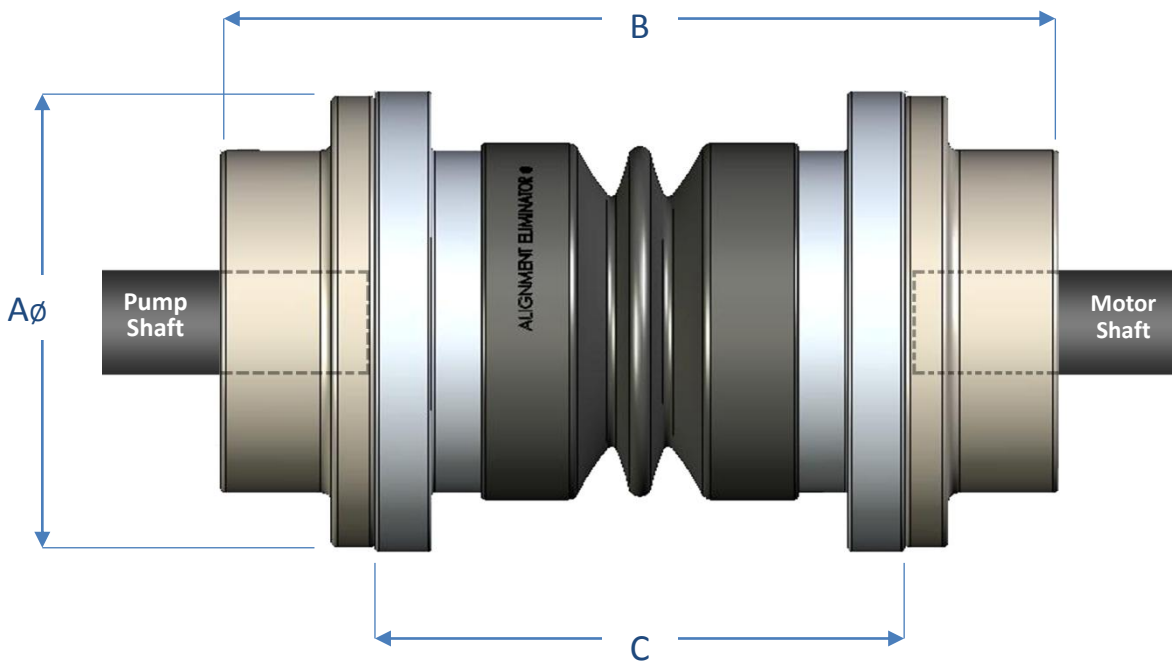


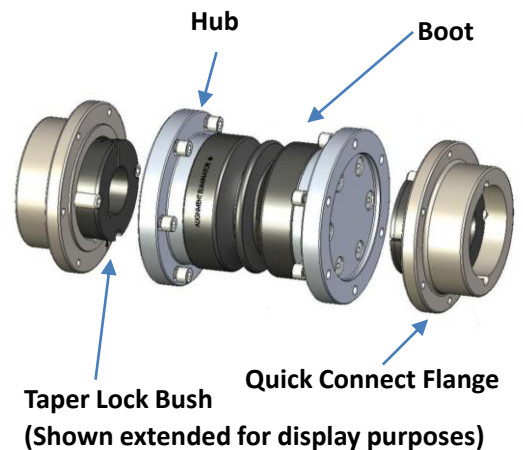
PARAMETER	UNIT	AE1	AE2	AE3	AE4	AE5
MAX. SPEED	RPM	3500	3500	3500	3500	3500
MAX. MISALIGNMENT ANGLE	Degrees°	6	6	6	6	6
MAX. SERVICE TEMPERATURE	°C	75	75	75	75	75
DIMENSION A $\varnothing$	mm	147	148	215	253	278
DIMENSION B Nominal ( $\pm$ )	mm	153 ( $\pm$ 7)	237 ( $\pm$ 6)	402 ( $\pm$ 10)	424 ( $\pm$ 12)	448 ( $\pm$ 12)
DIMENSION C OPTIMAL SHAFT GAP	mm	89	148	300	297	321

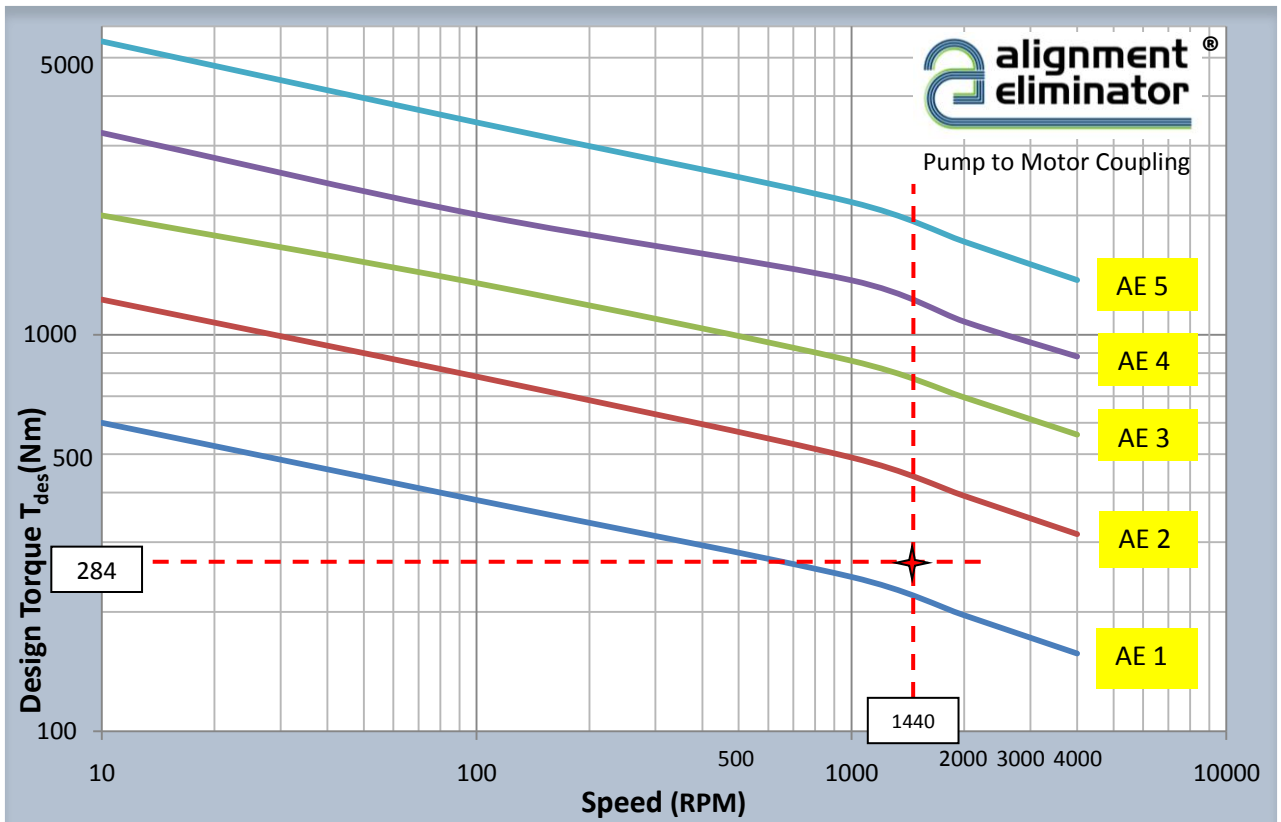
Specifications and dimensions subject to change without notice. Last updated 02/11/10  
AE1 available by special request. Please contact Thompson Couplings Ltd.



## MATERIALS

	STANDARD DUTY	EXTREME DUTY
BOOT	Elastomer	Viton <sup>®</sup>
FLANGES	Zinc Plated Steel	Stainless Steel
HUBS	Aluminium	Stainless Steel
BUSH	Steel	Zinc Plated Steel





Please refer to sizing calculation for accurate selection.

AE SELECTION GRAPH

**DESIGN GUIDE & SIZING INSTRUCTIONS:**

- DETERMINE NOMINAL TORQUE (Nm) FOR APPLICATION =  $T_{nom}$
- DETERMINE MACHINE SERVICE FACTOR FROM TABLE = **MSF**
- DETERMINE DUTY CYCLE FACTOR FROM FORMULA = **DCF**
- DETERMINE ANGLE FACTOR FOR COUPLING FROM FORMULA = **AF**
- CALCULATE DESIGN TORQUE (Nm) FROM FORMULA =  $T_{des}$
- VIEW GRAPH USING DESIGN TORQUE ( $T_{des}$ ) AND SHAFT SPEED (rpm)
- SELECT APPROPRIATE AE COUPLING ABOVE INTERSECTION POINT.

**DUTY CYCLE FACTOR – DCF**

FROM THE REQUIRED OPERATION HOURS PER DAY (hpd):

$$DCF = 0.5 \times \sqrt[3]{HPD}$$

Service interval of the AE coupling is based on 3 years operation (8 hours pd, 25 days pm = 7,200 hours)

**ANGLE FACTOR - AF**

OPERATING ANGLE ( $A^\circ$ ) OF THE AE COUPLING IS ADJUSTABLE WITH THE INSTALLATION:

$$AF = 1 - 0.035 \times A^\circ$$

**DESIGN TORQUE –  $T_{des}$**

$$T_{des} = \frac{T_{nom}}{AF} \times DCF \times MSF \text{ (Nm)}$$

**Example:**

A 35kW electric motor driven centrifugal water pump operates at 1440rpm for 12 hours per day. Installation shows the maximum misalignment angle for the shafts will be 2 degrees.

$T_{nom} = 9555 \times 35(\text{kW})/1440(\text{rpm}) = 232\text{Nm}$

**MSF = 1** (electric motor with no pulsations)

**DCF = 1.14**

**AF = 0.93**

$T_{des} = 232 \times 1.14 \times 1/0.93 = 284\text{Nm}$

From the graph - select an AE 2 coupling

Machine Service Factor	MSF
Electric motor	1
Petrol engine (4 cyl +)	1.25
Machinery with minor vibrations	1.5
Petrol engine (3 cyl -)	1.5
Diesel engine (4 cyl +)	2
Diesel engine (3 cyl -)	3
Machinery with large impact loads	3