**MIRA Retrofit S.A.**
Pol. Ind. de Bertoa, Rúa Volframio, Parcela H-16
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MIRA Retrofit SA

INFORMACION TECNICA-COMERCIAL DE RECTIFICADORAS CILINDRICAS
TECHNISCH-KOMMERZIELLE INFORMATIONEN ZU RUNDSCHLEIFMASCHINEN
TECHNICAL-COMMERCIAL INFORMATION ON CYLINDRICAL GRINDERS
INFORMATIONS TECHNIQUES ET COMMERCIALES SUR RECTIFIEUSES

| Marca / Trademark / Marke / Marque | **STUDER** | Modelo / Model / Modell / Modèle | **S20-2 - 400** (s/n 1155.63) |
|---|---|---|---|

| | |
|---|---|
| Tensión / Power supply / Spannung / Tension | 3 x 380 V, 50 Hz |
| Altura centro / Center height / Spitzenhöhe / Hauteur de pointes | 100 mm |
| Distancia entre centros / Distance between centers / Spitzenweite / Distance entre pointes | 400 mm |
| Cono porta piezas / Fitting taper Workhead / Aufnahme WSS / Cône poupée porte-pièce | MK 4 / MT 4<br>MK 4 / CM 4 |
| Cono porta muelas / Fitting taper Tailstock / Aufnahme Reitstock / Cône poupée porte-meule | MK 2 / MT 2<br>MK 2 / CM 2 |
| Motor / Motor / Motor / Moteur | 7 KW |
| Muela / Grinding wheel / Schleifscheibe / Meule | 350 x 30 x 127 mm<br>max. 50mm |
| Año de fabricación / Built in / Baujahr / Année de construction | 1988 |

## Opciones / Options / Optionen /Options

| bajo demanda | on request | auf Anfrage | sur demande |
|---|---|---|---|

## Funciones / Functions / Funktionen / Fonctions

| | | | |
|---|---|---|---|
| • según fabricante | • according to the manufacturer | • gemäss Hersteller | • selon fabricant |
| • rectificado externo & interno | • External & internal grinding | • Aussen- & Innenschleifen | • Rectification ext. & int. |

## Accesorios / Accessories / Zubehör / Accessoires

| | | | |
|---|---|---|---|
| • sistema de taladrina | • Coolant system | • Kühlmittel-Anlage | • Installations d'arrosage |
| • Dispositivo de rectificado interno | • Internal grinding device | • Interne Schleifvorrichtung | • Dispositif de rectification intérieure |
| • Husillo interno 25.000 Rpm | • Internal spindle 25.000 rpm | • Innenspindel 25.000 U/Min | • Broche inter. 25.000 t/min |
| • Nueva pantalla digital para ejes X y Z | • New digital display for X and Z axes | • Neue Digitalanzeige für X- und Z-Achse | • Nouvel affichage numérique pour les axes X et Z |
| • 1 Brida/sujeta muela | • 1 Grinding wheel attachment | • 1 Schleifscheibenaufsatz | • 1 Flasque porte-meule |
| • 3 Pie nivelador | • 3 leveling foot | • 3 Nivellierfuss | • 3 patins machine |
| • Lámpara nueva | • New lamp | • Neue Lampe | • Nouvelle lampe |
| • Sensitron | • Sensitron | • Sensitron | • Sensitron |
| • Sist. Tallado muela escamotable | • Hinged dressing attachment | • Rückklappbare Abricht-vorrichtung | • Dispositif de dressage réversible |
| • Manuales de instrucciones y mantenimiento originales | • Original instruction and maintenance manuals | • Original Bedienungs- und Wartungsanleitungen | • Manuels d'instruction et de maintenance originaux |
| • Otros bajo demanda | • Others on request | • Andere auf Anfrage | • Autres sur demande |

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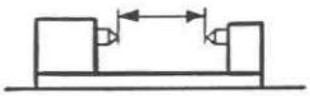
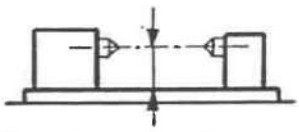
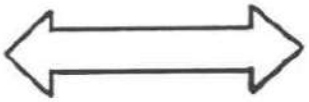
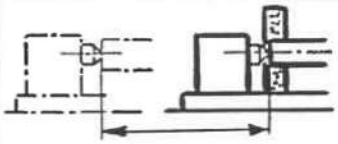
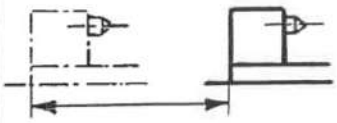
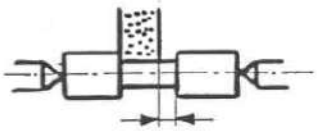
| FICHA TECNICA<br>TECHNISCHE DATEN | TECHNICAL DATA<br>DONNÉES TECHNIQUES |
|---|---|

| Marca<br>Trademark<br>Marke<br>Marque | **STUDER** | Modelo<br>Model<br>Modell<br>Modèle | **S20-2 - 400** (s/n 1155.63) |
|---|---|---|---|

| | | | |
|---|---|---|---|
| SPITZENWEITE:<br>DISTANZA TRA LE PUNTE:<br>МЕЖЦЕНТРОВОЕ РАССТОЯНИЕ | DISTANCE ENTRE POINTES:<br>DISTANCIA ENTRE PUNTAS: | DISTANCE BETWEEN CENTRES:<br>Distância entre pontas: |  <br>400 mm 15,7" \| 650 mm 25,6" |
| SPITZENHOEHE:<br>ALTEZZA DELLE PUNTE:<br>ВЫСОТА ЦЕНТРОВ | HAUTEUR DE POINTES:<br>ALTURA DE PUNTAS: | CENTRE HEIGHT:<br>Altura das pontas: |  <br>100 mm 3,94" |
| LAENGSSCHLITTEN<br>SLITTA LONGITUDINALE:<br>ПРОДОЛЬНАЯ КАРЕТКА | COULISSE LONGITUDINALE:<br>DESLIZAMIENTO LONGITUDINAL: | TABLE:<br>Carro longitudinal: |  |
| Schleiflänge<br>Lunghezza di rettifica<br>Длина шлифования | Longueur de rectification<br>Longitud de rectificación | Grinding length<br>Comprimento de retificação |  <br>400 mm 15,7" \| 650 mm 25,6" |
| Max. Weg<br>Corsa massima<br>Максимальный путь | Course max.<br>Recorrido máximo | Maximum travel<br>Curso máximo |  <br>420 mm 16,5" \| 650 mm 25,6" |
| Kleinster autom. Weg ca.<br>Min. spostamento autom.ca.<br>Наименьший автоматический путь, примерно | Déplacement autom. minimal env.<br>Desplazamiento automático mínimo aprox. | Minimum automatic travel approx.<br>Curso mínimo automático ca |  <br>1 mm .04" |

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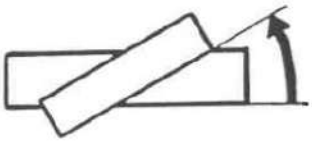
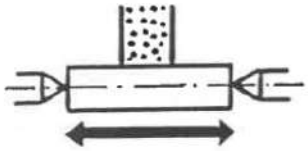
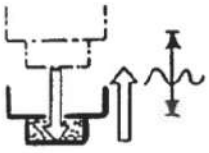
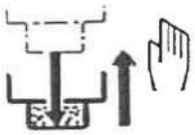
| | | | |
|---|---|---|---|
|  | Max. Schrägstellung des Tisches<br>Inclinaz.mass. del tavolo<br>Максимальное наклонное положение стола | Orientation max. de la table<br>Orientación máxima de la mesa | Maximum swivel of table<br>Orientação máxima da mesa |
| 30° / 15° | | | |
|  | Geschwindigkeit<br>Velocità<br>Скорость | Vitesse<br>Velocidad | Speed<br>Velocidade |
| 100 - 3500 mm/min<br>3,94 - 137,8"/min | | | |
| | Antriebsleistung Gleichstrommotor<br>Potenza del motore a corrente continua<br>Приводная мощность двигателя постоянного тока | Puissance du moteur à courant continu<br>Potencia del motor de corriente continua | Power requirement DC motor<br>Capacidade de corrente contínua |
| 0,12 kW / 0,30 kW | | | |
| | QUERSCHLITTEN:<br>SLITTA TRASVERSALE:<br>ПОПЕРЕЧНАЯ КАРЕТКА: | COULISSE TRANSVERSALE:<br>DESLIZAMIENTO TRANSVERSAL: | WHEELHEAD SLIDE:<br>Carro transversal: |
|  | Schnellverstellung<br>Spostamento rapido<br>Ускоренное перемещение | Déplacement rapide<br>Desplazamiento rápido | Rapid approch<br>Deslocamento rápido |
| 30 mm<br>1,18" | | | |
|  | Vorschubweg mit Handrad<br>Corsa con volantino a mano<br>Подача маховиком | Course avec volant à main<br>Recorrido con volante de mano | Infeed with handwheel<br>Curso com volante manual |
| 25 mm<br>.98" | | | |

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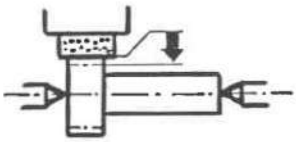
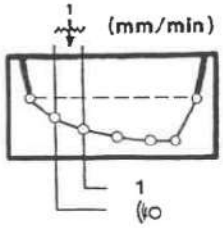
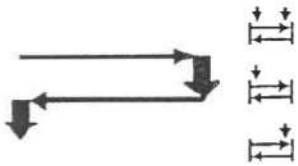
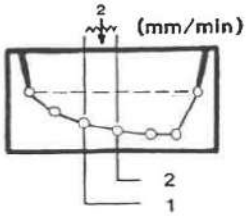
|---|---|---|---|
| Grösste Einstechtiefe im ø<br>Profond.mass.del tuffo in ø<br>Максимальная глубина врезания в ø | Profondeur max. de fonçage en ø<br>Profundidad máxima de perforación, en ø | Maximum plunge depth in ø<br>Profundidade máxima no ø |  <br>1,9 mm/ø<br>.074"/ø |
| Vorschubgeschw. (1) im Radius<br>Velocità d'avanzamento (1) nel raggio<br>Скорость подачи (1) по радиусу | Vitesse d'avance (1) en rayon<br>Velocidad de avance (1) en radio | Infeed speed (1) in radius<br>Velocidade periférica (1) no raio |  <br>0,03 – 1,5 mm/min<br>.001 – .06"/min |
| Einstechvorschub hubweise<br>Avanz.del tuffo a impulsi<br>Ступенчатая подача на врезание | Avance de fonçage par impulsions<br>Avance de perforación por impulsos | Incremental infeed per stroke<br>Avanço de penetração passo a passo |  <br>0 – 0,04 mm/ø<br>0 – .0015"/ø |
| Antriebsleistung Gleichstrommotor<br>Potenza del motore a corrente continua<br>Приводная мощность двигателя постоянного тока | Puissance du moteur à courant continu<br>Potencia del motor de corriente continua | Power requirement DC motor<br>Capacidade corrente contínua | <br>0,12 kW |
| Option: Vorschubgeschw. (2) im Radius<br>Opzione: velocità d'avanzamento (2) nel raggio<br>По выбору: скорость подачи (2) по радиусу | Option: Vitesse d'avance (2) en rayon<br>Opción: Velocidad de avance (2) en radio | Option: Infeed speed (2) in radius<br>Opção: velocidade periférica (2) no raio |  <br>0,02 – 0,3 mm/min<br>.000,8 – .01"/min |

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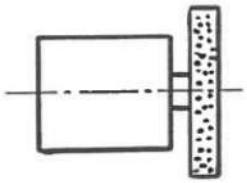
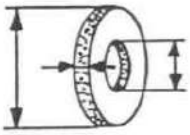
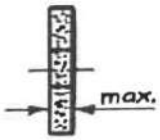
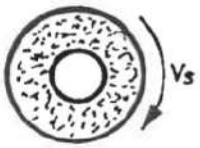
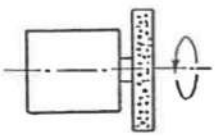
|---|---|---|---|
|  | SCHLEIFSPINDELSTOCK:<br>TESTA PORTAMOLA:<br>ШЛИФОВАЛЬНАЯ БАБКА: | POUPEE PORTE MEULE:<br>CABEZAL PORTA MUELA: | WHEELHEAD:<br>Cabeçote porta-rebolo: |
|  <br>350 x 30 x 127 mm<br>13,8 x 1,18 x 5" | Schleifscheibe: ø x Breite x Bohrung<br>Mola: ø x larghezza x foro<br>Шлифовальный круг: ø x ширина x отверстие | Meule: ø x largeur x alésage<br>Muela: ø x anchura x mandrinado | Grinding wheel: ø x width x bore<br>Rebolo: Ø x largura Ø x furação |
|  <br>50 mm<br>1.97" | Satzscheiben, max. Breite<br>Set di mole, larghezza mass.<br>Максимальная ширина шлифовальных кругов | Train de meules, largeur max.<br>Tren de muelas anchura máxima | Wheel sets, max. width<br>Jogo de rebolo, largura máxima |
| <br>3 kW | Antriebsleistung Drehstrom-motor<br>Potenza del motore trifase<br>Приводная мощность двигателя трехфазного тока | Puissance du moteur tri-phasé<br>Potencia del motor trifásico | Power requirement tree-phase AC motor<br>Capacidade de acionamento motor CA |
|  <br>30 m/s<br>98,4 ft/s | Umfangsgeschwindigkeit<br>Velocità periferica<br>Окружная скорость | Vitesse périphérique<br>Velocidad periférica | Peripheral speed<br>Velocidade periférica |
|  <br>1600/1975/2200 min $^{-1}$ | Drehzahlen<br>Velocità di rotazione<br>Скорость вращения | Vitesses de rotation<br>Velocidades de rotación | Spindle speeds<br>RPM |

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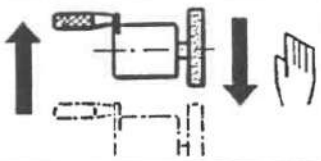
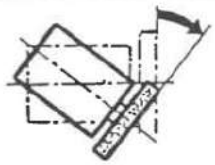
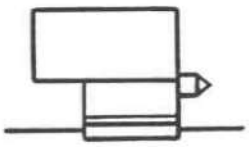
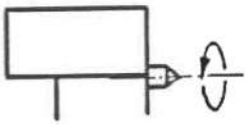
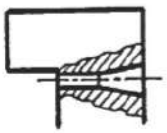
|---|---|---|---|
| Grobverstellung<br>Posizionamento manuale<br>Черновое перемещение | Déplacement manuel<br>Desplazamiento manual | Initial positioning<br>Ajuste grosso |  <br>170 mm<br>6,7" |
| Schwenkbarkeit nach rechts<br>Orientamento verso destra<br>Степень поворота вправо | Orientation vers la droite<br>Orientación hacia la derecha | Swivel range to right<br>Basculamento para a direita |  <br>15° 30° |
| UNIVERSAL-WERKSTUECKSPINDELSTOCK FUER SPITZEN- UND FUTTERARBEIT:<br>MANDRINO PORTAPEZZO UNIVERSALE PER LAVORI TRA LE PUNTE O NEL MANDRINO:<br>УНИВЕРСАЛЬНАЯ БАБКА ИЗДЕЛИЯ ДЛЯ ОБРАБОТКИ В ЦЕНТРАХ И В ПАТРОНЕ: | POUPEE PORTE-PIECE UNIVERSELLE POUR TRAVAUX ENTRE POINTES OU EN MANDRIN:<br>CABEZAL PORTA-PIEZA UNIVERSAL PARA TRABAJOS ENTRE JUNTAS O EN MANDRIL: | UNIVERSAL WORKHEAD FOR GRINDING BETWEEN CENTRES AND LIVE SPINDLE:<br>Fuso porta-peça universal para pontas e placas: |  |
| Drehzahlen<br>Velocità di rotazione<br>Скорость вращения | Vitesses de rotation<br>Velocidades de rotación | Spindle speeds<br>RPM |  <br>80/175/380/800 $min^{-1}$ |
| Aufnahmekonus<br>Cono di fissaggio<br>Посадочный конус | Cône intérieur<br>Cono interior | Fitting taper<br>Porta cone |  <br>Morse 4 |
| Reduktionshülse<br>Boccola di riduzione<br>Переходная втулка | Douille de réduction<br>Boquilla de reducción | Reduction sleeve<br>Bucha de redução | <br>Morse 4/2 |

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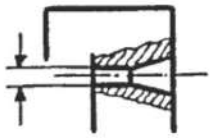
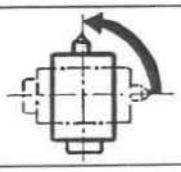
|---|---|---|---|
|  | Spindeldurchlass | Alésage de passage de la broche | Spindle passage diameter |
| | Foro di passaggio del mandrino | Mandrinado de paso de la broca | Passagem do fuso |
| | Проходной диаметр шпинделя | | |
| 24 mm<br>.94" | | | |
|  | Schwenkbarkeit | Orientation | Swivel range |
| | Orientamento | Orientación | Basculamento |
| | Диапазон поворота | | |
| 0 - 90° | | | |
| | Antriebsleistung Drehstrommotor | Puissance du moteur triphasé | Power requirement treephase AC motor |
| | Potenza del motore trifase | Potencia del motor trifásico | Capacidade de acionamento do motor CA |
| | Приводная мощность двигателя трехфазного тока | | |
| 0,5 kW | | | |

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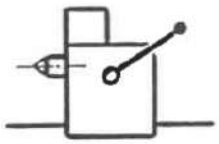
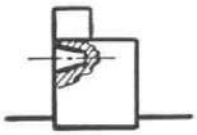
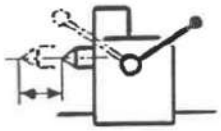
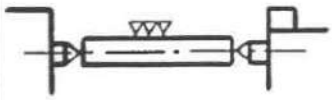
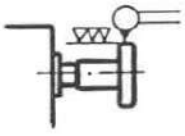
| | | | |
|---|---|---|---|
| REITSTOCK:<br>CONTROPUNTA:<br>ЗАДНЯЯ БАБКА: | CONTRE-POUPEE:<br>CONTRAPUNTO: | TAILSTOCK:<br>Contra-Ponta: |  |
| Aufnahmekonus<br>Cono di fissaggio<br>Посадочный конус | Cône intérieur<br>Cono interior | Fitting taper<br>Porta-cone |  <br>Morse 2 |
| Pinolenweg<br>Corsa del cannotto della contropunta<br>Путь пиноли | Course du fourreau<br>Recorrido de la pínula | Quill travel<br>Percurso da pínola |  <br>20 mm<br>.79" |
| GARANTIERTE ARBEITSGENAUIGKEIT:<br>PRECISIONE DI LAVORO GARANTITA:<br>ГАРАНТИРУЕМАЯ ТОЧНОСТЬ ОБРАБОТКИ: | PRECISION DE TRAVAIL GARANTIE:<br>PRECISION DE TRABAJO GARANTIA: | GUARANTEED ACCURACY:<br>Precisão de trabalho garantida: | |
| Geradheit der Mantellinie auf max. Schleiflänge<br>Rettilineità della generatrice sulla lunghezza massima di rettifica<br>Прямолинейность образующей по максимальной длине шлифования | Rectitude de la génératrice sur la longueur de rectification max.<br>Rectitud de la generatriz a lo largo de rectificación máxima | Surface straightness over maximum grinding lenght<br>Alinhamento da superfície periférica no comprimento máximo de retificação |  <br>0,0025 mm .000,1" \| 0,004 mm .000,16" |
| Rundheitsgenauigkeit beim Fliegendschleifen<br>Precisione di rotondità durante la rettifica a sbalzo<br>Макс. овальность при обработке в патроне | Faux-rond max. des pièces rectifiées en l'air<br>Excentricidad máxima de las piezas rectificadas en el aire | Roundness on live spindle<br>Precisão circular na retífica de mergulho |  <br>0,0004 mm .000,016" |

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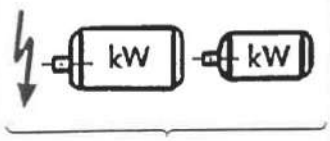
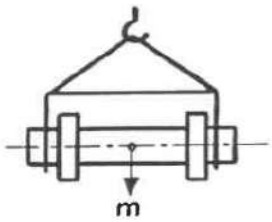
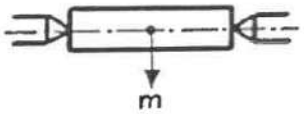
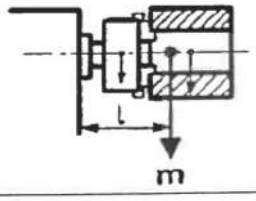
| | | | |
|---|---|---|---|
|  | GESAMTLEISTUNGSBEDARF: | PUISSANCE TOTALE NECESSAIRE: | TOTAL POWER REQUIREMENT: |
| | Potenza totale necessaria: | POTENCIA TOTAL REQUERIDA: | Capacidade total: |
| | ОБЩАЯ ПОТРЕБНАЯ МОЩНОСТЬ: | | |
| 7 kW | | | |
|  | MAX. WERKSTUECKGEWICHT/ BIEGEMOMENT: | POIDS MAX. DE LA PIECE/ COUPLE DE FLEXION: | MAX. WORKPIECE WEIGHT/ BENDING MOMENT: |
| | PESO MASSIMO DEL PEZZO/ MOMENTO FLETTENTE: | PESO MAXIMO DE LA PIEZA/ PAR DE FLEXION: | Peso máximo da peça: |
| | МАКСИМАЛЬНЫЙ ВЕС ИЗДЕЛИЯ/ МОМЕНТ ИЗГИБА: | | |
|  | Zwischen den Spitzen | Entre pointes | Between centres |
| | Tra le punte | Entre puntas | Entre-pontas |
| | Между центрами | | |
| 20 kg<br>44 lbs | | | |
|  | Fliegend | En l'air | Live spindle |
| | A sbalzo | En el aire | Mergulho |
| | В патроне | | |
| l · m ≦12 Nm (120 cm kg) | | | |

| | | |
|---|---|---|
| Aenderungen vorbehalten | Modifications réservées | Subject to change without prior notice |
| Soggetto a modifiche | Sujeto a modificaciones sin previo aviso | Reserva de modificação |
| Изменения возможны | | |

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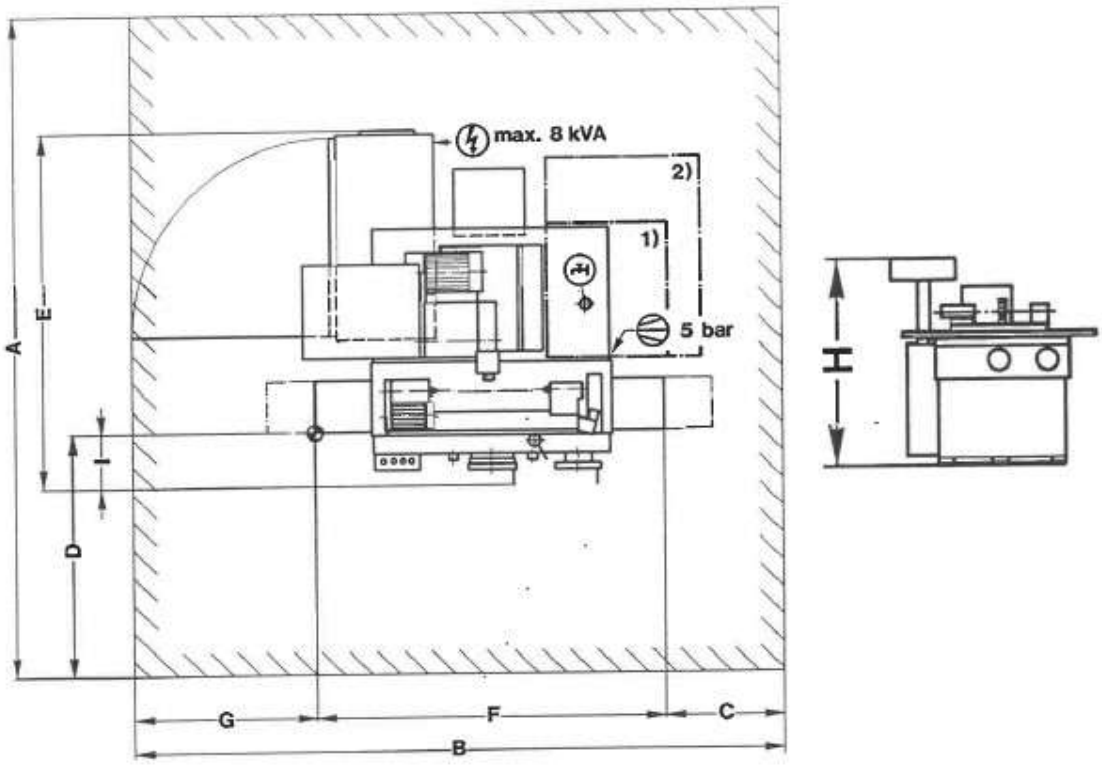
PLANO DE INSTALACION
AUFSTELLUNGSPLAN

INSTALLATION PLAN
PLAN D'INSTALLATION

| Marca<br>Trademark<br>Marke<br>Marque | **STUDER** | Modelo<br>Model<br>Modell<br>Modèle | **S20-2 - 400** (s/n 1155.63) |
|---|---|---|---|

AUFSTELLUNGSPLAN | PLAN D'INSTALLATION | INSTALLATION PLAN
PIANO D'INSTALLAZIONE | PLAN DE INSTALACION | Plano de instalação
План установки




| | A1) | A2) | B | C | D | G | I | kg/lbs | E * | F * | H * |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **400/15.7"** | 2800<br>110.2" | 2800<br>110.2" | 2760<br>108.7" | 500<br>19.7" | 1030<br>40.6" | 784<br>30.9" | 230<br>9.1" | 1600<br>3530 | 1500<br>59.1" | 1476<br>58.1" | 1500<br>59.1" |
| **650/25.6"** | 2800<br>110.2" | 2800<br>110.2" | 3165<br>124.6" | 500<br>19.7" | 1030<br>40.6" | 335<br>13.2" | 230<br>9.1" | 1900<br>4190 | 1500<br>59.1" | 2330<br>91.7" | 1500<br>59.1" |

* Transportmasse | Cotes de transport | Dimensions for transport
Dimensioni per trasporto | Cotas de transporte | Medidas de transporte
Размеры для транспортировки

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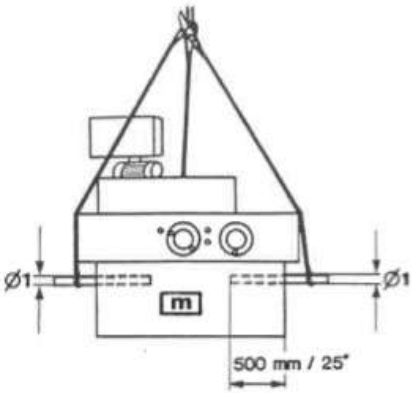
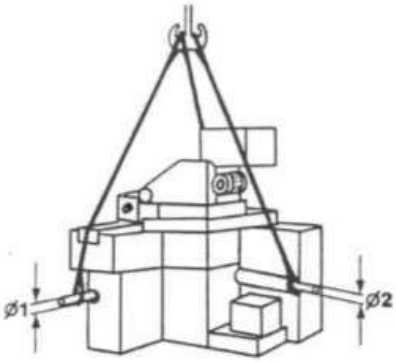
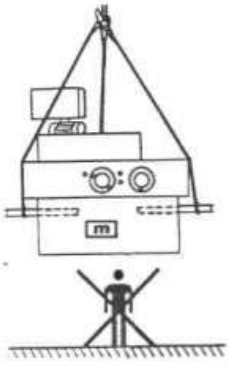
| | m |
|---|---|
| 400 mm 15,7" | ~1600 kg ~4,2 lbs |
| 650 mm 25,6" | ~1900 kg ~3,5 lbs |

Aufhängen / Gewicht
Agganciare / Peso
Строповка/вес
Suspension / Poids
Colgar / Peso
Suspending / Weight
Suspensão

| | Ø1 | Ø2 |
|---|---|---|
| 400 mm 15,7" | 40 mm 1,57" | 40 mm 1,57" |
| 650 mm 25,6" | 60 mm 2,36" | 40 mm 1,57" |




Warnung:
Avvertimento:
Предупреждение
警告
Avertissement:
Advertencia:
Upozorenje:
警告
Warning:
Advertência:
Varning:

| | | |
|---|---|---|
| Keine Personen im Gefahrenbereich! | Pas de personne dans la zone de danger! | No person in danger area! |
| Nessuna persona in zona di pericolo! | ¡Ninguna persona en la zona de peligro! | Proibida a permanência de pessoas na área perigosa! |
| Вход в опасную зону воспрещен! | Zabranjeno prisustvo osoba u opasnoj zoni! | Förbjudet att uppehålla sig i farozonen! |
| 危险勿近 | 危険区域につき立入禁止 | |

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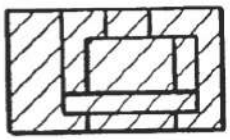
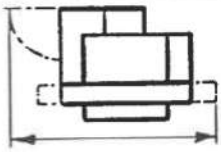
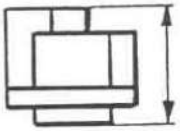
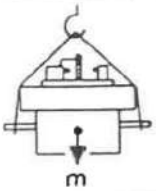
| | | | |
|---|---|---|---|
| PLATZBEDARF:<br>IGOMBRO MASSIMO:<br>ЗАНИМАЕМАЯ ПЛОЩАДЬ: | ENCOMBREMENT MAXIMUM:<br>DIMENSIONES MAXIMAS: | FLOOR SPACE:<br>Espaço de trabalho: |  |
| Länge<br>Lunghezza<br>Длина | Longueur<br>Longitud | Length<br>Comprimento |  |
| | | | 2350 mm 92,5" \| 2850 mm 112" |
| Breite<br>Larghezza<br>Ширина | Largeur<br>Anchura | Width<br>Largura |  |
| | | | 1480 mm 58" |
| GESAMTGEWICHT:<br>PESO TOTALE:<br>ОБЩИЙ ВЕС: | POIDS TOTAL:<br>PESO TOTAL: | TOTAL WEIGHT:<br>Peso total: |  |
| | | | 1600 kg \| 1900 kg |

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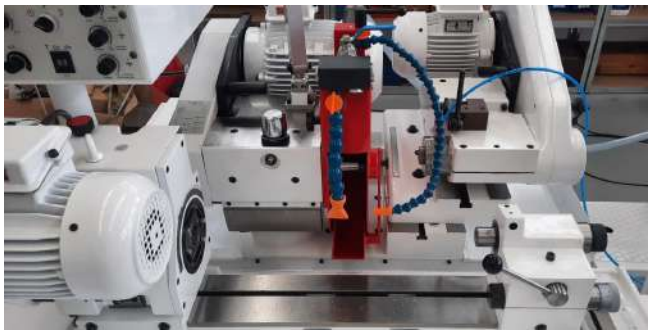
MIRA Retrofit SA

| PRESENTACION FOTOGRAFICA<br>FOTOGRAFISCHE PRÄSENTATION | PHOTOGRAPHIC PRESENTATION<br>PRÉSENTATION PHOTOGRAPHIQUE |
|---|---|

| Marca<br>Trademark<br>Marke<br>Marque | **STUDER** | Modelo<br>Model<br>Modell<br>Modèle | **S20-2 - 400** (s/n 1155.63) |
|---|---|---|---|