The innovation in the world of abrasive wheels

...since 1961

GLOBE

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FROM I.A.P. IMPRESA AUTOFFICINE PARMENSE (manufacturers of racing cars) TO I.A.P. INDUSTRIA ABRASIVI PARMENSE… 60 YEARS OF RACING

Eng. Paolo Ficai on FICAI-IAP 750 - Bolzano-Mendola 1954

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Dr. Prof. Celestino Ficai

Impresa Autofficine Parmense was established in 1950 to design and build racing cars, then the company abandoned this activity to become Industria Abrasivi Parmense, later represented by the Globe brand, by the Ficai brothers Paolo and Pietro. They acquired the experience from their father Celestino, Professor of Applied Chemistry at the University of Bologna (Faculty of Engineering) as well as co-founder and director or the Ceramics Centre linked to the Faculty.
Prof. Ficai's researches mainly focused on industrial ceramics, which at the time was growing in the Modena area, on special cements, on the sintering of aluminum oxides to produce abrasive and refractory elements.
The experience of these studies led to the idea of manufacturing abrasive wheels and this project was accomplished with the opening of the factory in La Spezia street, on the outskirts of Parma.

From 1961 until 1971 production was all manual and manufactured with rotary distribution presses. Polymerization was already made through continuous ovens, really original (the first ones in the world), designed by engineer Paolo Ficai. In fact, since its inception the company invested many substantial resources to develop the continuous baking cycle, at the time a revolutionary concept aimed at ensuring consistent results in terms of polymerization and production quality.

In 1971 engineer Giovanni Ficai joined the company after his father, Paolo, had left to hold important appointments in the glass-making industry. In the same year the company moved premises to Via La Spezia, 160 and reached the present dimensions of approximately 8000 sq m.
From 1972 on, Eng. Giovanni and Dr. Pietro gave life to a continuous and dynamic expansion geared to enhancing and automating production whilst preserving a high standard of quality. The new presses bought in Germany, Italy and Canada represented an important turning point for the process of automation.

However, all the automatic equipment, the continuous tunnel ovens and mixing systems installed afterwards were, and still are, designed and engineered by Eng. Giovanni.

Together with wheel technology, a company automation was developed, featured by a strong design originality thanks to the deep knowledge of production problems.
Today our company can boast completely automated and computer-controlled mixing systems, three tunnel ovens providing an output capacity of more than 30 million pieces/year as well as a set of automatic presses allowing to produce any type of resin-bonded wheels with diameters from 50 up to 800 mm.

The company did not neglect the environment protection and installed a thermal regenerative oxidizer (latest generation system representing the best technology that can be applied for emissions treatment) treating the emissive flow by purifying it from any form or pollution.
Continuous effort still goes into research and development with the aim of constantly enhancing products, advancing automation systems and productivity, this process is supported and consolidated by newly hired staff and family members (Eng. Paolo, son of Eng. Giovanni Ficai).

Dr. Eng. Paolo Ficai

Dr. Eng. Pietro Ficai

Dr. Eng. Giovanni Ficai

Dr. Eng. Paolo Ficai

THE EXPERIENCE CERTIFIED...GLOBE.


Membership Certificate

The Organization for the Safety of Abrasives (oSa®)

herewith grants to the company

INDUSTRIA ABRASIVI PARMENSE - GLOBE S.r.l.

as of 14 February 2002

based on the Application Form, oSa®-Constitution and Conditions of Use for the oSa® Trademark the right until withdrawn to use the oSa® mark in the described colours for the abrasives notified.

This right applies to the designation of the registered tools as well as their packaging or labelling.

Bonn, 10 November 2010 _____ Executive Board _____

Organization for the Safety of Abrasives (oSa®) - Oxfordstraße 8 - D-53111 Bonn - Germany


CERTIFICATO

I.A.P. GLOBE S.r.l.

Globe can rightfully be included among the top world manufacturers of high quality abrasive wheels. The whole production is manufactured in Parma, 100 Km south of Milan.
Globe has only one range of high quality products, manufactured with raw materials supplied by ISO certified companies based in the European Community.

The utmost care is devoted to mechanical and chemical safety of products to safeguard users. Globe products are the result of staff commitment and accountability, also thanks to an original product identification system. This systems makes it possible to trace the following information for each wheel until expiry: day, month and year of manufacture, name of worker in charge of pressing, pressing check, oven feeding, finished product check and shipping.
Also the following data are always available: environmental data of the production day, mixtures data and physical-chemical checks made on the raw materials used.

All data relating to ***each individual wheel*** are stored for three years, that is for the whole period that the product can be used, in the company files together with the manufacturing and test sheets.

Globe's quality system is certified by TUV according to UNI EN ISO 9001: 2008 standards.

The selected range of products offered by Globe is wide and many of them are patented, such as: Turbotwister, Combo, ZAC cutting discs, HT flap discs and packaging systems.
Globe has always been committed to study advanced and satisfying solutions enabling the user to achieve shorter working times and improved products' performance; aspects that allow cost reduction.

Safety has always been a primary priority of Globe products, from the beginning certified by DSA (Deutscher Schleifscheibenausschuss), SUVA (Schweizerische Unfallversicherungsanlait) and KDM (Bundesministerium für Arbeit und Soziales Zentral-Arbeitsinspektorat) and today certified by OSA (Organization for Safety of Abrasives).
Specific safety products'regulations (UNI EN 12413), Italian laws (Law 320 of November 5th, 1990, Decree 554 of December 3rd 1992), are scrupulously observed and the checks foreseen are regularly carried out and registered.

For the most sophisticated applications, such as special steels, titanium, special alloys, etc., high-quality raw materials and the most advanced technologies are used. Special cutting wheels are produced for cutting with coolants, such as those for cutting metal test pieces, chromed, cemented or hardened bars, etc.
Thanks to its flexibility and expertise, Globe can supply in a short time top quality products especially conceived for the customers' special needs (in the wide ranges between 50 and 800 mm).

STRUCTURE OF THE WHEEL ...THE SECRET OF SAFETY IN THE HEART OF THE WHEEL!

Globe wheels are manufactured in the maximum respect of safety rules and are severely tested in order to grant a safe operation, even in the most difficult conditions. Layers of abrasive mixture are alternated with fiberglass cloths (European production) impregnated with resins. The strong adhesion between the reinforcing elements and the mixture binder gives the wheel convenient strength features.

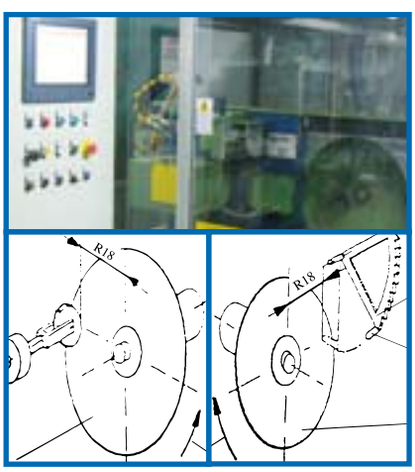
Special care is given to wheels'balancing that in Globe products always comply with still more strict values than those of the UNI EN ISO 6103 reference norm.
An accurate balancing is achieved thanks to the original cross filling of the mixture up to diameter 230 mm and rotary distribution for diameters higher than 230 mm.
Tolerance limits for the bore conform to UNI EN ISO 525. Bores that are too small prevent proper mounting and bores that are too large cause vibrations due to the eccentric rotation of the wheel.
The wheels assembled with their individual components, layers of abrasive mixture alternated with reinforcement cloths (fiberglasses impregnated with phenolic resins) are pressed into fully automatic machines, transferred on baking stands, loaded on trolleys that are then pushed into polymerization process tunnels.

Globe grinding wheels are structurally conceived with a fine grit top layer, to better absorb impact and maintain even wear around the edge, and with coarse grit bottom layers to maximize removal capacity.

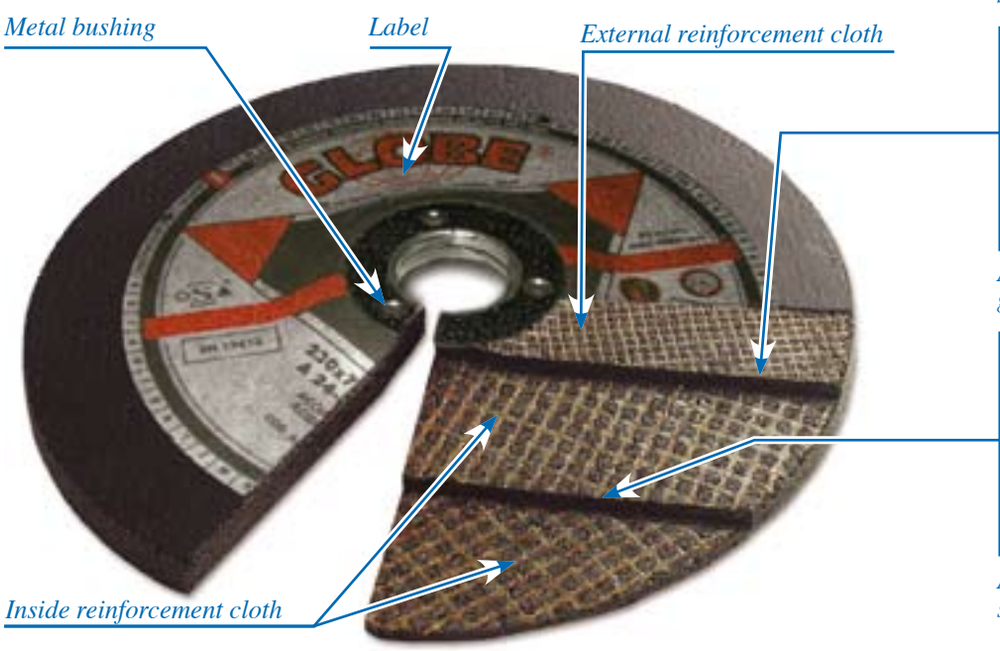
Controlled by sophisticated electronic instruments, our tunnels generate a precise cycle of temperatures that are gradually increased up to 180°C.

The constancy of this cycle ensures the wheels receive a perfect thermal treatment, resulting in optimal polymerization and performance.
The label is also pressed together with the wheel to enable identification and guarantees that the product is original.

Burst test machine



Side load test and impact test



Abrasive grains used in the layer of fine grit mixture enlarged 4 times

Abrasive grains used in the layer of coarse grit mixture enlarged 4 times

READING THE LABEL.

1) Manufacturer (name, address and declaration of origin):
IAP - GLOBE srl. Via La Spezia, 160 - 43126 Parma - Italia

2) OSA: Membership brand
Organization for the Safety of Abrasives

3) Sizes of the wheel:
external diameter, thickness and bore.

4) Colored stripe:
green: 100 m/s peripheral speed
red: 80 m/s peripheral speed
yellow: 63 m/s peripheral speed
blue: 45 m/s peripheral speed

5) Wheel's operating speed:
in RPM and m/s

6) Content specifications:
Iron, Sulphur, Chlorine

7) Type of abrasive:
A-Corundum (Aluminium oxide)
C-Silicon carbide
Z-Alumina zirconia
SG-Sol Gel (ceramic abrasive)

8) Grit size:
coarse: 16/24
medium: 30/60
fine: 70/120

9) Hardness:
P-Q: medium
R-S: hard
T: very hard

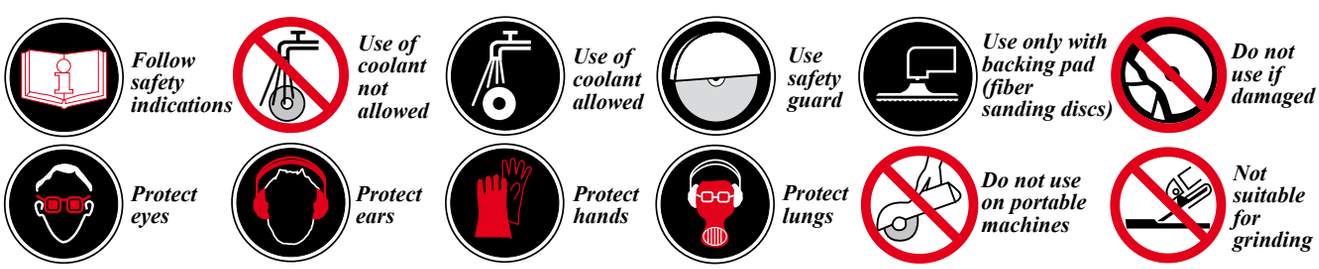
10) Directions for specific applications:
Al: Alumimium
X: Stainless steel
G: Cast iron
E: Building materials

11) Type of binder:
B = phenolic resin

12) Type of reinforcements:
F = Fiberglass cloths

13) Colour of identification of the type of use:
the colour of triangles identifies the type of material where to use the wheel.

14) Safety pictograms:



15) Decoding production data through the "zero" point:
useful for decoding the cuts on the label's external diameter, showing the expiry date (dd,mm,yy) and the operator in charge of the pressing phase, through the use of a special template for decoding data. The template can be downloaded from our web site page: www.globeabrasives.com/recalls where instructions can be found for its correct use.
Wheels have a 3 year validity, therefore to trace the manufacturing year, 3 years have to be subtracted from the expiry year marked on the label (day and month of expiry correspond to day and month of production). Every operator in charge of wheels' manufacturing is univocally identified by a code: combinations of letters from a to v. The operator in charge of checks in the final stage of product's choice before boxing is identified by the initials printed on the box label, where also the production date and boxing date are shown.

16) Wheel's bushing:
the expiry date (V=validity), shown with month and year (mm, yy) is also printed on the wheel's bushing.

MARKING SYSTEM OF GLOBE PRODUCT.

Checking product conformity

For each single Globe wheel, at the moment of manufacturing, an individual label is prepared showing day, month and year of expiry (the same as those of manufacturing but with 3 years more) as well as identity of the operator in charge of pressing.
Labels are daily prepared through a special machine connected to the central computer system.
Daily production of each press is indicated in a production sheet where checks of weight, balancing and thickness of wheels are recorded.
These sheets also include characteristics of the mixture used. Thanks to this information it is possible to quickly trace the batches of raw materials used, their chemical-physical checks are stored both in computer and printed files.
Production sheets trace batches through baking up to the final product test and boxing.
When polymerization is over, the product is transferred to warehouse, where each ***single wheel*** is checked and, if approved, is boxed and packed.
The codes of the operators who made the checks are shown on the label of the box and of the packing.
All checks carried out (with the signature of who made them), also after manufacturing, are reported on the sheets and are electronically stored for the whole product's lifetime (three years after manufacturing date).
Simultaneously, other safety tests are made:

- ***burst speed test, whose results, in accordance with the current regulation, are entered in officially stamped registers,***
- ***side load test, carried out regularly, with a special machine whose results are stored in its memory.***

New and exclusive (patented) packaging of Globe products: stockable, cylindrical boxes in plastic or cardboard

1 *Operator in charge of closing the baking trolley*
2 *Operator in charge of wheels' unpiling*
3 *Operator in charge of wheels' check*
4 *Operator in charge of packaging*
P *Wheels' production date*
D *Boxing date*

UNBALANCE ACCEPTED, TOLERANCE OF BORES AND SPEED (RPM) OF GRINDING AND CUTTING WHEELS.

$m_a = K\sqrt{m_i}$

m_i = wheel mass in grams

v = external peripheral speed

D = disc diameter in mm

Where K is obtained from the following table

USE	MACHINES	Periph. Speed 63 m/sec <v<100 m/sec.	K
Grinding	Portable		0,25
	Swing-frame and other types		0,40
Cutting	Portable		0,25
	Stationary or swing-frame	D < 305 D > 305	0,32 0,40

MAXIMUM UNBALANCE ADMITTED.
The maximum unbalance admitted (m_a) is governed by the norm UNI ISO 6103 and is expressed in grams on the disc's periphery.

Grinding and cutting wheels

d= bore diameter

$d \leqslant 18$ Tolerance $^{+\,0,21\ mm}_{-\,0\ mm}$

d >18 to $\leqslant 30$ $^{+\,0,21}_{-\,0}$
>30 to 50 $^{+\,0,25}_{-\,0}$
>50 to 80 $^{+\,0,30}_{-\,0}$

BORE TOLERANCE.
UNI ISO 525 norm, for cutting and grinding wheels.

Wheel diameter in mm	Peripheral speed			
	45 m/sec.	60 m/sec.	80 m/sec.	100 m/sec.
	RPM	RPM	RPM	RPM
50	17200	22800	30500	38210
75	11455	15300	20400	25470
100	8600	11450	15300	19100
115	7470	9965	13200	16600
125	6875	9200	12200	15280
150	5730	7640	10200	12730
178	4900	6450	8510	10675
200	4300	5730	7640	9550
230	3730	4980	6615	8300
250	3440	4575	6100	7640
300	2865	3820	5100	6360
350	2450	3275	4360	5460
400	2150	2870	3810	4770
500	1720	2290	3050	3820
600	1430	1910	2550	3185
800	1075	1430	1900	2380

TABLE OF CORRESPONDENCE PERIPH. SPEED/RPM/DIAM.

WORKING WITH ABRASIVE WHEELS…

Safecut: horizontal flush cut

Combi Speed: cutting and grinding 2 in 1

Double thickness grinding wheel with ventilating hub and threaded bore for a quick assembly and disassembly

Abrasive wheels still are the quickest and most versatile instrument that technology can offer for cutting and working different materials. With abrasive cutting discs the most different materials can be cut such as: metal profiles, sheet metal of all types, rails, railway sleepers and concrete beams, stones, marbles, granites, refractory material, tubes, fusion of different alloys, foundry feedheads, metal test pieces, etc…

These are only a small example of the possibilities of use offered by cutting wheels that can anyway give an idea of the extent of use that this tool still has.

If mounted on the suitable machines and chosen in the correct type, this tool does not find obstacles and limits of use. The continuous researches on improvement brought to widen the range of wheels by enhancing their performance in a selective way for the different jobs to be done and for different materials on which to use them.

An example of this, was the development of thin cutting wheels (thickness between 1,0 and 1,6 mm) that, thanks to their high penetration speeds and cooling power of some additives and fillers, allow to carry out a cold cut, thus avoiding the hardening of materials due to self-tempering (very common phenomenon with the use of thicker cutting wheels-normally wheels of 2.5 - 3,2 mm thickness were used).

The development of new products and new innovative solutions represent one of the most important aspects in the work in I.A.P.-Globe. An example of this is the ***patented*** boxing system of wheels (in cylindrical plastic or carton boxes), unique in the world, allowing to preserve and protect wheels from ageing and deterioration.

Many have been the new products introduced on the market in the latest years that are able to give innovative solutions for use and better performances for users:

- ***Safecut-depressed center thin cutting wheels:*** can grant excellent performances of thin, flat cutting wheels but also allowing to work in horizontal position thanks to the depressed center shape (CD). Moreover the aluminium cladding confers a high safety degree, protecting the convex part of the wheel from dangerous damaging during use.
- ***Combo-cutting and grinding wheels:*** : conceived for carrying out cutting and grinding operations with one only abrasive wheel in full safety.
- ***Wheels with Easy-Lock:*** wheels with a special threaded plastic hub allowing to easily assemble/disassemble the wheel in the grinder.
- ***Combi Speed-cutting and grinding wheels:*** born from the evolution of the combo wheel, they have very high cutting performances. Thanks to their low thickness (2,0 mm) and their special formulation, they allow a fast and cold cut. At the same time, the structure made of three reinforcement cloths, allows to carry out light grinding operations in full safety.
- ***Two-thickness grinding wheels with ventilating hub, high removal capacit:*** can remove very high quantities of materials (with very high performances, removal rate of 1:10 that is 1 gr of wheel per 10 grams of removed material). It was possible to reach this result thanks to the production of a fine grit layer, highly reinforced, in the back side, able to withstand the strong vibrations caused by the use of a very coarse grit in the front side (that is the one determining the high removal) and also able to get consumed regularly, without breakings on the edge with consequent ejection of abrasive material. The so conceived back side can keep the coarse grit abrasive grain in its position until it is totally consumed. For this reason the types of abrasive used are extremely important to obtain such high performances.

The special threaded, ventilating hub allows a quick assembly/disassembly of the wheel and the cooling of the workpiece.

The diffusion of different, more and more performing types of abrasives was of prime importance in the development of wheels. Their combination inside the wheel gives it extremely different working features. The different features of toughness and friability are crucial for the cutting rate and cut quality.

Among the main types of abrasives there are:

Aluminium oxide or brown corundum (pic. 1):
it is the most common of abrasives and has a medium level of toughness and friability.

Ceramic-coated brown corundum (pic. 2):
the feature of this abrasive is to have a "cover" on abrasive grains able to increase adhesion between grain and binding resin.
Its hardness and friability are similar to those of brown corundum and thanks to special milling processes it is possible to give grains different shapes (more or less rounded, sharp etc..) that determine different cutting capabilities.

Alumina Zirconia (pic. 3):
has a high toughness and the special feature of "bursting" at high temperatures, in order that grain is regenerated with new cutting "edges". This type of abrasive is produced by introducing zirconium oxides during arc melting.
Alumina zirconia, if used correctly, is one of the most efficient and long-lasting type of abrasive on the market; it has a very high toughness and hardness besides a very high resistance to the most difficult stresses thanks to its ability to self-change its cutting edges.

Semi-friable corundum (pic. 4):
more friable than brown corundum and less tough. This determines better cutting capability but less resistance to mechanical stress (this means an easier and faster cut but with a quicker consumption). Also this type of abrasive can be ceramic-coated in order to increase adhesion between grain and binding resin.

White corundum (pic. 5):
even more friable than the semi-friable one, it is however a bit tougher. Its features are: high cutting capability and low resistance to mechanical stress.

Silicon carbide (pic. 6):
among the most cutting abrasives, silicon carbide is the most suitable for working non-ferrous materials, stones, marbles, refractory materials, etc. Its high friability and hardness make this abrasive rather fragile but regular in consumption. Due to the sharpness and fragility of its crystals, this abrasive can be used only for some applications.

Sol gel or ceramic abrasive:
produced by sintering, it is absolutely the most precious abrasive and the most expensive. It is not much used for abrasive wheels as its capability of regenerating abrasive grain, that when breaking always bring out new cutting faces (even more than zirconium) does not enhance this type of use. Usually it is mainly used in abrasive papers and cloths, where it is possible to "glue" in a resistant way the grain to the cloth, thus enhancing the regeneration factor of grain, that is the main feature of this abrasive.

These are only some of the abrasives available on the market but there are also others such as monocrystalline, pink, ruby red ***(pic. 7)***, etc.
The combinations of these abrasives, agglomerated in resin matrix, usually phenolic resin (but also phenolic modified resin), with different powders and with specific additives, give the wheels their special working properties making them more or less suitable for the different applications.


brown corundum grit 30 **1**


ceramic-coated brown corundum grit 36 **2**


aluminia zirconia grit 30 **3**

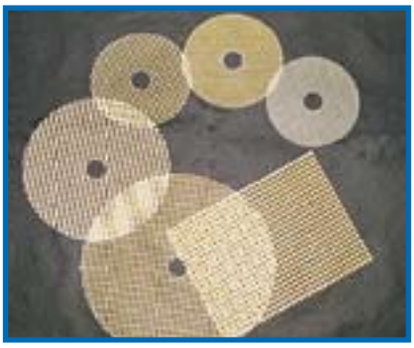

semi-friable corundum grit 30 **4**


white corundum grit 30 **5**


silicon carbide grit 30 **6**

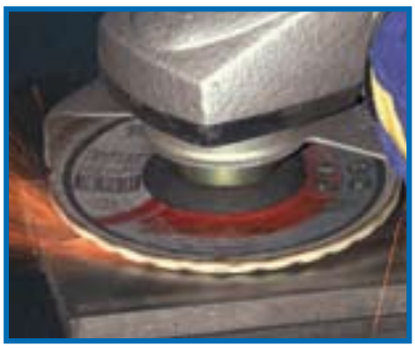

ruby red grit 60 **7**

Images of abrasives enlarged 4 times



Some types of wheel's fiberglass reinforcements

Combi with Easy Lock: quick assembly system



Turbotwister: the semiflexible grinding wheel

Safecut: depressed center cutting wheel with protective metal dome

Granulometry of the abrasive choosen for the mixture is of great importance to characterize the wheel, it can be divided as follows and is expressed in Mesh:

12-14-16-18-20-22-24	***coarse grit,***
30-36-40-46-50-54-60	***medium grit,***
70-80-90-100-120 and more	***fine grit***

Granulometry has to be choosen according to the wheel's thickness (for example very coarse grits cannot be used in very thin wheels) and to the features (penetration capacity, hardness and lifetime) that the wheels should have.

Abrasive grains are also characterized by: shape, thermal treatment and "coating". In fact the grain can be rounded ("cube-shaped"), can have live edges, more or less long shapes, can be coated with ceramic material to improve adhesion with binding resin or can be baked again at high temperatures to obtain a higher toughness.

Abrasive wheels increase their performances at higher peripheral speeds. Enough resistance to centrifugal force (peripheral speeds of 80-100 m/s) and to different mechanical stress cannot be obtained with organic resin binders alone, so fiberglass cloths (pre-impregnated with partially polymerized resins) are inserted into the wheel structure to achieve adequate safety values. There are several types of fiberglass cloths, varying in cloth per square meter, kind and weight of fibre (twisted or flat), closeness of mesh and quantity of impregnation (factor that guarantees adhesion to the mixture composing the wheel).
However considering that fiberglass has no cutting power, we try to limit the amount of reinforcements used to the level needed to achieve the required safety and resistance. Certainly, with higher peripheral speeds and more "severe" applications, more and heavier fiberglass reinforcements will have to be used.
Cloths can be added inside the wheel and/or on the sides but in special applications, such as laboratory wheels for cutting test pieces, no reinforcements are used at all and as the wheel is fragile, ***the safety of the system is obtained by completely enclosing the machine.***

Besides the components and types of raw material used for manufacturing abrasive wheels, the manufacturing technique is of primary importance. For example to obtain improved performance and a greater structure density of cutting wheels, they are pressed with rubberized discs (steel discs to which a layer of polyurethane is applied) which, under a pressure of around 300 Kg/cm^2 make the side surface of the cutting wheel very rough.
This roughness is extremely important, especially when cutting full sections, to achieve fast, cold and white cutting. Roughness is greater in discs that have no side reinforcements.

Cutting wheels pressed with rubberized discs can reach performances even 30% greater than wheels pressed with smooth steel moulds.
As a general rule, if cutting wheels are reinforced internally, the sides will have a very rough surface (in this case smaller diameter external cloths are often used) that allows a better penetration into the workpiece.
In case external reinforcements are on the full diameter, an improved resistance to side stresses will be reached but also a certain difficulty in penetrating, due to the friction caused by the reinforcing cloths applied to the sides.

One of the possibilities to minimize this problem is to use cutting wheels having a suitable thickness for the work that has to be carried out. Important information about the suitable use and the good operation of a cutting wheel can be obtained by observing the shape of the edge produced during cutting operations.

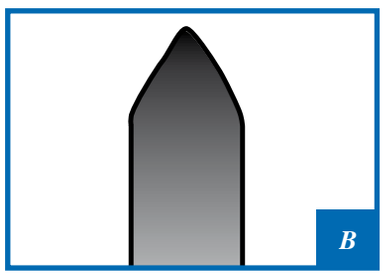
In fact:

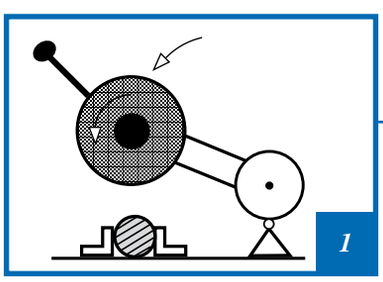
If the edge section is flat or slightly concave in the center (A) it means that there is a correct, well balanced ratio between cutting efficiency and disc wearing. The slight concavity that can arise in the middle, is usually due to the presence of a central reinforcement cloth that is subject to a faster wear.

If the edge section is pointed (B) and the edge is crumbled in some areas, the colour is dark and the wheel smells of burning, the wheel is too hard and not suitable for the type of cut it is making (usually not suitable to cut full sections or for the material that has to be cut). Proceeding with the cut may lead to jamming or even breaking of the disc.

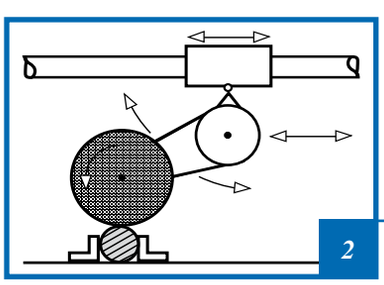
If the edge section is pointed and asymmetric (C) one of the following situations is occurring:
1) the workpiece to be cut or the wheel's positioning are misaligned,
2) the wheel, made with a mixture containing different grit size abrasives, suffered grit separation during distribution and pressing phase: fine grains have sunk to the bottom and coarse grains have remained on top.
The two sides of the wheel have therefore different density and hardness and this results in the wheel wearing out unevenly.

Caution: in both above-mentioned cases it will lead to straining and to possible breaking of the wheel.
The choice of the most suitable cutting wheel to be used for the work to carry out is also strictly tied to the cutting mode in which the cut will have to be made (machine operation and shape of the pieces to be cut). The objective is to achieve a fast and white cut (in the shortest time possible) thus limiting the heat developed in the process. Some examples of the most common working methods are:

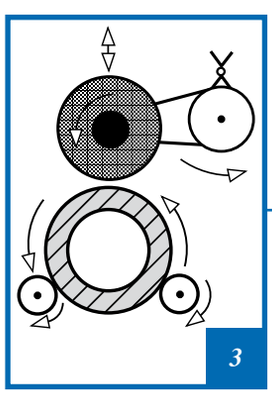




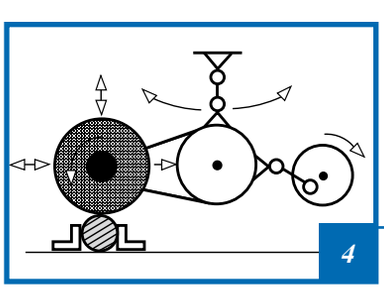
1) workpiece locked and cutting wheel going down vertically on the workpiece



2) workpiece locked on the bench of a bridge machine with stationary or swing-frame cutting wheel with horizontal movement; or stationary or swing-frame cutting wheel with horizontal moving of the piece on the mobile trolley



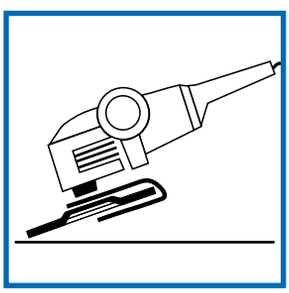
3) cutting wheel comes down vertically on the workpiece which is rotated by means of special mechanical equipment. The cutting wheel may also be swing-frame and swing from top to bottom

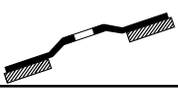


4) cutting wheel comes down vertically and swings horizontally (sometimes also vertically) on the workpiece locked on the bench.

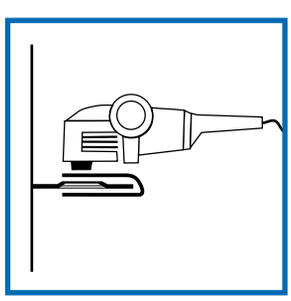
PRODUCTION PROGRAMME OF GLOBE WHEELS.

GRINDING WHEELS FOR PORTABLE ANGLE GRINDERS



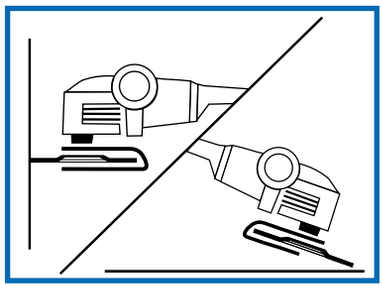
Type 27		SHEET 01	Grinding wheels
Type 28		SHEET 02	Saucer grinding wheels
Type 29 TURBO TWISTER		SHEET 03	Flexible grinding wheels
Flap discs		SHEET 11	
Fibre sanding discs		SHEET 12	

CUTTING WHEELS FOR PORTABLE ANGLE GRINDERS



Type 41 ZAC		SHEET 05	Flat thin cutting wheels
Type 42 SAFECUT		SHEET 05	Depressed center thin cutting wheels
Type 41		SHEET 04	Flat standard cutting wheels
Type 42		SHEET 04	Depressed center standard cutting wheels

CUTTING/GRINDING WHEELS FOR PORTABLE ANGLE GRINDERS

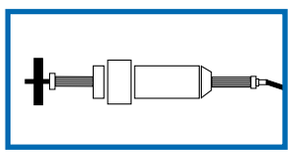


Type 41
COMBI and
COMBI SPEED

SHEET 04

Depressed center cutting and grinding wheels

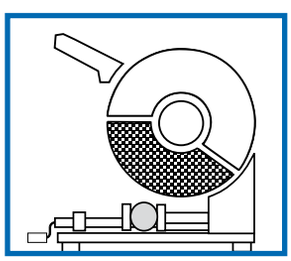
GRINDING WHEELS FOR STRAIGHT GRINDERS



Type 01

SHEET 06

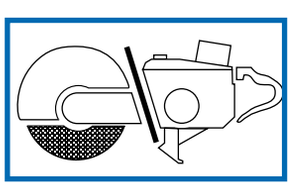
CUTTING WHEELS FOR LIGHT STATIONARY MACHINES



Type 41
CHOPCUT

SHEET 07

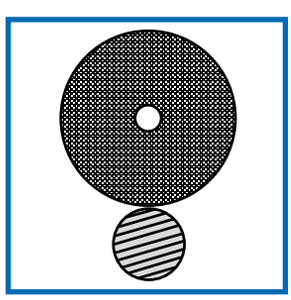
CUTTING WHEELS FOR PORTABLE MACHINES WITH ELECTRIC OR COMBUSTION ENGINE: ∅ 300-350-400



Type 41
RAILCUT
and ALLCUT

SHEET 08

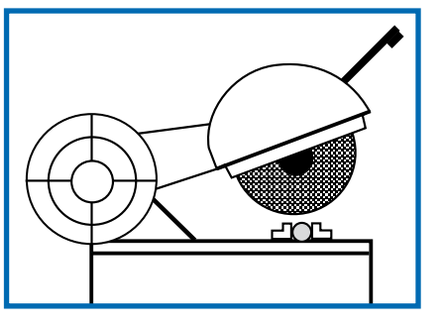
CUTTING WHEELS FOR LABORATORY MACHINES



Type 41
LABCUT

SHEET 08

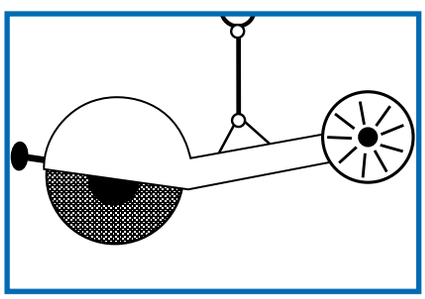
FLAT CUTTING WHEELS FOR STATIONARY MACHINES



Type 41

SHEET 09

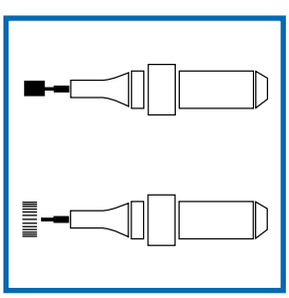
DEPRESSED CENTER CUTTING WHEELS FOR SWING-FRAME (OR STATIONARY) MACHINES



Type 42

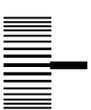
SHEET 10

GRINDING AND FINISHING WITH STRAIGHT GRINDERS



SHEET 13

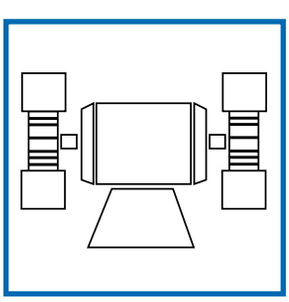
Shaft mounted abrasive wheels

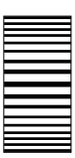


SHEET 14

Mounted flap discs

FINISHING WHEELS FOR BENCH GRINDERS





SHEET 15

Abrasive flap wheels

* Compulsory fields. By sending the present sheet, the Company declares to have read the regulations overleaf regarding treatmnt of data and to accept them.

INFORMATION FOR CHOOSING THE RIGHT WHEEL.

Please fill in and fax to:
+39.(0)521.293743

COMPANY DETAILS

***Company**		***Department**	
***Address**			***n°**
***Country**	***Town**		***Zip Code**
***Contact**		***Tel**	
***E-mail**			

MACHINE

Manufacturer/Year of Manufacture:			
Type:	☐ traditional	☐ rotary	☐ swing-frame
Power:	HP	kW	
Possib. of RPM adjust:	☐ yes	☐ no	
Max speed :	RPM	(m/s)	
Operation:	☐ semi-automatic	☐ automatic	☐ manual
Cutting:	☐ dry	☐ wet	
Suction:	☐ yes	☐ no	
Diameter of clamping flange:	mm		

WORKPIECES TO BE CUT

Size	(m/m)		
Type of material/ Temperature			Temp. of workpiece (°C)
	☐ Construction steel (%)		
	☐ Low-binder steel (%)		
	☐ High-binder steel (%)		
	☐ Other (%)		

CUTTING WHEEL

Size	Diam.	Thickness	Bore
Proposed spec.			(m/sec)
Yearly requirement			
Notes about use			
Manufacturer and specifications of currently used disc			
Position of reinforcements			

PARAMETERS

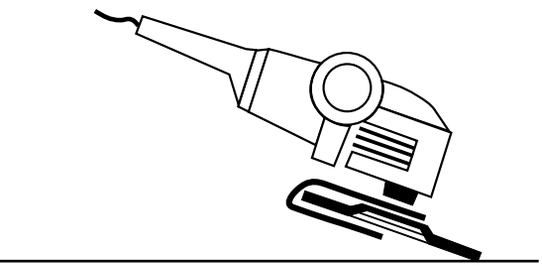
Cutting time	sec	cm^2/sections cut	
Power used (read Ammeter)			
Efficiency	Surface cut / Wheel surface wear		$\frac{cm^2}{cm^2}$ =
Amount of burr	☐ small	☐ medium	☐ large
Cutting surface	☐ white	☐ blue	☐ very blue

Confidentiality Guarantee and privacy protection L. 196/2003

Your personal data will be used by I.A.P. Globe srl, also with the help of electronic means, to send commercial information about new products.
Data will not be transmitted to third parties, if not for the necessary contractual fulfillment or for legal obligations. According to what is foreseen by art. 7 of the above mentioned Decree 196/03 you can exercise the right to check, update, modify, cancel and oppose to the treatment of your data. If you wish to cacel your data from our mailing list, please send us an e-mail to:
info@globeabrasives.com

GLOBE PRODUCT INDEX.

SHEET 01



Type 27

GRINDING WITH PORTABLE MACHINES: DEPRESSED CENTER WHEELS.

IRON AND STEEL

A 24-30-36 Q

For grinding iron and steel, good removal rate and medium durability. Wheel of medium hardness, especially suitable for not very heavy-duty jobs. Comfortable to use.

A 24-30-36 R

Excellent removal rate and long durability. Suitable for heavy-duty jobs such as jagged fins, sharp corners and welding of ferrous metals.

Z 24-30-36 S

Wheel containing alumina zirconia. Especially suitable for extremely heavy-duty jobs. High removal rate and long durability. Suitable for high-frequency grinders for specialized heavy structural works.

CAST IRON

A 24-30-36 QG

Medium-soft wheel for normal cast iron. Recommended for grinding dirty castings, where a high removal is needed to avoid that the wheel gets "clogged up".

Z 24-30-36 RG

Wheel containing alumina zirconia. Suitable for grinding hard cast iron, jagged fins and sharp corners.

The wide range of products offers different levels of hardness and different removal rates to give the operator the possibility of choosing the most suitable type for the work to be done. Globe wheels are manufactured in conformity with the strict unbalance limits to ensure minimum vibration during use. The quality of Globe wheels enhance their economic character, demonstrated by check tests and comparative laboratory tests.

STANDARD WHEELS FOR GRINDING IRON, STEEL AND CAST IRON

IRON AND STEEL

Wheel type: A 24-30-36 Q	
SIZE (diam. - thick. -bore) mm	ART. CODE
100 X 6,0 X 16,0	G0111
115 X 6,5 X 22,23	G0112
125 X 6,5 X 22,23	G0113
150 X 7,0 X 22,23	G0114
180 X 7,0 X 22,23	G0115
180 X 8,5 X 22,23	5325155010100
230 X 7,0 X 22,23	G0117
230 X 8,0 X 22,23	G0118

IRON AND STEEL

Wheel type: A 24-30-36 R	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	G0122
125 X 6,5 X 22,23	G0123
150 X 7,0 X 22,23	G0124
180 X 7,0 X 22,23	G0125
180 X 8,5 X 22,23	5325155110100
230 X 7,0 X 22,23	G0127
230 X 8,0 X 22,23	G0128

IRON AND STEEL

Wheel type: Z 24-30-36 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
180 X 8,0 X 22,23	G0136
230 X 8,0 X 22,23	5326054140100

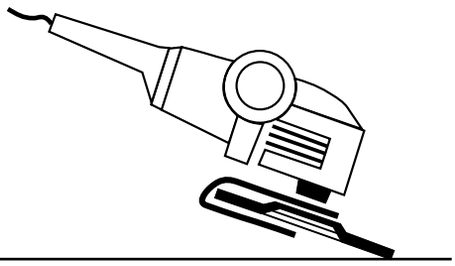
CAST IRON

Wheel type: A 24-30-36 QG	
SIZE (diam. - thick. -bore) mm	ART. CODE
180 X 7,0 X 22,23	G0211
230 X 7,0 X 22,23	G0213

CAST IRON

Wheel type: Z 24-30-36 RG	
SIZE (diam. - thick. -bore) mm	ART. CODE
125 X 6,5 X 22,23	5324248180100
180 X 8,0 X 22,23	G0222
230 X 8,0 X 22,23	G0224

SHEET 01



Type 27

DEPRESSED CENTER GRINDING WHEELS FOR PORTABLE GRINDERS.

STAINLESS STEEL

A 24-30-36 QX

Medium hardness and good removal rate. Ideal also for normal and hard stainless steel castings.

A 24-30-36 RX

Excellent removal rate and good resistance. Also suitable for food processing applications.

Z 24-30-36 SX

Wheel containing alumina zirconia, suitable for very heavy-duty jobs in heavy structural works. High removal rate and long durability. Suitable for high frequency grinders.

ALUMINIUM AND OTHER NON FERROUS MATERIALS

A 24-30-36 Qal

For grinding aluminium and other non ferrous materials (copper,brass…). The abrasive mixture used, especially lubricated, allows to obtain high removal rates without "clogging up".

STONE

C 24-30-36 QE

Applications in building industry for grinding stones, marbles, terracotta, concrete and other special building materials. High cutting capacity, medium durability.

All the wheels for stainless steel have contents of iron, sulphur and Chlorine lower than 0,1%, as shown on the label (certification available).
The wide range of Globe grinding wheels offers a high number of different specifications for the materials to be worked.
The choice of the right type is of basic importance to obtain maximum performance.

STANDARD WHEELS FOR GRINDING STAINLESS STEEL, NON FERROUS METALS AND SPECIAL MATERIAL

SHEET 01

STAINLESS STEEL

Wheel type: A 24-30-36 QX	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	G0311
125 X 6,5 X 22,23	G0312
150 X 7,0 X 22,23	G0313
180 X 7,0 X 22,23	G0314
230 X 7,0 X 22,23	G0315

STAINLESS STEEL

Wheel type: A 24-30-36 RX	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	G0321
125 X 6,5 X 22,23	G0322
180 X 7,0 X 22,23	G0324
230 X 7,0 X 22,23	G0325

STAINLESS STEEL

Wheel type: Z 24-30-36 SX	
SIZE (diam. - thick. -bore) mm	ART. CODE
180 X 8,0 X 22,23	G0334
230 X 8,0 X 22,23	5326051201100

STAINLESS STEEL

Wheel type: Z 24-30-36 QX-(HF)	
SIZE (diam. - thick. -bore) mm	ART. CODE
230 X 7,0 X 22,23	G0315 HF

HF = High Frequency

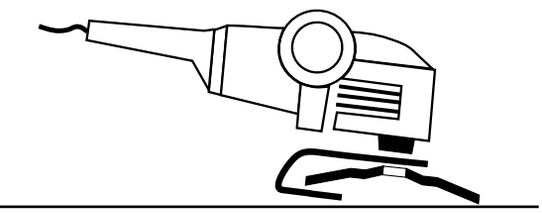
ALUMINIUM

Wheel type: A 24-30-36 Qal	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	G0411
125 X 6,5 X 22,23	G0412
150 X 7,0 X 22,23	G0413
180 X 7,0 X 22,23	G0414
230 X 7,0 X 22,23	G0415

STONE

Wheel type: C 24-30-36 QE	
SIZE (diam. - thick. -bore) mm	ART. CODE
100 X 6,0 X 16,0	G0511
115 X 6,5 X 22,23	G0512
125 X 6,5 X 22,23	G0513
150 X 7,0 X 22,23	G0514
180 X 7,0 X 22,23	G0515
230 X 7,0 X 22,23	G0516

SHEET 02



Type 28

SAUCER GRINDING WHEELS FOR PORTABLE GRINDERS.

Optimal solution for grinding flat surfaces.

Some operations, such as grinding of weld beads on level surfaces, often have to be carried out in horizontal position. With standard“Type 27” wheels, performance is not excellent as it is necessary to work with an angle of at least 15° with the work surface.
With “Type 28” saucer grinding wheels, it is possible to work also in horizontal position as they are manufactured with a natural angle of 15°, allowing flat grinding. These wheels also can be used for normal grinding operations.
The contact area of saucer grinding wheels is much larger than the one of a normal “Type 27” wheel, this results in a perfect planarity.

Advantages of saucer grinding wheels:

1. *possibility of working with the grinder in horizontal position and more comfortably for the operator,*
2. *perfect planarity of the surface grinded,*
3. *high performance.*

IRON AND STEEL

A 24-30-36 Q

Grinding of iron and steel, for standard applications. Good removal rate, medium durability. Medium hardness wheel, suitable for not too heavy duty jobs. Comfortable in use.

A 24-30-36 R

Grinding of iron and steel. High removal rate and long durability. Ideal for heavy duty jobs such as grinding of weldings, jagged fins and sharp corners.

Z 24-30-36 S

Wheel containing alumina zirconia, suitable for extremely heavy duty jobs. High removal rate and long durability, for use with high frequency grinders in heavy structural work.

CAST IRON

Z 24-30-36 RG

Wheel containing alumina zirconia, high removal rate and long durability. Especially suitable for grinding hard cast iron, jagged fins and sharp corners.

SAUCER GRINDING WHEELS FOR IRON AND STEEL WITH PORTABLE GRINDERS IN HORIZONTAL POSITION

IRON AND STEEL STAINLESS STEEL

Always available:

Wheel type: A 24-30-36 Q (conical)	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	G0641
125 X 6,5 X 22,23	G0651
180 X 8,0 X 22,23	G0711
230 X 8,0 X 22,23	G0712

IRON AND STEEL

Available on request:

Wheel type: A 24-30-36 R (conical)	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	G0643
125 X 6,5 X 22,23	G0653
180 X 8,0 X 22,23	G0721
230 X 8,0 X 22,23	G0722

IRON AND STEEL

Available on request:

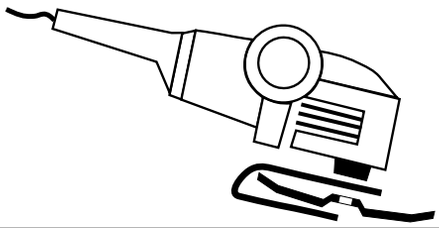
Wheel type: Z 24-30-36 S (conical)	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	-
125 X 6,5 X 22,23	-
180 X 8,0 X 22,23	-
230 X 8,0 X 22,23	-

CAST IRON

Available on request:

Wheel type: Z 24-30-36 RG (conical)	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 6,5 X 22,23	-
125 X 6,5 X 22,23	-
180 X 8,0 X 22,23	-
230 X 8,0 X 22,23	-

SHEET 03



Type 29

DEPRESSED CENTER SEMI-FLEXIBLE GRINDING WHEELS FOR PORTABLE GRINDERS (TURBOTWISTER RANGE).

IRON, STEEL, STAINLESS STEEL

A 24 Q

Perfect for ferrous metal working and where a high removal rate is needed, without the wheel gets clogged up.

A 36 Q

For grinding steel and stainless steel. Excellent removal rate, medium degree of finishing and excellent durability.

A 60 Q

Good degree of finishing and medium removal rate.

A 100 Q

Excellent degree of finishing and moderate removal rate. Long durability, ideal for all types of steel.

ALUMINIUM AND OTHER NON FERROUS METALS

A 36 Alu

Grinding of aluminium and other soft non ferrous metals (copper, brass…). The abrasive mixture used, especially lubricated, allows high removal rates throughout the whole life of the wheel without it gets clogged up.

The grooved surface grants greater power and colder cutting on all metals.

Turbotwister is the semi-flexible wheel, patented, characterized by a working surface with grooves forming a diamond pattern that increase removal rate and cause a cooling effect thanks to the air being forced through the helicoidal grooves. The specification for metal , without iron, sulphur and chlorine compounds, is also suitable for stainless steel. The large contact surface guarantees an excellent planarity of the surface treated.

FOR FLAT GRINDING OF IRON, STEEL AND NON FERROUS METALS

SHEET 03

IRON, STEEL, STAINLESS STEEL

Wheel type: A 24 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
115 X 22,23	G0811
125 X 22,23	G0812
150 X 22,23	G0813
180 X 22,23	G0814

IRON, STEEL, STAINLESS STEEL

Wheel type: A 36 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
75 X 9,52	G0825
115 X 22,23	G0821
125 X 22,23	G0822
150 X 22,23	G0823
180 X 22,23	G0824

IRON, STEEL, STAINLESS STEEL

Wheel type: A 60 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
75 X 9,52	G0835
115 X 22,23	G0831
125 X 22,23	G0832
150 X 22,23	G0833
180 X 22,23	G0834

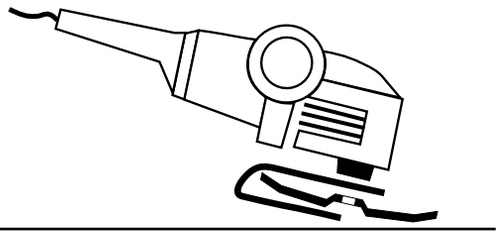
IRON, STEEL, STAINLESS STEEL

Wheel type: A 100 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
115 X 22,23	G0841
125 X 22,23	G0842
150 X 22,23	G0843
180 X 22,23	G0844

ALUMINIUM AND OTHER NON FERROUS METALS

Wheel type: A 36 Alu	
SIZE (diam. - bore) mm	ART. CODE
115 X 22,23	G0871
125 X 22,23	G0872

SHEET 03



Type 29

DEPRESSED CENTER SEMI-FLEXIBLE GRINDING WHEELS FOR PORTABLE GRINDERS. TURBOTWISTER RANGE).

STONE

C 24 Q

Especially suitable for working clogging material (such as fiberglass). High removal rate and medium durability.

C 36 Q

Especially suitable for the building industry to grind stone, marble, terracotta, concrete, etc. High cutting rate and good durability.

C 60 Q

Especially suitable for stone, marble, granite.
Good finishing, good removal rate, long durability.

C 100 Q

Suitable for stone, marble and granite. Excellent finishing, medium removal rate and long durability.

Blister pack of back spacer flange.

The mounting flange disappears completely into the wheel's cavity.

The cavity depth allows full housing of the mounting flange and the use of special back spacer flanges, so that nothing sticks out from the wheel's lower surface, making flat blending possible for a precise and ergonomically comfortable grinding.
The flexibility allows a perfect adhesion of the wheel to curved surfaces.

Back spacer flange.

FOR FLAT AND CURVED SURFACES GRINDING OF SPECIAL MATERIALS' WITH PORTABLE GRINDERS

STONE

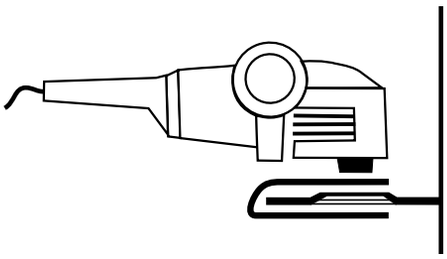
Wheel type: C 24 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
115 X 22,23	G0911
125 X 22,23	G0912
150 X 22,23	G0913
180 X 22,23	G0914

Wheel type: C 36 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
115 X 22,23	G0921
125 X 22,23	G0922
150 X 22,23	G0923
180 X 22,23	G0924

Wheel type: C 60 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
115 X 22,23	G0931
125 X 22,23	G0932
150 X 22,23	G0933
180 X 22,23	G0934

Wheel type: C 100 Q - HP	
SIZE (diam. - bore) mm	ART. CODE
115 X 22,23	G0941
125 X 22,23	G0942
150 X 22,23	G0943
180 X 22,23	G0944

SHEET 04



Type 42

DEPRESSED CENTER STANDARD CUTTING WHEELS FOR PORTABLE GRINDERS.

IRON AND STEEL

A 30-36 Q

For traditional use, it is suitable for cutting iron and steel. Good cutting capacity, medium durability.

A 30-36 R

Suitable for cutting iron and steel, combines a good cutting capacity with a long durability.

A 30-36 T

Wheel manufactured with special resins and abrasives to obtain excellent cutting capacity, very long durability and perfect resistance to the most heavy stresses.

STAINLESS STEEL

A 30-36 QX

For cutting standard stainless steel. Good cutting capacity and medium durability.
Especially suitable for light structural work.

Z 30-36 SX

Wheel containing alumina zirconia, especially conceived for alloy steel and stainless steel, as it contains no sulphur, chlorine or iron compounds (certification available). Excellent fast and cold cutting capacities. Long durability. Suitable for heavy structural work.

Globe offers a wide range of depressed center cutting wheels for portable machines.
The different thicknesses give the wheels different cutting speeds to be chosen according to the type of work to be carried out.
The range includes very thin wheels for fast cutting as well as wheels for both cutting and grinding, useful for example in cleaning weldings made in caulking.

STANDARD DEPRESSED CENTER CUTTING WHEELS FOR IRON, STEEL, STAINLESS STEEL

SHEET 04

IRON AND STEEL

Wheel type: A 30-36 Q	
SIZE (diam. - thick. -bore) mm	ART. CODE
100 X 3,2 X 16,0	G1011
115 X 3,2 X 22,23	G1013
125 X 3,2 X 22,23	G1015
150 X 3,2 X 22,23	G1016
180 X 3,2 X 22,23	G1111
180 X 4,0 X 22,23	6325136210100
230 X 3,2 X 22,23	G1113
230 X 4,0 X 22,23	6326036210100
230 X 4,8 X 22,23	6326039210100

IRON AND STEEL

Wheel type: A 30-36 R	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 3,2 X 22,23	G1023
125 X 3,2 X 22,23	G1025
150 X 3,2 X 22,23	G1026
180 X 3,2 X 22,23	G1121
180 X 4,0 X 22,23	6325136310100
230 X 3,2 X 22,23	G1123
230 X 3,6 X 22,23	G1124
230 X 4,0 X 22,23	6326036310100
230 X 4,8 X 22,23	6326039310100

IRON AND STEEL

Wheel type: A 30-36 T	
SIZE (diam. - thick. -bore) mm	ART. CODE
230 X 2,5 X 22,23	G1132

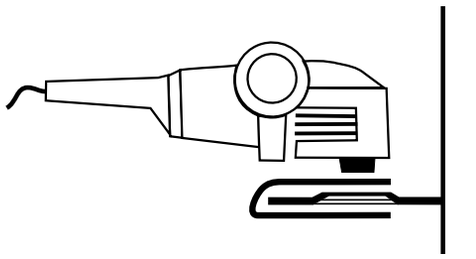
STAINLESS STEEL

Wheel type: A 30-36 QX	
SIZE (diam. - thick. -bore) mm	ART. CODE
180 X 4,0 X 22,23	6325136230100
230 X 4,0 X 22,23	6326036230100
230 X 4,8 X 22,23	6326039230100

STAINLESS STEEL

Wheel type: Z 30-36 SX	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 2,5 X 22,23	G1032
125 X 2,5 X 22,23	G1034
125 X 3,2 X 22,23	G1035
180 X 2,5 X 22,23	G1037
180 X 3,2 X 22,23	G1141
230 X 2,5 X 22,23	G1142
230 X 3,2 X 22,23	G1143
230 X 4,0 X 22,23	6326036360100

SHEET 04



Type 42

STANDARD DEPRESSED CENTER CUTTING WHEELS FOR PORTABLE GRINDERS.

CAST IRON

A 30-36 QG

Standard wheel for cast iron foundries. Medium hardness and excellent cutting capacity.

Z 30-36 RG

Special wheel containing alumina zirconia, especially suitable for foundries of special cast iron and alloy cast iron.
Excellent cutting speed and long durability.
Excellent resistance in heavy-duty works such as jagged fins and sharp corners.

ALUMINIUM AND OTHER NON FERROUS METALS

A 30-36 Qal

Wheel especially conceived for aluminium and other soft non ferrous metals (bronze, brass…)
Fast and lubricated cutting thanks to the special mixture.

STONE

C 30-36 RE

Standard wheel to be used in the building industry. Suitable for marble, stones, bricks, concrete, etc. Excellent cutting capacities, medium hardness and long durability.

Choosing the right specification for the work to be made is very important. Not only thickness but also the wheel's abrasive mixture is fundamental.
The different types of abrasives, different binders and hardness are the basis to be able to always give maximum performance for any application.
The several combinations that Globe range offers always allow to find the best product for the work to be made.

TO CUT CAST IRON, NON FERROUS METALS AND SPECIAL MATERIALS

CAST IRON

Wheel type: A 30-36 QG	
SIZE (diam - spess - foro) mm	ART. CODE
230 X 3,2 X 22,23	G1333

CAST IRON

Wheel type: Z 30-36 RG	
SIZE (diam. - thick. -bore) mm	ART. CODE
230 X 3,2 X 22,23	6326024320100
230 X 4,0 X 22,23	G1344
230 X 4,8 X 22,23	6326039120100

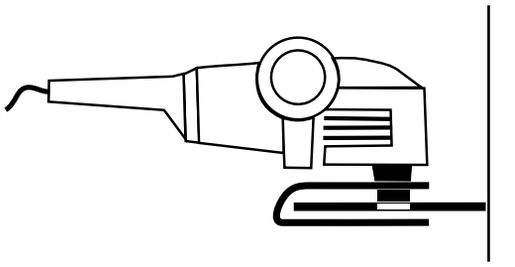
ALUMINIUM AND OTHER NON FERROUS METALS

Wheel type: A 30-36 Qal	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 3,2 X 22,23	G1222
125 X 3,2 X 22,23	G1223
180 X 3,2 X 22,23	G1321
230 X 3,2 X 22,23	G1323

STONE

Wheel type: C 30-36 RE	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 3,2 X 22,23	G1212
125 X 3,2 X 22,23	G1213
150 X 3,2 X 22,23	G1214
180 X 3,2 X 22,23	G1311
230 X 3,2 X 22,23	G1313

SHEET 04



Type 41

FLAT CUTTING WHEELS FOR PORTABLE GRINDERS.

IRON AND STEEL

A 30-36 Q

For traditional applications in cutting iron and steel. Good cutting capacity and medium durability.

A 30-36 R

Suitable for cutting iron and steel. Offers a good cutting capacity and a long durability. Excellent resistance to stress.

A 30-36 T

Manufactured with special resins and abrasives. Offers an excellent cutting capacity, long durability and excellent resistance to the most heavy stresses.

STAINLESS STEEL

Z 30-36 SX

Wheel containing alumina zirconia for use on alloy steel and stainless steel. Without sulphur, chlorine and iron compounds (certification available). Excellent cold and fast cutting. Long durability.

STONE

C 30-36 RE

For the building industry: cutting of marble, stones, bricks, concrete… Excellent cutting capacity, medium hardness and long durability.

Globe range offers a wide range of standard flat cutting wheels of 2,5 mm thickness for portable grinders.
Of great importance is the right choice for the work to be made.
The different types of abrasives, different binders and different hardnesses are the basis to be able to always supply the maximum performance for any application.
The several combinations offered by Globe range always allow to find the best product for the work to be done.

CUTTING WHEELS FOR:
IRON AND STEEL,
STAINLESS STEEL,
SPECIAL MATERIALS

IRON AND STEEL

Wheel type: A 30-36 Q	
SIZE (diam. - thick. -bore) mm	ART. CODE
230 X 2,5 X 22,23	G1415

IRON AND STEEL

Wheel type: A 30-36 R	
SIZE (diam. - thick. -bore) mm	ART. CODE
50 X 2,0 X 8,0	7080612310100
100 X 2,5 X 16,0	G1421
115 X 2,5 X 22,23	G1422
125 X 2,5 X 22,23	G1423
230 X 2,5 X 22,23	G1425

IRON AND STEEL

Wheel type: A 30-36 T	
SIZE (diam. - thick. -bore) mm	ART. CODE
180 X 2,5 X 22,23	7325115370100
230 X 2,5 X 22,23	G1435

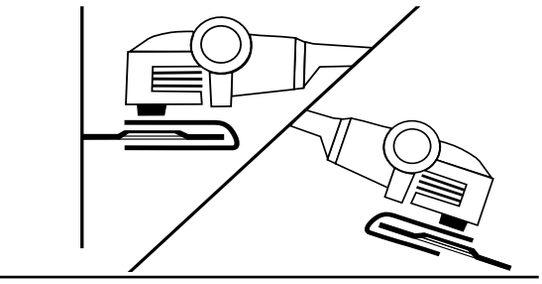
STAINLESS STEEL

Wheel type: Z 30-36 SX	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 2,5 X 22,23	G1442
125 X 2,5 X 22,23	G1443
180 X 2,5 X 22,23	7325115360100
230 X 2,5 X 22,23	G1445

STONE

Wheel type: C 30-36 RE	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 2,5 X 22,23	G1452
125 X 2,5 X 22,23	G1453
230 X 2,5 X 22,23	G1455

SHEET 04



Type 42

DEPRESSED CENTER COMBI WHEELS (THICKNESS 2,0 ÷ 4,0) FOR CUTTING AND GRINDING (2 IN 1) WITH PORTABLE GRINDERS.

IRON AND STEEL

A 30-36 R COMBI

For operations of light grinding and cutting with only one product. Suitable for iron and steel, good cutting capacity and long durability.

STAINLESS STEEL

A 30-36 RX COMBI

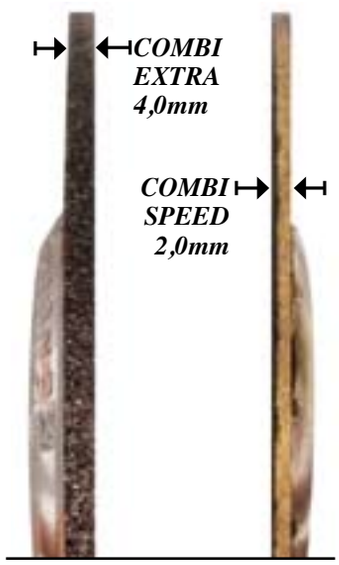
For operations of cutting and light grinding with only one product. The mixture without iron, sulphur and chlorine (certification available) makes the product suitable to be used on stainless steel. Good cutting capacity and durability.

IRON, STEEL, STAINLESS STEEL

A 60 SX COMBI SPEED

Wheel with 2 layers, especially conceived with 2,0 mm thickness to obtain a product characterized by high cutting capacity (thanks to the low thickness) and high safety in grinding operations. The wheel does not contain iron, sulphur and chlorine compounds and is thus suitable for stainless steel.

Combi wheels were especially conceived by Globe for cutting and light grinding or caulking of weld bead with one product only.
The Combi Speed wheel is the evolution of the Combi wheel. Thanks to the 2,0 mm thickness only and the 2-layer structure with 3 reinforcement cloths, Combi Speed combines in one disc an excellent cutting capacity and a high safety for grinding operations. Safety and resistance of Combi wheels are certified by MPA and constantly undergo side-load tests and burst tests.



Combi Speed offers great advantages in one product only:

1 *possibility of using only one grinder for cutting and grinding (no need of replacement or work interruption)*
2 *high cutting speed*
3 *excellent cutting quality and precision*
4 *low burr formation during cutting*
5 *good removal capacity*
6 *excellent safety level in grinding operations*
7 *maximum work efficiency*
8 *long durability*

COMBI SPEED SAVES TIME:
Fast and precise cuts (1), safe grinding (2).

DEPRESSED CENTER WHEELS FOR CUTTING AND GRINDING IRON, STEEL AND STAINLESS STEEL WITH PORTABLE GRINDERS

SHEET 04

IRON AND STEEL

Combi wheels:
4,0 mm thickness

Wheel type: A 30-36 R Combi	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 4,0 X 22,23	G1053
125 X 4,0 X 22,23	G1055
150 X 4,0 X 22,23	G1056
180 X 4,0 X 22,23	G1057
230 X 4,0 X 22,23	G1058

STAINLESS STEEL

Combi wheels:
4,0 mm thickness

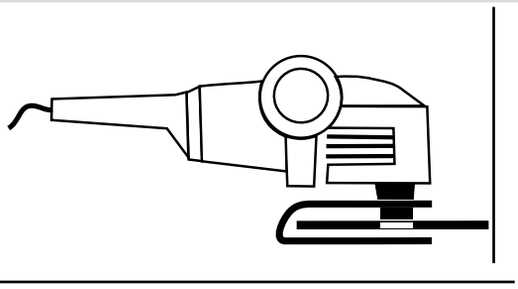
Wheel type: A 30-36 RX Combi	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 4,0 X 22,23	G1043
125 X 4,0 X 22,23	G1045
150 X 4,0 X 22,23	G1046
180 X 4,0 X 22,23	G1151
230 X 4,0 X 22,23	G1154

IRON, STEEL, STAINLESS STEEL

New Combi Speed:
2,0 mm thickness

Wheel type: A 60 SX Combi Speed	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 2,0 X 22,23	G1039
125 X 2,0 X 22,23	G1041
150 X 2,0 X 22,23	G1042

SHEET 05



Type 41

THIN FLAT CUTTING WHEELS FOR PORTABLE GRINDERS.

IRON AND STEEL

A 60 S

Suitable for cutting iron and steel. Good hardness and high cutting capacity.

STAINLESS STEEL

A 60 SX

Especially conceived for cutting stainless steel and particularly hard and alloy steels. Without sulphur, iron and chlorine compounds (certification available). Excellent fast and cold cut and long durability.

ALUMINIUM

A 60 Alu

For cutting aluminium and other soft non ferrous materials (copper, brass…). Fast and lubricated cut thanks to the special mixture. Good cutting capacity and durability.

STONE

C 60 S

For the building industry: marble, stone, bricks, concrete, etc.
Excellent cutting capacity, medium hardness.

The range of thin cutting wheels is manufactured with different specifications and thicknesses:

Diameter: 115-125 (mm)
Thickness: 1,0 – 1,3 – 1,6 (mm)

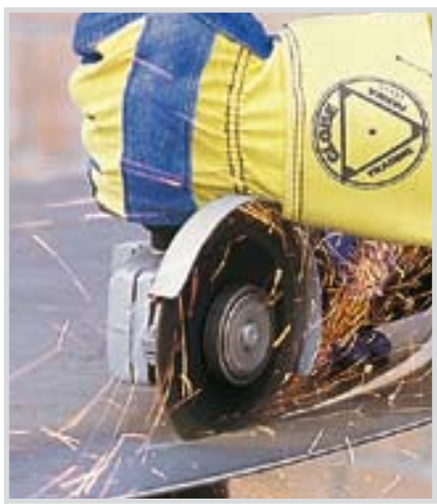
Diameter: 150 – 180 (mm)
Thickness: 1,6 (mm)

Diameter: 230 (mm)
Thickness: 2,0 (mm)

The special surface with helicoidal pattern (patented) on both wheel's sides, reduces friction and heat production.

The most efficient and fast cutting tool.
The very low thickness allows to halve the cutting rate compared to standard wheels. ZAC wheels are reinforced on the sides.

They never have to be used for grinding operations or for cutting with the wheel bent.
The coarse helicoidal pattern on the wheel's sides determine a low friction while cutting, reduced heat production, improved cutting speed and more rigidity of the wheel. This feature is patented.



Extreme cutting precision.

FLAT CUTTING WHEELS (THICKNESS 1,0 ÷ 2,0 mm) FOR FERROUS METALS AND SPECIAL MATERIALS WITH PORTABLE GRINDERS (ZAC)

IRON AND STEEL

Wheel type: A 60 S ZAC	
SIZE (diam. - thick. -bore) mm	ART. CODE
50 X 1,0 X 9,52	G1621-1
75 X 1,0 X 9,52	G1612-5
75 X 1,3 X 9,52	G1612
75 X 1,6 X 9,52	G1622-16
100 X 1,3 X 16,0	G1613
115 X 1,0 X 22,23	G1614
115 X 1,3 X 22,23	G1615
115 X 1,6 X 22,23	G1616
125 X 1,0 X 22,23	G1711
125 X 1,3 X 22,23	G1712
125 X 1,6 X 22,23	G1713
150 X 1,6 X 22,23	G1714
180 X 2,0 X 22,23	G1715
230 X 2,0 X 22,23	G1716

STAINLESS STEEL

Wheel type: A 60 SX ZAC	
SIZE (diam. - thick. -bore) mm	ART. CODE
50 X 1,0 X 9,52	G1621-2
50 X 1,3 X 8,00	G1621
75 X 0,8 X 9,52	G1622-0
75 X 1,0 X 9,52	G1622-1
75 X 1,3 X 9,52	G1622
75 X 1,6 X 9,52	7122106500100
100 X 1,3 X 16,0	G1623
115 X 1,0 X 22,23	G1624
115 X 1,3 X 22,23	G1625
115 X 1,6 X 22,23	G1626
125 X 1,0 X 22,23	G1721
125 X 1,3 X 22,23	G1722
125 X 1,6 X 22,23	G1723
150 X 1,6 X 22,23	G1724
180 X 2,0 X 22,23	G1725
230 X 2,0 X 22,23	G1726

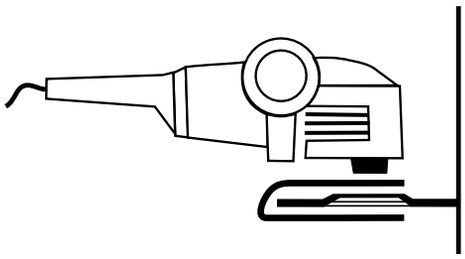
ALUMINIUM

Wheel type: A 60 Alu	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 1,3 X 22,23	G1645
125 X 1,3 X 22,23	G1742

STONE

Wheel type: C 60 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
115 X 1,0 X 22,23	G1634
125 X 1,0 X 22,23	G1731
125 X 1,3 X 22,23	G1732

SHEET 05



Type 42

DEPRESSED CENTER FLAT THIN CUTTING WHEELS (THICKNESS 1,0 ÷ 2,0mm) FOR PORTABLE GRINDERS

IRON AND STEEL

A 60 S

Suitable for cutting iron and steel. Fast and cold cutting, long durability.

STAINLESS STEEL

A 60 SX

Especially conceived for cutting stainless steel and particularly hard and alloy steel. Without iron, sulphur and chlorine compounds (certification available). Fast and cold cutting, long durability.

ALUMINIUM AND SPECIAL MATERIALS

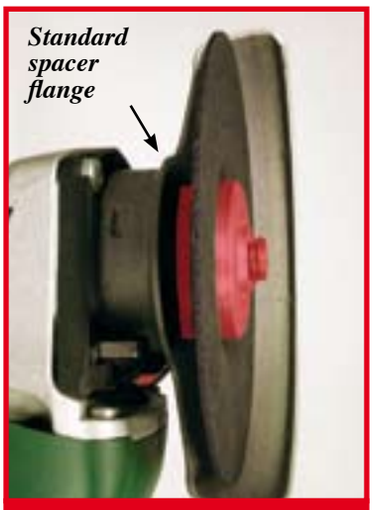
A 60 Alu

For cutting aluminium and other soft non ferrous materials (copper, brass, etc.). Fast and lubricated cutting thanks to the special mixture. Good cutting capacity and good durability.

The depressed center reinforcement in steel, avoids possible breakings due to contact with the workpiece.

Flush cut possible thanks to the depressed center.

Thanks to spacer flanges and to the depressed center, the grinder's shaft and the fastening nut do not protrude from the wheel's cavity (see the photo below), allowing the operator to carry out flush cuts in a comfortable way.
The depressed center shape gives the wheel a higher rigidity than a flat wheel, thus limiting flexion and allowing to carry out perfect cuts, especially with diameters > 150 mm.
The special steel bushing (patented) protects the depressed center from the contact with material under work, avoiding dangerous breakings (see the photo below on the left).



Protrusion of the shaft using a standard spacer flange.

No protrusion of the shaft thanks to the special spacer flange.

FOR CUTTING FERROUS METALS AND SPECIAL MATERIALS WITH PORTABLE MACHINES (SAFECUT RANGE)

IRON AND STEEL

Wheel type: A 60 S SAFECUT	
SIZE (diam. - thick. -bore) mm	ART. CODE
75 X 1,0 X 9,52	G1537
115 X 1,3 X 22,23	G1532
125 X 1,3 X 22,23	G1533
150 X 1,6 X 22,23	G1534
180 X 2,0 X 22,23	G1535
230 X 2,0 X 22,23	G1536

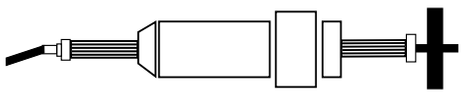
STAINLESS STEEL

Wheel type: A 60 SX SAFECUT	
SIZE (diam. - thick. -bore) mm	ART. CODE
75 X 1,0 X 9,52	G1547
115 X 1,3 X 22,23	G1542
125 X 1,3 X 22,23	G1543
150 X 1,6 X 22,23	G1544
180 X 2,0 X 22,23	G1545
230 X 2,0 X 22,23	G1546

ALUMINIUM AND SPECIAL MATERIALS

Wheel type: A 60 Alu SAFECUT	
SIZE (diam. - thick. -bore) mm	ART. CODE
230 X 2,0 X 22,23	G1566

SHEET 06



Type 1

FLAT GRINDING WHEELS FOR PORTABLE STRAIGHT GRINDERS.

IRON AND STEEL

A 30-36 Q

Conventional uses, suitable for iron and steel.
Good removal rate and medium durability.

A 30-36 R

Working of iron and steel, combines a good removal capacity with a long durability. Suitable for heavy-duty applications such as resistant alloys.
Available on request.

STAINLESS STEEL

A 30-36 QX

For use on alloy steel and stainless steel (without iron, sulphur and chlorine compounds).
Hi removal capacity, cold cutting and medium hardness.

These wheels are normally used on portable straight grinders for internal grinding of workpieces, such as internal lapping of pipes in the petrochemical industry.
Great care is taken in balancing these wheels to prevent vibrations and to ensure maximum control by the operator.
These wheels are manufactured with specifications for use at 45 m/s (without reinforcements) and for use at 60 and 80 m/s (reinforced).
Thanks to special additives, a high removal rate is reached without overheating the workpiece.

GRINDING OF FERROUS METALS WITH PORTABLE STRAIGHT GRINDERS

IRON AND STEEL
Specification for 45 m/s

Wheel type: A 30-36 Q	
SIZE (diam. - thick. -bore) mm	ART. CODE
100 X 20 X 20,0	G1825

STAINLESS STEEL
Specification for 45 m/s

Wheel type: A 30-36 QX	
SIZE (diam. - thick. -bore) mm	ART. CODE
50 X 12 X 8,0	9010501280100
100 X 20 X 20,0	G1815

STAINLESS STEEL
Specification for 60 m/s

Wheel type: A 30-36 QX	
SIZE (diam. - thick. -bore) mm	ART. CODE
100 X 20 X 20,0	9000005045700

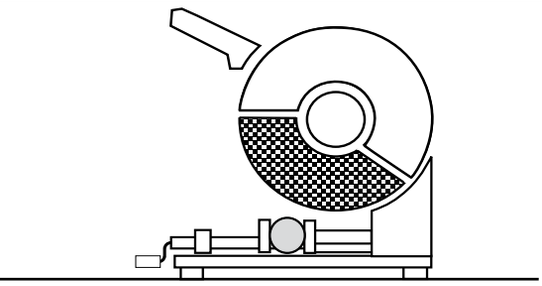
IRON AND STEEL
Specification for 80 m/s

Wheel type: A 30-36 Q	
SIZE (diam. - thick. -bore) mm	ART. CODE
100 X 20 X 20,0	G1825 80

STAINLESS STEEL
Specification for 80 m/s

Wheel type: A 30-36 QX	
SIZE (diam. - thick. -bore) mm	ART. CODE
100 X 20 X 20,0	G1815 80

SHEET 07



Type 41

THIN CUTTING WHEELS (CHOPCUT RANGE) FOR LIGHT STATIONARY MACHINES.

IRON AND STEEL

A 30-36 S

For iron and steel. Universal cutting discs, long durability and high cutting rate. Suitable for cutting channel steel and medium sized full sections.

STAINLESS STEEL

A 30-36 SX

For use on stainless steel without iron, sulphur and chlorine compounds (certification available). Long durability and excellent cutting capacity.
Suitable for cutting profiles and medium sized full sectionsì.

Globe cutting discs for light stationary machines allow to cut channel steel, tubes and also full sections with diameter up to 30/40 mm. They combine a long durability with an excellent cutting capacity thanks to their low thickness.
Particular care is taken in balancing these wheels to ensure comfortable cutting and good machine stability without vibrations.

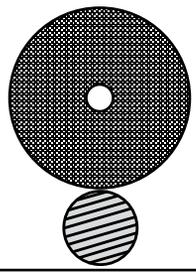
IRON AND STEEL

Wheel type: A 30-36 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 2,5 X 25,4	G1911
350 X 3,0 X 25,4	G1912
400 X 3,2 X 25,4	G1913

STAINLESS STEEL

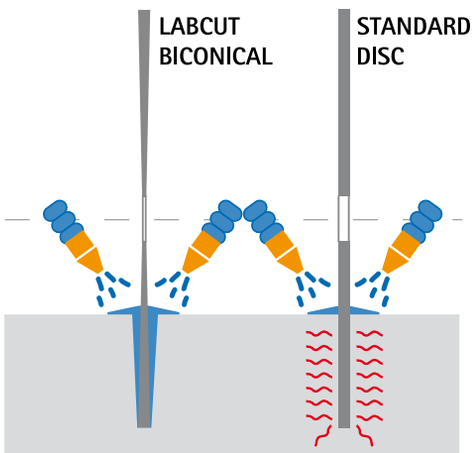
Wheel type: A 30-36 SX	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 2,5 X 25,4	G1911 INOX
350 X 3,0 X 25,4	G1912 INOX
400 X 3,2 X 25,4	G1913 INOX

WHEELS FOR CUTTING TEST PIECES (LABCUT RANGE) WITH FULLY ENCLOSED MACHINES.



Type 41

CUTTING WHEELS FOR: STAINLESS STEEL, CHROME PLATED BARS, ETC...



The special bi-conical shape of Labcut wheels enhances cooling of fluid while cutting, allowing to achieve a colder and cleaner cut.

Built without reinforcements for cutting test pieces ***exclusively with enclosed machines***.
Also with coolant. Thanks to the high cutting capacity they do not overheat the workpieces and allow a precise, fast and cold cut.
Available in diameters 250,300 and 350 mm, their mixture does not contain iron, sulphur and chlorine compounds.

IRON AND STEEL

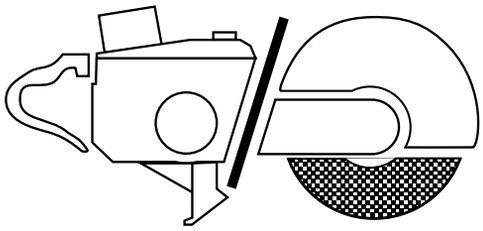
Wheel type: A 30-36 P	
SIZE (diam. - thick. -bore) mm	ART. CODE
250 X 1,8 X 32,0	G2001
300 X 2,5 X 32,0	G2011
350 X 3,0 X 32,0	G2012

IRON AND STEEL

A 30-36 P

Wheels for cutting alloy steel test pieces, chrome plated or cemented or finished bars. Suitable also for cutting with coolant. Mixture without iron, sulphur and chlorine (certification available.

SHEET 08



Type 41

WHEELS FOR PORTABLE CUTTING MACHINES WITH COMBUSTION ENGINE:
- RAIL CUT: RAILCUT RANGE
- GENERAL CUT: ALLCUT RANGE
REINFORCED FOR 100m/s.

RAIL CUTTING

A 24 R
Railcut

Cutting wheels conceived and reinforced for guided cutting of railway tracks with special machines with combustion engine. This highly balanced wheel features great penetration and cooling power. They allow a fast and straight cut. High-tech and safe tool, allows a highly efficient work.

UNIVERSAL CUTTING

A 30-36 S
Allcut

Universal use for any type of cut. Extremely safe and with high cutting capacity, it is particularly suitable in construction sites (industrial assemblies, breaking up of cars, road and railway accident emergency operations, etc.)..

STONE

C 24-30-36 S
Allcut

Universal use for building applications. Suitable for stones, plastic, aluminium, non ferrous alloys, etc. Use in open-air construction sites in maximum safety.

The Globe range of cutting wheels for portable machines with combustion engine includes wheels for cutting railway tracks (Railcut range) and wheels for general cutting of ferrous metals and special materials (Allcut range: universal cutting and stone).
These cutting wheels, duly reinforced for working at 100 m/sec in full safety, find their greatest application in construction sites: industrial assemblies, building sites, demolitions, road and railway accident emergency operations.
Wheels are available in different diameters (from 300 up 400 mm) and with different usage specifications.

FLAT CUTTING WHEELS FOR PORTABLE MACHINES WITH COMBUSTION ENGINE

RAIL CUTTING

RAILCUT range

Wheel type: A 24 R	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 4,0 X 22,23	G2111 22
300 X 4,0 X 25,4	G2111 25
350 X 4,0 X 22,23	G2112 22
350 X 4,0 X 25,4	G2112 25
400 X 4,5 X 25,4	G2113 25

UNIVERSAL CUTTING

ALLCUT range

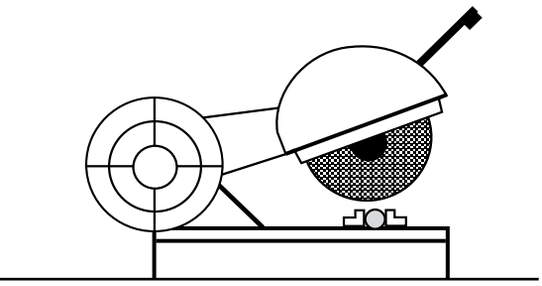
Wheel type: A 30-36 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 4,0 X 20,0	G2211 20
300 X 4,0 X 22,23	G2211 22
300 X 4,0 X 25,4	G2211 25
300 X 4,0 X 32,0	G2211 32
350 X 4,0 X 20,0	G2212 20
350 X 4,0 X 22,23	G2212 22
350 X 4,0 X 25,4	G2212 25
350 X 4,0 X 32,0	G2212 32

STONE

ALLCUT range

Wheel type: C 24-30-36 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 4,0 X 20,0	G2221 20
300 X 4,0 X 22,23	G2221 22
300 X 4,0 X 25,4	G2221 25
350 X 4,0 X 20,0	G2222 20
350 X 4,0 X 25,4	G2222 25

SHEET 09



Type 41

FLAT CUTTING WHEELS FOR STATIONARY MACHINES.

IRON AND STEEL

A 30-36 R

Conventional use, good cutting capacity and medium durability. Suitable for the use on iron and steel.

A 24 S

High performance, high cutting capacity and long durability. This type of cutting wheel is especially suitable for cutting building sections and general heavy structural work.

AN 36 S

For cutting steel and alloy steel castings particularly in lost-wax casting where the work-piece is fed manually. High stability and accurate balancing enhance the excellent cutting and cooling.

STAINLESS STEEL

A 30-36 RX

Thanks to the high cutting capacity and cooling, it is suitable for alloy steel. Without iron, sulphur and chlorine compounds.

STONE AND SPECIAL MATERIALS

C 30-36 S

Universal use for cutting of special materials such as building materials, stone, marble, plastic, aluminium and in general all non ferrous alloys.

C 24 S

Special cutting wheel manufactured from diameter 600 up to 800 mm for cutting beams and prestressed reinforced concrete workpieces. Especially suitable for railway sleepers.

Globe cutting wheels for stationary machines include a wide range of products for cutting the most different materials.
Available from diameter 300 mm up to 800 mm with thicknesses varying from 3 up to 9 mm.
There is also the possibility of changing the bore size according to customers' requirements.
Maximum care is given to wheels' balancing to obtain a vibration-free product.

CUTTING WITH STATIONARY MACHINES OF FERROUS METALS AND SPECIAL MATERIALS

IRON AND STEEL

Wheel type: A 30-36 R	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 3,5 X 20,0	G2314 20
300 X 4,0 X 22,23	G2314
300 X 4,0 X 25,4	G2314 25
300 X 4,0 X 30,0	G2314 30
300 X 4,0 X 40,0	G2314 40
350 X 4,0 X 22,23	G2315
350 X 4,0 X 25,4	G2315 25
350 X 4,0 X 30,0	G2315 30
350 X 4,0 X 40,0	G2315 40
400 X 4,5 X 25,4	G2411 25
400 X 4,5 X 32,2	G2411 32
400 X 4,5 X 40,0	G2411 40
500 X 5,0 X 25,4	G2412 25
500 X 5,0 X 40,0	G2412 40
600 X 6,0 X 60,0	G2413
600 X 8,0 X 60,0	G2414
700 X 7,0 X 60,0	868795447101

Wheel type: A 24 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 4,0 X 22,23	G2324
300 X 4,0 X 25,4	G2324 25
300 X 4,0 X 30,0	G2324 30
350 X 4,0 X 25,4	G2325 25
350 X 4,0 X 30,0	G2325 30
350 X 4,0 X 40,0	G2325 40
400 X 4,5 X 25,4	G2421 25
400 X 4,5 X 40,0	G2421 40
500 X 5,0 X 25,4	G2422 25
500 X 5,0 X 40,0	G2422 40

Wheel type: AN 36 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 2,5 X 22,23	G2332
300 X 2,5 X 25,4	G2332 25 T22
300 X 2,5 X 30,0	G2332 30
300 X 3,0 X 25,4	G2333
300 X 3,0 X 30,0	G2333 30
350 X 3,0 X 25,4	G2335 25

STAINLESS STEEL

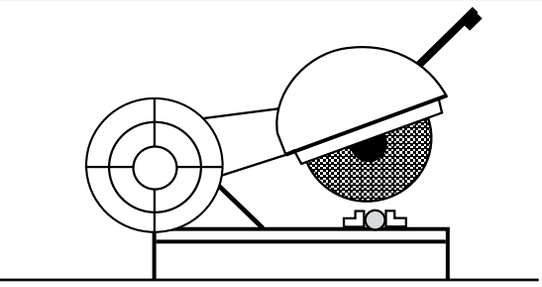
Wheel type: A 30-36 RX	
SIZE (diam. - thick. -bore) mm	ART. CODE
300 X 4,0 X 25,4	G2344 25
300 X 4,0 X 30,0	G2344 30
300 X 4,0 X 40,0	G2344 40
350 X 4,0 X 25,4	G2345 25
350 X 4,0 X 30,0	G2345 30
350 X 4,0 X 40,0	G2345 40
400 X 4,5 X 25,4	G2431 25
400 X 4,5 X 40,0	G2431 40
500 X 5,0 X 25,4	G2432 25
500 X 5,0 X 40,0	G2432 40

STONE AND SPECIAL MATERIALS

Wheel type: C 24 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
700 X 8,0 X 60,0	8687954470102
800 X 9,0 X 60,0	G2455

Wheel type: C 30-36 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
250 X 3,0 X 25,4	G2351
300 X 4,0 X 22,23	G2354
300 X 4,0 X 20,0	G2354 20
300 X 4,0 X 25,4	G2354 25
300 X 4,0 X 30,0	G2354 30
300 X 4,0 X 40,0	G2354 40
300 X 4,0 X 50,8	G2354 50
350 X 4,0 X 25,4	G2355 25
350 X 4,0 X 40,0	G2355 40
400 X 4,5 X 25,4	G2441 25
400 X 4,5 X 40,0	G2441 40
500 X 5,0 X 25,4	G2442 25
500 X 5,0 X 40,0	G2442 40
600 X 5,0 X 50,0	G2442 50
600 X 6,0 X 60,0	G2443
600 X 8,0 X 60,0	G2444

SHEET 10



Type 42

DEPRESSED CENTER WHEELS FOR CUTTING FERROUS METALS AND SPECIAL MATERIALS WITH STATIONARY OR SWING-FRAME GRINDERS.

IRON AND STEEL

A 30-36 R

Standard applications, good cutting capacity and average durability. Suitable to be used on iron and steel. The depressed center shape gives a high cutting stability and precision.

A 24 S

High performance, high cutting capacity and long durability. For standard applications, especially suitable to cut building sections and for structural works.
For iron and steel.

STONE

C 24 S

Special cutting wheel, from diameter 600 up to 800 mm for cutting beams and reinforced concrete workpieces.

These cutting wheels can be used effectively in a variety of applications in foundries, with ferrous and non-ferrous metals.
The depression in the wheel houses the locking nut so that operators can cut very close to feedheads, avoiding costly tooling machine operations to remove thick layers of residual material.
The special depressed center shape also gives more stability and rigidity to the disc.
Careful balancing prevents disturbing vibrations in the handle bar and significantly improves comfort for the operator and performance of the disc.
Available in diameters 400, 500 and 600 mm with thicknesses varying from 5 to 7 mm.

Depressed center shape allowing to carry out flush cuts.

IRON AND STEEL

Wheel type: A 30-36 R	
SIZE (diam. - thick. -bore) mm	ART. CODE
600 X 7,0 X 76,5	G2415 CD

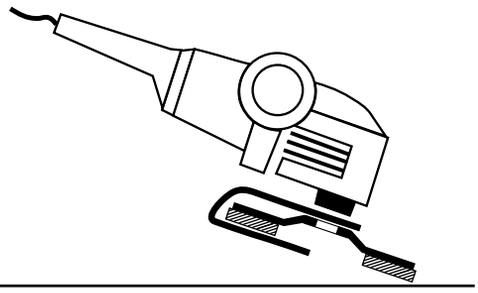
IRON AND STEEL

Wheel type: A 24 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
400 X 5,0 X 76,5	8727235360/100
500 X 5,0 X 76,5	8727545360/100
600 X 7,0 X 76,5	G2425 CD

STONE

Wheel type: C 24 S	
SIZE (diam. - thick. -bore) mm	ART. CODE
500 X 5,0 X 76,5	G2442 CD

SHEET 11



FLAP DISCS WITH FIBERGLASS BACKING PAD, FLAT OR CONICAL. CORUNDUM OR ALUMINA ZIRCONIA CLOTH.

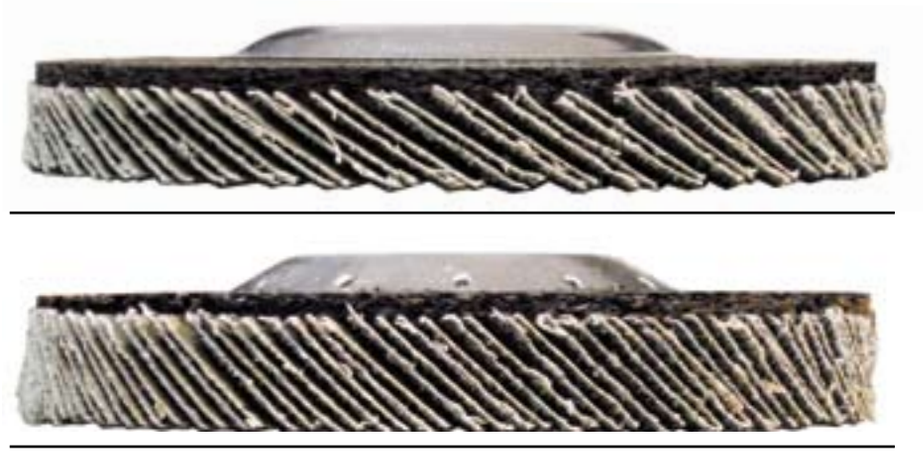
NARROW CROWN CLOTH (HT)

This type of assembly with a higher number of narrow flaps involves a narrower crown of abrasive cloth and flaps more inclined bringing the following advantages:

- *regular and total consumption of abrasive cloth (1/3 of the cloth not used does not remain on the disc, as it happens with the standard assembly).*
- *increase of removal speed thanks to the bigger cloth concentration on the outer part of the disc, where speed is higher.*
- *Constant removal capacity from the beginning to the end of the disc, thanks to the special geometry of flaps that being more, are more inclined than those of standard discs and bring better and constant renewal capacity of abrasive grains. The cloth is the best on the market and guarantees top level performances in lifetime and removal capacity. It is recommended to use powerful machines (at least 1.000 Watts).*

MOUNTING OF LARGE CROWN CLOTH (STANDARD)

Flaps are larger and less than those of the HT version. This type of assembly, less aggressive, is more suitable for edges and more "delicate" materials.Also suitable for less powerful machines.
Discs manufactured in this way have flaps of different hardness alternated in order to obtain an efficient and constant renewal of abrasive grain also with less inclined flaps.
Also in this case, cloths are the best on the market for this type of application ("softer" than those of the HT version).



Different inclination of flaps in assemblies with standard cloth and narrow crown cloth (HT).

Globe abrasive flap discs offer a wide range. Thanks to the fiberglass backing pad, the surface worked is not polluted, as it usually happens while grinding with discs with nylon backing pads. The special alumina zirconia cloths are suitable for grinding and finishing all types of steel (also alloy). Globe discs are manufactured and tested according to the European regulations respecting the maximum safety (EN13743).
Quality of abrasive cloths is of very high level, they get consumed regularly and always grant an excellent level of grain renewal and cutting. Cloth mounting can be made with the narrow crown (HT) patented version or with large flaps (traditional).
Flaps are carefully deposited to reach a perfect roundness and balancing for a precise, confortable work without vibrations and overheating. For special applications, discs with reduced diameter backing pad are available on request, where the prominent part of flaps is longer in order to offer more elasticity and softness (see photo).
The metal bushing in the center increases mechanical resistance and makes the disc highly safe.

Disc with cloth having prominent flaps and standard cloth.

ABRASIVE FLAP DISCS WITH FIBERGLASS BACKING PAD

IRON AND STEEL
CORUNDUM CLOTH

STANDARD ASSEMBLY			
SIZE (diam. - bore) mm	GRIT	ART. FLAT	ART. CONICAL
115 X 22,23	A 36	G2611	-
115 X 22,23	A 40	G2612	G2612 C
115 X 22,23	A 60	G2614	G2614 C
125 X 22,23	A 40	G2622	G2622 C
125 X 22,23	A 60	G2624	G2624 C
178 X 22,23	A 40	G2712	-
178 X 22,23	A 60	G2714	-

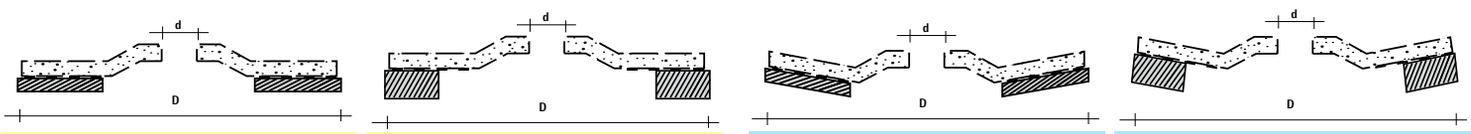
STAINLESS STEEL
ALUMINA ZIRCONIA CLOTH

STANDARD ASSEMBLY			
SIZE (diam. - bore) mm	GRIT	ART. FLAT	ART. CONICAL
115 X 22,23	Z 36	-	G2811 C
115 X 22,23	Z 40	G2812	G2812 C
115 X 22,23	Z 50	-	G2813 C
115 X 22,23	Z 60	G2814	G2814 C
115 X 22,23	Z 80	G2815	G2815 C
115 X 22,23	Z 120	G2817	G2817 C
125 X 22,23	Z 40	G2822	G2822 C
125 X 22,23	Z 60	G2824	G2824 C
125 X 22,23	Z 80	G2825	G2825 C
125 X 22,23	Z 120	G2827	G2827 C
178 X 22,23	Z 40	G2912	G2912 C
178 X 22,23	Z 60	G2914	-

HT ASSEMBLY			
SIZE (diam. - bore) mm	GRIT	ART. FLAT	ART. CONICAL
115 X 22,23	Z 40	G2812 HT	-
115 X 22,23	Z 60	G2814 HT	-
125 X 22,23	Z 40	G2822 HT	G2822 CHT
125 X 22,23	Z 60	G2824 HT	G2824 CHT
125 X 22,23	Z 80	G2825 HT	G2825 CHT

STAINLESS STEEL
CLOTH WITH CERAMIC ABRASIVE - SOLGEL

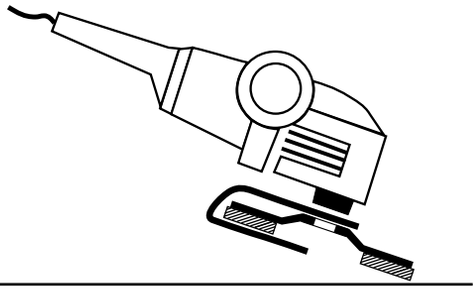
STANDARD ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. CONICAL
115 X 22,23	SG 40	G2852



FLAT | FLAT HT | CONICAL | CONICAL HT

N.B. For minimum orders of 1500 pcs, flap discs can be manufactured in diameters (mm): 115, 125, 180 in all grits (36-40-50-60-80-120) with corundum cloths or alumina zirconia cloths

SHEET 11



ABRASIVE FLAP DISCS WITH PLASTIC BACKING PAD. CORUNDUM CLOTH OR ALUMINA ZIRCONIA CLOTH.

NARROW CROWN ASSEMBLY (HT)

This type of disc has all the advantages described for HT discs with fiberglass backing pad (regular and complete consumption of cloth, higher removal speed, removal constancy from the beginning to the end of the disc). As it is more rigid than fiberglass discs, this type of disc needs still more to be used with powerful machines (at least 1000 Watts) that enhance their performances.

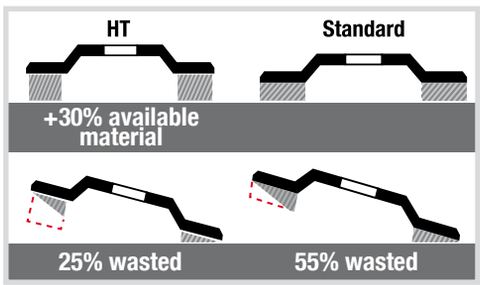
STANDARD ASSEMBLY

This type of assembly with large flaps, less aggressive, is more suitable for working on edges and more "delicate" materials. Also suitable on less powerful machines. Discs manufactured in this way have flaps of different hardness alternated in order to obtain an efficient and constant renewal of abrasive grain also with less inclined flaps. Also for this assembly, Globe discs are manufactured with the best cloths on the market.

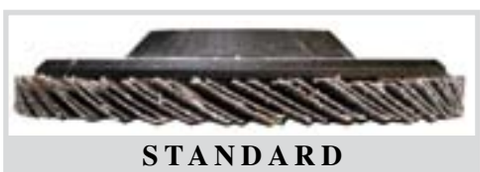
STANDARD ASSEMBLY ECONOMICAL VERSION (BASIC)

This type of discs contains less abrasive flaps than in the standard version. Cloths are of good level in order to grant excellent removal and finishing. Cloths used are softer than the other ones to grant a constant change of abrasive grains. Suitable also for not powerful machines.

Compared to fiberglass backing pad, the plastic backing pad gives the disc more rigidity.
Discs are available in the HT version (narrow crown structure), in the standard version or in the standard economical version both with zirconia cloths (suitable for grinding and finishing of all types of steel also alloy) and corundum cloths (suitable for iron and steel).
Also discs with plastic backing pad, as well as those with fiberglass backing pad, are built and tested according to the European regulations in conformity with maximum safety.
The quality of abrasive cloths is of very high level, they get consumed regularly, always granting an excellent level of change and cutting rate.
Among GLOBE new products, there is the new disc VORTEX HT, that combines:
-the cooling and ventilating effect given by the special backing pad
-the quick mounting given by the threaded bore
-the increased removal speed given by the narrow crown mounting of flaps.



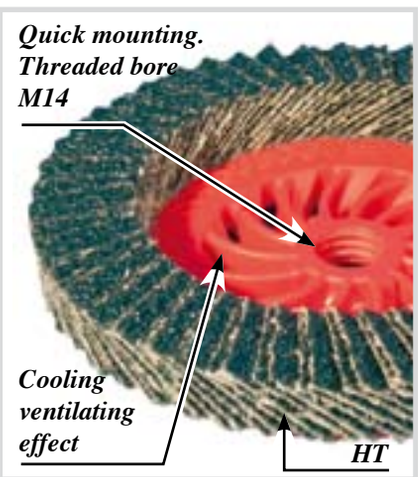
BASIC



STANDARD

HT

VORTEX HT



ABRASIVE FLAP DISCS WITH PLASTIC BACKING PAD

IRON AND STEEL
CORUNDUM CLOTH

STANDARD ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT
115 X 22,23	A 36	G3011
115 X 22,23	A 40	G3012
115 X 22,23	A 60	G3014
178 X 22,23	A 40	G3022
178 X 22,23	A 60	G3024

HT ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT HT
115 X 22,23	A 40	G3012 HT

BASIC ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT
115 X 22,23	A 40	GDLP115A040PLVE
115 X 22,23	A 60	GDLP115A060PLVE
115 X 22,23	A 80	GDLP115A080PLVE

STAINLESS STEEL
ALUMINA ZIRCONIA CLOTH

STANDARD ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT
115 X 22,23	Z 36	G3111
115 X 22,23	Z 40	G3112
115 X 22,23	Z 60	G3114
115 X 22,23	Z 80	G3115
115 X 22,23	Z 120	G3117
125 X 22,23	Z 40	G3132
125 X 22,23	Z 60	G3134
178 X 22,23	Z 40	G3122
178 X 22,23	Z 60	G3124

HT ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT HT
115 X 22,23	Z 40	G3112 HT
115 X 22,23	Z 50	G3113 HT
115 X 22,23	Z 60	G3114 HT
115 X 22,23	Z 80	G3115 HT
125 X 22,23	Z 40	G3132 HT
125 X 22,23	Z 60	G3134 HT

BASIC ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT
115 X 22,23	Z 40	GDLP115Z040PLVE
115 X 22,23	Z 60	GDLP115Z060PLVE
115 X 22,23	Z 80	GDLP115Z080PLVE
115 X 22,23	Z 120	GDLP115Z120PLVE

STAINLESS STEEL
CERAMIC CLOTH SOLGEL

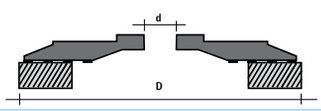
HT ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT HT
115 X 22,23	SG 40	G3152 HT

STAINLESS STEEL
ALUMINA ZIRCONIA CLOTH

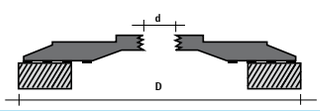
HT ASSEMBLY VORTEX		
SIZE (diam.) mm	GRIT	ART.
115 X M14	Z 40	G3112 HTV
115 X M14	Z 60	G3114 HTV
115 X M14	Z 80	G3115 HTV
125 X M14	Z 40	G3132 HTV
125 X M14	Z 60	G3134 HTV
125 X M14	Z 80	G3135 HTV

STAINLESS STEEL
ECONOMIC LINE

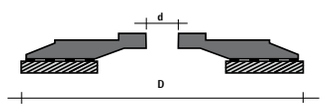
BASIC ASSEMBLY		
SIZE (diam. - bore) mm	GRIT	ART. FLAT
115 X 22,23	Z 40	GF3112
115 X 22,23	Z 60	GF3114



FLAT HT



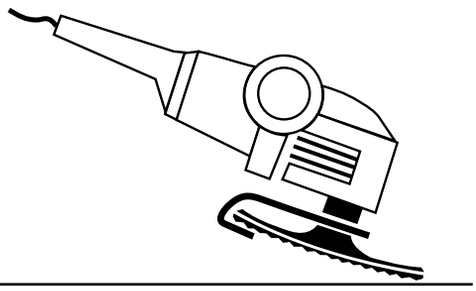
FLAT HT (ventilated) M14 threaded bore



FLAT

N.B. For minimum orders of 1500 pcs, flap discs can be manufactured in diameters (mm): 115,125,180 in all grits (36-40-50-60-80-120) with corundum cloths or alumina zirconia cloth.

SHEET 12

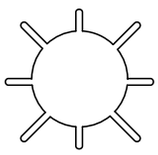


FLEXIBLE FIBRE SANDING DISCS.

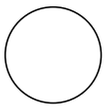
Fibre sanding discs are manufactured with fibers of the best quality. Great care has been taken to obtain homogeneous and accurate distribution of abrasive. Abrasive grains, exposed to a high potential electrostatic field, always turn their points upwards and the maximum cutting rate is reached.
Mixtures, made with corundum, alumina zirconia or silicon carbide allow to reach excellent performances on iron, steel, stainless steel and materials for construction industry. The special dressing, especially in the zirconium type, prevents overheating of work-pieces.
To be always used with the special backing pads.

AVAILABLE WITH THE FOLLOWING BORES:

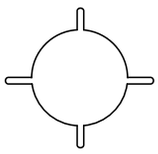
Star (standard):



Round (on request):



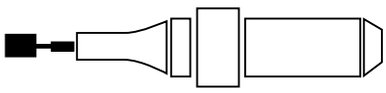
Cross (on request):

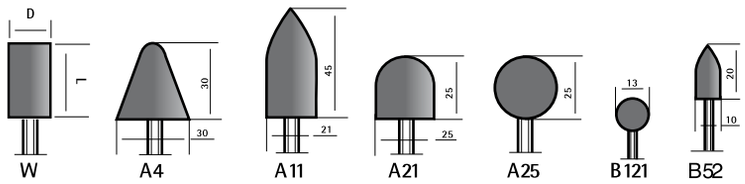


No other grains than those shown are available. Fiber sanding discs can be crowned on request, only in diam. 180, with 5% price increase (of the corresponding flat disc).

		CORUNDUM type 02A (IRON AND STEEL)	ALUMINA ZIRCONIA type 03A (STAINLESS STEEL)	SILICON CARBIDE type 02C (STONE)
SIZE (diam. - bore) mm	GRIT	ART. CODE	ART. CODE	ART. CODE
115 X 22,2	16	G3421	-	G3621
115 X 22,2	24	G3422	G3521	G3622
115 X 22,2	36	G3423	G3522	G3623
115 X 22,2	40	G3424	G3523	G3624
115 X 22,2	50	G3425	G3524	G3625
115 X 22,2	60	G3426	G3525	G3626
115 X 22,2	80	G3427	G3526	G3627
115 X 22,2	100	G3428	G3527	G3628
115 X 22,2	120	G3429	G3528	G3629
115 X 22,2	150	2000111522150	G3529	2000211522150
115 X 22,2	180	2000111522180	-	2000211522180
115 X 22,2	220	-	-	2000211522220
115 X 22,2	240	-	-	2000211522240
115 X 22,2	320	-	-	2000211522320
115 X 22,2	400	-	-	2000211522400
125 X 22,2	16	G3431	-	G3631
125 X 22,2	24	G3432	G3531	G3632
125 X 22,2	36	G3433	G3532	G3633
125 X 22,2	40	G3434	G3533	G3634
125 X 22,2	50	G3435	G3534	G3635
125 X 22,2	60	G3436	G3535	G3636
125 X 22,2	80	G3437	G3536	G3637
125 X 22,2	100	G3438	G3537	G3638
125 X 22,2	120	G3439	G3538	G3639
125 X 22,2	150	2000112722150	G3539	2000212722150
125 X 22,2	180	2000112722180	-	2000212722180
125 X 22,2	220	2000112722220	-	2000212722220
125 X 22,2	240	-	-	2000212722240
125 X 22,2	320	-	-	2000212722320
125 X 22,2	400	-	-	2000212722400
180 X 22,2	16	G3451	-	G3651
180 X 22,2	24	G3452	G3551	G3652
180 X 22,2	36	G3453	G3552	G3653
180 X 22,2	40	G3454	G3553	G3654
180 X 22,2	50	G3455	G3554	G3655
180 X 22,2	60	G3456	G3555	G3656
180 X 22,2	80	G3457	G3556	G3657
180 X 22,2	100	G3458	G3557	G3658
180 X 22,2	120	G3459	G3558	G3659
180 X 22,2	150	2000117822150	G3559	2000217822150
180 X 22,2	180	2000117822180	-	2000217822180
180 X 22,2	220	2000117822220	-	2000217822220
180 X 22,2	240	-	-	2000217822240
180 X 22,2	320	-	-	2000217822320
180 X 22,2	400	-	-	2000217822400

CERAMIC BONDED SHAFT-MOUNTED WHEELS.





Tab. 1: available shapes

Globe shaft-mounted wheels are suitable for grinding and fine finishing operations of stainless steel, iron and steel, cast iron.

The different specifications can be distinguished by the colour:

PINK:	***STEEL***
GREY-PINK:	***CAST IRON***
BLACK:	***STAINLESS STEEL***

IRON AND STEEL

CYLINDRICAL

SHAPE	SIZE (D X L X s) mm	GRIT	COD. ARTICOLO
W	10 X 30 X 6,0	60 P	G3711
W	15 X 20 X 6,0	60 P	G3721
W	20 X 20 X 6,0	46 P	G3731
W	20 X 25 X 6,0	46 P	G3741
W	20 X 30 X 6,0	46 P	G3751
W	25 X 25 X 6,0	46 P	G3761
W	30 X 10 X 6,0	46 P	G3811
W	30 X 20 X 6,0	46 P	G3821
W	30 X 30 X 6,0	46 P	G3831
W	35 X 35 X 6,0	46 P	G3841
W	40 X 20 X 6,0	46 P	9030400206060
W	40 X 30 X 6,0	46 P	G3851
W	40 X 40 X 6,0	46 P	G3861

SPECIALS SHAPES

SHAPE	SIZE (D X L X s) mm	GRIT	COD. ARTICOLO
A4	30 X 30 X 6,0	46 P	G3911
A11	21 X 45 X 6,0	46 P	G3921
A21	25 X 25 X 6,0	46 P	G3931
A25	25 X - X 6,0	46 P	G3941
B121	13 X - X 6,0	46 P	G3951
B52	10 X 10 X 6,0	60 P	G3961

STAINLESS STEEL

CYLINDRICAL

SHAPE	SIZE (D X L X s) mm	GRIT	ART. CODE
W	10 X 30 X 6,0	30 Q	G3711-INOX
W	15 X 20 X 6,0	30 Q	G3721-INOX
W	20 X 20 X 6,0	30 Q	G3731-INOX
W	20 X 25 X 6,0	30 Q	G3741-INOX
W	20 X 30 X 6,0	30 Q	G3751-INOX
W	25 X 25 X 6,0	30 Q	G3761-INOX
W	30 X 10 X 6,0	30 Q	G3811-INOX
W	30 X 20 X 6,0	30 Q	G3821-INOX
W	30 X 30 X 6,0	30 Q	G3831-INOX
W	40 X 20 X 6,0	30 Q	9030400206061
W	40 X 30 X 6,0	30 Q	G3851-INOX

SPECIALS SHAPES

SHAPE	SIZE (D X L X s) mm	GRIT	ART. CODE
A4	30 X 30 X 6,0	30 Q	G3911-INOX
A11	21 X 45 X 6,0	30 Q	G3921-INOX
A21	25 X 25 X 6,0	30 Q	G3931-INOX
B52	10 X 20 X 6,0	60 Q	G3961-INOX

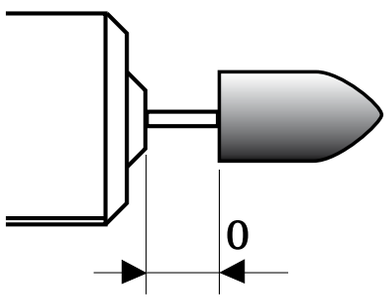
CAST IRON

CYLINDRICAL

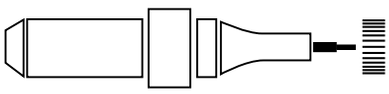
SHAPE	SIZE (D X L X s) mm	GRIT	ART. CODE
W	40 X 20 X 6,0	24-30 Q	9030400206083
W	40 X 20 X 6,0	24-30 S	9030400206085
W	50 X 10 X 6,0	24-30 Q	9030500106083

*On request shaft mounted wheels can be manufactured with 8 mm shaft or threaded shaft with 30% price increase. Available in different shapes **(Tab.1)**.*

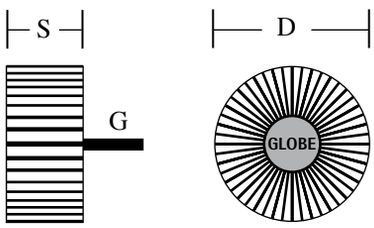
NOTES FOR THE USE:
For a better performance, keep the projecting distance "0" in the grinder, as small as possible.



SHEET 14



SHAFT-MOUNTED FLAP WHEELS.



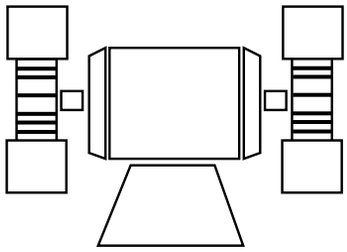
Globe shaft-mounted flap wheels are characterized by top quality cloth and excellent fabric of the support cloth that does not burn during use and does not produce bad smells; it wears evenly ensuring optimum change and cutting rate.

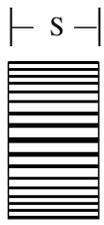
On request, wheels with 8 mm shaft can be manufactured.
Thanks to the noiselessness during use and perfect balancing, they represent an excellent tool for finishing and silking jobs.

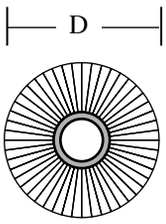
Zirconium wheels are available with 15% price increase, minimum order quantity is 100 pieces per type. Silicon carbide wheels are available with 10% price increase.
Add suffix C to the article code to identify corundum wheels.

SIZE (mm)			GRIT SIZE						
DIAM. (D)	THICK. (S)	SHAFT (diameter)	40	60	80	120	180	220	320
30	10	6	G4011	G4012	G4013	G4014	G4015	G4016	G4017
30	15	6	G4021	G4022	G4023	G4024	G4025	G4026	G4027
30	20	6	G4031	G4032	G4033	G4034	G4035	G4036	G4037
40	10	6	G4111	G4112	G4113	G4114	G4115	G4116	G4117
40	15	6	G4121	G4122	G4123	G4124	G4125	G4126	G4127
40	20	6	G4131	G4132	G4133	G4134	G4135	G4136	G4137
40	25	6	G4141	G4142	G4143	G4144	G4145	G4146	G4147
40	30	6	G4151	G4152	G4153	G4154	G4155	G4156	G4157
50	10	6	G4211	G4212	G4213	G4214	G4215	G4216	G4217
50	15	6	G4221	G4222	G4223	G4224	G4225	G4226	G4227
50	20	6	G4231	G4232	G4233	G4234	G4235	G4236	G4237
50	25	6	G4241	G4242	G4243	G4244	G4245	G4246	G4247
50	30	6	G4251	G4252	G4253	G4254	G4255	G4256	G4257
60	15	6	G4311	G4312	G4313	G4314	G4315	G4316	G4317
60	20	6	G4321	G4322	G4323	G4324	G4325	G4326	G4327
60	25	6	G4331	G4332	G4333	G4334	G4335	G4336	G4337
60	30	6	G4341	G4342	G4343	G4344	G4345	G4346	G4347
60	40	6	G4351	G4352	G4353	G4354	G4355	G4356	G4357
60	50	6	G4361	G4362	G4363	G4364	G4365	G4366	G4367
80	20	6	G4421	G4422	G4423	G4424	G4425	G4426	G4427
80	30	6	G4431	G4432	G4433	G4434	G4435	G4436	G4437
80	40	6	G4441	G4442	G4443	G4444	G4445	G4446	G4447
80	50	6	G4451	G4452	G4453	G4454	G4455	G4456	G4457

ABRASIVE FLAP WHEELS.







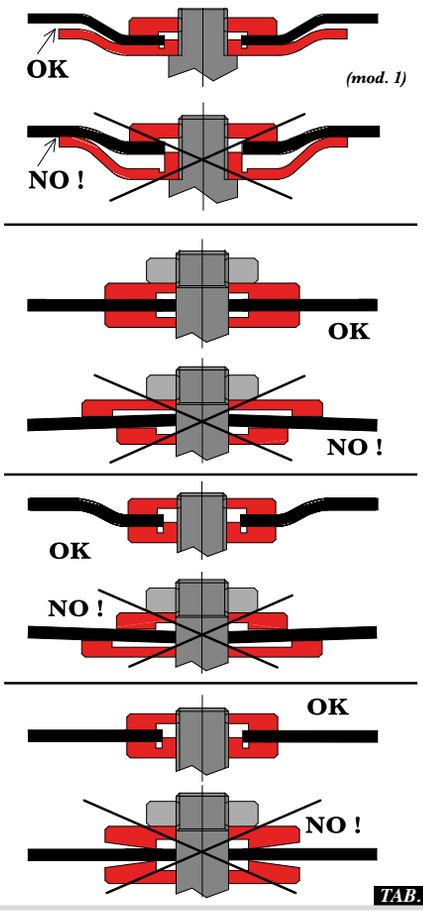
Zirconium wheels are available with 18% price increase, minimum order quantity per type is of 30 pieces. Add suffix Z to the article code to identify corundum wheels.

SIZE (mm)			GRIT SIZE					
DIAM. (D)	THICK. (S)	BORE	40	50	60	80	100	120
100	30	26,0	G4511	G4512	G4513	G4514	G4515	G4611
100	50	26,0	G4521	G4522	G4523	G4524	G4525	G4621
165	30	54,0	G4541	G4542	G4543	G4544	G4545	G4641
165	50	54,0	G4551	G4552	G4553	G4554	G4555	G4651
200	30	54,0	G4561	G4562	G4563	G4564	G4565	G4661
200	50	54,0	G4571	G4572	G4573	G4574	G4575	G4671
250	30	100,0	G4581	G4582	G4583	G4584	G4585	G4681
250	50	100,0	G4591	G4592	G4593	G4594	G4595	G4691

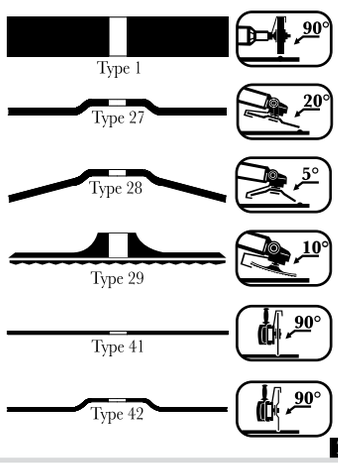
SIZE (mm)			GRIT SIZE				
DIAM. (D)	THICK. (S)	BORE	150	180	220	240	320
100	30	26,0	G4612	G4613	G4614	G4615	G4616
100	50	26,0	G4622	G4623	G4624	G4625	G4626
165	30	54,0	G4642	G4643	G4644	G4645	G4646
165	50	54,0	G4652	G4653	G4654	G4655	G4656
200	30	54,0	G4662	G4663	G4664	G4665	G4666
200	50	54,0	G4672	G4673	G4674	G4675	G4676
250	30	100,0	G4682	G4683	G4684	G4685	G4686
250	50	100,0	G4692	G4693	G4694	G4695	G4696

FLANGE COUPLES TO REDUCE THE BORE OF THE FLAP WHEEL	
ART. CODE	DESCRIPTION
2300000000100	Flange couple to reduce bore in diam. 26 mm wheels
2300000000165	Flange couple to reduce bore in diam. 54 mm wheels
2300000000250	Flange couple to reduce bore in diam. 100 mm wheels

OPERATING AND SAFETY INSTRUCTIONS



TAB. 2



TAB. 3

TAB. 4

OPERATING AND SAFETY INSTRUCTIONS FOR THE USE OF RESIN-BONDED, RIGID AND SEMI-RIGID ABRASIVE PRODUCTS. READ CAREFULLY AND SHARE WITH ALL OPERATORS.

Abrasive wheels can generate dangerous situations and/or create accidents. Read carefully the following information and the labels' indications; operators must be instructed to use abrasive product; operators must comply with the laws and decrees of their country and the safety/operating instructions of the machines on which abrasive wheels are mounted. Do not allow untrained/incompetent operators to use abrasive wheels. For further information and to consult the MSDS (Material Safety Data Sheet), visit ***www.globeabrasives.com/safety*** *and contact us at* ***www.globeabrasives.com/contacts****.*

Abrasive wheels are relatively fragile: handle and use with care. The use of damaged, altered, excessively worn wheels, the use for applications other than the ones for which they were manufactured, the use on different materials than those for which they were designed and the non correct installation can cause accidents, damages and serious injuries to persons. Cutting, grinding and polishing applications can free hazardous contaminants in the air. Use appropriate powder/fumes sution systems and wear protection devices for respiratory tract.

RECALLS ON PRODUCTION BATCHES.

Before using an abrasive product, check the website ***www.globeabrasives.com/recalls,*** *and, following the instructions, verify if the product is part of a recalled batch. Should this be the case, do not use the product, isolate it and all the other wheels coming from the same box/batch and contact our customer service.*

EXPIRY.

Lifetime of resin-bonded abrasive wheels is ***3 years*** *from production date* ***if reinforced*** *(BF on label) or* ***2 years if without reinforcement*** *(B on the label). The expiry date can be shown on the boxes, on the central metal hub or through cuts on the label perimeter.* ***Never use expired wheels****. These wheels are manufactured according the following norms:* ***EN12413*** *(Europe),* ***ANSI B7.1*** *(USA),* ***AS 1788.1*** *(Australia),* ***OSA*** *(Organization for the Safety of Abrasives).*

CHECKING, TRANSPORT, HANDLING AND STORAGE.

Verify packaging damages; refuse damaged packagings; handle with care and avoid shocks; store at temperatures between 5°C (41°F) and 45°C (113°F) and relative humidity between 45% and 65%; do not expose wheels to frost and high humidity conditions, water or chemical products such as solvents. Always use oldest wheels, but make sure they are not expired. For a correct choice, consult our catalogue or our guide at: ***www.globeabrasives.com/selection****.*

WHEEL INSPECTION.

Before mounting the wheel, make sure it is not cracked or damaged. Do not use wheels if damaged (fig.7) or expired. Carry out a sound check by striking one side of the disc with a non metallic object (screwdriver handle). If the sound is damp and not clear, reject the wheel. Do not use wheels that were exposed to too high/too low temperatures/humidity or that have been artificially or accidentally wet.

MACHINE INSPECTION.

Check flanges, backing pads, support pivots and adapters. Make sure the grinder is suitable for the type of work to be made and that the wheel is adequate for the grinder. Always use with suitable safety guard (fig.6). Always direct the open part of the safety guard to a direction opposite to the operator and make sure the safety guard is adjusted and firmly locked. Keep machines in an efficient state. Do not use grinders that do not show their rotating speed on their plate.

EYES, FACE AND BODY PROTECTION.

Use eye and face protections as masks, screens and glasses (fig.2). Wear hats or head protection, heavy leather apron, safety shoes, tight fitting clothes. The noise generated by the wheels can exceed 80 dBA. A prolonged exposure can cause permanent damages to hearing. Use ear protection such as earplugs and anti-noise screens (fig.3). The vibrations generated by the wheels can cause damages to the human body. Adopt work turnover and resting breaks. Carry out a specific evaluation of the noise and vibrations risk and adopt suitable protection and precautions. Wear protective gloves that fully cover also wrists (fig.4).

Carry out an evaluation of the physical, chemical risks associated with the use of abrasive products and adopt suitable precautions and protective measures. Protect the respiratory tract: use masks with special filters, air respirator systems, protective measures of the working environment such as ventilation systems, filtration and powder/fume suction (fig.5). Nearby personnel must be protected with all the above precautions/measures.

ASSEMBLY INSTRUCTIONS.

Follow the assembly instructions supplied with the machine and the use restrictions shown on the wheel label (fig.1).

Make sure the maximum turning speed (RPM) of the machine is always, in any operating condition, lower than or equal to the speed shown on the wheel label. A transversal coloured stripe on the wheel label indicates also its operating peripheral speed according to the following scheme: ***TAB.1****:*

None	*lower than 50 m/s*	*Blue*	*up to 50 m/s*
Yellow	*up to 63 m/s*	*Red*	*up to 80 m/s*
Green	*up to 100 m/s*		

TAB. 1

Check that dimensions and shape of the wheel correspond to those allowed for the machine. Check that the wheel is wholly contained within the safety guard of the grinder. Do not modify the clamping flanges. Do not mount more than one wheel in the spindle. Before mounting or dismounting an abrasive wheel, disconnect the power supply (electric energy, compressed air, etc.). Do not force wheels during assembly. Avoid clamping with too high tightening torque. Once the wheel is installed, make sure that it rotates freely by turning it by hand.

Check the presence, correct installation and securing of the safety guard. Connect the power supply, start the machine and make it turn for at least 30". During this test, do not keep the open area of the safety guard oriented towards the operator and other personnel. In case anomalies, excessive vibrations, irregular rotation should occur, let the grinder stop naturally, disconnect power supply, remove the wheel and check its assembly. If the problem persists, reject the wheel and inform the supplier of the problem. Some types of wheels can be supplied with mounting blotters that have to be mounted between the flanges and each side of the disc to compensate slight irregularities of surfaces between flanges and wheels.

CLAMPING FLANGES.

Make sure the flanges are flat, clean and smooth. Always use suitable flanges ***TAB.2****. Flanges must have the same diameter and the same shape (recesses) towards both faces of the wheel; make exception the raised hub flanges* ***(mod. 1*** *of* ***TAB.2)****.*

Flanges diameter: *for cutting and grinding wheels is normally equal to 1/3 of the wheel diameter.*

Exceptions: *reinforced depressed center grinding wheels (Type 27), reinforced conical (Type 28), semi-flexible reinforced (Type 29), reinforced depressed centre cutting wheels (Type 42) and flat (Type 41) up to diameter 230mm, that must have the following flanges diameters:*

-19mm (wheel diameter ≤100mm and bore ≤10mm)
-32mm (wheel diameter ≤100mm and bore between 10 and 16mm)
-41mm (wheel diameter between 100 and 230mm, bore 22.23mm).

INDICATIONS SHOWN ON WHEEL LABEL.

Specifications characterizing the wheel: *wheel dimension; Type of abrasive (A, Z, C, SG); granulometry of the abrasive (16,…,100) expressed in Mesh.*

Hardness: *scale of toughness shown with letters from A (very soft) to Z (very hard). Resin binder shown by "B" and reinforcement structure shown by "F" on label.*

Maximum allowed turning speed (RPM) and maximum allowed peripheral speed (m/s): the most common peripheral speeds are 50-63-80-100m/s.

Reference norms: *EN12413, ANSI B7.1, etc.*

Indications on the workable materials: steel, aluminum, cast iron, stainless steel, stone, marble, etc.

Shape types TAB.3: *(Type 1) straight grinding wheel; (Type 27)depressed centre grinding wheel; (Type 28) conical grinding wheel; (Type 29) depressed centre semiflexible grinding wheel; (Type 41) flat cutting wheel; (Type 42) depressed centre cutting wheel.*

Pictograms TAB.4: *from fig.1 to fig.7 explained above; (fig.8) do not use for side grinding; (fig.9) do not use on portable machines (wheels made only for stationary machines); (fig.10) not suitable for wet grinding/cutting; (fig.11) only suitable for wet grinding/cutting.*

USE INSTRUCTIONS AND RESTRICTIONS.

Use the abrasive wheels only and exclusively on materials, purposes and machine types they have been designed for; do not use cutting wheels (Ex. Type EN 41 and 42) for grinding purposes and do not apply side loads on them; always hold the grinder with both hands, grind or cut progressively, slowly and delicately; do not apply too much pressure on the wheels; do not make curved cuts; do not use the disc's side for grinding if not expressly indicated (Ex. Type EN 1); do not cut or grind pieces subject to forces or pressures that could be released due to these operations; remove all combustible, flammable or explosive materials from the working area. Firmly fix the work pieces before starting to work.

Dispose of the products according to the National laws in force in your country.

Member of

Organization
for the Safety of Abrasives

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