



Technical

DETERMINING PULLEY AND SHAFT DIAMETER

When calculating horsepower, use following charts to determine proper shaft and pulley diameter. This will ensure that the pulley and shaft that you select will be of the proper size (diameter) to adequately handle the loading and effective belt pull on the unit.

In Table I, use 180° arc of contact for end drives; 210° for center drives. Multiply figure shown by belt width to find the effective belt pull of a pulley. After calculating pulley diameter, shaft diameter must be determined. Table II specifies effective belt pull rating for shafts at selected pulley face width.

TABLE I

PULLEY DIAMETER	ARC OF CONTACT / DRIVE	
	180° / END	210° / CENTER
4"	40# PIW BELT	28# PIW BELT
8"	85# PIW BELT	60# PIW BELT
12"	125# PIW BELT	90# PIW BELT
18"	230# PIW BELT	170# PIW BELT
24"	345# PIW BELT	250# PIW BELT

TABLE II

PULLEY FACE WIDTH	SHAFT DIAMETER				
	1-3/16"	1-7/16"	1-15/16"	2-7/16"	2-15/16"
12"	1000	1500	3700	6300	10600
14"	920	1500	3700	6300	10600
18"	670	1200	3700	6300	10600
20"	590	1100	3500	6300	10600

22"	530	950	3100	6300	10600
26"	440	790	2600	5600	10600
32"	350	620	2100	4400	9100
38"	290	510	1700	3700	7500
44"	240	440	1400	3100	6400
51"	210	370	1200	2700	5500
57"	180	330	1100	2400	4900