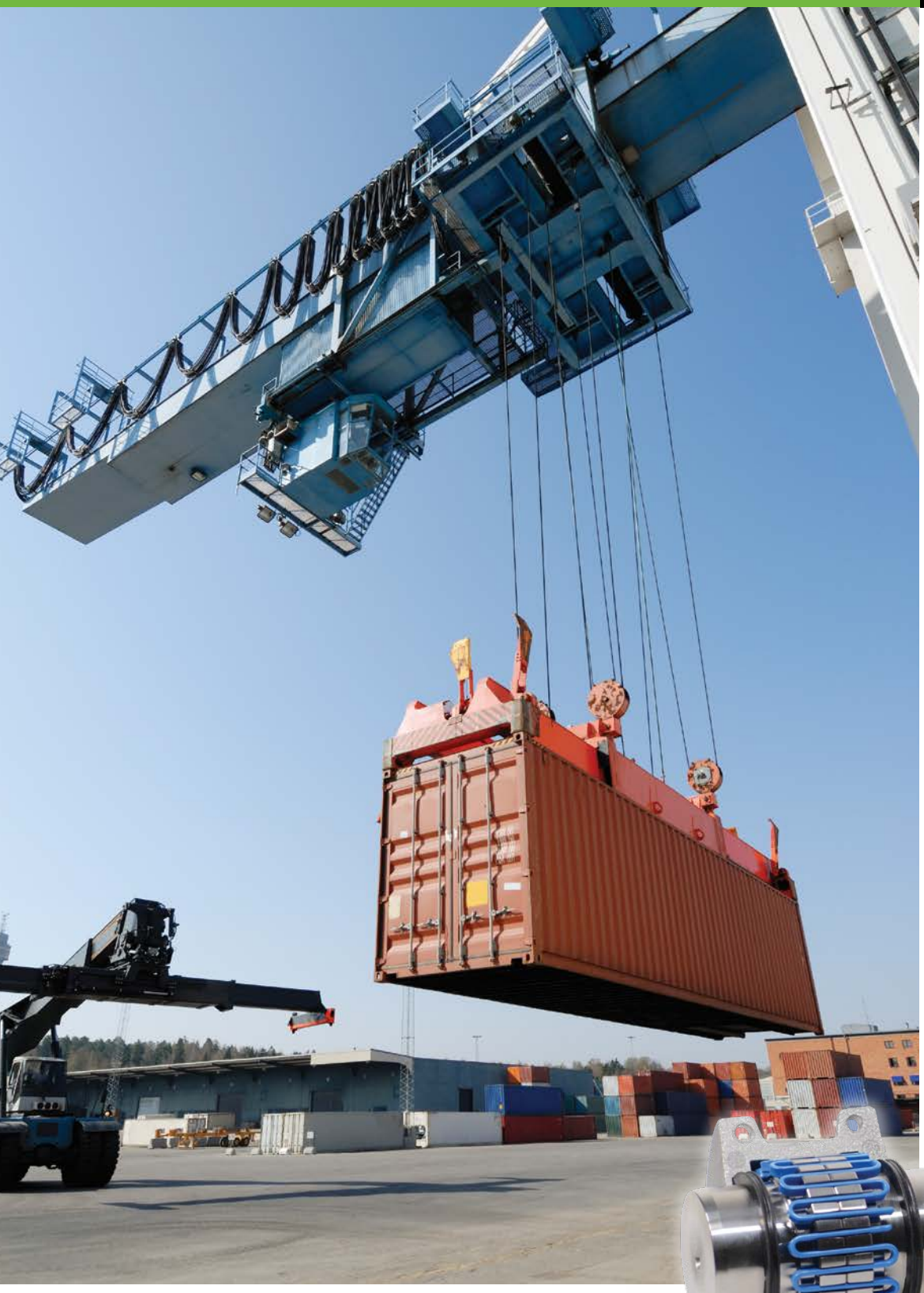
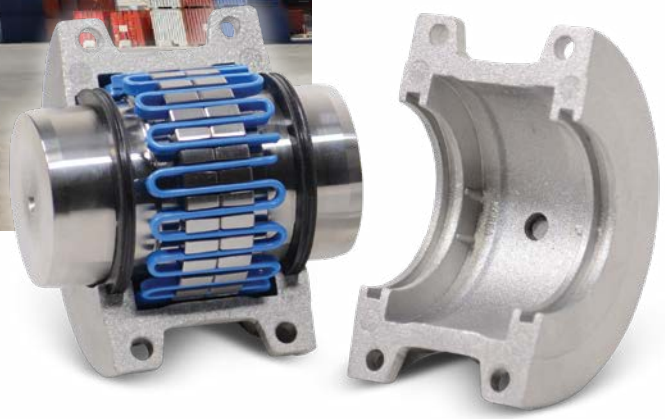


2000 Series Taper Grid Resilient Couplings

for Protection from Shock, Misalignment and Vibration



BIBBY TURBOFLEX™
A REGAL REXNORD BRAND

HUCO™
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BIBBY TAPER GRID RESILIENT COUPLINGS

Dr. James Bibby originally invented the Resilient Coupling in 1917 and the 2000 series is the latest development of this well accepted product.

This Bibby Turboflex product has become universally accepted where reliable protection against shaft misalignment, vibration and shock is desirable.

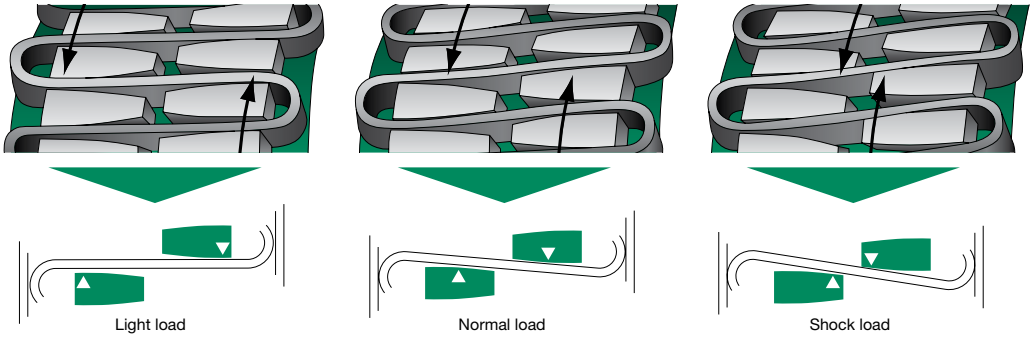
Since those early days refinements in design and material specifications have kept pace with advancing technology, achieving significant improvements in power/weight ratios.



Principles

Positive protection against the damaging effects of shock loads, impact loads and vibration.

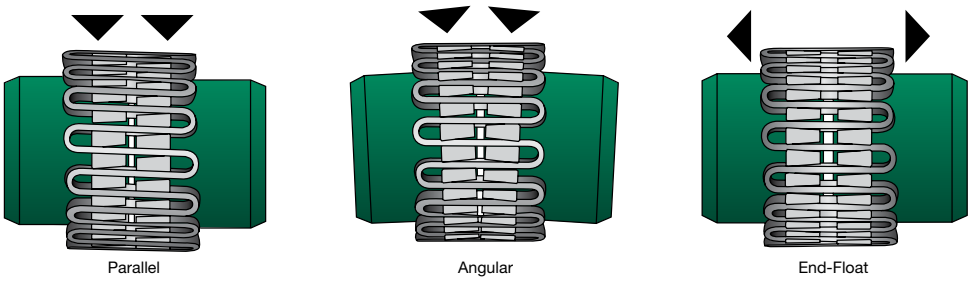
The Series 2000 is torsionally flexible. The circumferential flexibility is progressive due to the curved profile of the grooves – 'state-of-the-art' in resilient coupling design.

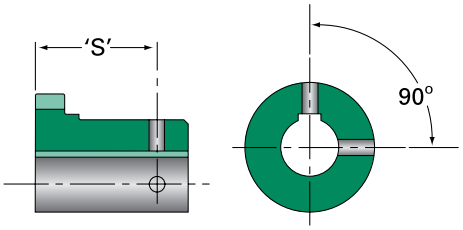


Accommodating Shaft Misalignment and End-Float

The Series 2000 will accommodate combinations of misalignment present at set-up or occurring during machine displacement, settlement, etc.

Limited End-Float kits are available on request.





Set Screw Ø x Length (Cone Point)	Position 'S' from Hub Faces
M5 X 5	2020 = 35 2030 = 40
M6 X 6	2040 = 40 2050 = 45 2060 = 53
M8 X 8	2070 = 54 2080 = 65
M10 X 10	2090 = 72

Recommended Fits Between Shafts and Hubs

Coupling bore tolerances for sizes up to and including 2090T can be specified to suit a transition fit with the shaft. In these instances axial restraint of the hub should be provided by set screws. Relative sizes and positions are given in the table at the left.

For sizes above 2090T or where interference fits are preferred for smaller coupling sizes, bore tolerances should provide an interference fit between shaft and hub of 0.0002 to 0.0007mm per mm of diameter.



Versatile Design

Both 2000H and 2000V couplings feature identical hubs and grid springs, the different cover styles endowing the units with great versatility - one is horizontally split, the other is vertically split.

All coupling components are designed to be interchangeable with other taper grid couplings.



Easy Installation and Maintenance

The grid springs are easily installed by hand or with a soft mallet. The cover fasteners can be tightened with standard wrenches. Every Bibby Turboflex Series 2000 coupling is delivered with detailed installation instructions.

Periodic lubrication of the coupling is required and each cover half is supplied with standard plugs which can be easily removed for re-lubrication. Extended lubrication periods and enhanced coupling life can be achieved by using high performance lubricants referred to in the maintenance instructions.

COUPLING SELECTION PROCEDURE

Table 1 – Service Factors

Complimentary to customers special knowledge of their own equipment

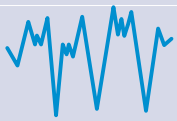
Torque Demands Driven Machine	Typical applications for electric motor or turbine driven equipment	Typical Service Factor
	Constant Torque such as Centrifugal Pumps, Blowers and Compressors	1
	Continuous duty with some torque variations including Extruders, Forced Draft Fans	1.5
	Light shock loads such as Briquetting Machine, Rubber Calendar or Crane and Hoist	2
	Moderate shock loading as expected from a Car Dumper, Ball Mill or Vibrating Screen	2.5
	Heavy shock load with some negative torques from Crushers, Hammer Mill and Barking Drum	3
	Applications like Reciprocating Compressors with frequent torque reversals, which do not necessarily cause reverse rotations	Consult Bibby Turboflex

Table 2

Number of Cylinders	Service Factor
6 and over	0.5 + S.F. Table 1
4 or less	1.0 + S.F. Table 1
Less than 4 refer to Bibby Turboflex	

Information Required

- Type of Prime Mover
- Kilowatt (kW) or Torque Rating
- Rotational speed rpm
- What application the coupling is to be used on
- Type of duty (eg. reversing or unidirectional, frequency of starts and peak torques)
- Diameter of drive and driven shafts
- Any limitation of axial travel
- Any other physical limitations
- Any other specific needs

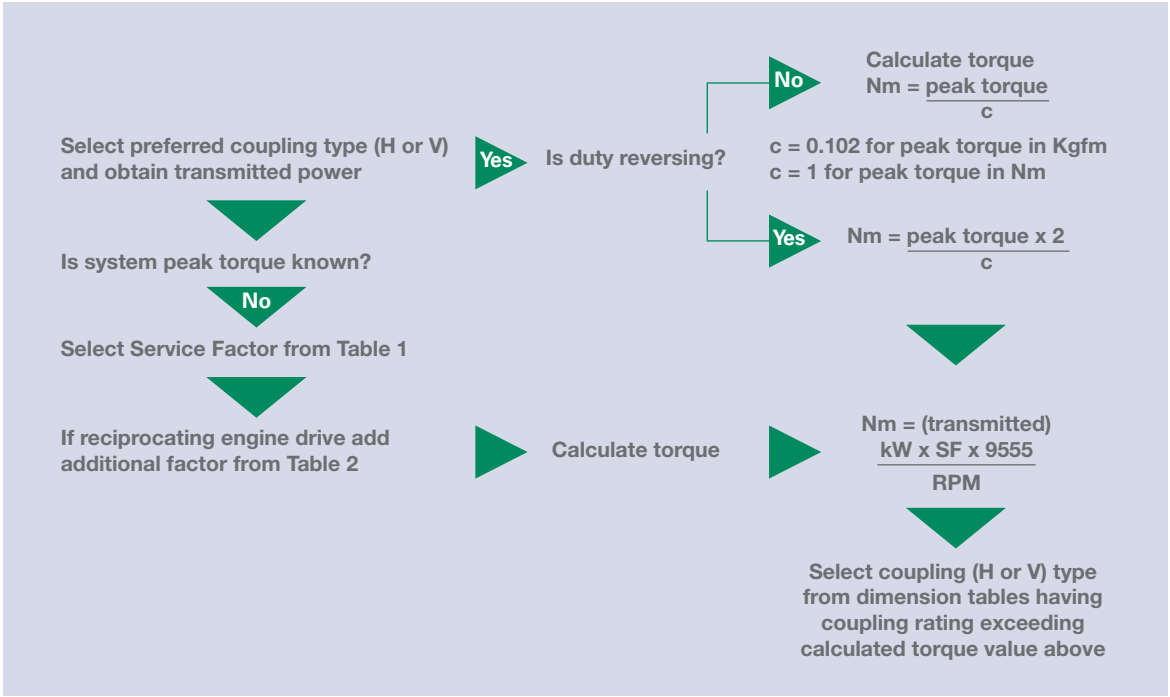
Note: Where high peak loads can occur and for brake applications, please contact Bibby Turboflex.

- The system peak torque is the maximum load created by the driving or driven equipment.
- Occasional peak torques of twice the catalog rating can be accommodated providing they occur less than 1000 times during the life of the coupling.
- For drives where the operation is near or actually passes through a major torsional natural frequency, a mass elastic analysis of the system is advised. When the Service Factor in Table 1 is greater than 2, consult your supplier or Bibby Turboflex.

Table 3

Maximum Coupling Bore Sizes		
Duty Class	**Load Classification**	**Max. Bore Size**
Uniform	Steady load, soft start, very rarely subjected to maximum loading	Catalog Maximum Bore
Medium	Steady load with superimposed cyclic load fluctuations	$\frac{\text{Boss Diameter}}{1.45}$
Heavy	Repeated maximum load fluctuations/ shock loads	$\frac{\text{Boss Diameter}}{1.5}$
Extra Heavy	Regularly subjected to fully reversing maximum loads	$\frac{\text{Boss Diameter}}{1.6}$

Bibby Coupling Selection (If in doubt, please consult your supplier)

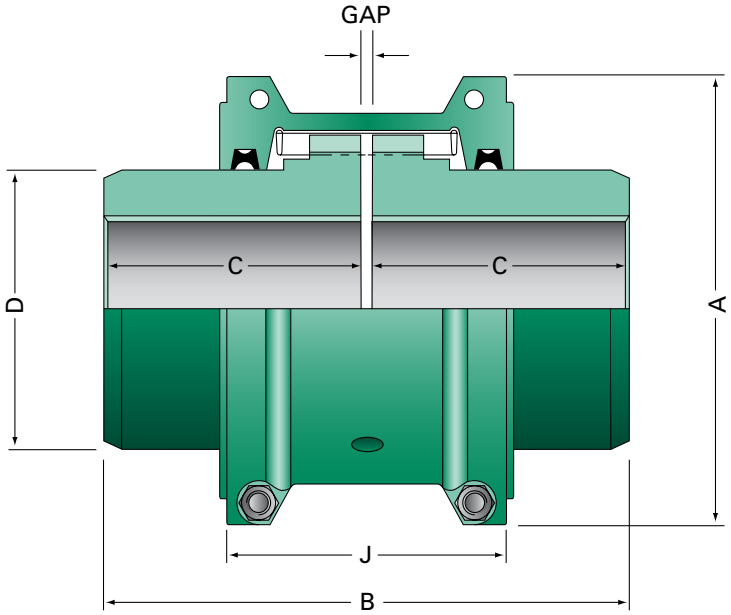


Having selected the coupling type and size, now check the following on pages 5 and 6.

- That the coupling running speed is lower than the permitted maximum.
- That the shaft spacing and coupling dimensions can be accommodated.
- That the maximum bore is suitable for the shaft. (If not, go to next size above and check again.)
- Acceptability of key stresses and boss strength for your specific duty. Refer to Table 3.

MODEL 2000H

- Horizontally Split Cover
- General purpose
- Easy access to grid minimizes downtime
- Ideal for limited space applications
- Stop lug in cover prevents spinning during reversing service



Size	Coupling Rating Nm	Max Speed	Min Bore mm	② Max Bore mm	① Cplg Wt. Kg	① MR2/ kgm2	A mm	B mm	C mm	D mm	J mm	Gap mm
2020	52	4500	13	27	1.8	0.0014	102	98	47.5	39.7	67	3.2
2030	149	4500	13	35	2.4	0.0022	111	98	47.5	49.2	68	3.2
2040	249	4500	13	44	3.2	0.0033	118	105	50.8	57.2	70	3.2
2050	435	4500	13	51	5.2	0.007	138	124	60.3	66.7	79	3.2
2060	684	4350	19	57	7.1	0.012	151	130	63.5	76.2	92	3.2
2070	994	4125	19	68	10.1	0.018	162	156	76.2	87.3	95	3.2
2080	2050	3600	25	83	17.7	0.045	194	181	88.9	104.8	116	3.2
2090	3730	3600	25	95	24.5	0.079	213	200	98.4	123.8	122	3.2
2100	6280	2440	42	108	41.3	0.18	251	246	120.6	142.1	156	4.8
2110	9320	2250	42	117	53.6	0.27	270	259	127	160.4	163	4.8
2120	13700	2025	60	137	78.7	0.51	308	305	149.2	179.4	192	6.4
2130	19900	1800	66	165	118	0.99	347	330	161.9	217.5	195	6.4
2140	28600	1650	66	184	176	1.85	384	375	184.1	254	201	6.4
2150	37000	1500	108	215	228	3.49	453	372	183	270	272	6.4
2160	51000	1350	120	240	310	5.82	502	402	198	305	278	6.4
2170	67800	1225	135	280	448	10.42	567	438	216	356	307	6.4
2180	94000	1100	150	300	619	18.3	630	484	239	394	321	6.4
2190	124000	1050	150	335	776	26.2	676	524	260	437	325	6.4
2200	169000	900	178	360	1057	43.5	757	565	280	498	356	6.4

① Coupling weight and MR2 with no bore

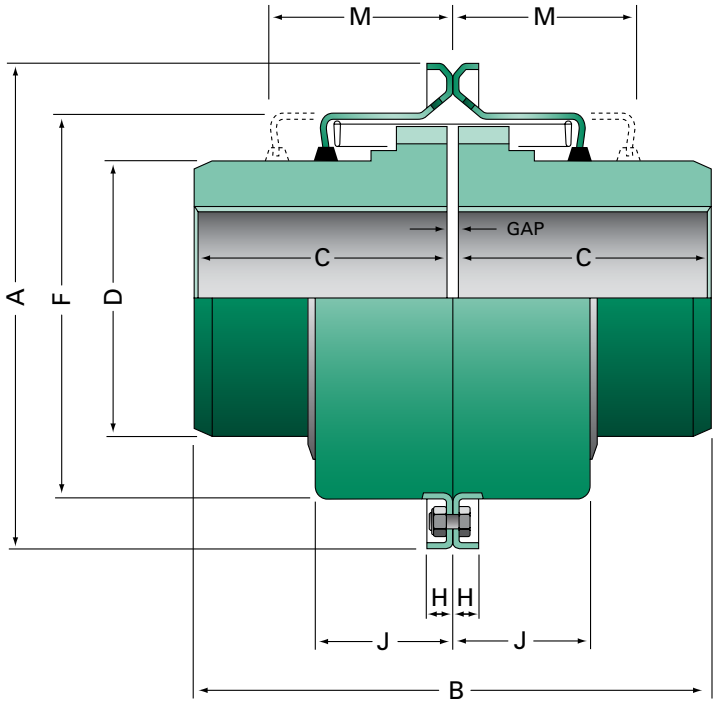
② Max bores stated above use rectangular parallel keyways to BS 4235 pt 1: 1972 or DIN 6885 sht 1: 1969

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Other couplings available are spacer and half spacer models. Also couplings with disc or drum brakes can be supplied.

MODEL 2000V

- Vertically Split Cover
- General purpose
- Ideal for higher running speeds



Size	Coupling Rating Nm	Max Speed	Min Bore mm	② Max Bore mm	① Cplg Wt. Kg	① MR2/ kgm2	A mm	B mm	C mm	D mm	F mm	H mm	J mm	M mm	Gap mm
2020	52	6000	13	27	1.6	0.0011	111	98	47.5	39.7	63	9.5	24.4	48	3.2
2030	149	6000	13	35	2.2	0.0018	121	98	47.5	49.2	72	9.5	25.2	48	3.2
2040	249	6000	13	44	3.0	0.0027	129	105	50.8	57.2	80	9.5	26	51	3.2
2050	435	6000	13	51	5.0	0.0063	148	124	60.3	66.7	97	13	31.4	61	3.2
2060	684	6000	19	57	6.7	0.010	162	130	63.5	76.2	110	13	32.2	64	3.2
2070	994	5500	19	68	9.7	0.016	173	156	76.2	87.3	121	13	33.8	67	3.2
2080	2050	4750	25	83	16.6	0.039	200	181	88.9	104.8	149	13	44.1	89	3.2
2090	3730	4000	25	95	23.6	0.072	232	200	98.4	123.8	168	13	47.3	96	3.2
2100	6280	3250	42	108	39.5	0.172	267	246	120.6	142.1	198	16	60.2	121	4.8
2110	9320	3000	42	117	51.9	0.261	286	259	127	160.4	216	16	63.3	124	4.8
2120	13700	2700	60	137	75.8	0.500	319	305	149.2	179.4	246	16	73.8	143	6.4
2130	19900	2400	66	165	115	1.080	378	330	161.9	217.5	284	22	75.4	147	6.4
2140	28600	2200	66	184	173	1.895	416	375	184.1	254	322	22	78.5	156	6.4

① Coupling weight and MR2 with no bore

② Max bores stated above use rectangular parallel keyways to BS 4235 pt 1: 1972 or DIN 6885 sht 1: 1969

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