blasting wheel Turbine

The abrasive propelling Wheel that use blades or vanes require about 10% of the horsepower requires by air blast systems to throw equal volumes of abrasive at the same velocities.the power lossed in an airless system are the friction between the airless abrasive blast wheels are generally of the blade type,as shown in Fig.1,these wheels may have one or two side plates,one of which is attached to the shaft bearings,and belt drive,or the side plates,one of which

Is attached directly to the shafe of a suitable motor.the side plate holds four to twelve throwing

Bladed,depending on the size of the wheel.blade tip diameters range from 205 tp 660mm(8 to 26 in.)and blade widths range from 40 to 125mm (1.5 to 5 in.),rotational speeds range from 500 to 4000 rev/min or more.usable abrasive velocities range from 15m/s (50 ft/s) to 122m/s(400 ft/s),with 75m/s (245ft/s) the most widely used velocity.abrasive flow rates with steel shot range from 23kg/min (50lb/min) up to 1040kg/min (2300lb/min) with a 100hp motor.

Figure 1 also shows the operation of a blade-type wheel. a controlled flow of abrasive (through a valve not shown) is fed by gravity into an abrasive feed spout from which it flows into a rotating vaned impeller.the impeller rotates at the same speed as the bladed wheel,and the number of vanes is equal to the number of wheel blades.the impeller roatated in a stationary cylinder (referred to as a control cage pr impeller case).that is equipped with an opening that may be rotated and locked in a preferred postion.as the impeller forces the abrasive out of the control cage opening.each of the blades picks up a metered amount of abrasive at the end of the blade and accelerates the abrasive to produce a tent blast pattern, as shown.

Centrifugal blast wheel units are enclosed in housing to prevent the discharge of stray abrasive,the principal wearing parts of the blast wheel assembly are the impeller,control cage,wheel blades,and housing liners,these parts are most ecomomically made of high-alloy cast iron,and each can be individually replaced.unalloyed cast iron parts, although less expensive,have a very short lift under normal operating conditions.

The life of these parts is influenced primarily by the type and condition of the abrasive medium and contaminants picked up in the cleaning process,abrasive materials are discussed in depth later in this section.clean steel shot provides the longest useful l life of wheel and guard housing liners,much greater wear results from the use of nonmetallic of abrasive in various conditions on the life of the components of a caused by glass beads,nonferrous shot,or the agricultural abrasives frequently used in deburring and special finishing applications.

The HQ03 series of blast wheels have the following type:

- HQ034,I,II，III A （5.5,7.5,11,15,18.5KW） direct centrifugal blast wheels
- HQ034,I,II,III B(11,15,18.5KW) double wheel hub,belt driven centrifugal blast wheels

¯ HQ035I,II (18.5,22KW) double wheel hub, belt driven centrifugal blast wheels
¯ HQ035 (18.5KW) single wheel hub, belt driven curve blade centrifugal blast wheels
¯ HQ036I,II (22,30KW) single wheel hub, belt driven curve blade centrifugal blast wheels

The general technical index

Model	Diameter. of the blade size (mm)	The width of the blade (mm)	The speed of the impeller (r/min)	Shot velocity (m/s)	Shot amount (kg/min)	Motor type	Motor power KW	Belt QTY	Blade QTY	Driven type
HQ034	380 (single)	62	2900	63	100	C180M	5.5		8	Motor direct driven beeline blade
HQ034I	400	80	2930	73	120	C180M	7.5		8	
HQ034II **A**	420	80	2930	74	180	C180M	11		8	
HQ034III **A**	420	80	2930	74	250	C180M	15		8	
HQ034III **A**	420	80	2930	74	320	C180M	18.5		8	
HQ034II **B**	420	80	2930	74	180	C180M	11	6	8	Belt driven beeline blade
HQ034III **B**	420	80	2930	74	250	C180M	15	6	8	
HQ034III **B**	420	80	2930	76	320	C180M	18.5	6	8	
HQ035I	450	100	2940	78	320	C180M	18.5	6	8	
HQ035II	450	100	2940/1470	78	350	C180M	22	4	8	
HQ035	492 (single)	88	1470	82	320	C180M	18.5	4	8	Belt driven curve blade
HQ036I	492 (single)	88	1470	82	350	C180M	22	4	8	
HQ036II	492 (single)	88	1470	82	480	C180M	30	4	8	

	Notice. : 1. Q034A and Q034B is two different blast wheels. 2. All the Q034B centrifugal blast wheels adopts B series narrow V type belts
	Warning ! 1. the diferent motor power assembled in the blast wheel, the according shot amount technical index is also different.

Technical parameters for blast turbines					
Model No.	Parameter of impeller (mm)	Speed of impeller (r/min)	Speed of projectile (m/s)	Capacity (Kg/min)	Power (kw)
ZLHQ034	380	2900	73	120	7.5
HQ034ZL	400	2960	73	160	11
HQ034(I,II)	420	2450	74	250	15
HQ035(I,II)	492	2600	78	360	22
HQ0345	450	2600	78	480	30
HQ038	500	2370	71	970	75