



**Universal hydraulic
bending machines**

**Hydraulische
ringbiegemaschinen**



CURVATRICI UNIVERSALI IDRAULICHE PER TUBI, BARRE E PROFILATI

Curvatrici di tipo asimmetrico con tre rulli trascinatori a dorso liscio.

Macchine molto robuste costruite in acciaio stabilizzato, con alberi in acciaio al **Nichel Cromo** trattati termicamente ad alta resistenza all'usura.

Cuscinetti a rulli su tutti gli alberi.

Riduttore di velocità ad ingranaggi elicoidali, lubrificati in bagno d'olio.

Limitatore di coppia registrabile, montato sull'albero centrale a protezione dei sovraccarichi e per l'autoadeguamento della velocità differenziata del rullo interno.

Possibilità di utilizzo sia ad assi orizzontali (AO) che ad assi verticali (AV).

Pulpito Mobile comprendente:

- pedaliera doppia per rotazione sinistra e destra dei rulli,
- doppi pulsanti per l'azionamento dei cilindri idraulici,
- visualizzatori di quota per il rilevamento della posizione dei rulli,
- pulsante start, selettore a chiave con spia di pre-senza tensione, pulsante di emergenza

HYDRAULISCHE RINGBIEGEMASCHINEN

Biegemaschinen mit asymmetrischer Walzenanordnung, drei angetriebenen Rollen und hydraulischer Zustellung.

*Maschinen mit robuster, verstärkter, elektrogeschweißter Stahlkonstruktion mit induktionsgehärteten Wellen aus **Chrom-Nickel-Stahl** für höhere Festigkeit und wenigen Verschleiß.*

Rollenlager auf allen Walzen Reduktionsgetriebe mit schrägrerzahn Antriebsrädern im Ölbad gelagert.

Auf der zentralen Welle ist eine automatisch nachstellende Kupplung montiert, die die Maschine vor Überlastung schützt und die Geschwindigkeitsdifferenzen der einzelnen Wellen ausgleicht.

Maschine kann horizontal und vertikal eingesetzt werden.

Bewegliches Steuerungspult, das das Folgende umfasst:

- Doppelpedal für die Umkehrung des Rollendreh-sinns,
- doppelte Drucktasten für den Antrieb der Hydraulikzylinder,
- Höhenanzeiger für die Vermessung der Rollenposition,
- Antriebsdruckknopf, Notfalldruckknopf, Schlüsselwähler mit Warnlampe für Spannungsanwesenheit.

UNIVERSAL HYDRAULIC BENDING MACHINES

Bending machines with asymmetric arrangement of three smooth driving rolls.

*Rugged machines, with stabilized steel construction, equipped with **nickel-chromium steel** shafts, which are heat treated and resistant to wear.*

All shafts are provided with roller bearings.

Speed reducer with lubricated spiral gears.

Torque limiter assembled on the central shaft in order to avoid overloads and to allow the compensation of the different speed of the inner roll.

Machines can operate both on horizontal (AO) and vertical axis (AV).

Remote control Unit including:

- double foot-pedal control for left-hand and right-hand rotation of rolls,
- two push-buttons for up and down stroke of bending rolls,
- digital read-outs to check the position of bending rolls,
- Start and Emergency Stop push-buttons, switch key with warning light

CINTREUSES HYDRAULIQUES UNIVERSELLES POUR PROFILES, TUBES, BARRES

Machines à cintrer de type asymétrique ayant trois rouleaux d'entraînement à dos lisse.

Machines très solides en acier stabilisé, munies d'arbres en acier au **nickel-chrome traités** thermiquement et ayant une grande résistance à l'usure.

Roulements à galets sur tous les arbres.

Réducteur de vitesse à engrenages hélicoïdaux, lubrifiés par bain d'huile.

Limiteur de couple réglable, monté sur l'arbre central comme protection contre les surcharges, et pour l'autoadaptation de la vitesse différenciée du rouleau interne.

Possibilité d'utiliser la machine indifféremment selon un axe horizontal (AO) ou un axe vertical (AV).

Pupitre de commande mobile comprenant:

- pédalier double pour l'inversion du sens de rotation des galets,
- deux bouton-poussoirs pour la montée et la descente des galets,
- deux visualisateurs de cote pour relever la position des galets,
- Start, Arrêt d'urgence, sélecteur à clé de démarrage avec témoin présence tension

MÁQUINAS DE CURVAR UNIVERSALES PARA TUBOS, BARRAS Y PERFILES

Máquinas de curvar de tipo asimétrico con tres rodillos de arrastre con parte superior lisa. Máquinas muy robustas de acero estabilizado, con árboles de **acero Nicromo** tratados térmicamente de alta resistencia al desgaste.

Cojinetes de rodillos en todos los árboles.

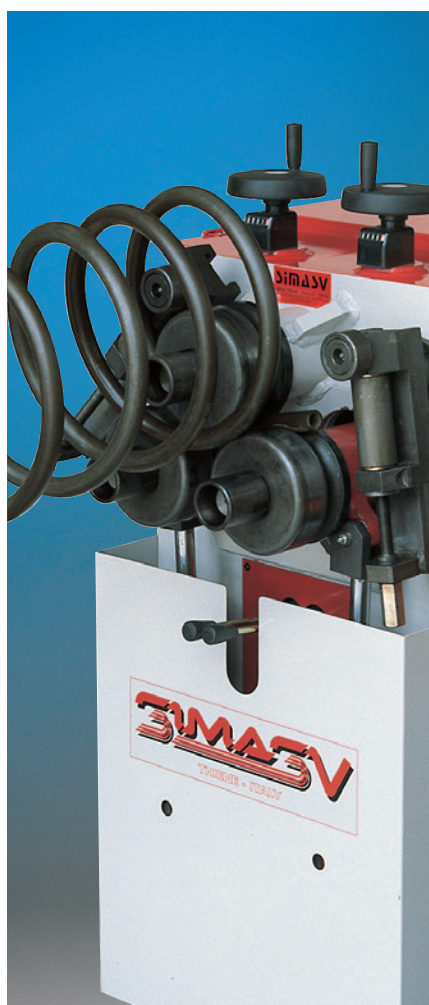
Reductor de velocidad de engranajes helicoidales, lubricados en baño de aceite.

Limitador de par regulable, montado en el árbol central como protección contra sobrecargas y para adecuación automática de la velocidad diferenciada del rodillo interior.

Possibilidad de empleo tanto con ejes horizontales (AO) como con ejes verticales (AV).

Pupitre móvil que incluye:

- dos pedales para la inversión del sentido de rotación de los rodillos,
- dos botones para el accionamiento de los cilindros hidráulicos
- visualizadores de medida para la detección de la posición de los rodillos,
- Botón Start, botón de emergencia, selector de llave con luz presencia tensión.

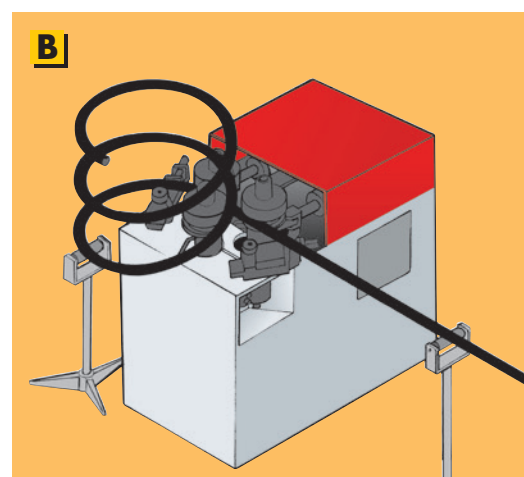
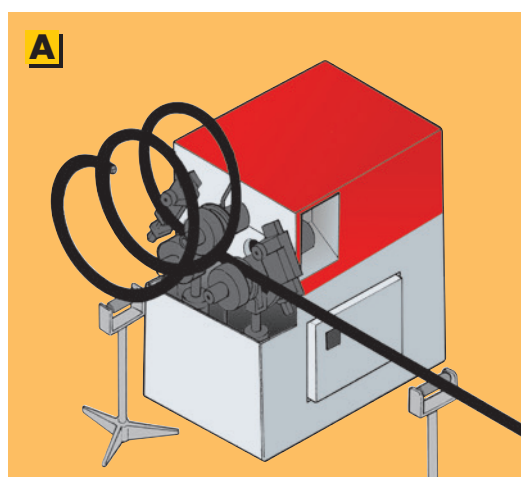


TECHNICAL SPECIFICATIONS - TECHNISCHE DATEN

CHV series Serie CHV	Model Modell	CHV 3360	CHV 3380	CHV 4100
TECHNICAL DATA TECHNISCHE DATEN	M.U. M.E.			
central shaft Ø in mm Ø Zentralwelle in mm	Ø	60 mm	80 mm	100 mm
Ni.Ch. hardened rollers Gehärtete Ch.-Ni.-Walzen	Ø	180 mm	245 mm	315 mm
Roller rotation Walzendrehung	Rev/min Umd/Min.	10 – 5.5 m	8 – 6.1 m	7 < 6 m
Central /side roller centre distance Abstand Zentralwalze / seitliche Walze	mm	115	165	250
Roller stroke Walzenhub	mm	150	180	175
Oleodynamic pressure Ölhydraulischer Druck	Bar	160	160	180
Profile bending with maximum moment of resistance W Profilbiegen bei maximalem Widerstandsmoment W	cm ³	6	16	45
Pump characteristics Pumpenmerkmale	L/min	2	2	2.2
Pump electrical motor Elektromotor Pumpe	kW	0.75	1.1	7.5
Tank capacity (litres of oil) Tankfassungsvermögen (Liter Öl)	L.	10	15	16
Electrical motor Elektromotor	kW	3	4	7.5
Voltage (different on request) Spannung (andere auf Anfrage)	Volts/Hz	380/50	380/50	380/50
Noise with machine ON Geräuschpegel bei eingeschalteter Maschine	dB	55.5	55.5	63.5
Noise with machine moving Geräuschpegel bei Maschine in Bewegung	dB	64.5	64.5	66.5
Overall dimensions - Length Außenmaße - Länge	mm	740	950	2000
Overall dimensions - Width Außenmaße - Breite	mm	1120	1400	1465
Overall dimensions - Height Außenmaße - Höhe	mm	1100	1300	1700
Dry net weight Netto-Trockengewicht	Kg	750	1600	4000
Adjustment Regelung		Hydraulic Hydraulisch	Hydraulic Hydraulisch	Hydraulic Hydraulisch
Control Bedienung		Digital	Digital	Digital
Driving rollers Zugwalzen	No. Anz.	3	3	3

All specifications are subject to improvements and modifications without notice.
Alle technischen Angaben unterliegen Verbesserungen und Änderungen ohne Vorankündigung.

CHV3360



A-B

Posizioni di lavoro dei modelli:

Working positions of models:

Positions de travail des modèles:

Kombinierte Ausführung für den horizontalen oder vertikalen Einsatz:

Posición de trabajo para modelos:

ROLLER TYPE WALZENTYP			ST42 profile type Profiltyp ST42	Maximum dimensions Max. Abmessungen	Minimum internal bending diameter Mindestinnendurchmesser der Biegung	Minimum dimensions Min. Abmessungen	Minimum internal bending diameter Mindestinnendurchmesser der Biegung
				mm	mm	mm	mm
●				60x10	380	20x5	230
●				80x5	250	80x20	275
●				30x30	270	12x12	230
●	▼			60x30x3	750	20x15x2	240
●	▼			50x50x3	650	20x20x2	240
●	▼			60x60x6	650	30x30x4	330
●	▼			50x50x5	600	30x30x4	400
●				60x60x7	500	20x20x3	250
●	▼			50x50x6	550	20x20x3	270
●	▼			60x60x7	600	20x20x3	250
●	▼			80x45	500	25x12	250
●	▼			70x40	500		
●				35	400	10	200
	▼			80x42	600		
		*		60.3x3.2	800	17.2x2	200
		*		60x2	1000	20x1.5	250

- With supplied rollers.
- ▼ For profiles with thin or sloping walls, special and/or tapered rollers are needed. Special designs such as internal cores and fillings are required to limit distortions. The above-mentioned bending diameters are just an indication since they depend on the quality of the material as well as the operator's skill and ability. Smaller diameters than the above can also be obtained; this will be possible by doing multiple runs or using special rollers and special precautions.
- * A set of rollers for each pipe diameter is required.

- Walzen im Lieferumfang enthalten.
- ▼ Für dünnwandige oder geneigte Profile sind Spezial- bzw. konische Walzen erforderlich. Zum Begrenzen von Verformungen werden Vorrichtungen wie Walzenkerne und verschiedene Füllungen benötigt. Bei den oben angegebenen Biegedurchmessern handelt es sich um Richtwerte, da sie von der Werkstoffqualität und dem Geschick und der Fertigkeit des Bedieners abhängen. Es können auch geringere als die oben angegebenen Durchmesser erzielt werden. Dazu müssen mehrere Durchgänge erfolgen oder Spezialwalzen und spezifische Vorgehensweisen eingesetzt werden.
- * Satz von drei Rollen für jeden Rohrdurchmesser erforderlich.

CHV3380



Visualizzatore digitale per lo spostamento dei rulli curvatori

Electronic adjustment read-out of bending rolls

Afficheur électronique pour réglage des galets de cintrage

Digitalanzeige für Rollenpositionierung

Visualizador electrónico por desplazamiento des rodillos

ROLLER TYPE WALZENTYP			ST42 profile type Profiltyp ST42	Maximum dimensions Max. Abmessungen	Minimum internal bending diameter Mindestinnendurchmesser der Biegung	Minimum dimensions Min. Abmessungen	Minimum internal bending diameter Mindestinnendurchmesser der Biegung
				mm	mm	mm	mm
●				80x15 80x20	530 570	30x10	280
●				120x25 50x50	420 430	60x5	290
●				45x45	430	15x15	270
●	▼			80x40x4	800	25x15x2	320
●	▼			70x70x3 80x40x4	1400 1000	25x25x2	350
●	▼			80x80x8	800	30x30x3	400
●	▼			70x70x7	700	30x30x3	450
●				80x80x9	900	25x25x3.5 30x30x4	300 350
●	▼			70x70x8	800	25x25x3.5 30x30x4	300 350
●	▼			90x90x10	900	30x30x4	300
●	▼			120x55 UPN120 (120x55)	700 800	30x15 UPN30 (30x15)	300 300
●	▼			100x50 UPN100 (100x50)	600 900	30x15x2 UPN30 (100x50)	300 350
●				52	500	15	280
	▼			120x58 IPN120 (120x58)	700	80x42 IPN80 (80x42)	400
		*		88.9x5	800	21.3x2.77	300
		*		100x2	1800	25x2	300

- With supplied rollers.
- ▼ For profiles with thin or sloping walls, special and/or tapered rollers are needed. Special designs such as internal cores and fillings are required to limit distortions. The above-mentioned bending diameters are just an indication since they depend on the quality of the material as well as the operator's skill and ability. Smaller diameters than the above can also be obtained; this will be possible by doing multiple runs or using special rollers and special precautions.
- * A set of rollers for each pipe diameter is required.

- Walzen im Lieferumfang enthalten.
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- * Satz von drei Rollen für jeden Rohrdurchmesser erforderlich.

CHV4100



ROLLER TYPE WALZENTYP			ST42 profile type Profiltyp ST42	Maximum dimensions Max. Abmessungen	Minimum internal bending diameter Mindestinnendurchmesser der Biegung	Minimum dimensions Min. Abmessungen	Minimum internal bending diameter Mindestinnendurchmesser der Biegung
				mm	mm	mm	mm
●				100x25	1000	40x8	400
●				160x35	800	80x8	450
●				60x60	800	20x20	400
●	▼			100x40x4	1300	30x20x2	500
●	▼			80x80x5	1600	25x25x2	500
●	▼			100x100x12	1000	40x40x5	600
●	▼			90x90x10	1100	40x40x4	550
●				100x100x11	1000	30x30x4	450
●	▼			90x90x10	1100	30x30x4	450
●	▼			100x100x11	1200	30x30x4	450
●	▼			UPN 180 (180x70)	900	UPN 30 (30x15)	400
●	▼			UPN 180 (180x70)	1100	UPN 30 (30x15)	450
●				75	800	15	450
		*		4" (114.3x5.6)	1200	1/2" (21.3x2.6)	450
		*		125x2.5	2000	15x1	500
	▼			UPN 100 (100x50)	2000	UPN 50 (50x38)	1200
	▼			IPN 180 (180x82)	1200	IPN 80 (80x42)	700
	▼			IPN 140 (140x66)	2500	IPN 80 (80x42)	1200
	▼			HEA 120 (120x114)	1000	HEB 100 (100x100)	1200
	▼			HEA 100 (100x96)	1100	HEB 100 (100x100)	1200

- With supplied rollers.
- ▼ For profiles with thin or sloping walls, special and/or tapered rollers are needed. Special designs such as internal cores and fillings are required to limit distortions. The above-mentioned bending diameters are just an indication since they depend on the quality of the material as well as the operator's skill and ability. Smaller diameters than the above can also be obtained; this will be possible by doing multiple runs or using special rollers and special precautions.
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- * Satz von drei Rollen für jeden Rohrdurchmesser erforderlich.



TECHNOLOGICAL INNOVATION

100% ITALIAN QUALITY

IMPROVE YOUR BUSINESS WITH A SIMASV® HYDRAULIC BENDING MACHINE

Do you need to make different, precise items also with "difficult" materials?
The solution is simple: just trust a SIMASV® hydraulic bending machine!

STRENGTH

Strong machines of various capacities in stabilized steel with nickel chrome steel shafts, heat-treated for very high resistance to wear.

PRECISION

Thanks to the smooth surface driving rollers, there is complete absence of any deformation or mark while bending.
The rectifying side rollers with manual or hydraulic 3D movement adjustment guarantee flatness even when dealing with highly flexible materials.

Finally, to guarantee constant precision during the whole bending process, special self-piloted valves are fitted in the bottom hydraulic cylinders of the SIMASV® machines to block rollers in position also with a full load.

PROFESSIONALISM

Consisting of selected technical and sales staff, the SIMASV® sales network leads you professionally in the choice of machinery and rollers suitable to your processing requirements.

For further information you can therefore:

- contact your dealer or
- contact S.I.M.A.S.V. directly, mailto: marketing@simasv.it.

HYDRAULIC BENDING MACHINES WITH THREE DRIVING ROLLERS

WHAT FEATURES MAKE SIMASV® BENDING MACHINES YOUR IDEAL WORKING TOOL?

HYDRAULIC BENDING MACHINES WITH READ-OUTS - "CHV" SERIES

Hydraulic adjustment of the bending rollers operated by electrical valves.
Roller positioning and stop using electrical buttons. Reading of the roller position on electronic digital displays located on the mobile console. Manually adjusted 3D rectifying side rollers.

SMOOTH SURFACE DRIVING ROLLERS

Driving rollers for perfect profile resistance and total absence of any deformation or mark while bending.

DOUBLE WORK POSITION

Work position reversibility:
horizontal position to make small diameters and light profiles;
vertical position to make multi-loop coils or large and heavy bends.

PYRAMID-SHAPED FULCRUM ROLLER AXIS

Fixed central top roller; two moving bottom side rollers with compass movement allowing to obtain very narrow bending diameters.

LEFT AND RIGHT LEADING PRE-FOLD

Made by the bottom rollers using double hydraulic adjustment independent cylinders, capable of carrying out the minimum initial leading radius on the profile to be bent.

MECHANICAL TORQUE LIMITER

Provided with peripheral speed automatic control of the top central roller.
This exclusive and unique system in SIMASV® bending machines allows balancing the various speeds of the top roller for the various diameters of the profiles to be made, so as to obtain constant diameters during the whole bending process. Moreover, thanks to this system, the use of the motor power is reduced to a minimum, guaranteeing considerable energy saving.

SELF-PILOTED VALVES

To guarantee constant precision during the whole bending process, special self-piloted valves are fitted in the bottom hydraulic cylinders of SIMASV® machines, to block the rollers in position also with a full load.

THE MOBILE CONTROL CONSOLE

Mobile control console outside the machine working area, in compliance with the EC Mandatory Regulations:
Double roller rotation control pedals to give the operator full control of all machine movements during bending.

PATENTS

HORIZONTAL BENDING PRESSES

Punch- and die-carrier conical pin rapid locking device with interchangeable punches and dies in bending machines

The invention consists of a punch- and die-carrier conical pin rapid locking device with interchangeable punches and dies, that considerably reduces the substitution time of these bending press tools, while providing the greatest level of safety in the use of the machine

HYDRAULIC NOTCHING MACHINES

Automatic blade slack adjustment system for shear cutting of sheet metal (applied on models AF/B - AV/B - AV/PA). The invention consists of an automatic blade slack adjustment system during sheet metal shear cutting, which is simpler than popular adjustment systems. Providing a greater degree of operating reliability, this system is particularly suited to asymmetric cutting.

Automatic shear blade slack adjustment device for sheet metal cutting (applied on model AF258/P). The invention consists of a device for the automatic adjustment of upper and lower shear blade slack during the cutting of sheet metal, whose main objective, in case of asymmetric cutting, is the control of the shifting of the upper blades with respect to the lower blades in a pre-fixed direction compared to the cutting direction.

Upper blade adjustment device in variable angle shears. The invention consists of a device allowing the adjustment of the upper blades with regard to the lower blades by acting directly on the blade holder. The device also allows a safe and precise adjustment of upper blade movement compared to lower blade movement without the need to remove the safety protection.

Variable angle shears with punching unit. The invention consists of shears equipped with a punching and cutting unit with variable angle blades allowing the cutting of angles of different sizes.

Variable angle universal shears. The cutting angle of these variable angle universal shears can be varied from a minimum of 30° to a maximum of 180°.

PUNCHING MACHINES

Improved punching machine for sheet metal punching The invention consists of an improved punching machine allowing for the assembly of the punch-holder cartridge in the cartridge-holder block hole, which is simpler and faster than similar popular punching machines. Its aim is to eliminate the problem of the punch-holder cartridge jamming in the cartridge-holder block during the substitution of the cartridge, which occurs in the more popular punching machine models. Moreover, the cartridge is quicker and easier to change in comparison with similar popular punching machines.



We manufacture machines for



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