

MAGNETIC WORKHOLDING for GRINDING

**Electro-Permanent
magnetic chucks**





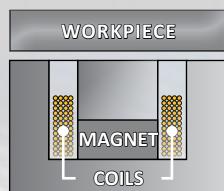
ELECTRO-PERMANENT MAGNETIC CHUCKS

BRAILLON MAGNETICS, inventor of Electro-Permanent technology, provides a range of powerful, reliable and waterproof Electro-Permanent magnetic chucks for all surface grinding applications.

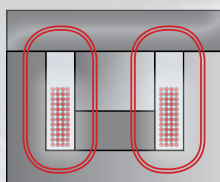
The Electro-Permanent technology consists in changing the magnetic state of the chuck by means of short electric pulses. Once the pulses completed the magnetic chuck keeps its new state, magnetized or demagnetized, even in case of power supply failure.

The advantages of Electro-Permanent technology are unquestionable :

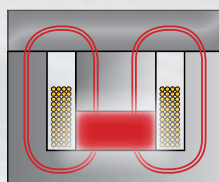
- **SAFETY** : The holding force is maintained even in case of power supply failure.
- **PRECISION** : Without heating, the magnetic chuck keeps its geometry.
- **ECOLOGICAL** : No continuous energy consumption.



1. Non magnetized
The magnets are not polarized



2. Magnetization
Energizing the coils creates the magnetic field



3. Magnetized
The magnetic field is maintained by the magnets

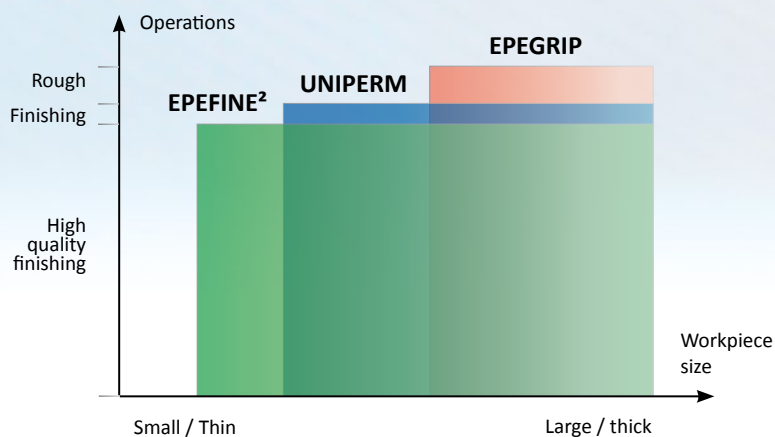
FULL DEMAGNETIZATION

All **BRAILLON MAGNETICS** Electro-Permanent chucks integrate the full demagnetization concept. During demagnetization cycle, the Alnico magnets are completely demagnetized due to a series of decreasing electric impulses according to the know how of **BRAILLON MAGNETICS**.

The full demagnetization permits to reach the lowest possible residual magnetism level in the workpiece, including the workpieces made of high-alloy steel.

APPLICATIONS

The choice of magnetic chuck is determined by the size of the workpiece as well as the type of grinding to be realized.



EPEGRIIP

Electro-Permanent magnetic chuck for clamping of medium thick to thick elements.

Workpiece type	Minimum thickness 8 mm *
Pole pitch	15mm + 6mm
Construction	Steel+resin, without top plate
Surface wear	5 mm
Accessories	End stops in both directions
Options	Brass separators, through-going holes

UNIPERM

Universal Electro-Permanent magnetic chuck for clamping of thin elements.

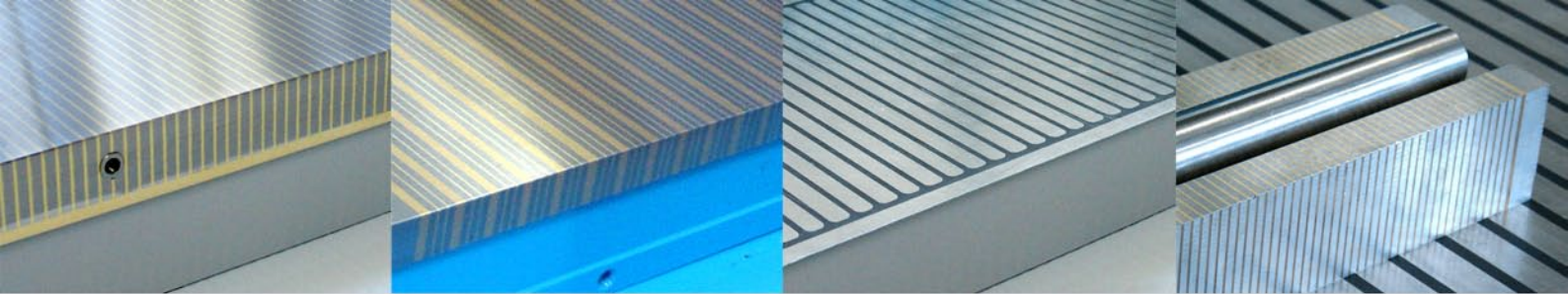
Workpiece type	Minimum thickness 4 mm *
Pole pitch	4 + 1 + 4 + 1 + 4 + 5 mm
Construction	Steel and brass, with top plate
Surface wear	6 mm
Accessories	End stops in both directions

EPEFINE²

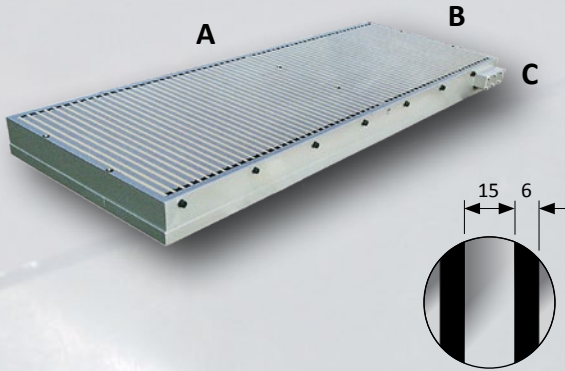
Universal Electro-Permanent magnetic chuck with extra thin pole pitch, can be used for EDM applications. Ideal for clamping of very thin elements.

Workpiece type	Minimum thickness 2 mm *
Pole pitch	4 mm + 1 mm
Construction	Steel and brass, with top plate
Surface wear	6 mm
Accessories	End stops in both directions
Options	Through-going holes

* The indicated thickness permits to reach the optimal utilization conditions. Nevertheless thinner workpieces can also be machined.

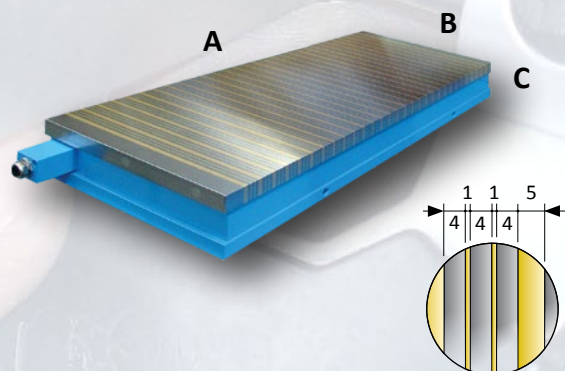


FEATURES AND SIZES



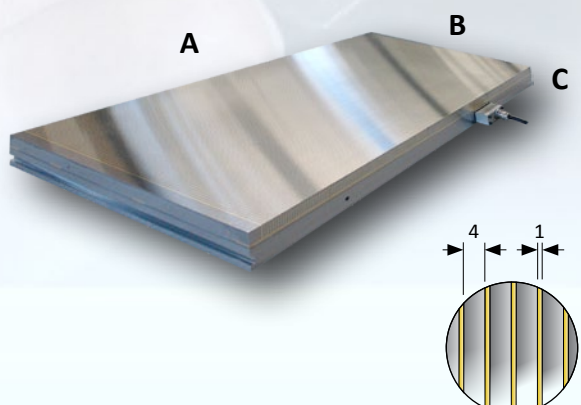
C = 91	B								Control unit 400v
	200	300	400	500	600	700	800	1000	
A 400	54	80	105	131	156	182	208	259	BUR10
500	66	98	129	161	192	224	256	319	
600	78	116	153	191	228	266	303	378	
700	91	134	178	221	264	308	351	438	BUR20
800	103	152	202	251	300	350	399	498	
900	115	170	226	281	336	392	447	558	
1000	127	188	250	311	372	434	495	618	BUR30
1100	139	207	274	341	408	476	543	678	
1200	151	225	298	371	444	518	591	738	
1300	164	243	322	401	480	560	639	797	BUR40
1400	176	261	346	431	516	602	687	857	
1500	188	279	370	461	552	644	735	917	
1600	200	297	394	491	588	686	783	977	BUR40
1700	212	315	418	521	624	728	831	1037	
1800	224	333	442	551	660	770	879	1097	
1900	237	352	467	582	696	811	926	1156	BUR40
2000	249	370	491	612	733	853	974	1216	

Weight of magnetic chucks (Kg)



C = 95	B								Control unit 400v
	150	200	300	400	500	600	700	800	
A 350	36	48	71	94	125	150	174	199	BUR10
400	41	54	81	108	143	172	200	229	
450	46	61	92	122	162	194	226	259	
500	51	68	102	136	180	216	252	288	BUR20
600	61	81	123	164	217	260	304	348	
700	71	95	143	191	254	305	356	407	
800	81	108	164	219	290	349	408	466	BUR30
900	90	122	184	247	327	393	459	525	
1000	100	135	205	275	364	437	511	585	
1100	110	149	225	302	401	482	563	644	BUR40
1200	120	162	246	330	437	526	615	703	

Weight of magnetic chucks (Kg)



C = 68	B								Control unit 400v
	150	200	300	400	500	600	700	800	
A 300	27	35	50	65	80	95	110	125	BUR10
400	35	45	64	84	103	123	142	162	
500	43	55	79	103	127	151	175	199	
600	51	66	95	124	154	183	212	241	BUR20
700	59	75	110	143	177	211	244	278	
800	66	85	124	162	201	239	277	315	
900	75	96	140	183	227	271	314	358	BUR30
1000	83	106	155	202	251	299	346	395	
1100	90	116	169	221	275	327	379	432	
1200	99	127	186	243	301	358	416	474	BUR40
1300	106	137	200	262	325	386	448	511	
1400	115	148	216	283	351	418	485	553	
1500	123	158	231	302	375	446	518	590	BUR40
1600	130	168	245	321	399	474	550	627	
1700	139	179	262	343	425	506	587	670	
1800	146	189	276	362	449	534	620	707	BUR40
1900	154	199	291	381	472	562	652	744	
2000	163	210	307	402	499	594	689	786	

Weight of magnetic chucks (Kg)



CONTROL UNITS

BRAILLON MAGNETICS control units permit to control all Electro-Permanent magnetic chucks. Resulting from many years of research and experience, they permit to exploit the advantages of Electro-Permanent technology with recognized reliability.

ADJUSTABLE MAGNETIZATION

Equipped with the newest, microprocessor based remote control T10, the control unit permits to adjust the holding force of the magnetic chuck with a 20 steps resolution.

FULL DEMAGNETIZATION

The demagnetization cycles are optimized for each type of chuck. It is also possible to customize the cycle on request by means of DB9-RS232 connector.

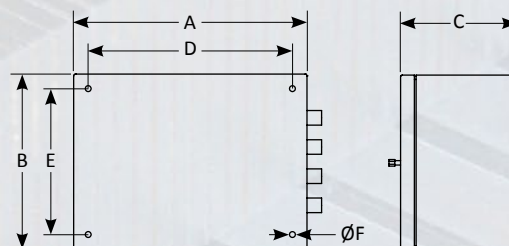


MULTIPLE CHUCKS

BRAILLON MAGNETICS control units can control several Electro-Permanent magnetic chucks at the same time. For instance, one control unit **BUR-80** can control up to 8 magnetic chucks.

SPECIFICATIONS

Power supply voltages	230 - 400 - 415 VAC
On request voltages	460 VAC
Mains frequencies	50 / 60 Hz
Remote control cable	3m
Housing material	Steel
Protection index	IP66



PENDULAR CONTROL UNIT

It is also possible to control the magnetic chucks in a pendular way by magnetizing or demagnetizing two groups of chucks separately. For instance, one control unit **BUR-40P** will permit to separately control 2 groups of 4 magnetic chucks each.

MACHINE INTERFACE

All **BRAILLON MAGNETICS** control units include an interface permitting to pilot and to control the magnetic chucks from the machine's PLC. The safety information contact is available to control the correct operation of magnetic system.

Type	Nbre of chucks	WITH STEEL HOUSING							ON BRACKET							
		A	B	C	D	E	ØF	Weight	A	B	C	D	E	ØF	Weight	
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Kg)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Kg)
BUR10	1	400	300	150	355	255	10	10	265	180	78	240	135	7	3	
BUR20	2	400	300	200	355	255	10	12	345	270	160	325	225	7	7	
BUR30	3	400	300	200	355	255	10	13	345	270	160	325	225	7	7	
BUR40	4	500	400	200	455	355	10	21	445	350	160	425	325	7	12	
BUR50	5	500	400	200	455	355	10	22	445	350	160	425	325	7	13	
BUR60	6	500	400	200	455	355	10	22	445	350	160	425	325	7	13	
BUR70	7	500	400	200	455	355	10	23	445	350	160	425	325	7	14	
BUR80	8	600	500	210	555	455	10	30	545	450	160	525	425	7	15	
BUR10P	2	400	300	200	355	255	10	12	345	270	160	325	225	7	7	
BUR20P	4	500	400	200	455	355	10	21	345	270	160	325	225	7	12	
BUR30P	6	500	400	200	455	355	10	22	445	350	160	425	325	7	13	
BUR40P	8	600	500	210	555	455	10	30	445	350	160	425	325	7	15	