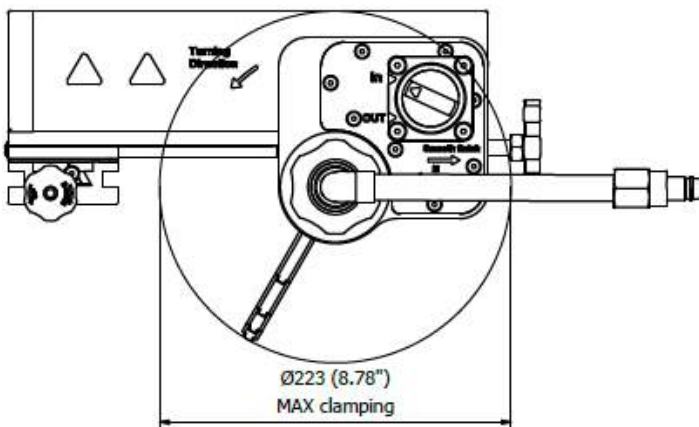
Motor Power	Air Consumption	Air Supply Pressure
630 W (0.85 HP)	1100 l / min	6.2 Bar

Dimensional Data

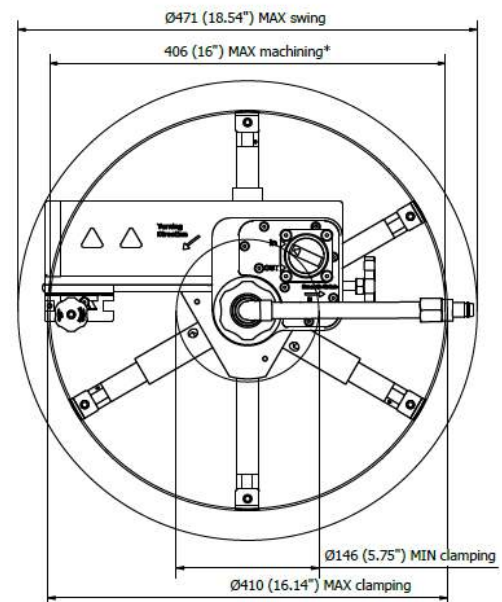
Case dimensions	Total case weight	Overall weight machine without base	Overall height machine	Overall height machine without Base configuration
620 x 460 x 340 mm	37,2 kg	+/- 12 kg	267 mm (10,5")	212 mm (8,36")

MAIN ASSEMBLY

With Gibbs Dimensions



Assembly with Base Dimensions



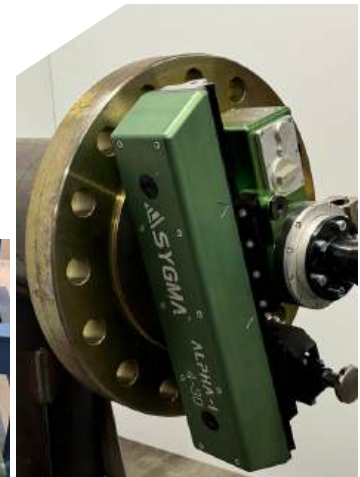
ALPHA-I

4-30

The **Alpha-I 4-30** revolutionizes flange facing with its innovative features, including an automatic toolpost and S-Gear system, enabling easy setup and operation to achieve multiple surface finishes with precision.

FEATURES

- Multiple Surface Finishes
- Easy Setup & Operations
- S-Gear System
- Automatic Toolpost
- Variable Feet Adjustment
- Easy Levelling



TECHNICAL SPECIFICATIONS

Clamping capacity	Min	Max
Collet	Ø 99,5 mm	Ø 292 mm
	Ø 3,92"	Ø 11,5"
Base 1	Ø 201,5 mm	Ø 504 mm
	Ø 7,93"	Ø 19,84"
Base 2	Ø 476 mm	Ø 756 mm
	Ø 18,74"	Ø 29,76"

Machining capacity	
Min	Max
Ø 100 mm	Ø 780 mm
* Ø 3,94"	* Ø 30,71"

* based on neutral cutting tool

Dimensional Data			
Case dimensions	Total case weight	Overall weight machine without base	Height machine without motor
900 x 800 x 550 mm	+/- 160 kg	+/- 38,5 kg	202 mm (7,95")

Motor Data	
Pneumatic	
Motor Power	1080 W (1.45 HP)
Air Consumption	1000 l / min
Air Supply Pressure	6 Bar
Electric	
Motor Power	1,5 kW
Voltage	230 V
Frequency	50 Hz
Hydraulic	
Rated Power	1.5 kW
Operating Pressure	100 bar
Recommended Flow Rate	10-11 L/min
Hydraulic Oil	ISO VG 32 or ISO VG 46
Maximum Return pressure	< 10 bar

ALPHA-I

4-30

OPTIONS

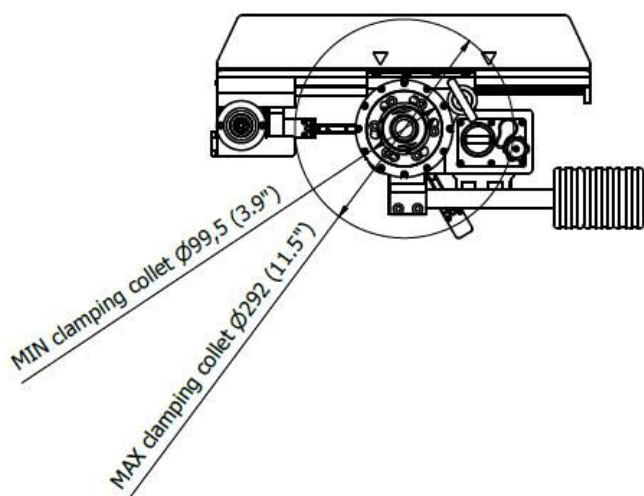
Manual Toolpost
Automatic Toolpost

ACCESSORIES

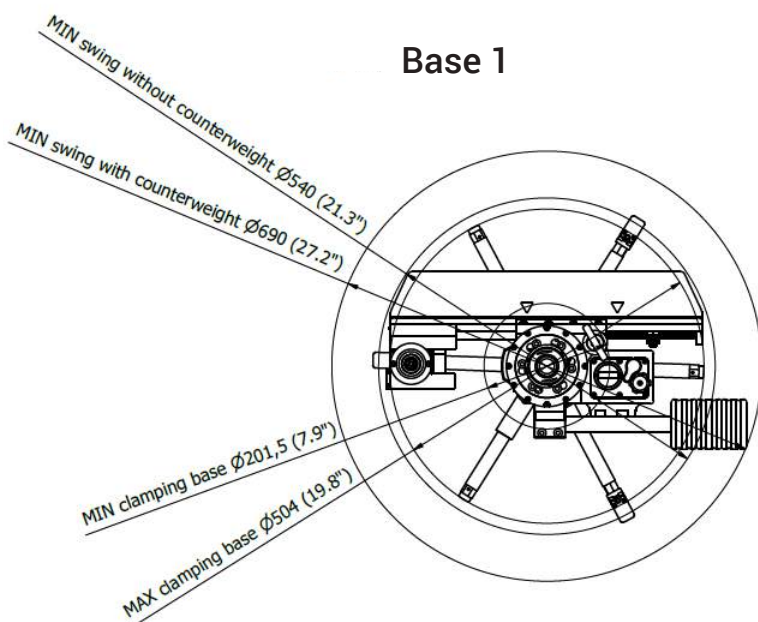
Tubesheet Mounting Kit
Tubesheet Backfacing Kit
Tubesheet Welding Kit

MAIN ASSEMBLY

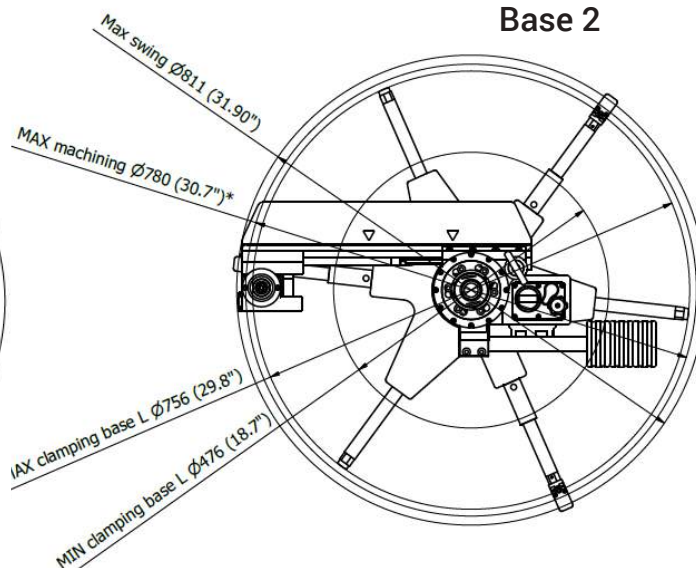
Collet



Base 1



Base 2

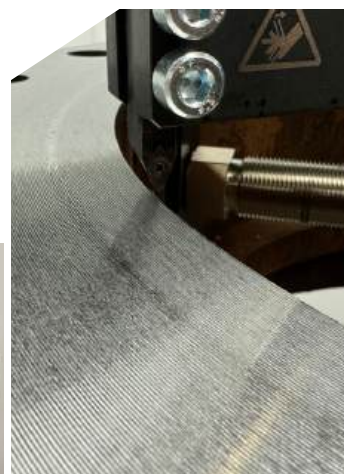
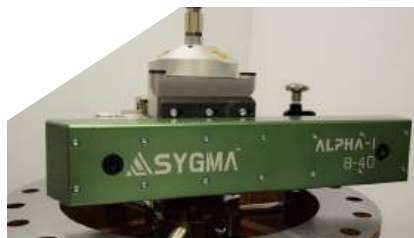


ALPHA-I 8-40

The Alpha-I 8-40 is an exceptionally versatile flange facer, incorporating our cutting-edge S-gear™ system. With its unique 3-clamping base feature, it offers a clamping range from 8 inches to a maximum of 40 inches.

FEATURES

- Built-in Motor
- Easy Setup & Operations
- S-Gear System
- Automatic Toolpost
- Variable Feet Adjustment
- Easy Levelling



TECHNICAL SPECIFICATIONS

Clamping capacity	Min	Max
Base 1	Ø 203,2 mm	Ø 508 mm
	Ø 8"	Ø 20"
Base 2	Ø 508 mm	Ø 1016 mm
	Ø 20"	Ø 40"

Machining capacity	
Min	Max
Ø 203,2 mm	Ø 1006 mm
* Ø 8"	* Ø 39,6"

* based on neutral cutting tool

Dimensional Data			
Case dimensions	Total case weight	Overall weight machine without base	Overall height machine without Base/ Motor
860 x 790 x 660 mm	+/- 210 kg	60 kg	293 mm (11,5")

Motor Data	
Pneumatic	
Motor Power	1650 W (2,21 HP)
Air Consumption	1900 l / min
Air Supply Pressure	6,2 Bar
Electric	
Motor Power	1,5 kW
Voltage	230 V
Frequency	50 Hz
Hydraulic	
Rated Power	1,5 kW
Operating Pressure	100 bar
Recommended Flow Rate	10-11 L/min
Hydraulic Oil	ISO VG 32 or ISO VG 46
Maximum Return pressure	< 10 bar

ALPHA-I

8-40

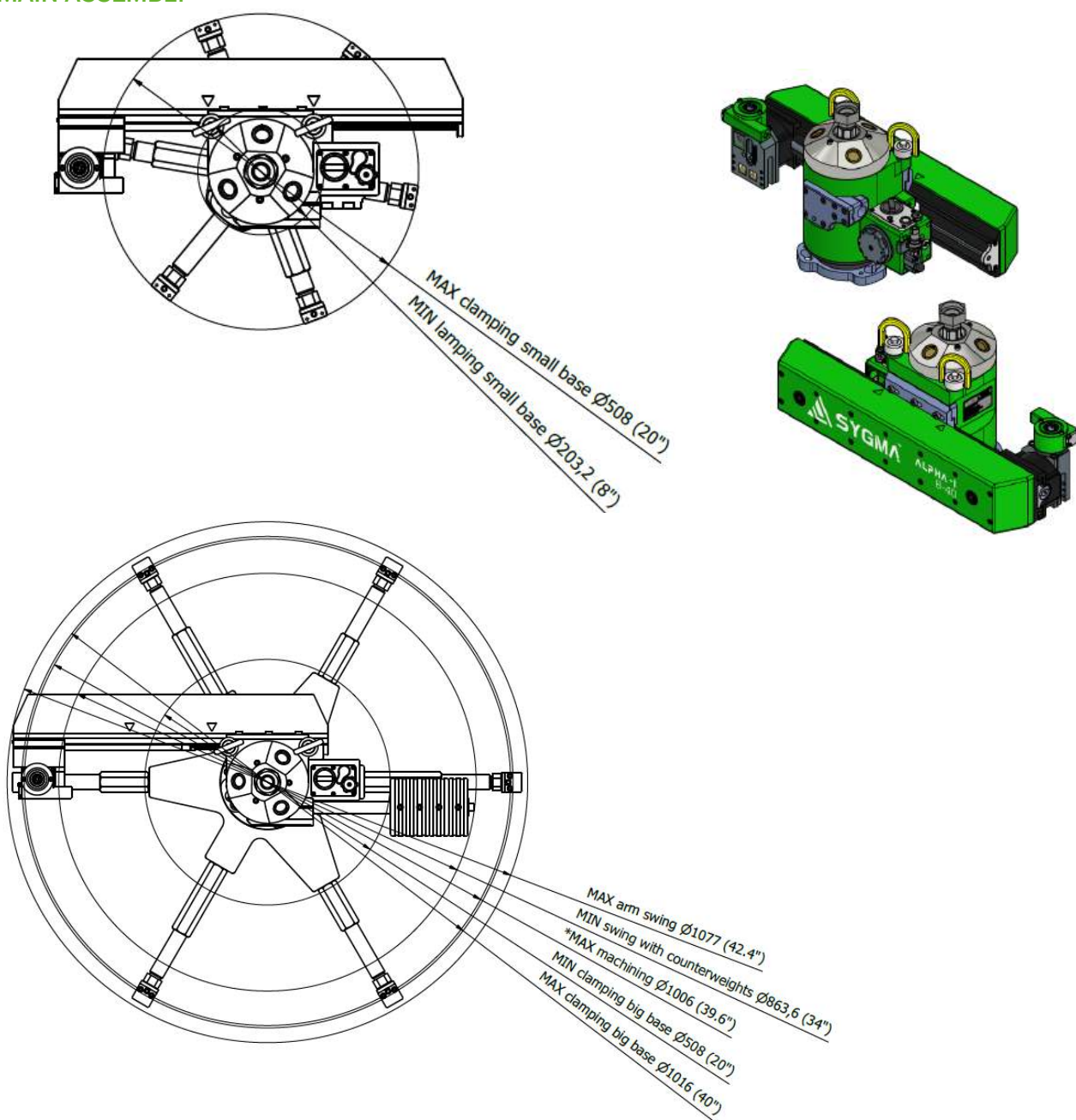
OPTIONS

Manual Toolpost
Automatic Toolpost

ACCESSORIES

Tubesheet Mounting Kit
Tubesheet Backfacing Kit
Tubesheet Welding Kit

MAIN ASSEMBLY



ALPHA-I 15-60

Alpha-I 15-60 revolutionizes flange facing with its innovative features including an automatic toolpost, a stroke limiter and an ION-4 gearbox enabling easy setup and operation to achieve multiple surface finishes with precision.

FEATURES

- Multiple Surface Finishes
- Easy Setup & Operations
- ION-4 Gearbox
- Automatic Toolpost
- No-Row Clamping Feet
- Easy Levelling



TECHNICAL SPECIFICATIONS

Operational Data	Min	Max
Clamping capacity	Ø 379 mm	Ø 1358 mm
	Ø 15"	Ø 54"
Machining capacity	Ø 360 mm	Ø 1514 mm
	* Ø 14,25"	* Ø 60"

* based on neutral cutting tool

Dimensional Data			
Case dimensions	Total case weight	Overall weight machine without base	Overall height machine
1200 x 840 x 840 mm	+/- 410 kg	296 kg	545 mm (21.46")

Motor Data	
Pneumatic	
Motor Power	2715 W (3,64 HP)
Air Consumption	2900 l / min
Air Supply Pressure	6,2 Bar
Electric	
Motor Power	1,5 kW
Voltage	230 V
Frequency	50 Hz
Hydraulic	
Rated Power	1.5 kW
Operating Pressure	100 bar
Recommended Flow Rate	10-11 L/min
Hydraulic Oil	ISO VG 32 or ISO VG 46
Maximum Return pressure	< 10 bar

ALPHA-I

15-60

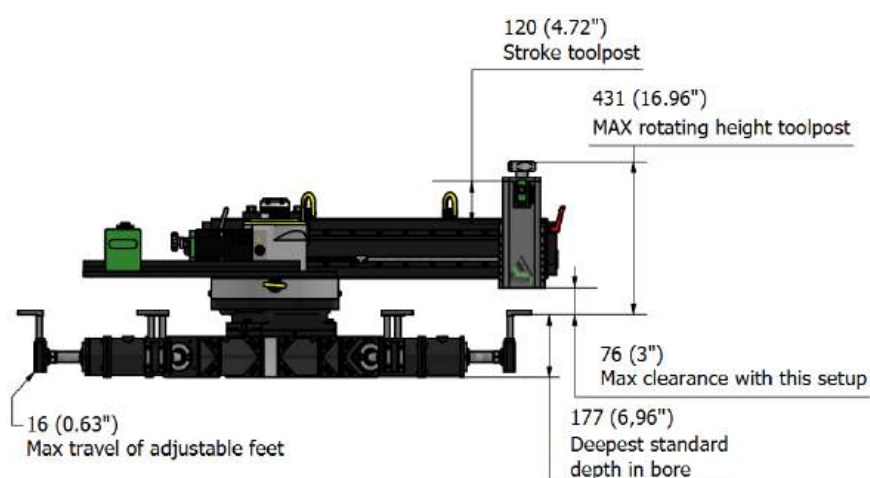
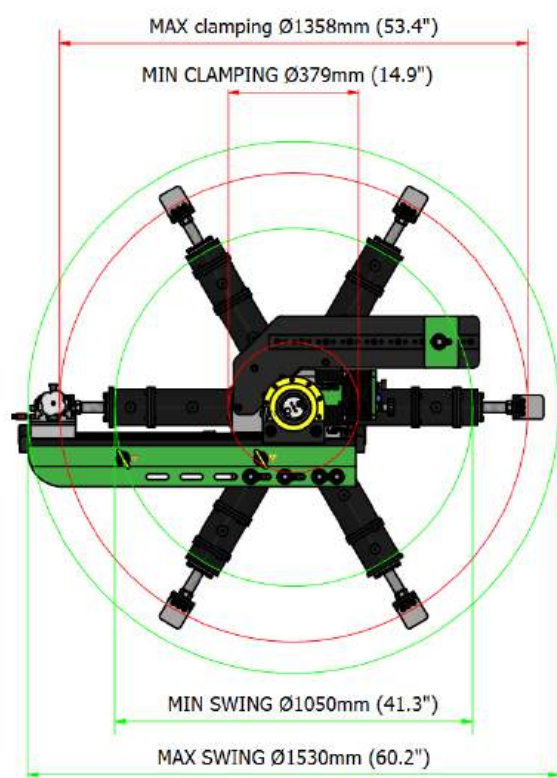
OPTIONS

Manual Toolpost
Automatic Toolpost

ACCESSORIES

Tubesheet Mounting Kit
Tubesheet Backfacing Kit
Tubesheet Welding Kit

MAIN ASSEMBLY



ALPHA-I 30-80

Alpha-I 30-80 revolutionizes flange facing with its innovative features including an automatic toolpost and an ION-4 gearbox enabling easy setup and operation for achieving multiple surface finishes with precision.

FEATURES

- Multiple Surface Finishes
- Easy Setup & Operations
- ION-4 Gearbox
- Automatic Toolpost
- No-Row Clamping Feet
- Easy Levelling



TECHNICAL SPECIFICATIONS

Operational Data	Min	Max
Clamping capacity	Ø 736 mm	Ø 2139 mm
	Ø 29"	Ø 84,2"
Machining capacity	Ø 550 mm	Ø 2139 mm
	* Ø 22"	* Ø 84,2"

* based on neutral cutting tool



Dimensional Data			
Case dimensions	Total case weight	Overall weight machine pneumatic configuration	Overall height machine
1500 x 1140 x 960 mm	707 kg	530 kg	545 mm (21,46")

Motor Data		
Pneumatic		
Motor Power	2 Engines of 1650 W (2,21 HP)	Total: 3300 W (4,42 HP)
Air Consumption	2 Engines of 1900 l / min	Total: 3800 l / min
Air Supply Pressure	6,2 Bar	
Electric		
Motor Power	2 Engines of 0.75 kW (1 HP)	Total: 1,5 kW (2 HP)
Voltage	230 V	
Frequency	50 Hz	
Hydraulic		
Rated Power	1.5 kW	
Operating Pressure	100 bar	
Recommended Flow Rate	10-11 L/min	
Hydraulic Oil	ISO VG 32 or ISO VG 46	
Maximum Return Pressure	< 10 bar	

ALPHA-I 30-80

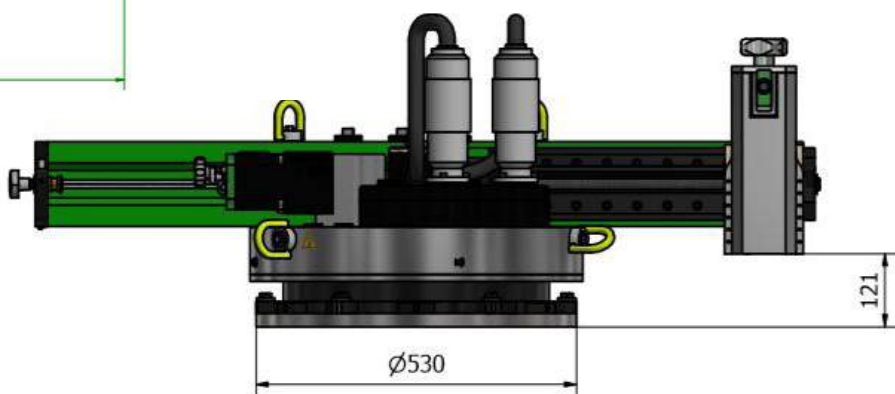
OPTIONS

Manual Toolpost
Automatic Toolpost

ACCESSORIES

Tubesheet Mounting Kit
Tubesheet Backfacing Kit
Tubesheet Welding Kit

MAIN ASSEMBLY



ALPHA-I 50-160

Introducing the **Alpha-I 50-160** Flange Facer: a reliable, precision-engineered powerhouse. With safety at the forefront, its advanced features ensure worry-free operation and easy setup. The Alpha-I 50-160 redefines efficiency and performance.

FEATURES

- Easy Setup & Operations
- Optimised Stability (Due to High Torque Output)
- Zero Backlash
- ION-4 Gearbox
- Adjustable Clamping Feet
- Multiple Motorization Available
- In-House Engineered Heavy Duty
- Unique Integrated Safety Features
- No-Row Clamping Feet



TECHNICAL SPECIFICATIONS

Clamping Capacity	Mm	Inch
Min. clamping diameter	Ø 1276	Ø 50
Max. clamping diameter	Ø 3356	Ø 132
Extension Kit* (Optional)	Ø 4716	Ø 185

* More information on request

Dimensional Data
Clamp base
Case 1 - 1300 x 1300 x 550

Hub & Arm
Case 2 - 2050 x 1200 x 770

Legs
Case 3 - 1200 x 1200 x 885

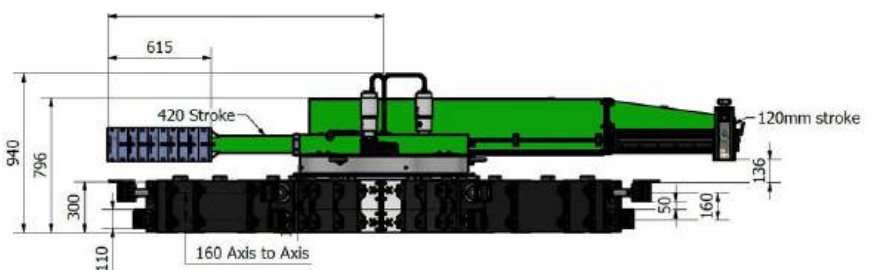
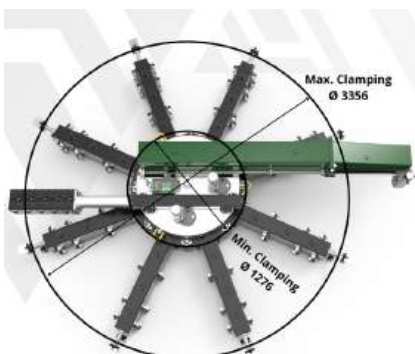
Extension Kit (Optional)
Case 4 - 1200 x 1200 x 820

Machining Capacity	Mm	Inch
Min. machining diameter	Ø 1118	Ø 44 *
Max. machining diameter	Ø 4168	Ø 164*
With Arm/Extension Kit	Ø 5080	Ø 200*

* Based on neutral cutting tool

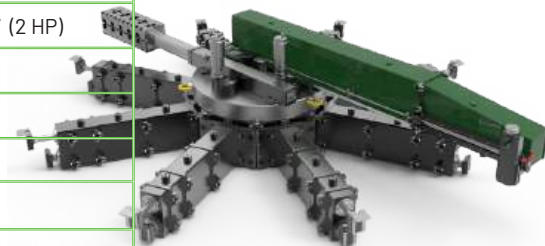
Dimensional Data				
Pneumatic Motor Supply	Air Supply Pressure	Air Cons (NL/min)	Overall weight machine	Overall height machine
3200 / 4.3 HP	6.2 Bars	6200 NL/min	2100 kg	900 mm (35.43")

MAIN ASSEMBLY



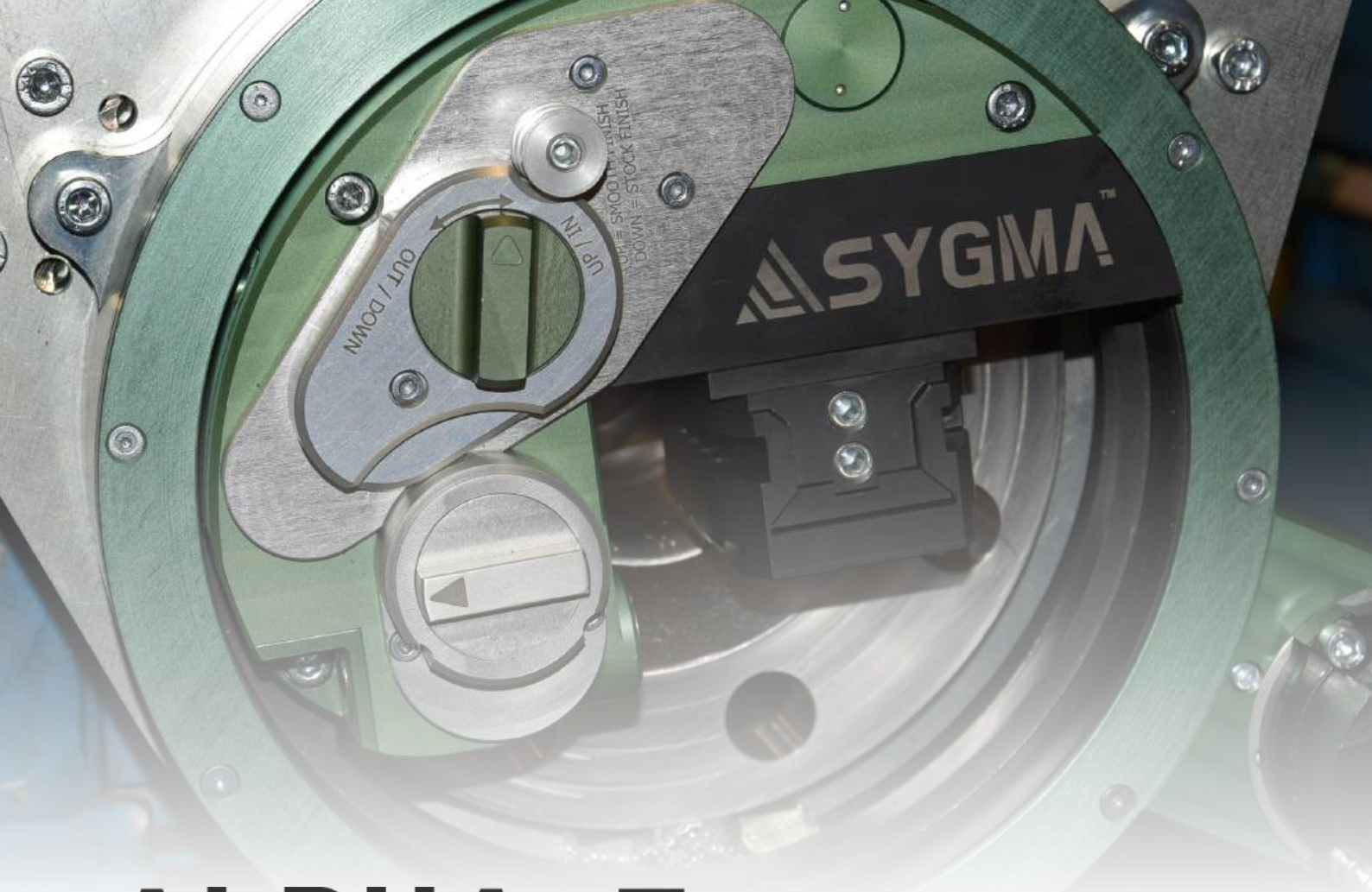
ALPHA-I 50-160

Motor Data		
Pneumatic		
Motor Power	2 Engines of 2416 W (3,24 HP)	Total: 4832 W (6,48 HP)
Air Consumption	2 Engines of 2500 l / min	Total: 5000 l / min
Air Supply Pressure	6,2 Bar	
Electric		
Motor Power	2 Engines of 0.75 kW (1 HP)	Total: 1,5 kW (2 HP)
Voltage	230 V	
Frequency	50 Hz	
Hydraulic		
Rated Power	1.5 kW	
Operating Pressure	100 bar	
Recommended Flow Rate	10-11 L/min	
Hydraulic Oil	ISO VG 32 or ISO VG 46	
Maximum Return Pressure	< 10 bar	

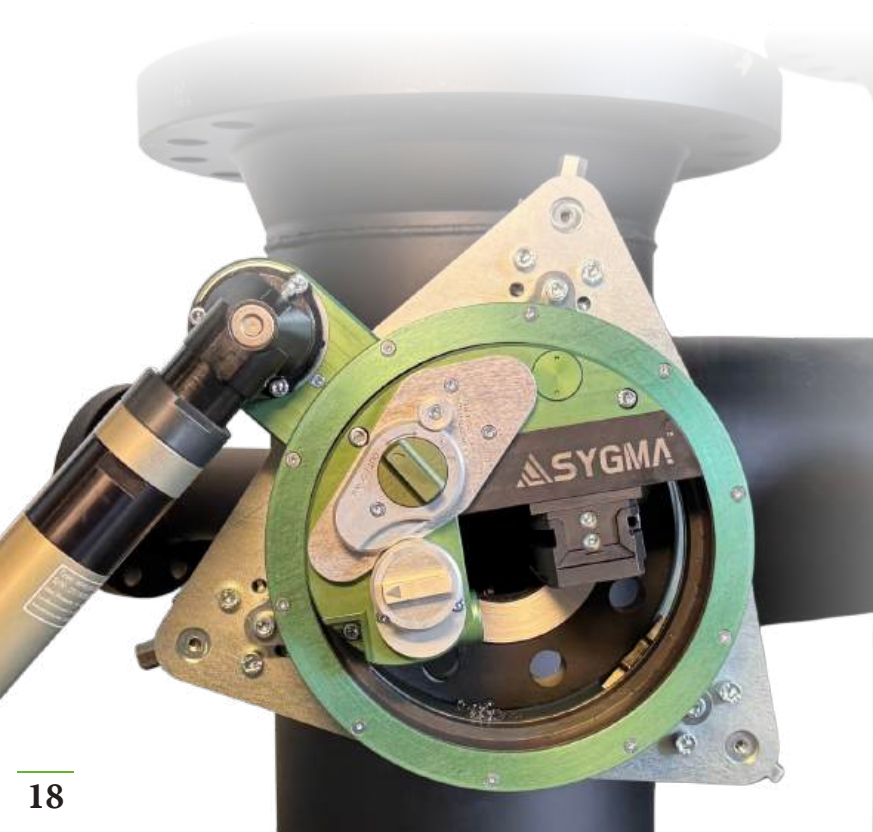


APPLICATIONS ALPHA-I FLANGE FACERS





ALPHA-E - SERIES -



EXTERNAL MOUNTING FLANGE FACERS

Available Models

- 0-8
- 0-13
- 0-24
- 0-40
- 0-60

Machining Capacity

From 0 inches to 60 inches

Positions

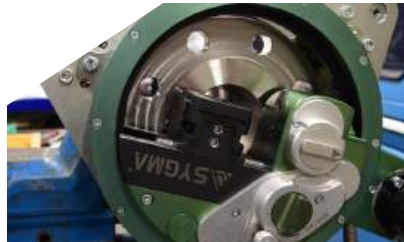
- Horizontal Flange Facing
- Vertical Flange Facing
- Inverted Flange Facing

ALPHA - E - SERIES -

The Alpha-E Series is a unique heavy-duty flange facer designed with high-quality features for multi-purpose machining applications. Thanks to the modular surfacing arm, multiple operational attachments can be utilized. With Sygma's™ signature modular design, you can upgrade your machine according to your needs. Depending on the chosen configuration, the Alpha-E Series allows for a wide variety of machining applications, such as orbital milling, single-point turning, and indexed drilling.

FEATURES

- Zero Backlash
- Multiple Motorizations Available
- Modular & Compact Design
- High Quality Surface Finishes
- Unique Integrated Safety Features
- Integrated No Rotation (NORO) System (clamping feet)
- Custom Designed Storage Container
- Independent Clamping System for Minimum Torsion On Body



TECHNICAL SPECIFICATIONS

Models	Clamping Capacity		Machining Capacity	
	Min	Max	Min	Max
Alpha-E 0-8	Ø 65 mm	Ø 225 mm	Ø 0 mm	Ø 210 mm
	Ø 2,5"	Ø 9"	Ø 0"	Ø 8"
Alpha-E 0-13	Ø 65 mm	Ø 350 mm	Ø 0 mm	Ø 330 mm
	Ø 2,5"	Ø 13,5"	Ø 0"	Ø 13"
Alpha-E 0-24	Ø 305 mm	Ø 615 mm	Ø 0 mm	Ø 615 mm
	Ø 12"	Ø 24"	Ø 0"	Ø 24"
Alpha-E 0-40	Ø 714 mm	Ø 1029 mm	Ø 0 mm	Ø 1016 mm
	Ø 28"	Ø 40,5"	Ø 0"	Ø 40"
Alpha-E 0-60	Ø 1240 mm	Ø 1540 mm	Ø 0 mm	Ø 1540 mm
	Ø 49"	Ø 60"	Ø 0"	Ø 60"

Models	Dimensional Data				
	Case Dimensions	Transportation Weight	Total Machine Weight	Output Pneumatic Motor	Standard Drive
Alpha-E 0-8	To be confirmed			623 W	Air
Alpha-E 0-13	600 x 800 x 400 mm	To be confirmed		1300 W	Air
Alpha-E 0-24	1105 x 860 x 505 mm	195 kg (430 lbs)	To be confirmed	1700 W (2x)	Air
Alpha-E 0-40	To be confirmed			1700 W (2x)	Air
Alpha-E 0-60	2100 x 2100 x 550 mm	1100 kg (2425 lbs)	800 kg (1763 lbs)	1700 W (2x)	Air

Accessories		
Back Facing Kit	Orbital Milling Kit	Partition Milling Kit



2 *Orbital Milling Machines*

ALPHA-OM - SERIES -

WINDSOLUTIONS
Monopiles & Transition pieces

Precision Flatness

- Local Flatness (30°C): 0,3 mm
- Overall Flatness: 0,4 mm

20FT Container

The machine comes fully pre-configured for direct transport, fitting perfectly into a single 20ft container, reducing transport costs and enabling quick, easy on-site installation.



ALPHA-OM

10 000

The Sygma™ Alpha-OM orbital milling machine enables extremely precise flange machining, resulting in lower capital and operational expenditure for offshore wind farms. With our orbital milling machines, high-precision machining of flange surfaces reduces the need for manual correction and rework – enhancing safety, lowering operator exposure, and ensuring consistent, reliable results in demanding environments.

FEATURES

- Workflow optimization
- Versatile & Adaptable
- Plug & Play setup
- Smart Control
- Robust & Transport-ready
- Exceptional Performance
- Modular Design
- Next-level Orbital Milling Technology



TECHNICAL SPECIFICATIONS

Operational Data	Min	Max
Clamping capacity	Ø 3800 mm	Ø 9450 mm
	Ø 150"	Ø 372"
Machining capacity	Ø 3800 mm	Ø 10.160 mm
	Ø 150"	Ø 400"

**Tailor Your Alpha-OM (Orbital Milling) to Any On-Site Machining Challenge.*

SPECIFIC APPLICATIONS

Monopiles & Transition Pieces	Slewing Bearings
Wind Turbines	Gasket Surface Areas Machining
Weld Prepping	Offshore Flange Reconditioning



SN: MFE2021103

LMC MINI-FACER EVO



3 *Manual Flange Facing Machines*

MINIFACER - SERIES -

SETUP IN MINUTES, MACHINING IN SECONDS

Available Models

- MiniFacer ONE
- MiniFacer SB
- MiniFacer EVO
- MiniFacer OD

Machining Capacity

From 0.5 inch to 14 inches

Positions

- Horizontal Flange Facing
- Vertical Flange Facing
- Inverted Flange Facing



MINIFACER ONE

The Sygma™ **MiniFacer ONE** is the flagship model of the MiniFacer Series and was the first manually operated tool on the market to face different types and diameters of flanges with an internal clamp diameter between 1 and 10 inches.

FEATURES

- Easy & Quick to Set Up
- Manually Operated
- Durable Case
- 2-Year Warranty
- Safe for Ex Zones



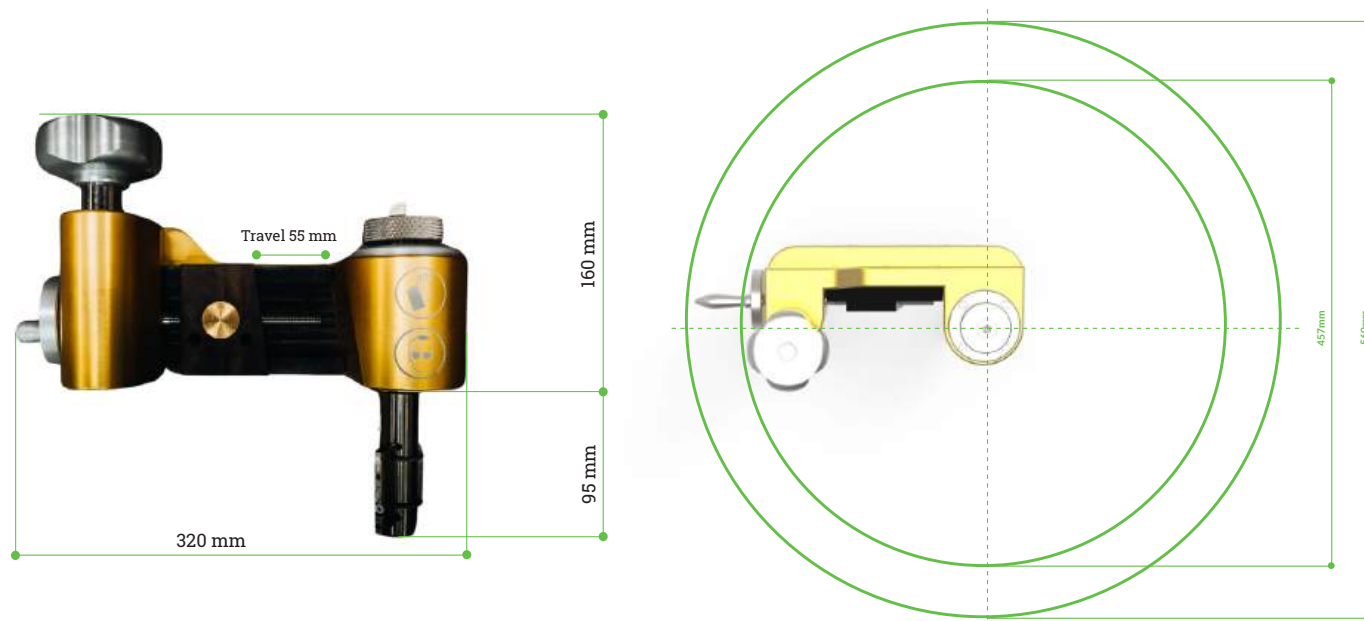
TECHNICAL SPECIFICATIONS

Operational Data	Min	Max
Internal clamp capacity	Ø 25 mm	Ø 252 mm
	Ø 1"	Ø 10"
Facing diameter	Ø 30 mm	Ø 350 mm
	Ø 1,25"	Ø 14"



Dimensional Data					
Case dimensions	Total case weight	MiniFacer weight (ready to use)	Overall length machine	Height from Flange Face	Min. swing diameter
550 x 450 x 210 mm	15 kg	7 kg	340 mm (13,5")	200 mm (8")	Ø 460 mm (18")

MAIN ASSEMBLY



MINIFACER

SB

The Sygma™ **MiniFacer SB (Small Bore)** has been specially developed to fit smaller flange bore sizes. The simplified clamping system ensures that flanges are refaced in no time. The internal clamp diameter ranges from 0.53 to 1.18 inches.

FEATURES

- Easy & Quick to Set Up
- Manually Operated
- Durable Case
- 2-Year Warranty
- Safe for Ex-Zones



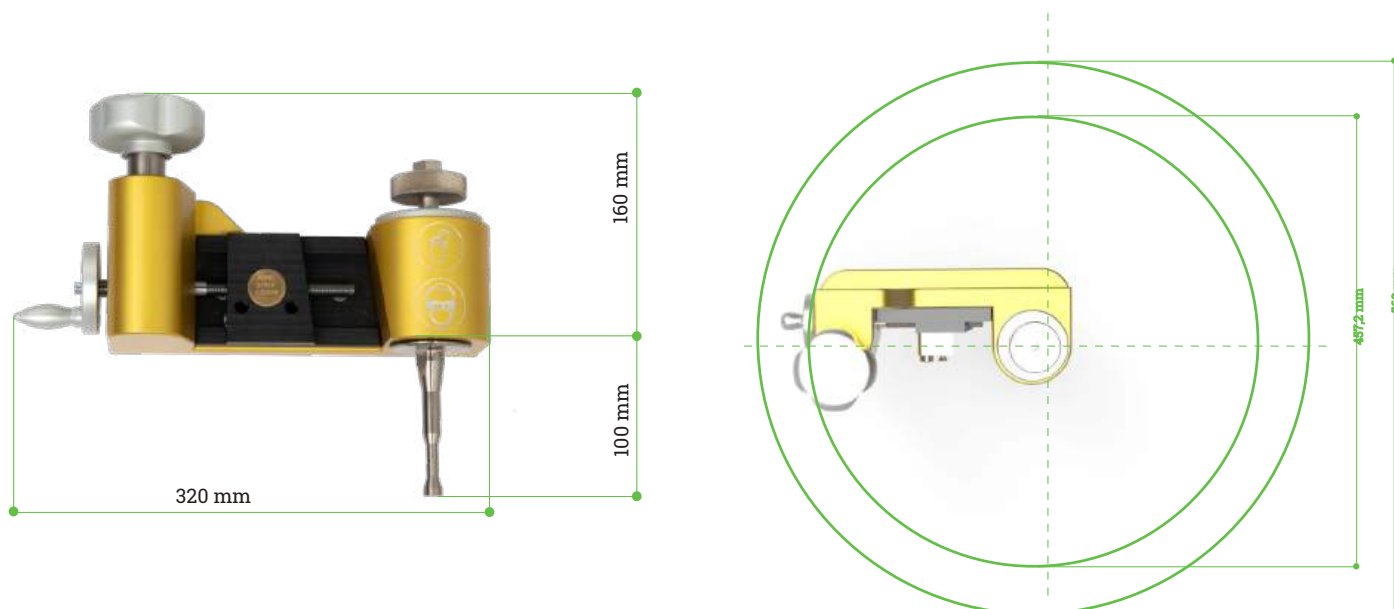
TECHNICAL SPECIFICATIONS

Operational Data	Min	Max
Internal clamp capacity	Ø 13,5 mm	Ø 30,5 mm
	Ø 0,53"	Ø 1,18"
Facing diameter	Ø 13,5 mm	Ø 350 mm
	Ø 0,53"	Ø 14"



Dimensional Data					
Case dimensions	Total case weight	MiniFacer weight (ready to use)	Overall length machine	Height from Flange Face	Min. swing diameter
570 x 440 x 260 mm	15 kg	6,5 kg	340 mm (13,5")	200 mm (8")	Ø 460 mm (18")

MAIN ASSEMBLY



MINIFACER

EVO

The Sygma™ **MiniFacer EVO** is the larger version of the MiniFacer ONE, equipped with an adjustable base for increased precision and flexibility, making it an essential asset in your machine fleet. It also offers a range of internal clamping capacities.

FEATURES

- Easy & Quick to Set Up
- Manually Operated
- Durable Case
- 2-Year Warranty
- Safe for Ex-Zones



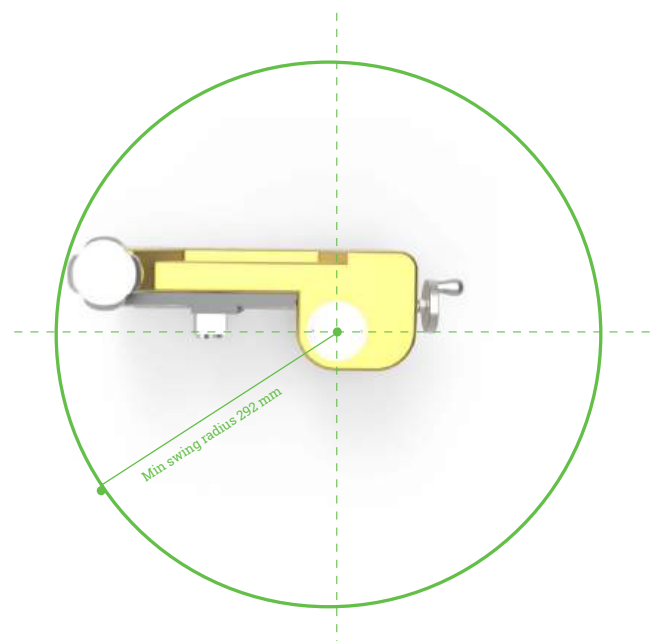
TECHNICAL SPECIFICATIONS

Operational Data	Min	Max
Internal clamp capacity Collet	Ø 48 mm	Ø 240 mm
	Ø 2"	Ø 9"
Internal clamp capacity Base	Ø 146 mm	Ø 466 mm
	Ø 6"	Ø 18"
Facing diameter	Ø 48 mm	Ø 610 mm
	Ø 2"	Ø 24"



Dimensional Data					
Case dimensions	Total case weight	MiniFacer weight (ready to use)	Overall length machine	Height from Flange Face	Min. swing diameter
670 x 520 x 390 mm	34 kg	9 kg	425 mm (17")	200 mm (8")	Ø 590 mm (23")

MAIN ASSEMBLY



MINIFACER

OD

The Sygma™ **MiniFacer OD** is the development in the manual flange facer range. It is the first outside-clamping model in Sygma's™ MiniFacer Series, designed for even the most confined spaces.

FEATURES

- Easy & Quick to Set Up
- Manually Operated
- Durable Case
- 2-Year Warranty
- Safe for Ex-Zones



TECHNICAL SPECIFICATIONS

Operational Data	Min	Max
External clamp capacity	Ø 65 mm	Ø 350 mm
	Ø 2,5"	Ø 13,5"
Facing diameter	Ø 0 mm	Ø 350 mm
	Ø 0"	Ø 13,5"



Dimensional Data					
Case dimensions	Total case weight	MiniFacer weight (ready to use)	Overall length machine	Height from Flange Face	Min. swing diameter
670 x 520 x 390 mm	40 kg	10 kg	240 mm (9,5")	300 mm (12")	Ø 300 mm (12")

MAIN ASSEMBLY



MINIFACER - SERIES -

HIGHLY DURABLE HARDCASE



APPLICATIONS MINIFACER FLANGE FACERS



4 *Portable & Heavy-Duty Grinding Machines*

XTREME - SERIES -



SOLUTION FOR CENTRELESS GRINDING

Models

Xtreme 750

Built for demanding applications in cement, chemical plants, steel and sugar mills, and mining, where reliable equipment is essential. It features a linear track with manual or automatic feed systems.

Xtreme 1000

The Sygma™ Xtreme 1000 is designed for tough applications in cement, chemical plants, steel and sugar mills, and mining. It features a 5.5 kW motor for reliable performance in harsh conditions.

XTREME

750

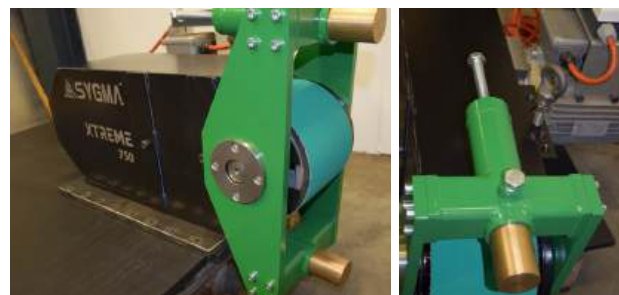
The Sygma™ Xtreme 750 features a robust construction that ensures durability and performance in the harshest environments. The linear track is available in both manual and automatic feed systems, offering flexibility and efficiency to meet various operational needs.

The manual feed system has a 4 mm/revolution. The automatic system is available in 2 configurations:

- AC configuration with end switch (230 Volt & 29 Nm nominal torque)
- Servo Drive (400 Volt & 45 Nm nominal torque)

FEATURES

- Centreless out of Round Correction
- High Precision
- Easy Belt Change by Removing only 1 Plate
- Triangle can be Converted
- Easy Adjustment of Power Supply
- Machine can easily be changed from Left to Right Hand Motor



TECHNICAL SPECIFICATIONS

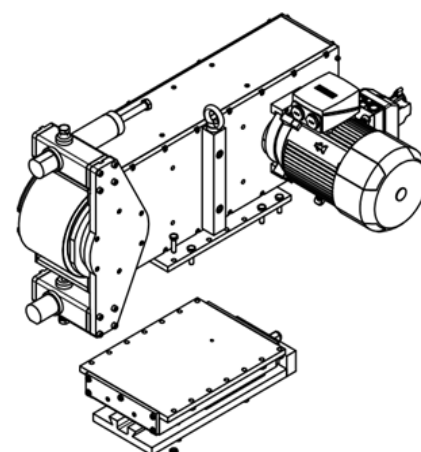
Manual Feed System
4 mm / revolutions

Automatic Feed System
4 mm / revolution

AC Configuration with end switch	Servo Drive
Feed 2 fase	Feed 3 fase
230 Volt	400 Volt
Nominal torque	Nominal torque
29 Nm	45 Nm

Dimensional Data

Belt width	150 mm
	5.91"
Dimensions	600 x 570 x 305 mm
	27.17 x 22.44 x 12"
Weight	165 kg
	363 lb



XTREME 1000

The Sygma™ Xtreme 1000 offers advanced safety features and user-friendly controls for safe and efficient operation, even with abrasive materials or high temperatures. Powered by a 5.5 kW motor, it delivers 36 Nm of torque at 1460 rpm, making it ideal for (centreless) grinding. The linear track is available in both manual and automatic feed systems, offering flexibility and efficiency to meet various operational needs.

The manual feed system has a 4 mm/revolution. The automatic system is available in 2 configurations:

- AC configuration with end switch (230 Volt & 29 Nm nominal torque)
- Servo Drive (400 Volt & 45 Nm nominal torque)

FEATURES

- Centreless out of Round Correction
- High Precision
- Easy Belt Change by Removing only 1 Plate
- Triangle can be Converted
- Easy Adjustment of Power Supply
- Machine can easily be changed from Left to Right Hand Motor



TECHNICAL SPECIFICATIONS

Manual Feed System
4 mm / revolutions

Automatic Feed System
4 mm / revolution

AC Configuration with end switch	Servo Drive
Feed 2 phase	Feed 3 phase
230 Volt	400 Volt
Nominal torque	Nominal torque
29 Nm	45 Nm

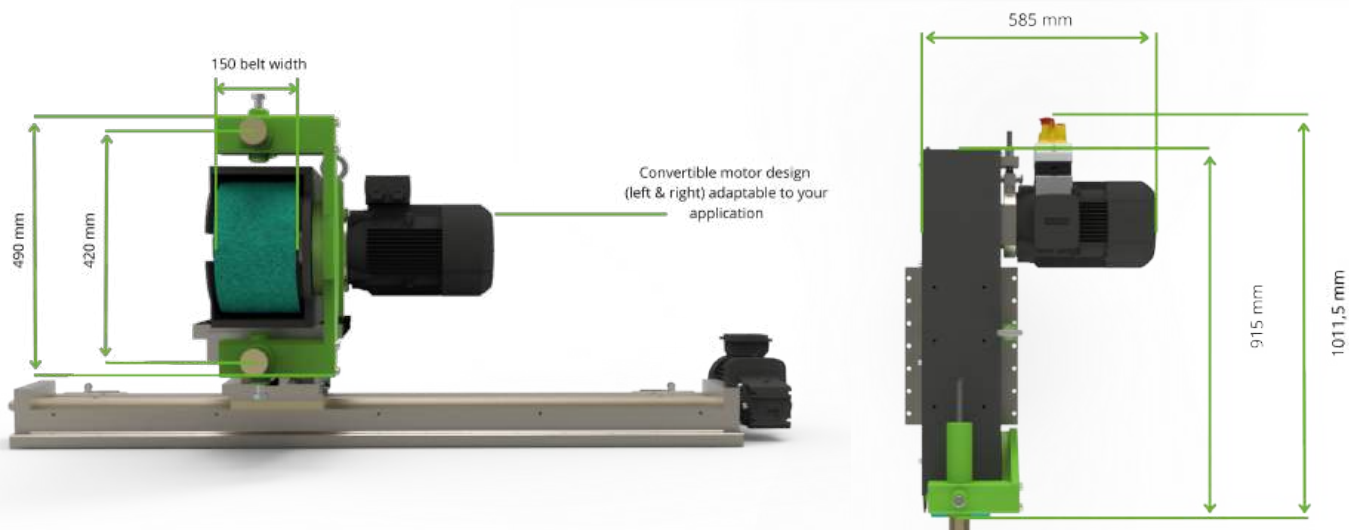
BLG Drive Motor

3 Phase Voltage

Capacity	5.5 kW
Rotation per minute	1460 tr/min
Torque	36 NM
Weight	205 kg
	451 lb



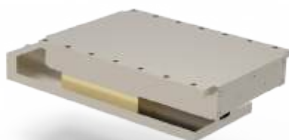
GRINDING SPECIFICATION



XTREME - SERIES -

OPTIONAL CONFIGURATION

Spring-loaded Table + Triangle



Used for centreless grinding applications

Linear Track



Used for grinding wide metal rolls from one side to the other

SPRING-LOADED TABLE

The spring-loaded table is a solution for centreless grinding and consists of 3 parts:

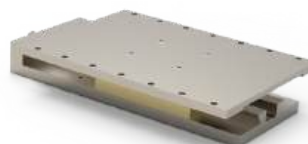
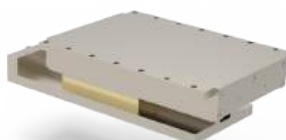
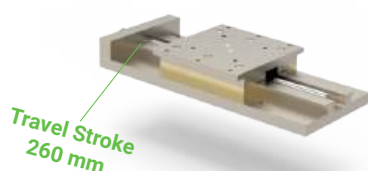
- A Fixed Table
- A Conversion
- A Springloaded Table

The spring-loaded table has the capability to perform out-of-round correction up to 100 mm. The fixed table allows for a translation of 260 mm.

Conversion 32.5 kg

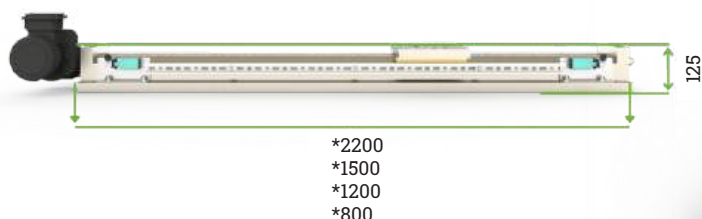
Spring-loaded Table 70.5 kg

Fixed Table 44 kg



LINEAR TRACK

The linear track allows the Xtreme Series to grind up to 15 times the width of the belt itself, making it suitable for wide grinding applications.





5 *On-Site Milling & Drilling Machines*



LEGACY - SERIES -

YOUR ANSWER TO PORTABLE MILLING

Available Models

- Legacy PPM Models
- Legacy MM Models
- Legacy HDM Models
- Legacy EOS

Milling Head

- Basic Milling Head
- Advanced Milling Head

Milling Head Options

- Electric
- Pneumatic
- Hydraulic
- Servo

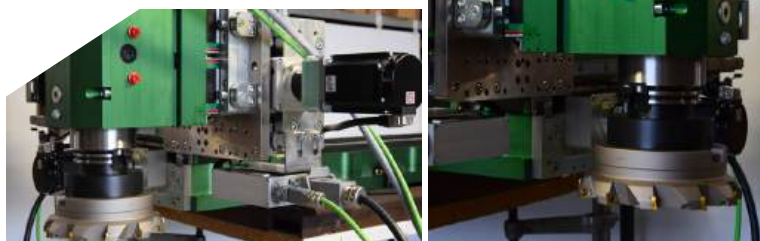
LEGACY

MM

The Sygma™ **Legacy MM** model is our **standard line** for milling applications, renowned for its exceptional performance and reliability. Designed with **high-precision linear guides** and **pre-loaded spindles**, the Legacy MM model ensures unparalleled accuracy and smooth operation. This machine is a must-have in your machining fleet, offering not only versatility and precision but also durability and ease of maintenance. Whether you are working on intricate details or large-scale projects, the Legacy MM model adapts seamlessly to various tasks, making it an invaluable asset for any machining operation.

FEATURES

- Modular Design
- User-Friendly Programming Software
- Toolkit Included
- Cost-effective Solutions
- Superior Performance



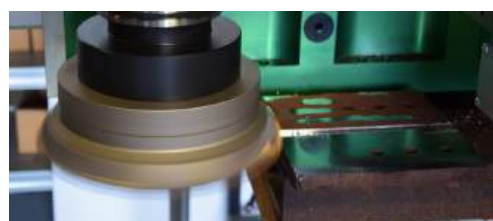
TECHNICAL SPECIFICATIONS

		Effective Stroke		
Spindle System	Models	X-axis (mm)	Z-axis (mm)	Y-axis (mm)
ISO 40 / 50				
Drive Options	MM500	240	125/250	500 / 740 / 1340 / 2140
Pneumatic	MM1000	740	125/250	500 / 740 / 1340 / 2140
Electric	MM1600	1340	125/250	500 / 740 / 1340 / 2140
Hydraulic	MM2400	2140	125/250	500 / 740 / 1340 / 2140
Servo	MM3000	2740	125/250	500 / 740 / 1340 / 2140

Lengths can also be custom-made upon request. The MM500 can also be built on the MM1000.

Milling Heads		
	Basic	Advance
Direct Drive		
Offset Gearbox		
Integrated Z-axis		

Additionally, the **MM model** is available in a **gantry setup**, providing even **greater flexibility** and **capability**. The gantry configuration allows for larger workpieces and more complex operations, expanding the range of applications you can tackle with confidence. This option further enhances the machine's adaptability, making it suitable for a wide array of industrial and commercial milling needs.



The Sygma™ **Legacy HDM model** is the ultimate solution for **heavy-duty milling** needs. Engineered with a robust dovetail slide, it is perfect for all your heavy-duty operations, offering **unparalleled precision** and **stability**. Whether you are handling the toughest materials or performing complex tasks, the Legacy HDM model ensures consistent, high-quality results.

FEATURES

- Modular Design
- User-Friendly Programming Software
- Toolkit Included
- Cost-effective Solutions
- Superior Performance

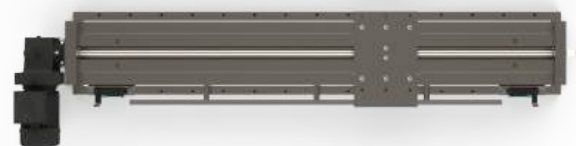
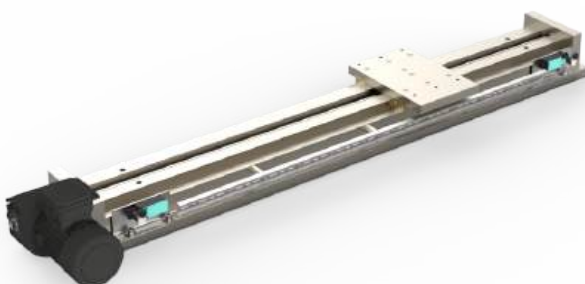


TECHNICAL SPECIFICATIONS

		Effective Stroke		
Spindle System	Models	X-axis (mm)	Z-axis (mm)	Y-axis (mm)
ISO 40 / ISO 50	HDM800	600	125/250	To be confirmed
Drive Options	HDM1200	1000	125/250	
	HDM1600	1400	125/250	
	HDM2400	2200	125/250	
	HDM3200	3000	125/250	
Electric				
Hydraulic				

Milling Heads		
	Basic	Advance
Direct Drive		
Offset Gearbox		
Integrated Z-axis	-	

Additionally, this model is available in a **gantry milling configuration**, providing even **greater flexibility** and **capability** for large-scale and intricate projects. The Sygma™ Legacy HDM model is designed to meet the most demanding milling requirements with exceptional performance and reliability.



LEGACY

EOS

The Sygma™ Legacy EOS (Enhanced Operational Systems) machines are designed to offer high precision, robustness, and reliable milling, thread milling, and a variety of drilling machining performances. Featuring advanced technology and automation, the EOS ensures maximum efficiency and ease of use for high-tech production environments.

The Legacy EOS is available in 3 versions:

- EOS 100
- EOS 200
- EOS 300



TECHNICAL SPECIFICATIONS

Models	X-Travel	Y-Travel	Z-Travel	Toolholder
EOS 100	110 mm	110 mm	300 mm	ISO 40
EOS 200	390 mm	390 mm	460 mm	ISO 40
EOS 300	222 mm	222 mm	460 mm	ISO 40

Technical Features				
Models	Control Box	Operational weight	Power output Spindle motor	Milling motor
EOS 100	YES	215 kg	4,7 kW	Servo
EOS 200	YES	270 kg	4,7 kW	Servo
EOS 300	YES	270 kg	4,7 kW	Servo

Key Features
Control panel in heavy duty case (touch screen)
Milling motor RPM control for optimum
User-friendly programming software
End of stroke setting
Very accurate and repeatable machining
Emergency switch
Incorporated feed motor configuration for impact protection.
Compact design for confined space applications
High precision guide rails and ball screw spindles for precise movements

Optional Features
Air through spindle
Cooling liquid trough spindle

Adapted SYGMA™ spindle featuring
Reduced vibration
High load bearing configuration for HD use
User-friendly programming software
Fast and easy tool exchange
precise refit of tooling

LEGACY MILLING HEAD



The Sygma **milling head** is the ultimate tool for on-site machining, known for its versatility. It can be mounted on Sygma milling rails and orbital milling machines and configured with different motor options for a wide range of applications. The design includes an offset gearbox, allowing flexible motor positioning in compact areas. The bolt-on milling head features precise positioning holes, enabling various down-feed lengths without compromising stability or repeatability.

Basic vs. Advanced Milling Head

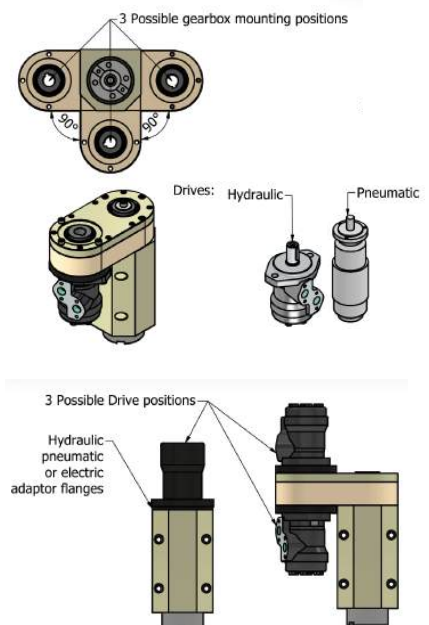
The basic milling head is a compact unit with standard seals and bearings, suitable for general-purpose milling tasks that don't require high precision. It's a cost-effective solution for many industrial applications needing reliable performance without specialized components.

In contrast, the advanced milling head features specialized bearings and seals for greater stability at higher speeds, allowing for much more accurate operations. This makes it ideal for high-precision applications, such as intricate machining tasks and environments where accuracy is critical. Its superior stability and precision are essential for industries demanding meticulous detail and consistency. Pneumatic milling heads are less stable at higher speeds compared to electric and hydraulic options, resulting in lower accuracy. This makes them unsuitable for tasks requiring the high precision and consistency of advanced milling heads.

TECHNICAL SPECIFICATIONS

Models	Milling Head Options by Model					
	Basic Milling Head			Advanced Milling Head		
	Electric	Hydraulic	Pneumatic	Electric	Hydraulic	Pneumatic
PPM	YES	YES	YES	NO	NO	NO
MM	YES	YES	YES	YES	YES	NO
HDM	YES	YES	NO	YES	YES	NO

Features	Power Options		
	Electric	Hydraulic	Pneumatic
Revolutions	2000 rpm	1500 rpm	2000 rpm
Power	3,7kW	5,8 kW	1,65 kW
Weight	+/- 47 kg	+/- 25 kg	+/- 22 kg
Consumption	N/A	50 l/min	1900 NI/min
Power Supply	400 V	N/A	N/A
Working Pressure	N/A	100 bar	6 bar
Direct Drive	YES	YES	YES
With offset Gear-box	NO	YES	YES
Collet Spindle	ISO 40	ISO 40	ISO 40



NOTES

- **PPM Model:** Offers only the basic milling head in electric, hydraulic, and pneumatic options.
- **MM Model:** Offers both basic and advanced milling heads. The advanced milling head is available in electric and hydraulic options, but not in pneumatic.
- **HDM Model:** Offers both basic and advanced milling heads. Pneumatic options are not available for either the basic or advanced milling head.

6 *Pipe Cutting & Beveling Machines*

CUBE
- SERIES -



OD-MOUNTED PIPE CUTTING & BEVELING

Performance

The Cube Series is capable of performing precision in-line cuts or simultaneous cuts and bevels for fast and perfect results.

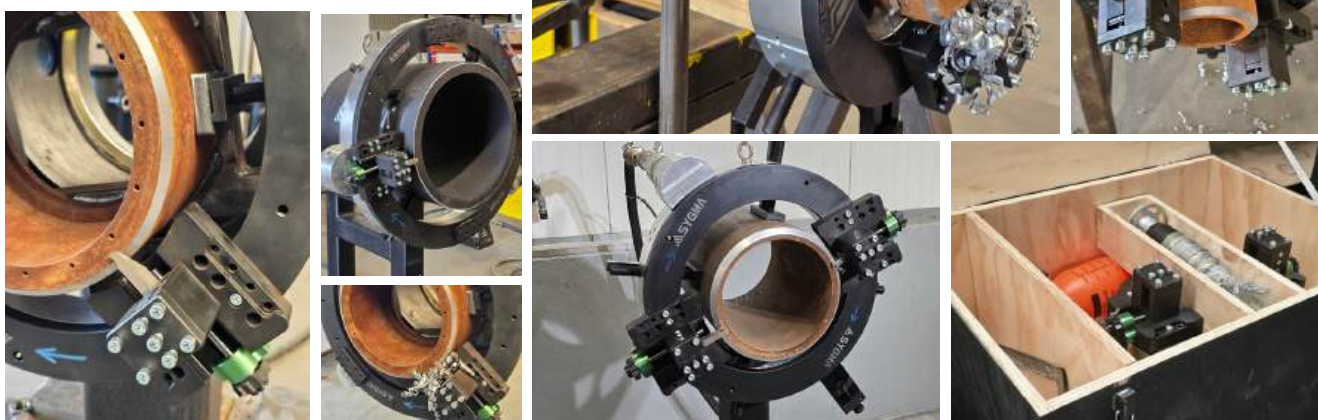
Product Range

Available in sizes ranging from 1" to 56" (25 – 1430 mm), the Cube Series comes in both lightweight and heavy-duty editions.

The Sygma™ **Cube series** is the perfect solution for pipe cutting, beveling, and end preparation of welded joints. The machines are designed and built to withstand the most demanding conditions, ensuring safe and reliable execution of your projects. Moreover, its split frame (clamshell) design allows for easy and rapid mounting, significantly reducing downtime.

FEATURES

- Split Frame Design
- Cut or Cut & Beveling Simultaneously
- Cold Operation
- Automatic Feed
- Self-centering Option Available
- Multiple Motorizations
- Signature Modularity



TECHNICAL SPECIFICATIONS

Model	Working Range		Wall Thickness		Rotation Speed
	Inch	mm	Aluminium	Heavy Duty	
Cube - 89	1 - 3"	25 - 89	≤30	-	42 r/min
Cube - 168	2 - 6"	50 - 168	≤30	-	22 r/min
Cube - 230	3 - 8"	80 - 230	≤30	-	15 r/min
Cube - 275	5 - 10"	125 - 275	≤30	-	14 r/min
Cube - 305	6 - 10"	150 - 305	≤30	≤110	13 r/min
Cube - 325	6 - 12"	168 - 325	≤30	≤110	13 r/min
Cube - 377	8 - 14"	219 - 377	≤30	≤110	12 r/min
Cube - 426	10 - 16"	273 - 426	≤30	≤110	12 r/min
Cube - 457	12 - 18"	300 - 457	≤30	≤110	12 r/min
Cube - 508	14 - 20"	355 - 508	≤30	≤110	12 r/min
Cube - 560	16 - 22"	400 - 560	≤30	≤110	12 r/min
Cube - 610	18 - 24"	457 - 610	≤30	≤110	11 r/min
Cube - 630	20 - 26"	480 - 630	≤30	≤110	11 r/min
Cube - 660	22 - 28"	508 - 660	≤30	≤110	11 r/min
Cube - 715	24 - 30"	560 - 715	≤30	≤110	11 r/min
Cube - 762	26 - 32"	600 - 762	≤30	≤110	11 r/min
Cube - 830	28 - 34"	660 - 830	≤30	≤110	10 r/min
Cube - 914	30 - 36"	762 - 914	≤30	≤110	10 r/min
Cube - 1066	36 - 42"	914 - 1066	≤30	≤110	10 r/min
Cube - 1230	42 - 48"	1066 - 1230	≤30	≤110	10 r/min
Cube - 1430	48 - 56"	1230 - 1430	≤30	≤110	8 r/min

6 *Pipe Cutting & Beveling Machines*

DELTA - SERIES -



Solution for Pipe Beveling & End Preparation Tasks

Models

- Delta-I 30
- Delta-I 80
- Delta-I 120
- Delta-I 159

Product Range

Available in sizes ranging from 1" to 56"
(25 – 1430 mm),

The Sygma™ Delta Series is perfect for various types of pipe beveling and end preparation. These cold cutting tools are easy and quick to set up and operate. Cold beveling enhances safety and does not affect the pipe material. The split frame design allows for mounting around the outer diameter (OD) of the in-line pipe, providing strong and stable clamping.

FEATURES

- Cold Bevelling (doesn't affect pipe material)
- Easy Setup & Operation (Plug & Play)
- Self-centering with High Precision
- Small Work Radius
- Ratchet Tool to Adapt Feed Easily
- Multiple Motorizations (Pneumatic & Electrical)



TECHNICAL SPECIFICATIONS

	Delta-I 30		Delta-I 80		Delta-I 120		Delta-I 159	
	Delta-IE 30	Delta-IP 30	Delta-IE 80	Delta-IP 80	Delta-IE 120	Delta-IP 120	Delta-IE 159	Delta-IP 159
Motorization	Electric (Metabo Motor)	Pneumatic	Electric (Metabo Motor)	Pneumatic	Electric (Metabo Motor)	Pneumatic	Electric (Metabo Motor)	Pneumatic
Power Supply	220-240V PH 50/60 Hz	2000l/min & 1.0 MPa	220-240V PH 50/60 Hz	2000l/min & 1.0 MPa	220-240V PH 50/60 Hz	2000l/min & 1.0 MPa	220-240V PH 50/60 Hz	2000l/min & 1.0 MPa
Motor Power	1300 W	1 HP	1500 W	1 HP	1500 W	1 HP	1500 W	1 HP
Range (ID)	18-28 mm	18-28 mm	28-76 mm	28-76 mm	40-114 mm	40-114 mm	65-159 mm	65-159 mm
Pipe Thickness	< 15 mm	< 15 mm	< 15 mm	< 15 mm	< 15 mm	< 15 mm	< 20 mm	< 20 mm
Rotation Speed	50 r/min	50 r/min	55 r/min	55 r/min	30 r/min	30 r/min	35 r/min	35 r/min
Net Weight	10 KG	10 KG	10 KG	10 KG	18 KG	18 KG	25 KG	25 KG
Gross Weight	13 KG	13 KG	13 KG	13 KG	28 KG	28 KG	35 KG	35 KG
Case Dimensions	57 x 43 x 17 cm	57 x 43 x 17 cm	57 x 43 x 17 cm	57 x 43 x 17 cm	60 x 50 x 20 cm	60 x 50 x 20 cm	78 x 30 x 30 cm	78 x 30 x 30 cm

Machine Packing List	Delta-I 30	Delta-I 80	Delta-I 120	Delta-I 159
Beveling Tool	1	1	1	1
Expansion Block	8 (set)	5 (set)	8 (set)	5 (set)
0° Facing Tool	1	1	1	1
30° Beveling Tool	1	1	1	1
37,5° Beveling Tool	1	1	1	1
Allen Key	1	1	1	1
Hexagon Wrench	2	2	2	2
Instruction Manual	1	1	1	1
Case	1	1	1	1

Tool Bits



Facing Tool
Beveling Angle 0°



V type
Beveling Angle 30°



V type
Beveling Angle 37°



Inside Beveling Tool
Beveling Angle 12° or 15°
or as per required





7

Bolt Torque & Tensioners Solutions

XTENS

- SERIES -



SOLUTIONS FOR BOLT TENSIONING

Available Models

- Xtens TSR
- Xtens HN

TSR - Capacity

- From 160 to 4685 kN

HN - Capacity

- From 198 to 1911 kN

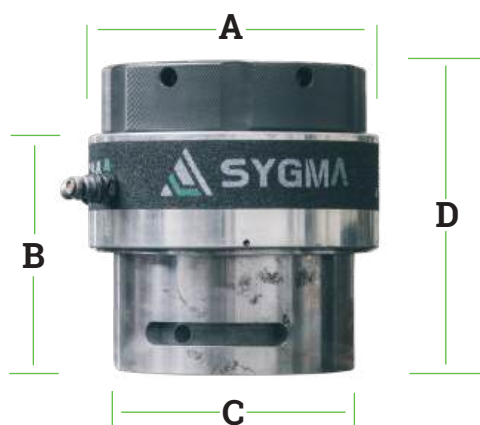
The Sygma™ **Xtens TSR** specializes in advanced bolting tensioning solutions, providing both standard and custom products to meet the precise needs of various industries. Our tensioning systems are designed to ensure accurate, efficient, and safe application of tension in bolted joints.

FEATURES

- Spring Return System
- Ergonomic Puller Design
- Unique Quick Release Adaptation
- Piston Stroke Indication
- Piston Overstroke Prevention
- Piston/Cylinder Misalignment Compensation
- Extensive Bolt Size Coverage with Limited Tools
- Improved Load Cell Design for Increased Tool Life



SIZE RANGE

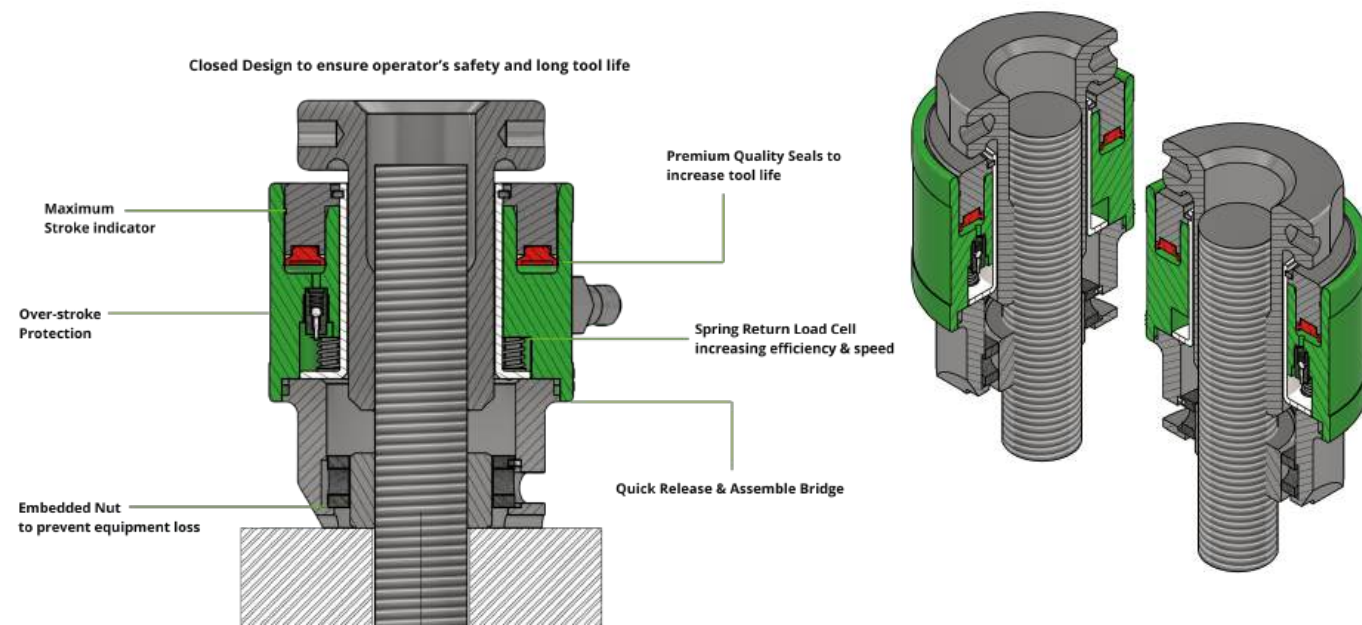


Size Rang (in mm)				
	A	B	C	D
Min	66,8	92.5	63	113.5
Max	283	205	270	277

For the complete size range of each load cell, refer to page 44, specifically the last four columns of the table.

CROSS-SECTION SAFE LOAD CELL DESIGN

Our advanced load cell combines safety and efficiency in a compact design. With a longer stroke compared to competitors, it delivers superior performance and reliable results every time. The new spring return technology reduces downtime and increases productivity. Featuring a robust and secure design, the load cell offers unmatched safety, making it the ideal choice for demanding industrial applications.



TECHNICAL SPECIFICATION

Load Cell	XTS	Tool Load			Bolt Size					Effect Area		Max. Stroke		Cylinder Return System	Max. Working pressure	Weight load		A	B	C	D
					Imperial		Metric									cell	cell				
Name Load Cell	Ref Loadcell	kN	Lbs	Inch	Ref Adaptor Kit	Ref Pulley	Dimensions	Ref Adaptor Kit	Ref Pulley	mm²	in²	mm	inch		Bar	Kg	Lb	mm	mm	mm	mmN
TSR 0	XTS0000	160	35969.431019	¾"	XTS00003	XTS00023	M20	XTS00001	XTS00021			10	0.393701	Manual Return	1500	±2.5	±5,512	66.8	92.5	63	113.5
				⅝"	XTS00004	XTS00024	M22	XTS00002	XTS00022												
				T	XTS00003	XTS00023	M24	XTS00001	XTS00021												
							M27	XTS00002	XTS00022												
TSR 1	XTS0000	280	62946.504284	1 ¼"	XTS00004	XTS00024	M30			1871	2.9001	10	0.393701	Spring Return	1500	±2.5	±5,512	85	119.5	76	144.5
TSR 2	XTS0200	454.4	102153.184095	T	XTS02006	XTS02026	M24	XTS02001	XTS02021	3029	4.6949	12	0.472441	Spring Return	1500	±3.9	±8,598	103	116.5	75	141.5
							M27	XTS02002	XTS02022												
				1 ¼"	XTS02007	XTS02027	M30	XTS02003	XTS02023												
				1 ¼"	XTS02008	XTS02028	M33	XTS02004	XTS02024												
				1 ½"	XTS02009	XTS02029	M36	XTS02005	XTS02025												
TSR 3	XTS0300	670	150621.982394	1 ¼"	XTS03005	XTS03025	M33	XTS03001	XTS03021	4463	6.9176	12	0.472441	Spring Return	1500	±5	±11,023	118	122.5	92	149.5
					XTS03006	XTS03026	M36	XTS03002	XTS03022												
				1 ½"	XTS03007	XTS03027	M39	XTS03003	XTS03023												
				1 ¾"	XTS03008	XTS03028	M42	XTS03004	XTS03024												
				1 ½"	XTS04005	XTS04025	M39	XTS04001	XTS04021												
TSR 4	XTS0400	1000	224808.843871	1 ¼"	XTS04006	XTS04026	M42	XTS04002	XTS04022	6882	10.5571	12	0.472441	Spring Return	1500	±7	±15,432	140.5	131.5	112	163.5
				1 ¼"	XTS04007	XTS04027	M45	XTS04003	XTS04023												
				1 ½"	XTS04008	XTS04028	M48	XTS04004	XTS04024												
				T	XTS04009	XTS04029															
					XTS05008	XTS05028	M52	XTS05001	XTS05021												
TSR 5	XTS0500	1550	348453.86239	2 ¼"	XTS05009	XTS05029	M56	XTS05002	XTS05022	10324	16.0022	12	0.472441	Spring Return	1500	±11	±24,251	175.5	154.5	148	193.5
							M60	XTS05003	XTS05023												
				2 ½"	XTS05010	XTS05030	M64	XTS05004	XTS05024												
							M68	XTS05005	XTS05025												
							M70	XTS05006	XTS05026												
TSR 6	XTS0600	2505	563146.40439	2 ¾"	XTS06006	XTS06026	M72	XTS06001	XTS06021	16700	25.8850	12	0.472441	Spring Return	1500	±16	±35,274	219	167	172	216
					XTS06007	XTS06027	M76	XTS06002	XTS06022												
				3 ¼"	XTS06008	XTS06028	M80	XTS06003	XTS06023												
				3 ¼"	XTS06009	XTS06029	M85	XTS06004	XTS06024												
				3 ½"	XTS06009	XTS06029	M90	XTS06005	XTS06025												
TSR 7	XTS0700	3500	786831.30355	3 ½"	XTS07004	XTS07024	M90	XTS07001	XTS07021	23373	36.2282	12	0.472441	Spring Return	1500	±23	±50,706	252	186	230	241
							M95	XTS07002	XTS07022												
				3 ¾"	XTS07005	XTS07025	M100	XTS07003	XTS07023												
				4"	XTS07006	XTS07026															
				4"	XTS08004	XTS08024	M105	XTS08001	XTS08021												
TSR 8	XTS0800	4685	1053229.90204	4 ¼"	XTS08005	XTS08025	M115	XTS08003	XTS08023	31233.3	48.4117	15	0.590561	Spring Return	1500	±30	±66,139	283	199	255	264

The Sygma™ **Xtens HN** offers a single-acting design with an integral load-holding lock nut, providing a reliable and efficient solution for critical bolted joints. Designed to permanently replace standard nuts on one side of the joint, this innovative tensioning system is ideal for applications that require frequent opening and closing, such as routine maintenance.

Robust Performance & Custom Solutions for Extreme conditions

The Xtens HN, built from high-grade alloy steel with a nitrocarburised piston, offers durable, high-performance tensioning in extreme conditions. Self-energizing seals ensure reliability, while dual quick-connect couplings simplify connections, and a stroke indicator enhances safety. Custom and special design tensioners are available upon request.

Capacities from 198 to 1911 kN

Bolt sizes from M24 to M100 diameter

Maximum working pressure 1500 bar

TECHNICAL SPECIFICATIONS

Model Number	Bolt size	Capacity		Effective area (cm ²)	Stroke (mm)	Weight (kg)	Tommy bar
		kN	Tonnes				
HN1-M24	M24x3	198	20.2	13.2	5	1.9	TB06
HN2-M27	M27x3	216	22.1	14.4	5	2.0	TB06
HN3-M30	M30x3.5	253	25.8	16.9	5	2.4	TB06
HN3-M33	M33x3.5	253	25.8	16.9	5	2.4	TB06
HN4-M36	M36x4	306	31.2	20.4	5	2.7	TB06
HN5-M39	M39x4	344	35.1	22.9	6	2.9	TB06
HN6-M42	M42x4.5	398	40.5	26.5	6	3.5	TB06
HN7-M45	M45x4.5	475	48.4	31.7	6	4.0	TB06
HN8-M48	M48x5	501	51.1	33.4	6	4.2	TB06
HN9-M52	M52x5	564	57.5	37.6	6	4.9	TB06
HN10-M56	M56x5.5	746	76.1	49.8	8	6.4	TB06
HN11-M60	M60x5.5	905	92.3	60.3	8	8.0	TB06
HN11-M64	M64x6	905	92.3	60.3	8	8.0	TB06
HN12-M68	M68x6	1000	101.9	66.7	8	8.8	TB08
HN13-M72	M72x6	1203	122.7	80.2	8	10.6	TB08
HN13-M76	M76x6	1203	122.7	80.2	8	10.6	TB08
HN14-M80	M80x6	1414	144.1	94.3	10	12.9	TB08
HN15-M85	M85x6	1605	163.6	107	10	16.2	TB10
HN15-M90	M90x6	1605	163.6	107	10	16.2	TB10
HN16-M95	M95x6	1705	173.8	113.6	10	18.3	TB10
HN17-M100	M100x6	1911	194.9	127.4	10	21.9	TB10

Dimensions (mm)			
A	B	C	D
72	55	18	132
75	55	18	132
82	57	21	134
82	57	21	134
88	57	22	135
93	58	21	135
100	62	23	142
106	64	24	141
110	64	25	142
117	67	32	145
128	74	28	152
141	77	29	155
141	77	29	155
150	78	30	156
162	81	31	159
162	81	31	159
174	87	35	165
187	95	37	173
187	95	37	173
194	102	39	179
205	110	41	188

8 *Hydraulic Torque Wrench*

SQD & LP Series



UNMATCHED POWER IN EVERY TURN

Available Models

- SQD
- LT

Torque (Nm) - SQD

- From 183 to 26664

Torque (Nm) - LT

- From 232 to 39024

SQD Series

The Sygma™ Square Drive bolting tools are robust, user-friendly, and reliable hydraulic torque wrenches designed for high economic efficiency. These tools offer exceptional accuracy, with all Square drive models delivering $\pm 3\%$ tool precision. For enhanced work efficiency, they feature a standard 360° swivel with quick couplings, enabling easy and rapid setup and operation.

FEATURES

- Easy setup & operation (Plug & Play)
- Multi-directional 360° x 180° degree swivel
- Quick coupling system
- 360° adjustable reaction arm
- Push button reversible square drive
- Tool accuracy of $\pm 3\%$
- Robust & reliable design
- Advanced aluminium-titanium alloy

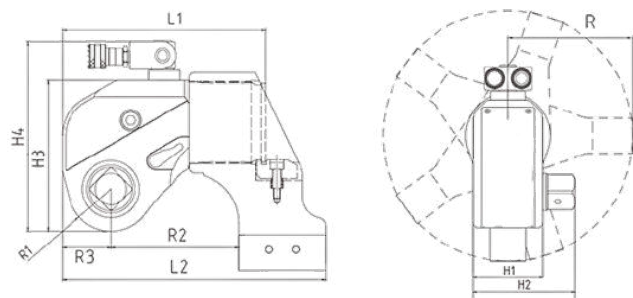
ACCESSORIES

- Impact sockets
- Customized / special reaction arms
- Backup wrench
- Torque pump
- High pressure hose



TECHNICAL SPECIFICATIONS

Type	Torque (Nm)	Bolt size (M)	Weight (kg)	Square Drive
SQD-1	183 - 1837	16 - 36	2.5	3/4"
SQD-3	451 - 4512	22 - 48	5	1"
SQD-5	752 - 7528	27 - 56	8	1- 1/2"
SQD-10	1551 - 15516	36 - 72	15	1- 1/2"
SQD-20	2666 - 26664	48 - 100	35	2- 1/2"



* Larger tools available upon request.

Type	SQD-1	SQD-3	SQD-5	SQD-10	SQD-20
L1	144.5	178	210.5	245	307.5
L2	173	229	270.5	317.5	383.5
H1	50	68	80	100	120
H2	72	95	123	142	183
H3	96	127	149	182	220
H4	131	176.5	199	232	270
R	91.5	123.5	140	178	213
R1	26	34	39	51	59
R2	85	114	137	154	186
R3	29	40	46.5	58.5	71

LP Series

The Sygma™ LP-series is the go-to solution for tight clearance applications. Its innovative cassette design allows a single hydraulic drive unit to power any cassette within the range, maximizing versatility. The standard 360° swivel, equipped with quick couplings, ensures effortless setup and operation, significantly boosting work efficiency.

FEATURES

- Easy setup & operation (Plug & Play)
- Multi-directional 360° x 180° degree swivel
- Quick coupling system
- Light weight & low clearance
- Cassette-type torque wrench
- Tool accuracy of +/- 3%
- Robust & reliable design
- Advanced aluminium-titanium alloy

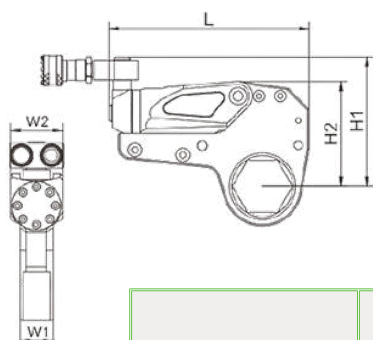
ACCESSORIES

- Impact sockets
- Customized / special reaction arms
- Backup wrench
- Torque pump
- High pressure hose



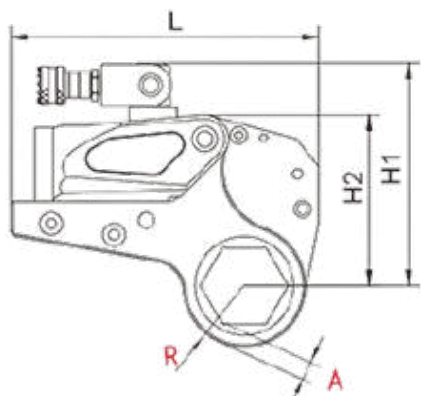
TECHNICAL SPECIFICATIONS

Hydraulic Drive	Torque (Nm)	Nut sizes (mm)	Weight (kg) Body + Cassette
LP-2	232 - 2414	15 - 60	2.6
LP-4	585 - 6474	34 - 80	6.6
LP-8	1094 - 11774	41 - 105	11.4
LP-14	2415-20122	62-116	7
LP-30	4683-39024	80-155	14.5



Hydraulic Drive	Sizes (mm)				
	L	H1	H2	W1	W2
LP-2	196.4	128.5	105	32	51
LP-4	246	187	145.7	42	66
LP-8	301	216	178	53	83

LP Series



LP2				LP4				LP8			
Type	R	A	Max. Torque	Type	R	A	Max. Torque	Type	R	A	Max. Torque
LP2-19	27	16	2328	LP4-34	36	16	2510	LP8-41	46	22	10941
LP2-22	27	14	2328	LP4-36	36	15	2510	LP8-46	46	19	10941
LP2-27	27	11	2328	LP4-41	39	15	5021	LP8-50	46	17	10941
LP2-30	29	12	2328	LP4-46	42	15	5858	LP8-55	50	18	10941
LP2-32	29	11	2328	LP4-50	44	15	5858	LP8-60	52	17	10941
LP2-34	31	11	2328	LP4-55	46	14	5858	LP8-65	55	17	10941
LP2-36	31	10	2328	LP4-60	50	15	5858	LP8-70	58	17	10941
LP2-41	34	10	2328	LP4-65	53	15	5858	LP8-75	60	17	10941
LP2-46	37	10	2328	LP4-70	56	15	6474	LP8-80	63	16	10941
LP2-50	40	11	2328	LP4-75	59	15	6474	LP8-85	66	16	10941
LP2-55	43	11	2328	LP4-80	61	15	6474	LP8-90	69	17	10941
LP2-60	46	11	2414					LP8-95	71	16	10941
								LP8-100	75	17	11774
								LP8-105	78	17	11774



9 *Turntables Heavy Lifting*



ROTATE HEAVY LOADS WITH PRECISION

Available Models

- HTT-450

Cylinder Capacity

- 23.2 t

Maximum Load Capacity

- 236 t (one cylinder) - 472 t (dual cylinders)

Maximum Operating Pressure

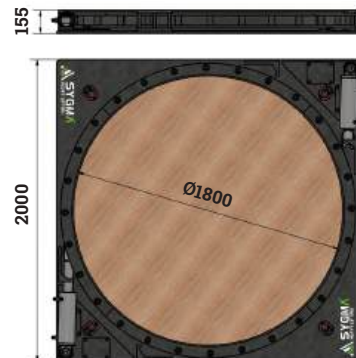
- 700 Bar / 10.000 PSI

HTT Series

Designed for demanding industrial environments, our turntables provide safe, reliable, and efficient load positioning. **The SYGMA TurnTables** improve workflow efficiency while reducing manual handling. Built with robust materials and engineered for continuous operation, they deliver smooth and accurate rotation for even the most challenging loads.

FEATURES

- Controlled and secure rotation of heavy equipment and structures
- Quick and effortless change of rotation direction
- Capacity up to 232 t (single cylinder) or 472 t (dual cylinder)
- Space-saving design for challenging installation environments
- Recycled plastic board, durable, rot-resistant, and low-maintenance.



TECHNICAL SPECIFICATIONS

Amount Cylinder	Maximum Capacity Load	Cylinder Capacity	Cylinder Oil Capacity (liter)		Rotation per Stroke	Platform Diameter	Weight
	tons	tons	advance	retract	degrees	mm	tons
One Cylinder	236	23.2	0.86	0.33	12.85	1800	1,4
Two Cylinder	472	46.4	1.72	0.66			

**Tailor Your HTT TurnTable to Any On-Site Machining Challenge.*





10 Master Pin Press Tool

MPP - SERIES -



A HIGH-FORCE PIN EXTRACTION & INSTALLATION

Available Models

- MPP-100
- MPP-150
- MPP-200

Stroke

- 350 mm

Working Pressure Kg/cm²

- 650

Operation

- Hand pump
- Electrical pump (dual control)

MPP Series

The Sygma™ MPP Series delivers safe, high-force pin extraction and installation for heavy equipment maintenance. Engineered for demanding field and workshop environments, it eliminates dangerous manual hammering, minimizes downtime, and enhances operator safety during pin and bushing service.

FEATURES

- High strength steel construction
- Integrated lifting eyes
- Precision linear drive system
- Protective cover for moving parts
- Compatible with standard hydraulic power packs

OPTIONAL ACCESSORIES

- Hydraulic power pack
- Control valve with flow regulation
- Custom mounting adapters
- Transport case



THREE MODELS
DIFFERENT CAPACITY

HIGH PRECISION
FEED CONTROL

ROBUST DESIGN
BUILT FOR FIELD USE



TECHNICAL SPECIFICATIONS

Specifications	MPP-100	MPP-150	MPP-200
Capacity (Ton)	100 Ton (1000 kN)	150 Ton (1500 kN)	200 Ton (2000 kN)
Stroke (mm)	350	350	350
Working pressure (KG / CM ²)	650	650	650
Approx. Weight (KG)	205	480	630
Operation	Hand Pump	Hand Pump	Hand Pump
	Electrical pump (dual control pump 2 in 1)	Electrical pump (dual control pump 2 in 1)	Electrical pump (dual control pump 2 in 1)
Universal Tooling Set (included in the package)	10 Sets to cover 19.3 mm up to 60.2 mm in diameter	12 Sets to cover 23.7mm up to 70mm in diameter	15 Sets to cover 19.3mm up to 76.2mm in diameter

PIN DETAILS			
Min Dia. (mm)	19.3	23.7	19.3
Max Dia. (mm)	60.2	70	76.2
Min Length (mm)	160	311	311
Max Length (mm)	320	365	415

11 *Hydraulic Pumps & Cylinders*

HYDRAULICS



HYDRAULICS PUMPS & CYLINDERS

Pump Series

- PH-series
- PHS-series
- PME-series
- PMP-series
- PP-series

Cylinder Series

- Single acting push
- Single acting High Tonnage push
- Single acting hollow
- Pull

HYDRAULICS

PUMPS

Hydraulics is utilized in all Sygma pumps. Harnessing the forces of nature simplifies the maintenance and servicing of your machines.

All Sygma™ **hydraulic pumps** feature a functional design that withstands rough handling in harsh environments. They can be used in various applications and industries. The pumps are compatible with all hydraulic tools and cylinders in Sygma's product range.



FEATURES

- High Quality
- Cost Effective
- Simple to Use
- Ergonomically Designed
- Customizable Options



Hydraulic Hand Pumps

Lightweight and portable, these pumps do not require an external power source. They are cost-effective, easy to use, and ideal for workshop or field applications.

Air Hydraulic Pumps

A cost-effective option for faster and more efficient operations, requiring no manual effort from the operator. Portable and ideal for workshop use, it only requires a standard air-line supply. Field use is feasible if access to a compressor is available.

Petrol Hydraulic Pumps

An excellent alternative for field operations, such as construction sites and shipyards. No external power source is required.

Electrical Hydraulic Pumps

The ideal choice for applications requiring large oil capacities, such as multiple cylinder operations. By adding different valve types, these pumps can easily operate multiple tools. The electric pumps are suitable for stationary installations.

PRODUCT RANGE



Single Stage Hydraulic
Hand Pumps **PH**



Two-Stage Hydraulic
Hand Pumps **PHS**



Electrical Hydraulic
Pumps **PME**



Petrol Hydraulic
Pumps **PMP**



Air Hydraulic
Pumps **PPxx-1000**



Air Hydraulic
Pumps **PPxx-2500**



Air Hydraulic
Pumps **PPxx-9200**

HYDRAULICS

CYLINDERS

Suitable for Harsh Environments

All Sygma™ **Cylinders** can be equipped with either a push-to-connect (male coupling half, AQU8) or a screw-to-connect (female coupling half, AQI24).

These versatile hydraulic cylinders handle pulling, pushing, and lifting tasks across various industries, including engineering, automotive, mining, and petrochemical. With customizable strokes and capacities, they provide cost-effective solutions for precision work and heavy lifting of up to 500 tons.



FEATURES

- Hard Chromed Pistons
- Galvanized Cylinders
- Mechanical Stoppage
- High-pressure Capability
- Wide Range
- Customizable Options



PRODUCT RANGE



Single Acting Push
Cylinders **CF/CFU**



Single Acting Push
Cylinders Blackline **CF BL**



Single Acting Push
Cylinders Aluminium **CFA**



Single Acting Push
Cylinders **CFC**



Single Acting Push
Cylinders Compact **CL/CLF**



Single Acting High
Tonnage Push **CX**



Single Acting Stainless
Steel Push Cylinders **CSF**



Single Acting Hollow
Cylinders Aluminium **CHFA**



Single Acting Hollow
Cylinders Steel **CH/CHF**



Pull Cylinders
CPF

HYDRAULICS

PRODUCT OVERVIEW

HYDRAULIC PUMPS



PH
Single Stage Hydraulic
Hand Pumps



PHS
Two Stage Hydraulic
Hand Pumps



PME
Electrical
Hydraulic Pumps



PP-xx-1000
Air
Hydraulic Pumps



PP-xx-2500
Air
Hydraulic Pumps



PP-xx-9200
Air
Hydraulic Pumps



PMP
Petrol
Hydraulic Pumps

HYDRAULIC CYLINDERS



CF-CFU
Single Acting
Push Cylinders



CF BL
Single Acting
Push Cylinders
Blackline



CFA
Single Acting
Push Cylinders
Aluminium



CFC
Single Acting
Push Cylinders



CL-CLF
Single Acting
Push Cylinders
Compact



CX
Single Acting
High Tonnage
Push



CSF
Single Acting
Stainless Steel
Push Cylinders



CHFA
Single Acting
Hollow Cylinders
Aluminium



CH/CHF
Single Acting
Hollow Cylinders
Steel



CPF
Pull
Cylinders



THE NEXT GENERATION OF ON-SITE MACHINING AND BOLTING SOLUTIONS

Syigma™ stands out for its unwavering focus on **precision** and **reliability**, even in the most demanding environments. Our products are meticulously crafted for industrial use, consistently exceeding industry standards. Built on the philosophy of modularity, they offer maximum adaptability and durability. Backed by industry-leading Belgian engineering, **Syigma™** empowers you to achieve your goals confidently and effortlessly.

Syigma™ Custom Product Development Services

At **Syigma™**, you've found the ideal destination for tailored product development. Our expert engineers meticulously identify your needs and specifications, conducting thorough analyses before crafting a product design that precisely aligns with your expectations.

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