HAYES
JAW COUPLINGS

Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

HAYES®
We've Got Connections

POWER
TRANSMISSION
PRODUCTS

Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

HAYES
We've Got Connections

POWER TRANSMISSION PRODUCTS

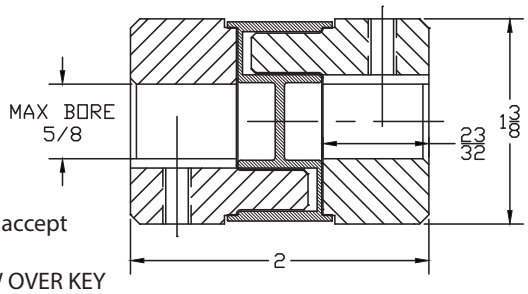
Hayes Jaw Couplings

This simple, three piece, quality built, flexible coupling is generally used to connect an electric motor to a hydraulic pump or mechanical drive. The hubs are made of a strong, lightweight aluminum alloy. The bodies and lugs are precision machined on CNC equipment to assure proper fit every time. Two set screws are standard. The solid wall of rubber in the insert eliminates metal-to-metal contact and provides a clean, quiet, trouble free performance when aligned properly. The unique steel locking insert is standard on all splined couplings in the 20 through 60 series. For the mobile market, taper lock splines are also available in the same series. Three insert choices are available. Neoprene, Hytrel* and Neoprene with a metal ring. Neoprene is used for light or steady loads. Hytrel*, for industrial application where torque, a variety of load conditions or chemicals exist. Neoprene with a metal ring for medium and heavy torque conditions and internal combustion engine applications. Installation requires only a straight edge and feeler gage to insure proper alignment. For longer insert life, misalignment should not exceed .005 parallel or 1° angular.

XO SERIES

5/8" Max Bore

MAX FRAME SIZE: 48
MAXIMUM RECOMMENDED TORQUE: .75 HORSEPOWER AT 1800 RPM

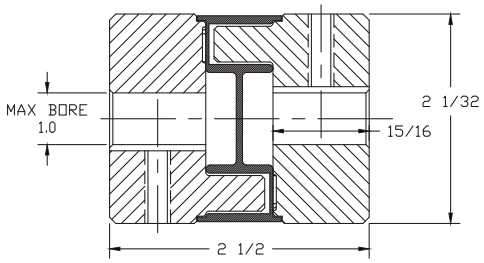


- Drive insert will accept a 1/2" shaft
- ONE SET SCREW OVER KEY This series only
- DRIVE INSERT MATERIAL Hytrel*
- Approx. Weight Blank Bore: 4 oz.

10 SERIES

1" Max Bore

MAX FRAME SIZE: 145T 184
MAXIMUM RECOMMENDED TORQUE: 2.7 HORSEPOWER AT 1800 RPM

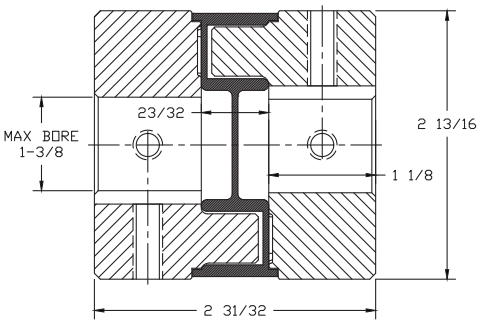


- Drive insert will accept a 7/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 10 oz.

20 SERIES

1-3/8" Max Bore

MAX FRAME SIZE: 184T 215
MAXIMUM RECOMMENDED TORQUE: 5.1 HORSEPOWER AT 1800 RPM

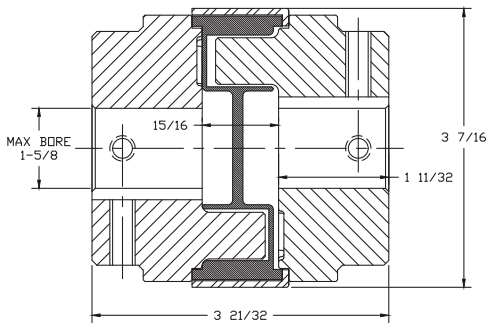


- Drive insert will accept a 1-1/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 1-1/2 lbs.

30 SERIES

1-5/8" Max Bore

MAX FRAME SIZE: 215T 256U
MAXIMUM RECOMMENDED TORQUE: 10.2 HORSEPOWER AT 1800 RPM



- Drive insert will accept a 1-3/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 2-1/2 lbs.

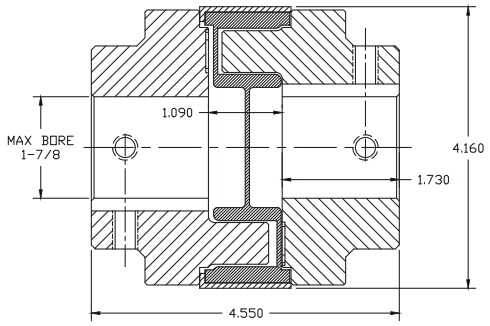
Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

HAYES
We've Got Connections

POWER TRANSMISSION PRODUCTS

40 SERIES
1-7/8" Max Bore

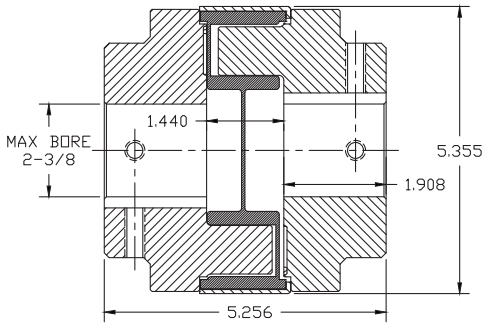
MAX FRAME SIZE: 326 405TS 365U
MAXIMUM RECOMMENDED
TORQUE: 30 HORSEPOWER
AT 1800 RPM



- Drive insert will accept a 1-7/8" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 4 lbs.

50 SERIES
2-3/8" Max Bore

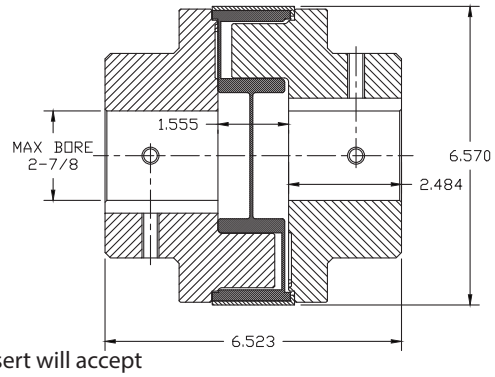
MAX FRAME SIZE: 326 405TS 365U
MAXIMUM RECOMMENDED
TORQUE: 75 HORSEPOWER
AT 1800 RPM



- Drive insert will accept a 2-1/4" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 8 lbs.

60 SERIES
2-7/8" Max Bore

MAX FRAME SIZE: 365T 445TS 405U 445US
MAXIMUM RECOMMENDED
TORQUE: 114.1 HORSEPOWER
AT 1800 RPM



- Drive insert will accept a 2-3/4" shaft
- DRIVE INSERT MATERIAL Hytrel* or Neoprene
- Approx. Weight Blank Bore: 12 lbs.

Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

HAYES
We've Got Connections
POWER TRANSMISSION PRODUCTS

STEEL LOCKING INSERT

STANDARD ON ALL SPLINED COUPLINGS 20 THROUGH 60 SERIES

For spline shaft applications, we use a split system and steel locking insert to provide more holding power and to protect splined shafts. It is commonly used on power units and hydrostatic drives.

INSTALLATION INSTRUCTIONS:

1. Tighten socket head cap screw for split locking system.
2. Tighten set screw on large diameter to bring steel locking insert down against shaft.

TAPER LOCK SYSTEM

STANDARD ON ALL SPLINED COUPLINGS 20 THROUGH 60 SERIES

The Hayes taper lock bushings are competitively priced, strong, durable, and used primarily in the mobile market. The tapers are drawn together with socket head cap screws which are tightened from the lug side of the coupling, allowing you to get closer to the pump face. The steel taper lock bushing provides uniform pressure on the shaft to help prevent movement and the resulting damage.

NEOPRENE DRIVE INSERT

STANDARD ON ALL SPLINED COUPLINGS 20 THROUGH 60 SERIES

For spline shaft applications, we use a split system and steel locking insert to provide more holding power and to protect splined shafts. It is commonly used on power units and hydrostatic drives.

HYTREL DRIVE INSERT

Designed for INDUSTRIAL applications where torque and a variety of load conditions exist. It also has good chemical and abrasion resistance. Temperature range -65°F to +250°F (-54°C to +121° C).

METAL RING

For Neoprene Insert ONLY

A Metal Ring is recommended (only for neoprene inserts) for medium and heavy torque conditions, as well as internal combustion engine applications. The Ring slips over the insert to contain the rubber and increases load capacity. May be used in some cases to allow over size bores in next smaller series coupling.

Consult factory for more information.

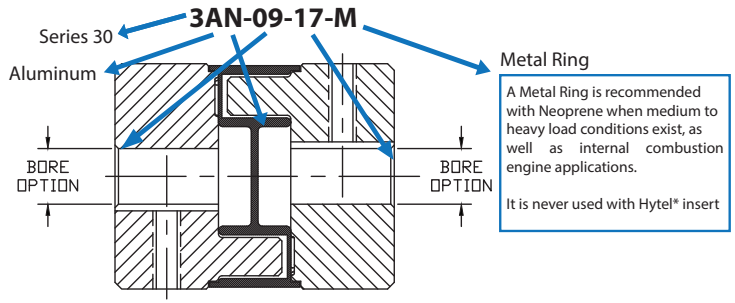
Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

HAYES®
We've Got Connections

POWER TRANSMISSION PRODUCTS

TO ORDER ANY SERIES HAYES COUPLING

1. Determine the H.P. of your prime mover.
2. Choose the correct series coupling based on your H.P.
3. Locate the option numbers on the chart at right that refer to your shaft requirements.
4. Using your option numbers, proceed per the example below to find your part number.



A Metal Ring is recommended with Neoprene when medium to heavy load conditions exist, as well as internal combustion engine applications.

It is never used with Hytel* insert

TO ORDER COMPLETE COUPLINGS

3 ← The first figure is the first digit of the series No. (X0 THRU 60 Series)
3**A** ← The second figure defines Coupling Material "A" for Aluminum or "S" for Steel (Special)
3A**H** ← The third figure denotes Drive Insert Material "N" for Neoprene or "H" for Hytrel*
3AH-**17** ← 4th and 5th figures show Bore Option on One Half Coupling
3AH-17-**09** ← 6th and 7th figures show Bore Option of Second Half Coupling
3AH-17-09-**M** ← 8th figure is used only when ordering a Metal Ring

TO ORDER A HALF COUPLING ONLY

1 ← The first figure is the first digit of the series No. (X0 THRU 60 Series)
1**A** ← The second figure defines Coupling Material "A" for Aluminum or "S" for Steel (Special)
1A**0** ← "0" is inserted as the third figure
1A0-**07** ← 4th and 5th figures show Bore Option on the Half Coupling
1A0-07-**00** ← "00" is inserted as the 6th and 7th figures

TO ORDER A DRIVE INSERT AND METAL RING

6 ← The first figure is the first digit of the series No. (X0 THRU 60 Series)
6**0** ← "0" is inserted as the second figure
60**N** ← The third figure denotes Drive Insert Material "N" for Neoprene or "H" for Hytrel*
60N-**00** ← "00" is inserted as the 4th and 5th figures
60N-00-**00** ← "00" is inserted as the 6th and 7th figures
60N-00-00-**M** ← Insert "M" for Metal Ring

TO ORDER A TAPER LOCK BUSHING

5A0-92**T**-00 ← Add a "T" after the spline option

BORE TOLERANCES

Bore (in.)	Tolerance
Up to 1	+.0003 to .0010
1-1/16 to 2	+.0005 to .0015
2-1/16 to 2-7/8	+.0010 to .0020

BORE OPTIONS

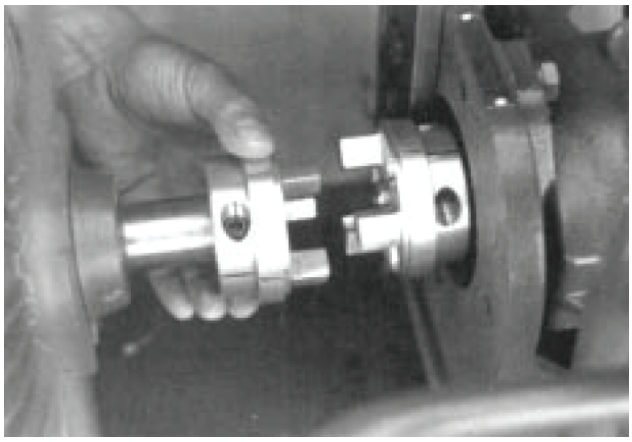
Option No.	Size		Option No.	Size	
	Bore	Key		Bore	Key
-01	3/8	1/16	-51		
-02	7/16	3/32	-52		
-03	1/2	1/8	-53		
-04	9/16	1/8	-54	15 mm	5 mm
-05	5/8	3/16	-55		
-06	11/16	3/16	-56	17 mm	5 mm
-07	3/4	3/16	-57	18 mm	6 mm
-08	13/16	3/16	-58	19 mm	6 mm
-09	7/8	3/16	-59	20 mm	6 mm
-10	15/16	1/4	-60	22 mm	6 mm
-11	1	1/4	-61	24 mm	8 mm
-12	1-1/16	1/4	-62	25 mm	8 mm
-13	1-1/8	1/4	-63		
-14	1-3/16	1/4	-64	28 mm	8 mm
-15	1-1/4	1/4	-65	30 mm	8 mm
-16	1-5/16	5/16	-66	32 mm	10 mm
-17	1-3/8	5/16	-67	33 mm	10 mm
-18	1-7/16	3/8	-68	35 mm	10 mm
-19	1-1/2	3/8	-69		
-20	1-9/16	3/8	-70	38 mm	10 mm
-21	1-5/8	3/8	-71	40 mm	12 mm
-22	1-11/16	3/8	-72	42 mm	12 mm
-23	1-3/4	3/8	-73	45 mm	14 mm
-24	1-13/16	1/2	-74		
-25	1-7/8	1/2	-75	48 mm	14 mm
-26	1-15/16	1/2	-76	50 mm	14 mm
-27	2	1/2	-77	55 mm	16 mm
-28	2-1/16	1/2	-78	60 mm	18 mm
-29	2-1/8	1/2	-79	65 mm	18 mm
-30	2-3/16	1/2	-80		
-31	2-1/4	1/2	-81		
-32	2-5/16	5/8	-82		
-33	2-3/8	5/8	-83		
-34	2-7/16	5/8	-84		
-35	2-1/2	5/8	**SPLINED COUPLING SIZES**		
-36	2-5/8	5/8	**Option No.**	**Teeth**	**Pitch**
-37	2-3/4	5/8			
SEMI-STANDARD			-85	19	16/32
-38	1/2	3/32	-86	17	12/24
-39	5/8	5/32	-87	11	16/32
-40	3/4	1/8	-88	9	16/32
-41	7/8	1/4	-89	15	16/32
-42	1	3/16	-90	13	8/16
-43	1-1/4	5/16	-91	13	16/32
-44	1-3/8	3/8	-92	14	12/24
-45	1-1/2	5/16	-93	15	8/16
-46	1-3/4	7/16	-94	21	16/32
-47	.5295	1/8	-95	23	16/32
-48			-96	27	16/32
-49	2-7/8	3/4	-97		
-50	BLANK		-98	20	16/32

Option No.	P.A.	Major O.D.	Min. Series
-85	30	1.276	30
-86	30	1.580	40
-87	30	.770	20
-88	30	.640	20
-89	30	1.000	20
-90	30	1.750	40
-91	30	.885	ALL
-92	30	1.250	20
-93	30	2.000	50
-94	30	1.375	30
-95	30	1.525	40
-96	30	1.750	40
-97			
-98	30	1.320	30

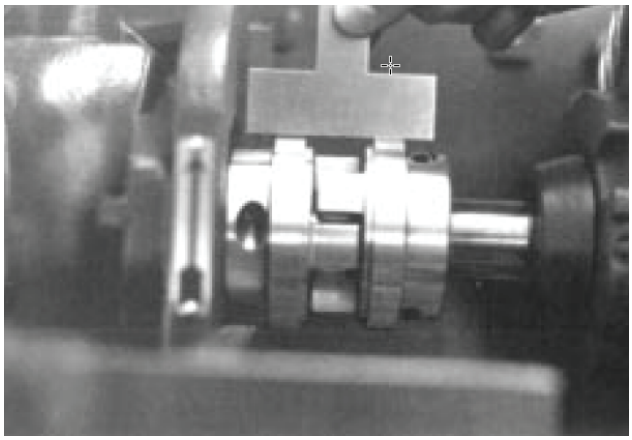
Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

HAYES
We've Got Connections

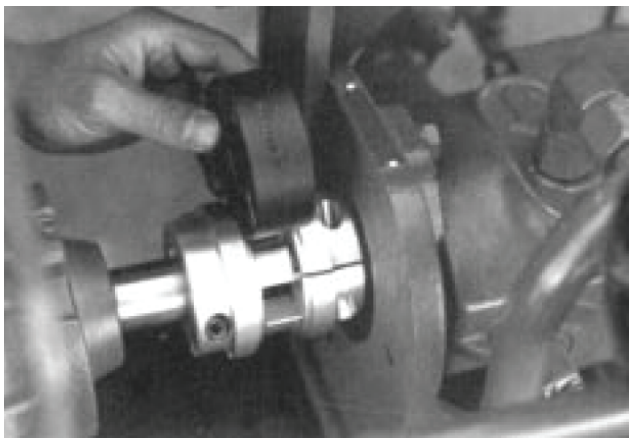
POWER TRANSMISSION PRODUCTS



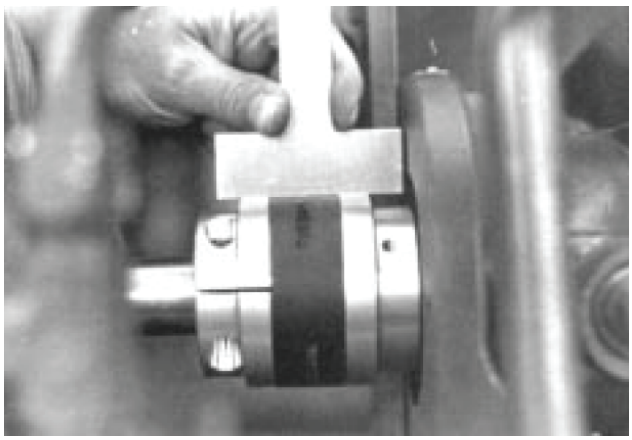
Install couplings on pump and motor shafts.



Misalignment is easily detected with a straight edge and using a .005 feeler gage on top and side of coupling will give ample alignment.



Use drive insert between dirt seals for gage to determine distance between coupling halves, leaving approximately 1/32 clearance per side. (Insert should not run in compressed state.)



Recheck alignment with straight edge and tighten. (Coupling can also be aligned with insert installed.) No more than 1° maximum angular misalignment.

- Please remember that if excess vibration or misalignment are present in your system it will cause the rubber insert to wear rapidly.
- The rubber element is the safety factor in your system. It could protect the system from serious damage caused by either of these two conditions.
- We strongly recommend accurate alignment and minimum vibration when using a flexible coupling in order to obtain maximum life.

Hayes Manufacturing, Inc.
6875 US Highway 131
Fife Lake, MI 49633
Phone: 231-879-3372 | Fax: 231-879-4330
www.hayescouplings.com

HAYES
We've Got Connections

POWER TRANSMISSION PRODUCTS

Hayes Jaw Couplings

Our flexible drive coupling has been tested by the University of Michigan Mechanical Engineering Department. The guide below gives you the usable results of these tests. A safety factor of 3 applied to the recommended maximum torque is shown in the guide.

Before Ordering you need to know the following:

1. Type of prime mover and load classification
2. Shaft diameter and key size
3. Horsepower rating of prime mover
4. Maximum operating speed (R.P.M.).

Ordering Instructions:

A. To locate your proper coupling series use the service factor guide below and locate your prime mover and load classification. (Example: a 30 H.P. electric motor for a pump with a medium load application = 1.5 service factor.)

B. Multiply the H.P. of the load to be transmitted by S.F. then divide by 3. (Example: 30 H.P. x 1.5 S.F. = 45 H.P. ÷ 3 = 15 H.P.)

C. With this figure, refer to the performance data guide and locate the R.P.M.'s at which you motor operates (Example: 1800 R.P.M.'s)

D. Move down the chart until you come to the first H.P. larger that you need. (Example: 1-5/8 shaft x 3/8 key = 40 Series H.P.) If Neoprene is used a metal ring is recommended.

Service Factor Guide

Load Classification		Prime Mover		
		Electric Motor or Turbine	6 or more Cyl. Gas or Diesel Eng.	Less than 6 Cyl. Gas or Diesel Eng.
Light or Uniform Load Even or steady Load Non-Reversing	• Blowers • Conveyers • Centerifugal Pumps • Fans • Agitators	1.0	1.5	*2.0
Medium or Moderate Load Moderate Shock Uneven Load Infrequent Reversing	• Elevators • Mixers • Machine Tools • Reciprocating Pumps	1.5	*2.0	*2.5
Heavy Load Heavy Shock Uneven Load Frequent Reversing	• Shaker Conveyors • Crushers • Presses • Winches	*2.0	*2.5	Neoprene with Metal Ring Only 3.0

NOTE- Use as general guide only

Optional: *Hytrel or Neoprene with Metal Ring

Performance Data Guide

Coupling Series	Coupling Size			Maximum Reccom-mended Torque in lbs.	Maximum Torque in lbs. †	HORSEPOWER	Maximum R.P.M.									
	Outside Dia.	Overall Length	Max. Bore				100	300	600	900	1200	1500	1800	2400	3000	3600
XO	1.375	2.00	5/8		26		.04	.12	.25	.37	.50	.62	.75	1.0	1.2	1.5
10	2.025	2.56	1	900	96		.15	.45	.91	1.37	1.82	2.28	2.7	3.6	4.56	5.4
20	2.825	2.96	1-3/8	2,150	180		.28	.85	1.71	2.57	3.42	4.28	5.1	6.8	8.5	10.2
30	3.275	3.62	1-5/8	3,000	362		.57	1.71	3.42	5.14	6.85	8.56	10.2	13.7	17.1	20.5
40	4.062	4.50	1-7/8	4,500	1052		1.66	5.00	10.01	15.01	20.01	25.01	30.0	40.0	50.0	60.0
50	5.260	5.21	2-3/8	9,000	2628		4.16	12.50	25.01	37.52	50.03	62.54	75.0	100.0	125.0	150.1
60	6.450	6.43	2-7/8	13,500	3996		6.34	19.02	38.04	57.06	76.08	95.10	114.1	152.1	190.2	228.2

*Hub strength static tested by University of Michigan, Mechanical Engineering Department
†Safety factor of three applied
H.P. and torque ratings are for aluminum couplings. For rating on steel (special) consult factory