YOUR GLOBAL PARTNER FOR PIPELINE EQUIPMENT



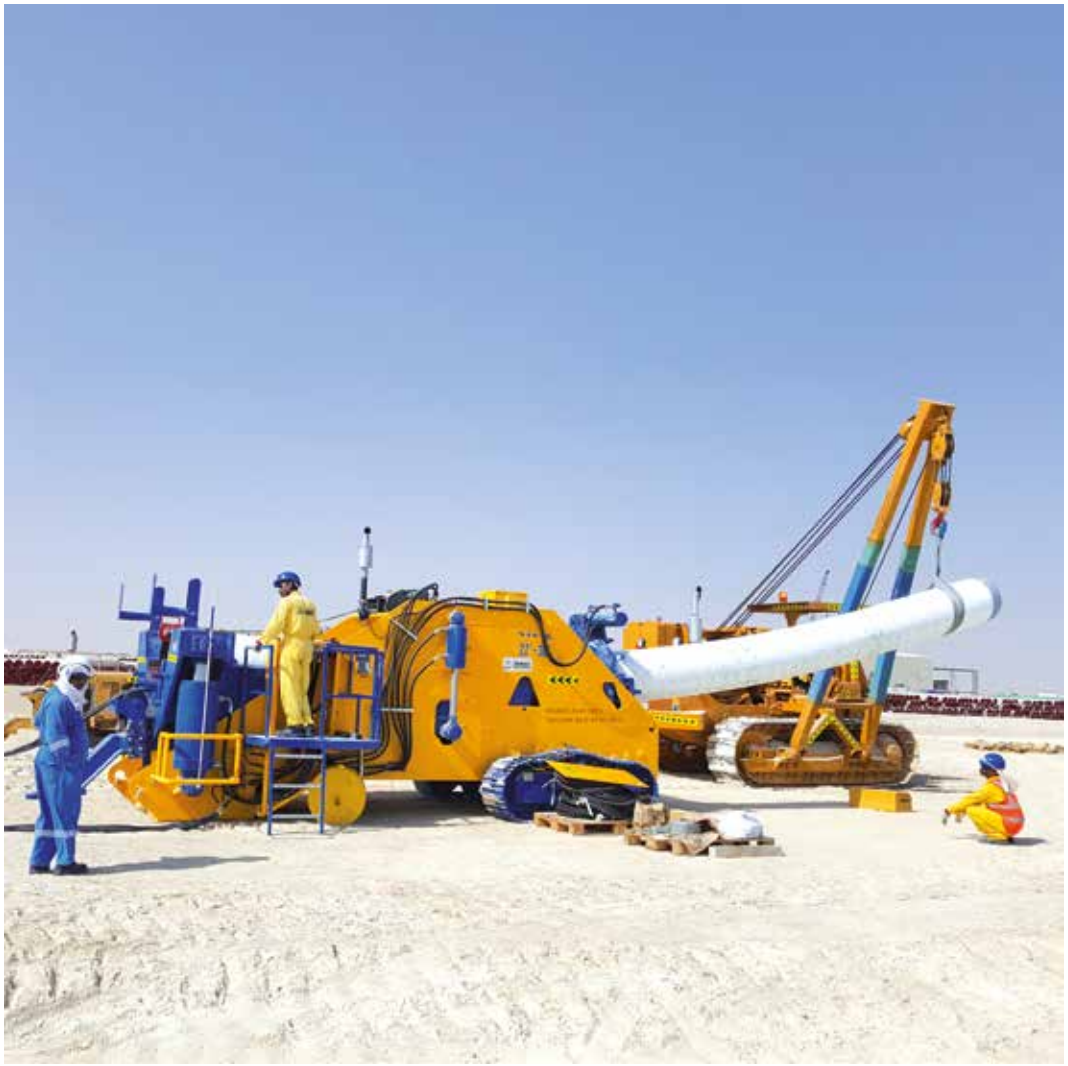


BENDING MACHINES

Pipelines must follow the contours of the site terrain.
Inevitably, it will thereby also be necessary
to lay the pipeline in curves or in upward and downward slopes.
This cannot be achieved with straight pipes.
However, it is neither purposeful nor economical
to use factory made pipe bends.

One advantage of steel as pipe material is that it can be plastically deformed without being preheated. With a pipe-bending machine, pipes adapted to the necessary route can be produced on the building site in several successive steps, through the straight pipes being respectively given a specific bend and "tailor-made" for use in this way.

The hydraulics system of our bending machines is driven by high-performance diesel engines made by reputable manufacturers, that we select at the exhaust emission level required by the customer. With the hydraulic pumps, we rely on sufficient power reserves and outstanding quality.



The pipe is bent through the hydraulic movement of several functional components of the machine. In the case of pipe bending machines made by Vietz, these movements run one after the other in a clearly defined sequence and the force of each of the functional groups can be individually adjusted to the material, diameter and wall thickness of the pipe through the hydraulic pressure. Even with difficult pipes, excellent bending results can be achieved in this way.

Vietz bending machines are always suitable for several pipe sizes. The machine is already equipped with the necessary pipe holders for the largest respective pipe diameter. For working with all smaller pipe sizes, we supply inserts that are attached to the machine with screws. Our bending machines make it unnecessary to weld and separate inserts.

The top die, whose shape is used to create the bend, is supplied to fit the respective pipe size and, together with the inserts, makes up what is called the “bending set”. Our bending machines are supplied with prepared quick-connect couplings and operating elements for using a hydraulic mandrel, which is often indispensable for fulfilling the project conditions. The bending specialist controls all the functions of the machine from his/her operator platform, which we have positioned to provide the best possible overview.

For particularly cold or harsh surrounding conditions, as well as to fulfil special customer requirements, we supply suitable special models of our machines.

TECHNICAL SPECIFICATION **PBM 4-24" - 22-36"**

	Unit	Model		Model		Model	
		Model PBM 4-24"		PBM 16-30"		PBM 22-36"	
ENGINE		**International**	**EU**	**International**	**EU**	**International**	**EU**
Type		Deutz D 2011 L04 i	Deutz TCD 2.9 L4	Deutz TCD 2012 L04 2V	Deutz TCD 2.9 L4 HP	Deutz TCD 2013 L04 2V	Deutz TCD 3.6 L4
Fuel		Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Configuration		inline-four	inline-four	inline-four	inline-four	inline-four	inline-four
Displacement	ccm	3,6	2,9	4	2,9	4,8	3,6
Cooling		air	liquid	liquid	liquid	liquid	liquid
Power	kW/hp	43	55	83	75	104	100
Engine speed	rpm	2200	2200 (2600)	2200	2300	2200	2300
Emission class		EPA Tier 3 EU Stage III A	EU Stage V	EPA Tier 3 EU Stufe IIIA	EU Stufe V	EPA Tier 3 EU Stufe IIIA	EU Stufe V
HYDRAULIC SYSTEM							
Type of pump		axial piston open circuit pump		axial piston open circuit pump		axial piston open circuit pump	
No of pumps (working - cooling)		1 - 1		1 - 1		1 - 1	
Maximum pressure	bar	210		250		240	
Flow at rated speed	l/min	125 (140)		125		200	
CAPACITIES							
Fuel tank	l	90		250		250	
Hydraulik tank	l	170		400		450	
ENGINE ELECTRICAL SYSTEM							
Voltage	V	12		24		24	
Number's of batteries, maintenance free	pcs	1		2		2	
Capacitiy of batteries	Ah	88		176		176	
WINCH							
Type		Hydraulic drive		Hydraulic drive		Hydraulic drive	
Maximum pulling force (bottom/top rope layer)	kN	45		80/50		80/50	
Maximum rope speed (bottom/top rope layer)	m/min	2,6/8,9		7/11		7/11	
Rope diameter	mm	10		12		12	
Maximum oil pressure	bar	150		200		200	
UNDERCARRIAGE							
Track chain type / type		Tire	Chain track type B1**	B1		B2	
Triple grouser shoes width	mm		500	500		500	
DIMENSIONS AND WEIGHT		**Wheeled / Tracked Version**					
Length	mm	4.675	4.960	6.300		7.210	
Width	mm	2.320	2.330	3090 / 2700***		3230 / 2860***	
Height	mm	2.335	2.335	2.250		2.540	
Operating weight	kg	9.000	10.500	19.000		24.300	
Article no.		**on request**		**40442**		**40443W**	

* other types on request | ** optionally available | *** without platform | **** without undercarriage | ***** without winch | Mistakes and changes are reserved

TECHNICAL SPECIFICATION **PBM 30-42" - 48-64"**

Unit	Model		Model		Model		Model	
	PBM 30-42"		PBM 36-48"		PBM 42-56"		PBM 48-64"	
	International	**EU**	**International**	**EU**	**International**	**EU**	**International**	**EU**
	Deutz TCD 2013 L04 2V	Deutz TCD 4.1 L4	Deutz TCD 2013 L04 2V	Deutz TCD 4.1 L4	Deutz TCD 2013 L06 2V	Deutz TCD 6.1 L6	Deutz TCD 2013 L06 2V	Deutz TCD 7.8 L6
	diesel	diesel	diesel	diesel	diesel	diesel	diesel	diesel
	inline-four	inline-four	inline-four	inline-four	inline-six	inline-six	inline-six	inline-six
ccm	4,8	4,1	4,8	4,1	7,1	6,1	7,1	6,1
	liquid	liquid	liquid	liquid	liquid	liquid	liquid	liquid
kW/hp	129	115	129	115	197	180	197	180
rpm	2300	2300	2300	2300	2200	2300	2200	2300
	EPA Tier 3 EU Stufe IIIA	EU Stufe V	EPA Tier 3 EU Stufe IIIA	EU Stufe V	EPA Tier 3 EU Stufe IIIA	EU Stufe V	EPA Tier 3 EU Stufe IIIA	EU Stufe V
	axial piston open circuit pump		axial piston open circuit pump		axial piston open circuit pump		axial piston open circuit pump	
	1 - 1		1 - 1		1 - 1		1 - 1	
bar	300		300		300		300	
l/min	300		300		400		400	
l	320		380		400		400	
l	800		800		800		800	
V	24		24		24		24	
pcs	2		2		2		2	
Ah	176		176		176		176	
	Hydraulic drive		Hydraulic drive		Hydraulic drive		Hydraulic drive	
kN	80/50		100/65		150/107		150/107	
m/min	7/11		8/9,5		5/7		5/7	
mm	12		16		19		19	
bar	200		200		175		175	
	D7E		D7E		B8		B8	
mm	600		600		600		600	
mm	8.680		8.860		9.650		9.760	
mm	3660 / 3440***		3880 / 3660***		4100 / 3990***		4350 / 4240*** / 4000****	
mm	3120 / 2980*****		3520 / 3220*****		4020 / 3520*****		4240 / 3740*****	
kg	49.000		59.500		73.000		73.000	
40444D		**40445D**		**40481**		**40444D**		**on request**

* other types on request | ** optionally available | *** without platform | **** without undercarriage | ***** without winch | Mistakes and changes are reserved


Vietz

MANDREL

Vietz mandrels work hydraulically,
are optimised for use with our bending machines
and are controlled by the bending specialist
at the control panel of the bending machine.

During the remodelling process in the bending machine, the outer curve area of the pipe is stretched, and the inner one is compressed. There is a tendency here for the pipe to collapse inwards, buckle or form dents.

If the pipe is being used for a pipeline, all of these cross-section flaws will have a negative impact on the fluid mechanics. For this reason, maximum cross-section flaws are usually specified when constructing a pipeline. Typical limits lie at 2% of the outer pipe diameter.

During the bending process, a mandrel is placed in the remodelling zone on the inside of the pipe, to counteract the tendency for cross-section flaws to appear.


LANGE

The mandrel can be hydraulically clamped or retracted. When it is clamped, rubber buffers press from inside against the pipe areas that are being compressed or stretched. When retracted, the mandrel can be moved on its rollers.

From a pipe size of 14 inches (DN 350) upwards, our mandrels are equipped with a hydraulic drive to facilitate positioning inside the pipe. With smaller mandrels, there isn't enough space inside the pipe for this.

Especially with spiral-welded pipes, every mandrel tends to be deflected a little to the side every time it passes over the weld seam. Overall, the mandrel will tilt until, at some point, it will no longer operate reliably. In the worst case, the rollers will lose contact with the surface.

From a construction size of 22 inches (DN 550) upwards, Vietz mandrels are equipped with running gear that is able to swing, which allows the mandrel to be correctly realigned inside the pipe without having to suspend working operations.

TECHNICAL SPECIFICATION **MANDREL**

	Unit	Model					
		6-8"	10-12"	14-16"	16-18"	18-20"	22-24"
GENERAL							
Pipe size	inch	6-8	10-12	14-16	16-18	18-20	22-24
DN		150-200	250-300	350-400	400-450	450-500	550-600
Pipe inside diameter min.	mm	123,9	209,5	292,0	342,8	393,4	482,8
Pipe inside diameter max.	mm	212,7	315,1	396,8	447,4	496,8	597,2
ENGINE							
Displacement	ccm	-	-	12,5	12,5	32	32
Quantity of motors	pcs	-	-	2	2	2	2
WHEEL							
Diameter Ø	mm	34	70	100	100	140	160
Quantity of wheels	pcs	3	3	4	4	4	4
CLAMPING RANGE							
Overall lenght (rubber pads)	mm	390	590	630	730	730	750
vertical throw max.	mm	39	40	53	53	70	70
min. Ø with pads	mm	125	226	264	298	342	443
MEASUREMENTS AND WEIGHT							
Lenght	mm	1300	1540	1720	1678	1810	1805
Width	mm	105	217	345	376	430	443
Height	mm	160	318	356	395	432	533
Weight	kg	60	110	185	240	370	470
SETTING OF RUBBER PADS							
Quantity of plates	pcs	2	6	6	6	6	10
Quantity of pads	pcs	10	30	30	30	30	70
Article no.		**40672**	**40678H**	**40697**	**40689**	**40698**	**40683**

Mistakes and changes are reserved

TECHNICAL SPECIFICATION **MANDREL**

Unit	Model								
	26-28"	28-30"	30-32"	36-38"	40-42"	46-48"	48"	52"	56"
inch	26-28	28-30	30-32	36-38	40-42	46-48	48	52	56
	650-700	700-750	750-800	900-950	1000-1050	1150-1200	1200	1300	1400
mm	609,2	660,2	698,4	850,4	952,4	1104,4	1155,4	1257,4	1358,4
mm	698,2	749,2	800,2	949,2	1049,6	1201,6	1201,6	1302	1403
ccm	32	50	50	80	100	100	100	100	200
pcs	2	2	2	2	2	2	2	2	2
mm	160	180	200	250	250	250	250	250	300
pcs	4	4	4	4	4	4	4	4	4
mm	1030	1348	1348	1714	1715	1844	1844	1844	2144
mm	81	88	77	120	130	155	148	148	148
mm	538	583	632	741	833	955	1017	1118	1220
mm	2090	2100	2350	2775	2780	3760	3750	3750	3465
mm	635	660	690	840	890	1055	1080	1210	1260
mm	615	670	732	840	932	1057	1065	1165	1264
kg	775	1070	1310	2120	2480	3670	3980	4420	5170
pcs	16	14	14	18	18	18	20	24	20
pcs	160	126	126	234	234	234	260	312	260
	40684	**40682**	**40679**	**40686**	**40688**	**40699**	**40694**	**40691**	**40692N**

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VIETZ GMBH

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