



Kruppsconduit

Metal Raceway Product Range





Overview

Aluminium alloys with a wide range of properties are used in engineering structures. Alloy systems are classified by a number system (ANSI) or by names indicating their main alloying constituents (DIN and ISO). Selecting the right alloy for a given application entails considerations of its tensile strength, density, ductility, formability, workability, weldability, and corrosion resistance, to name a few. A brief historical overview of alloys and manufacturing technologies is given in Ref.[4] Aluminium alloys are used extensively in aircraft due to their high strength-to-weight ratio. On the other hand, pure aluminium metal is much too soft for such uses, and it does not have the high tensile strength that is needed for airplanes and helicopters.

Aluminium alloys versus types of steel

Aluminium alloys typically have an elastic modulus of about 70 GPa, which is about one-third of the elastic modulus of most kinds of steel and steel alloys. Therefore, for a given load, a component or unit made of an aluminium alloy will experience a greater elastic deformation than a steel part of the identical size and shape. Though there are aluminium alloys with somewhat-higher tensile strengths than the commonly used kinds of steel, simply replacing a steel part with an aluminium alloy might lead to problems.

With completely new metal products, the design choices are often governed by the choice of manufacturing technology. Extrusions are particularly important in this regard, owing to the ease with which aluminium alloys, particularly the Al–Mg–Si series, can be extruded to form complex profiles.





In general, stiffer and lighter designs can be achieved with aluminium alloys than is feasible with steels. For instance, consider the bending of a thin-walled tube: the second moment of area is inversely related to the stress in the tube wall, i.e. stresses are lower for larger values. The second moment of area is proportional to the cube of the radius times the wall thickness, thus increasing the radius (and weight) by 26% will lead to a halving of the wall stress. For this reason, bicycle frames made of aluminium alloys make use of larger tube diameters than steel or titanium in order to yield the desired stiffness and strength. In automotive engineering, cars made of aluminium alloys employ space frames made of extruded profiles to ensure rigidity. This represents a radical change from the common approach for current steel car design, which depend on the body shells for stiffness, known as unibody design.

Aluminium alloys are widely used in automotive engines, particularly in cylinder blocks and crankcases due to the weight savings that are possible. Since aluminium alloys are susceptible to warping at elevated temperatures, the cooling system of such engines is critical. Manufacturing techniques and metallurgical advancements have also been instrumental for the successful application in automotive engines. In the 1960s, the aluminium cylinder heads of the Corvair earned a reputation for failure and stripping of threads, which is not seen in current aluminium cylinder heads.

An important structural limitation of aluminium alloys is their lower fatigue strength compared to steel. In controlled laboratory conditions, steels display a fatigue limit, which is the stress amplitude below which no failures occur – the metal does not continue to weaken with extended stress cycles. Aluminium alloys do not have this lower fatigue limit and will continue to weaken with continued stress cycles. Aluminium alloys are therefore sparsely used in parts that require high fatigue strength in the high cycle regime (more than 107 stress cycles).

Heat sensitivity considerations

Often, the metal's sensitivity to heat must also be considered. Even a relatively routine workshop procedure involving heating is complicated by the fact that aluminium, unlike steel, will melt without first glowing red. Forming operations where a blow torch is used can reverse or remove heat treating, therefore is not advised whatsoever. No visual signs reveal how the material is internally damaged. Much like welding heat treated, high strength link chain, all strength is now lost by heat of the torch. The chain is dangerous and must be discarded.

Aluminium also is subject to internal stresses and strains when it is overheated; the tendency of the metal to creep under these stresses tends to result in delayed distortions. For example, the warping or cracking of overheated aluminium automobile cylinder heads is commonly observed, sometimes years later, as is the tendency of improperly welded aluminium bicycle frames to gradually twist out of alignment from the stresses of the welding process. Thus, the aerospace industry avoids heat altogether by joining parts with rivets of like metal composition, other fasteners, or adhesives.



in overheated aluminium can be relieved by heat-treating the parts in an oven and gradually cooling it - in effect annealing the stresses. Yet these parts may still become distorted, so that heat-treating of welded bicycle frames, for instance, can result in a significant fraction becoming misaligned. If the misalignment is not too severe, the cooled parts may be bent into alignment. Of course, if the frame is properly designed for rigidity (see above), that bending will require enormous force.

Aluminium's intolerance to high temperatures has not precluded its use in rocketry; even for use in constructing combustion chambers where gases can reach 3500 K. The Agena upper stage engine used a regeneratively cooled aluminium design for some parts of the nozzle, including the thermally critical throat region; in fact the extremely high thermal conductivity of aluminium prevented the throat from reaching the melting point even under massive heat flux, resulting in a reliable lightweight component.

Why Rigid Aluminum Conduit?

Lower Installation Cost

- Labor Savings of 40-70% Against Rigid Steel Conduits
- 1/3rd of the Weight of Rigid Steel Conduit
- Less Chance of a Workers Injury
- Easy Onsite Fabrication

Explosion Proof

- It Replaces Rigid Steel Virtually in All Locations
- Non-Sparking
- Aluminum Conduit Meets All National Electrical Code – Article 500 Hazardous Area Requirements
- No Toxic Fumes

Superior Attractive Appearance

- Corrosion Resistant Oxide Film
- No Rust or Unsightly Discoloration or Streaking

Non-Magnetic

- Protection for Sensitive Environments
- Power Savings Over the Life of the Installation

Rigid aluminum conduit uses a 6063 alloy, T-1 temper (former designation T-42). Advantages of Aluminium Conduits-You need to Correct it, swap the items and Change the colors.



1. Scope

This standard covers the requirements for porthole-extruded aluminum-alloy conduit for use as a raceway for the wires or cables of an electrical system. The finished conduit is produced in nominal 10 ft. (3.05 m) lengths, threaded on each end with one coupling attached.

This standard also covers aluminum conduit couplings, elbows, nipples and conduit lengths other than 10 ft (3.05 m).

Properly assembled systems of conduit, couplings, elbows and nipples manufactured in accordance with this standard, and other identified fittings, provide for the electrical continuity required of an equipment grounding conductor.

2. Normative References

The following standard contains provisions which, through reference in this text, constitute requirements of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below.

ANSI/ASME B1.20.1, Pipe Threads, General Purpose (Inch)

UL 6A, Electrical Rigid Metal Conduit – Aluminum, Red Brass and Stainless Steel

3. Definitions

3.1 Electrical rigid aluminum conduit (ERAC): A threadable aluminum raceway of circular crosssection designed for the physical protection and routing of wire conductors and cables and for use as an equipment grounding conductor.

3.2 Threaded Coupling: An internally threaded aluminum cylinder for joining together the components of an ERAC system.

3.3 Elbow: A manufactured curved section of ERAC threaded on each end.

- 3.4 Nipple: A straight length of ERAC not more than 2 ft (0.61 m) long and threaded on each end.
- 3.5 Straight conduit: A straight length of ERAC without a coupling.

3.6 Finished conduit: A straight length of ERAC with one coupling attached.

SPECIFICATION DATA

ALLOY: Kruppsmetal Rigid Aluminum Conduit is manufactured of 6063 alloy in temper designation T-1. The fittings are of the same alloy.



STANDARDS: Kruppsmetal Rigid Aluminum Conduit is listed by Underwriters' Laboratories to U.L. 6A, "Standard for Electrical Rigid Metal Conduit - Aluminum, Red Brass and Stainless Steel" and is manufactured to ANSI C80.5. (Replaces Federal specification WWC-540C).

THREAD PROTECTORS: Color-Coded end caps keep threads clean and sharp and help provide trade size recognition. Even sizes are blue; 1/2 trade sizes are black; and 1/4 trade sizes are red.

RECOMMENDED INSTALLATION PRACTICES

CUTTING: A hacksaw is recommended to cut trade sizes 1-1/4 and smaller. Larger trade sizes can be cut with power cut-off equipment.

BENDING: Standard EMT benders, one size larger than the size of the conduit, should be used on conduit trade sizes 1 and smaller. For sizes over trade size 1, conventional equipment is recommended.

THREADING: Sharp dies and conventional cutting oil should be used for aluminum conduit. A general purpose emulsifiable oil can provide excellent results.

FITTINGS: Aluminum fittings are recommended; however galvanized fittings are satisfactory for most installations.

FISHING AND WIRE PULLING:

Small Conduit: In trade sizes up to 1-1/2 and on shorter runs (up to 100 feet), polyethylene fish tapes can be used effectively. Also recommended are round, flexible, speedometer-type steel cables. Use of flat steel tapes should be avoided since they tend to jam in the bends, or if not used carefully, scrape and cut conduit walls.

Large Conduit: For pulling large conductors through larger conduit or longer runs, polypropylene rope is recommended. Steel pulling cables, especially when old or frayed, can damage steel or aluminum conduit.

IN SOIL OR CONCRETE: Underwriters' Laboratories Electrical Construction Equipment Directory (UL Green Book) states that aluminum conduit used in concrete or in contact with soil requires supplementary corrosion protection. Examples of supplementary protection are paints approved for the purpose (bitumastic paint, for example), tape wraps approved for the purpose, or PVC coated conduit.

UL and NEC Requirements for Corrosion Protection of Steel / Aluminium Conduit And Electrical Metallic Tubing



Typical Applications for Aluminium Conduit

	Aluminium Conduit Preference									
Application	Material Cost	Installation Labor Cost	Weight	Freight Savings	Corrosion Resistance	Non-Sparking	Voltage Drop	Rust Free	Non-Magnetic	Heat Buildup
General Industrial	٠	٠	٠	٠	٠			٠		
General Commercial	٠	•	٠					٠		
Bridges/Tunnels	٠	٠	٠		٠			٠		
Chemical Plants	٠	٠	•	٠	٠	•	٠	٠		•
Food Processing	٠	٠	٠	٠	٠	٠		٠		•
High Voltage Installations	٠	•	•				٠	٠	٠	•
Natural Gas Processing/Pump Stations	٠	٠	•	٠		•		٠		
Oil Refineries	٠	٠	•	٠	٠	٠		٠		•
Power Plants	٠	٠	•	٠	٠		٠	٠	٠	•
Pulp/Paper Mills	٠	٠	•		٠	٠		٠		•
Rooftop HVAC	٠	٠	•		٠			٠		
Telecom	٠	٠	•		٠			٠	٠	•
Textile Mills	٠	•	•	٠	٠	٠		٠		٠
Transportation Manufacturers	٠	•	•	٠	٠			٠		
Wastewater/Water Treatment	•	•	•	٠	٠	•		٠		•





Chart A

CORRODED END
(Anodic or less noble)
Magnesium
Zinc
Aluminium
Steel
Load
Tin
Nickel
Brass
Bronzes
Copper
Stainless Steel (passive
Silver
Gold
Platinum
Protected End
(Cathodic or more noble)



From: Americal Galvanizers Association

BLUE thread protectors: "full inch" trade sizes 1, 2, 3, 4, 5, 6. BLACK thread protectors: "half inch" trade sizes 1/2, 1-1/2, 2-1/2, 3-1/2. RED thread protectors: "quarter inch" trade sizes 3/4, 1-1/4.

Chart B

UL GUIDELINES CORROSION PROTECTION SUMARY

CORROSION PROTECTION SUMARY										
IN CONCRETE	Required	Optional								
Steel Rigid Conduit		х								
Intermediate Metal Conduit		Х								
Aluminium Rigid Conduit	х									
Steel EMT	Below grade	On or above								
	may need	grade								
Aluminium EMT	х									
In Soil:										
Steel Rigid Conduit		Х								
Intermediate Metal Conduit		Х								
Rigid Aluminium Conduit	х									
Steel EMT	Generally									
	Required									
Aluminium EMT	х									

From: Soares Book on Grounding

Chart C

CHART (C)	Aluminium	Brass	Brozne	Copper	Galvanized Steel	lron/ Steel	Lead	Stainless Steel	Zinc
Aluminium		1	1	1	3	2	2	3	3
Copper	1	2	2		2	1	2	1	1
Galvanized Steel (Zinc)	3	2	2	2	3	3		2	3
Lead	2	2	2	2	3	3		2	3
Stainless Steel	3	1	1	1	2	2	2		1
Zinc	3	1	1	1	3	1	3	1	





PART NUMBER	SIZE		T. PER 100FT. DUPLINGS	NOMINAL DIAM		NOMINAL THICK		LENGT COUP		BUNDLE QUANTIE		NTIES	;	
NUMBER	IN	LB.	KG	IN	ММ	IN	MM	FT	М	PC	FT	М	LB.	KG
KCRAC50	1/2	28.1	12.7	0.840	21.3	0.104	2.64	10	3.05	127	1270	387.3	1042	468.0
KCRAC75	3/4	37.4	17.0	1.050	26.7	0.107	2.72	10	3.05	91	910	277.5	992	446.4
KCRAC100	1	54.5	24.7	1.315	33.4	0.126	3.20	10	3.05	91	910	277.5	1456	655.2
KCRAC125	1-1/4	71.6	32.5	1.660	42.2	0.133	3.38	10	3.05	61	610	186.0	1330	598.5
KCRAC150	1-1/2	88.7	40.2	1.900	48.3	0.138	3.51	10	3.05	61	610	186.0	1604	721.8
KCRAC200	2	118.5	53.8	2.375	60.3	0.146	3.71	10	3.05	37	370	112.8	1295	582.7
KCRAC250	2-1/2	187.5	85.0	2.875	73.0	0.193	4.90	10	3.05	19	190	57.9	1062	477.9
KCRAC300	3	246.3	111.7	3.500	88.9	0.205	5.21	10	3.05	19	190	57.9	1427	642.1
KCRAC350	3-1/2	295.6	134.1	4.000	101.6	0.215	5.46	10	3.05	19	190	57.9	1672	752.4
KCRAC400	4	350.2	155.8	4.500	114.3	0.225	5.72	10	3.05	19	190	57.9	1957	880.6
KCRAC500	5	478.9	217.2	5.563	141.3	0.245	6.22	10	3.05	7	70	21.3	980	441
KCRAC600	6	630.4	285.9	6.625	168.3	0.266	6.76	10	3.05	7	70	21.3	1288	579.6

Standards:

• AS/NZ 2053-7-2002 - Australian / Newzealand Standard Institute Follows NEMA Standards for Rigid Steel Race Ways

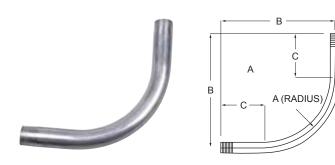
- ANSI C80.5-2005 American National Standard Institute for Electrical Rigid Aluminum Conduit (ERAC)
- UL6A
- UL Standard for Electrical Rigid Aluminum Conduit (ERAC)
- NEC-344-10
- National Electric Code 2002

Note:

Dimensions data is for reference only NPT thread with end-cap on each end Rigid Aluminium Conduits meet UL6A



90 Degree Elbow Standard



Dimensions listed in inches unless otherwise noted

- Dimensional data is for reference only
- NPT thread are protected by end-cap on both ends
- Galvanized Rigid Elbows meet UL6 and ANSI C80.5

Part	Size	Weight Each		Вох	A		В		с		CUT LENGTH	
Number	Size	LB.	KG	Qty	IN	ММ	IN	ММ	IN	ММ	IN	мм
KRBA9050	1/2″	0.35	0.15	50	4.0	101.6	6.9	175.2	2.9	73.6	12.0	304.8
KRBA9075	3/4″	0.45	0.20	50	4.5	114.3	7.4	187.9	2.9	73.6	12.9	327.6
KRBA90100	1″	0.72	0.32	25	5.8	147.3	8.7	220.9	3.0	76.2	15.0	381.0
KRBA90125	1-1/4″	1.17	0.52	20	7.3	158.4	10.6	269.2	3.3	83.8	18.0	457.2
KRBA90150	1-1/2″	1.66	0.74	15	8.3	210.8	11.9	302.2	3.6	91.4	20.3	515.6
KRBA90200	2″	2.52	1.13	10	9.5	241.3	13.8	350.5	4.3	109.2	23.4	594.3
KRBA90250	2-1/2″	4.80	2.16	24	10.5	266.7	15.8	401.3	5.3	134.6	27.0	685.8
KRBA90300	3″	7.35	3.30	35	13.0	330.2	18.8	477.5	5.8	147.3	32.0	812.8
KRBA90350	3-1/2″	9.23	4.15	35	15.0	381.0	21.8	553.7	6.8	172.7	37.0	939.8
KRBA90400	4″	12.70	5.71	35	16.0	406.4	23.1	586.7	7.1	180.3	39.3	998.2
KRBA90500	5″	24.16	10.87	bulk	24.0	609.6	35.2	894.0	11.2	284.4	60.0	1524.0
KRBA90600	6″	38.59	17.36	bulk	30.0	762.0	42.6	1082.0	12.6	320.0	72.3	1836.4

Note:

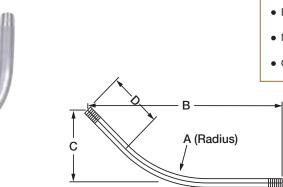
Rigid Conduit Elbows other than the above standard radius can be manufactured according to the customer's request.



Picture sourced from Internet



45 Degree Elbow Standard



Dimensions listed in inches unless otherwise noted

- Dimensional data is for reference only
- NPT thread are protected by end-cap on both ends
- Galvanized Rigid Elbows meet UL6 and ANSI C80.5

Part	Size	Weigl	nt Each	Вох		A		В	(с	C	כ	CUT Ι	ENGTH
Number	Size	LB.	KG	Qty	IN	мм	IN	ММ	IN	ММ	IN	ММ	IN	ММ
KRBA4550	1/2″	0.24	0.10	50	4.0	101.6	7.0	177.8	2.9	73.6	1.9	48.2	8.0	203.2
KRBA4575	3/4″	0.31	0.13	50	4.5	114.3	7.4	189.7	3.0	76.2	2.0	50.8	9.0	228.6
KRBA45100	1″	0.55	0.24	25	5.8	147.3	9.5	241.3	4.0	101.6	2.7	68.5	10.0	254.0
KRBA45125	1-1/4″	1.00	0.45	20	7.3	185.4	13.1	333.7	5.4	137.1	4.3	109.2	15.5	393.7
KRBA45150	1-1/2″	1.31	0.58	15	8.3	210.8	14.0	355.6	5.8	147.3	4.3	109.2	16.5	419.1
KRBA45200	2″	1.86	0.83	10	9.5	241.3	16.1	408.9	6.6	167.6	5.4	137.1	18.5	469.9
KRBA45250	2-1/2″	3.73	1.67	50	10.5	266.7	19.0	482.6	7.9	200.6	6.8	172.7	22.5	571.5
KRBA45300	3″	5.07	2.28	35	13.0	330.2	20.5	520.7	8.5	215.9	6.7	170.1	23.5	596.9
KRBA45350	3-1/2″	6.73	3.02	35	15.0	381.0	22.8	579.1	9.5	241.3	7.1	180.3	26.0	660.4
KRBA45400	4″	10.11	4.54	35	16.0	406.4	29.2	741.6	12.1	307.3	10.5	266.7	33.5	850.9
KRBA45500	5″	17.33	7.79	bulk	24.0	609.6	36.1	916.9	15.0	38.10	11.2	284.4	43.0	1092.2
KRBA45600	6″	26.79	12.05	bulk	30.0	762.0	42.9	1089.6	17.8	452.1	12.8	352.1	48.0	1219.2

Note:

Rigid Conduit Elbows other than the above standard radius can be manufactured according to the customer's request.



Picture sourced from Internet



Rigid Aluminium Coupling

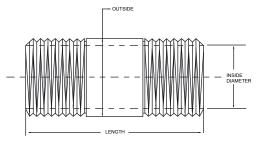
COUPLING								
Part	Siz	e.	Weigh	t Each	Вох	Le	Length	
Number	IN	ММ	IN	мм	Qty	IN	мм	Finish
KAC50	1/2″	16	0.04	18.0	100	1.63	41.4	
KAC75	3/4″	21	0.06	27.0	50	1.64	41.6	
KAC100	1″	27	0.10	45.0	30	1.97	50.0	
KAC125	1-1/4″	35	0.12	54.0	25	2.03	51.5	_
KAC150	1-1/2"	41	0.18	81.0	25	2.06	52.3	Aluminium
KAC200	2″	53	0.24	108.0	20	2.13	54.1	in
KAC250	2-1/2"	63	0.62	279.0	24	2.19	55.6	In
KAC300	3″	78	0.78	351.0	16	3.31	84.0	A
KAC350	3-1/2"	91	1.21	544.5	12	3.41	86.6	
KAC400	4″	103	1.08	486.0	10	3.52	89.4	
KAC500	5″	129	1.64	738.0	5	3.95	100.3	
KAC600	6″	155	2.64	1188.0	3	4.25	107.9	



Picture sourced from Internet

RIGID ALUMINIUM CONDUIT

NIPPLES

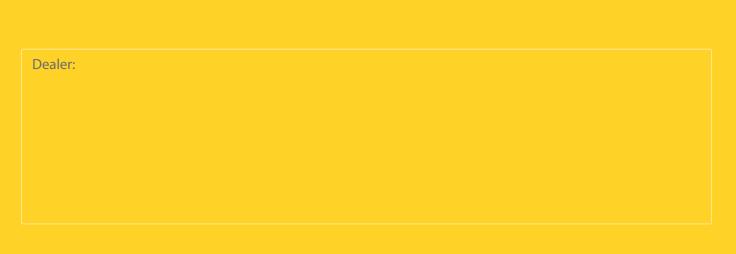


RIGID NIPPLES – ALUMINIUM

Part	Conduit	1	Unit		
Number	Size	Length	Quantity		
KMAG55	11/2″	12″	5 Pcs.		
KMAG56	2″	Close	5 Pcs.		
KMAG57	2″	21/2"	5 Pcs.		
KMAG58	2″	3″	5 Pcs.		
KMAG59	2″	31/2"	5 Pcs.		
KMAG60	2″	4″	5 Pcs.		
KMAG61	2″	5″	5 Pcs.		
KMAG62	2″	6″	5 Pcs.		
KMAG63	2″	8″	5 Pcs.		
KMAG64	2″	10″	5 Pcs.		
KMAG65	2″	12″	5 Pcs.		
KMAG66	21/2"	Close	5 Pcs.		
KMAG67	21/2"	3″	5 Pcs.		
KMAG68	21/2"	31/2"	5 Pcs.		
KMAG69	21/2"	4"	5 Pcs.		
KMAG70	21/2"	5″	5 Pcs.		
KMAG71	21/2"	6″	5 Pcs.		
KMAG72	21/2"	8″	5 Pcs.		
KMAG73	21/2"	10″	5 Pcs.		
KMAG74	21/2"	12″	5 Pcs.		
KMAG75	3″	Close	1 Pc.		
KMAG76	3″	3″	1 Pc.		
KMAG77	3″	31/2"	1 Pc.		
KMAG78	3″	4″	1 Pc.		
KMAG79	3″	5″	1 Pc.		
KMAG80	3″	6″	1 Pc.		
KMAG81	3″	8″	1 Pc.		
KMAG82	3″	10″	1 Pc.		
KMAG83	3″	12″	1 Pc.		
KMAG84	31/2"	Close	1 Pc.		
KMAG85	31/2"	4″	1 Pc.		
KMAG86	31/2"	5″	1 Pc.		
KMAG87	31/2"	6″	1 Pc.		
KMAG88	31/2"	8″	1 Pc.		
KMAG89	31/2"	10″	1 Pc.		
KMAG90	31/2"	12″	1 Pc.		
KMAG91	4″	Close	1 Pc.		
KMAG92	4″	4"	1 Pc.		
KMAG93	4″	5″	1 Pc.		
KMAG94	4″	6″	1 Pc.		
KMAG95	4"	8″	1 Pc.		
KMAG96	4″	10″	1 Pc.		
KMAG98	5″	Close	1 Pc.		
KMAG99	5″	5″	1 Pc.		
KMAG100	5″	6″	1 Pc.		
KMAG101	5″	8″ 10″	1 Pc.		
KMAG102	5″	10″	1 Pc.		
KMAG103	5″	12″	1 Pc.		
KMAG104	-	Close	1 Pc.		
KMAG105	6″ 6″	6″ 8″	1 Pc.		
KMAG106 KMAG107	6″ 6″	8 10″	1 Pc. 1 Pc.		
KMAG107 KMAG108		10	1 PC.		
KINAG108	0	12	TFC.		

RIGID NIP	PLES – ALU	JMINIUM	
Dout	Conduit		Unit
Part Number	Conduit Size	Length	Unit Quantity
KMAG0	1/2″	Close	20 Pcs.
KMAG1	1/2″	11/2″	20 Pcs.
KMAG2	1/2″	2″	20 Pcs.
KMAG3	1/2″	21/2"	20 Pcs.
KMAG4	1/2″	3″	20 Pcs.
KMAG5	1/2″	31/2"	20 Pcs.
KMAG6	1/2″	4″	20 Pcs.
KMAG7	1/2″	5″	20 Pcs.
KMAG8	1/2″	6″	20 Pcs.
KMAG9	1/2″	8″	20 Pcs.
KMAG10	1/2″	10″	20 Pcs.
KMAG11	1/2″	12″	20 Pcs.
KMAG12	3/4"	Close	20 Pcs.
KMAG13	3/4"	2″	20 Pcs.
KMAG14	3/4″	21/2"	20 Pcs.
KMAG15	3/4″	3″	20 Pcs.
KMAG16	3/4″	31/2"	20 Pcs.
KMAG17	3/4″	4″	20 Pcs.
KMAG18	3/4″	5″	20 Pcs.
KMAG19	3/4″	6″	20 Pcs.
KMAG20	3/4"	8″	20 Pcs.
KMAG21	3/4"	10"	20 Pcs.
KMAG22	3/4"	12″	20 Pcs.
KMAG23	1"	Close	20 Pcs.
KMAG24	1″	2″	20 Pcs.
KMAG25	1″	21/2"	20 Pcs.
KMAG26	1″	3″	20 Pcs.
KMAG27	1″	31/2"	20 Pcs.
KMAG28	1″	4″	20 Pcs.
KMAG29	1″	5″	20 Pcs.
KMAG30	1″	6″	20 Pcs.
KMAG31	1″	8″	20 Pcs.
KMAG32	1″	10″	20 Pcs.
KMAG33	1″	12″	20 Pcs.
KMAG34	1 1/4″	Close	5 Pcs.
KMAG35	1 1/4″	2″	5 Pcs.
KMAG36	11/4"	2 1/2"	5 Pcs.
KMAG37	1 1/4″	3	5 Pcs.
KMAG38	11/4″	31/2"	5 Pcs.
KMAG39	1 1/4″	4″	5 Pcs.
KMAG40	11/4″	5″	5 Pcs.
KMAG41	1 1/4″	6″	5 Pcs.
KMAG42	11/4″	8″	5 Pcs.
KMAG43	11/4″	10″	5 Pcs.
KMAG44	1 1/4″	12″	5 Pcs.
KMAG45	11/2"	Close	5 Pcs.
KMAG46	11/2″	2″	5 Pcs.
KMAG47	11/2″	21/2″	5 Pcs.
KMAG48	11/2"	3″	5 Pcs.
KMAG49	1 1/2″	31/2"	5 Pcs.
KMAG50	11/2"	4″	5 Pcs.
KMAG51	11/2″	5″	5 Pcs.
KMAG52	11/2"	6″	5 Pcs.
KMAG53	11/2"	8″	5 Pcs.
KMAG54	11/2″	10″	5 Pcs.





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